

Republic of Iraq

Ministry of Planning

NATIONAL DEVELOPMENT PLAN

Years 2010-2014



Republic of Iraq
Ministry of Planning

National Development Plan 2010-2014

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Forward by the Minister of Planning

Strategic long-term planning is a feature of modern nations. Short-term planning provides only topical solutions and approaches to emergency situations. This reactionary planning does not address actual and complex problems. We cannot use a short-term approach to build a comprehensive national economy that includes the ambitions of the nation and society.

The loss of the strategic compass in the arena of the Iraqi economy has cost us dearly and has led us to waste time and money. The country has not prospered and has left the Iraqi people to suffer despite the affluence they could have due to Iraq's wealth and illustrious history.

Over the past few years, Iraq has demonstrated the inability to manage the annual budget, allocate investments, and has struggled to create an economy that allows for progress and development. This is due to budgets being approved late in the year and the release of the money thereafter. A critical portion of the year elapses and the minister, or other government officials, is unable to make a decision about completing projects. This ineffective cycle is repeated year after year. For this reason, the Ministry of Planning took the initiative to propose adopting a plan that encompassed more than one year. We proposed a five-year plan that covers the period of 2010 – 2014. The Council of Ministers adopted the initiative and the plan became a governmental decision. The Ministry of Planning, including all of its agencies and experts, worked diligently until this was achieved. Within this document you will find a plan that is a comprehensive guide for the nation and society to build Iraq's economy. This is a gift from the Ministry of Planning to the Iraqi government and to the Iraqi people. This plan is a major achievement of the ministry and represents the heart of the ministry's experience as well as the dedication and hard work of its experts.

The new plan cannot be compared to previous development plans in Iraq because it is different from other plans developed in the past. This is an advanced and unique plan that includes modern methods and approaches to technical planning and related practices. Previous planning was based on listing projects and distributing them among the various economic sectors. In contrast, this plan is based on a scientific methodology and analysis of data.

The plan forecasts future developments during 2010 – 2014 and proposes a new economic philosophy that is based on a market economy. For the first time, Iraq has adopted this concept and will provide private sector investment opportunities and will also provide the opportunity for foreign investment. Some may see the establishment of a comprehensive five-year development plan for Iraq as a risk in light of its current conditions in regards to political and economic instability. In actuality, this plan encompasses the reality of Iraq today and uses modern tools and methodologies to address the contemporary situation.

Implementation of this plan will take a lot of hard work and dedication. There are critical challenges that must be faced to enable the plan to bear fruit. We need to focus on building political stability. We should overcome governmental bureaucracy, particularly at the decision-making level. It is also critical to control corruption and reduce its impact so building the economy progresses at a proper and decent pace. A new governmental approach to implement this development plan will help to overcome challenges and allow this plan to succeed.



Ali Ghalib Baban
Minister of Planning



Acknowledgments

The development of this plan would not have been possible without the belief in the vital importance of a national mission that determines the course of the country's development. We must begin by thanking, appreciating, and acknowledging the Minister of Planning, Mr. Ali Ghalib Baban, who was the first to propose the idea of moving from preparation of an annual investment plan to a five-year program and for his constant follow-up and insightful instructions to the work team throughout the plan preparation period. This had a profound impact on accomplishing the plan.

We also want to thank and appreciate all ministerial and non-ministerial agencies, the Ministry of Planning in the Kurdistan region, as well as all governorates and their representatives on plan preparation committees for their cooperation and effective participation during the plan's development. We also extend sincere thanks and gratitude to USAID/*Tatweer*'s team. In particular we would like to thank the experts Mr. Nael Shabaro and Mr. Behnam Elias Putrus. We would also like to thank USAID/*Tatweer*'s invaluable assistants for their extensive technical and logistical support during the development of the plan.

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We also express our appreciation and gratitude for the expert efforts exerted by the Deputy Minister and Head of the Central Statistical Organization (CSO), Dr. Mahdi Al-Allak, for his continual support of the plan and his work in directly coordinating between the Poverty Reduction Strategy (PRS) and this plan. We would further like to thank the heads of all the committees, their members, and ministry affiliates who effectively participated in the various phases of the plan preparation and transformed the Ministry of Planning into a work cell through 2009 in order to complete this strategic document.

In addition, we would like to use this opportunity to express our deep appreciation for the efforts exerted by the national experts Dr. Basil Al-Husseini, Dr. Adnan Yasin Mustafa, Dr. Wafaa Al-Mahdawi, and Dr. Amer Hermis for their distinguished technical contributions and for their role in drafting and issuing the final version of the plan.

We hope this national effort forms a comprehensive program that moves Iraq to an advanced developmental phase and lays the foundation for future strategic planning based on principles that combine justice, efficiency, and sustainability.

Dr. Sami Matti Pollus

Deputy Minister of Planning for Technical Affairs

Head of the Technical Committee for Plan Preparation

Introduction

The idea for preparation of a mid-term National Development Plan (NDP) was born out of the failures and problems faced in preparing annual investment programs, in particular the difficulties of instituting a comprehensive mid- and long-term vision that defined project priorities and their elements based on an annual development approach. For that reason, MoP proposed to the honorable Council of Ministers (CoM) the idea of preparing a mid-term (five-year) development program. The council approved the idea in 2008 with decision no. (20Z/10/1/15/8013), dated 4/15/2008. Immediately after that, the MoP began preparation of a five-year NDP and oversaw the actual intensive work for the plan preparation that actually started at the beginning of 2009.

Approach

Our approach was to build the NDP based on reliable data, sound scientific analysis and realistic assumptions. Specifically, a comprehensive analysis of the reality of Iraq's economy was performed at the aggregate, sectoral, and spatial levels over the past 40 years with emphasis on the 2004-2008 period. Furthermore, an in-depth analysis was performed to assess the situation of public services, infrastructure, and environmental and social conditions, including poverty and unemployment, with a focus on vulnerable groups such as women, children, and persons with disabilities.

For every activity and service addressed, the plan was careful to present previous policies along with their positive and negative effects. It then identified the problems and challenges facing that activity or service. The vision for the next five years was established thereupon and transformed into more detailed quantitative and qualitative objectives based on the nature of each activity, service, and capability. Then means for achieving these objectives were proposed so as to conclude the plan with a comprehensive investment program by sector, activity, and province.

Advantages of the Plan

The 2010-2014 NDP is characterized by a number of issues that distinguish it from previous plans and that can be summed up as follows:

1. It adopted a participatory approach during preparation that commenced with establishment of a general framework to diagnose the reality and capabilities, and continued by defining problems and specifications, designing the visions and translating them into objectives and means of achieving the objectives, as well as defining the plan's investment objectives and priorities. The participatory approach to plan preparation took various forms and employed various techniques to ensure participation by all involved parties.

During the phase in which the approach to plan preparation and the timeframe were defined, workshops were held to which a number of experts from the United Nations organizations and MoP managers and officials were invited.

During the plan preparation phase, 11 specialized technical committees were formed under the leadership of the Deputy Minister for Technical Affairs.

Two of these committees were led by the Deputy Minister and Chairman of the Central Statistical Organization (CSO), namely, the Millennium Development Goals (MDGs) Committee and the Committee for Poverty Alleviation. The other nine committees each focused on a particular technical aspect of the plan, which included:

1. Economic Policy Committee;
2. Revenue Estimation Committee;
3. Agriculture and Water Resource Committee;
4. Industry and Energy Committee;
5. Transportation and Communications Committee;
6. Construction, Housing and Services Committee;
7. Human Development Committee;
8. Spatial Development Committee;
9. Private Sector Committee.

These committees were led by general managers at MoP and members consisted of representatives of the Kurdistan region, relevant line ministries, academics, representatives of the unions concerned, and experts from the USAID/Tatweer and the United Nations Assistance Program for Iraq. Each committee, within its purview, presented background documents detailing current sectoral policies, the current reality, capabilities, challenges, proposed vision, objectives, and means of achieving the objectives. In April 2009, at the Al-Rasheed Hotel in Baghdad and with a support from USAID/Tatweer, the first conference was held to discuss the plan's general framework, as well as its overall, sectoral, and spatial orientations. The conference was attended by the Deputy Prime Minister, Dr. Rafi Al-Isawi and more than 350 participants attended. Among the participants were a number of ministers, deputy ministers, ministry advisors, members of the Council of Representatives (CoR), representatives from Kurdistan Regional Government (KRG); governors; Provincial Council (PC) members; unions, academicians, civil society organizations (CSOs), and donor organizations including USAID and the UN.

The discussion revolved around the plan's general framework, its overall and partial orientations, and the sectoral background documents prepared by the committees. The conference produced a number of important remarks and opinions that were beneficial in later phases of the plan. In addition, the subsequent roles of ministries, nonministerial agencies, KRG, and the provinces were defined by means of representations on their strategic visions for their sectors, spatial specializations, and their proposed five-year plan projects in accordance with a template prepared by MoP. A significant number of remarks and opinions about the papers presented at the first conference were received from USAID and the UN agencies. They were beneficial during the second phase when preparing background documents.

The second conference was held also with the support of USAID/Tatweer in early November 2009 to discuss the final sectoral and technical documents pertaining to the plan once it was developed. More than 400 people attended from all of the aforementioned agencies. More than 37 experts from the UN, USAID, the EU and many other international organizations attended. Over the course of five days, discussions were held concerning all sectoral aspects, the vision, objectives, and means of achieving the objectives. The conference was an excellent opportunity to initiate the drafting of the plan document.

In order to strengthen the provinces' participation in the plan preparation and as a capacity building exercise for the provincial officials, committees were formed to propose projects to be implemented in the next five years. This was conducted in coordination with the Provincial Planning Units (PPUs) that are part of MoP and located in 15 provinces. It was also conducted through work teams from MoP's headquarters who visited all provinces on more than one occasion, which was a great help in facilitating the process of proposing projects of a local nature. The MoP also held three more conferences in Dhi Qar, Basrah and Diyala to discuss representing the local needs in the NDP. The MoP had a plan to hold these conferences in all provinces, but due to time limitations, only three local conferences were held.

Direct coordination took place with all ministries, KRG, and the provinces with regards to the quantitative and qualitative objectives for their sectors and/or spatial specializations as well as in determining the priorities of the projects selected for the plan document.

2. In addressing developmental issues, the plan is not limited to public investment; rather, it considers private investment a fundamental partner in the development process and expects it to contribute to about 46% of the investments required to achieve the vision and objectives of the plan. The sectors, activities, and areas in which the domestic and foreign private sector can invest were identified.
3. The plan calls for strengthening decentralized administration in order to improve the effectiveness of provinces' roles in developing and managing their resources and the development process.
4. The plan focused on areas not emphasized in previous plans in Iraq. Some examples include:

- Adding the spatial (regional) dimension to development,
- Using the Unsatisfied Basic Needs formula based on the level of deprivation as a criterion to distribute development benefits among Iraqis,
- Establishing a balance between the needs of the population of different public services and infrastructure and the capabilities of the production sectors,
- Including a wide range of sectors such as the tourism and artifacts sectors,
- Balancing developmental decision-making based on the three dimensions of sustainable development: economic, social, and environmental.
- Using environmentally friendly technologies and proper handling of the negative environmental effects accrued over the past decades.
- The plan also focuses on social and humanitarian aspects that have never been addressed in previous plans. These included concern for vulnerable groups, poverty and the need to alleviate it, and the extent to which Millennium Development Goals (MDGs) can be achieved,
- The plans addresses the issue of institutional reform and good governance,
- It also emphasizes the promotion of a number of activities, particularly ensuring availability of housing.

Data and Information Sources

Construction of the plan relied on qualitative and specialized studies performed by subcommittees and experts, as well as work papers provided by ministries, the KRG, and a number of provinces. The MoP's studies prepared by its technical departments were also used, along with some academic studies, and the Central Statistical Organization's periodic releases and surveys over the past years. In addition, the Poverty Reduction Strategy (PRS), adopted by the honorable Council of Ministers in January 2009, was a main source of plan data and information.

Obstacles to Plan Preparation

Normally, development plans are prepared amid stable economic, political, and security conditions. Preparing a plan for Iraq in the midst of unstable conditions created several obstacles, particularly in regard to domestic and foreign private sector participation. Furthermore, Iraq's reliance on a single main resource, namely oil, and lack of stable oil prices was another fundamental challenge. During plan preparation, oil resource calculations were changed three times due to price fluctuation in the international market. A price ranging between US\$60 and US\$68 per barrel was adopted for the plan years. This price has become low in light of current prices, which exceed US\$80 per barrel. There were also problems in the areas of accuracy, unavailability of complete data, and lack of a clear general direction in terms of the indicators that a planner can rely on to formulate a plan of alternatives. Indeed, all economic, service, and social indicators have fluctuated greatly because of the turmoil in Iraq over the past 40 years. This has also resulted in difficulty in defining a specific base year for all activities and performances, an exercise usually fundamental to building any mid- or long-term plan.

The obstacles faced during the plan preparation do not in any way diminish the plan's importance and effectiveness in drawing a developmental picture for the country over the next five years. The working team exerted tremendous effort to find alternatives and means to curtail the obstacles. With regards to the anticipated financial resources, the plan proposed a flexible investment program that can accommodate new developments or events during the execution phase. It also proposed clear and specific mechanisms to follow up on and evaluate the results and consequently reconsider the plan in 2012, if needed.

Cross-sectional comparison of data was performed using various sources so as to arrive at realistic figures. In addition, the most recent surveys performed by the CSO during 2004-2008, which are consistent with international standards, reduced the effects of this problem. With regard to the stability in the security situation, the plan is based on the ambition that security conditions will continue to improve, as has been the case over the past two years.

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Acronym List

BIS	Bank for International Settlements	MoCH	Ministry of Construction and Housing
BOO	Build-Own-Operate	MoE	Ministry of Electricity
BOT	Build-Operate-Transfer	MoED	Ministry of Education
CBI	Central Bank of Iraq	MoF	Ministry of Finance
COM	Council of Ministers	MoH	Ministry of Health
COR	Council of Representatives	MoHE	Ministry of Higher Education
COSQC	Central Organization for Standardization and Quality Control	MoHR	Ministry of Human Rights
CSO	Central Statistics Organization	MoIMR	Ministry of Industry and Mineral Resources
CSOs	Civil Society Organizations	MoLSA	Ministry of Labor and Social Affairs
CSR	Civil Service Reform	MoMPW	Ministry of Municipalities and Public Works
DG	Director General	MoO	Ministry of Oil
DOH	Directorate of Health	MoP	Ministry of Planning
DPMO-EA	Deputy Prime Minister's Office – Econ. Affairs	MoT	Ministry of Trade
DPMO-S	Deputy Prime Minister's Office – Services	MoTRAN	Ministry of Transportation
EU	European Union	MoWR	Ministry of Water Resources
FAO	Food and Agricultural Organization	NDP	National Development Plan
GDP	Gross Domestic Product	NDS	National Development Strategy
GIS	Geographic Information System	NIC	National Investment Commission
GoI	Government of Iraq	PC	Provincial Council
HDI	Human Development Index	PMO	Prime Minister's Office
HSE	Health Safety and Environment	PPP	Public-Private Partnership
IA	Iraqi Airways	PPU	Provincial Planning Units
IMF	International Monetary Fund	PRS	Poverty Reduction Strategy
IT	Information Technology	TBI	Trade Bank of Iraq
ITMP	Iraq Transport Master Plan	UBN	Unsatisfied Basic Needs Formula
KRG	Kurdistan Regional Government	UN	United Nations
LLR	Lender of Last Resort	USAID	US Agency for International Development
MDG	Millennium Development Goals	VPO	Vice President's Office
MoA	Ministry of Agriculture	WB	World Bank
MoC	Ministry of Communications		



Executive Summary

When compared to Iraq's annual investment programs, the mid-term (five-year) National Development Plan (NDP) sets out serious approaches to meeting development challenges and defines the country's capabilities on general, sectoral, regional, and spatial levels. It promulgates visions and sets quantitative and qualitative objectives in developing the country's economy and society over the life of the plan.

The plan begins with the challenges facing the Iraqi economy and society, as well as its financial and human resource endowments, which are summarized below.

1. Iraq relies almost totally on oil to fund the state's federal budget. Oil resources form approximately one-half of the nation's gross domestic product (GDP). The effect is to limit Iraq's economic exposure to the external world because of the paltry contribution by non-oil commodity. It also indicates the private sector's limited role in the development process.

Pertaining to social issues, Iraq faces serious challenges in the areas of education and health, as measured by qualitative and quantitative indicators. There has been an increase in the percentage of vulnerable groups and an increase in the rate of unemployment to 15 percent, particularly among youth and women. In addition, 23 percent of the population lives below the poverty line and there is a significant shortfall in housing, which according to some estimates is equal to 3.5 million housing units.

In the area of infrastructure, Iraq suffers from a decline in the rate of quantitative and qualitative facilities for drinking water; coverage is no more than 90 percent in urban areas and 65 percent in rural areas. There is an even bigger problem with respect to sanitation. In Baghdad, coverage by sanitation projects is approximately 75 percent and no more than 3 percent in other urban areas. There is a complete lack of these services in rural areas.

Spatial development does not fare any better. There is a large disparity in economic and social development as well as in services among provinces and between rural and urban areas. There is also a decline in human development indicators as evidenced by a rise in the level of deprivation and poverty in most southern provinces, with the exception of Basrah, and a relative increase thereof in middle provinces and the Kurdistan region.

In the area of rural development, there is clear indication that the countryside lags behind in terms of economic, social, and structural indicators, including a low level of agricultural productivity; high illiteracy rates; low rates of enrollment in and high dropout rates from schools, particularly for girls; poverty rates that exceed the national average; inferior health services and care; high rates of deprivation from services and housing; and a generally weak link between rural and urban areas.

In the environmental arena, there is an indication of lack of concern for the environmental dimension of development

and, consequently, a high level of pollution of environmental elements (water, air, and soil). There is also a weakness in identifying, monitoring, and tracking pollutants. Moreover, both society and organizations have little environmental awareness. In addition, there is no comprehensive identification of the effects of consecutive wars in which environmentally destructive weapons and those with long-term effects were used.

The consecutive wars and crises suffered by Iraq, as well as the rapid changes since 2003, have led to a social situation that cannot accommodate new changes and transformations. This has generated cases of corruption that have had a negative effect on the course of development.

2. In light of the challenges indicated above, and in light of the federal democracy environment, the plan aims to have Iraq become an effective country through the workings of market mechanisms; becoming a participant in the world economy; and an embodiment of the principle of international partnership. Based thereupon, the plan seeks to have Iraq effectively employ its economic resources, both human and natural, to achieve a diverse and competitive economy in which the private sector plays a leadership role in creating wealth and jobs, and the public sector plays an organizational and enabling role to address market failures, guarantee fair distribution of the national income, and see that at-risk social groups can effectively fulfill their role in achieving economic and social progress.
3. Objectives: The development plan translates the strategic vision through the following general objectives:
 - Increase in the gross domestic product (GDP) at a rate of 9.38% per year during the plan period.
 - Generate 3 to 4.5 million new jobs based on the proportion between capital concentration and work that will be used in activities and projects adopted by the Plan.
 - Diversify the Iraqi economy through achievement of gradual increases in the rate of participation by other sectors in GDP, particularly the production, agriculture, and industrial sectors, along with tourism, which is a sector with some accomplishments and promise. It is also one of the sectors in which private sector activity plays a historically strong role. This role can be strengthened in the future both through generation of GDP and through the jobs it can generate.
 - Strengthen the role of the domestic and foreign private sectors, either in terms of the magnitude of investment anticipated within the country, estimated at about 46 percent, or in terms of job opportunities. The plan seeks to expand and diversify the activities that the private sector invests in, particularly comprehensive animal and vegetable production projects; fisheries; tourism of all kinds; conversion industries, particularly those in which Iraq has a comparative advantage; passenger transportation,

merchandise, communications, as well as port and airport management; and education, health, and housing. The plan urges the government to play a strong enabling role in the area of housing to encourage both individual and private (national and foreign) sectors to invest in housing, yet recognizing that the state will retain responsibility for secure housing for vulnerable groups.

- Improve and increase productivity and promote the concept of competition, particularly in activities enjoying a comparative advantage such as oil and gas, petrochemical industries, chemical fertilizers, cement, pharmaceutical industries, production of dates and fruits, rearing of livestock, and tourism of all kinds (recreational, religious, and historical) across all of Iraq's provinces.
- Reduce poverty rates by 30 percent from 2007 levels by focusing on comprehensive rural development and the creation of job opportunities, particularly for vulnerable groups such as youth and women, and focus on ensuring basic services, particularly educational and healthcare services, for rural areas and vulnerable groups.
- Establish a spatial development trend characterized by fair distribution of infrastructure services and public services (water and sanitation, health, education, etc.) among all of Iraq's provinces in a manner consistent with their population size and the extent of their deprivation and need. Further, distribute production and tourism activities across the provinces in a manner consistent with their capabilities at the state, regional, and international levels, with focus on rural areas and those urban areas that are the most deprived.
- Establish sustainable development that balances economic, social, and environmental considerations so as to optimize use of available natural resources without undermining the right of future generations to benefit from those resources. Further to this, focus on keeping up with international developments in the areas of climate change and the use of environmentally friendly technologies.
- Strengthen the role of local governments in developing their provinces and building capacity for coordination and complementarities, using their comparative advantages.

4. To achieve these objectives, the plan:

Estimated the investment that must be secured at around 218 trillion Iraqi dinars, i.e., US\$186 billion during the five years of the plan; US\$100 billion would be funded by the federal budget at a rate of 30 percent per year of the overall budget. The remaining US\$86 billion would be funded by the domestic and foreign private sectors; the public and private sectors would contribute 53.7 percent and 46.3 percent, respectively.

Category	percent
Agricultural Sector	9.5
Industrial Sector	30
Oil	15
Electricity	10
Conversion Industries	5
Transportation and Communications Sector	9
Construction and Services Sector	17
Education Sector	5
Regional Development	12.5
Kurdistan Region	17*
Total	100

* Or any percentage confirmed by the General Population Census.

Investment priorities were distributed by giving the oil and electricity sectors a higher priority because they are the primary source of financial resources for sustainable development, at least over the midterm, and electricity is the primary infrastructure for development in the production and service sectors. Higher priority was also given to the agricultural, transportation, and communications sectors. Agriculture is an important resource that has promise with regard to contributing to economic diversity and ensuring the country's food security. It also has an important role in generating employment opportunities that will contribute to reducing poverty, stabilizing productive labor in rural areas, and reducing migration to urban areas, which has crowded already stressed city services. The transportation and communications sectors were also given priority they have highly functional interconnections with other sectors. The Plan sought to reserve 12.5 percent of its investments for the regional development program and 17 percent for the Kurdistan region. Table (1) indicates the relative magnitude of the investments directed to the plan's sectors.

But securing investment alone is not sufficient to achieve the plan's objectives. The plan must be supported in the areas of financial and monetary policy, institutional development, as well as administrative and legal reform. It must also be supported through plan tracking and monitoring systems. Accordingly, the plan proposed a number of financial and monetary policies that are compatible with the investment policy, as well as strategic, sectoral, spatial, and social objectives.

The plan proposes a host of institutional reforms at the sectoral level. It emphasizes the need for building human and technical capabilities, using modern technology, and

verifying the cost-effectiveness of projects. In addition, it emphasizes the need for good governance based on the principles of rule of law, accountability, transparency, justice, inclusivity, efficacy, and effectiveness. The plan additionally emphasizes the importance of modernizing the public sector in accordance with these principles.

The plan also calls for using modern technologies and acquired knowledge, benefiting from the most notable regional and international experiments and expanding the economy's knowledge base.

Chapter One

The Plan's Economic and Social Framework



The Plan's Economic and Social Framework

1.1 Historical Overview

Over the past 40 years, the Iraqi economy has witnessed tangible developments in general economic indicators such as GDP, national income, and fixed capital formation, though with ups and downs. This is natural in light of circumstances over the years, most notably nationalization of the oil industry in 1972, the first Gulf War in 1980-1988, the second Gulf War in 1991, international economic sanctions in 1991-2003, and the fall of the regime established in 1968.

These events directly affected development in Iraq. Nationalization of the oil industry and correction of its prices provided Iraq with sustainable financial strength, leading it to adopt an expansionary spending policy that energized economic activity, stimulated the production cycle, and raised consumption levels. The economy thus experienced high rates of growth, which were tangibly reflected in the Iraqi people's standard of living and allowed them to enjoy economic and social prosperity. At the same time, however, the spending policy of the 1970s caused a host of issues, including increases in the consumer price index and higher import rates. Overall, the final outcome of the 1970s appears to have been positive when evaluated using locally and internationally recognized economic and social development measures.

Between 1980 and 2003, Iraq suffered from long wars and severe economic sanctions. Development regressed as a result; economic policies were adopted, to support war efforts and resist sanctions, with no regard for progress in development, thus effectively ending the positive achievements of the 1970s. The Iraqi economy was trapped in a vicious cycle that could only be broken by a shock. That shock occurred with the fall of the regime in 2003. However, the ensuing instability in economic, political, social, and security conditions threatened, and continues to threaten, development efforts, and the road ahead is still long and difficult.

1.2 Developmental Features

Iraq's developmental reality over the past 40 years embodies the issues described below.

1. Oil revenues are the main source of financing for the developmental process in Iraq. This has undermined the role and importance of other financing sources, particularly taxes. Sectoral financing policies are unable to generate an economic surplus that can effectively contribute to the financing process.
2. Centrality is the approach used to manage the Iraqi economy. This has made the public sector critical to the development process, all the while marginalizing the private sector's role, and distancing it from the economic arena. To the extent it exists, the private sector has no impact on developmental effectiveness and civilian social organizations play no role.
3. In Iraq, capital accumulation has been achieved by transferring oil revenues to economic sectors in the form of fixed assets. There is no contribution to capital accumulation from technological advancement and higher productivity

rates. This has voided the growth rates achieved in the gross domestic product and capital accumulation of their true content and rendered them incapable of expressing real and sustainable growth. Accordingly, they are liable to collapse as a result of any crisis.

4. There is no intellectual base and no process for sustainable human development when distributing income between investments and consumption. This has rendered the process of development in Iraq far removed from the standards of sustainable development to improve the quality of life.
5. Divisiveness and the lack of coordination and cooperation have characterized the various branches of the economic policy. This has particularly been the case with respect to finance and monetary policies, and it has exacerbated the severity of unemployment, inflation, and the spread of administrative corruption.

1.3 The Plan's Assumptions

The development plan for 2010-2014 is based on four basic assumptions that are considered methodological starting points for preparing and executing the plan:

1. The ability of the Iraqi economy to move forward and execute a sustainable and comprehensive development plan.
2. Sustainable and comprehensive economic development as a goal for growth and a basis for achieving prosperity for all members of society, improving the quality of their lives, and protecting the environment.
3. Movement from centralized management of the economy to decentralized management measured by the status of the market economy, competition, and a gradual increase in the role of local governments pursuant to a creative approach aimed at selecting and establishing market-based mechanisms to define priorities and make decision.
4. Assignment of a greater role to the domestic and foreign private sectors with respect to financing the development process.

1.4 Challenges

1.4.1 Economic Challenges

1. The quartile nature of the Iraqi economy, whereby the crude oil extraction and exportation sector accounts for 44 percent of the domestic product generated and 93 percent of total exports
2. The Iraqi economy's significant exposure to the external world as a natural outcome of the low contribution by commodity sectors (excluding oil) in GDP generation, (28.6 percent for commodity activities, 38 percent for distributional activities, and 33.4 percent for service activities for the period 2004-2008). These rates explain Iraq's need to increase imports from the outside world to cover increasing local demand, as the increase in operating expenses in the public budget ultimately translated into increased demand in the domestic market.

The most telling evidence of this fact is the increase in the imported portion, as compared to the domestic portion, of commodity supply in the Iraqi market.

3. The private sector's limited role in the development process as evidenced by the decline of its participatory share in economic activity, job creation, coverage of increased domestic demand, and investment generation. This has rendered the sector inflexible and unable to respond quickly to the changes targeted in the current plan unless a suitable and attractive work environment is created.

1.4.2 Social Challenges

Iraq suffers from a host of social challenges that are no less severe or critical than its economic challenges in terms of their impact on the society and its relationships, the economy and its capabilities, and on the people and the means of enabling them. They limit the course of sustainable human development and hinder the process of achieving the Millennium Development Goals (MDGs) established internationally and nationally. The most prominent social challenges are described below.

1. **Schooling and Higher Education:** Despite the importance afforded this sector by the Iraqi constitution, development plans, and economic policies, there are indications of a lack of responsiveness. Data shows a significant deficit in school preparation, an increase in schools with double or triple daily sessions, mud-constructed schools not fit for use, and a decline in the rate of school enrollment, which stands at 85 percent for boys and 82 percent for girls. The situation does not differ for higher education, which has tended toward vertical expansion in universities and has strengthened quantitative progress at the expense of qualitative progress. There is also a clear disconnection between graduates of the educational system and market needs. There is a focus on the humanities specialties, because of the ability to secure the financial and human requirements associated therewith, at the expense of scientific and technical specialties.
2. **Health:** The magnitude of the challenges facing Iraq's health sector may greatly hinder its ability to progress along the health axes set forth in the MDGs. There is still a large gap between what has been achieved and what must be achieved by the year 2015. The most serious of those challenges include the scarcity of drinking water supplies and the lack of treatment for wastewater and garbage. There are also significant problems in the health system itself, including a decline in the number of beds and doctors per 1,000 people as compared to international indicators. Furthermore, there is not optimal use of available health facilities; the bed occupancy rate in public hospitals does not exceed 65 percent, reflecting the population's lack of trust in the services provided by public health institutions.
3. **Housing:** Iraq suffers from a housing crisis. Estimates on the need for suitable housing units range from 1 million to 3.5 million, depending on the assumptions used in housing studies, but in any this constitutes a significant housing shortfall. The development plan must address that shortfall, as well as present policies and procedures that

can effectively alleviate its severity. Perhaps the leadership role that must be granted to the private sector and foreign investment in this plan's timeframes will contribute to addressing this challenge.

4. **Poverty:** Data from the poverty alleviation strategy in Iraq have confirmed that 23 percent of the population lives below the poverty line. The current development plan needs to craft its investment programs and objectives in a manner that reduces this rate to the strategy's target rate of 16 percent. However, the disparity in income distribution, i.e. the state of inequality has reached 40 percent, which is considered evidence that can, in and of itself, hinder translation of the goal into reality. Therefore, the plan must seek to formulate comprehensive policies that raise per capita income, achieve equity in distribution, and firmly address the phenomenon of poverty.
5. **Unemployment:** Unemployment may be the social challenge with the most negative effect on the economy and society as a whole. Pursuant to the most recent statistical survey conducted for unemployment in 2008, the unemployment rate has persisted at the rate of about 15 percent overall, with a disproportionately high rate among youth at 30 percent and among women at 32.5 percent. The challenge is to establish solutions and constructive processes to alleviate unemployment through policies that affirm the private sector's role in creating job opportunities, as well as an effective and job creating operating policy.
6. **Youth:** The diversity among youth from an educational, cultural, and skill level perspective is considered another one of the main challenges facing the Iraqi economy. Twenty-four percent of participants in the labor force are uneducated; of that group 41.2 percent can read and write and 43.1 percent have a primary school certificate. These rates confirm the necessity for the plan to adopt a bundle of effective policies to promote youth, as well as educate and employ them.

1.4.3 Duality of Spatial Development

The duality of spatial development is considered one of the most prominent features of the spatial development pattern in Iraq, a nation characterized by the presence of provinces and regions that are comparatively more advanced alongside others that are less developed or different from an economic, social, and cultural perspective. Poor geographic distribution of investments may best explain this duality, which has also expanded to include clear disparity between urban and rural areas. The spatial development pattern has led to the concentration of population, economic activity, and services in a handful of cities. This has, in turn, attracted more of the population and labor force from small towns and rural areas to urban areas and economically and socially developed provinces.

Population movements have negative impacts from an economic, social, and environmental perspective. The current plan must address them by correcting the spatial distribution of its investments consistent with standards that balance social equity and economic efficiency as well as focus on decentralized management of development by granting local administrations

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a role in defining their growth, development, and needs. Local administrations must also have an effective role in defining the strategic activities that take place within their administrative purview and serve the national interest.

1.4.4 Environmental Challenge (Unsustainable Environment)

The environmental dimension of development has not received the requisite attention in Iraq over the past decades, neither on the national strategy level nor on the project level. Iraq also lacks comprehensive systems to track and address environmental issues. This has led to clear and tangible pollution of all environmental elements, namely, air, water, and soil. This has been compounded by use of banned weapons in wars, particularly radioactive uranium, as well as bombing and destruction of military installations. Addressing environmental problems and spreading societal environmental awareness is considered a major challenge.

1.4.5 Incomprehensive Rural Development

Economic, social, cultural, and structural retardation are among the most prominent features of the Iraqi countryside. They can be observed in the low level of productivity, the clear spread of seasonal unemployment and underemployment, the decline in the countryside's contribution to domestic product generation, and the lack of services adapted to a rural setting. This has contributed to the spread of poverty, population migration, and illiteracy. The current plan faces a dynamic challenge that requires adoption of investment programs specializing in development of the Iraqi countryside, as well as the revival of rural resettlement plans and policies that aim to combine small villages (into a mother village) to ensure a minimum number of residents and provide them with basic services such as education, primary healthcare, and rural roads.

1.5 Vision

Iraq is seeking to be a peaceful and stable nation under the auspices of a federal democracy. It is also seeking to be an effective nation that functions in accordance with market mechanisms and a regional economic power that complements and is part of the international economy in a manner that embodies the principle of international partnership. Based thereupon, Iraq will use its economic resources, both human and natural, effectively and efficiently to attain a competitive and diversified economy in which the private sector has a leadership role in generating wealth and jobs, while the government performs an organizational and enabling role to address market failures and ensure equitable distribution of national income so as to enable the most vulnerable social groups to fulfill their role effectively in achieving economic and social progress. All of this is to be achieved with guidance from the principles of democracy, the rule of law, good governance, sustainable development, competitiveness, social justice, freedom, and human rights.

1.6 Strategic Objectives

1. Work to increase the GDP at a rate of 9.37 percent per year for the duration of the plan.
2. Work to diversify the economy and transform it into one that is characterized by a gradual increase in the rate of participation by sectors other than oil in the GDP, particularly the production (agriculture, industry) and tourism sectors, as well as one that is characterized by growing participation from the private sector over the course of transformation into a market economy.
3. Work to improve and increase productivity and promote competition in all economic sectors, particularly as regards activities that have a comparative advantage, such as oil, gas, petrochemicals, cement, plastics, pharmaceuticals, and electricity across all of Iraq's regions and provinces so as to guarantee and ensure a continuously robust economy for Iraq.
4. Work to increase the employment rate, particularly among youth and women, by activating the private sector's role in employment. This should reduce the high unemployment rate of 15 percent, consisting of both seasonal unemployment and underemployment, and the social problems associated therewith.
5. Increase as well as quantitatively and qualitatively improve the water provided for human consumption over both the mid and long term, as well as double the coverage areas of sanitation projects and expand their spatial coverage to include all provinces.
6. Work seriously to alleviate the poverty that is currently widespread in Iraq by creating job opportunities and areas (new sustainable jobs) as well as sustainable income. Further, ensure basic social services to the poor by ensuring qualification and training in new job areas, particularly for high-risk groups like orphans, widows, and individuals with special needs.
7. Work to achieve comprehensive and relevant growth that guarantees activation or productive investment of human and natural resources in all of Iraq's provinces. This would be supported by means of geographically balanced investment allocations and an attempt to decrease disparities, barriers, and dualities at the regional (district) level. Further, this would be achieved by working to establish a coherent series of economic activities, industrial complexes, and economic free zones across the nation. The plan also aims to achieve balanced distribution of infrastructure, social services, and suitable housing based on population size, needs, and the extent of regional deprivation over the past periods.
8. Address rural development issues, particularly the poor performance by the agricultural sector in terms of productivity and job creation, as well as unsuitable housing and weak infrastructure in the countryside. That is why the plan seeks to reduce disparity and barriers between rural and urban areas in terms of the availability of infrastructure, social services, and areas of new job creation. These would, in turn, contain the phenomenon of rural-to-urban migration that applies negative pressure on existing services and infrastructure, particularly in large cities.
9. Increase awareness about and acceptance of the principles of sustainable development and quality of life, and the need to achieve them across all of the economy's

sectors. Further, have these principles considered in both rural and urban planning so as to minimize the negative impacts of the years during which these principles were ignored or neglected. Moreover, improve the economic, social, and environmental aspects of the population's life.

The plan aims to establish and reinforce suitable and proper mechanisms so as to achieve its strategic objectives, policies, and overall vision for the future. It also aims to work on providing a suitable organizational structure and legal framework that contributes to guaranteeing and ensuring high rates of achievement and proper implementation of the plan.

1.7 Means of Achieving the Vision

One of the main assumptions upon which the plan is built is reliance on a comprehensive and sustainable model of development so as to achieve economic prosperity and the quality of life, and effectiveness of the Iraqi people. To translate this model into reality, the resources that will be used for funding purposes were defined based on a number of alternatives for different developmental levels. They are as follows:

Alternative One

This alternative assumes that old relationships and interconnections among economic activities continue during plan years 2010-2014. This alternative consists of two levels:

1. Assuming that the Iraqi economy grows at a compound annual rate of 9.45 percent as of 2009 requires investment in the amount of 154,040 billion dinars, i.e., US\$131 billion.
2. Assuming an annual growth rate of 11.0 percent requires investment in the amount of 180,854 billion dinars, i.e., US\$154 billion.

Alternative Two

This alternative assumes that existing historical technical relationships among economic activities continue, with the exception of the assumption pertaining to the rate of growth in crude oil extraction and that activity's output, both set at 13.1 percent annually, in the hopes of increasing foreign and private sector investment in this activity. Accordingly, the overall growth rate under this alternative is 9.11 percent.

Alternative Three

In this alternative, five activities were selected and their growth rate was doubled as compared to historical levels. This was done as follows:

1. Crude Oil:
 - In 2010 and 2011, export quantities and prices remain as is in Alternative Two.
 - From 2012 to 2014, the exported quantity is assumed to grow by 20 percent annually as compared to the 2011 level; in other words, daily production will exceed 5 million barrels per day at an assumed price of about US\$70 per barrel. Based thereupon, oil output will grow at a rate of 22 percent per year.

2. Agriculture: It will grow at a rate of 7.0 percent.
3. Electricity and water: They will grow at a rate of 20 percent.
4. Transportation: It will grow at a rate of 6.0 percent.
5. Social services: They will grow at a rate of 20 percent.

Accordingly, and pursuant to this alternative, the GDP will grow at a rate of 17 percent.

Chosen Alternative

Based on discussions held about the three alternatives, and in consideration of Iraq's conditions and production capabilities, another alternative was prepared. It is considered a combination of these alternatives and it was adopted when preparing the plan's estimates. It is as follows:

1. Historical growth rates for the periods 1970-1980, 1980-1990, 1990-2000, 2000-2007, and 1970-2007 were calculated. Based thereupon, rates were calculated for the GDP and labeled as historical rates.
2. Six activities were given special priority. They are:
 - Crude oil extraction, as it guarantees sustainable financial resources at this stage
 - Electricity as one of the central activities relied upon by all production and life activities and areas
 - Agriculture, as it guarantees food security, reduces food imports, and creates a vast number of job opportunities that can reduce unemployment in rural areas and alleviate poverty
 - Social development services, as it is the sector focused on building up the citizenry and providing a social umbrella. It includes the basic infrastructure-supporting services (water and sanitation, education, health, culture, youth and sports, as well as enablement in the area of housing), other services related to the MDGs, and achievement of strategic poverty alleviation objectives.
 - Transportation, as it is an important sector that supports the flow of economic activity and increases its efficiency. It also has a profound impact on the population's quality of life.
 - Conversion industries, as Iraq possesses capabilities, in terms of natural and human resources, that guarantee it a comparative advantage in many industrial activities such as petrochemical, chemical, fertilizer, cement, and food industries. They also constitute a crucial starting point for diversifying the national economy, invigorating participation by the private sector, and ensuring job opportunities.

As for the remaining activities, they were assumed to remain at their historical growth levels. Based thereupon, the growth rate of the GDP will be 9.38 percent annually. Tables (2-5) provide output estimates by activity as well as the magnitude of investments and financial resources needed. They also provide data about what can be funded by the state's public budget and what can be proposed for contribution by the private or foreign sector.

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1.8 The Plan's Anticipated Revenues

1.8.1 Estimates for Oil Revenues

It is well known that more than 90 percent of current operating and investment spending is funded by oil revenues. For that reason, estimates mainly depend on estimating oil output and revenues.

On the other hand, it is also assumed that non-oil revenues will improve in terms of their share of overall revenues.

A committee was formed to estimate revenues for purposes of plan preparation. It consisted of members from the Ministry of Oil, the Ministry of Finance, the Iraqi Central Bank, as well as the MoP. The committee estimated that export quantities will be as set forth in Table 2.

Year	Exported Quantity Million Barrels/Day	Price Dollar/Barrel	Export Value in Billions of Iraqi Dinars
2010	2.150	60	55,089.5
2011	2.300	63	61,880.1
2012	2.500	68	72,598.5
2013	2.800	68	81,310.3
2014	3.100	68	90,022.1

* Dollar = 1,170 dinars for each period.

On the other hand, directors at the Ministry of Oil expect the picture will improve after 2012 based on contracts currently being signed with foreign companies to increase the quantity of oil production and exportation. Accordingly, alternative estimates were prepared based on the expectations set forth in Alternative Three.

1.8.2 Estimate for Non-Oil Revenues

1. Tax revenues will increase at a rate of 15 percent per year over prior levels.
2. The treasury's profit of non-oil company revenues will increase at a rate of 15 percent per year for the years 2010-2014.
3. Non-tax revenues of 1,800 billion dinars per year.

Accordingly, the oil and non-oil revenues set forth in Table (3) indicate an anticipation that oil revenues will increase from 55,089 billion dinars in 2010 to 90,022 billion dinars in 2014, while non-oil revenues will increase from 3,263 billion dinars in 2010 to 7,404 billion dinars in 2014. Accordingly, the plan anticipates achievement of total revenues in the amount of 390,397 billion dinars based on the estimates of the plan's Financial Resources Committee and 446,787 billion dinars based on the alternative estimates for oil production and exportation.

Year	Committee Estimates for Oil Revenues	Non-Oil Revenues	Total (-1)	Alternative Oil Estimates	Total (-2)
2010	55,089.45	3,263.6	58,353.1	55,089.4	58,353.1
2011	61,880.13	5,628.2	67,507.7	61,880.1	67,507.7
2012	72,598.5	6,354	78,952.5	82,506.1	88,860.1
2013	81,310.32	6,846.9	88,157.2	99,006.6	105,853.5
2014	90,022.14	7,404.4	97,426.5	118,808.8	126,213.2
Total			390,397		446,787.6

Alternatives	Plan Calculations			
	30 percent of budget revenues targeted to investment spending		Portion funded by the domestic and foreign private sector	
	Billions of dinars	Billions of dollars	Billions of dinars	Billions of dollars
Alternative One	117,119.1	100	152,345.9	130.2
Alternative Two to be adopted after 2010	134,036.3	114.6	83,600.7	71.5

1.9 Magnitude of Investment

1.9.1 Magnitude of Government Investment

In light of these estimates, and as indicated in Table (2), the anticipated revenues that will be adopted at this time for purposes of preparing the magnitude of government investment are 390,397.0 billion dinars.

Through a historical look, and in light of government obligations toward inflated operating expenses, particularly in terms of the magnitude of salaries, pension payments, and expenses pertaining to security and price subsidies, the public budget can allocate what corresponds to 30 percent of these revenues to investment spending, i.e., 117 trillion dinars or US\$100 billion, with the hope that the plan and its specifications are revised at the beginning of 2012. The matter may require reconsideration of investment orientations based on what will be achieved by then and what will occur in terms of oil and non-oil revenue changes.

1.9.2 Magnitude of Nongovernment Investment

The magnitude of investment needed to achieve the plan's target growth rate of 9.38 percent annually is 217.6 trillion dinars, or US\$186 billion. It is anticipated that development partners (the domestic and foreign private sector) will fund US \$86 billion, which will be spent in the various fields specified by the plan, as well as other activities not set forth in the plan such as insurance, banks, and other personal services.

1.10 Policies Necessary to Execute the Vision

There is a need for a comprehensive framework of procedures and regulations to ensure good governance that balances among a number of political, social, and economic issues addressed in chapter 12 of the plan document. There is also a need for a number of specialized policies that are directly related to execution of the alternative chosen to grow the GDP and focus on the aggregate aspect of the plan. Sectoral policies will be discussed in the portions dedicated to sectoral development.

1.10.1 Financial Policies

1. Increased funding of the state's public budget from non-oil sources by invigorating economic activity so as to ensure expansion of the tax base.
2. Reconsideration of the spending structure so as to reduce spending on operating areas, redirect funds to investment to fill the gap in investment needs, and use operations spending to support investment spending.
3. Correlation of sums designated for province development to population size, degree of need and deprivation, and the capabilities available in the provinces so as to support the plan's orientations.

4. Management of the government's public debt so as to ensure availability of funding for the state's public budget and issuance of government bonds to avoid inflationary pressure.
5. Reliance on external funding through facilitated loans in the event there is a need to expand funding of strategic projects within the plan.
6. Restructuring and reform of the banking sector to ensure performance of the internal and external banking services needed by the development process.
7. Restructuring of the state's administrative and organizational structure so as to execute, monitor, and oversee public spending.
8. Restructuring at the aggregate economic level as agreed to with the International Monetary Fund (IMF) and in a manner consistent with economic and social development needs.
9. Improvement of the quality and timeliness of the financial and economic data issued by governmental administrations to support decision making as regards overarching economic policies.

1.10.2 Monetary Policies

Monetary policy must support both stability and development. It must also accommodate and complement the financial policy.

The nation needs significant funding for development. Thus, the monetary policy must be more relaxed in terms of lending, reducing cost, managing the public deficit, and promoting investment.

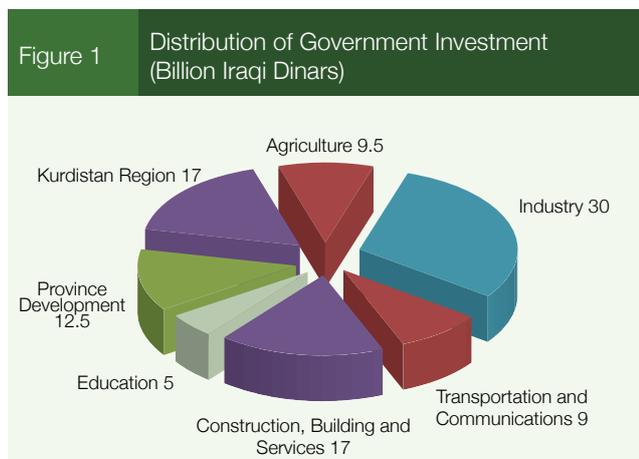
1.10.3 Investment Policy

1. The investment policy will support the objective of achieving comprehensive and sustainable development of the economy. As indicated, the magnitude of requisite investment is about 217.6 trillion dinars.
2. Government investment as well as domestic and foreign private sector investment will contribute to executing the plan's aggregate and sectoral objectives. Specifically, the government will contribute 53.7 percent of investment, with the foreign and private sector contributing 46.2 percent of investment during the years of the plan.
3. The plan's investment orientations are based on the principle of sectoral priorities that will promote unbalanced growth during plan years so as to achieve a future goal of balanced sectoral growth. Accordingly, the oil, electricity, and agricultural sectors were accorded investment priority and allocated 15 percent, 10 percent, and 5.9 percent, respectively of total government investment allocations over the five years of the plan. In contrast, 5 percent of total government investment allocations were directed to the conversion industries sector.

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This area was mostly left to private (domestic and foreign) investment. High priority was also given to the transportation and communication sectors for their close connection to economic activity and human prosperity; they were allocated 9 percent of total government investments under the plan.

- The investment policy seeks to reinforce the plan's spatial objective by allocating 14,625 billion dinars, or US\$12.5 billion which is 12.5 percent of total government investment allocations under the plan, to the regional development program so as to reinforce the primary principle of promoting decentralization and a larger role to local governments in the development domain.
- The investment policy seeks to build up the Iraqi people, as they are the cornerstone of economic and social progress. For that reason, it has allocated 22 percent of the government investment program to service sectors, such as water and sanitation, health, education, as well as sports, tourism, and cultural activities.
- Seventeen percent of total government investment, or any percentage to be confirmed by the next population census, was allocated to the Kurdistan region in a phased manner. This is equivalent to 19,890 billion dinars or US\$17 billion (Figure 1).



1.10.4 Decentralized and Federal Policies

- The plan is keen to involve the provinces' local authorities in the process of preparing and defining their developmental priorities, particularly in the area of availability of social services to citizens. At the same time, provided the issue of planning and strategic projects that serve the Iraqi public and multiple provinces is left to the federal government in consultation with the concerned local authorities.
- Distribution of investments based on a balancing between the principles of social justice (in terms of services and infrastructure) and economic efficiency (in terms of production activities) so as to create a correlation and complementary relationship among regions and provinces and based upon the foundations of comparative advantages, capabilities, and developmental limitations of the region and province.

1.10.5 Policies for Support of the Private Sector

- Building of a partnership between the public and private sectors using all partnership forms and methods as well as concession contracts.
- Improvement and diversification of fundamental infrastructure and services such as electricity and all forms of transportation that help the private sector transport its products and production needs seamlessly and at appropriate cost.
- Opening of the way for direct and indirect foreign investment with continued development of laws and regulations that govern it.
- Streamlining and simplification of governmental procedures and development of laws that promote investment and give Iraq a competitive edge in dealing with businesspeople and investors.
- Reform and conversion of public companies into private or mixed companies by benefiting from laws currently in effect, particularly Laws No. 21 and 22 of 1997.
- Reform of the financial sector, improvement of the banking sector's performance, expansion of loan avenues by providing small and mid-size loans at preferential conditions, and funding small and mid-size projects.

1.11 Estimates for Gross Domestic Product and Expected Inflation

As indicated in the chosen alternative, the GDP will grow at an annual rate of 9.38 percent. Furthermore, sectoral growth rates were calculated in light of their historical flexibility pursuant to the specifications referred to in the aforementioned alternative. Accordingly, the GDP at 1988 prices will increase from 54,654.2 billion dinars in 2009 to 85,568.3 billion dinars in 2014 (Table 4). GDP estimates were also prepared at current prices for the years 2009-2014 as indicated in Table 5 based on a group of deflators. As indicated in Table 6, the deflator adjusted inflation rate will reach 41 percent during the plan period of 2010-2014, as compared to the previous rate of 22 percent. It is worth noting and emphasizing that both the financial and monetary policies must consider this inflation rate out of concern for its known impact on spending habits.

It is also worth noting that all future estimates and analyses of plan results must be at 1988 prices or any other base year as the estimates at current prices set forth in Table 5 are subject to significant and continuous fluctuations in light of the price fluctuations that will occur.

Table 4		Gross Domestic Product Estimates for Plan Years 2010-2014 at 1988 Prices (Billions of Iraqi Dinars)					
Activities	Plan Rate of Growth	Plan Years					
		2009	2010	2011	2012	2013	2014
Crude oil extraction	10.5	22,971.2	25,383.2	28,048.4	30,993.5	34,247.8	37,843.8
Commodity activities							
Agriculture	5	4,442.7	4,664.8	4,898.1	5,143	5,400.1	5,670.1
Manufacturing	6.3	1,234.9	1,312.7	1,395.4	1,483.3	1,576.8	1,676.1
Electricity, water and gas	15	875.8	1,007.2	1,158.2	1,332	1,531.8	1,761.5
Building and construction	7.6	1,996.4	2,148.1	2,311.4	2,487	2,676.1	2,879.4
Other forms of mining	5.7	105.6	111.6	118	124.7	131.8	139.3
Distribution activities							
Transportation, transport and communications	4	1,885	2,074.8	2,157.8	2,244.1	2,333.9	2,427.2
Wholesale and retail commerce	5.8	3,544.2	3,749.8	3,967.2	4,197.4	4,440.8	4,698.4
Banks and insurance	16	904.4	1,049.1	1,217	14,117.7	1,637.5	1,899.5
Service activities							
Social services	12	9,243.2	10,352.4	11,594.7	12,986	14,544.44	16,289.7
Personal services	1.8	615	626.1	637.3	648.8	660.5	672.4
Home ownership	7.4	6,725.8	7,223.5	7,758	8,332.1	8,948.7	9,610.9
Gross domestic product	9.38	54,654.2	59,780.8	65,388.2	71,521.6	78,230.3	85,568.3

Table 5		Gross Domestic Product Estimates for Plan Years 2010-2014 at Current Prices (Billions of Iraqi Dinars)					
Activities	2009	2010	2011	2012	2013	2014	
Crude oil extraction	101,853,066.9	138,546,274.5	188,458,020.8	256,351,114	348,702,706.3	474,324,361.7	
Commodity activities							
Agriculture	63,628,081.3	118,051,474.8	219,029,486.8	406,375,963.3	735,962,662.5	139,886,339.2	
Manufacturing	2,803,946.9	3,529,028.6	4,441,606.8	5,590,132.4	7,035,928.3	8,855,160.251	
Electricity, water and gas	1,686,633.7	2,191,845.7	2,848,106.8370	3,701,309.3	4,809,851.4	6,250,153.57	
Building and construction	9,992,727.9	14,966,844	22,417,649.9	33,576,080.2	50,291,638.1	75,324,226.26	
Other forms of mining	643,581.8	97,6693.9	1,482,964.4	2,250,451.3	3,415,647.3	5,183,978.115	
Distribution activities							
Transportation, transport and communications	24,573,784.4	35,677,203.1	51,797,782.6	75,201,690.6	109,182,506.6	158,511,873.2	
Wholesale and retail commerce	15,095,310.2	19,883,886.6	26,190,670.7	34,499,455	45,442,523.7	59,857,774.67	
Banks and insurance	3,097,312.4	4,368,928.3	6,162,858.3	8,692,958.3	12,261,400.1	17,295,440.56	
Service activities							
Social services	17,250,472.4	21,986,796.1	28,023,519.8	35,717,481.4	45,524,323.5	58,023,381.99	
Personal services	3,851,583.7	5,160,167.7	6,912,257.6	9,260,676.8	12,406,823.4	16,621,544.31	
Home ownership	17,181,003.8	24,578,563	35,161,129	503,004,342.2	71,958,389.4	102,941,328.5	
Gross domestic product	261,657,505.4	389,917,706.4	592,926,053.6	921,517,746.8	1,464,994,401	2,382,052,616	

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Table (6)		GDP Deflators (Billions of Iraqi Dinars)					
Activities	Growth Rate	2009	2010	2011	2012	2013	2014
Crude oil extraction	23.1	4,433.9	5,458.2	6,719	8,271.1	10,181.8	12,533.7
Commodity activities							
Agriculture	76.7	14,321.9	25,306.9	44,717.2	79,015.4	139,620.1	246,708.8
Conversion industry	18.4	2,270.6	2,688.4	3,83.0	3,768.7	4,462.2	5,283.2
Electricity, water and gas	13.0	1,925.8	2,176.2	2,459.1	2,778.8	3,140.0	3,548.2
Building and construction	39.2	5,005.4	6,967.5	9,698.7	13,500.6	18,792.9	26,159.7
Other forms of mining	43.6	6,094.5	8,751.7	12,567.5	18,046.9	25,915.4	37,214.5
Distribution activities							
Transportation, transport and communications	39.6	12,317.7	17,159.5	24,004.9	33,510.8	46,781.1	46,781.1
Wholesale and retail commerce	24.5	4,259.2	5,302.7	6,6601.8	8,219.2	10,233.0	12,740.0
Banks and insurance	21.6	3,424.7	4,164.5	5,064.0	6,157.8	7,487.9	9,105.3
Service activities							
Social development services	13.8	1,866.3	2,123.8	2,416.9	2,750.5	3,130.0	3,562.0
Personal services	31.6	6,262.7	8,241.8	10,846.2	14,273.5	18,784.0	24,719.7
Home ownership	33.2	2,554.5	3,402.6	4,532.2	6,03666666	8,041.2	10,710.9

1.12 Estimates for Gross Fixed Capital Formation (Investment)

Usually, and in light of the data available, the capital coefficient (k/y), i.e., the ratio of capital to output, is used to estimate the magnitude of the investment necessary to achieve the target growth rate. Because it was not possible to calculate this coefficient on a sectoral level, the aggregate capital coefficient was used to estimate the magnitude of investment in gross fixed capital formation. The coefficient is 4:1, i.e., four units of capital are needed to produce one unit of output.

This correlation has been demonstrated by the Iraqi economy over the past decades, particularly during the years 1980-1989, the First Gulf War years. As for the most recent years 2004-2008, in light of the adjustments made to output and formation figures, in light of the proposals to re-evaluate the prices for processed petroleum to national refineries, and in light of the magnitude of subsidies entering into gross fixed capital formation, the decision was made to adopt this correlation until a coordinated time series of overall economic indicators has been prepared.

In any event, a ratio of 4:1 is the acceptable ratio and, in light of this ratio, the magnitude of overall investment was estimated at US\$186 billion. It is arrived at by multiplying the increase in output at fixed prices by 4 and converted using a foreign exchange rate of US\$1 equal to 1,170 dinars.

1.13 Labor Force

To estimate the labor force needed to execute this plan, and using the method of labor to output (L/Y) or productivity (Y/L), the target output increase and assuming a magnitude of investment of US\$186 billion, more than 4.5 million job opportunities will be created and available over the coming years (2010-2014). However, it is worth noting that this figure is for illustrative purposes and may be lower in light of the nature of projects included in the plan and the funding investment that will be achieved from nongovernment funding sources. In any event, it is likely to be no fewer than 3 million job opportunities in addition to what is currently being achieved.

Chapter Two

Population and Labor Force



Population and Labor Force

2.1 Population Development

The International Conference on Population and Development, held in Cairo in 1994, is considered an important turning point in the history of worldwide concern for population policies. Iraq, however, did not participate in the conference, to avoid taking on any direct or indirect commitments with regard to the population policies outlined in the conference's agenda. This created an official absence of declared population policies in Iraq.

For decades, Iraqi development plans had not reflected the crucial relationship between population and development, but instead had sought to neutralize that relationship's positive and negative effects. Positive effects included promotion of investment and growth and improvement of quality of life; negative effects included revival of unsustainable consumption and production patterns that waste Iraq's nonrenewable resources, especially oil.

Population was neglected, as was its status as a functional correlation variable affecting the change in macroeconomic components; the structure of economic activity; equilibrium in the job market; and trends in, and forms of, employment and unemployment. The unavoidable truth is that one cannot comprehensively address the challenges facing the Iraqi economy, now or in the future, outside the framework of a clear vision and objective analysis of the population's demographic, quantitative, and qualitative problems. The current national plan seeks to acknowledge this fact by embodying the developmental correlations between population and development. It seeks to do so by adopting a development policy that reflects our new understanding of these correlations, supports expanded choices for all of the population, and ensures human rights based on the fact that development is development of the people, by the people, and for the people. The plan also seeks to acknowledge the reality of current failures, along with their short- and mid-term effects, and to address them. The biggest developmental challenge in the area of population will be the extent to which it can fulfill the current generation's needs and improve their quality of life without jeopardizing future generations' ability to fulfill their needs.

2.2 Population Size and Growth Rates

The absolute population growth rate in Iraq has risen rapidly and continually and has not been affected by growth or decline in the Iraqi economy over time. This was confirmed by the results of the five general population censuses conducted in Iraq beginning in 1947 and ending with the most recent in 1997. It was also confirmed by population surveys and estimates prepared by the Central Statistics Organization (CSO) in 2003. Data show that the Iraqi population increased from about 8 million people in 1965 to 12 million people in 1977, to 16 million people in 1987, to 22 million people in 1997, to 26 million people in 2003 to 30.5 million people in 2008. The Iraqi population is expected to reach 35 million people by the year 2014.

The absolute population increase is the natural result of the rise in the population growth rate, which remained at the high

rate of 3.1 percent during the 1970s and 1980s. At that time, the government urgently desired to increase it further, so it adopted programs and procedures aimed at providing financial and moral incentives such as encouraging early marriage and increasing provisions for the families of state agency workers with four or more children. The birth rate declined for the first time after 1990. Official estimates indicate that the population growth rate in Iraq fell to 2.8 percent as a result of unique, well-known circumstances in Iraq at that time. Specifically, the overall fertility rate fell from 6.2 percent in 1987 to 4.7 percent in 1993; the infant mortality rate rose from 64.1 per 1,000 births in 1987 to 111.7 per 1,000 in 1994; and the birth rate fell from 43 per 1,000 live births in 1974 to 38 per 1,000 1994.¹ The comprehensive economic embargo also exacerbated the demographic situation and created obstacles that persisted and were compounded by other problems not previously experienced in Iraq. These included a lack of interest in marriage and preference for migration among youths; return of foreign workers to their countries; and an increase in the cost of living.

Iraq went through a complete transformation after 2003 that was replete with variables that affected population demographics, including a decline in the overall fertility rate to 4 percent in 2006 (it still remains 65 percent higher than the international rate of 2.6 percent); a decline in birth rates to 31 per 1,000 people per the results of the cluster survey conducted for 2006; a decline in the infant mortality rate to 35 per 1,000 live births during the period 2001-2005; and an increase in the number of displaced people within and outside Iraq. The International Organization for Migration (IOM) estimates that one-fifth of Iraq's population has emigrated.

Despite the decline in most demographic indicators after 2003, Iraq's population growth rate has remained, and is expected to remain, at 3 percent over the mid- and long term because of increased birth rates and decreased death rates resulting from the expanded provision of preventive care and medical services. This rate is considered the reason that Iraq has been late in entering the demographic dividend zone. Accordingly, the current development plan will seek to contain these population phenomena using procedures and programs with insightful, calculated, and logical objectives that are founded on planning and organizational trends, so that population quantity and quality are used to guide development policy in Iraq with an eye toward sustainable development.

¹ As indicated in various studies, fertility rates affected primarily by the mother's educational level, and despite all circumstances, women's educational rates are increasing (slowly). Fertility rates are therefore falling. Wars and unemployment may lead to an increase in fertility rates.

2.3 Population Structure

2.3.1 By Age

The population growth rate naturally affects the age of population groups and the shape of the population pyramid. Population censuses indicate that there have been tangible changes in the population's age structure. The under-14 year old age group increased from 45 percent in 1970 to 47 percent in 1987 and declined to 44.2 percent in 1997. This trend is best explained by the decline in female fertility rates and the increase in death rates as a result of wars and the embargo. Their share of the population continued to decline after 2003, reaching 38.49 percent in 2008. This is in sharp contrast to countries with high human development, where the rate is no more than 19.6 percent. The high rate increases the burden on the budget, for it requires increased spending on education and health. It also imposes pressures on economic resources to cover the consumption needs of this age group that are outside the scope of economic activity. This trend expanded the base of the population pyramid and gave it the feature of a young pyramid with high economic vitality. The base began to shrink, however, after 2003. As for the working age (15-64 years) population group, it gradually declined from 49.8 percent in 1970 to 47 percent in 1987, as a result of the younger group's relative magnitude. It increased again in the 1990s, reaching 52.2 percent in 1997 as a result of decline in the relative magnitude of the first age group. Statistical surveys have confirmed that after 2003, the gradually increasing trend of this population group continued until it reached 58.44 percent in 2008. In contrast, the 65+ year age group declined from 5.1 percent of the population in 1970 to 3.4 percent in 1987 and 2.8 percent in 1997. It increased slightly after 2003 to reach 3.7 percent in 2008.

2.3.2 By Sex

In Iraq, the ratio of males to females remained almost equal for the entire period between 1970 and 2008. External migration did have slight effects on the percentage of males. Population statistics indicate that males accounted for 51.4 percent and females accounted for 48.6 percent of the total population. These percentages remained relatively stable, with a slight change noted after 2003; the percentage of males declined to 50.88 percent and the percentage of females increased to 49.12 percent of the total population in 2008. External migration is a convincing reason for the decline in the percentage of males in Iraq after the events of 2003.

2.3.3 By Environment

There has been an increase in the urban population as compared to the rural population since 1997, when the rates were 75 percent and 25 percent, respectively. The nature of development policies implemented previously, the mechanism for distributing investments geographically among provinces, and the effects of internal migration all played a role in defining the population's distribution in Iraq. Surveys have shown that internal migration contributed to a 45 percent urban population growth rate during the period 1960-1980. Its contribution declined to 29 percent during the period 1980-1995 as a result of state efforts to limit population mobility through economic,

social, and legal means. There were also reverse migration phenomena during the years of the economic embargo. After 2003 however, the trends in distribution changed. In 2008, the rural population increased to 35.76 percent, while the urban population declined to 64.24 percent. Spreading violence in the main provinces and their centers, as well as forced migration, played a major role in the nature and percentage of that distribution.

2.4 Economically Active Population

The economically active population falls within the 15-64 years age group. They represent the labor force available in the economy. They can be categorized as the employed and unemployed.

The 1997 General Population Census indicates that 23.5 percent of the total population participated in economic activity. This figure increased to 24.8 percent in 1987, declined to 23 percent in 1997, and then increased after 2003 to reach 29 percent in 2008. However, the slight increase and then continued decline for decades, as compared to international rates, was an inevitable result of the economic recession; the lack of employment opportunities available to working-age population groups entering the job market for the first time; and the continuing deterioration in the security situation after 2003, which limited the possibilities for participation by the economically active population of working age.

There was a decline in the rate of participation in economic activity by the working-age population from 45.2 percent in 1987 to 43.6 percent in 1997. There was a relative increase after 2003, when the rate reached 52 percent in 2008. Effectively, participation by the working-age population in economic activity fell by half. These data are considered to be statistical confirmation of the presence of unemployment in the ranks of the actual labor force. However, looking at the distribution of the economically active population by gender males accounted for 46 percent and females accounted for 11 percent in 2008. This explains the decline in the rate of female participation in economic activity, despite the comparable ratio of males to females in the population as a whole, as well as their comparable ratio in the working age population, where females accounted for about 53 percent of the total in both of these categories in 2008. In contrast, the percentage of male participation in economic activity accounted for about 83 percent as compared to females, whose participation was only 17 percent per 2008 statistics (Table 7).

Population and Labor Force

2. Population and Labor Force

Year	2002-2004-2008	Population	Working Age Population	Economically Active Population	Economically Active of Working Age	% of Working Age Population	Economic Activity Rates	Active of Working Age / Working Age Population
2002	Males	12,814,121	6,789,847	5,724,359	5,520,812	52.99	44.67	81.31
	Females	12,750,714	6,670,880	1,201,175	1,173,210	52.32	9.42	17.59
	Males and Females	25,564,835	13,660,784	6,925,534	6,694,022	53.44	27.09	49.00
2004	Males	13,629,337	7,269,084	6,154,288	5,948,151	53.33	45.15	81.83
	Females	13,510,248	7,113,984	1,351,909	1,322,989	52.66	10.01	18.60
	Males and Females	27,139,585	14,596,762	7,506,197	7,271,141	53.78	27.66	49.81
2008	Males	15,394,248	8,274,241	7,129,446	6,916,433	53.75	46.31	83.59
	Females	15,183,550	8,052,637	1,717,759	1,686,677	53.04	11.31	20.95
	Males and Females	30,577,798	16,571,888	8,847,205	8,603,110	54.20	28.93	51.91

2.4.1 Labor Force and Employment

The working-age population is society's inherent power, as it constitutes the available labor force. A portion of that population must be discounted because of voluntary and obligatory unemployment. This increases the degree of dependence in the economy, which were 113 in 1977. It is worth noting that the degree increases as the population growth rate increases when compared to the labor force growth rate. This has been confirmed by historical statistics for the period 1977-1997. The population growth rate was 3.1 percent, while the labor force growth rate was no more than 2.7 percent. That is because, during that period, the labor force was affected by a number of demographic, economic, and social factors including the Iraqi population's age structure, which tended toward a population group under 14 years, the limited availability of educational opportunities that facilitated participation in the job market, and the low rate of female participation in economic activity. Post-2003 statistical surveys conducted in Iraq have confirmed a tangible decline in the degree of dependence within the Iraqi economy. Indeed, it fell to 76 in 2008, when the population's age structure changed and the working-age group increased to 58.44 percent. This increase not only means a decline in the degree of dependence but also the availability of additional labor supply entering the job market, estimated to be about 1,331,970 workers for the 2004-2008 period. This presents a serious challenge to the current development plan, namely, the extent to which it will be capable of creating job opportunities for the additional current and future labor supply in light of productivity, financial, and institutional constraints, as well as the clear disparities in the size and distribution of the labor force by economic activity and sector.

The total labor force in Iraq, both in private and public sectors, was estimated to be 5,072,811 in 2002 and grew to 7,664,177 in 2007. The employment rate of the labor force in the public sector was 19.3 percent in 2002 and declined to 14.7 percent in 2007 because of changes in the form and content of employment in Iraq after 2003. The private sector had a higher rate, which increased from 80.7 percent in 2002 to 85.3 percent in 2007. This disparity in labor distribution rates between the private and public sectors was accompanied by

a clear disparity in the labor distribution by economic activity in 2007. The private sector had the highest employment rates in the fields of agriculture, fishing, and wholesale and retail commerce, where the rate was 98 percent. This was followed by a 90 percent employment rate in the fields of building and construction, 82 percent in the fields of transportation and communications, and 66.5 percent in conversion industries. The private sector recorded a decline in employment rates in the fields of mining, quarries, and extraction at 14.5 percent, water and electricity at 18.5 percent, and the service sector at 35 percent. Employment rates were evenly distributed between the public and private sectors in the fields of finance and insurance. Based upon these data, the NDP seeks to provide the institutional environment necessary to support and promote the private sector as well as render it a principal and effective partner in implementing development objectives, thereby creating new jobs that absorb the increase in accumulated and anticipated labor supply indicated by the statistical data.

Modernization also negatively affected the nature of employment trends in Iraq. The percentage of employees involved in non-commodity activities went from 59 percent in 2006 to 82 percent in 2008, pointing to the conversion industry's inability to absorb the increase in the labor force; only 5.9 percent of employees worked in that sector in 2006. This rate increased to 13.7 percent in 2008, confirming that the labor force's rural-to-urban migration was the result of industrial factors and attraction, as is the case in developed countries. Rather, it was the result of the factors of eviction from rural areas. Looking at the employment structure by gender the rate of female participation in economic activity is low and influenced by institutional, cultural, economic, and legal factors that have exacerbated the severity of this decline when compared to males. This will be addressed in more detail in the section analyzing gender and society in chapter 8.

2.4.2 Unemployment

The high unemployment rate phenomenon was not prominent during the 1980s and 1990s because of the mandatory military

draft that applied to most of the economically active population. The unemployment rate was no higher than 5 percent per 1987 statistics. However, after 2003, unemployment rates skyrocketed, their trends varied, and their underlying reasons multiplied and were compounded by current conditions, resulting in an increase in the unemployment rate to 28 percent pursuant to the CSO's 2003 employment and unemployment survey. The rate subsequently declined to 18 percent in 2006 and 15 percent in 2008 as a result of the employment policy adopted by the government after 2005 that aimed to increase employment by the state and the security apparatus.

The employment and unemployment survey data also showed that unemployment rates among males were higher in 2003, reaching 30.2 percent and declined to 14.3 percent in 2008. In contrast, unemployment rates among females increased in 2008 to 19.6 percent after they had been 16 percent in 2003. The unemployment rate for youth between the ages of 15 and 24 years increased to 30 percent, and the rate for males within that category was 30 percent, as compared to 32 percent for females. Individuals in the 60-64 years age group had the lowest unemployment rate at 4.63 percent based on the results of the 2008 survey.

The differences are even clearer when comparing urban and rural areas. The unemployment rate in urban areas declined from 30 percent in 2003 to about 16 percent in 2008, while the rate declined in rural areas from 25 percent in 2003 to 13 percent in 2008 (Table 8). The lack of security, failure of reconstruction projects to create new job opportunities, decline in investment spending allocations as a percentage of total public spending, absence of foreign investment supporting the principle of national labor employment, and the inefficacy of external grants and loans in creating job opportunities are all considered factors in raising unemployment rates in Iraq.

2.5 Challenges

1. Iraq's population growth rate remains high despite the slight decline over the mid- and long term as a result of the rise in the overall fertility rate, which spurs a continual increase in consumption spending rates to fulfill the needs of consumers in population groups below the working-age as well as the over working-age groups, which are paid for from investment spending.
2. Less than half of Iraq's population are consumers; the rest are producers responsible for helping both themselves and the consumer segment of society. This puts pressure on economic resources and makes it challenging for the job market to create new job opportunities.
3. The decline in the rate of participation in economic activity by the population group between the ages of 15 and 64 years despite the rise in their proportion of the overall population.
4. Unemployment rates are still high. They have noticeably stabilized among the youth category; however, females in this category maintain a higher rate than males.
5. The increase in modernization has had a negative impact on employment trends in Iraq. Statistical data has shown

concentration of the labor force in non-commodity activities at the expense of commodity activities, which has led to increases in their prices.

6. The employment policy has been inefficient in responding to the needs of Iraq's job market because of its overall detachment from the economic mechanisms that should govern the course of its components.

2.6 Policies

1. A sound population policy would aim over the long term to reduce the overall fertility rate and thus the population growth rate so Iraq can prepare to enter the demographic dividend.
2. The Iraqi economy's efficiency must improve by increasing the absorptive capacity of investment in order to increase the level of productivity and output and ensure coverage of the increases in aggregate effective demand for both the consumer and producer categories. This reduces the pressure on economic resources.
3. Advanced training and qualification programs can contribute to empowering the Iraqi labor force and increase its skill level in a manner consistent with and complementary to Iraqi job market needs, thereby increasing the rate of participation in economic activity.
4. Affirmation of women's economic role by adopting a strategy to improve their economic and social conditions would empower them and expand their options and participation. This would, in turn, reinforce the culture of parity and equality between genders in obtaining job opportunities.
5. Iraqi youth need to be empowered and their effective participation encouraged in areas that support the paths of sustainable development.
6. To ensure the efficacy of employment policy, there must be balance for the labor force that achieves harmony between labor supply and demand. The development plan should evaluate the country's actual needs from the available labor force and ensure the accuracy of its quantitative and qualitative sectoral trends.
7. To contain population movements resulting from urbanization, it is necessary to adopt advanced agricultural policies that make rural development a priority, attract and settle migrant labor, correct the sectoral problem of enlarged non-commodity sectors, and encourage the private sector to invest in rural areas and develop animal resources. For its part, the state would provide a comprehensive system of agricultural incentives that encourage investors and farmers to use modern technology and improved seeds to boost farmers' output and income.
8. To address structural problems in the labor force distribution between commodity and non-commodity sectors, it is necessary to select and support the sectors that absorb large numbers of the labor force; that is, sectors that use a labor-intensive and less capital-intensive production approach, such as the construction and building sector

Population and Labor Force

Table 8 Unemployment Rates in Iraq by Environment and Gender for the Years 2003-2008^a

Year	Urban			Rural			Urban and Rural			
	Males	Females	Males & Females	Males	Females	Males & Females	Males	Females	Males & Females	
2003 ²	31.1	22.3	30.0	28.9	6.7	25.4	30.2	16.0	28.1	
2004 ²	28.3	22.4	27.7	31.2	3.1	25.7	29.4	15.0	26.8	
2005 ³	18.6	22.7	19.3	20.2	2.6	16.9	19.2	14.2	18.0	
2006 ⁴	19.7	37.4	22.9	15.0	8.0	13.2	16.2	22.7	17.5	
2007 ⁴	11.4	14.7	11.9	12.3	5.0	11.0	11.7	11.7	11.7	
2008	1 st Quarter	16.0	26.0	17.8	17.3	11.3	16.1	17.1	23.4	18.2
	2 nd Quarter	13.4	25.4	15.5	15.8	8.4	14.0	15.1	19.5	15.9
	3 rd Quarter	12.3	26.1	14.7	14.6	7.5	12.9	13.8	18.5	14.7
	4 th Quarter	10.6	22.5	12.7	11.8	6.3	10.5	11.3	17.4	12.5
Average 2008 ^a		13.7	25.0	15.2	15.2	8.4	13.4	14.3	19.7	15.3

- a Central Statistics Organization. Surveys of Employment and Unemployment in Iraq for the Years 2003-2008.
 2 Excluding the Kurdistan region.
 3 Excluding Erbil and Dahuk
 4 Urban data for the urban centers

and the service sector. This will effectively contribute to addressing high unemployment rates.

9. To achieve a complementary partnership between the public and private sectors there must be an economic/institutional/legal framework that ensures promotion of this partnership and encourages the private sector to increase productive investment rates, embarks on fields that used to be monopolized by the public sector, and build a build-operate-transfer (BOT) method that crowns the efficacy of this partnership.

2.7 Vision

The vision is to design a population policy aimed at achieving a balanced population growth rate that results in better human development and considers job market needs, thereby securing achievement of an optimal employment rate for the labor force.

2.8 Objectives and Means of Achieving Them

The plan seeks to translate the vision by adopting the objectives outlined below.

First objective: Reduction of unemployment rates from 15 percent to 7 percent during plan years by:

1. Adopting a labor-intensive technique in economic activity to create new job opportunities and contribute to absorption of additional job seekers.
2. Supporting sectors that absorb large numbers of workers so as to reduce unemployment, including the construction and building sector and the service sector.

3. Crafting a new economic policy focused on liberating the market and working to support the private sector and reinforce its participation in economic activities so as to promote growth and create job opportunities.

Second objective: Increase in economic participation in general and female participation in particular by:

1. Reconsidering all economic, financial, and business regulations and laws governing promotion of economic activity.
2. Increasing private sector investments through legal, institutional, financial, and monetary incentives.
3. Providing unemployment benefits to help the unemployed start small projects and contribute through various economic activities.
4. Employing programs that promote and reinforce the skills of workers, particularly female workers.

Third objective: To connect educational and training system graduates and labor market needs in terms of educational levels, specializations and skills by:

1. Reconsidering the qualitative and quantitative aspects of the educational and training systems.
2. Benefiting from educational and technological advances and their incorporation in academic curricula.
3. Quick and timely responsiveness to job market needs via a labor force trained using state-of-the-art technologies.

Fourth objective: Improve the quality of the labor force by:

1. Preparing a special training policy that works to qualify labor and takes on a principal role in making the requisite structural changes.
2. Working to restructure training centers throughout Iraq and provide all practical training needs, both material and human.
3. Assumption by training centers of responsibility for improving training levels to enable the private sector to establish small projects.
4. Work to study some international systems that provide training for different skills so as to rely on the best of them, and developing them in a manner that suits the needs of the Iraqi job market.

Fifth objective: To increase the labor force's efficiency and productivity by:

1. Pursuing modern work systems and methods.
2. Directing human resource development programs so as to fulfill the needs of rapid development in various aspects of life and benefit from the incredible advances in the field of information technology.
3. Defining orientations and objectives to develop the skills and capabilities of the working-age population and preparing them for incorporation in the production process.

Sixth objective: Work to create job opportunities throughout Iraq so as to ensure a balanced distribution of the labor force by:

1. Devising a spatially balanced employment policy.
2. Geographically redistributing investments while considering a location's comparative advantage.
3. Keeping labor laws flexible and working to modernize them in accordance with economic and social advances.

Seventh objective: Arrive at the optimal employment level for the labor force by:

1. Diversifying the economy and reinforcing the importance of the growth of non-oil economic sectors.
2. Addressing instabilities in the labor force structure based on their sectoral and gender distribution .
3. Adopting an effective employment policy grounded in reality.
4. Empowering the producer category in the economy.

Eighth objective: Promotion of worker performance levels in the public and private sectors by:

1. Embodying modern administration principles in training programs.
2. Developing trainees' personal skills by adopting high-quality training programs that are consistent with the economy's identified needs.

Chapter Three

Macroeconomy



As of 2010, Iraq has completed a 60 year path of development that can be described as rich in achievements as well as difficult setbacks, which lead the Iraqi economy to a complete collapse. This made the economy vulnerable to the external world in terms of its overall indicators as can be seen when the economy moved from positive growth and development in the 1970s towards the retraction and eventual collapse of the 1980s.

Overall indicators show that Iraq's economy transitioned from a phase of development and growth during the 1970s, to recession and collapse in the 1980s and 1990s, to a stage of recession between 2003 and 2006, and finally to a stage of growth after 2007. This chapter sheds light on the historical development of Iraq's macroeconomic indicators.

3.1 National Income and Per Capita Income

As Iraq implemented consecutive development plans during previous decades, it witnessed severe fluctuations in the national income and per capita national income growth rates. Local production increased in favor of agriculture and industry, while crude oil continued to dominate as the source of foreign currencies. The national income jumped from 938 million dinars in 1970 to 15,440 billion dinars in 1980, i.e., a 939 percent increase between 1970 and 1980.

The extensive efforts exerted in the 1970s to achieve the nationalization of oil and its price increases may explain the substantial increase in the national income during that decade. This growth rate declined in the 1980s, with the national income reaching 13,009 billion dinars in 1985. This was a result of the First Gulf War and stoppage of Iraqi crude oil exports, both of which had negative effects on the national income. However, the increase in national income subsequently continued, reaching 47,942 billion dinars in 1990. It then increased to 46,635 billion dinars in 2000 and fell to 25,729 billion dinars in 2003. The decline resulted from the changes that took place in 2003 as shown in Table 9. National income reached 100,101 billion dinars in 2007, an increase of 74 percent between 2003 and 2007.

Year	National Income (millions of dinars)	Per Capita Income (Iraqi dinars)
2003	25,728,748.0	976,794.0
2004	46,923,315.7	1,728,935.7
2005	65,798,566.8	2,353,058.2
2006	85,431,538.8	2,926,339.0
2007	100,100,816.6	3,372,433.0

Year	GDP at current prices (millions of Iraqi dinars)	Per capita GDP at current prices (Iraqi dinars)	GDP at fixed prices (millions of Iraqi dinars)	Per capita GDP at fixed prices
2003	29,585,788.6	1,123,227.0	26,990.4	1,025
2004	53,235,358.7	1,961,509.2	41,607.8	1,223
2005	73,533,598.6	2,629,674.9	43,438.8	1,226
2006	95,587,954.8	3,274,233.0	47,851.4	1,661
2007	111,455,813.4	3,754,986.0	48,510	1,634

The fluctuations in national income have obviously influenced per capita income. Thus, it increased from 98 dinars in 1970 to 1,166 in 1980, and then decreased to 835 dinars in 1985. For the aforementioned reasons, per capita income rose to 2,680 dinars in 1990 and 1.9 million dinars in 2000. It decreased to 0.98 million dinars in 2003 and then increased again, due to the increase of Iraqi crude oil exports, to approximately 3.4 million dinars in 2007. This constituted an average growth of 24.4 percent between 2003 and 2007 at current prices.

3.2 Gross Domestic Product and Per Capita Gross Domestic Product

Iraq's GDP increased from 1.2 billion dinars in 1970 to 15.8 billion dinars in 1980 at current prices. This constituted an overall increase of 1246 percent and a compounded average growth rate of 29.7 percent between 1970 and 1980. This obviously influenced per capita GDP, which increased from 123 dinars in 1970 to 1,191 dinars in 1980. However, this increase slowed in the 1980s when the GDP fell to 15 billion dinars in 1985. It rose to 56 billion dinars in 1990. Despite this increase, the average rate of GDP growth fell to 13.6 percent at current prices between 1980 and 1990, and 4.5 percent at fixed prices during that period. As a result, per capita GDP fell to 963 dinars in 1985. Undoubtedly, this deterioration was a result of the mobilization of economic, financial, and human resources to support military activities. This deterioration was further exacerbated by the stoppage of Iraqi crude oil exports from the Persian Gulf and stoppage of the pumping of oil through Syria in 1982. This was coupled with reduced production in most industrial establishments because of lack of human resources and insufficiency of foreign currency to import the intermediate commodities and raw materials needed for most economic activities, particularly conversion industries, but the transport and communications sectors as well.

During the 1990s, GDP increased until it reached 6.7 trillion dinars in 1995 and almost 50 trillion dinars in 2000 at current prices. This increase influenced per capita GDP, which increased from 3,126 dinars in 1990 to 326,000 dinars in 1995 and more than 2 million dinars in 2000. Economic growth data indicate that, between 2003 and 2007, the GDP, as measured at current prices (Table 10), increased from 29.6 trillion dinars in 2003 to 111.5 trillion dinars in 2007, a 277 percent increase during that period and an average annual growth rate of nearly 39 percent. When measured at fixed prices, GDP grew from 27 billion dinars in 2003 to 48.5 billion dinars in 2007, a growth rate of 80 percent for that period, or an average growth rate of 16 percent per year. This reflects the presence of high inflationary pressures.

These increases influenced per capita GDP, which increased from approximately 1.1 million dinars in 2003 to approximately 3.8 million dinars in 2007 at current prices, an increase of 234 percent. Per capita GDP also increased at 1998 prices. Specifically, it rose from 1,025 dinars in 2003 to 1,634 dinars in 2007, an increase of 58 percent.

3.3 Gross Domestic Product by Economic Activity at 1988 Prices

Economic sectors have contributed to the GDP at varying rates during the course of Iraqi development. However, despite any variation, oil, mining, and quarries have contributed the most to GDP generation. Their rates have fluctuated over time as a result of unsteady internal and external political and economic circumstances. Furthermore, crude oil prices have been heavily influenced by international factors. Accordingly, its contribution to GDP in the early 1970s was influenced by the nationalization of oil. Specifically, it was only 32 percent in 1970 and increased to 64.5 percent in 1979 as compared to a contribution of 14.1 percent from the agriculture sector, 1.3 percent from conversion industries, and 16.1 percent from the social development services sector.

During the 1980s, these percentages were influenced by involvement in the First Gulf War. The contribution by the oil, mining, and quarries sector to GDP fell 32.7 percent in 1989; the agricultural sector's contribution was 16.5 percent, the conversion industries sector was 14.1 percent, and the social development services sector was 19.5 percent during the same year. These percentages fluctuated during the economic sanctions and influenced the contributions by the various sectors to generating GDP. The contribution from oil, mining, and quarries rose during the economic sanctions period to 50.7 percent, the agricultural sector accounted for 21.3 percent, and the conversion industries' share fell to 8.1 percent after the closure of most factories.

After 2003, the sectors' contribution to GDP was influenced by political and economic events. As Table 11 shows, the contribution from oil, mining, and quarries increased from 59.9 percent in 2003 to 85.8 percent in 2007. The agricultural and industrial sectors' contributions to GDP were no greater than 9.2 percent and 2.3 percent, respectively, in 2007.

Year	2003	2004	2005	2006	2007
Agriculture, forests and hunting	3,850.3	4,521.8	5,939.6	6,195.9	4,479.7
Mining and quarries	13,930.0	19,837.5	18,397.5	19,409.4	20,865.2
Crude oil	13,917.1	19,789.4	18,319.6	19,327.5	20,778.5
Other types of mining	12.9	48.1	77.9	81.9	86.7
Conversion industries	1,243.9	966.6	956.0	1,056.4	1,122.4
Electricity and water	200.0	423.6	489.6	537.4	598.6
Building and construction	258.4	720.3	1,495.0	1,578.5	1,607.9
Commodity sectors	33,412.6	46,307.3	45,675.2	48,187.0	49,539.0
Transport, communications and storage	1,259.9	1,924.0	1,867.6	1,395.8	1,160.2
Wholesale, retail commerce and hotels	1,056.4	2,293.7	2,545.0	2,736.0	2,537.8
Money, insurance and airport services	1,119.9	5,837.5	6,070.1	6,591.7	7,290.5
Banks and insurance	88.7	248.0	307.7	345.6	815.6
Distribution sectors	3,524.9	10,303.2	10,790.4	11,069.1	11,804.1
Home ownership	1,031.2	5,589.5	5,762.4	6,246.1	6,474.9
Social and personal development services	4,241.9	5,289.0	5,901.4	8,590.3	9,115.6
General government	3,891.2	4,666.8	5,260.1	7,925.4	8,533.6
Personal services	350.7	622.2	641.3	664.9	582.0
Service sectors	9,515.0	16,167.5	17,565.2	23,426.7	24,706.1
Total by activity	27,160.7	41,814.0	43,661.8	48,091.4	48,777.9
Less calculated service	170.3	206.2	223.0	240.0	267.3
GDP	26,990.4	41,607.8	43,438.8	47,851.4	48,510.6

3.4 Fixed Capital Formation

The term fixed capital means the material outcome arising from investment, mainly assets such as machinery, equipment, buildings, facilities, and vehicles that are of a fixed nature and are used in the production process. The stages of fixed capital formation are considered strategic components not only in terms of long-term economic variables but also in terms of short-term fluctuations and their effects on the country's overall economic activity. The CSO's historical data sources show that the volume of domestic gross fixed capital formation increased from 120.2 million Iraqi dinars in 1960 to 159.0 million dinars in 1969, a total increase of 32 percent and an average compounded growth rate of 3.2 percent per year as measured at current prices.

In contrast, it rose from 185 million dinars in 1970 to approximately 1,950 million dinars in 1979, a total increase of 953.4 percent and an average compounded growth rate of 29.9 percent per year. This increase was supported by the exceptional increase in investments flowing into the economy as a result of the increase in crude oil revenues. However, gross capital formation fell in the 1980s at an annual rate of -7.5 percent because of the lack of productive capabilities during the wars and increasingly scarce financial and technical. In the 1990s, there was a change in the magnitude of fixed capital formation, particularly after 1995. As measured in fixed prices, it increased from 6.2 billion dinars in 1990 to approximately 116 billion dinars in 1995 and 1,465 billion dinars in 2000.

After 2003, fixed capital formation experienced a tangible increase. As shown in Table 12, between 2004 and 2007 fixed capital formation increased from 2.9 trillion dinars in 2004 to 33.8 trillion dinars in 2007 as measured at current prices. This corresponded to an average growth rate of 128 percent per year during that period. In addition, fixed capital formation grew from 4.3 billion dinars in 2004 to 33 billion dinars in 2007 as measured at fixed prices. This corresponded to an average growth rate of 97 percent per year during the 2004-2007 period.

Year	Fixed capital formation
2004	2,857,807
2005	10,182,362
2006	16,282,945
2007	33,832,163

The invigoration in fixed capital formation during the years 2004-2007 was the result of the increase in government investments of all types, as well as an inflow of donations. Fixed capital formation also increased in the public sector from 2.5 trillion dinars in 2004 to 33.6 trillion dinars in 2007, i.e., a compounded growth rate of 136 percent (Table 13).

Year	Public sector	Private sector
2004	2,487,718	370,088.0
2005	9,743,477	438,885
2006	16,013,395	269,550
2007	33,573,936	258,226

The private sector had a very low magnitude of fixed capital formation. It also witnessed a decline down from the highest levels achieved in 2005. Specifically, fixed capital formation declined from 439 billion dinars to 258 billion dinars in 2007. At its highest level in 2005, the private sector's share of fixed capital formation was still no more than 4.5 percent. The increase in fixed capital formation during that period did not represent a real increase, i.e., the creation of new productive capabilities. Instead, it consisted primarily of compensating for the material destruction and technical losses that afflicted existing production capabilities. If one were to analyze the roles of the public and private sectors, individually by activity, with respect to fixed capital formation, the outcomes below would be noted.

1. The public sector's share of fixed capital formation in the area of commodity activities increased and ranged between 50 percent and 80 percent for the period of 2004-2007. In contrast, the private sector's share in commodity activities, as a percentage of the total contribution, declined to about 28 percent in 2007.
2. The private sector's share in service activities increased. Its lowest share in fixed capital formation in this area was 41 percent in 2007, and it increased to 82 percent in 2005. In contrast, the public sector's share in this activity, as a percentage of total contribution, was low, ranging from 16 percent in 2004 to 45 percent in 2007.
3. The public sector's share in the field of distribution activities was low. Specifically, it was 5.2 percent in 2007 as compared to the private sector's share of 32 percent.
4. Despite the private sector's high share in service and distribution activities, home ownership, and building and construction, its share of gross fixed capital formation remained low at no more than 5 percent. This indicates that the main sectors responsible for fixed capital formation are oil, mining, quarries, electricity, and water. This is in addition to the state's social development services: education, health, water, and sanitation. This explains the public sector's dominance over economic decision making, as it possesses the material production capacities. Accordingly, the private sector did not participate in economic decision making.

3.5 Consumer Spending

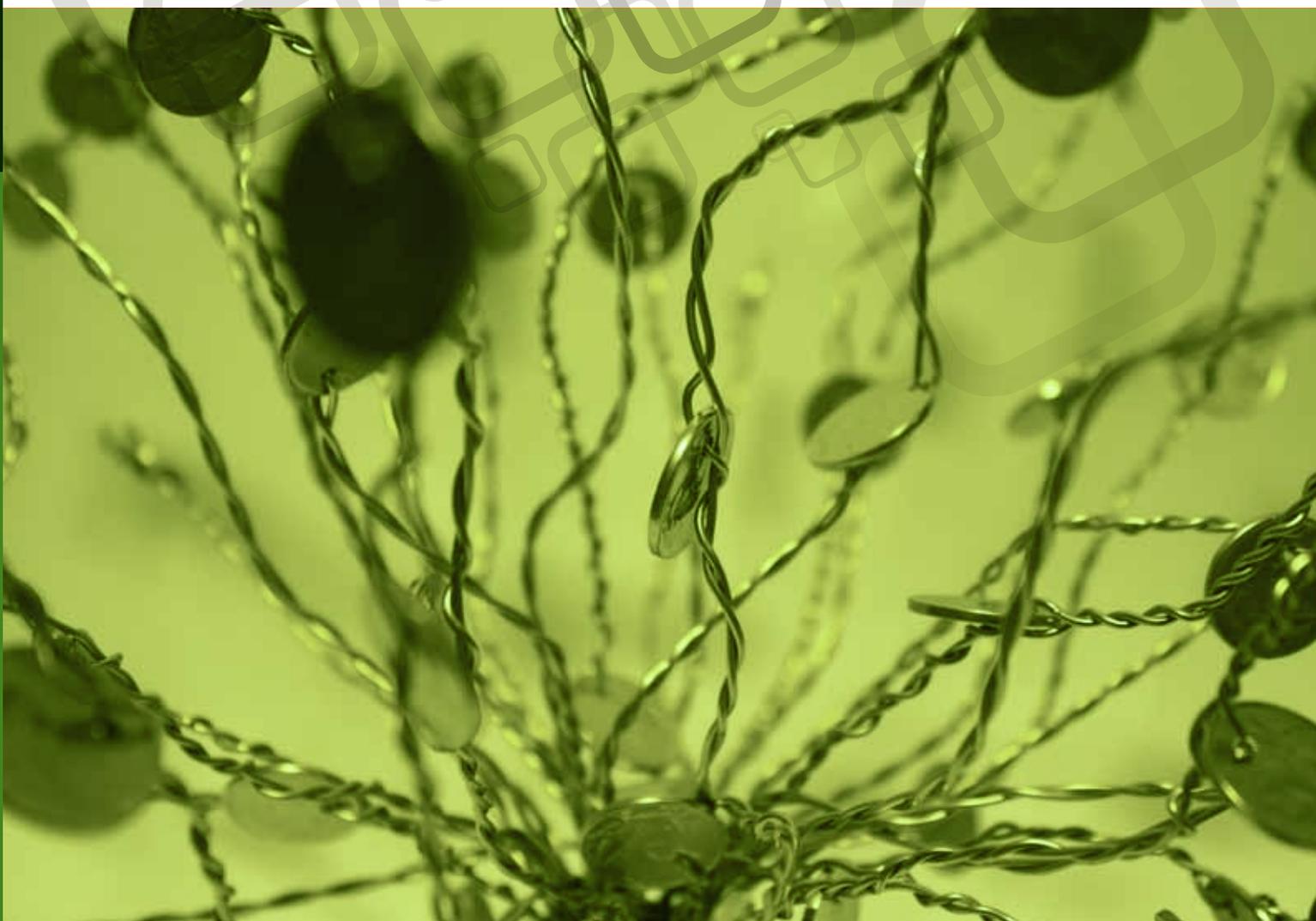
The CSO's historical data sources confirm that there has been a change in total government and private consumption spending over the past decades, increasing from 854 million dinars in 1970 to approximately 6 billion dinars in 1980, 31.4 billion dinars in 1990, and 12.7 trillion dinars in 2000. In the 1970s, private consumption spending accounted for 68 percent of total consumption; government consumption spending accounted for 32 percent of the total. However, these shares subsequently changed in favor of government consumption spending, which accounted for 40 percent of the total in 1980. The situation changed drastically with the imposition of economic sanctions; government consumption spending fell to about 20 percent in 1990 as compared to household (private) consumption spending, which accounted for 80 percent of total consumption spending. Government consumption spending began to increase again in the years following to account for 47 percent of total consumption spending as compared to private consumption spending share of 53 percent. The fluctuation in private consumption spending during the 1970-2000 period can be attributed to the change in per capita income as well as economic and political conditions. The same was true for the fluctuations afflicting government consumption spending, which was characterized by a noticeable increase in the late

1990s and early 2000s. This increase was not accompanied by a significant improvement in government services and relied almost entirely on crude oil revenues, which resulted in competition for investment spending.

Following 2003, the magnitude of total (government and private) consumption spending, as measured at current prices, totaled to about 33 billion dinars in 2004. It increased to about 69 billion dinars in 2007, which corresponded to an average growth rate of 27.4 percent per year. The magnitude of government consumption spending increased from 13.6 trillion dinars in 2004 to 20.9 trillion dinars in 2007. However, this increase was counterbalanced by the decline of government consumption spending as a share of total consumption spending from 41 percent of the total in 2004 to 30 percent in 2007. In contrast, private consumption spending increased from 19.5 trillion dinars in 2004 to 47.7 trillion dinars in 2007, and thus its share of total consumption spending increased from 59 percent in 2004 to 70 percent in 2007.

Chapter Four

The Financial and Monetary Sector



4 The Financial and Monetary Sector

4.1 The Financial Sector

4.1.1 The State's Financial Framework

The state's general budget in Iraq reflects the adopted philosophy with respect to financial policies and social options, the aim being to achieve economic stability, resist inflationary and recessionary pressures, and ensure the continuity of development and achievement of equitable distribution.

The financial policy in Iraq over the past three decades has faced many difficulties and complex options that have threatened economic stability. They included pressure on total demand resulting from increased governmental spending when the spending budget was doubled in the 1980s. Government spending followed a different course in the 1990s as a result of the economic sanctions. This exacerbated the imbalances in the structure of public spending, which grew even more pronounced during the second half of the 1990s. This was the result of continued implementation of government subsidy programs while dealing with the impediments to efficacy stemming from the international control of the Iraqi economy, including the Oil for Food program that began in 1996. Thus, structural imbalances increased and the economic and social disparity among population groups worsened. In turn, this gutted the financial policy of the economic and social content aimed at achieving development objectives and undermined public finance's effectiveness.

After 2003, the new Iraqi government was determined to rectify past errors and increase the effectiveness of public finance. It sought to have financial policy founded on the Iraqi Constitution, which states in Article 110, paragraph three, that designing financial policies falls under the purview of federal authorities. It also states in Article 80, paragraph four, that the public budget, final accounts, and development plans are to be proposed by the Ministers' Council (executive authority). The Iraqi Constitution also gave financial policy a spatial dimension. Article 114 states that comprehensive development policies and public planning for the country fall within the joint purview of the federal and regional governments with respect to financial policies. Specifically, the priorities defined by the region itself are put in place provided they are within the limits of the public spending allocated to the region. Therefore, regional governments focus their planning responsibilities on the strategic options available to them for purposes of development and construction. The current plan has embodied this fact.

Crude oil revenues represent 92 percent of the total federal government revenues. These revenues are exposed to international market fluctuations and are influenced by international prices and demand. This has pegged the stability of Iraq's financial and economic performance to the stability of those revenues. The fall in crude oil prices to less than one-third of their levels in July 2008, because of the global financial crisis, was a difficult challenge that required wise management of revenues on the government's part. Iraq adopted a probable hedging price for exported barrels of Iraqi oil in order to calculate budget revenues and prevent foreign supply shocks from influencing the financial policy's objectives of achieving stability, development, and equitable distribution.

4.1.2 Public Expenses

Public expenses began increasing in 1972. Nationalization of the oil industry, and the attendant increased revenues helped fund the increase in public expenses. Public expenses increased as public services expanded along with governmental interference with respect to compulsory pricing, subsidies, and import expansion. However, this trend was influenced by many internal and external factors during the 1980s and 1990s that altered the rates, trends, and structures of public spending and reduced its overall effectiveness. This, in turn, had economic and social outcomes evidenced by the increase in public spending rates and index prices during the 1990s (with the exception of 1996). Thus, inflation rates grew astronomically and caused the Iraqi Central Bank to become dependent on printing more money to fund government spending.

Public spending continued to increase in 2003 to cover the state's financial obligations, which were inherited from the previous era, and to correct the economic situation by commencing to rebuild, reconstruct, and re-launch development and achieve growth in all activities and sectors. This process necessitated reconstructing the Iraqi economy and resetting policies to ensure that the country's resources were channeled to sectors that achieve development. This led to an increase in total public expenses, as indicated in Table 14, from 33,661.6 billion dinars in 2004 to 59,861.973 billion dinars in 2008, which corresponds to an average growth rate of 15.4 percent per year. Operating expenses constituted 85 percent of overall expenses in 2004 and declined to 74 percent in 2008 in favor of investment expenses, which were no more than 15 percent of the total public spending in 2004, and increased to 26 percent in 2008.

These figures indicate that spending policy between 2004 and 2008 tended to sacrifice economic growth and focus on achieving temporary consumption welfare at the expense of permanent welfare. This is evidenced by the noticeable increase in operating expenses, including employee compensations, which accounted for 37.1 percent of total operating expenses in 2008, and social benefits, which include the public distribution system (the ration card, which constituted 8.9 percent of total operating expenses, and the social safety net, which constituted 1.4 percent of total operating expenses for the same year). Aid accounted for 5.4 percent of total expenses. Subsidies to state-owned agencies and companies accounted for 70 percent of total aid, whereas other expenses accounted for 14.3 percent of total operating expenses.

We do not anticipate that spending on these items will decline in the coming years because their beneficiaries are definitely not ready to waive the benefits they receive. Furthermore, this type of spending has a socio-institutional structure, whereby the state is like a social insurance company that guarantees free subscription to all beneficiaries. Therefore, the current plan seeks to change the trend in the spending policy during the years 2010-2014. It also seeks to do so in a manner that supports an increase in investment spending as a percentage of total public spending. Moreover, it seeks to optimize operating expenses so as to control the magnitude of consumption and ensure that it is consistent with the flexibility of overall supply for commodities and services. The aim of this

Item/ Year	Operational expenditures	Investment expenditures	Total expenditures	Operational To Total %	Investment to Total %
2004	28,547.3	5,114.3	33,661.6	0.85	0.15
2005	28,431.1	7,550.0	35,981.1	0.79	0.21
2006	41,691.2	9,272.0	50,963.2	0.82	0.18
2007	39,051.9	12,675.6	51,727.5	0.76	0.25
2008	44,190.7	15,671.2	59,862.0	0.74	0.26
Composit Growth Rate	11.5	32.3	15.4		

process is to limit the inflationary pressure generated by this type of spending and protect public revenues, particularly oil revenues, from dwindling. Thus, we set limits to free benefits and its associated burdens on the current generation that will also be incurred by future generations.

4.1.3 Public Revenues

In the 1970s, the Iraqi economy enjoyed a large financial surplus that exceeded its absorptive capacity. Public revenues, including oil revenues, grew at a rate of 33 percent. This increase can be attributed to the role of oil revenues whose share of total public revenues increased from 40 percent in 1972 to 80 percent in 1974 and 88 percent in 1979, a sum corresponding to 72 percent of the revenues allocated to funding current spending. This shows us the importance of oil revenues as a source for funding development in Iraq. However, this funding source suffered setbacks in the 1980s. Indeed, with the First Gulf War, the surplus came to an end and the growth rate in total revenues declined along with it by 17 percent. In contrast, in the 1990s, public revenues experienced clear growth, reaching 97 percent during the period 1990-1995. The high growth rate was the result of the borrowing policy adopted by the government from the monetary authority to support public spending. The increase was essentially a monetary increase resulting from application of a funding policy through inflation that was based on printing new currency being the only avenue for funding public expenses. This drove prices upwards and widened the gap between public revenues and expenses. For this reason, actual growth rate for revenues was negative, declining by 393 percent, whereas the nominal growth rate for revenues was positive and increased by 97.8 percent. This feature alone is considered a sufficient explanation for the 394 percent inflation rate experienced between 1990 and 1995 as well as the resulting lack of actual value with respect to these revenues and their failure to fulfill their true funding role.

Year	Oil revenues	Non-oil revenues	Total public revenues	Percentage of change
2004	21,262.9	466.2	21,729.1	-
2005	2,562.3	3,335.6	28,958.6	0.34
2006	42,106.3	3,286.0	45,392.3	0.57
2007	39,092.5	2,973.0	45,064.5	0.07
2008	42,442.2	8,332.9	57,750.1	0.21
Average	18.8	105.6	47.7	-

The situation was no different after 2003. An examination of the changes in public revenues, as set forth in Table 15, indicates that there was a continuous increase throughout the 2003-2008 period, from 21,729 billion dinars in 2004 to 57,750 billion dinars in 2008 with an average compound growth rate of 47.7 percent per year. Oil revenues constituted 83.6 percent of revenues in 2004, increasing to 92.9 percent in 2008. This was a natural consequence of the increase of oil revenues, in absolute numbers, from 21,262.9 billion dinars in 2004 to 42,442.2 billion dinars in 2008, with an average compound growth rate of 18.8 percent per year. In contrast, non-oil revenues increased from 466.2 billion dinars in 2004 to 8332.9 billion dinars in 2008, with an average compound growth rate of 105.6 percent per year during that period. However, their share of total public revenues declined from 16.4 percent in 2004 to 7.1 percent in 2008. This reduction is attributed to the decrease in economic activity in general. This affected the budget by reducing tax revenues, which at best were no greater than 0.94 percent of total revenues in 2004 and increased to 12.8 percent thereof in 2008. In addition, total customs fees declined as a result of the liberalization of foreign trade and the exemption of imports from said customs with the exception of a five percent reconstruction fee applicable to imports other than food and medicines. Furthermore, many state-owned public companies ceased their activities, and a large percentage of consumers stopped paying the fees associated with public services such as water, electricity, and telephones. These factors all contributed to reducing the share of oil revenues in overall public revenues during the period 2004-2008. As in past decades and eras, however, oil revenues maintained their first place ranking with respect to funding development in Iraq.

4.1.4 Overall Deficit or Surplus

Iraq's economic history indicates that there was a structural deficit in the central government's budget in 1972. This was the result of implementation of government procedures pertaining to nationalization of the oil industry which led to a decline in oil revenues. However, in the 1990s, there was a surplus in the central government's budget. This surplus was 27.7 percent greater than the magnitude of spending. Foreign variables also had a positive impact on the magnitude of the surplus in the 1970s. However, they had a negative impact on the surplus during the 1980s, leading to a budget deficit corresponding to 20.2 percent of the central government's total spending for the period 1981-1989. The severity of the deficit increased during the decade of economic sanctions and embargos increasing to 76.5 percent of the central government's overall spending. In light of political and economic developments that happened in Iraq after 2003, as well as the effects of unstable

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international economic conditions, the public budget deficit began to fluctuate between 2003 and 2008. This was the result of the severe influence of strong external factors that affected the deficit both positively and negatively. Table 16 shows that the deficit declined from 11,935.5 billion dinars in 2004 to 7,022.5 billion dinars in 2005 and 5,570.9 billion dinars in 2006. However, it began to increase again in 2007, reaching 9,662.968 billion dinars, a 73.5 percent increase over 2006 levels. In 2008, the budget deficit began to decline, falling to 9,086.892 billion dinars as compared to 2007, a decline of 5.9 percent.

Year	Deficit	Percentage of change	Average compound growth rate
2004	11,935.5	-	
2005	7,022.5	41.2-	
2006	5,570.9	20.7-	
2007	9,662.968	73.5	
2008	9,086.892	5.9-	6.58-

4.1.5 Public Debt

During the 1970s, the government relied on foreign loans to fund public spending on operating and investment expenses. Loans funded about 3.8 percent of operating expenses and 5.3 percent of investment expenses corresponding to about 1.1 percent of the GDP in the 1970s. The main purpose of these loans was to fund development projects set forth in investment plans. Some of the most notable projects were the Japanese loan to construct a fertilizer factory for 1.4 million dinars, the Polish loan to construct a sugar factory in Mosul for 1.4 million dinars, the loan from the International Bank for Reconstruction and Development for 1.1 million dinars, the Kuwaiti loan to build a hydroelectric station, and other foreign loans that combined to account for 15.3 percent of total public borrowing during the period

1970-1979. During the 1970s, borrowing from the monetary authority (treasury transfers) accounted for 82.3 percent of total loans. In contrast, during the first half of the 1980s, foreign loans were sought because of the low level of foreign currency reserves in Iraq. During this period, most foreign loans were Arab loans. Some loans were related to military spending; others were related to the implementation of some development projects, payment of consumption needs, payment of sums owed on previous loans so as to implement projects, and payment for imports. These loans corresponded to 9.9 percent of the GDP for the period 1980-1984, 19 percent of the total public borrowing during the period 1980-1989. The sums borrowed from the monetary authority (treasury transfers) accounted for 80.5 percent of total borrowing. This indicates the magnitude of the burden borne by the Iraqi economy with respect to paying loan installments and associated interest. These loans resulted in a decline in net foreign assets at the monetary authority as well as a short-term imbalance. However, the imbalance may be less of an issue over the longer term if the loans are used to implement development projects that lead to real growth in the

GDP. That is because it would reduce the gap between supply and demand in the long run. During the period of economic sanctions in the 1990s, Iraq did not resort to external loans because of decisions associated with the economic sanctions. Thus, treasury transfers, i.e., borrowing from the monetary authority, constituted 100 percent of total public borrowing during the period of 1990-1995.

Iraq took its first steps to address its debt issue during the first months of 2003, believing that external debts and international compensations were the biggest challenges keeping Iraq from joining the international economy. In 2003, Iraq's debts were estimated to be US\$127 billion according to the World Bank and the Bank for International Settlements (BIS). In contrast, initial data recorded in the supporting credit agreement signed by Iraq with the International Monetary Fund in 2006 indicate that Iraq's loans were US\$114 billion.

On November 21, 2004, the Iraqi government agreed with the Paris Club countries, which consist of 18 plus Korea and whose debts totaled US\$36.8 billion, to reduce Iraq's debts by 80 percent over three stages. During the first and second stages, 30 percent of the debts and the related interest would be reduced according to a set of special international agreements and arrangements. During the third phase, a 20 percent reduction would take place if Iraq were to abide by all of the fund's conditions. Iraq abided by all of the conditions and was released from its restrictions. The magnitude of its external debt was reduced to US\$50,201 billion in 2007 as compared to US\$108,657 billion in 2004, a 53 percent reduction. Moreover, the structure of the external debt also changed, whereby non-Paris Club countries achieved the highest percentage reduction at 83 percent, followed by commercial debts, which fell by 82 percent. On the other hand, the debts from Paris Club countries fell by 68 percent between 2004 and 2007, and internal debt fell by no more than 30.2 percent, decreasing from 6,379,061 million dinars in 2004 to 4,455,569 million dinars in 2008.

4.1.6 Challenges

The current plan is encountering a number of challenges imposed as a result of certain internal and external factors, described below.

1. Weakness of the financial administration, along with difficulty in handling public revenues and expenses and directing them in an appropriate manner, from an economic and social perspective, in accordance with the priorities of development objectives.
2. The fact that the classic method (line-item budget) of preparing Iraq's budgets adopted in 1927 is still in use today. This has caused the budgets to be devoid of a strategic planning vision when prioritizing objectives. They are limited to addressing immediate needs.
3. Severe spending pressures that the plan cannot overcome at this stage as they were caused by the previous and current economic, social, and political circumstances and have resulted in increased inflationary pressures. The financial policy sought to transfer its burdens to the monetary policy so they could be handled with the latter policy's strict tools.

4. The severity of the imbalance in the public spending structure in favor of operating expenses as opposed to investment expenses, which has caused an increase in the levels of effective total demand. It has also hindered development projects and programs aimed at reconstruction and increased the inflexibility of the production system. Thus, it has deepened the severity of the imbalance in the commodity component of national supply in favor of imported commodities.
 5. The inability to generate employment opportunities owing to reduced investment spending as a share of total public spending. The unemployment phenomenon facing those of employment age has become one of the most difficult challenges facing this plan.
 6. Government subsidies, in some of their forms, have exacerbated the severity of the imbalance in the structure of public spending. There is also an imbalance in the structure of the spending on operations. This has burdened the budget with unproductive expenses, per economic standards, and increased the waste in nonrenewable financial resources.
 7. Oil revenues are the main source of financing the objectives of the public budgets in Iraq. This has added a discretionary feature and uncertainty to the budget. It has also limited the budgets' ability to achieve their objectives.
 8. Non-oil revenues have been declining as a percentage of total public revenues. Ineffective tax policies have supported this trend and gutted it of its economic and social content. They have also limited its role in financing development, stimulating private sector activity, and limiting the disparity in income distribution.
 9. The external public debt and its rescheduling have imposed international obligations on the government. These obligations have an economic component that falls within the purview of implementing the provisions of agreements with the IMF and the International Pledge Document in the field of handling and reconstructing the economy of Iraq according to the principles of a market economy.
 10. The ineffectiveness of the policy for managing Iraq's internal public debt as evidenced by the decline in government borrowing to less than 1 percent of the 2008 public budget revenues.
 11. Iraq's dependence on a set of discretionary and hedged price to estimate its revenues. This exacerbates the budget deficit or surplus and forces the government, in case of deficit, to ask the Central Bank to lower interest rates, which is necessarily accompanied by negative economic and social effects.
- 4.1.7 Policies**
1. A comprehensive policy that ensures establishment of a stable environment in the economy as a whole, the main principles are based on the idea of real integration between the financial and monetary policies. Also, one that stimulates economic growth, continues economic stability by controlling inflation rates, controls unjustified public economic and social spending, and achieves equitable distribution.
 2. A financial policy that supports the domestic ability to handle emergency fluctuations in revenues and keeps them in line with spending. Adoption of an economic policy focused on balancing economic openness and economic stability while tempering this approach with an effective role for the state.
 3. Directing and guiding the policy on public spending, the priorities of the current plan, and the objectives of province councils while complying with the requirement to achieve continuous development and avoiding public spending that is not economically or socially justified so as to reduce the budget deficit.
 4. Using good financial governance with respect to Iraq's oil revenues through public budgets developed using scientific methodology, as well as economic and financial standards to direct and mobilize nonrenewable oil revenues toward productive spending fields. Moreover, establishing the bases and frameworks for financial responsibility, transparency, and adaptability to new events is emphasized.
 5. A policy to reform government subsidies so as to move from comprehensive subsidies to subsidies targeting the poor and vulnerable groups. The policy's goal would be to narrow the base of freeloaders in society (reforming the ration card).
 6. An effective tax policy that embarks on reform, and aims to reflect its financial, economic, and social role accurately and seeks to increase the efficacy of tax collection.
 7. Reactivating the role of specialized development banks and transforming their missions from comprehensive banks to specialized banks so they can stimulate and encourage the private sector by offering loans at favorable terms.
 8. Developing and supporting the Iraqi stock market as well as affirming support for all the other monetary establishments so they embody sound, technologically advanced and internationally ratified principles in the area of financial service provision.
 9. Adopting an efficient policy for managing the public debt, the internal and external debts, and disentangling the causal relationship that exists between inflationary pressures on the one hand and qualitative and quantitative public spending trends on the other, as that raises the cost associated with financing investments by creating a crowding-out situation.
 10. Announcing the commencement of privatization of public economic institutions. This would be thereby supporting the course of the spending policy toward reducing its quantitative levels, and changing its qualitative directions so as to ensure it is rational and productive. Also, empowering the private sector and its role in economic activity, as well as laying the foundations for proper transformation toward a market economy at the lowest cost possible.

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4.1.8 Objectives and Means of Achieving Them

The plan intends to adopt the following objectives to face the challenges:

First objective: Limiting the increase of the budget deficits

Means of achieving the objective

1. Financially reconstructing public revenues and expenses
2. Complying with the policy of financial discipline
3. Improving budget resources using nontraditional sources
4. Controlling increases in public spending in general and spending on operating activities in particular so as to achieve financial balance
5. Thoroughly reviewing hedged oil price to ensure a true estimate of Iraq's oil revenues.

Second objective: Scientific method for preparing the budget

Means of achieving the objective

1. Changing the type of budget from a line-item budget to a planning and programs budget
2. Identifying priorities during plan preparation in a scientific and realistic manner that ensures avoidance of the rushed and improvised approaches that were characteristic of previous budgets
3. Making the expenditure productivity and cost-benefit analyses the economic foundations for selecting projects to achieve the budgetary goals
4. Building the executive capabilities of ministries and governmental organizations so as to ensure implementation of a flexible budget. Moreover, seeking to improve the quality and timeliness of financial and economic data issued by governmental departments so as to support the development planning process
5. Applying market principles by gradually removing government from the leadership role in planning and implementation of economic projects. Also, promoting decentralized activities, particularly those of province councils with respect to managing their provinces.

Third objective: Simultaneously reducing the severity of imbalances in the qualitative and quantitative structure of public spending

Means of achieving the objective

1. Increasing investment spending as a percentage of total public spending while considering the economy's absorptive capacity and the executive capability of the organizations concerned
2. Minimizing the base of freeloaders along with expanding qualitative services to the population, including healthcare, water, sanitation, and education
3. Migration from a comprehensive targeting system to one that targets poor and vulnerable groups in accordance with the poverty alleviation policy in Iraq, as well the developmental capacity distribution system and social safety nets.

Fourth objective: Diversifying the sources of non-oil revenues

Means of achieving the objective

1. Increasing the efficacy of tax collection and reducing tax avoidance
2. Imposing indirect taxes like sales tax and the carbon tax
3. Reducing subsidies on services and commodities, particularly nonessential ones, gradually and activating efficacy in fee collection
4. Continuing to rehabilitate the conversion industry infrastructure so as to use available productive capabilities
5. Using the resources available for tourism in general and religious tourism in particular
6. Rehabilitating agricultural infrastructure, particularly irrigation networks; water-logging; and reclaiming agricultural lands
7. Supporting private sector activity and encouraging the sector to enter all investment fields, particularly production fields (commodity fields).

Fifth objective: Responsible administration of the external debt

Means of achieving the objective

1. Strengthening financial management, monitoring, and supervision
2. Developing mechanisms that ensure transparency
3. Entering into agreements with debtors such as Paris Club members and others to reduce debt
4. Seeking a waiver for Iraq from having to pay compensation for the damages of the Kuwait war.

Sixth objective: Guaranteeing the effectiveness of the internal public debt

Means of achieving the objective

1. Restructuring the internal debt in favor of borrowing from commercial financial organizations
2. Depending on treasury transfers to finance infrastructure projects (electricity, water, railroads) and not using them solely to address budget deficits, as that will help address the imbalance in the structure of public revenues in favor of non-oil revenues.

Seventh objective: Reforming government subsidies

Means of achieving the objective

1. Reducing the funds allocated to subsidize fuel so as to remove price distortions and wasteful consumption
2. Moving from all to some and from general to specific with respect to the scope of individuals covered by the ration cards distribution system
3. Restructuring subsidies in the budget and relying on a priority schedule provided it includes the private sector's production activity with support from the capital of specialized banks.

Eighth objective: Establishing a Generations Fund (Sovereign Wealth Funds)

Means of achieving the objective

1. Investing the government's financial surplus in long-term financial investments
2. Applying the economics rule of continuous economic development, thereby enabling Iraq to overcome what is known as "generational imbalances."

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4.2 Monetary Sector

4.2.1 Monetary Policy

The Iraqi Central Bank's monetary policy has not been effective over the past three decades. This policy was set under the auspices of Law No. 64 of 1976. However, it failed to manage foreign reserves, achieve economic stability, or defend a stable exchange rate for the Iraqi dinar. Managing the country's foreign currency sources, mainly oil revenues, was done using a mechanism that necessitated recording the revenues in the foreign reserve account at the Iraqi Central Bank provided its equivalent in Iraqi dinars would be recorded in the Ministry of Finance's account at the Central Bank. That mechanism happened automatically for both the foreign currency and its Iraqi dinar equivalent and continued to constitute a single unit with respect to public budget revenue elements.

Managing the components of the foreign currency reserve, and their roles in supporting monetary policy needs, namely, to achieve stability, support growth, and balance out inflationary pressures, was an issue generally seen as a formality and totally unrelated to monetary policy. That is because the financial policy allowed use of these reserves and considered them highly flexible methods of paying and fulfilling the obligations of the previous regime. This was done by exchanging the Iraqi dinar for foreign currency. For the last three decades of the last century, this view caused monetary policy to follow the courses and trends of financial policy using the public budget. In other words, monetary policy, with all of its tools, supplanted national debt tools with foreign currency when the Iraqi dinar was exhausted. The excessive possession of foreign currency and its replacement with the Ministry of Finance's treasury transfers rendered the Central Bank incapable of addressing domestic liquidity pressures, including demand pressures on foreign currency to finance external commerce. The situation became worse whenever treasury transfers replaced foreign currency by printing new money to fund public budget deficits. This greatly increased domestic liquidity in the absence of a true cover (reserve) of foreign currency for over two decades. Consequently, the Iraqi dinar's external value depreciated and exchange rates fell, causing severe shocks that created unprecedented inflation in prices and continual deterioration in living standards.

Therefore, stabilizing domestic liquidity rates, addressing inflation, and defending a stable exchange rate became impossible tasks for the Central Bank and its management tools, even though such capabilities were desired and expected. For this reason, under the auspices of Law No. 64 of 1976, monetary policy became a hostage to public budget policy and the processes of random spending. This rendered the Iraqi Central Bank's budget nothing more than a reflection of myriad unplanned, uncoordinated activities undertaken in the public budget. Furthermore, financial objectives dominated monetary objectives as the objectives of monetary stability were disregarded. Indeed, the value of the Iraqi dinar and the degree of its stability were linked to policies for financing the growing government deficit. In addition, continual direct and indirect borrowing from the Iraqi Central Bank became a major source of inflation in Iraq in the years that preceded issuance of new Iraqi Central Bank Law No. 56 of 2004.

After 2003, Iraq's monetary authority undertook an important set of procedures and steps in the monetary field. They were aimed at promoting economic and financial stability, developing them, and maintaining the stability of the domestic prices to create a competitive economic environment based on supply and demand and to establish independent objectives and trends and set policies accordingly. Among the important procedures adopted were to replace the domestic currency on 1/15/2004 at a value of 4 trillion of the old Iraqi dinars, license foreign banks, hold a daily auction for foreign currencies, and issue new legislation for banks and the Iraqi Central Bank, namely, Law No. 56 of 2004. This law aimed to reformulate the objectives, methods, and tasks of the Central Bank to reflect a market economy, a bank governed by a clear monetary, banking, and financial environment. The new law expanded the authorities of the Central Bank, granted it independence, and adopted the primary objective of working to maintain the stability of domestic prices. The law also aimed to change monetary policy tools in favor of quantitative (indirect) tools as used in advanced countries; using these new tools would expand the Bank's influence over the banking system, particularly with respect to open market processes, which had not been practiced by the Bank since its establishment and until 2003.

Moreover, under the new law, there were changes made to banks' compulsory (legal) reserves. The Central Bank required banks to maintain reserves in the form of cash holdings or deposits at the Central Bank. No bank was allowed overdrafts from these reserve accounts. Furthermore, the reserve amount was set at 25 percent, provided 20 percent of a bank's deposits were deposited at the Central Bank, and five percent was held in cash in safety deposit boxes at the bank.

Accepting deposits for nightly investment from banks with surplus balances was one of the new trends of the monetary policy. Moreover, the bank adopted an index interest rate (called the Bank Rate), and banks had complete freedom to set interest rates and deal with each other in the market pursuant to any agreed-upon rate. The Central Bank enhanced its role as a supporter of banks by providing credit facilities as the lender of last resort (LLR). These credit facilities took the form of three-month loans to banks facing crises. The loan could be renewed by the Central Bank, provided the banks participated in stabilizing the financial system. The interest rate applicable to these LLR loans was the index interest rate plus 3.5 percent, i.e., an interest rate of 10.5 percent.

The new law demonstrated the Central Bank's independence by giving it the right to refuse to give credit or direct or indirect loans to the government or public entity. The only limited exception was what the Central Bank might do to provide and support liquidity for the benefits of State-owned commercial banks under Central Bank supervision. Such support would be in the form of loans that would have the same provisions and conditions applicable to commercial banks of the private sector. Furthermore, the Central Bank had the right to purchase government bonds provided the purchase was done on the secondary market and in accordance with market mechanisms. In summary, the Central Bank's approach to dealing with the

government consisted of the fact that the ability to print money was independent of the ability to spend money in the public budget.

Thus, the monetary policy of the Iraqi Central Bank enabled the country to stabilize its monetary system and address inflationary activities and waves following great improvement in the exchange rate of the Iraqi dinar, which has risen by more than 40 percent in the last five years. Furthermore, it has built strong foreign currency reserves that are over 44 percent of the actual GDP. The interest rate has played a positive role in strengthening confidence in the Iraqi dinar. In turn, basic annual inflation rates, which exceeded 34 percent three years ago, have now decreased to seven percent per year. This was achieved after a period during which monetary policy had been undermined by widespread use of the dollar, speculation, the development of liquidity alternatives derived from material assets, including commodities and the dollar. These alternatives had functioned like money, as they were a store of value and a monetary liquidity tool beyond the scope of the existing system. These phenomena had led the system to its weakest point in the country's economic history.

The Iraqi dinar's attractiveness today, as a strong national currency, has become the best tool for promoting monetary savings and financial mediation. It is also the proper and suitable path for addressing inflation expectations, which have made dinar substitutes favorite methods of wealth accumulation. The latter have become a form of revenue similar to interest (though superior to the nominal interest offered by banks) and have generated powerful intangible returns caused by inflation. This inflationary trend has become an element of speculation in the economy because it indicates the avoidance of real investments by transacting with material or real assets. They are considered highly liquid assets and can achieve a quick profit, as they can have a high return driven by inflation expectations. Because they are not bank interest rates, they render the market careless about productive activity. That is why the index interest rates adopted by monetary policy were a countermeasure to inflation and the expectations associated therewith. This was done to allow true investment to regain its proper role beyond the scope of inflationary speculation.

Despite all of the complicated transitional political circumstances, monetary policy was able to promote the nation's monetary structure and achieve tangible levels of economic stability. It was also able to defend strong, stable exchange rates and an attractive national currency.

4.2.2 Money Supply

In its narrowest sense, money supply means the total supply of money in circulation plus current deposits. The money supply noticeably increased in the 1970s, going from 217.7 million dinars in 1970 to 1,575.8 million dinars in 1979. This absolute increase is attributed to the nationalization of oil and the increase in oil prices in 1973. The absolute increase in money supply was larger than the actual monetary increase in the GDP. However, in the late 1970s, there was excess demand for cash because the real output was high, with absolute levels that exceeded the absolute levels of the increase in the money supply. This led to a reduction in price levels and production costs, as well as an increase in the real value of the Iraqi dinar. This reflected the degree of responsiveness to the general price level, whether up or down, in the face of changes in the money supply and the GDP.

In the 1980s, money supply increased from 2,650.2 million dinars in 1980 to 11,868.2 million dinars in 1989. This increase is attributed to the increase of credit offered by the banking system to finance the increasing government deficit that resulted from the increase in the public military spending requirement. The percentage of currency in circulation averaged 85 percent of the total money supply during the period from 1980 to 1990, with the remaining 15 percent held in current deposits. This explains why the monetary stability coefficient increased during that period and was greater than one. Indeed, it reached 4.1 percent in 1989. This means that the average growth rate for the money supply was higher than the average growth rate for the GDP. In other words, there was a monetary surplus and an increase in prices.

In the 1980s, money supply grew at an average growth rate of 74 percent, whereas it was 23.7 percent during the decade of the 1990s because the only factor affecting money supply in the 1990s was printing money, i.e., governmental borrowing from the monetary authority. The money supply increased from 15,359.3 million dinars in 1990 to 1,728 billion dinars in 2000 and 3,013 billion dinars in 2002. This increase is explained by the widening gap in the money supply, totaling 775.5 percent during the period of economic sanctions as compared to 153.8 percent during the 1980s. This explains the continual increase in the monetary stability coefficient, which was greater than one throughout the 1990s and exceeded 4.5 percent. The percentage of money in circulation was 87.3 percent in 1990 and decreased to 85.3 percent in 2000, whereas the current deposits were no more than 12.7 percent in 1990 and increased to 14.7 percent in 2000.

Year	Money Supply	Net of currency trading	Current deposits	3 : 1%	2 : 1%
2003	5,774,000	4,630,000	1,144,000	80.2	19.8
2004	10,149,000	7,163,000	2,986,000	70.6	29.4
2005	11,399,000	9,113,000	2,286,000	79.9	20.1
2006	1,546,000	10,968,000	4,492,000	70.9	29.1
2007	217,721,000	14,232,000	7,489,000	65.5	34.5
2008	28,778,872	-	-	-	-

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Per the money supply indicator, after 2003, Iraq continued to apply its expansion policy. The money supply reached its highest level in terms of absolute value (Table 17) when it increased from 5.7 trillion dinars in 2003 to 28.7 trillion in 2008. This great increase is attributed to continual and effective increases in governmental spending within the operating and investment arenas. The growth in money supply can be tracked and compared to the change in the GDP, showing that the money supply grew at a rate of 38 percent during that period as compared to a GDP growth rate of 21.1 percent at current prices and 5.6 percent at fixed prices.

With respect to the components of money supply, the currency in circulation was quite high in 2003 at 80.2 percent. However, that percentage declined to 65.5 percent of total money supply in 2007 as a result of the positive effect of the interest rate that led to an increase in the percentage of current deposits from 19.8 percent in 2003 to 34.5 percent in 2007. Despite this increase, the growth of cash demonstrates that the applicable expansion policy caused inflation pressures. Through the tools of its monetary policy, the monetary authority sought to apply procedures to limit inflation.

4.2.3 Inflation

Inflation is not a new phenomenon in the Iraqi economy. It appeared in the 1970s after the nationalization of oil and the increase in oil prices, as well as the influence of the five-year development plans. However, inflation was no higher than five percent. This rate increased in the 1980s and worsened following imposition of the economic sanctions in the 1990s, which led to stoppage of Iraqi oil exports, a freeze on Iraq's foreign currency accounts, and reliance on the printing of new currency as the sole source for financing public spending. Inflation rates increased as indicated in Table 18, which shows the average annual compound growth rate during the period from 1980 to 2003.

Period	Growth average
1980–1985	10.6 percent
1986–1990	18.6 percent
1991–1995	250.0 percent
1995–2003	12.8 percent
1980–2003	55.9 percent

Table 19 depicts the disparity in the inflation rate before 2003. It confirms that rates increased as a result of the monetary policy applicable at that time, particularly the policy of inexpensive cash and funding the state's budget deficit by printing cash. The rate reached 500 percent in the 1990s despite the strict monetary procedures and policies of the Central Bank, as well as the policy of fixing the dinar's exchange rate against the dollar. The continuation of this policy later strengthened the Iraqi dinar against the dollar and kept it between 1,454 and 1,205 during the period 2003–2008. The magnitude of financial support provided by the state for most ration card commodities also led to an increase in inflation rates.

Year	Inflation rate
2003	32.6 percent
2004	26.9 percent
2005	36.9 percent
2006	53.2 percent
2007	30.8 percent
Average Growth Rate	36.0 percent

The standard price was 32.6 percent in 2003 and increased to 53.2 percent in 2006, but it decreased to 30.8 percent in 2007. This indicates the success of the monetary policy after 2003 in reducing the severity of inflation. It gives a good indicator of the degree of efficiency of the procedures applied by the

monetary authorities toward reducing inflation rates, which is considered the main objective of the Iraqi Central Bank. There are costs and burdens on the budget of the Central Bank associated with achieving this objective. An annual reduction of inflation by 20 percent added purchasing power estimated at 21 trillion dinars to the economy. The cost of the monetary operations undertaken by the Central Bank is 2 trillion dinars; each dinar of cost yields 10 dinars of benefit because of the monetary policy multiplier. This depends on the proper selection of the nominal index (index exchange rate) or index interest rate. Monetary policy has worked to achieve the objective of stability and address inflation by depending on the signal from the nominal exchange rate, which it considers the price of money, and by depending on the signal from the exchange rate, which hit considers the external value of money.

4.2.4 Interest Rate

Since its establishment, the Iraqi Central Bank has relied on the policy of administratively setting the bank interest rate (paid and received). During previous stages, these prices did not change to suit inflation trends. So, they tended to be negative real interest rates during periods when inflation was present in the Iraqi economy over the past three decades. This is evidenced by the increase in the relative magnitude of current deposits as compared to fixed deposits. Indeed, the decline in interest rates as compared to inflation rates made holding cash unprofitable. This had a negative effect on the magnitude of saving deposits and oriented capital toward speculation. Therefore, before 2003, the interest rate had a limited effect.

After 2003, the monetary authorities sought to activate the role of interest rates to encounter inflation and the expectations resulting from it. On 3/1/2003, the interest rate was liberalized, and monetary policy adopted the interest rate as a reference and an operating objective for adopting a policy to counteract the expansion in government current and investment spending, as well as to contain and restrict the inflation rates associated with this spending. To achieve this objective, the Central Bank set the interest rate at six percent in 2004. It later increased to 16 percent in 2006. That was done to make the interest rate in the positive range for the borrower, to stimulate saving at banks, to participate in reducing the burdens of public spending, to withdraw the cash surplus, and to control domestic liquidity.

Year	Interest rate
2004	6.0 percent
2005	7.0 percent
2006	16.0 percent
2007	20.0 percent
2009	6.0 percent

As this trend continued, the interest rate grew to 20 percent in 2007. During 2008, the monetary authority applied continual and accelerated reductions to adapt to decreasing inflation levels. The interest rate was subsequently reduced to 16 percent, 14 percent, and seven percent. The reduction procedures were the result of the relative success in controlling inflation and stimulating bank credit, particularly in the private sector, where investment covered the decline in government spending. That decline in the state's funding capabilities resulted from the international economic crises.

4.2.5 Exchange Rate

Before 2003, the exchange rate was subject to the fixed rate of US\$3.3 per Iraqi dinar. There were 13 exchange rates bearing different names in the parallel exchange market. As a result of the rapid increase in the price of the dollar relative to the dinar, driven by political events, instability, and the approaching change in the pre-2003 regime, the price of the dollar jumped to 1,957 dinars. The reasons included loss of confidence in the Iraqi currency and loss of its role as a store of value. Psychological factors and increased inflation expectation also contributed to the increase.

In early 2003, the exchange rate deteriorated when military operations commenced against Iraq. The price of the dollar rose to 2,541 Iraqi dinars and then 3,000 dinars. However, Central Bank Law No. 56 in 2004 was issued for the purpose of achieving balance between demand for the dollar and its supply and to find a balanced dollar/dinar exchange rate. In addition, the law sought to stabilize the exchange rate so it could reflect price stability and make the domestic currency more attractive. The law also sought to limit the phenomenon of transacting in dollars by providing proper exchange rate signals. All of these factors contributed to an increase in the value of the Iraqi dinar, which then reached 1,218 dinars per dollar, an increase of more than 40 percent in the dinar's exchange rate as compared to 2003.

Table 21 shows the great improvement in the Iraqi dinar's exchange rate resulting from an improvement in oil exports, growth of the trade surplus, modification of the monetary policy to support the external value of the Iraqi dinar, use of interest rate tools to control domestic liquidity, and use of public auctions for foreign currency to achieve balance in the foreign currency market.

Year	Exchange rate
2003	1,936
2004	1,453
2005	1,472
2006	1,475
2007	1,267
2008	1,205

The positive developments in the exchange rate index that were adopted by the monetary policy represent the most important and pivotal change leading to a reduction in total costs within the real economy, promotion of growth, and the increase of total revenues from production activity.

The future strategy of the monetary sector is to continue improving the dinar's exchange rate in a gradual, studied manner, using the indirect tools provided by monetary policy to influence

the factors affecting the exchange rate. These factors include reducing domestic inflation rates, supporting the advantages of foreign payments and reserves, organizing and regulating the foreign currency market, and working to develop other monetary tools, including creating a stock market and attracting foreign investments.

4.2.6 Banking Sector

Despite the prestige and long tradition of commercial banks in Iraq, after 2003, monetary authorities, represented by the Iraqi Central Bank, sought to issue instructions aimed at creating a flexible banking system that can respond to economic, financial, banking, domestic, and international changes by making the sector more efficient and profitable and providing it with financial and monetary certainty. The task of developing the banking system in both the public and private sectors and developing the financial markets became an urgent necessity that was no less important than the objectives set by the monetary authorities.

Banking activity in the private sector showed a noticeable expansion after 2003 as a result of the new economic philosophy that aimed to support the private sector, enhance economic efficiencies, and increase the role of market forces in managing the economy. Table 22 shows that the number of private sector banks increased from 19 to 28, including 6 Islamic banks, during the period from 2003 to 2007. That increase in number of private banks and quantity of their capital was driven by an improvement in oil revenues and the expected growth in demand banking facilities for credit or deposit purposes. The capital of private banks increased to .994 trillion dinars during that period. Moreover, current deposits at private banks increased from 3.4 trillion to 11 trillion dinars in 2007. However, the percentage of current deposits was no greater than 7.3 percent in 2007 as compared to 6.2 percent in 2004.

4 The Financial and Monetary Sector

Table 22 Change in the Number of Private Banks and Their Capital for the Years 2004-2007 (trillions of Iraqi dinars)

Year	Number	Total capital	Bank deposits	Percentage of current deposits percent
2004	19	-	3.4	62
2005	20	-	3.6	53
2006	22	0.663	4.7	57
2007	28	0.994	11	73

Table 23 Change in the number of Public Banks and Their Capital for the Years 2004-2007 (trillions of Iraqi dinars)

Year	Number	Total capital	Bank deposits	Percentage of current deposits percent
2004	7	0.15	5.2	0.99
2005	7	0.165	7.1	0.96
2006	7	0.18	12.2	0.97
2007	7	0.215	16.7	0.99

The number of public commercial banks was seven, which remained steady during the period from 2004 to 2007. Table 23 shows that the banks' capital grew to 215.5 billion dinars in 2007 from 150 billion dinars in 2004. Furthermore, deposits at public sector banks were 5.2 trillion dinars in 2004 and rose to 16.7 trillion dinars in 2007. The percentage of current deposits was between 96 percent and 99 percent between 2004 and 2007. Bank density was no more than 0.2 percent, i.e., one bank per 45,000 people. That was accompanied by an increase in the number of private banks to 28 private banks in 2007, 3 public commercial banks, and 4 specialized banks. Public sector banks had 348 branches, whereas private banks had 201 branches.

Total deposits (Table 24) achieved tremendous results in the public, commercial, and private banks during the period 2004-2007, increasing from 8.6 trillion dinars to 26.2 trillion dinars, an average growth rate of 222 percent. Further, their share of GDP increased from 16 percent in 2004 to 24 percent in 2007.

Table 24 Total Deposits as a Percentage of GDP for the Years 2004-2007 (trillions of Iraqi dinars)

Year	Total deposits 1	GDP 2	2:1 percent
2004	8.6	53.2	16
2005	10.7	73.5	14.5
2006	16.9	95.5	17.6
2007	26.2	107.8	24

As for credit activity, the magnitude of government credit provided by commercial banks increased from 824.6 billion dinars in 2004 to 3,459 billion dinars in 2007 (Table 25). This increase was accompanied by an increase in the percentage of credit provided by public sector banks from 24.7 percent in 2004 to 31 percent in 2007. In contrast, the percentage of credit provided by private banks was 75.3 percent in 2004,

decreasing to 69 percent in 2007. These percentages show us the low level of participation by public sector banks in credit activity in favor of private sector banks. This is because cash accumulated at public sector banks as a result of significant reservations about providing credit. The percentage of liquidity was 84.5 percent in 2003 in commercial banks (public and private), declining to 14 percent in 2007 because the Central Bank adopted measures that helped employ bank liquidity through the currency and stock auctions.

Table 25 Governmental Credit Provided by Commercial Banks (public and private)

Year	Total credit 1	Credit provided by public sector banks 2	2:1 percent 3	Credit provided by private sector 4	4:1 percent 5
2004	824.6	204.0	24.7	620.2	75.3
2005	1,717.4	767.2	45.0	950.2	55.0
2006	2,664.8	783.8	29.0	1,881.0	71.0
2007	3,459.0	1,072.0	31.0	2,387.0	69.0

The private sector took advantage of most credit provided by public and private sector banks. However, that percentage fluctuated from 56.5 percent in 2004, to 39 percent in 2005, and then 53 percent in 2007.

The approach to bank oversight by the Central Bank changed from a controlling governmental oversight based on control of fixed rules to a precautionary (automatic) bank oversight pursuant to Banking Law No. 94 of 2004 and in accordance with organizational and implementation regulations. This allowed the banking system to work flexibly and efficiently to strengthen and rationalize banking performance in accordance with international banking oversight standards.

4.2.7 Challenges

1. To maintain the success of monetary policy in continuing to reduce severe inflation rates from 30.8 percent in 2007 to the single digits in a manner that supports and guarantees continued economic stability and achieves prosperity during plan years.
2. To continue reduction of dollar usage in the Iraqi economy by ensuring the stability of the Iraqi dinar's exchange rate, thereby promoting transactions using the Iraqi dinar, as well as its use as a store of value, through confidence by the public and an increase in demand for the domestic currency.
3. To ensure the independence of the Iraqi Central Bank; specifically, to ensure that the ability to print money is independent from the ability to spend it, with the latter function falling within the purview of the executive authority.
4. To enhance the effectiveness of monetary policy in the areas of achieving economic stability and stimulating economic growth during plan years.
5. An increase in the money supply. This is an indication of

the current expansionary policy and can put pressure on inflation rates. Currency in circulation accounted for 65.5 percent of the total money supply as compared to current deposits, which accounted for only 34.5 percent of the total money supply in 2007.

6. The effects of the continuation of the strict monetary policy that was adopted after 2004 in order to limit expansion in spending and the increase of inflation levels, and countering them with increasing the interest rate from six percent in 2004 to 20 percent in 2007 to stimulate saving in banks.
7. To improve the Iraqi dinar exchange rate in a gradual and studied way using monetary policy tools to affect factors influencing exchange rates such as inflation, the balance between foreign currency payment and reserves, and organization and regulation of the foreign currency market.
8. The decline in bank density, which is no more than 0.2 percent, i.e., one bank per 45,000 people.
9. The increase in the rate of current deposits in private banks, which accounts for 78.7 percent of total deposits as compared to the public sector banks' share of 21.3 percent.
10. Decrease in the percentage of credit provided by public sector banks, which accounted for only 31 percent of credit in 2007 as compared to private banks' share of 69 percent.

4.2.8 Policies

1. To establish an effective monetary policy that continues to suppress the inflation rates arising from the expansionary spending policy during plan years. In addition, activation of monetary tools that stimulate investment and growth using interest rate signals.
2. To resume liberalization of interest rates and remove the monetary restrictions imposed by the Central Bank's credit plan that allocated resources among different economic sectors.
3. To allow foreign banks to work in Iraq in accordance with the Investment Law, and to encourage Iraqi banks to develop mechanisms that improve their practices and create an atmosphere of competition.
4. To establish an anti-money-laundering department at the Central Bank so it can act as a safety valve for the banking sector and protect commercial banks. The department would also participate in normalizing work and enhancing the effectiveness of the banking system in Iraq.
5. To overcome the increase in liquidity rates, and reduce uncertainty. Further, to develop payment systems by developing a real-time gross settlement (RTGS) system, i.e., continuous settlements with no stoppage.
6. To reduce the interest rate so as to stimulate bank credit and encourage increased investments by the private sector in production sectors in accordance with the financial stability situation and the reduction in inflation rates.

4.2.9 Objectives

First objective: Low and stable inflation rates

Means of achieving the objective:

1. Implementing open market processes
2. Stimulating saving through credit activity
3. Reducing the growth of the money supply in favor of current deposits
4. Influencing the flexibility of the production system using financial and monetary policy tools
5. Stabilizing the Iraqi dinar exchange rate.

Second objective: Interest rate signals as a stimulus to investment

Means of achieving the objective:

1. Completing liberalization of the interest rate and reducing rates while achieving economic stability, decreasing inflation, and stimulating investments
2. Establishing bases of competition among banks
3. Confirming the flexibility of credit limits by adopting indirect methods and by adopting preventive oversight methods.

Third objective: Exchange rate stability

Means of achieving the objective:

1. Floating the exchange rate in a manner managed through public bids.
2. Guaranteeing a good coverage rate by reserve monies of no less than a 70 percent benchmark.

Fourth objective: Activating the role of specialized banks

Means of achieving the objective:

1. Supporting bank capital
2. Encouraging interbank lending
3. Ensuring low interest rates over the short term secured through participation of the public budget and the policy of economic development.

Fifth objective: Increasing the rate of bank density in the economy

Means of achieving the objective:

1. Increasing the number of private and public sector banks through a targeted plan
2. Encouraging the opening of private bank branches that are distributed geographically based on population size
3. Encouraging the opening of foreign bank branches.

Sixth objective: Achieving an optimal level of foreign reserves at the Central Bank

Means of achieving the objective:

1. Foreign reserve should not be less than a pre-set percentage based on the value of real non-oil GDP
2. Depositing the surplus reserves of foreign currency in a long-term investment account (sovereign wealth funds).

Chapter Five

Agriculture and Water Resources



5 Agriculture and Water Resources

5.1 Previous Agricultural Policies

Agricultural activity is distinguished by the high sensitivity of natural circumstances, the seasonal and biological nature of the activity, the privacy of agricultural management, the importance of this activity in satisfying basic human needs, and national food security. All of these influence the policies adopted by the state.

In Iraq, all the agricultural strategies and policies undertaken since the middle of the last century aimed at achieving high percentages of food security, a goal that was never reached. However, better food security was achieved during the 1950s and 1960s compared to later decades due to war and economic sanctions. The post-2003 war period has witnessed a negative shift away from this aim as a result of deterioration in the quality of in-use fields and livestock pastures.

5.1.1 Plant and Animal Production Policies

Production Policy

Agricultural policy in past decades aimed at using the available resources to achieve a suitable supply of crops. But production levels failed to meet both society's growing needs for food and livestock and the national industries' need for raw materials. Despite vast planted areas, productivity remained low. The annual production of grains has always been less than required. Since the 1980s, this deficiency has been made up by importing. The deficiency in fodder resulting from limited planted areas and the stoppage of imports in the 1990s led to a decline in the number of farm animals to almost half the number in 1989. Furthermore, almost 75 percent of livestock projects were affected negatively because of the halt of importing concentrated fodder along with the increase in fodder types that are produced domestically to a very low standard.

Composition of Crops

Agricultural activity in Iraq during the winter season is focused on wheat and barley, while in the summer the focus is on vegetables and grains. The annual average planted areas with winter crops in the period 1970-1990 reached 77 percent of the total planted areas in the country; in that same period, the annual average of planted areas with summer crops was 23 percent of the total planted areas. The summer crop planted areas are limited because rainfall is low and irrigation is poor.

Pertaining particularly to grain crops in Iraq, it was noticed that the relative importance of crop composition increased with time, especially during nineties due to the blockade circumstances. They reached 86.3 percent and 86.4 percent in the 1970s and 1980s, increasing to 89.9 percent in the first half of the 1990s, then decreasing to 85.2 percent in the second half of the decade.

Vegetable crops (including onion and potato) are the second most widely produced crops after grains. Areas planted with vegetables constituted 8.3 percent, 8.9 percent, and 9.7 percent of all cultivated land in the 1970s, 1980s, and 1990s, respectively. The relative importance of the oil-producing crops decreased from 2.3 percent in the 1970s to two percent in the 1980s, and then increased to 2.7 percent in the 1990s. Legume and fodder crops decreased in relative importance in

the composition of crops in the 1970s, 1980s, and 1990s by 3.1 percent, 2.7 percent, and 2.4 percent, respectively.

Economic Policies

• Pricing and Marketing Policy

Agricultural pricing policy is an integral part of the overall economic policy in the country. The historical amount of support provided to agricultural production entries proved to be a large hurdle in front of the needed development. A large percentage of fertilizers, pesticides, and seeds distributed to farmers were smuggled abroad. Pricing policy passed through different stages. In the 1970s and 1980s, marketing was compulsory according to prices imposed by the state. Toward the end of the 1980s, during the blockade, the state abandoned this method, immediately affecting strategic crops such as wheat, barley, rice, yellow corn, cotton and sunflower. The state was ready to receive the crops at a certain price, and farmers could market them to the state or the traders. After the events of 2003, the market took on the role of setting the prices of agricultural products and production supplies, and specifying the size and directions of agricultural production. In 2008, a profitable price was specified for barley, wheat, and rice, and farmers were given their freedom to market their products.

• Supply Policy

The agricultural bank and other commercial banks were financing farmers with formal interest rates (18-21 percent) with short-term productive loans and loans for buying production requirements and implementing agricultural projects. Despite this, the agricultural sector was still not developed as intended because of the increase in interest rates on the one hand and the lack of mechanisms to continue lending on the other. After 2003, a 25 billion dinar fund to lend to farmers was established to provide subsidized financing according to suitable guarantees. Finally, the agricultural initiative was made by the Prime Minister in 2008 when six

specialized lending funds were established to give loans without interest to farmers in the fields of gardening, palm trees, using machines and technology, developing livestock, and big agricultural development projects. A sum of US\$240 million was allocated for these funds in 2008, and a similar sum was allocated in 2009. This led to a positive effect in the agricultural field.

• Research and Guidance Policy

The research and guidance field has not received the required attention except at the end of the 1990s and the beginning of the new millennium when a group of national developmental programs were adopted. These programs used an integrated bundle of activities and efficiencies that were adopted by the peasants and farmers. Their aims were to increase productivity by spreading technology and modern production methods. These projects were:

- a. Planting new high-productivity types of rice and developing a system to eliminate the grass that grows after the harvest and influences the growth of crops.

- b. Including fodder beans in the crop cycle of wheat and rice to improve the fertility of the soil.
- c. Developing grain planting in dry areas by using types of grain that have good resistance levels against drought, using best methods in agricultural processes, and planning special crop cycles.
- d. Developing the planting of cotton.
- e. Developing the planting and production of tomatoes.
- f. Developing the yellow and white corn harvest: spreading the planting of spring and autumn crops and raising the standards of crops. Projects should aim to increase white corn production because it can endure saltiness and be included in the crop cycle with wheat.
- g. Rehabilitating domestic animal projects that aim to use 70-75 percent of the components of the domestic animals' fodder from the domestic production of meat and eggs, thus providing employment opportunities in the rural sector.

5.1.2 Water Resource and Land Reclamation Policies

Water Policy

Agriculture in Iraq outside the range of 400 mm of rain per year depends on water from rivers. Even in areas that receive guaranteed, or almost guaranteed, rain, there is a strong need for supplementary irrigation to increase the productivity of the output per donom [Donom is a measure of land that equals about 1,000 square meters] which is currently very low. Since most of the water sources in Iraq are from outside its regional boundaries, and other countries control these sources, Iraq has had to follow water policies that protect it from the dangers of continuous floods in addition to securing a water reserve that is suitable for different usages, especially agricultural usages. The government worked on establishing important points in the infrastructure to control the water, including the barrages system in Kut, Samura, Al-Tharthar, the dams of Al Ramadi and Al-Habania, the dam of Al-Hindia, the dam of Debes, the dam of Diyala, the dam of Al-Faloja, the dams of the middle Euphrates on the banks of Al-Shamia and Al-Kofa, and the dam of Al-Amarah. In the latter stages, at the end of the 1950s, the government started to build dams and reservoirs to prevent floods, store water and reorganize the way it was released, plan for other uses of it, especially for the electric power that was considered a secondary product of the dams. Therefore, the dams of Dokan and Darbankhan were built in the 1950s, and Hudaitha and Mosul dams were added in the 1980s. The system of Al-Tharthar, Humreen Dam, and finally the Great Dam were developed in the 1990s with a total storing capacity of approximately 33 billion square meters. Work on building Bokhmah, Badoush, and Mak'hool, which were to add important storage capacity to Iraq during periods of scarcity of water at that time, stopped for different reasons.

Land Reclamation Policy

Large areas of agricultural land suffer from salinity, being filled with underground water, desertification, and drought. Agricultural plans and policies in past decades aimed at

expanding irrigation networks and water logging to improve soil and its productive capability. This was followed by the reclamation of lands; the area of fully reclaimed land was 2.5 million acres, and semi-reclaimed land was approximately 3.7 million acres. These lands are distributed throughout different areas and provinces of Iraq, as shown in the following figure, and there are still approximately 10 million acres that need reclamation.

The situation of reclaimed lands deteriorated and they were lost because the full reclamation programs did not continue and specialized maintenance works were neglected. The same thing is applicable to the non-serious investment of underground water, especially in areas that contain a renewable reserve of water and fertile water. Watering the land with surface irrigation is used for approximately 95 percent of irrigated areas and is accomplished using correct scientific methods. Less than five percent of crop areas are watered with sprinkling systems. Large parts of these areas are irrigated with underground water and more than half suffer from operative problems, lack of spare parts, and fuel and other problems.

The year 2008 witnessed the opening of the main desalination pumping station, the largest station of its type in the Middle East. It receives salty water from the main station and then drains into the Persian Gulf.

Also in this year, work on integrated reclamation works continued, including covered water logging, and the works of amending and finalizing projects in central and southern Iraq.

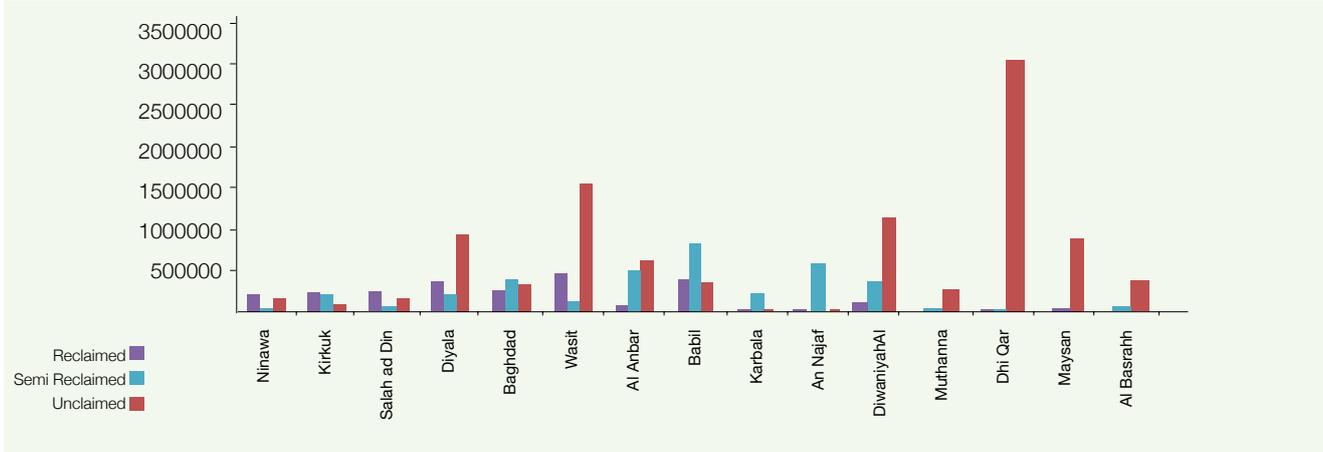
The low cost of producing irrigation water and cost of digging canals has led to reducing its role as an important economic factor in agricultural production, and caused an excessive usage of water and irrational consumption. The cost of making the water available is still done on the basis of the agricultural area regardless of the consumed quantity of water, the frequency of irrigation, or the crop types.

The space of the targeted areas (the area that was studied is estimated to be 12,400,000 acres out of 13,240,000 acres that have shares of water in Iraq) that are served with irrigation and water logging, which should be implemented, has made adding new lands slow (the percentage of the finished areas in all the provinces was 35 percent by the end of 2008) when compared with the arable land that is deteriorating. This was estimated by the Ministry of Agriculture to be approximately 100,000 acres annually because of the increase in salinity of the underground waters and desertification that resulted from mismanagement, using an improper traditional style of irrigation, and planting without relying on technology and modern methods. Weakness in agricultural guidance also played a role; there was little connection between scientific research and guidance and poor coordination between academic research centers and the ministries of related fields. Efforts were further hampered by the cancellation important research organization efforts, such as the Council of Scientific Research and the Aba Center for Agriculture Research.

5 Agriculture and Water Resources

Figure 4

Represents Land According to Reclamation Type on the provincial level



5.1.3 Orientations of the Agricultural Sector in the International Compact Document

The International Compact with Iraq (ICI), like the previous consecutive five-year plans in the country, details agricultural activity as an important part of the Iraq's development due to the numerous roles that this sector plays in the country. These roles include securing the country's food security, diversifying the base of Iraq's economy, developing the countryside, creating more jobs, reducing unemployment and poverty, protecting and improving the environment, and preserving available resources and making the most efficient use of them. The (ICI) specified the general framework for developing the agricultural sector as described below.

1. Developing a fixed, competitive, and continuous agricultural sector in rural areas to improve food security, provide income, create employment opportunities, diversify economic growth, and protect the natural environment in those areas
2. Creating a strong environment for a profitable and competitive agricultural sector that is governed by a market economy, led by the private sector, and supported by suitable government policies and organizational support
3. Developing a comprehensive agricultural policy that merges with the food policy, commercial policy, agricultural policy, water policy, policy of managing environmental and natural resources, and policy of developing the financial market
4. Developing a financing plan from the public and private sectors to support the policies of the agricultural sector, organizational reformations, and infrastructure upgrading
5. Developing land management policy, water policy, and a comprehensive method to solve the water issues of the boards.

Advancement in these fields will:

- Move resources
- Attract foreign investment
- Utilize resources in an organized and efficient manner.

Because of the limited investments that were given to the sector between 2004 and 2008, (between 2.5 percent and 4.5 percent of the total investment), none of the above-mentioned aims were achieved. In addition, the participation of this sector in the GDP and formation of fixed capital was minimal (approximately 10 percent for the GDP and less than one percent for fixed capital formation). In previous periods, they were between 20 percent and 25 percent.

Despite the attention that the national development strategy between 2007 and 2010 and the International Convention Document have given to the agricultural sector, the investments allocated to this sector between 2007 and 2010 were limited, and never Exceeded 25 percent, at best, for water resources and nine percent for the agricultural and animal production sector. Limited resources combined with low implementation rate have hampered tangible development in the essential indicators of this sector.

5.2 Agricultural Production

5.2.1 Plant Production

Arable Land

The total of arable land, irrigated land, and dry land in Iraq is 44.46 million acres. The total area of that land available for irrigation is 22.86 million acres. Of course, covering those lands with irrigation networks depends on the availability of water, especially in light of the current unjust usage by the countries that share mutual rivers with Iraq.

The total irrigated area is 13,240 million acres; it forms 58 percent of the lands that can be irrigated. This is a low percentage, as the Food and Agriculture Organization (FAO) estimates the percentage planted irrigated land in the Middle East and North Africa at an average of 62 percent. A large part of the land is in poor condition because of salinity and the fact that it is filled with ground water, especially in the central and southern areas because of bad operational works, poor maintenance, and lack of integrated water logging.

Planting crop fields occupy a large area of agricultural land,

estimated at approximately 10 million acres, 41 percent of which is in the province Ninawa. The planted area with vegetables and potatoes is 2.5 million acres. Statistics show that there is a reduction in palm tree areas from 32 million trees in 1960 to 16.2 million trees in 1989 and 10 million trees in 2007. The total production was approximately 447,000 tons. This ranked Iraq lower regionally and internationally in the number of the palm trees after being ranked first internationally a few decades ago.

Production and Harvests

Natural factors are still the main influences on determining the production levels and harvests of the main crops in Iraq. That is because the production indicators and field harvest fluctuate strongly according to the years. The production of wheat in 2002 was approximately 2.6 million tons and the productivity of the donom was approximately 392 kg. The production in 1997 was less than 1 million tons and the productivity were 172 kg/donom.

Regarding barley, it reached a peak in 1990 of 1.8 million tons and 232 kg/donom. As for rice, in 2007, it registered the highest production and productivity at approximately 400,000 tons and 790 kg/donom. Production and productivity of field harvests and other harvests varied throughout the years. There are obvious differences in productivity among the provinces with respect to climate, soil, and water resources in addition to manpower capabilities. Regarding harvesting wheat, the provinces of Al-Najaf and Al-Qadisiyyah ranked first in producing wheat in 2007, with 645,666 kg/donom because they have considerable availability of water from on irrigation projects. The lowest productivity was in the province of Ninawa, approximately 169 kg/donom because lack of rain and drought (90 percent of the irrigated area in the province depends on rain). Regarding the barley harvest, the provinces of Al-Qadisiyyah and Wasit ranked first, with 450 kg/donom and 325 kg/donom, respectively, because they depend on rivers to water their crops. The provinces of Ninawa and Saladin ranked very low, with a productivity of 100 kg/donom, because rice requires huge quantities of water. The provinces of Al-Najaf and Al-Qadisiyyah ranked first in planted areas, followed by the provinces of Babel and Diyala. The least planted areas was in the province of Al Muthanna. Concerning the productivity, the provinces of Al Muthanna and Wasit registered the lowest levels of productivity of the harvests.

Dates suffered from significant deterioration in the area of the palm trees fields and production and productivity losses resulting from the consecutive wars. Especially hard hit was the province of Al-Basrah, which had held first rank in the number of palm trees, production, and productivity in past decades until the end of the 1970s. In 2007, the provinces of Saladin and Wasit ranked first in productions, 75 and 74 kg/palm trees, respectively; other provinces like An Najaf, Maysan, Karbala, and Diyala ranked low, with productivity between 44 and 48.5 kg/palm trees.

Fruit is considered an important food for the population and its domestic production does not satisfy market needs. The need for fruit increases when the standard of living of the population improves, as this increases the demand for it. Importing fruit

has economic disadvantages, so improving productivity to meet the demand is important.

The increase in costs to establish fruit fields, the long period between planting and harvest, and a decreasing cost of imported fruit led to weakness in domestic fruit production because it competes poorly with imported fruit on the one hand and with other harvests that have shorter production cycles on the other. In the last few years, production suffered from the spread of diseases, including white fly on citrus trees. Coupled with the low use of pesticides and fertilizers and lack of modern techniques in caring for the fields, this has had a negative effect on the level of productivity and causes a need for imports.

Including grapes, which constitute the largest percentage of summer fruit, the number of fruit trees in 2004 in the country reached 17.2 million trees. The average of productivity was 23.5 kg/tree in the country; in 2007 the number of fruit trees in the country was 18.4 million trees, with a low productivity of 21.1 kg/tree in the country. As for fruit trees in 2004, the number was 8.1 million trees in the country. The average productivity in the country was 13 kg/tree. The provinces of Saladin and Baghdad occupied the first rank and the number of fruit trees in 2007 increased to reach 8.5 million trees in the country, and that was accompanied by a reduction in the average of productivity to 10.2 kg/ tree.

5.2.2 Animal Production

Livestock Wealth

a. The most important animals in Iraq are cows, buffalo, sheep, and goats because they provide food for the people as well as skins and wool that are used for industrial purposes. The last count of livestock wealth, in 2001, showed that there were 1,232,147 cows, 117,778 buffalo, 6,009,139 sheep, and 736,198 goats.

Livestock wealth was influenced by the circumstances of war. Livestock suffered from diseases like foot-and-mouth disease, experienced a scarcity of meadows, and lacked proper veterinary services, leading to the death of many animals. Iraq has the capability to double existing herds, especially in the provinces that have the basic requirements like meadows, factories and stores of fodder and experienced keepers.

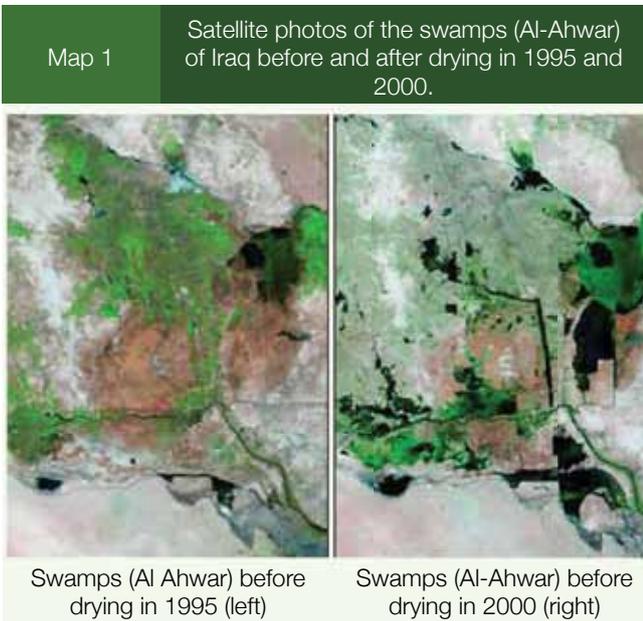
b. Fish wealth decreased from 36,935 tons in 1997 to 25,998 tons in 2001 because of the drying of swamps in Al-Ahwar and the decrease in water levels (40 percent of swamps have dried up significantly). The figure below shows the changes that have occurred in Iraqi swamps. Production of Iraq of fish wealth (from fisheries, rivers, and the sea) in 2005 reached 25.6 thousand tons only; that is identical to what Somalia produces, and 40 times less than what Egypt produces. Certain main species of Iraqi fish have disappeared from the market as a result of fishermen using poisons and explosives to kill them and failing to abide by rules that prohibit fishing during the propagation season, in addition to other detrimental factors including the lack of fodder and medicine as well as the general weakness of the system. Reports of the FAO show that the total production of freshwater fish started to decline

5 Agriculture and Water Resources

continuously in the period following the war. It was between 13,600 and 12,300 tons between 2000 and 2004.

Normal carp constitute the greatest species found in the internal water spaces of Iraq, followed by cyprinid, barbell, Al-Ahmar, Al-Shelk, Al-Baz (barbuse socinus), and Al-Jari. There are large numbers of other species of fish that are not used in the marketplace, like Al-Khashabi and Al-Lassaf. Species that live in the sea include Al-Shank, Al-Bayah, Al-Zubaidi, and some crustaceans and shrimp.

The FAO report stated that the number of fisheries in Iraq was 1,787 at the end of 2003, with 178 fisheries in the north and 1,609 in the central and the southern regions. The main species bred in fisheries are normal carp, grass carp, and silver carp.



The incubators for propagating fish in Iraq are distributed as described below.

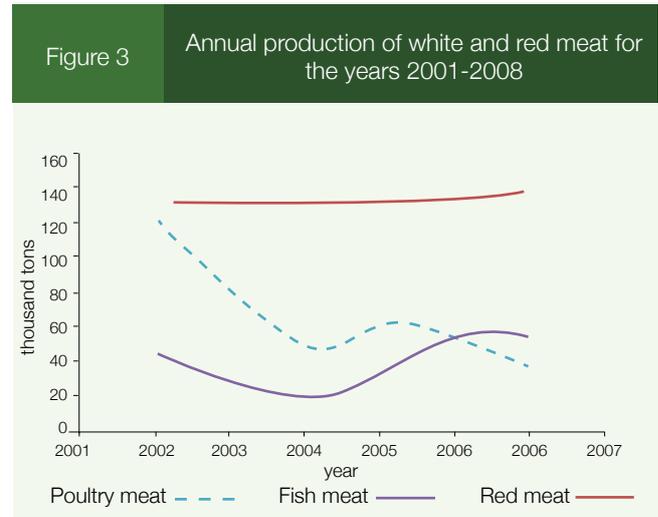
1. Al-Swairah Central Incubation Facility (Fish Farm): the buildings and premises of this project were fully destroyed after the fall of the regime.
2. Erbil and As-Sulaymaniyah: each one of these two fish incubating facilities contains 80 incubators. The production capacity of these two incubators is 15 million larvae.
3. The private sector incubators: There were 24 incubating facilities in 2003 and they contain 749 incubators; their average production capacity is 129 million larvae.

c. Livestock is the main part of the food basket, especially for providing protein. It is also an important source for the raw materials that are the components of many industries.

Animal production in Iraq has not developed commensurate with the food requirements of the population, which high levels of growth in recent years, along with attendant high levels of

income and living standards. The production of red meat has not shown any tangible development since the beginning of this decade (annual production is between 135,000 and 140,000 tons per year); production of poultry meat decreased from approximately 125,000 tons in 2002 to approximately 42,000 tons in 2007. That was a result of an increase in the costs of production, especially the cost of fodder; the inability to compete as a result of flooding the market with cheap products; the loss of important parts of the production process such as the principal fields in Samurra; and the refusal of investors to operate their fields because of the absence of studied support for this industry. All of this has also had negative consequences on the production of eggs, currently at 604 million eggs.

Despite the noticeable increase in the production of fish, from approximately 40,000 tons in 2002 to approximately 58,000 tons in 2007 that is attributed to establishing unlicensed lakes and basins, there is a noticeable decline in fish productivity of the donom in internal water spaces; it does not exceed 4 kg/donom. Some countries have a productivity of 50 kg/donom in this field, and the international average is 35 kg/donom/year. In the fish basins, productivity reaches approximately 50 kg/donom. the following figure shows the development of the production of meat (red meat, fish, and poultry) in Iraq in the current decade.



5.2.3 Sufficiency and Competitiveness of Domestic Plant and Animal Production

Sufficiency of Production

Agricultural production is for direct consumption or for use as raw materials for the food and other industries. Despite the large areas that are planted with the crops, the low productivity of the donom of most of the harvests means that is insufficient for domestic need, and the deficit must be covered by imports.

The value of imports in the private sector in 2002 was US\$372.7 million. The food group constituted a percentage of 47.6 percent of total imports. The value of imports in the private sector in 2003 reached US\$1,129.9million, of which the food group constituted 18.7 percent. The value of the annual

imports of the ration card issued to needy citizens is US\$3.5 billion dollars; most of the items are food materials like wheat, rice, oil, tea, milk, and legumes.

Except for dates, production of most food products is insufficient to meet the needs of the population. Wheat meets about 49 percent of the need; barley, 59 percent; yellow corn, 33 percent; potatoes, 76 percent; tomatoes, 40 percent; red meat, 14.5 percent; white meat, 14 percent; milk, 43 percent; and eggs, 16 percent. This reflects the fragility of food security in Iraq despite its large agricultural capabilities.

Competitive Capability

The quality of Iraqi agricultural products currently is between “acceptable” and “not acceptable” because the wheat and barley crops are of low quality resulting from weakness in their productive characteristics and their susceptibility to diseases. Other basic products like rice, fruit, vegetables, red and white meat, and dates will have a competitive capability if the production and marketing processes are improved to increase the productivity of the donom. This would lead to the decrease of the standard output in addition to protecting the domestic product from the policy of flooding the Iraqi market with cheap agricultural products from neighboring countries.

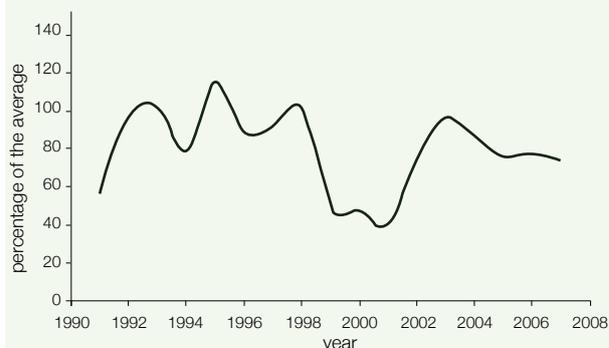
5.3 Water Resources

Iraq lies in an area that is between dry and semi-dry. The annual average rainfall is not more than 200 mm. Approximately half of Iraq is desert. The rain that falls in it is not more than 50mm per year and most of the remaining areas of Iraq benefit from 150 to 450 mm/year, except in a few mountainous areas in the northeast, where rainfall is approximately 1,000 mm/year.

The water resources of Iraq are strongly connected with the quantity of rain and snow that fall in the main river basins (Tigris and its tributaries and Euphrates) and the policy of using the dams and reservoirs that are built on upper parts of the mutual rivers in Turkey, Syria, and Iran. There are no international agreements to share the water between Iraq and these countries. This makes the water resources that are available for Iraq fluctuate from one year to another, as shown in the following figure. Its quality deteriorates because it is kept in reservoirs and polluted water is discharged into them from various industrial agricultural and human activities.

Figure 4

The percentages of the contribution of revenues of the Tigris and the tributaries of the Euphrates to the average



Source: Ministry of Water Resources.

Iraq will witness more shortages in water resources and low quality after Turkey completes its irrigation projects and Syria develops its irrigation projects. That is because Turkey and Syria are aiming at planting more than 2.4 million hectares that will be irrigated from the Euphrates basin, and approximately one million hectares that will be irrigated from the Tigris. This will cause a deficiency in revenues from the Tigris and Euphrates of more than 43 percent in 2015. Therefore, the Ministry of Water Resources is updating the water budget of Iraq (comprehensive planning of water and land), and will establish policies related to managing and investing the water resources. With respect to water resources shared by other countries, a diplomatic approach is required to reach a just division of waters that guarantees the reduction of damages that result from scarcity of water. The countries that share the rivers with Iraq will need to work with Iraq through agreements and strategic treaties based on mutual interests.

Iraq has passed through a bitter experience with water over the year that ended on 30/9/2008 and it has negatively influenced the agricultural production, which was originally undeveloped, and especially livestock wealth for the following reasons:

1. Drought and unsuitable climate conditions
2. Scarcity of water in the Tigris
3. Euphrates and its tributaries
4. Problems in managing and operating some dams
5. Weakness or absence of water guidance.

Climate changes that are happening all over the world may affect the areas in Iraq that are more prone to drought. Therefore, suitable water policies need to be characterized by flexibility, qualified and integrated management systems for water resources, long-term plans, participation of users of water in the responsibility, and consideration of water as a valuable commodity. Iraq will face, sooner or later, tough challenges in securing its continuing water requirements.

Agriculture and Water Resources

5.4 Agricultural Holdings and Legislation Governing the Sector

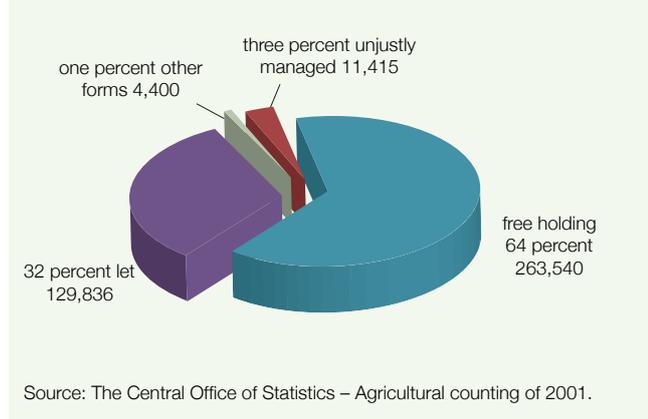
5.4.1 Agricultural Holdings

The agricultural sector in Iraq is characterized by different types of holdings and their small size, the result of continual division as a result of inheritance. Large areas of arable lands have been divided into small holdings that are uneconomic. This forms a big hurdle for agricultural production and is a reason for lack of stability in the sector.

1. Owned lands are completely subject to private holding, and the owner enjoys complete freedom in dealing with them.
2. State-owned lands (Amiri lands) are divided into two types: purely state-owned land that has never been taken from anyone and land that is registered officially in the land registration department and that the government has given to someone with a registration document, but that the government still supervises.
3. Endowment lands.
4. Left lands are lands that are left for different usages and owned by the state.
5. Wastelands, which are deserted and uncultivated lands.
6. Sixty-four percent of all agricultural holdings are free holdings of certain persons. They are divided into small, uneconomic areas in most cases simply because of inheritance; 32 percent of them are let be, three percent of them are poorly managed and one percent are in other forms of holdings.

Figure 5

The number of agricultural possessions and the percentages according to holdings



5.4.2 Legislation Governing the Sector

The Law of Agricultural Holding of 1932 is considered the first law regulating agricultural holding in Iraq. In September 1958, the Law of Agricultural Reformation No. 30 was issued. It regulates agricultural holding and it specified the maximum limit of the area of land that an individual is allowed to own within the irrigated and dry areas in addition to the minimum limit of areas

that are allowed to be distributed to the peasants within the same concept. In 1970, the Law of Agricultural Reformation No. 117 dealt with many of the legal loopholes left in the Law of 1958. In 1983 a law was issued allowing agricultural reclamation for companies and individuals (No. 35 of 1983). These three laws are considered to make up the most important legislation that regulates the work of this sector. In 1985, Law No. 79 and Decision No. 350 were issued; they were concerned with letting the reclaimed lands to university graduates who had studied agriculture. In 2006, the Law of Investment No. 13 that allows the investment within the agricultural sector among the other economic sectors was issued.

The multiplicity of laws, legislations, instructions and continuous change has allowed only a modest area of agricultural possession. This is despite the fact that they have tried to take into consideration the method of irrigation, the level of fertility and the type of crops, and have enriched the performance of the agricultural sector. That is because the holdings in general are below the ideal economic level and they were one of the reasons that caused the deterioration of the agricultural field and its non-development.

5.5 The Private Sector's Role

Though private ownership of agricultural holdings is at approximately 64 percent, the role of the private sector in agriculture remains limited and is affected by government policies that support other supplies of production without a serious attempt to develop the agricultural sector and increase the efficiency of its performance and productivity. Private sector investment in the agricultural sector are mostly limited to projects of livestock wealth (raising domestic animals and fish), i.e., the fields that achieve quick returns. After passage of Law No. 35 of 1983, productive activities in the crops field emerged on relatively large areas in addition to the abandonment of the state of agricultural production projects and the farms of the state in 1987. The farms and livestock operations were privatized, but regulations, the blockade, and the fall of the regime in 2003 did not give privatization the opportunity to develop naturally.

Every economic sector in Iraq has its own problems, but the agricultural sector has suffered from problems that have not resulted from inside the sector itself. The sector has not witnessed, and will not witness, development unless the country becomes stable. As in most countries, prosperity in agricultural activities goes hand in hand with a stable political situation. The following are important challenges that limit the role of the private sector in agricultural activity.

1. After 2003, the labor force that had a background in agriculture was attracted to other activities like the police and army because of higher incomes and fees in those activities and the fact of deterioration in the agricultural sector.
2. The capital required to develop the agricultural sector remained for many decades in the hands of the state. The private sector refrained from investing in agricultural development projects because sufficient funds were not available and there was no confidence between the

private sector and the government. It is now up to the state to prepare and foster the legal environment that will enable cooperation with the private sector in agricultural projects.

3. The nature of ownership is considered one of the main limitations in development of the agricultural sector. The subject of the different types of agricultural holding is still causing arguments, as it is a big hurdle to increased production as well as a contributing factor to Iraq's instability.

5.6 Social Dimensions to Agricultural and Rural Development

Agriculture was the source of living for approximately 64 percent of the population of Iraq in the 1940s and 1950s. The percentage declined gradually, reaching its lowest level in the 1990s (28.5 percent); it then started to increase again, reaching approximately 40 percent in 1997. Most of the data from Iraqi rural areas show that there are two distinguishing phenomena. The first is the reduction in the numbers of those who are economically active in rural areas from the total labor force in Iraq from 16 percent in beginning of the 1990s nineties to approximately 10 percent at the end of the century because of widely spread unemployment in the countryside, especially among young men. This is considered a factor that encourages the continual migration to the city. The second is the increased reliance on women in agricultural labor. The percentage of women in agricultural works in 2000 was more than 50 percent of the total number of workers in agriculture, and this percentage is expected to increase 59 per cent in 2010, according to data from the FAO, making women the main force in field works.

This puts increased pressure on rural women, who also have primary responsibility for family duties and is considered an element in limiting opportunities for developing the countryside. The CSO's public population statistics showed in 1997 that there was a counter-migration from cities to rural areas because of the economic feasibility of agricultural production. This encouraged many inhabitants of cities to move to rural areas and to live in them. But, the migration pattern changed, and people began moving from rural areas to the cities because of the harsh living conditions in the countryside. According to FAO estimates, more than 79 percent of the land resources in Iraq are deteriorating to the point that people choose to migrate.

The attractiveness of the cities is considered one of the reasons in the increase in migration from the countryside. This has increased the unemployment problem in cities and deepened the pressure on populations and public services that was originally fragile. Any fundamental reformation of the rural areas will have positive consequences for both the rural and urban sectors. Stabilizing the rural labor force and alleviating poverty in rural areas will be accompanied by liberation of the cities from the economic, social, and service pressures of migrants from the countryside.

5.7 The Agriculture Sector's Capabilities

The agriculture sector has huge capabilities that make it one of the leading sectors in supporting and diversifying the national economy. These are described below.

1. The existence of approximately 45 million donoms of arable irrigated and dry arable land, 23 million of them with the possibility of being irrigated and 13 million that are already irrigated. This gives a capability to widely utilize the production of plants with a diversified composition of harvests that would hugely participate in achieving the food security of the country.
2. The existence of a large basic herd that consists of primarily sheep, goats, cows, and buffalo, which are a fundamental source of animal protein. Moreover, there is the ability to develop fish and domestic animal and egg production with competitive pricing, unlike in previous decades.
3. The diversity of the environment in Iraq: woods in mountainous areas, deserts, wide desert hills, and swamps (Al-Ahwar). This harbors the opportunity to diversify the production of plants and animals and to use the various environments to develop harvest compositions and competitive productivity. Iraq is characterized by enormous biological diversity; FAO has indicated that more than 40 percent of biological forms are available in Iraq.
4. The existence of good water resources from the Tigris, Euphrates, and their tributaries, and the northern areas of Iraq with rain levels that are between 400 and 1,000 mm/year and other areas with levels that are between 150 and 450 mm/year. It is possible to satisfy additional water needs through supplementary irrigation.
5. The existence of significant human resources to practice agricultural activities. Approximately 30 percent of the population is not efficiently utilized despite their qualification to practice agricultural activities based on their scientific agricultural capabilities.
6. The existence of supportive policies and policies with regard to the inputs and outputs of agricultural experience, despite it characterized as being unstable and having changed its orientations according to consecutive political regimes.
7. The existence of fundamental bases to support the participatory role of private sector activity in the production of both plants and animals.
8. The existence of fundamental bases for laws and regulations in the sector, but ones that need development and updating if they are to form the basis of a comprehensive agricultural revolution in which the private sector would have a leading role.

All these available capabilities of the agricultural sector, if well utilized, will become fundamental factors in developing the sector and supporting its role in attaining food security, creating employment opportunities, developing the countryside, limiting poverty and actively participating in diversifying the Iraqi economy.

5.8 The Agriculture Sector's Challenges

Despite the historical heritage of agricultural activity in Iraq, the agricultural sector has suffered, and is still suffering, from significant problems and challenges that can be summarized as shown below.

1. A severe deficiency in achieving food security for the country from domestic production
2. The limited water resources that can be used for agriculture and the limited available methods of storing it currently compared with the need. Moreover, there is no agreement that gives Iraq a just share of the Tigris and Euphrates. There are related challenges, including:

The random use and waste of water in the agriculture, industry, and civil sectors; the weakness of internal coordination; and the absence of consensus between the main water users, which requires developing a vision and water policy; the weakness of participation of the users of water in managing it and the absence of water guidance; the suitability of irrigating the fields, especially from the rivers.

A flexible system is needed to manage the demand for water to "maximize the utilization of the water that is available for us" and that takes into consideration the social, political, economic, and environmental factors within which this process is managed. The strategies and the tools of managing the demand for water enable to the efficient use of water in addition to just behavioral practices of water usage.

3. The fact that though there is vast arable land in Iraq, the part that is utilized remains small and inadequate. In addition to that, there are challenges that accompany the use of these lands, including:
 - The problem of water logging and salinity of the soil in central and southern Iraq
 - The division of holdings and the small size of holdings hinder agricultural processes, especially the use of machines and modern techniques
 - The spread of gypsum soil in wide areas of the country, which demands special experience and care
 - The increase in the desertification area and the spread of sand dunes, along with degradation, which form a severe danger to agriculture.
4. The severely low productivity of the donom for all crops and farm animals and the increase in prices of these products compared with international prices. There is the possibility of making significant improvements in the productivity of crops and animal farms by adopting modern production and administrative processes and improving guidance.
5. The lack of human resource development and supporting capabilities, including:
 - The prevailing administrative situation as the administrative system is suffering from an

unnecessary increase of the number of employees and management cycles; this has negative influence on its movement, activity, and performance.

- The technical and administrative capabilities of the workers in this activity still need support, development, improvement of guidance tasks, a raised standard of awareness, and negotiations to reach acceptable agreements on improving the quantity and quality of water and guaranteeing a just and acceptable share of water for Iraq.
 - The weakness of coordination between research parties and the executive parties, severe shortages in supplies for practical field research, the necessity for doing this side by side with agricultural guidance and imparting that to local people, and dealing with shortages in the field of agricultural media are essential.
 - Advanced methods are needed to transfer production capabilities in order to narrow the gap that exists between actual needs and achieved production, even partially.
6. The fact that government investment is still less than the required standard and the investment environment is still unattractive for the private and foreign sectors, despite the Law of Investment No. 13 of year 2006, as no investments that could strengthen the agricultural sector were pumped into it. Agricultural investments are the key to continual development and the best method to achieve food security, find more productive employment opportunities, improve the income of rural inhabitants, increase levels of nutrition of rural families, and reduce migration from rural to urban areas.
 7. The fact that applicable laws in the agricultural sector stress the principles of maintaining an everlasting environment, but that they are not properly executed or applied. That is because the illegal hunting, use of poisons and electricity for fishing, and irrational use of fertilizers and pesticides are the dominant practices, in addition to the lack of an effective system for processing recycling sewage water.
 8. The existence of economic, social, educational, and constructional underdevelopment in rural areas. The countryside suffers from a clear decrease in productivity, severe unemployment (especially seasonal), a notable decrease in the level of services, and widespread poverty (approximately 40 percent of the total number of poor people in Iraq). These are the primary causes for migration from rural to urban areas.

5.9 Vision

1. Increase the role of domestic agricultural production in achieving food security; entering the field of exporting dates and fruits; making ideal use of the natural, financial, human; and productive resources that can help Iraq become competitive; utilizing modern technology and foreign expertise; and stimulating the private and foreign sectors to invest heavily in this sector.
2. Increase the participation of agriculture in the GDP, forming a steady flow of capital, considering the agricultural sector

a fundamental sector in diversifying the Iraqi economy, and addressing the issue of poverty that is focused in the Iraqi countryside.

3. Enable Iraq to obtain water rights from bordering countries and provide guidance for internal water consumption.

5. 10 Objectives

5.10.1 Water Resources and Land Reclamation

1. Building nine dams during the period of the National Development Plan to increase water reservation capacity to approximately 33 billion square meters, including the 14.4 billion square meter Bukhma Dam, which will take three years to complete and will generate an electric capacity of 1,500 megawatts.
2. Developing water resources by expanding the gathering of water in suitable areas and reusing wastewater later.
3. Improving water treatment capacity.
4. Working on integrated reclamation of the lands to reach an annual average of 800,000 donoms. Justice in distributing

the reclaimed lands of the provinces, especially in the first years of the plan, should be applied until 4,005 out of the 7,196 million donoms in the 18 provinces are completed.

5. Completing the main debouchments: the Eastern Euphrates, the Western Euphrates, east of Al-Gharaf, west of Al-Gharaf, and east of the Tigris to maintain the quality of the main rivers.
6. Implementing necessary maintenance works according to the operating budget for them. There are 126,000 km of networks for irrigation and canals, and more than 200 water-pumping stations, among other things, that need regular maintenance.
7. Beginning a continuous program of investing in underground water resources.

5.10.2 Agricultural Production

1. Regarding plants, producing wheat in winter, producing potatoes in summer, and developing the production of dates and fruit, as a priority. Secondarily, producing rice, tomatoes, onion, white and yellow corn, fodder legumes, jat, and grass. The following tables show the production plan for the above-mentioned harvests for 2010-2014.

The Production Plan of Wheat for 2010 and 2014 Compared with the Starting Line.

Harvest: kg/donom
Area: 1,000 donoms
Production: 1,000 tons

Table 26			
Crop	Starting line	2010	2014
Irrigated wheat			
Harvest	409.8	450	500
Area	3,526	3,500	3,400
Production	1,445	1,575	1,700
Semi-Irrigated Wheat			
Harvest	409.8	691	1,000
Area1	450	700	1,700
Production	184	484	1,700
Wheat dependent on rainwater			
Harvest	139.3	140	140
Area	2,049	1,950	1,550
Production	285	273	217
Total of wheat			
Harvest	317.8	385.8	543.9
Area	6,025	6,150	6,650
Production	1,915	2,332	3,617

Agriculture and Water Resources

The Production Plan of Barley, Rice, and Yellow Corn for 2010-2014

Harvest: kg/donom
Area: 1000 donoms
Production: 1000 tons

Crop	Starting line	2010	2014
Irrigated barley			
Harvest	275.7	280	300
Area	1,707	1,750	1,800
Production	470	490	540
Dry barley			
Harvest	75.5	100	150
Area	2,919	2,900	2,750
Production	220	290	413
Total barley			
Crop	149.3	167.7	209.5
Area	4,624	4,650	4,550
Production	691	780	953
Rice			
Harvest	750	800	1,000
Area	446	300	300
Production	335	240	300
Yellow corn (grains)			
Yellow corn (irrigated)			
Harvest	609.6	650	850
Area	541	500	300
Production	330	325	255
Yellow corn (irrigated with sprinkling)			
Harvest	609.6	950	1,250
Area	45	145	545
Production	27	138	681
Total yellow corn (grains)			
Harvest	609.6	717.8	1,107.7
Area	586	645	845
Production	357	463	936

Plan for Producing Potatoes, Onion, Tomatoes, and Dates for 2010-2014

Harvest: kg/donom
Area: 1000 donoms
Production: 1000 tons

Crop	Starting line	2010	2014
Potatoes/ spring			
Harvest	3,922	4,000	5,000
Area	77	80	80
Production	303	320	400
Potatoes/autumn			
Harvest	3,899	3,950	5,000
Area	71	80	180
Production	278	316	900
Total potatoes			
Crop	3,931	3,980	5,000
Area	148	160	260
Production	581	636	1,300

Onion			
Crop	2,001	2,200	3,000
Area	57	70	80
Production	113	154	240
Tomatoes			
Crop	3,337	3,350	5,000
Area	335	370	400
Production	1,118	1,240	2,000
Dates			
Productivity	447	450	700
Productivity of palm tree (kg)	55.14	55.5	70

2. With regard to animal production, increasing the number of sheep, goats, and poultry as a priority, then increasing the number of buffalo and camels and achieving significant increases in the production and productivity of t animal

products (white and red meat, milk, and eggs) as shown in the following tables. The plan also calls for giving support for the private sector to rehabilitate livestock wealth projects, especially poultry projects.

Animal:	Annual Growth Rate:	Number of Animals According to Year				
		2010	2011	2012	2013	2014
Sheep and Goat	7%	12,000	12,840	13,740	14,710	16,000
Cow	%7	1,500	1,605	1,717	1,838	2,000
Buffalo and Camel	%5	250	263	276	289	305
Poultry						
Chicken Meat	%10	860	946	1,041	1,145	1,259
Hens for Meat Production	%50	100	150	225	338	500
Chicken Eggs	25%	500	625	782	997	1,250
Hens for Egg Production	%40	30	42	59	83	125

Production	Production of 2014
Red meat ¹	243
Sheep	112
Cows	104
Buffalo and camels	27
White meat	140
Chickens	100
Fish	40
Milk	1,360
Sheep	325
Cows	960
Buffalo and camels	75
Eggs	1,500

1. With 40 percent of births and 60 percent of raising and fattening of herds.

5.11 Means of Achieving Agricultural Objectives

5.11.1 Investment Policy

Emphasizing the importance of agricultural sector in the country's investment policy, both animals and plants, and providing the required water for agricultural use. Focusing investment policy in the sector on securing the fundamental infrastructures, including integrated reclamation of the land; building dams and reservoirs; supporting the activities of research and applicable agricultural studies; breeding new, distinguished species that produce quickly; expanding projects that increase production of ratified seeds; providing veterinary care; fighting agricultural diseases and spreading modern techniques (artificial insemination and embryo transfer); maintaining biological diversity; and establishing natural protection areas with concomitant integrated rural area development, improving rural roads, supporting inhabitants of the countryside, spreading healthcare projects, especially basic ones). The investment plan must equally distribute investments in among the provinces in accordance with the available agricultural capabilities in each and the relative advantages to the country as a whole.

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5.11.2 Supporting the Private Sector

1. Encouraging private and foreign sectors to invest in animal and plant production and establishing industrial agricultural societies on appropriate economic and technical bases and in the field of establishing cooling and freezing storage.
2. Encouraging the public joint-stock companies by developing and strengthening the financial markets with the state participating by buying parts of their shares at the foundation stage and withdrawing them later when the companies become stable.
3. Growing and developing financial markets and adopting credit policies that encourage the private sector to rehabilitate its projects that were halted, and establishing new projects.
4. Continuing to support agricultural inputs and outputs and protecting them from imported products, especially during the term of this plan, to enable the private sector prove itself competitive against imported products.
5. 11. Encouraging the private sector to industrial agricultural based on economic and technical expertise, including reclamation of lands and establishing irrigation and canal networks.
6. Supporting and encouraging investment in promising areas in the western desert to produce fodder and raise animals and encouraging the investment in other agricultural objectives on the borders of deserts.
5. Activating the projects of dams centrally.
6. Completing the connection of the main canals with the main outlet to rid rivers and canals from local pollution.
7. Supporting and expanding agricultural guidance, spreading the application of agricultural researchers, , and expanding guidance projects so that users of water are aware of the importance of the wise use of water, ideally with the participation of the concerned ministries.
8. Strategically invest in underground water dedicating required sums to buy digging equipment and holding the Ministry of Water Resources solely responsible for those resources. Random expansion in digging wells should be limited by preventing private companies, and even the government companies under the control of the state's organizations, from investment except unless they have obtained approval from the Ministry of Water Resources.
9. Taking the limited water resources into consideration in the process of setting future agricultural policies by expanding the application of modern irrigation methods and encouraging the planting substitute crops that consume less water and can resist salinization and drought.
10. Building on the suggestions made by Turkey during water resource negotiations concerning the ideal and rational of water. This calls for focusing on the productivity of the single donom, and it is necessary for the Ministry of Agriculture to take steps to qualify the capabilities of those who utilize the land. This would be done through increasing the production unit of the area of the crops by giving technical support, facilitating the process of obtaining the components of production like fertilizers, machines and fuel for agricultural processes, fighting the forests and the increase of buying prices of crops as a factor that participates in making peasants interested in taking care of planting their lands.

5.11.3 Water Policies

Providing the required quantities and qualities of water has become one of the limitations of agricultural expansion in Iraq. Therefore, it is imperative that this be a priority in the development policies in Iraq in general and the agricultural policies in particular through a wide group of programs and procedures, as described below.

1. Reaching an agreement with the countries that share water from the Tigris and Euphrates and their tributaries (Turkey, Syria, and Iran) to do so according to international agreements and conventions to guarantee that Iraq obtains a quantitatively and qualitatively just share of water.
2. Complete the second stage of the water budget quickly (the strategic study of water and land resources) that the Ministry of Water Resources has undertaken for the various sectors that are beneficiaries and consumers, including agriculture, electricity, transport, swamps (Al-Ahwar), drinking, healthy water, industrial needs, and others.
3. Develop a central plan that specifies the share of water needed in all areas of arable land. Moreover, specify agricultural requirements such as machines, ratified seeds, and fertilizers. Agricultural staff should perform monitoring and evaluation to guarantee appropriate implementation hold rural inhabitants responsible for adhering to the.
4. Applying the principles of integrated management of water resources in coordination with all parties responsible for the ideal use of water resources and maintaining them, including the treatment of sewage and industrial wastewater, not letting it go into the rivers before treating it, and studying the possibility of reusing it.
11. Establishing an information bank in the field of managing water and irrigation to use in the processes of planning, managing the demand for water for different purposes, developing the apparatuses of measuring wastes and levels and methods of collecting hydrological and climate methods about the basins of the Tigris and Euphrates, and documenting them.
12. Continuing to maintain dams and reservoirs and solving problems related to the ideal operation of water resources; building new dams to store quantities of water in suitable areas, with priority given to implementing projects that have complete feasibility studies and available financing.
13. Establishing a national project that deals with studies on international climate change, its effects on the water that comes into Iraq, and the future living conditions in light of expected scarcity.
14. Directing research studies in the concerned ministries and universities toward finding the necessary methods and applications to increase the standard of irrigation; reduce

waste;, use untraditional water resources like sewage and agricultural wastewater; invest in irrigated agriculture; and apply the research results at the level of pioneering projects to make them the initiative to be used by all water consumers. This requires returning to establishing research centers.

15. Considering water an important economic resource and setting a suitable price for it to maintain this wealth.
16. Giving the maintenance of projects, irrigation networks, canals, and reclaimed lands top priority and returning to the method of managing and operating them by establishing independent authorized administrations, as it was in the Law of The Agricultural Interests.

5.11.4 Rural Development

Applying the principle of integrated rural development through the term of the plan to raise the economic, social, educational, and constructional level of rural societies; removing the injustice that they have suffered from in past eras; and reducing the differences between rural areas and urban areas by spreading schools, healthcare organizations, and water and electricity projects using all available power resources, including renewable powers (wind, solar, and biological) in addition to traditional sources of power. It is also suggested that we establish rural roads that connect main villages with the districts and counties to limit migration of rural inhabitants, maintaining the work force in the rural sector, and participating to a large extent in limiting the phenomenon of poverty that is severely concentrated in rural areas of Iraq.

5.11.5 Increasing Productivity and Improving Production

Using all resources available to increase the harvest of the donom, whether tree or farm animal, especially modern machines, fertilizers, ratified seeds, agricultural cycles, and methods of irrigation like sprinkling, dropping, and supplemental irrigation and artificial insemination, embryo transfer; supporting the role of research centers and universities in this field.

5.11.6 Biological Variation

Maintaining biological variations and increasing the flexibility of food production to meet the challenges imposed by climate change. Increasing the number of the natural protected areas and maintaining the ones that are currently available and using gene banks.

5.11.7 Relative Advantage

Capitalizing on the comparative advantage of each agricultural area, starting with planting lands that are suited to different specific crops, and then reducing the levels of crop harvests that are plants grown in unsuitable areas.

5.11.8 Legal Reformation of the Agricultural Sector

1. Issuing special legislation for managing water through the participation of governmental parties and beneficiaries (societies of water users).
2. Limiting the holding of arable lands to two main types:
 - Freehold of individuals or groups
 - State-owned land.
3. Reviewing all laws and decisions that govern agricultural relationships and preparing one comprehensive law with the new reality.
4. Taking care of the mutual ownership issue and the problems of removing joint ownership of arable land to dividing arable lands and fields.
5. Amending the Law of Agricultural Reformation 117 of 1970 (Article 4), paragraphs 3 and 4, to allow a rural inhabitant to benefit from owning the land distributed to him, including the right to waiver it to others more capable with expertise in the agricultural sector.
6. Applying the amended Law 35 of 1983 on the large areas only.
7. Studying the issue of letting those who own lands to repossess them from actual investors.
8. Reviewing the inheritance law so that it won't lead to dividing ownerships in the future but without damaging the legal capacity of inheritance.

Chapter Six

Industry and Energy



6.1 Previous Policies in the Area of Industry and Energy

The industrial sector is one of the most important in promoting the material foundations of any economy. Its importance is even greater in Iraq because the oil sector and its extraction and conversion activities are among the most important activities in the economy. The crude oil sector has garnered considerable attention since the discovery of oil in Iraq at the beginning of the 20th century; policies and procedures were promulgated to develop management, drilling, production, and marketing operations. In 1972, crude oil was nationalized as an important national resource to fund national growth and its attendant economic, social, and developmental dimensions. In the 1960s, 70 percent of oil revenue was directed to the development of economic and service sectors as well as to basic infrastructure. Recently, this figure has declined to 50 percent.

As a result of the oil sector's exceptional importance, consecutive policies and procedures contributed to achievement of important results in crude oil production and export, which reached a peak in 1979 of 3.5 million barrels a day and 3.2 million barrels a day, respectively, as compared to the production and export figures of 1970, which totaled 1.5 million barrels a day and 1.4 million barrels a day, respectively.

The confirmed oil reserve in Iraq is now 12 percent of all world reserves. The confirmed reserve increased from 34 billion barrels in 1970 to 112 billion barrels in 1990 as a result of exploration activities and field development operations. In 2001, the reserves reached 115 billion barrels as a result of studies aimed at reevaluating geological and physical data using modern methods.

In addition to the aforementioned, the importance of widely investing in gas became prominent in the mid-1970s and resulted in construction of the North Gas Plant, whose production capacity has reached 536 million square feet (msf)²/day.

Due to the policies of consecutive governments, less attention was given to the field of conversion. In the 1950s, based upon the recommendations of foreign experts that development policies in Iraq focus on crude oil resources, construction of basic infrastructure, and the agricultural sector as a source of primary and food products, little importance was given by the development program to the conversion industry. The only exceptions were the industries built by the private sector. However, these were also linked to primary agricultural products, such as the textile, sugar, dairy and construction material industries.

Following the change in the political system in Iraq from a monarchy to a republic in 1958, greater attention was paid to the conversion industry. In the 1960s, development plans focused on creating conversion industries in a number of industrial avenues such as the glass and ceramics, refining,

paper, and mechanical industries, as well as traditional industries that existed in Iraq. These were based upon the premise that the conversion industry is a central pillar for building a strong material foundation for the economy and becoming liberated from economic subservience to industrial nations.

The economic plans for this phase considered that establishing these industries and spreading them throughout the provinces would stop mass rural-to-urban migration, particularly to Baghdad, which had exploded during that period. This policy was intensified in the 1970s and 1980s whereby it was greatly expanded into many industrial, engineering, mineral, heavy, chemical and petrochemical industries, as well as traditional industries prevalent in Iraq (food, textiles, and construction) even though some of those industries had no comparative advantage at the regional or international level.

In the 1980s and 1990s, military industries expanded, as well as those that were directly or indirectly related to the military effort. Huge military-industrial complexes were created in various locations around the country. In addition, the industrial sector's investment allocations reached 50 percent of the total investment allocations of some programs in the 1990s. This limited resource availability for other uses, particularly in the agricultural, service, basic infrastructure, and housing sectors, which government investment programs stopped funding as of 1984. The importance given to the conversion industry and the consecutive development plan's policy of channeling large investment amounts into these industries amounted to a contribution of 13.9 percent of the gross domestic product in 1988.

In electric energy, development policies in the 1970s and 1980s focused on this sector because of its importance to prosperity, the powering of production machinery, and economic activity in general. In the 1980s, it was planned that power generation would reach 20 thousand megawatts. A number of thermal energy stations were built with a capacity of up to 1,200 megawatts per station, in addition to the significant energy generation capacity from gas and hydropower plants. In other words, the electricity generation policy relied on the principle of making multiple generation choices available. It also promoted the creation of a national transportation and distribution network, particularly in the 1980s, and the proliferation of thermal energy stations that were planned for throughout the different Iraqi provinces to achieve economies of scale in energy transportation and to reduce waste in energy transportation and distribution networks. There were also plans to connect with neighboring countries to achieve sustainability in electric energy generation for consumers and economic activities.

Pursuant to the pre-2003 ruling regime's orientations, the public sector was in complete control of the oil and electric energy sectors. The private sector's role was not worthy of mention. The private industrial sector did have a clear role in the conversion industry, as its share exceeded 50 percent of the added value of conversion industry activity by the late 1970s. The conversion industry developed in the public sector

² msf = million square feet

in the 1970s and 1980s, and the private sector was given a role in small- and medium-sized industries. In addition, some laws supporting the activities of both the private and mixed sectors were promulgated. These provided many incentives and advantages to the various branches of the conversion industry. The most recent of these laws was Law Number 20 of 1998, titled the Industrial Investment Law for the Private and Mixed Sectors, which enabled the private sector to establish approximately 40,000 small- and medium-sized industrial projects.

Like other sectors, the industrial sector greatly deteriorated and its contribution to the gross domestic product declined, particularly in the areas of electrical energy activities and conversion industries, because of consecutive wars and the economic sanctions imposed on Iraq. This was particularly the case during the 2003 war. Almost all large factories were destroyed, especially those of a military nature. Electric energy generation stations were also destroyed. In addition, many public companies, production laboratories, and energy production plants were looted and vandalized. The subsequent lack of security exacerbated the problem and halted the operations of the private industrial sector. This, in turn, significantly reduced its contribution to the gross domestic product to no more than 3.9 percent in 2008.

After 2003, and due to the fragility of the security and political situation, production declined to record lows in the oil and electricity production sectors. Further, energy policy focused on increasing oil and gas reserves, expanding production and exportation of crude oil, improving its quality, and inviting foreign companies to participate in developing oil and gas fields pursuant to investment agreements and joint production contracts. This policy applied to all energy and conversion industry branches in general. In electricity, the direction was toward building gas generating units to increase production capacity, improve the transport network and control centers, and increase production and transport network reliability so as to achieve electricity connectivity with the transport networks in neighboring countries.

In the conversion industry, for the purpose of operating government industrial facilities in 2004, a plan was drafted for immediate operation. In addition, a loan was secured in the amount of 75 billion dinars for strategic companies. This contributed to commencement of operations at those companies. In 2005 and 2006, a survey was conducted of the conversion and extraction companies (excluding oil) to determine the requisite cost of improvements, which were estimated to be 2,250 billion dinars. However, the amounts collected from investment budgets for 2006 and 2007 were approximately 14 and 42 billion dinars, respectively. This did not match the actual need and resulted in the inability to effectively improve the public sector during those two years. In 2008, 668 billion dinars were collected from the investment budgets. This helped rehabilitate companies and introduce some production lines necessary to improve the industrial reality in Iraq.

With regards to the development of private industrial projects, as of 2006, the state contributed by granting many industrial project permits to the different industrial sectors. It also provided support for industrial projects by giving them loans and preferential rates as well as opportunities to obtain industrial land and operating necessities.

In research and technology, prior policies focused on technical research, particularly military research, and various research centers were established. After 2003, the new policy focused on encouraging scientific research for peaceful purposes, more specifically, research in human and animal pharmaceutical research and diagnostic kits. Research was also conducted in the areas of the chemical and petrochemical industry, packaging, environmental studies, and new and renewable energy resources. Work was conducted with the public and private industrial sector, government ministries, and educational institutions to revamp and improve basic infrastructure and the industrial base in Iraq, as well as to transfer technology and benefit from it.

The policies that followed between 2004 and 2008 for various industrial activities (oil and gas, electricity, the conversion industry), as well as the focus given by the 2007 – 2010 National Development Strategy to this sector, called for average annual growth of 13 percent in the oil sector and 37 percent in the non-oil sector, measured in current prices. This would be achieved using domestic investments and encouraging foreign investment. However, the magnitude of actual investments in the conversion industry and electricity sectors was much smaller than those the strategy said should be paid out of investment budgets. In addition, foreign investors were reluctant to invest in this sector. Accordingly, the industrial sector was not able to return to the levels attained in 1980 in terms of its share of the national economy. In addition to the aforementioned, the conversion industry was saddled with 19 dissolved military industrial companies in need of major overhaul and a change in the nature of their operations from military to civilian. It was also saddled with 9 companies destroyed in 2009.

As a result of consecutive wars, sanctions, and security conditions, industrial activity, including oil, witnessed fluctuations in its contribution to the gross domestic product when measured at current prices. It reached 66.4 percent in 1979, for example, and then declined to 34 percent in 1988. It increased again to 76.2 percent in 2001, then dropped again to 60.6 percent in 2004, then reached 58.3 percent in 2008. When analyzing the change in industrial activity's contribution to the gross domestic product for the year 2008 as compared to 2004, one notices a progressive increase in its contribution rate of 178.6 percent at current prices but only 16.6 percent at fixed 1988 prices.

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Table 31 Domestic Production and Output for Industrial Activity (Oil, Gas, Electricity, Conversion and Extraction industries)

Year	Production	Gross domestic product at current prices	Growth rate compared to 2004	Gross domestic product at 1988 prices	Growth rate compared to 2004	Worker compensation	Surplus from operations and outflows
2004	35,936,966.4	32,235,265.2		21,227.7		844,546.3	31,315,837.1
2005	48,565,655.3	44,088,536.2	36.8	19,843.1	6.5-	919,428.1	42,983,450.4
2006	61,163,230.4	55,283,502.8	71.5	21,003.2	1.1 -	1,105,085.8	53,689,192.2
2007		61,856,655*	91.8	21,905*	3.2		
2008			178.6	24,749.1*	16.6		

Source: Central Statistics

Note: Data include water activities.

* Iraqi Economics Report for 2008 – Department of Economic Planning

Fixed capital for industrial activity at current prices increased from 2,017.718 billion dinars in 2004 to 15,760.143 billion dinars in 2007, a growth of 676 percent. The public sector had approximately 99.6 percent of the gross capital formation for the industrial activity in 2007. Accordingly, the government sector's continued dominance of industrial activity in Iraq since 2003 is apparent, despite confirmation of conversion to a market economy and the provision of a main role to the private sector.

Table 32 Total Fixed Capital by Economic Activity at Market Prices for 2004–2007								
Economic Activity	2004	Relative magnitude percent	2005	Relative magnitude (percent)	2006	Relative magnitude percent	2007	Relative importance percent
Crude Oil	448,719	22.3	2,381,925	53.9	2,639,510	26.4	6,000,469	38.3
Conversion Industries	200,063	9.9	86,666	2.0	3,220,347	32.1	330,590	2.1
Electricity & water	1,368,935	67.8	1,950,983	44.1	4,163,628	41.5	9,339,082	59.6
Total	2,017,718	100.0	4,419,575	100.0	10,023,485	100.0	15,670,142	100.0

Source: Central Statistics Organization (CSO)

Table 33 Total and Relative Magnitude of Fixed Capital Formation at 1988 Prices (Million Iraqi Dinars)								
Economic Activity	2004	Relative magnitude (percent)	2005	Relative magnitude (percent)	2006	Relative magnitude (percent)	2007	Relative importance (percent)
Crude Oil	944,595.8	21.8	3,382,618.7	39.1	4,276,035	24.1	8,911,839.4	27.0
Conversion Industries	300,378.2	6.9	115,304.7	1.3	4,535,685.3	25.6	423,386.9	1.3
Electricity & water	2,200,265.5	50.8	1,920,848.1	22.2	3,419,881.9	19.3	8,760,072.3	26.5

Source: Central Statistics Organization (CSO)

6.2 Industrial Sector Activities

6.2.1 Oil and Gas Activities

Reality

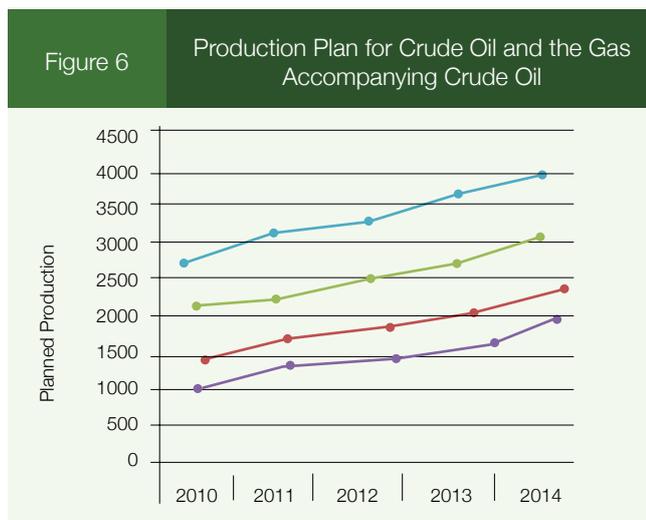
Oil and gas were discovered in Iraq in the early 1900s and have become among the most important sources of energy and a main source of financial resources to the national economy. This sector was affected by the events that Iraq experienced. As a consequence, oil exports fluctuated. There were also delays in investment programs and plans to address the accompanying gas that was being wastefully burned.

In 2004, daily crude oil production reached 1.995 million barrels/day. It rose to 2.285 million barrels/day in 2008, a growth of

14.5 percent over levels in 2004. Despite that, it could not reach 1979 production rates, which were at a record high of 3.563 million barrels/day.

Export of crude oil increased between 2004 and 2008, in 2004 reaching 1.535 million barrels/day. Exports increased to 1.849 million barrels /day in 2008; a growth rate of 20.5 percent. During some months of 2009, oil exports reached two million barrels/day, despite damage and vandalism to the basic oil export infrastructure.

In 2004, the quantities of crude oil refined locally totaled 150 million barrels. In the years subsequent, this quantity fell to 120.9 million barrels, a decrease of 19.4 percent. Actual production capacity was also 32 percent lower than the planned production capacity in 2008. The sector was unable to meet increasing local consumption needs for benzene, white oil, gas oil, and liquid gas due to repeated loss of electrical power at oil refineries. This affected the population and its quality of life. Indeed, domestic consumption of primary oil products (benzene, white oil, gas oil, fuel oil of all types, and lubricants) fell to 18.981 million square meters/year in 2005 after it had been 20.396 million square meters/year in 2004.



In gas activity, confirmed reserves are approximately 3,100 billion square meters and potential reserves are approximately 9,000 billion square meters. In 2008, the quantity of natural gas production increased 14.848 billion square meters/year from its level of 13.407 billion square meters/year in 2004. This represented an increase of 10.7 percent. However, 40.9 percent of the gas produced is burned before becoming available for use. This constitutes a significant loss to the national economy and a source of environmental pollution.

The oil and gas activity plays a vital role in overall economic performance in Iraq as it:

1. Funds 95 percent of the nation's federal budget
2. Contributed 27 percent of gross fixed capital formation in 2007 at 1988 prices
3. Helped create 55.5 percent of the gross domestic product in 2008 at current prices
4. Contributed by generating more than 95 percent of the total value added at current prices in the industrial sector in 2008
5. Employs more than 1,000 employees
6. Contributes to the production of 76 percent of Iraq's total need for oil derivatives (benzene, gas oil, white oil), which amounts to 4.467 square meters/day, and 68 percent of liquid gas needs. Inability to meet the overall need for the aforementioned products has led to no construction of high-capacity oil refineries in the past four years. All oil

refineries in the country are now old, which affects their production capacity.

Potential of Oil and Gas

1. There are huge crude oil reserves confirmed in Iraq, putting it in third place worldwide.
2. There are large gas reserves.
3. There is a competitive advantage in the crude oil activity due to the low extraction cost as compared to other oil-producing countries.
4. There is a large unmet need for oil products locally.
5. The country has approximately 80 years of experience in oil operations.
6. There is basic infrastructure and the potential to develop it, particularly in the area of ports specializing in transport of crude oil.

Challenges

1. The technology in use in some oil facilities is outdated, particularly the technology for extraction and isolation of the accompanying gas.
2. There is a shortage of experienced, qualified, and specialized personnel.
3. There is a scarcity in the financial allocations necessary to achieve objectives. In the years 2007-2009, investment allocations did not exceed 35 percent of the needs estimated for the years 2007-2010 in the national strategy.
4. Transport pipeline networks, particularly the strategic lines, are old.
5. There is an insufficient number of docks in Iraqi ports from which to export in order to handle any developments in production and exportation.
6. It is not possible for old refineries to meet environmental regulations. Further, continued burning of gas at high rates negatively affects the environment.
7. There continue to be subsidies for oil products, despite their reduction in recent years. This affects the efficiency with which refining and distilling activities are performed.

Vision

To increase production capacity in the fields of oil, gas, and oil products pursuant to international specifications, and to increase oil and gas reserves, thereby ensuring longevity of Iraq's advanced position among producers and exporters worldwide, while utilizing these resources in a sustainable manner to protect the environment.

Objectives

1. Increasing the production of crude oil from 2.285 million barrels/day in 2008 to 4.1 million barrels/day in 2014.

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This would be achieved by opening a number of fields to foreign investment in addition to national effort.

2. Increasing the quantity of exported crude oil from its current level of 1.894 million barrels/day in 2008 to approximately 3.1 million barrels/day in 2014.
3. Increasing the established oil and gas reserves.
4. Gradually increasing storage capacity for crude oil in export depots until a capacity equivalent to 5 days worth of production is reached.
5. Increasing the production of dry gas from its current rate of approximately 800 million square feet/day in 2008 to approximately 2,200 million square feet/day in 2014, using the production of the Akaz and Mansouria fields, as well as the accompanying burned gas.
6. Increasing the current refining capacity of 0.580 million barrels/day from the large refineries to approximately 1.450 million barrels/day by 2016 by building new refineries in a number of cities having a competitive edge in that field.
7. Supplementing the storage capacity for oil products to ensure attainment of stock equivalent to 40 days worth of consumption of benzene, gas oil, and liquid gas, and 100 days worth of consumption of white oil.
8. Reducing the quantity of burned gas to 150 million square feet/day instead of the 700 million square feet/day throughout 2008.
9. Protecting the environment from pollution and addressing the environmental problems resulting from oil and gas activities.
8. Continuing implementation of suitable modern technologies in various oil and gas activities, including environmentally friendly technologies
9. Providing an important role to the private sector in the field of oil services and privatizing the company in charge of oil projects, oil product distribution, construction, and maintenance work
10. Controlling the type of oil exported and consumed locally by adopting international standards (ISO) as well as accurately measuring quantities for accounting purposes
11. Increasing environmental awareness; building an information database on the effects of oil pollution; establishing a comprehensive system for environmental tracking and monitoring in this activity; and treating the various negative environmental effects existing today
12. Developing and building capabilities.

Means for Achieving the Objectives

For oil production to reach 4.5 million barrels/day in 2014 and 6 million barrels/day in subsequent years, the following must occur:

1. Developing current and discovered oil fields and offering of a portion of these fields to foreign investment to achieve this plan's objectives
2. Restructuring of public service companies in accordance with the market economy approach
3. Adhering to international standards in the fields of health, safety, and the environment (HSE) by adopting internationally accepted systems, including environmentally friendly technologies
4. Putting in place the systems and mechanisms necessary to guide oil product consumption
5. Constructing reservoir support (water injection) projects for oil fields, their consideration as priorities, and location of alternatives to river water
6. Developing current ports and constructing new ports that comply with environmental and safety requirements and have a capacity large enough to absorb exportation of specified quantities
7. Digging and repair of development wells, and construction of the necessary production facilities and supporting projects

6.2.2 Electricity Activity

Reality

Electricity activity is considered the economy's main engine as it is used in all economic, service, and industrial activities. In addition, individual consumption of electricity is considered one of the main indicators of society's level of prosperity.

The national electricity generation rate in Iraq reached approximately 2,958 megawatts in the period prior to the Second Gulf War in 1990. Production was sufficient to meet all energy demand until 1994, but increasingly began to suffer as a result of wars, economic sanctions, the halt of development plans, and the increase in consumer energy consumption. As a result, there was an increasing shortage—the actual annual energy production rate was 3,409 megawatts as compared to a demand for 4,653 megawatts in 2003, a shortage of 27 percent.

Deterioration of the electrical energy situation continued. In 2004, electrical energy generation reached approximately 3,827 megawatts. This figure increased to 4,526 megawatts in 2008; an increase of 63 percent. In contrast, demand ranged from 5,442 megawatts in 2004 to 10,000 megawatts in 2008. So, despite the increase in production, the country still suffered from a shortage of electrical energy of 38 percent in 2008. There were many reasons behind the decline in electrical energy production, including the destruction and damage sustained by electrical energy facilities and establishments, vandalism, and theft that affected the majority of economic establishments after 2003; deterioration of security and instability, affecting workers in that vital activity; and the resulting deficit in production needs, consisting of shortage and lack of delivery of fuel and oil by-products to the majority of electricity production projects. These factors were coupled with the difficulty in acquiring the tools necessary to maintain stations and energy-producing establishments, the deterioration and decline in production efficiency, the aging of electricity production and generation stations, and the lack of water for hydroelectric stations. All of these factors led production rates at those stations to decline during the first half of 2008 as compared to 2007. The decline ranged between 24 percent and 59 percent.

Figure 7

Peak load rate and required energy generation for the years 2003 – 2008 (megawatts)

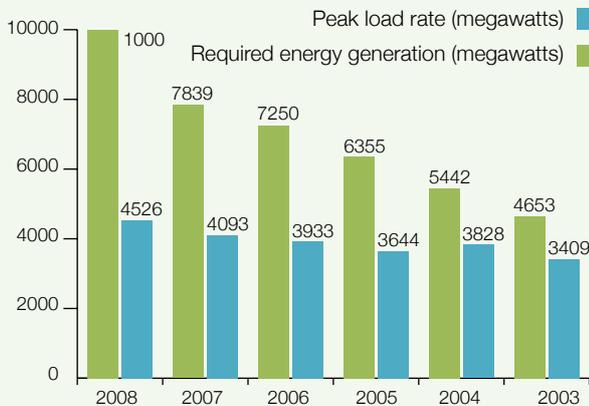
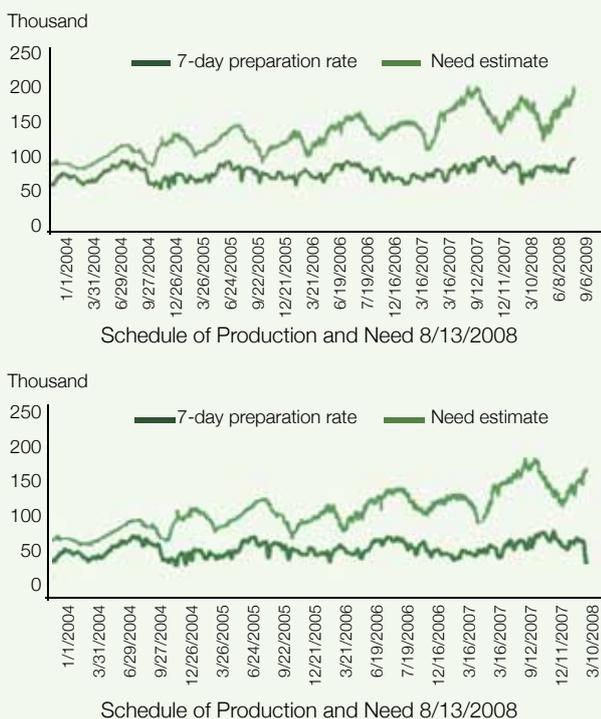


Figure 8, 9

Two-day electricity production and demand



Source: Ministry of Electricity

In light of the above, the state is seeking to plan to add new production capacity to the electrical system by increasing the number of energy generation units (fast installation) in terms of gas and diesel stations. This planning is anticipated to occur in 2009 for a capacity of approximately 1,000 megawatts. Implementation is planned for the coming years; contracts have been signed for equipping these stations with the American GE Company and the German Simmons Company, both of which specialize in this type of gas production station. Electricity and water activities have contributed the following:

1. 26.5 percent of gross fixed capital formation in 2007 at 1988 prices. This was the result of the priority given to redevelopment and rehabilitation of this activity by allocating large sums of investments to it.
2. Creation of 0.8 percent of the gross domestic product at current prices in 2008
3. 1.5 percent of the total value added of the industrial sector in 2008 at current prices
4. Employment of more than 94,000 workers.

Potential of Electrical Energy

1. The availability of different types of fuel necessary to operate the different types of generation stations
2. The existence of large investment opportunities to cover demand for electricity for various types of consumption
3. The possibility of using solar energy in electrical power generation.

Challenges

1. The antiquity of generation units and transport and distribution networks
2. The lack of sufficient quantity and type of fuel to operate consistently
3. The scarcity of water and its effects on operating hydroelectric stations
4. The difficulty in meeting environmental requirements, particularly in old projects
5. The scarcity of trained labor
6. The unstable security situation
7. The difficulty of meeting financial obligations, which hinders implementation of investment plans
8. Subsidized pricing, which creates wasteful consumption of electricity.

Vision

To enhance the electrical system and its three activities (production, transport, and distribution), close the gap between electrical energy production and demand, and provide all consumer types with consistent energy.

Objectives

1. To increase production capacity in the system so as to meet the increasing demand for electrical energy by constructing additional units at gas, steam, and diesel production stations
2. To enhance Iraq's electrical energy consumption from an average of 1,100 kilowatts to 3,700 kilowatts
3. To secure a reserve to face increasing demand for energy in the future, estimated to increase at a rate of 10 percent annually
4. To secure a reserve in generating capabilities ranging between 5 percent and 10 percent

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5. To improve the performance of the electrical system and stop its decline by performing repair works and comprehensive (production, transport, and distribution) improvements
6. To improve the quality of services to all types of consumers (domestic, commercial, industrial, agricultural, and government), and to improve the speed of connecting service in new residential neighborhoods.
7. To stabilize the electric current and increase reliability.
8. To develop and build upon employee abilities, including developing abilities in the environmental field, thereby helping realize the principles of more environmentally friendly production
9. To reduce environmentally harmful gas emissions and noise pollution in existing and new projects, and use environmentally cleaner technologies in generation and transport of energy.

Means for Achieving the Objectives

1. Focusing on increasing production by building new stations based on sound economic principles
2. Repairing existing stations, in addition to developing and resolving organizations' problems by conducting economic and technical studies
3. Expanding and developing transport networks and resolving bottlenecks
4. Encouraging implementation of Investment Law No. 13 of 2006 to coordinate work with foreign and domestic investors and coordinate work with national investment associations in the provinces
5. Continuing to draft guidance policies to organize demand for energy by issuing new instructions as regards energy usage rates, while considering the needs of marginalized and low income classes
6. Continuing the project of electrical energy interconnection with neighboring countries
7. Expanding use of alternative and renewable energy, including solar energy
8. Complying with international standards in the fields of health, safety, and the environment (HSE) by following internationally approved regulations
9. Setting strict monitoring mechanisms with respect to household, consumer, industrial, and imported appliances so as to ensure high and economic efficiency in energy consumption.

6.2.3 Activity of Conversion and Extractive Industries (Excluding Oil)

Reality

This activity has witnessed a decline in its contribution to the gross domestic product, when measured at current prices, of 1.7 percent in 2008 after it had been 6 percent in 1979, increased to 13.9 percent in 1988, decreased to 3.8 percent in

1990, and continued to decline to 1.5 percent in 2001.

As regards its contribution to domestic output in the field of industrial activity, at current prices, it totaled 3 percent in 2004 and 2008.

There are many reasons for the decline in the contribution of conversion and extractive industries (excluding oil). They include the decline in production capacities due to the security situation; the existence of an atmosphere conducive to flooding the market with cheap products; failure to promulgate laws governing industrial activities in light of new developments; scarcity of equipment necessary to generate electrical and gas energy; exposure of public sector production facilities to destruction, vandalism, and theft; shortage in the funding necessary to repair them; and the antiquity of industrial company production lines. The decline was also caused by the increase in the number of workers since 2002, which resulted in inflated worker numbers and an increase in inefficient labor. All of these factors have had a negative impact on production costs and made it difficult to compete. It is worth noting that many private sector establishments, nearly 70 percent, have shut down operation for many reasons, most important among them the security situation and the inability to compete with imports. This activity has contributed to the following:

1. 1.3 percent of gross capital formation in 2007 at 1988 price
2. Creation of 1.7 percent of the gross domestic product in 2008 when measured at current price
3. 3 percent of the total added value in the industrial sector for 2008 at current price
4. Employment of more than 193,000 employees.

This activity contributes to producing 10 percent to 40 percent of Iraq's total need for conversion industries. In the chemical industry, this sector produces approximately 40 percent of actual need; 30 percent of the need for textile industries; and 12 percent of the need for construction industries.

The Private Sector's Role

The transitional period, which began after 2003 and continues to date, has witnessed the demise of the private Iraqi sector. This occurred as a result of the stoppage of private industrial projects due to destruction; increased production costs; flooding of the local market with competing imported products; absence of security; and the targeting of businessmen and their families, leading them to escape to neighboring countries.

In the area of the conversion and extractive industry activity, the private sector contributed 1 percent of the gross domestic product in 2008. Despite the sector's importance in domestic economic activity, its overall investment remains very small. Indeed, its contribution to fixed capital formation capital did not exceed 0.4 percent in 2004 at 1988 prices. The lack of security and an appropriate investment environment, and the weakness of the financial situation and the banking system may be the reasons behind the private sector's diminished role and reduced importance in Iraq's development.

Potential in the Field of Conversion Industries

1. The abundance of natural resources in most of Iraq's provinces
2. The abundance of domestic markets for the conversion industry
3. The abundance of the requisite skilled labor
4. The country's growing need for different industries, particularly the construction industry, in the next phase of rebuilding Iraq.

Challenges

1. The difficulty of competing in a market flooded with cheap, low-quality products
2. The need to amend current laws and promulgate new ones that serve the industrial sector
3. The need to activate the Central Agency's role in the areas of evaluation and quality control, in its capacity as a regulatory agency, to control quality of local and imported products
4. The need to reform the banking system
5. The need to draft central regulations to address the inflated number of employees working in public sector companies
6. The antiquity of production lines and the non-conformity of current projects to environmental requirements and specifications
7. The scarcity of electric energy and the fluctuation in voltage levels, which negatively affect production capacity
8. The limited quantity of natural gas prepared for some companies that rely on it as a primary material in their production process.

Vision

To achieve industrial growth that contributes to diversification of the national economy by moving in the direction of a market economy, to manage industrial operations, and to build partnerships with international companies, the private sector, and domestic and foreign investors.

Objectives

1. To significantly increase the conversion industry's contribution to the country's gross domestic product as public companies have been classified
2. To revamp economically sustainable public companies
3. To strengthen the private sector's role in the conversion industry
4. To work on achieving self-sufficiency or to increase the number of public companies to 12 during 2010, 16 during 2011, and 19 by the end of 2013
5. To achieve a complimentary relationship between public and private industrial sectors, as well as other sectors by creating small and medium-sized projects to enhance existing industrial companies and their products and to create new employment opportunities
6. To reconstitute 12 of the Military Industrial Agency's dissolved companies and convert them to civilian industry
7. To increase the non-oil extraction activity's contribution to the gross domestic product
8. To work on building industrial complexes in at least five provinces, to provide transparent mechanisms for granting bank loans to the private sector, and to speed up the process for issuing project permits
9. Continue building on the consumer protection document that has been drafted, as well as the Competition Law, the Anti-Trust Laws, and the Iraqi Producer Protection Law. In addition, the following laws have been set up: the Law for Establishment of Industrial Cities, the Trademark and Geographical Indicator Law, the Economic System Law, and the Mineral Investment Law. Moreover, a final draft has been prepared to amend the Private and Mixed Sector Investment Law No. 20 of 1998. Finally, a draft of the Privatization and Roadmap Law was prepared in September 2007.
10. To develop human abilities and cultivate the necessary skills to manage the conversion operation
11. To improve the environmental reality for existing industries, ensure that new projects comply with new environmental policies, and increase environmental awareness in industrial projects.

Means for Achieving the Objectives

1. To improve public company performance levels by classifying public industrial projects into three categories:
 - Companies that attract investment and have the ability to be self-sufficient immediately.
 - Companies that require reform, operational improvements, and increases in production capacity to attract investment. This category of companies is expected to remain until the end of 2012.
 - The small number of companies that require a cost-benefit analysis to determine whether they should continue to operate. Some of these companies may also need to be broken up and restructured, while others may not be viable and may need to be re-classified or have the course of their operations altered.
2. To restructure companies and industries so as to move toward a market economy. In that regard, a number of contracts were concluded to restructure and modernize the laboratories of existing public companies that are attractive to investors. These contracts are based upon a partnership with specialized international companies as well as the private sector. From a technical and economic standpoint, it is important to continue in this direction whenever possible.
3. To expand the private sector's role in industrial development and encourage it to establish companies in partnership with the public sector.

4. To move toward establishing partnerships with technologically advanced international companies.
5. To focus on industries with regional and international competitive potential.
6. To develop and expand industrial research and development centers in coordination with the Ministry of Science and Technology and the universities.
7. To reinvigorate geological survey and mineral investigation operations, as well as locate available natural resources for the purpose of exploiting them using modern technology.
8. To establish the industrial investment plan and coordinate with councils and provinces in accordance with said provinces' natures, the availability of natural resources therein, and their competitive advantage. Also, to promote the construction of new industries through local and foreign investors, create employment opportunities, and develop national industry.
9. To draft laws that will contribute to the creation of an environment conducive to investment, whether domestic or foreign, and to promulgate consumer and producer protection laws. (There have been a number of draft laws prepared [the Consumer Protection Law, the Competition Law, the Anti-Trust Law, the Iraqi Producer Protection Law, the Industrial City Law, the Trademark and Geographical Indicator Law, the Economic System Reform Law, the Mineral Investment Law, the final draft amending the Private and Mixed Sector Investment Law No. 20 of 1998, and the Privatization and Roadmap Law of September 2007]).
10. To provide electrical power to industrial complexes and large factories to ensure the continuity of their operation. This would be achieved by building electrical stations nearby
11. To invest in the environmental aspect to address the environmental problems caused by existing industrial projects
12. To withhold from establishing any industrial project unless it ensures protection of the environment and to require new industrial projects to receive a passing grade on their environmental consequences study before being allowed to move forward
13. To use more environmentally friendly technologies to operate new and existing projects.
14. To find practical and humane solutions to address the problem of the ineffective labor employed in industrial companies by:
 - Preparing a database containing data on surplus labor in all public companies
 - Connecting surplus labor with human resource development centers in the provinces that would, in turn, put them in touch with the Ministry of Labor where training would take place, where the surplus labor's potential would be developed, and said labor could be used in the economic units located in the provinces
 - Finding appropriate solutions to protect the rights of surplus labor and ensuring receipt of social protection by groups that cannot be trained for alternative work.

6.2.4 Research and Development Activity

Vision

Working to keep up with scientific and technological advances taking place worldwide so as to improve scientific research and transfer technology to Iraq. Also, it is vital to work to activate the role of research and development in national development programs, thereby transforming the Iraqi economy into an economy with a vast knowledge base so as to narrow the digital divide between Iraq and the developed world.

Objectives

1. To expand construction of basic infrastructure associated with research, development, and human resource development
2. To select and utilize advanced technology, while orienting it to serve society
3. To build technology incubators in various industrial fields.

Means of Achieving the Objectives

1. Supporting and funding scientific research, sponsoring scientists and researchers, establishing a mechanism to improve the quality of research centers, coordinating among research centers at the national and international levels, and promoting their role in national development programs
2. Expanding the scope of Iraq's representation at international gatherings and organizations related to science and technology
3. Enforcing laws related to science, technology, innovation, and intellectual property rights, as well as sponsoring researchers
4. Fostering international cooperation with science and technology associations and scientific research organizations, as well as transferring and utilizing technology.

- 1 Using sprinkling systems for 250 thousand donoms, and a cost of \$65 m.

Chapter Seven

Infrastructure



7.1 Transportation Sector

7.1.1 Previous Policies

Before presenting and evaluating previous transportation and communications sector policies, and before evaluating the current reality and diagnosing the problems and challenges facing growth and development, it is helpful to highlight the most prominent features and characteristics that distinguish it from other economic sectors. These must be considered when determining the means and requirements to improve its reality. The most noteworthy are as follows:

1. The transportation and communications sector is important in the Iraqi economy because it directly affects people's lives every day. People need transportation and communications to complete their daily needs and other activities.
2. The sector is closely intertwined with other economic sectors, has a direct impact on their growth and development, and a direct and significant impact on the nation's economic integration. This makes it impossible for other economic sectors to develop and grow without an infrastructure and appropriate and efficient services from the transportation and communications sector. Every kind of land use requires a network of suitable roads and transportation.
3. The sector's infrastructure extends over long distances. Indeed, most sector projects include more than one area and more than one province. Thus, this sector's projects require large investments for construction and maintenance.
4. There are many possibilities for the (Iraqi and foreign) private sector to participate and invest in the implementation and operation of this sector's projects.

In previous decades, particularly in the 1960s and 1970s, the strategy for developing the transportation sector was characterized by investing in all available modes of transportation, including road, rail, maritime, water, and air, as well as developing these means based on social and economic activity requirements. Significant work was performed on roads. Specifically, most main and secondary roads were resurfaced, secondary lanes were added to main and secondary one-lane roads, and a large number of railroad crossings were eliminated. Further, phased construction of rural roads began and several bridges were built.

During the 1970s and 1980s, national development plans strengthened the highway networks connecting Iraq to neighboring countries, such as the one connecting Iraq with Syria and Jordan and the one connecting the country to the Arab Gulf states. This was done by constructing Highway No. 1 and preparing a design for Highway No. 2, which would run through Baghdad, Samarra, and Mosul, and then into Turkey and Syria. In addition, a comprehensive transportation plan for the city of Baghdad was completed, which recommended construction of an underground metro and several circular roads and bridges, sections of which were implemented— the Mohammed Al-Qasim Road and the Saladin Alayoubi Road,

for example. However, as for the underground metro itself, only the designs were completed.

In the 1960s, increased foreign trade and congestion at Al-Maaqal port focused development attention and plans on increasing the number of ports and docks. A new port was built closer to the Arab Gulf region at Umm Qasr in 1965, and able to receive larger ships and boats.

In the 1980s, development plans focused on strengthening the role of the industrial city in the Basrah province by constructing the Khor Al-Zubair port as a main pillar of this city. It consisted of 12 docks used by the iron and steel plant, as well as to import iron ore, export sponge iron, and load chemical fertilizers and general cargo. During this period, national development plans also focused on constructing the maritime dockyards necessary for ship maintenance and repair.

In railroads, in the 1960s, development plans converted metric railroads to standard railroads. In the 1970s and 1980s, national development plans included construction of a number of high-quality railroads such as the Baghdad–Al-Qaim–Akashat project to connect the phosphate and fertilizer production center with Iraqi ports in Basrah; the Kirkuk–Biji–Haditha project; and part of the Mussayib–Karbala–Najaf–Samawah arc line. This period also saw a large number of locomotives, passenger trains, and cargo trains imported. Development plans also included preparing designs for strategic megaprojects such as the circular Baghdad–Cote–Ammara–Basrah railroad line, the Baghdad–Bagouba–Kirkuk–Erbil–Mosul railroad line, the Mussayib–Karbala–Najaf–Samawah arc line, the Mosul–Zakho railroad line, and others.

In civil aviation, in the 1970s and 1980s, the Baghdad and Basrah international airports were built. In 1979, transition to the new international airport in Baghdad was finalized, even though its facilities were not completed, and the Iraqi air fleet was expanded and modernized. During that year, by opening long-distance lines, Iraqi air capabilities grew from a service network with limited geographic scope to one with international scope. The volume of passengers, cargo, and regular and political mail transported by air steadily increased. The year 1979 was also characterized by steady increase in aviation revenues. Indeed, for the first time that year, revenues exceeded costs and civil aviation went from deficit to surplus—the result of the state providing major material and moral support in the form of large investments that funded the purchase of aircraft and ground equipment, the training of an elite group of pilots and technicians, and the implementation of other service projects.

In the 1970s, national development plans included development and expansion of communications projects, including construction of communications centers and telephone switches. Further, ground telephone networks for land-line use and coaxial cables were extended to interconnect switches and cities.

The wars of the early 1980s and the economic sanctions commencing in the early 1990s diverted attention from modernizing the transportation and communications sector, limiting major achievements in this field. This caused the sector to lag behind regional and international development in all measures, leaving it unable to respond efficiently to human needs and the requirements of economic activities. The infrastructure developed in the 1960s and 1970s became a burden to the Iraqi economy because of the large financial resources needed to repair and maintain it.

Because of the transportation sector's crucial role in provision of key services to the population and to all economic activities, and in an effort to upgrade its performance level, Iraq began focusing on this vital sector in 2003. Specifically, in cooperation with Italian counterparts, the MoP began preparing a comprehensive transportation plan for Iraq: the Iraq Transport Master Plan (ITMP). Preparation of this plan continued from mid-2003 to the end of 2005. Representatives from all departments and other entities involved in transportation sector activities—roadways, railroads, ports, and civil aviation—participated in its preparation.

This comprehensive transportation plan included a complete survey of transportation sector activities, as well as an assessment of state of these activities, ways to improve them, and the funds needed to do so. The plan also included all projects required for transportation activities for the next 20 years, including crucial and strategic projects. Cost estimates for these projects were estimated and an implementation schedule was prepared. We can rely on the comprehensive transportation plan as a long-term plan, and can use some of its projects for the purposes of mid-term plans, including the 2010-2014 five-year plan. Because of the security conditions that prevailed during the plan's preparation, and because it does not cover the entire transportation network in Iraq, it should be updated after extensive surveys of the network and collection of all data necessary for the update within a context of appropriate security conditions, and of a network free of roadblocks and temporary barriers that significantly affect its performance.

The National Development Strategy (2007-2010) indicated that transportation and communications services, mail, and international network services all lag far behind expectations. This required strengthening the transportation and communications network to raise service quality and efficiency in all provinces, requiring significant investments as well as administrative and organizational structure changes. Iraq can address the sector's problems by introducing the latest technology in this area, and by creating the appropriate environment by adopting appropriate policies and developing an appropriate regulatory framework.

The National Development Strategy (2007-2010) specifies the procedures necessary to advance transportation sector activities (excluding road and bridge activities) as follows:

1. Continued dredging of the Umm Qasr port and the surrounding areas
2. Removal of sunken vessels in Shatt-Al-Arab and the Umm Qasr port
3. Preparation of a plan to increase the efficiency and efficacy of institutional procedures of ports and inland waterways
4. Exploration of the potential for developing truck transport and traffic lines
5. Repair, renovation, and maintenance of railroad stations
6. Modernization of training centers to enhance the skills of railroad workers
7. Preparation of a railroad strategy to assess the current situation in order to open the door for the private sector to provide services
8. Development of airports and a civil aviation strategy and preparation of a comprehensive plan to organize services and future activities, including the possibility of assigning airport management to the private sector
9. Development of programs to privatize some activities in the sector, particularly in the fields of communications and air, land, and maritime transport
10. Retraining of supervisory and operations staff, particularly in stalled activities such as civil aviation and maritime navigation.

In the area of communications, the National Development Strategy (2007-2010) indicated that there had been improvements in telephone communications since 2004: the number of landline subscribers grew from 794,198 to 2,800,000 in June 2005. Further, the number of internet subscribers more than doubled and the number of cell phone subscribers jumped from 488,966 to 2,500,000. In addition, satellite television equipment was extended to most of the population, and cell phone networks operated in the major urban areas. The 2007-2010 National Development Strategy identified the actions necessary to advance the communications sector as follows:

1. Rebuilding and expanding existing switches and local distribution networks, and supervision of the civil work required to achieve telephone penetration of 3.3 million subscribers in 2007
2. Construction of a modern, integrated, long-distance communications network ensuring international communication
3. Rebuilding of the postal system, including rehabilitation of postal services and existing buildings to put Iraq on par with other countries.

In order to achieve transportation and communications sector objectives, the strategy calls for the allocation of between 11,000 billion and 12,000 billion dinars per year. However, the

actual allocation has not exceeded 4–10 percent of the planned amount each year. This rate did not allow for achievement of strategy objectives. This shortage of funds was compounded by insufficient time allotted to developing the strategy; limits on its scope to identifying wholly comprehensive sector targets for communications, roads, and bridges; poor implementation follow-up; the deteriorating security situation; failure to prepare the private sector to invest in this sector, as was done with other sectors; and staff's inability to adapt to the instructions to conclude new contracts.

7.1.2 Transportation Sector

The transportation sector consists of roads, bridges, passenger transport, cargo transport, railroad transport, ports, maritime shipping, and civil aviation. The National Development Plan will address the state of, vision and objectives for, and means of achieving the objectives for each of these activities. In general, the sector seeks to build an integrated, efficient, and reliable transportation network; ensure balanced use of its different systems, which correspond to spatial distribution of the population and economic activities; and enhance the advantages of Iraq's geographical location in this field. This vision can be achieved by:

1. Increasing the current transportation network's efficiency and capacity
2. Integrating the different transportation systems
3. Enhancing the efficiency and performance of the transportation sector's institutions, facilities, and public companies, as well as enhancing its efficiency in the areas of management and operation
4. Developing and promoting cargo transport by railroads, and protecting the road network from damage
5. Reducing accidents within the transportation network
6. Reducing travel time and providing shortcuts away from city centers
7. Contributing to strengthening Iraq's economic independence
8. Reducing transportation costs
9. Strengthening Iraq's geographical location in transportation and the transit trade
10. Increasing the sector's contribution to the gross domestic product
11. Strengthening the private sector's role in the different transportation activities, particularly as regards operating procedures and service provision.

7.1.2.1 Road and Bridge Activity

Reality

This activity falls within the purview of the General Authority for Roads and Bridges within the Ministry of Construction and Housing, which is responsible for constructing and maintaining bridges over rivers and roads outside the cities, including highways, arterial roads that connect province centers, border

crossings, secondary roads that link village districts, and rural roads that connect villages and the countryside to secondary and arterial roads.

The total length of the external road network (beyond the boundaries of municipalities and the Mayoralty of Baghdad) is approximately 48,000 km, comprising:

- Highways: 1,084 km
- Arterial roads: 11,000 km
- Rural roads: 10,000 km
- Border roads: 11,000 km
- Secondary roads: 15,200 km.

In addition, there are 1,247 concrete and steel bridges and 35 floating bridges scattered throughout the country's provinces. This network does not meet the country's needs, particularly with respect to rural roads, which are a fundamental cornerstone of rural community development. According to international standards, each 100 inhabitants/km² needs 1 km/km² of roads; road density in Iraq stands at 0.18 km/km². This rate must be increased to 0.75 km/km², that is, the road network needs to be 240,000 km to properly serve Iraq's population of 57 inhabitants/km² (per 1997 statistics). If one excludes uninhabited desert areas, the same criterion would require the addition of 20,000 km of new roads.

Before 2003, Iraq's external road network was relatively good in terms of efficiency and capacity. However, most of it suffered extensive deterioration, destruction, and damage during the 2003 war its aftermath, the result of military operations and sabotage, as well as the lack and scarcity of emergency and periodic maintenance operations. This reduction of the road network's efficiency and capacity was compounded by loss of and damage to instructional signs, warning signs, and directional signs on the outer roads and highways. Repair of the existing road network is accordingly one of the plan's priorities in the area of road and bridge activities.

Near total cessation of railroad activities after 2003, along with reliance on the road network to transport cargo, put further pressure on the road network, as did lack of control over allowable axle and vehicle weights— which contributed to destroying and devastating large portions of the network.

In addition, there was an increase in the number of vehicles entering the country after 2003. This led to increased vehicle circulation among safe provinces, thereby adding pressure on the outer roads, particularly single-lane roads. This was exacerbated by poor traffic control, cessation of issue of driver's licenses, and poor control of existing driver's licenses and their holders, all of which led to an increase in the number of accidents, particularly fatal ones.

The deteriorating security situation after 2003, along with the ensuing social, economic, and security effects, led to a decline in the efficiency of road work quality control. As well, the increase in fuel and asphalt prices during that time led to a significant increase in the cost of implementing and maintaining road projects. This was accompanied by worldwide price increases at the end of 2007 and during 2008. These factors

led to a halt in most projects that had been postponed even before the increase in the prices of oil derivatives and asphalt. Such projects were not completed during that period because contractors were unable to keep pace with rising work-related costs. This situation persisted until September 11, 2007 when a mechanism was adopted to compensate contractors for the abnormal increase in those costs.

Problems and challenges facing road and bridge activities:

1. Most cargo is transported over the road network, as opposed to the railway system, thereby applying significant pressure on the network and contributing to its deterioration.
2. There is no control over loads and vehicle axle weights which leads to destruction of the road network.
3. There are few connecting roads between provinces and cities.
4. There are few circular and bypass roads in the cities.
5. There are problems acquiring rights of way, including the objections of owners, rural inhabitants, and farmers.
6. There is a need for significant investments to rehabilitate and construct new projects.
7. The quality control system is weak.
8. Same-level railroad crossings, contributing to traffic and congestion, are prevalent.

Vision for Road and Bridge Activities

Iraq will have a road network with a balanced hierarchy that integrates with the other transportation systems while ensuring reduced travel time and cost, greater security, and reduced negative environmental impacts.

Objectives

The objectives for road and bridge activities during the plan period focus on two axes.

1. The first axis consists of:
 - Improving the condition of the current road network by repairing existing roads and reconstructing bridges affected by the war, military operations, and sabotage, as well as installing instructional, directional, and warning signs
 - Performing periodic maintenance on the existing road and bridge network, using modern and advanced techniques that would more quickly and economically implement repair and maintenance procedure, including the cold in-place asphalt pavement recycling technology recently approved in Iraq.
2. The second axis consists of increasing the network's capacity and its level of user safety and security, and protecting it from damage, by:

- Completing the remaining portions of highways previously constructed, and completing links between these roads and city centers that had not yet been linked thereto
- Constructing new highways, particularly Highway No. 2, to link urban centers and complete the link between Iraq and neighboring countries that have not been linked by highways to date
- Continuing to construct secondary lanes on arterial roads and one-lane roads, particularly those that have reached maximum capacity
- Expanding construction of crossroads among the provinces, thereby reducing travel time
- Expanding construction of bypass roads that reduce congestion in cities and limit entry of through-traffic to city centers
- Continuing to implement the plans' remaining stages to replace floating bridges with fixed bridges
- Continuing to eliminate railroad crossings
- Furnishing outer roads with instructional, directional, and warning signs
- Protecting the road network from excessive weight by constructing weigh stations to detect and deter vehicle weights and axle loads that exceed the allowable limits
- Continuing the program of constructing rural roads and increasing their reach to serve the greatest number of rural villages and agricultural projects and ensure their connection of agricultural production centers with markets.

Means of Achieving the Objectives

1. Directing investments in a manner commensurate with the importance and social and economic role of road and bridge activity to ensure rehabilitation of damaged roads and bridges, and constructing all types of new roads, including highways, arterials, secondary roads, and rural roads
2. Developing railroad transportation to reduce the volume of cargo transported over the roads
3. Passing new laws or amending current laws to impose tolls for use of main roads, arterials, and bridges to ensure appropriate funding for periodic and continuous road and bridge maintenance
4. Improving quality control during road and bridge work by providing necessary and sufficient laboratories to run the tests associated the work. Controlling vehicle weight and axle loads on existing road and bridge projects by constructing weigh stations. .
5. Introducing modern and cost-effective technologies to repair and maintain roads, and providing means for their success
6. Strengthening the private sector's role in service provision.

The Private Sector's Role

Both the domestic private sector and foreign investment can play a role in implementing the infrastructure and highway axes, provided free roads and bridges are available for these axes. The private sector can also actively participate in providing services such as building comprehensive rest areas (pursuant to guidelines and designs to be identified in agreement with the General Authority for Roads and Bridges). It is necessary for the state to act as a regulator and supervisor in all stages (design, implementation, operation, and service provision).

7.1.2.2 Passenger Transport and Cargo Shipping Activity

Reality

The Passenger Transport Agency was created in 1938 to transport passengers within Baghdad only, operating under a central funding system. It was transformed into the General Company for Passenger Transport, pursuant to Company Law No. 22 of 1997, and operated as a self-financing company based on its activities listed in the company's bylaws no. 10 of 2000. The company aimed to transport people by bus within the city of Baghdad, between provinces, and between Iraq and neighboring countries. The company also aimed to provide internal transportation services. The General Company for Passenger Transport merged with the General Company for Delegations Transport. It was renamed the General Company for Passenger and Delegations Transport by Council of Ministers decision number 338 of 2008 to make delegations transport a department within the company.

The General Company for Passenger Transport had a large fleet of buses and a number of associates to operate that fleet. The military operations and looting accompanying entry of foreign troops into Iraq caused the company to suffer significant material damages.

Public passenger transport activity declined in 2003 and thereafter. There was very limited intercity and intra-city transport, and it was not as organized as before.

In 2008, public passenger transport activity gradually regained an organized structure, with buses running between safe cities day and night. Urban transport resumed in Baghdad in cooperation with the Baghdad Province Council, with lines running between universities and the city's main areas. It is hoped that the experiment will be expanded to the remaining provinces.

In June 2009, the General Company for Passenger and Delegations Transport had a total of 1,234 buses, of which 593 were working, 338 were idle, and 303 were scrapped, as compared to a total of 1,633 buses in 2002. On the same date, there were also 30 working lines within the city of Baghdad, of which 10 lines were run to transport students, 9 were run within provinces, and 14 were run between Baghdad and the provinces.

The destruction that befell the passenger transport fleet, along with administrative chaos, reduced the number of transported passengers from about 130 million in 2002 to about 6.5 million in 2006.

After 2003, intra-city and intercity transport was provided almost entirely by the private sector. Due to successive increases in the prices of oil derivatives, including gasoline and kerosene, the private sector raised prices for these services. These increases greatly burdened the people, particularly students, low-income individuals, and the poor.

On June 30, 2009, the General Company for Passenger and Delegations Transport had a total of 5,641 operators. More than half of them were not needed; this affected the company's efficiency.

As the security situation has improved, demand for intra-city and intercity passenger transport increased. Given the limited scope of rail activity at this time, bus transport is the currently available solution.

Implementing public transport projects such as metro, tram, or suspension trains within cities, and particularly Baghdad, to rapidly and safely provide public transport services and reduce congestion and pollution, has become an urgent necessity.

Even though the prices charged by the General Company for Passenger and Delegations Transport have increased, they continue to be much lower than private sector prices. In addition, the company's buses are modern, air-conditioned and safe, and the company provides some services during the trip. For these reasons, individuals prefer public buses over private buses.

Challenges

1. Limited financial allocations
2. Continued security instability in some cities and provinces, and continued presence of security barriers in main and secondary streets
3. Limited public intra-city and intercity bus fleet
4. Significant laxness in public transport administrative and operational systems and resulting decline in performance
5. The presence of an unregulated private sector using vehicles that do not meet the required specifications and pollute the cities' environment.

Vision

Ensure rapid, sustainable, and environmentally friendly intra-city and inter-city public transport to low income groups, students, youth, and the poor.

Objectives

1. Providing about 1,500 buses that run 130 routes in Baghdad, Table 34 shows the objectives for the passenger transport activity as represented by the number of buses to be provided during the 2010-2014 five-year plan for purposes of internal and intercity transport.
2. Preparing studies and designs for the Baghdad Metro project and planning to commence construction during the final years of the five-year plan

3. Upgrading the passenger intra-city and intercity transport fleet, using modern, comfortable, and environmentally compliant buses
 4. Providing special rates for students, youth with special needs, and social security programs members
 5. Providing significant opportunities for the private sector in passenger transport and providing necessary support, particularly in terms of ensuring subsidized transport means at favorable credit terms.
3. The private sector is provided the opportunity to operate passenger bus transport and set rates, while the state continues to regulate, supervise, and define bus quality and specifications. The state would also provide subsidies for certain social segments such as students, seniors, people with special needs, and those covered by the social protection system.

Table 34 Quantitative Objectives for Passenger Transport as Represented by the Number of Buses To Be Provided During the 2010-2014 Five-Year Plan for Internal and Intercity Transport

Year	Internal transport			Intercity transport (passengers / international / tourism)
	Buses	Double-deck	Single-deck	Buses
2010	-	-	100	-
2011	-	-	100	100
2012	-	100	-	100
2013	-	100	-	100
2014	-	-	-	100

Means of Achieving the Objectives

1. Conducting deliberations about setting an implementation schedule for the Baghdad Metro project as a long-term solution to the passenger transport problem, as well as to ease traffic congestion in the city of Baghdad and improve the city's environment
2. Supporting and reorganizing the private sector within the field of passenger transport, as well as providing the sector with the infrastructure to do business, particularly in the area of high-quality passenger transport
3. Ensuring private sector transport at favorable terms and defining operating life to ensure safety, economic, and environmental sustainability.

The Private Sector's Role

In many countries worldwide, the state subsidizes public transport in general and intracity passenger bus transport in particular, irrespective of whether operated by the state or the private sector. The only exceptions are a few countries in which these forms of transport are profitable. Thus, the scenarios proposed for operating intracity passenger transport during the five-year plan are:

1. The state continues operating and subsidizing passenger bus transport at prices that suit students, low-income people, and the poor.
2. The state continues operating passenger bus transport and sets profitable rates and offers subsidized pricing to seniors, children, and students.

Over the long term, the state should completely stop operating the passenger transport system and transfer that task to the private sector. The state should also limit its role in controlling, monitoring, and defining vehicle quality and specifications, and setting applicable tariffs.

Ground Transport of Cargo by Truck

Iraq used to have a large truck fleet for cargo transport, which belonged to the Ministries of Transportation and Trade. This fleet was looted and damaged, and only a few trucks remain for what is required.

Within this sector, management systems are antiquated and the workforce far exceeds needs. The General Company for Land Transport currently has about 4,350 workers, a figure several times greater than necessary. This has significantly affected its cost and operating efficiency.

The five-year plan for this sector is tending towards transferring all activities to the private sector—after evaluating its capacity and capabilities—to take advantage of its highly flexible management style. An alternative would be to create a partnership between the public and private sectors for this activity. This would require:

1. Strengthening the state's role as regulator and supervisor of cargo ground transport via trucks
2. Developing railroad transportation in order to protect the road network and spare it further damage, as well as to benefit from the large savings realized when transporting cargo by train.

7.1.2.3 Railroad Activity

Reality

Railroad transportation is considered a vital activity within the transportation sector for both passengers and cargo. Particularly for cargo, rail provides long-distance transport at a relatively reasonable cost as compared to other means.

Iraq is considered a pioneer in the region in using railroads for transportation; the first train was put in operation in June 1914 and an extensive rail network covers vast portions of the country today.

Early on, the railroad network was heavily used to transport passengers and cargo. However, as the road network grew, a large share of railroad transport moved to road transport, particularly cargo.

Infrastructure

An effective railroad network is crucial to development; it will contribute significantly to protecting the road network, particularly highways, from the damage caused by heavy truck traffic.

In 2008, Iraq's railroad lines totaled 2,295 km, of which 1,901 km were main lines, and 394 km were secondary lines. The number of locomotives in operation was 106, down from the 494 originally constructed. There were 43 transfer locomotives, down from the original 145, 65 passenger cars out of the original 250, and 2,460 cargo transport trucks out of the original 10,266. In 2008, the total number of passengers was 107,000, and the total weight of cargo transported was 257,000 tons.

Table 35 shows the total activity of the Iraqi railroad system for the period 1979–2008. It should be noted that despite increasing the length of railroad lines during this period, railroad transportation activity fell dramatically from millions of passengers and millions of tons of cargo annually to hundreds of thousands. This resulted in a decline in the activity's economic and financial performance, as shown.

lines to increase their efficiency, increase operating speeds, and improve line capacities.

Capabilities

Railroad transportation offers significant opportunities for development and thanks to Iraq's size, location in the region, extensive rail network experience, and infrastructure. Most imports enter, and future exports will depart from, its southern ports and the ports of its neighboring countries. The transit trade that can be revitalized takes place through these outlets as well. Indeed, transporting cargo over long distances and in large quantities would be more efficient and economical by rail. The transportation network connecting East Asia and Europe can be integrated only by passing through Iraq. This will require the country to upgrade its railroad network in particular, and its transportation infrastructure throughout, as rail is the most suitable and economical mode of long-distance transportation, irrespective of whether Iraq wants cargo to go through its own ports or those of neighboring countries.

Table 35 Total Activity of the Iraqi Railroad System 1979-2008

Year	Length of railroad lines (km)	Number of passengers ('000 passengers)	Transported cargo (1000 Tons)	Income (1000 Dinars)	
				Passengers	Cargo
1979	1645	3351	6493	2286	20,609
1988	2389	3865	6109	8124	18,990
2002	2272	1248	5227	1131	22,687
2004	2272	63	439	57	4977
2006	2272	4	165	15	1049
2008	2295	107	257	-	-

Large portions of the current railroad network are old, outdated, and have defective signaling and communications systems. This leads to lower operating speeds and endangers the safety of passengers and cargo. Accordingly, some lines are being renovated to upgrade them, increase their operating speeds and improve their condition. Work is also being done to double up single railways to increase capacity and ensure a higher level of safety.

In addition, a new wireless communications system is being used between stations and locomotives, replacing the old wired system. It includes a global positioning system to keep track of train movements and determine their locations.

Most railroad lines in operation use the aforementioned wired standard operating system. Lines currently in operation are Baghdad–Basrah, Baghdad–Samarra, Mosul–Rabia, and Baghdad–Fallujah. It is hoped that the remaining portions of these lines will gradually become operational as the security situation improves and the lines are renovated.

Work is currently being done to double the Baghdad–Basrah line, the Baghdad–Mosul line, and the Hammam Al-Ail–Sabonia–Rabia line, and to modernize and renovate existing

The amount of transit cargo expected to be transported through Iraqi ports to Turkey, Syria, and Europe is estimated to be 35 million tons annually in a normal case scenario, and 60 million tons in a best case. The feasibility study performed on the large port of Al-Faw indicates that handling this quantity of transit cargo will require construction of a special double railway. Cargo railway networks in Syria and Turkey will also be required. Measures necessary to achieve political understanding and trade liberalization in Iraq and the other countries must be taken.

Expanding the railway network will help alleviate the pressure on cargo transport currently using highways and inter-city arterial roads. This will reduce damage to roads caused by large loads and in many cases, excessive axle loads.

Challenges

1. Competition between passenger/cargo transport and railway transport—particularly since the expansion of Iraq's highway and arterial roads networks
2. An incomplete railway network that does not extend to many important locations

3. The age of large segments of the current network and its cars, and the breakdown of signal and communications systems
4. Very low operating speeds that make rail unattractive for both personal travel and cargo transport
5. The large investments required to construct lines, equip them with signals and communications, and produce locomotives, passenger cars, and cargo cars
6. The limited capabilities of the projects department at the headquarters of the General Company for Iraq Railways, which are insufficient to meet the company's responsibilities to implement current and future projects.

The current proposal is to restructure the General Authority for the Implementation of Railroad Projects so it can take on implementation of the proposed megaprojects. Alternately, the General Company for Implementation of Transport Projects would be rehabilitated so it could specialize exclusively in implementing railroad projects.

Vision

Reconstruction of Iraqi railway lines, to keep up with international railway networks and the growing requirements in transportation. The reconstructed network is modern; high-speed; consistent with the development in the country's other sectors; connects Iraq north to south and east to west; and links it to its neighboring countries in ways that serve the country's national interests.

Objectives

1. Quantitative

Table 36 shows the quantitative goals for the railroad activity over the five-year plan period 2010-2014. It details the increase in railroad line lengths, primary and secondary railroad line lengths, stations, as well as passenger and cargo transport capacities.

2. General Objectives

- To complete the process of doubling single lines

- To implement new crossings with high standards
- To eliminate all railroad crossings
- To equip the railroad network with modern trains, cars, and wagons that can transport passengers and cargo and meet the needs of the population and the national economy, as well as rehabilitate existing ones
- To upgrade the signal and communications systems in the current railroad network over the coming years, including the satellite communications system currently under construction that identifies the location of trains at any time for purposes of accident prevention and in case of train breakdown
- To increase the speed of passenger trains to 140 km/hour in phase one and to 250 km/hour in phase two
- To strengthen Iraq's geographical presence as a link between east and west, and meet the demand for transit cargo transportation, by building an efficient and effective infrastructure capable of meeting that demand, and by promoting railroad links with Syria and Turkey that serve the national interest
- To electrify the railways.

The Private Sector's Role

Like all other activities in the transportation sector, railroad activity is characterized by the huge investments required to implement its infrastructure. That is why investors' interest is limited to implementing infrastructure in highly profitable activities such as cargo transport or the high- and continuous-demand field of passenger transport. The field of operations and service provision is broad and open to the private sector. Use of Iraqi land as a dry conduit for the transit trade between East Asia, Turkey, Europe, and Syria will increase the chances of attracting investors and to the rail hubs that connect to holy cities and promote religious tourism in the country.

Means of Achieving the Objectives

1. Allocating of the investments necessary to develop and modernize railway transportation activity and construct the new projects in the five-year plan

Year	Increase in line lengths (km)		Increase in passenger transport capacity (million passengers)		Increase in cargo transport capacity (million tons)			
	Yearly	Cumulative Total	Yearly	Cumulative Total	Yearly	Cumulative Total	Yearly	Cumulative Total
2009	-	1,906	122	2,915	-	1	-	4
2010	-	1,906	200	3,115	0.5	1.5	1	5
2011	-	1,906	400	3,515	1	2.5	1	6
2012	800	2,706	2,087	5,602	4.2	6.7	38	44
2013	140	2,846	1,165	6,767	23	29.7	58	102
2014	2,157	5,003	6,233	13,000	35	64.7	233	335

2. Encouraging the private sector to invest in this activity, particularly in operations and service provision, and granting permission to the sector to open rail transit agencies to attract transport requests
3. Restructuring the General Authority for Implementation of Railroad Projects so it can take on project implementation and assign the task to companies specializing in this field. Alternately, rehabilitating the General Company for Implementation of Transportation Projects (which currently exists) so it can specialize exclusively in implementing railroad activities
4. Developing the capacity of engineering and technical staff in the railways sector to implement and construct railroad projects, providing the specialized railroad construction equipment, which ensures creation of national specialized staff highly efficient in this field
5. Developing and modernizing Iraq's railway institutions, upgrading laboratories and equipment, developing its work procedures, setting controls to encourage staff training, and encouraging students to join it.

7.1.2.4 Port Activity

Reality

Basrah is Iraq's only international port—an important strategic center for the country and its interactions with the world. It is also of vital economic importance in securing a large portion of Iraq's import needs and a key port for exporting crude oil and other Iraqi products.

Port activity and maritime transport have therefore been important in Iraq over the years, particularly in the 1970s, and Basrah has become the center of economic activities associated with import and export.

Port activities are funded and managed entirely by the state through the General Company for Iraqi Ports.

Currently, Iraq has four commercial ports and two platforms to export oil. There are 48 commercial port docks with a capacity of 17.5 million tons annually, of which 43 are currently operational with a capacity of 15.90 million tons annually. Table 37 shows Iraqi commercial ports, their capacities, the number of docks in each port, and the available depths at the docks.

As a result of the economic sanctions imposed on Iraq, and the damage to ports during the most recent war, the port machinery and equipment are obsolete and much of it is nonoperational. The war also increased the number of sunken vessels in shipping lanes and a halt to dredging these lanes. This has, in turn, led to reduced depths in the lanes and off port docks. The sunken vessels hinder ship entry and dredging and maintenance operations. All of these factors have had a negative impact on the performance and efficiency of commercial ports and docks.

Port activity declined after 1990 as a result of economic sanctions; Iraq's imports were shipped to neighboring countries' ports until 2002. In that year, total cargo weights reached about

Port	Available capacity (million tons annually)	Number of docks		Available depths at docks (meter)
		Existing	Actually operating	
Magal Port	1.5	11	6	6-8
Umm Qasr Port	7.5	22	22	6-10
Khor Al-Zubair Port	6.4	12	12	3-8
Abou Flous Port	0.5	3	3	6
Total	15.9	48	43	

9 million tons because the country signed the Oil for Food Memorandum and because foreign trade increased. Cargo weights then dropped in 2004 and 2005 to about 3 and 6 million tons, respectively, because of the deteriorating security situation. They rose in subsequent years to their previous levels.

As noted, with available capacity at operational port docks of about 15.90 million tons annually (in 2008) but real annual traffic at 11.85 million tons, there is substantial unused capacity available. We must determine the current volume of Iraq's imports and exports passing through its ports and the volumes of neighboring countries, as well. If that export figure is greater than 11.85 million tons annually, we must investigate exploiting the available capacity and what may be the reasons why ships could be reluctant to dock at the Iraqi ports and choose those of neighboring countries instead. We should study how to attract these ships to Iraqi ports and how to upgrading port performance by equipping port docks with the necessary handling equipment, as well as cost-effective means for intra-port transport and connection to the national transportation network.

In 2007 and thereafter, using its own funds and funds provided from the investment budget, the General Company for Iraqi Ports worked to upgrade the Al-Zubair and Tahrir dredgers and purchased the Taibah dredger. The vessels Al-Waleed and Hanan ships were recovered. Work is currently in progress to recover other targets using company revenues, allocations from the investment budget, and a loan from Japan. The number of vessels carrying crude oil from Basrah's oil port and Umm Qasr deep-water port is between 292 and 434 vessels annually. Total cargo ranges from 39 to 48 million tons annually. In 2008, the number of passengers arriving at the Umm Qasr port aboard passenger ships was 8,700 or less, and about 6,500 departed from the port. This reflects a decline in passenger use of maritime transport to neighboring countries.

Despite Iraq's substantial port activity, it generated no more than 5 billion dinars in financial surplus in 2008, a dramatic decline from the 82 billion dinars in financial surplus in 2005, the best year to date. This is the result of outdated administration and

operation approaches, old equipment, and the employed staff of more than 10 thousand, one third of whom are not needed. Around 40 percent of employees are administrators, a high figure that ultimately negatively affects performance efficiency.

Potential

The main potential for developing port activity in Iraq includes:

1. The significant difference between the design capacity of current docks—about 15 million tons annually—and the projected demand of Iraq's future imports and exports, estimated to be 53 million tons by 2018
2. The presence of a maritime front within the territorial waters of Iraq, making possible the construction of a port able to receive the largest commercial ships with loads of up to 120,000 tons, and conversion of the country's secondary ports to primary ports, strengthening Iraq's geographical position as a link between east and west and promoting transit trade. There would still be a need to develop railroad infrastructure to accomplish this goal.

Challenges

1. Iraqi ports face stiff competition from the ports of nearby countries (the United Arab Emirates and Qatar, for example) and neighboring countries (Kuwait, Jordan, Syria, Saudi Arabia, and Iran). These ports have made significant progress over the past two decades while performance and efficiency in Iraqi ports have declined as the result of economic sanctions and wars. Overall, Iraqi ports have experienced no noticeable improvement domestically or internationally.
2. The current depths of shipping lanes and docks ranges from 6 to 10 meters—inadequate to receive the largest container ships and loads. This is why current ports remain secondary ports. Moreover, transportation costs remain relatively high and noncompetitive as compared to those of the other ports, leaving Iraqi businessmen dependent non-Iraqi ports for their imports.
3. Ports also lag behind in management and operations, as they lack modern electronic systems and have failed to keep up with the latest global developments in this field.
4. As noted, the many sunken ships in the shipping lanes affect all shipping into and out of Iraqi ports.
5. There is a shortage of marine equipment (excavators, towboats, ships, cranes, lighting ships, survey boats, pollution control boats, lead ships, and water and fuel tankers). There is also a shortage of specialized port equipment and cargo-handling equipment, and to the extent it exists, it is old.

6. There is little government investment directed toward port activity or needs. Between 2004 and 2008, total investment in this activity was no more than 178,000 million dinars; of that no more than 30 percent was spent. In addition, the private sector is reluctant to invest in implementing port infrastructure projects.
7. The staff in this sector are low-skilled and there is a not an efficient ratio of technical to administrative staff. There is also a large surplus of labor that negatively affects performance efficiency.

Vision

Main and secondary ports meet the nation's import and export needs; are able to compete with the ports of neighboring and nearby countries; and act as a starting point for Iraq's dry channel linking Asia, Europe, Turkey, and Syria.

Objectives

1. General objectives
 - Increase the capacity of existing ports and shipping lanes
 - Utilize the available unused capacities of existing ports, which total about 3 million tons annually, and reduce reliance on the ports of neighboring and nearby countries for Iraq's foreign trade by increasing the capacity of current Iraqi ports
 - Transition to constructing major ports capable of receiving the largest ships; reduce transport costs to make Iraqi ports competitive with alternative ports; and equip one of them with the requirements necessary to act as a dry channel
 - Strengthen the private sector's role in implementing, operating, and providing port services.
2. Quantitative objectives
 - Increase the design capacity of Iraqi port docks to plan target levels by 2014 (as shown in table 38)
 - Construct the large port of Al-Faw during the plan period (as shown in table 39)
 - Remove sunken vessels in shipping lanes as well as those close to docks during the plan period (as shown in table 40)

Table 38

Current Design Capacities for Iraqi Port Docks and 2014 Target Levels Under the Strategic Development and Modernization Plan

Port name	2010		Docks expected to be added during the five-year plan (2010–2014)	2014	
	No. of docks	Capacity thousand tons/year		No. of docks	Capacity thousand tons/year
Umm Qasr	22	7,500	19	41	14,000
Khor Al-Zubair	12	6,400	13	25	10,650
Al-Magal	6	1,500	8	14	3,600
Abou Flous	3	500	-	3	750
Total	43	15,900	40	83	29,000

Table 39

Targeted Quantitative Objectives for Construction of the Large Port of Al-Faw

Description	2018	2038
Container docks	No. of docks	1011 – 22
	Containers/year	3,000,000 – 7,000,000
General cargo docks	No. of docks	67 – 22
	Tons/year	10,000,000 – 40,000,000

Table 40

Quantitative Objectives for Ports Activities to Lift Sunken Vessels 2010–2014

Authority	2010	2011	2012	2013	2014	Total
Umm Qasr	3	2	1	2	2	10
Khor Al-Zubair	1	2	2	2	2	9
Khor Abdullah Channel	1	1	1	2	2	7
Shatt Al-Arab	3	3	2	2	2	12
Removal of 8 sunken vessels using the Japanese loan	8					8
Total	16	8	6	8	8	48

Means of Achieving the Objectives

- Construction of the large port of Al-Faw
- Allocation of the funds necessary to develop, expand, and modernize existing ports or open them to investments
- Implementation of procedures to enhance performance, modernize operating methods, and remove obstacles to activity, using the following means:
 - Contracting with a global consulting firm specialized in providing advice, proposals, and solutions to increase the efficiency and performance of the General Company for Iraq's Ports, including in its role as regulator and monitor of private sector performance, so it can compete with companies in neighboring and nearby countries
 - Providing maritime service needs to the oil ports (Basrah and Omaig ports) and the liquid gas port in Khor Al-Zubair
 - Deepening, excavation, and establishment of marine channels leading to the port and establishing television and electronic control systems for ship and vessel movement
 - Upgrading ground handling equipment to achieve the requisite cargo handling capacity
 - Upgrading and enhancing the marine unit fleet that provides marine services to ports, provided this upgrade includes offshore excavators, towboats, signal ships, lead ships, passenger boats, connection boats, and workboats
 - Introducing modern electronic port management and operation systems
 - Preparing a comprehensive plan to train and qualify port staff, develop new qualified staff, and implement a training institute in the ports

- Recovering all sunken vessels from shipping lanes in Khor Abdullah, Khor Al-Zubair, Shatt Al-Arab, and Shatt Al-Basrahh
- Developing and modernizing shipyards and boat slips in ports, completing projects under construction, and constructing new shipyards that meet ship repair requirements
- Modernizing ports' provision of housing, water, and public services to importers, exporters, and port workers
- Reconsideration of surplus workers and staff.

As Iraqi ports are located at the edge of the Arabian Gulf, any proposal to amend the fees and prices of services provided by ports and maritime agencies must be crafted in a careful and studied manner, taking into account the fees charged in neighboring and nearby countries' ports, so that Iraqi fees are competitive and attractive.

The Private Sector's Role

The private sector can play a major role in constructing and operating some port infrastructure, as well as providing services. It is possible to open the door to the private sector to run basic container docks. If the private sector is reluctant to participate in constructing infrastructure, the state should do so rather than leaving the matter pending. It should then open the door to the private sector in the fields of operation and service provision.

Currently, in terms of port activity, private sector participants are involved in unloading and shipping in their capacity as unloading contractors. They are also involved in implementing bids for projects generally, and the maintenance of some tools and equipment.

Through investments, the private sector can participate in some projects and work as follows:

1. Construction of the large port of Al-Faw
2. Construction of 13 multipurpose docks in the Umm Qasr port, with a capacity of 3,750,000 tons/year
3. Construction of 4 container docks in the Umm Qasr port, with a capacity of 2,000,000 tons/year
4. Construction of 13 multi-purpose docks in the Khor Al-Zubair port, with a capacity of 4,250,000 tons/year
5. Investment in the Maamir dock in Al-Faw, with a capacity of 100,000 tons/year
6. Administration, operation, and development of the Al-Magal and Abou Flous ports
7. Provision of services such as departure and docking, as well as provision of services to ships in the port
8. Management of port docks, particularly container docks.

7.1.2.5 Maritime Transportation Activity

Reality

Iraq currently has three ships. It is hoped that new ships will be added through the purchase of existing ships or the manufacture of new ships as needed. As maritime transportation activity is both important and lucrative, the goal is to support the sector to create a nucleus for an Iraqi maritime fleet. Once this nucleus is created, fleet expansion would be funded from the revenues and profits generated by the ships within this fleet's nucleus.

Work is currently underway to sign joint transport agreements with international maritime transportation companies to transport Iraq's imports and exports, as well as create job opportunities and training to Iraqi executives.

In river transportation, work is almost at a standstill because of the security situation, water scarcity, shallow river depths, and the need to dredge them. There are also obstacles in river waterways due to the remains of bridges damaged by wars, as well as construction debris associated with temporary floating and service bridges. Reviving this activity will require resolution of the issues cited above.

The General Company for Maritime Transportation has 2,420 employees responsible for management and operations even though its activities have been suspended and work by executives has been stopped. There are also a number of surplus employees that were hired after 2003 and constitute a burden on the company's budget.

Challenges

1. The need for relatively large investments (at the outset only) to form the nucleus of a new Iraqi fleet of container transport ships and various cargo transport ships
2. Building ships on demand takes time and requires the provision of special and appropriate needs.

Quantitative Objectives

Quantitative objectives for maritime transportation activity include providing the ships necessary to transport Iraq's commodity imports and exports, particularly grain and food, and creating the nucleus of an Iraqi commercial fleet. Table 41 shows the number, types, and capacities of ships that would be purchased under the five-year plan (2010–2014) for maritime transport and maritime agencies.

Table 41 Quantitative Goals for Maritime Transport and Maritime Agencies During the Five-Year Plan (2010–2014)

	Needs	Capacity/ number	Number needed	Ship distribution by plan year				
				2010	2011	2012	2013	2014
Maritime transport	Pouring ships	50,000 tons	8	2	1	1	2	1
	Multipurpose ships	1,000–20,000 tons	2		1		1	
	Passenger transport ship	1,000 passengers	1		1			
	Container transport ships	750–1,000 containers	2	1		1		
Maritime agencies	Maritime transport boats with a 50 passenger capacity	4		1	1	1	1	
	Self-powered fueling ships with a 1,000 ton capacity	2		1			1	
	Self-powered maritime ships with 1,000 ton capacity	2			1	1		
Total		8		2	2	2	1	

The Private Sector's Role

Entry by the Iraqi private sector into the field of maritime transport is very limited at this time. Ownership is limited to small vessels because of the huge investments required to build large ships, the cost of crew and personnel wages, and the vast competition from the neighboring countries' fleets and firms.

This activity is crucial to supplying the country's needs, particularly in terms of food, grain, and military supplies. It is also very profitable. Accordingly, entry by the foreign private sector into maritime transport activities should preferably be in the form of joint ventures. As noted, it is necessary to form a national fleet of ships and vessels to meet the nation's essential needs and to benefit from the profitability of this activity.

7.1.2.6 Civil Aviation Activity

The civil aviation activity includes the activities of the General Establishment for Civil Aviation and the General Company for Iraqi Airways. The activities of the former include airports throughout Iraq; the activities of the latter entail air transport using the company's aircraft.

Reality

Generally, the activities of the General Establishment for Civil Aviation involve civil aviation in Iraq, civil air traffic management operations, and internal and external commercial air transportation operations.

Iraq now has six international airports, in Baghdad, Mosul, Basrah, Erbil, Sulaymaniyah, and Najaf respectively. Work is in progress to renovate and modernize the Baghdad, Mosul, and Basrah airports.

Baghdad International Airport consists of three buildings (Samarra, Babel, Ninawa). Each has a capacity of 2.5 million passengers annually and includes six air bridges. The airport has two runways for aircraft landing and take-off, one of 4 km x 60 meters, the other of 3.3 km x 45 meters. There are two bypasses, the first 4 km x 45 meters, the second 3.3 km x 30 meters. There is an area for aircraft parking. The airport also includes buildings for air traffic control, communications, firefighting, operators, and storage areas, and a building for car parking. The airport is equipped with all the devices that ensure air traffic safety and provides services for travelers.

Basrah International Airport consists of one building with a capacity of 2 million travelers annually and five air bridges for aircraft parking. The airport has one runway of 4 km x 60 meters, a bypass of 4 km x 45 meters, an area for aircraft parking, and buildings for air traffic control and communications. The airport is equipped with all the devices that ensure air traffic safety and provides services for travelers.

Mosul Airport consists of one building with a capacity of 500,000 travelers annually; a runway 2.8 km x 45 meters; an area for aircraft parking that accommodates three aircraft; and an air traffic control and communications building. The airport is equipped with all the devices that ensure air traffic safety and provides services for travelers.

Sulaymaniyah International Airport is an international airport categorized as CAT 1. It has both air and ground facilities. The air facilities consist of a runway 3.5 km x 45 meters, a parallel bypass of 3.5 km x 30 meters, secondary bypasses, and a parking area for three aircraft. The ground facilities consist of

a one-story travelers' building with an approximate capacity of 350,000 travelers/year and a fuel depot.

Erbil International Airport is an international airport with both air and ground facilities categorized as CAT 1. The air facilities consist of a runway of 2.8 km x 30 meters, an area for parking five aircraft, and secondary bypasses. The ground facilities of the airport include a small, one-story travelers' building with an approximate capacity of 150,000 travelers/year, a fuel depot, buildings for firefighting trucks, ground equipment, and power supply.

Najaf International Airport consists of a travelers' building with a capacity of 3,000,000 travelers/year, an area for parking four aircraft, and a runway 3 km x 45 meters.

Table 42 shows the activities of the General Establishment for Civil Aviation for the years (2002–2008), revealing low efficiencies during the period 2003–2004 and the rapid restoration of efficiencies in the subsequent years, reflecting the growing demand for air transportation.

Details	Years						
	2002	2003	2004	2005	2006	2007	2008
Number of travelers	426,520	22,162	66,898	243,980	442,017	461,849	585,967
Number of trips	4,329	436	1,870	3,686	3,235	6,389	7,933
Labor force	1,254	1,254	1,333	1,381	1,461	1,523	1,490
Revenues (million Dinars)	518	544	1,635	9,583	9,890	12,949	22,074
Expenditures (million Dinars)	1,772	1,335	5,654	41,553	43,143	31,298	21,054
Training outside Iraq	106 sessions	-	51 sessions	9 sessions	7 sessions	12 sessions	56 sessions
	369 trainees	-	341 trainees	64 trainees	36 trainees	52 trainees	179 trainees
Training inside Iraq	58 sessions	-	55 sessions	124 sessions	82 sessions	24 sessions	146 sessions
	270 trainees	-	236 trainees	459 trainees	383 trainees	191 trainees	191 trainees

Iraqi Airways is considered to be the national carrier. It was established as an independent entity in 1988; however, it was first instituted in 1946 under the administration of the Iraqi Railway Department.

In 2002, as a result of the economic sanctions, international transportation was limited to relief flights to Syria and pilgrimage flights. Internal transportation was limited to Basrah–Mosul flights, transportation of local goods for companies, and civil flights to conduct Basrah and Mosul airport operations.

In July 2004, the airport in Baghdad was handed over by the multinational forces, and began rebuilding and operating in September 2004. However, operation was limited to Amman, Damascus, and incidental flights.

In 2005 the company building in Baghdad International Airport was rehabilitated and four Boeing aircraft were leased. Sulaymaniyah airport was rehabilitated using company staff, and lines to (Sulaymaniyah, Erbil, Dubai, Istanbul, Cairo, Beirut, Tehran) were opened.

In 2008, Iraqi Airways had two owned and three leased aircraft. The number of flights that year was 3,494 international flights and 1,916 local flights. There were 120,282 incoming travelers on international flight and 57,764 on internal flights; the number of travelers on international departure flights was 113,226, and 56,306 on internal flights. This year also saw a marked improvement in civil aviation activities, as Iraq opened lines to Turkey and the Scandinavian countries. It is hoped that other new lines will connect to Athens, Paris, and London. It is also hoped to restore additional Iraqi Airways activities after an agreement is reached with Kuwaiti Airways.

Data	Years		
	1979	1988	2002
No. of Trips	-	6,311	1,230
No. of Travelers	688,022	695,538	198,362
Cargo quantity (tons)	16,118	24,752	80,184

2008 was also marked by Iraqi Airways obtaining the air investor certificate (A.O.C.), opening new offices in Iraq for the Iraqi Airways Company, determining a code for Najaf International Airport, upgrading the company's fleet with government-owned

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and other, leased aircraft, and a cooperation agreement with Boeing related to a modern information system.

Despite the relative improvement in civil aviation during 2008, the sector still requires substantial additional development to become a profitable international and internal air carrier, particularly in controlling aircraft scheduling and reducing ticket prices.

Civil aviation needs development and support in various ways. The activity represents Iraq in the eyes of the world. It is also the gateway through which the world can come to Iraq. Therefore, attention given to it should be at an appropriate level.

During the upcoming five-year plan, and for the purposes of promoting religious tourism, Iraq is expected to start constructing the Middle Euphrates International Airport. This airport will be in the Karbala province and will ultimately be centered between the Najaf, Babil, and Karbala provinces. Its impact may extend to neighboring provinces such as Diwaniyah.

Table 43 shows the number of flights and passengers (departures and arrivals), and the quantities of goods transported on board Iraqi Airways during the years 1979, 1988, and 2002. The table shows that there was little growth in passenger transport during the period 1979 to because of conditions imposed by the Iraq-Iran War. Growth then declined during the period 1988 to 2002 because of the economic embargo, including an embargo on air transportation activities.

Table 44 shows the number of Iraqi Airways' internal and international flights, arrivals, and departures for the period 2004–2008. It shows rapid growth in demand for air transport between 2004 and 2006 becoming stable in 2007 and 2008. This stability may be attributed to the limited number of available aircraft and the advanced age of existing aircraft.

Challenges

1. The slow pace of implementing the rehabilitation of the existing airports
2. Lack of a new and integrated air fleet; currently a limited number of aged owned and leased aircraft
3. Failure to resolve the Kuwaiti case
4. An increased number of non-specialist employees hinders company performance and financial results

5. Noncompliance of some Iraqi Airways management methods and operations with international requirements.

Vision

High-level management and a new Iraqi air fleet with new aircraft.

Objectives

1. General Objectives

- Rehabilitating Existing Airports
- Constructing new airports in areas of high demand and tourist attractions, particularly religious tourism
- Rebuilding the air fleet
- Developing current staff and creating new young cadres
- Strengthening the role of Iraqi Airways as a national carrier
- Meeting the growing demand for transport by Iraqi Airways.

Quantitative objectives

Table 45 shows the quantitative objectives of the civil aviation activity during the plan years 2010–2014.

Year	Number of aircraft		Number of travelers	
	Arrival	Departure	Arrival	Departure
2010	7,453	7,453	719,965	679,257
2011	9,912	9,912	1,072,748	964,928
2012	13,183	13,183	1,598,395	1,370,198
2013	17,533	17,533	2,381,609	1,775,468
2014	23,319	23,319	3,548,597	2,521,165

The quantitative objectives for rebuilding the Iraqi air fleet are to provide:

- 18 passenger planes
- 5 long-range planes
- 13 medium and short-range planes
- 5 long-ranges, large-capacity cargo planes.

Year	International transportation			Internal transportation		
	Number of flights	Departure	Arrival	Number of flights	Departure	Arrival
2004	305	9,917	10,555	-	-	-
2005	1,782	70,898	61,936	826	20,333	20,023
2006	3,266	145,323	128,675	1,412	37,473	37,222
2007	3,331	116,719	109,314	1,565	57,527	57,010
2008	3,494	113,226	120,282	1,916	56,306	57,764

The quantitative objectives for number of travelers (international and internal) and goods (imported and exported shipments) expected to be transported by Iraqi Airways during the five-year plan (2010–2014) are shown in table 46.

	2010	2011	2012	2013	2014
International transport (travelers)	367,680	514,752	773,752	1,083,252	1,516,552
Internal transport (travelers)	79,037	102,748	133,572	173,643	225,735
Imported shipments (tons)	39,513	55,318	77,445	108,423	151,792
Exported shipments (tons)	252	353	494	692	969

The Role of the Private Sector

In infrastructure, the private sector can play a role in:

1. Construction of civilian airports (both air and ground facilities) by private sector investors
2. Construction by the state of airport air facilities (runways, bypasses, air traffic control towers, aircraft parking areas, and so on), while making construction of ground facilities (travelers' halls, restaurants, cafeterias, markets, garages, and the like) available to the private sector, which would implement them by investing in areas of high economic and technical potential, such as religious tourism

In operations, the private sector can make contributions independently or through joint operations. In services, it can play an important and effective role. For example, the role of the General Company for Iraqi Airways could be limited to transport of travelers and luggage on aircraft and marketing of that service. The private sector could then provide services in fields such as the following:

- Aircraft maintenance
- Services to aircraft at the airport (electricity, air conditioning, cleaning)
- Cargo shipments.

7.2 Communications Sector

The communications sector includes the following activities:

1. Communications activities (including switches, networks, and messaging)
2. Mail
3. The internet and information technology.

7.2.1 Communications Activity

Reality

Given the important role played by the communications sector in civilian and military life, the infrastructure of this sector has been subjected to lethal wartime blows that have led to its almost complete destruction. The declining security situation and acts of terrorism and sabotage since 2003 led to the cessation of infrastructure maintenance and rehabilitation in hot spots and unsafe areas, particularly in the telephone ground network.

In addition, the creation of the Media and Communications Department and the withdrawal of most powers and responsibilities from the Ministry of

Communications, and their transfer to the Media and Communications Department, led to delays in implementing a clear communications policy during the period 2003–2009. The plan was clear in this field for the quality of the proposed projects, and the continuous changes in setting priorities.

Year	Number of switches	Total number of telephones (in thousands)	Post offices	Mailboxes
2002	285	1,183.3	314	44,218
2003	279	1,128.3	-	-
2004	278	1,198.2	282	47,395
2005	285	1,235.8	285	49,094
2006	288	1,278.2	286	55,028
2007	292	1,306.1	288	55,227
2008	296	1,525.2	355	53,627

In 2002, Iraq had 285 electronic switches distributed across all provinces. There were approximately 1183.3 thousand telephone lines, and the telephone penetration per 100 people across Iraq was 4 percent. In 2007, the number of switches rose to 292 and telephones increased to 1,306.1 thousand. Telephone penetration per 100 people rose to 5.1 percent for Iraq in general and 7.3 percent for the province of Baghdad. The number of post offices in the same year was 351 across all provinces. The number of mailboxes was 55,227, as shown in table 47.

As far as the activities of the international network service (Internet) which is a very new service in Iraq, the number of open service centers was 19 in 2001, 55 in 2003, and 26 in 2006. The number of open service centers for the private sector was 30 in 2003, 15 in 2005, and 5 in 2006. The current reality of the cell phone network is that, despite this technology not arriving in Iraq until 2003, the number of participants has increased greatly. The number of participants in all cell phone networks reached 15,420,500 in 2008, and network coverage ranged from 30 percent to 90 percent of the population—likely driven by the affordability of SIM cards, the disruption of landline service, and citizens' desire to acquire cell phones—a new cultural phenomenon—and benefit from their features. However, the level of cell phone service declined in the latest period, and

cell phone companies took no concrete measures to improve service.

Cell phone service is still below the required level, and more efforts are required to secure its efficiency, whether for the country's agencies or for its citizens.

To take advantage of Iraq's geographical location and to strengthen its role as a link between east and west, north and south, work is underway to link Iraq to the neighboring countries by a network of axes and optical fiber cables.

As the communications sector has become an important and profitable sector, it can contribute significantly to the state's revenues. The field is also wide open to the private sector to participate in constructing and operating several of the sector's projects through partnership contracts or through complete investment, with the state supervising and regulating activities.

The general framework adopted by the communications strategy in Iraq for the coming period is consistent with the World Summit's conclusions as regards the information-based society; the general Arab strategy with respect to communications and information technology 2007–2012; the regional plan of action to build an information-based society in ESCWA member countries; and the Millennium Development Goals (MDGs).

The following data, issued by the CSO in March 2009, shows the national indicators for monitoring the MDGs:

- The number of fixed telephone lines and cell phones per 100 people
- The number of personal computers used per 100 people

Table 48 shows the indicators, their values for the base years, and the target values for 2015. Note the decline of telephone penetration in 2007 to 5.1 percent, down from 5.6 percent in 1990. This may be the result of widespread use of cell phones, ownership of personal computers, and use of satellite television.

Indicator	Base number	Base Year	Current number	Year	Target for 2015
Number of fixed telephones per 100 persons	5.6	1990	5.1	2007	11.2
Number of cell phones per 100 persons	0	1990	39.1	2007	40
Proportion of families that own personal computers	3.6	2004	7.4	2007	10
Proportion of families that use satellite	32	2004	88.3	2007	100

Challenges

- Inability to perform the maintenance work on the telephone ground network in hot spots
- Collapse of the communications network infrastructure and the age of its equipment
- Limited use of allocations to this activity for purposes of implementing projects

Vision

Implementation of a qualitatively advanced communication and information technology infrastructure and upgrade of the level of communication services to international standards, thereby ensuring quality and providing world-class services that keeps up with global developments. The implementation of e-governance is an additional important facet of the vision.

Objectives

1. General Objectives

- Expanding fixed telephone lines in the urban and rural areas, and high rates of universal access and universal services
- Providing an appropriate infrastructure for the application of e-government services
- Reducing the disparity in cell phone proliferation between urban and rural areas
- Increasing distribution of computers
- Increasing access to the Internet
- Reduce the costs of using telecommunications, including the Internet, as a proportion income, making prices affordable to a larger segment of society, especially school and college students
- Improving the quality of communications and Internet services
- Expanding the use of broadband services at appropriate price
- Improving and expanding communication bands for international gateways
- Optimizing use of frequencies, control over international cell phone traffic, and provision of Internet services gateways.

2. Quantitative Objectives

Table 49 shows the infrastructure indicators for information technology, communications, and gateways. Note that some of these figures are ambitious as compared to national indicators for monitoring achievement of the MDGs. That is the case for the number of telephone lines, number of cell phone subscribers, and families who own a computer.

Means of Achieving the Objectives

In addition to securing the investment required to achieve activity goals—through government investment or private or foreign investments—the following will support achieving

activity goals:

1. Supporting the communications and media regulatory authority and strengthening its executive abilities to apply rules and guidelines
2. Creating an enabling environment by instituting laws and regulations for the communications and information sector, including the Ministry of Communications law to restructure the ministry to include information technology functions as part of its responsibilities;
3. Strengthening the role of the authority to create a fair and transparent competitive environment for all parties to encourage investment and activate the private sector's role; seeking to protect consumers and simplify the procedures for issuing telecommunications services licenses
4. Transferring the developed expertise by entering into strategic partnerships with international companies providing telecommunication services
5. Ratifying the agreements for intellectual property rights and preventing illegal reproduction of software, artistic, and intellectual products.

Indicator	Present status	Target status
Number of fixed telephone lines per 100 persons	5%	25%
Number of cell phone subscribers per 100 persons	40%	100%
Number of computers per 100 persons	1%	5%
Number of Internet Subscribers per 100 persons	-	20%
Number of broadband Internet Subscribers per 100 persons	-	10%
Proportion of families that have computers	5.6%	20%
Proportion of families that have access to the Internet at home	2.8%	10%
Per capita of international Internet bandwidth		
Percentage of the population covered by cell phone service (coverage includes most of the regions)		100%
Cost to access the Internet (20 hours per month) in US\$ as a percentage of annual per capita income	8%	4%
Cost of using a cell phone (100 minutes per month) in US\$ and as a percentage of annual per capita income	5%	3%

The Role of the Private Sector

The communications sector is well-suited for the private sector to play an important and broad-based role in. It is quite profitable, provides rapid returns, and faces increasing demand for services, including:

1. Cell phone services
2. Landline phone services
3. Wireless phone services
4. Internet services

7.2.2 Postal Activity

Reality

Despite the progress in mail services in Iraq, and the good quality of service provided in past decades in light of the poor and limited phone service, there is a lack of modern means of communications such as cell phones and the Internet. Even so, the reality is that current postal service in Iraq is quite limited, not very reliable, and at times almost nonexistent.

Challenges

1. Mail development projects not included in the priorities of the communications sector
2. Slow incorporation of modern, advanced communications systems in mail operations
3. Weakness of the available capabilities and traditional work methods
4. Lack of user confidence in the level of services delivered.

Vision

To rebuild mail activities to provide quick and reliable services.

Objectives

1. Improving the quality of postal services, particularly the traditional services, and introducing new services
2. Developing mail services internally and with other countries to become an international postal service
3. Increasing the proportion of mail distributed to homes and institutions
4. Integration of postal sector activities within the national economy and government activities to implement e-government, electronic trade, and ATMs and other applications.

Means of Achieving the Objectives

1. Separating the mail activities from communications to create an independent entity, initially; considering, at a later date, prominent role for the private sector
2. Developing a clear strategy for directions to accelerate postal activities
3. Developing an action plan, including for human capacity, to upgrade the postal service infrastructure to realize the greatest benefits from communications and information technology to improve services and link them electronically
4. Realizing the maximum benefit from communications and information technology and other banking technologies in improving services permitting citizens to save money with increased confidence
5. Introducing a strategic partner into the postal service directorate; generating savings by introducing modern administrative and technical capabilities and expertise, as well as new technological systems that improve service

efficiency and quality

6. Addressing the need for the postal service and savings capabilities to function on a commercial basis and be able to compete in a free market environment, reducing dependence on government support
7. Encouraging the private sector to invest in developing international mail centers in Iraq and an express mail service capability.

7.3 Storage Sector

Reality

Storage is a strategic infrastructure component, ensuring food security for the general public, especially in grains. This sector includes silos and grain storage areas for wheat, barley, and rice, currently under the authority of the Ministry of Trade/the General Company for Grain Trade.

The number of grain storage silos in the provinces of Iraq is 45, with capacities ranging from 10,000 to 50,000 tons for vertical and dome silos.

As the wars in which Iraq was engaged threatened food security, it is now crucial to secure a good stock of the primary grains.

Storage capacities were developed in 2008, and reached around 4.5 million tons of wheat and barley, 350,000 tons of rice, distributed throughout most of Iraq's provinces. The provinces with the greatest storage capacity are Ninawa, Salahuddin, Baghdad, and Kirkuk. The lowest storage capacity (wheat and barley) is in Sulaymaniyah, where there is no capacity. Storage capacity in the provinces of Karbala, Muthanna, and Dhi Qar is no greater than 40,000 tons.

The storage capacity for the strategic rice crop is concentrated in Wasit, Basrahh, Baghdad, and Najaf, as shown in table 50.

Provinces	Storage capacities of the silos and warehouses of the General Company for Grain Trading (wheat and barley)				Current roofed storage capacities for the rice crop (tons)
	Bins	Bunkers	Terraces	Current storage capacities (tons)	
Ninawa	353,000	446,200	91,500	890,700	42,750
Dahuk	105,000	23,000	-	128,000	-
Erbil	112,000	114,800	-	226,800	7,500
Kirkuk	20,000	330,100	40,000	390,100	7,500
Salah ad Din	235,500	436,200	22,000	693,700	22,100
Sulaymaniyah	-	-	-	-	-
Anbar	10,000	172,000	-	182,000	12,350
Diyala	160,000	129,800	-	289,800	40,000
Baghdad	362,500	232,600	-	595,100	57,450
Wasit	42,000	134,000	17,000	193,000	9,350
Najaf	66,000	137,900	-	203,900	40,400
Diwaniyah	15,000	128,100	-	143,100	17,300
Babil	93,000	129,300	-	222,300	14,200
Muthanna	10,000	24,500	-	34,500	15,000
Karbala	10,000	-	1,000	20,000	5000
Dhi Qar	20,000	9800	13,500	43,300	1,100
Maysan	10,000	85,400	-	95,400	7,200
Basrahh	125,000	-	-	125,000	53,950
Total	1,749,000	2,533,700	194,000	4,476,700	353,150

All storage capacities, in all of the forms shown in the above table, are insufficient to store what is locally produced and what is imported. For example, total Iraqi wheat imports in 2008 were 3.5 million tons, and what was produced by farmers was 650 thousand tons. Locally-produced rice totaled 200,000 tons and what was imported totaled 102 million tons. Accordingly, there is a need to add new storage capacities to meet the populace's needs, to secure strategic stocks of the main grains, and to compensate for obsolete silos.

The problems and challenges

1. The age of some silos and their need of rehabilitation
2. Ineffective silo management and operation methods.

Vision

Safe and sustainable storage methods to ensure availability of the main crops (wheat and rice).

Objectives

1. General Objectives

- Securing strategic storage of sufficient wheat and rice for at least six months
- Constructing new silos and new storage places for wheat and rice.

2. Quantitative Objectives

Table 51 shows the proposed storage capacities to be added during the five-year plan 2010–2014, broken down by province.

Province	Current grain silo storage capacities (tons)	Province's 6-month need for grain (wheat + barley) (tons)	Proposed silo storage capacities (ton)
Kirkuk	20,000	77,142	120,000
Salah ad Din	10,000	79,380	100,000
Anbar	10,000	91,074	120,000
Wasit	42,000	72,444	100,000
Diwaniyah	15,000	70,962	120,000
Muthanna	10,000	44,610	60,000
Karbala	10,000	61,764	80,000
Dhi Qar	20,000	116,154	120,000
Maysan	10,000	64,998	80,000
Basrah	125,000	165,672	120,000
			+
	In Umm Qasr silo		120,000

7.4 Water and Sanitation

7.4.1 Policies in the Area of Water and Sanitation Services

All previous strategies and development plans have stressed the importance of these two services and their direct links to human life and health, and paid special attention to improving and distributing them to all provinces and rural areas. Drinking water policy has not been limited to providing sufficient water quality and quantity, but also has focused on very low, subsidized prices. Accordingly, providers of drinking water and sanitation services were steadily developed along with material and human resources such that Iraq's capabilities ranked high in the region. In 2008, in urban areas, 95 percent of the population has access to safe drinking water, and in rural areas, 75 percent.

The percentage of the population who have access to sanitation services is 75 percent for the urban areas, and 50 percent for the rural areas. However, the war and embargo-driven deterioration that has hit the remaining sectors, impacted negatively upon completion of the programs for one of the most important services related to human health. The level

of services provided to the citizens decreased to 48 percent, not to mention adversely effects on the quality and quantity of water supplied. This showed an obvious decline and a high proportion of failed plans at the level of the various cities and rural areas. The goal of universal coverage in the areas of water and sanitation services is to handle each area separately. The plan would start with the current reality, and define the vision, objectives, and means of achieving the objectives. The plan would also identify the provinces that are not under the auspices of the city and territory of Baghdad. It is worth noting that it was not possible to prepare an analysis of the Kurdistan region and its provinces because the ministry did not receive any data about the territory at the time plan documents were prepared.

7.4.2 Water Services

7.4.2.1 Water Services in Provinces Other than Baghdad

Reality

This sector suffered dramatic neglect after 1991 for reasons previously mentioned, which resulted in a decline to a low level of service provision, both quantitatively and qualitatively. Water is produced and processed by the Ministry of Municipalities and Public Works for 14 provinces and the districts and areas within the province of Baghdad. The population covered by this service numbers approximately 22 million; the number receiving service is 17.8 million. The number of projects currently is 245, in addition to 2,128 water units with different production capacities distributed across all provinces and rural areas. The quantity of water produced per day is 7.2 million cubic meters, and the amount of the current shortage is 2.6 million cubic meters, thus the shortage is 21 percent and the percentage of the served population is 79 percent for the year 2008 as noted in table 52.

There has been significant development in providing this service since 2004, including a steady increase in the actual production of drinking water and a steady decrease in the total shortage from 34 percent in 2004 to 21 percent. These were driven by allocation of 10,250 trillion dinars between 2004 and 2008 to construct new projects or rehabilitate existing projects affected by the war.

Drinking water policy, as noted, is to subsidize the service and charge only a token price. Below are some of the results of this policy.

- The continued existence of considerable disparity in service levels between urban and rural areas. In urban areas, the shortage in drinking water availability has declined to 10 percent. The shortage in rural areas has remained quite high, at no less than 36 percent.
- The continued existence of considerable disparity in drinking water shortages among provinces: 15 percent in Ninawa, 30 percent in Basrah, 28 percent in Maysan, 26 percent in Qadisiya, and 20 percent in Dhi Qar.

Province	Number of active projects	Capacity (m ³ /day)	Number of working complexes	Capacity (m ³ /day)	Total capacities (m ³ /day)	Population per 2007 estimates	Population Served	Shortage percent
Ninawa	39	778,827	77	128,160	906,987	2,901,809	2,466,537	15
Kirkuk	14	479,746	134	105,600	585,346	918,288	808,093	16
Baghdad	10	237,080	186	234,752	471,832	2,897,473	2,346,953	19
Diyala	25	286,963	134	153,600	440,563	1,610,828	1,320,878	18
Salah ad Din	19	270,200	148	246,048	516,248	1,237,059	1,136,594	18
Babil	18	245,920	173	282,104	529,024	1,707,508	1,400,156	18
Najaf	9	224,560	86	121,952	346,512	1,117,624	90,527	19
Karbala	7	233,310	107	222,864	456,174	924,085	776,231	16
Wasit	19	181,100	229	239,232	420,332	1,097,949	812,482	26
Anbar	21	372,418	155	241,368	613,786	1,542,152	1,295,407	16
Maysam	13	68,600	159	224,192	292,792	845,498	608,785	28
Muthanna	6	124,260	36	62,208	186,468	636,297	538,126	17
Diwaniyah	13	198,773	173	169,792	368,565	1,018,072	753,373	26
Dhi Qar	19	109,140	118	258,720	367,860	1,666,932	1,333,545	30
Basrah	13	201,800	213	536,800	738,600	1,952,030	1,366,241	30
Total	245	4,012,697	2,128	3,228,392	7,241,089	22,073,604	17,858,649	21

Challenges

- Lack of budget for water projects, both in the investment budget for new projects and the operating budget for current projects to ensure the needs of the operations such as fuel, sterilization materials, and maintenance
 - Low water levels in the rivers that supply the projects, caused by low levels of water coming from the countries upstream of the Tigris and Euphrates and their tributaries, and the lack of rain in recent years
 - Aging water lines, which leads to increased water loss and pollution of the water received by the consumer
 - The difficulty of the procedures and the length of time required for municipal authorities to allocate land for water projects and encroachments by other parties
 - Operational problems caused by continuous power interruptions, insufficient fuel to run project generators, and lack of engineering and technical staff
 - The excessive price policy that supports service delivery and its negative impact on long-term economic performance.
- Bringing service to areas not previously serviced
 - Providing safe drinking water that meets all international standards for all uses in the urban and rural areas
 - Ensure that the water processed is of high quality and meets international standards
 - Reducing the water shortages in all Iraqi provinces
 - Reducing service level disparities among provinces as well as between rural and urban areas.

Means of Achieving the objectives

- Completing and constructing 92 projects in all provinces, funded locally by the investment budget
- Ensuring adequate water quotas are allocated for new and existing projects from the source they depend on
- Ensuring availability of operational requirements such as fuel, electricity, engineering and technical staff, and a continuous supply of filtering and sterilizing materials
- Reducing water waste through rehabilitating the transportation and distribution networks, and increasing consumer awareness of various ways to reduce water consumption
- Gradually removing subsidies for providing this service, based on consumption levels, but continuing subsidies for the poor whose consumption is less than a certain limit to be determined by the water authorities
- Constructing water desalination projects in the provinces that suffer from high salinity, especially the southern provinces

Vision

Ensure safe drinking water that meets international standards is accessible by all provinces' residents in rural and urban areas.

Objectives

Reducing the number of people with no access to safe drinking water from water projects or water reservoirs to 10 percent in urban areas and 26 percent in rural areas to avoid shortages and ensure that drinking water of sufficient quality and quantity through other means such as:

7. Continuing capacity building programs, developing the staff in accordance with modern technologies for implementing water projects.

7.4.2.2 Water Services in Baghdad

Reality

Baghdad's drinking water is produced by 8 purification projects and 44 water reservoirs. Purified water from the projects is distributed to the complexes, which then pump it to the network associated with these reservoirs, which are in various areas of Baghdad. There are also nine small pumping stations that serve the residential complexes.

Most of these projects are old and their economic life has ended. However, the mayorality of Baghdad has been rehabilitating them to increase their capacities to 942 million cubic meters per year. As of 2008, their actual capacity was 788 million cubic meters per year.

The plans for water production in Baghdad were completed in 1982, based on a daily per capita consumption of 500 liters/day and taking population growth into account three.

These plans included constructing the Alrusafa water purification project, with a capacity of 9,000 cubic meters per day, constructing 16 underground tanks on both sides of Karkh and Alrusafa, and networks of major pipeline carriers, in addition new pure water systems in new communities.

A portion of this plan was completed in the 1980s. As a result, pure water processing rates improved for several years. However, economic sanctions caused a decline in investment programs in the 1990s. Moreover, Baghdad's water authorities had to rely on emergency systems to address immediate problems. It did so by reinforcing connections using unproven or otherwise inadequate methods. This led to processed water shortages in Baghdad, and particularly the Al-Rusafa district, in the summer, reaching 1.25 million cubic meters, or 35 percent. The per capita consumption rate decreased in Al-Rusafa to 110 liters/day after a 1987 peak of 300 liters/person/day throughout Baghdad. Water quality consistently declined along with water availability.

After 2005, Baghdad's water department activated previous plans and developed additional plans to improve services and to accomplish its goals. As a result, three underground storage tanks of varying capacities were constructed in the Al-Rusafa district. The department also directed the implementation of Alrusafa water project—the first stage with two lines and a capacity of 910,000 cubic meters per day. Additional projects included the first expansion of the East Tigris project, with a capacity of 225,000 cubic meters per day, and the second expansion, with a capacity of 180,000 cubic meters per day, and construction of the Sadr water project, with a capacity of 90,000 cubic meters per day, to cover the shortage in the Alrusafa area, which amounts to 1.25 million cubic meters per day.

There was a lack of appropriations for water projects in Baghdad during the period 2004–2009, and the little funding received

was not fully utilized. Indeed, the rate of implementation of scheduled projects was no higher than 70 percent during the best years. As a result, most of water projects have not been completed.

Challenges

The problems and challenges facing the water sector in Baghdad are the same in the other provinces.

Vision

Secure safe drinking water that meets international specifications, and enough for all the city inhabitants.

Objectives

1. Increasing the per capita share of drinking water to 200–300 liters/person/day
2. Ensure a high quality water supply in accordance with international specifications
3. Ensure adequate stocks of water to supply the city sectors when water projects stop.

Means of Achieving the Objectives

1. Completing construction of Alrusafa water project in two stages, with a capacity of 910,000 cubic meters per day
2. Directing the implementation of the plan to construct the remaining three stages of the Alrusafa project to produce 3,165 million cubic meters per day
3. Constructing a new purification project for the areas that are far from the main project services
4. Continuing construction of small purification complexes for the areas suffering from severe shortages
5. Constructing 10 new underground tanks, and expanding tanks that are currently operating
6. Constructing new laboratories and expanding existing ones
7. Extending the pure water networks to the areas that are not currently served
8. Renewing the old and damaged water networks to reduce waste and obtain high quality water
9. Make consumers aware of the differences between drinking water and the raw water used for irrigation and other purposes
10. Gradually removing subsidies for service, based on consumption levels, but continuing subsidies for the poor, and those who consume less than a certain limit determined by the water authorities
11. Continue capacity-building programs and developing staff according to modern technologies for implementing water projects.

7.4.3 Sanitation

Sanitation services have been and remain below the required level. They were not given the necessary attention, despite their importance, in successive development plans, which led to a decline in the number of people served. The 2005 Iraq environmental survey showed that 25.7 percent of the people were served by the sewer systems, 51.2 percent were served by a separate treatment system (septic tank), and 23.1 percent were not served by either. The survey also showed that there are 38 central processing stations and a small processing station for sewage, of which 14 are central processing stations, 24 small processing stations. Of the total, 31.6 percent of the central processing stations and the small processing stations were operational, 31.6 percent of the central processing stations and the small stations were partially operational and 36.8 percent were idle.

The total design capacities of the central processing stations and the small processing stations amount to 1,038 million cubic meters per day. The capacity of the central processing stations was 97.1 percent, while the capacity of the small processing stations was 2.9 percent; the actual capacities were no more than one-third of the design capacities. The survey also showed that 75 percent of the provinces that have sewage systems that suffer from leakage, constituting dangers to the environment and health because most were constructed more than 20 years ago. This leads to exuding, sprinkling, and leakage of sewage into the drinking water network, which in turn leads to water pollution and the threat of serious diseases such as cholera and viral hepatitis.

7.4.3.1 Sanitation services in the provinces and Baghdad's suburbs

First: Reality

Sanitation projects, as noted, were and still are below the required level. The percentage of population in the provinces, with the exception of the outskirts of Baghdad and the Kurdistan region, was about 26 percent in 2009. Lack of care in this sector contributed to polluting the environment and became a real danger to the health of citizens, as most sanitation water is dumped in rivers and streams used for drinking water by many residents of the villages and rural areas which are not served by the portable water networks. Table 53 shows the number of projects and residents served.

Huge investments were allocated to sanitation in the various provinces, with the exception of the city of Baghdad, reaching 750 billion dinars for the period 2004–2008. High drainage rates of 90 percent were achieved, despite which sanitation services remained limited and infrastructure deteriorated. As a result, there was no noticeable improvement in these services.

Challenges

1. The large deficit in coverage of the urban population and the total absence of coverage in the rural areas, and the need for huge financial resources to increase coverage and quality of service
2. The age of the existing sewer drainage networks and the need to maintain and develop it

Province	Design capacity	Number of people served	Number of sewage water stations	Number of pumps	Network length (km)
Ninawa	17,820	61,500	5	14	51
Kirkuk	3,500	9,000	2	5	26
Salah ad Din	27,000	82,000	16	62	345
Diyala	21,600	22,610	1	-	74,691
Anbar	7,000	35,500	6	12	125
Baghdad outskirts	3,000	12,000	13	10	7,500
Babil	12,000	55,000	4	22	128
Karbala	41,000	165,000	7	14	224
Najaf	42,000	180,000	19	17	125
Diwaniyah	12,000	50,000	-	31	175
Wasit	-	-	-	-	-
Muthanna	1000	4,000	5	5	16,277
Dhi Qar	18,000	95,000	14	11	13,617
Maysan	30,000	75,000	31	68	120
Basrah	118,100	1,000,000	65	98	866,436
Total	354,020	1,846,610	194	369	84,529,413

3. The serious environmental pollution caused by the discharge of untreated water into water resources, particularly the presence of sanitation water in drinking water networks close to the intake of drinking water projects
4. The reluctance of skilled and unskilled workers to work in sanitation for social reasons
5. The continuous and significant horizontal expansion of Iraqi cities and towns, which maximizes the cost of service and hampers the increase of coverage percentage
6. Lack of fuel and operational supplies such as specialized mechanisms, equipment, and so on
7. Problems using and allocating project sites and the use of typical traditional methods and designs without modernizing them.

Vision

All provinces covered by sanitation services and the percentage of those served exceeds the Millennium Development Goals of 10 percent, with river waters managed to meet international standards.

Objectives

1. Increase the percentage of those who are served by sanitation networks to 35 percent in the provinces, with the exception of the city of Baghdad
2. Treated water dumped in rivers conforms to international specifications.

Means of Achieving the Objectives

1. Implementing 48 projects distributed over all provinces

according to need, population density, and current coverage percentage

2. Rehabilitating old sanitation networks and replacing their damaged parts
3. Allocating investment amounts within the plan for the expansion of rainwater networks
4. Enhancing the capabilities of the central laboratories and sewage laboratories in the provinces to secure the necessary tests to ensure dumped water is treated per international specifications
5. Implementing new projects in the cities according to population density, groundwater levels, and implementation stages, from the higher levels to the lower levels (province, judiciary area, district)
6. Reviewing the standards of city planning and horizontal housing and transitioning to vertical housing
7. Granting incentives to sewage workers to reduce their reluctance to work in this field
8. Ensuring operational requirements in a sustainable manner
9. Continuing capabilities-building programs and staff development according to modern technologies in implementing sanitation projects.

7.4.3.2 Sanitation Services in the City of Baghdad

Reality

Of Baghdad's population, 75 percent are served by the sanitation networks. There are three active projects, with different capacities. The percentage of incoming sewage in the city exceeds its treatment capacities. Some of the overflow goes untreated to the discharge places, causing environmental damage and negatively affecting the health of citizens and even threatening their lives. In addition, the age of these networks makes them susceptible to leakage and overflow into drinking water networks, (which are in no better condition), causing drinking water pollution that further threatens the citizens' lives and health. Table 54 shows the sanitation projects in the city of Baghdad.

Challenges

The problems and challenges faced by sanitation activities in the city of Baghdad are not much different than those that face the provinces, with the exception that coverage in Baghdad is up to 75 percent of the city's population.

Vision

Secure sustainable sanitation services in all areas of Baghdad and ensure that water dumped in rivers is treated in accordance with international specifications.

Objectives

1. Increase the level of service coverage from 75 percent of the population of Baghdad to 100 percent in 2014,

Project	Design capacity (m ³ /day)	Incoming to the project (m ³ /day)	Served areas
Old Rustamiya project	175,000	225,000 – 250,000	The areas located west of the army channel from the Adhamiya region to Rustamiya project
Rustamiya project third expansion	300,000	325,000	The areas located east of the army channel from Alshaab region – Sadr city – the municipalities
Karkh project	205,000	625,000	The project treats the sanitation water of the areas located on the Karkh side

surpassing the relevant Millennium Development Goal

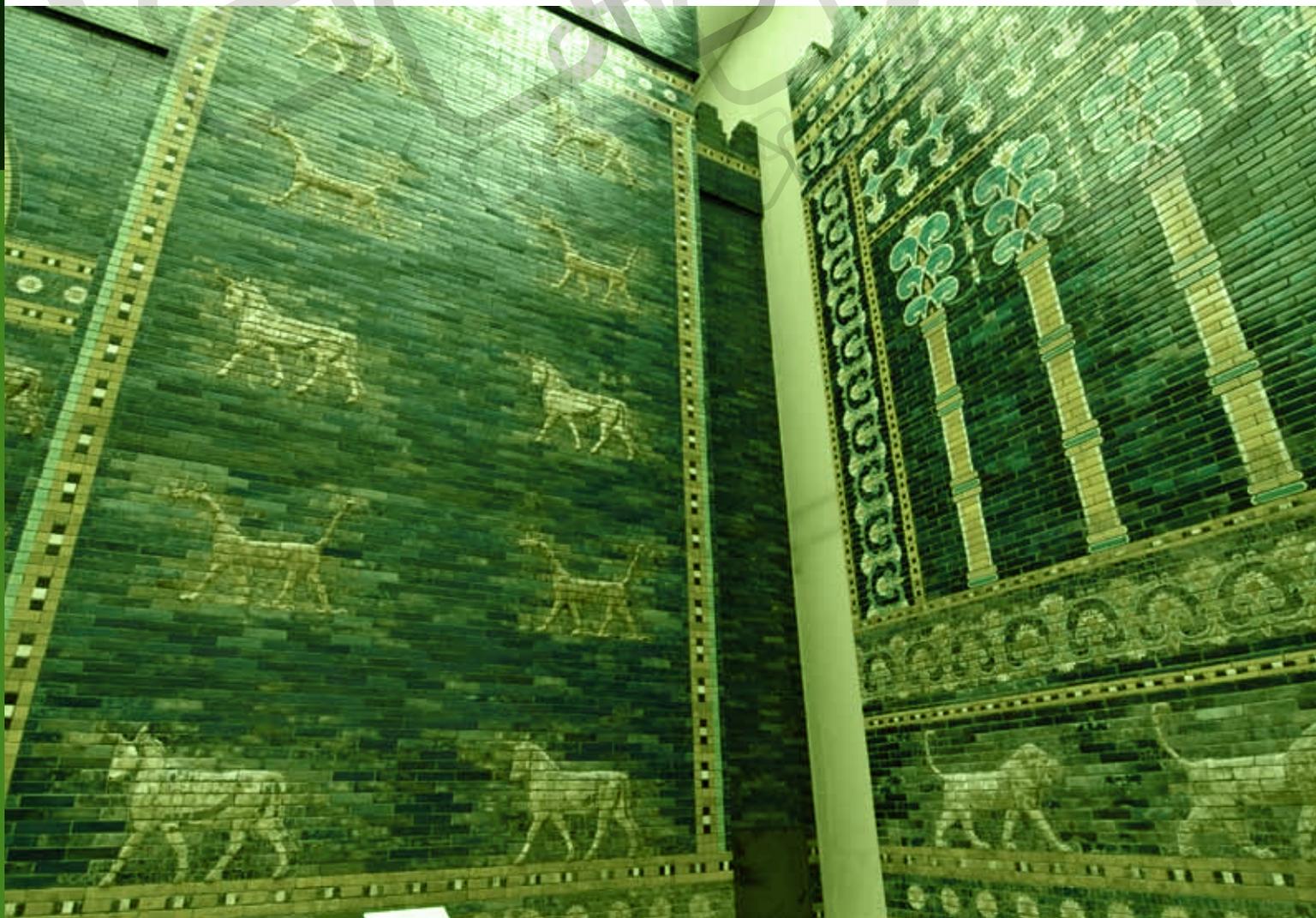
2. Improve the environmental impact of this activity, reducing the pollution it creates by increasing capacity to treat sanitation water and providing sewer network services to the areas that are currently not served
3. Make use of the gases that result from the process of treating sanitation water, such as methane, to generate electric power, and use byproducts of sanitation water (sludge) by converting it into pavement stones or fertilizer
4. Convert sanitation water to water suitable for agriculture and irrigation after treating it using modern and advanced technologies.

Means of Achieving the Objectives

1. Implementing 10 new projects in the city of Baghdad and completing projects currently under construction, and allocating the investment funds for them
2. Rehabilitating old sewer networks at the end of their design life using modern technology (for example, the hidden excavation method), and increasing the capacity in line with population growth in the city
3. Implementing new networks for the unserved areas in the city to improve the environmental situation
4. Promoting and developing the capabilities of the central laboratories to perform the necessary tests to ensure dumped water is treated according to international specifications
5. Ensuring operational requirements are met in a sustained way
6. Continuing the capabilities-building program, developing staff according to modern technologies in the implementation of sanitation projects.

Chapter Eight

Public Services



8.1 Education

According to the principles of the 2005 constitution of Iraq, the state is committed to providing the opportunities of education equally to all Iraqis. In the past two decades, the entirety of the education system has deteriorated. A serious effort is required to heal the wounds and hasten the reforms that will achieve the larger aims of economic reform.

8.1.1 Reality

8.1.1.1 Educational Stages

Early Childhood

The state realizes the importance of education in this level of life as a pillar that raises the standard of educational of the later levels. One of the compulsory MDGs, approved by the constitution of 2005, is expanding early childhood development educational programs—the base for building education.

Despite the growth in the number of children who attended kindergarten (4.3 percent), there is no noticeable progress in absorption of children ages 4–5 years at this level. The percentage of coverage increased only from 5.4 percent to 5.6 percent, because of the limited increase in the number of the kindergarten— at a rate of 0.6 percent compared to the increase in the number of teachers at a rate of 1.8 percent.

Elementary Education

Some development in the absorption of children aged 6–11 occurred, with a coverage rate of 85.6 percent increasing to 87 percent for the period 2001/2002 and 2007/2008. This indicates an inability to achieve full compulsory education. There was a growth rate of 3.9 percent in the number of children who attended elementary schools, in addition to a growth rate of 7.2 percent in the number of teachers for this level and a decrease in the student–teacher ratio from 21:1 to 18:1. The number of overall schools has increased by 4.6 percent.

Secondary Education

The percentage of coverage of education at the secondary level decreased to 44.3 percent from 56.6 percent. The 6.9 percent increase that occurred in the number of those attending this level is mainly the result of the increase in population. There was a growth in provision at this level that included a growth rate of 12.4 percent in teachers, and a decline in the student–teacher ratio from 17:1 to 14:1. The total number of teachers has increased by 4.9 percent.

Vocational Education

The percentage of coverage for people in vocational middle school education decreased from 3.9 percent to 3.2 percent; there was a 0.5 percent decrease in the number of those attending this level. There was an increase in provision of 11.3 percent of teachers, which led to a decrease in the student–teacher ratio from 10:1 to 6:1. The number of vocational schools has increased by 2.9 percent.

Teacher Training Institutes

There was a 6.2 percent decrease in the number of those who attended teacher training institutes during the research period. On the other hand, there was an increase in training provision that included an increase of 26.3 percent in the number of teachers, which led to the student–teacher ratio decreasing from 26:1 to 13:1 and the number of institutes increasing by 3.1 percent. Growth in this area is higher than that in other areas of education; there is a high level of interest in these institutes, especially for females.

Higher Education

The percentage of population coverage at this level (18–23) decreased from 10.2 percent to 8.3 percent; there was a 0.5 percent decrease in the number of those enrolled. However, there was an increase of 12.5 percent in the number of teachers. This led to a much lower student–teacher ratio—from 22:1 to 10:1, in addition to an increase in the number of colleges and institutes of 17.4 percent, resulting from the horizontal and vertical expansion of this level during 2001/2002–2007/2008.

There was an increase in the number of the governmental and private universities, and colleges, institutes and technical colleges, as the number of universities increased from 17 to 19 between 2003/2004 and 2007/2008 in addition to the Iraqi Commission for Computers and Informatics and the Iraqi Council for Medical Specializations.

The number of government colleges increased from 160 to 201 and the number of private colleges from 13 to 19. In technical education, the number of institutes and colleges has remained the same; 27 institutes and 9 colleges during the same period. Despite the improvement in various university campuses, especially between 2007 and 2009, the campuses, including classrooms, laboratories, and other facilities, still suffer from overcrowding because of limited space, including in the Technical Education Commission's institutes.

8.1.1.2 Education Facilities

Governmental funding and performance levels have not reached the required level (from a financial, executive, and organizational perspective) to correct discrepancies and eliminate inadequacies in educational facilities, supplies, and so forth. This has increased inadequacies in educational facilities and increased the number of schools that need refurbishment or are about to collapse from overuse, such as serving more than one shift in same facility. The percentage of educational facilities used for two shifts in 2007/2008 is 35.8 percent at the elementary level, 42.1 percent at the secondary level, 23.5 percent at the vocational level, and 49 percent at teacher training institutes. Facilities used for three shifts comprise are 4.5 percent at the elementary level, 3.4 percent at the secondary level, and 1.5 percent at the vocational level for the same year. The data in table 55 show that there is a continuous increase, reflecting a deficiency gap—the inability of the rate of school growth to match the increase in demand.

Table 55 The Deficiency in the Number of Educational Facilities for the Years 2004/2005-2007/2008

Academic year	Number of schools	Number of educational buildings	Educational deficiency gap	Percentage	Schools about to collapse	Percentage	Schools in need of comprehensive refurbishment	Percentage
2005/2004	15,754	11,800	3,954	25%	1,537	13%	2,683	23%
2005/2006	16,857	12,126	4,731	28%	1,925	16%	2,843	23%
2007/2006	17,390	12,182	5,199	30%	1,898	16%	3,041	25%
2008/2007	17,913	12,597	5,316	30%	1,878	15%	3,076	25%

Despite the efforts directed at educational facility construction and refurbishment, the deficiency gap increased from 25 percent in 2004/2005 to 30 percent in 2007/2008, the result of a growing rate of demand for schools, the increase in the percentage of attendance in schools, the growth of population groups who are school-aged, the spread of education in different urban and rural areas, the reduction in drop-out rates, and the large number of outdated educational facilities. These all combined to widen the gap between what is required of schools and what can be provided in terms of facilities. More effort and more financing than is available are needed to narrow this gap, end insufficiencies, and address the multiple shift problem. As well, the deteriorating condition of educational facilities exacerbates the problem: a high percentage of schools are unsuitable for use or have buildings about to collapse (15 percent of all school buildings) or need comprehensive refurbishment (25 percent of all school buildings), making them unable to endure the pressure and density of multiple shifts. This picture becomes clearer when we know that the age of the majority of these buildings has exceeded their life expectancy or that they were built during previous decades without meeting required stability regulations. This is in addition to the shortage of facilities (laboratories, sport fields, classrooms, computers, and so on), and the fact that many schools are

built of clay. These types of schools represent yet another significant problem: there are 656 such schools distributed in most provinces, with 26.4 percent of them in the province of Dhi Qar— more than in other provinces. It is followed by Salah ad Din, Ninawa, Kirkuk, Ad Diwaniah, Wasit, Maysan, Diyala, Al-Anbar, and Babel, and they are followed by Baghdad, Al Basrah, and Al-Muthanna. These schools are concentrated in Iraqi villages, rural areas and remote areas, and do not exist in Karbala and An Najaf.

There are some schools with supplementary buildings made of clay—84 buildings in all, 80 percent distributed mostly in the province of Babel, 8 percent in the province of Al Muthanna, 7 percent in Diyala, and 4.8 percent in Karbala.

8.1.1.3 Spending on Higher Education

Allocated funds for higher education continued to decline during the years after the fall of the previous regime. However, Table 56 shows that the overall education sector's budget increased (except for the Kurdistan region) from 605 billion dinars in 2004 to approximately 2.5 trillion in 2008, increasing from 3.2 percent to 5.6 percent of the budget. Regarding the investment budget, the share of the education sector was very low and did not exceed 3 percent in the best case in 2007, and

Table 56 Development of Expenses for Higher Education Sectors in Iraq (Except Kurdistan) for the Years 2004–2008 (millions of Iraqi dinars)

Budget	2004	2005	2006	2007	2008
1. Current budget	19,026,800	28,431,168	39,062,163	39,062,163	44,190,747
2. Investment budget	1,118,300	7,550,000	9,272,000	12,665,305	15,671,227
3. Total	20,145,100	35,981,168	50,963,161	51,727,468	59,861,974
4. Current budget for education (except Kurdistan)(1/4)	605,135	1,367,696	1,589,720	1,928,112	2,470,319
5. Percentage	3%	5%	4%	5%	6%
6. Investment budget for education (except Kurdistan)	27,990	13,483	22,000	366,000	150,000
7. Percentage (6 ÷ 2)	3%	0%	0%	3%	1%
8. Investment budget	-	368,541	-	10,061,305	11,671,227
9. Investment budget for higher education (except Kurdistan)	-	-	-	258,971	200,000
Percentage (8 ÷ 7)				3%	2%

Source: Ministry of Education and the Ministry of Higher Education and Scientific Research, Planning Departments

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decreased to 1 percent in 2008. In higher education, the highest percentage was 2.6 percent of the total investment budget of 2007. This reflects the low priority given to investment in higher education.

8.1.1.4 Education and Social Variables

Violence

Wars and crises have left deep psychological scars in Iraq and create serious challenges to the educational process—represented, inter alia, by a high percentages of dropouts, especially among females, low educational standards, and weak qualifications among graduates.

Gender Gap

In most areas of Iraq, females do not have the same access to education as males, at all levels: they represent 43 percent of the total number of students for the academic year 2007/2008. Many practices and traditions, such as marrying girls off at a very young age, play a role in their lack of presence in schools. Other key factors in limiting opportunities are poverty and the limited number of girl's schools in rural areas. This encourages fathers to prefer to educate males, not females. Most of those influenced by this factor are in remote areas, isolated, or otherwise marginalized areas. Moreover, in most cases, females tend to study the arts and literature, whereas males tend to study science and technology. This makes females unable to compete with male peers in the labor market.

Guaranteeing the Quality of Female Graduates

The education sector has seen some positive developments, the result of the opportunities for anyone of either gender to pursue education, especially higher education and graduate studies.

The increase in the numbers of students enrolled at all educational levels without appropriate infrastructure and educational staff, has negatively affected the quality of education and its ability to keep up with international changes and the requirements of globalization.

Despite the absorption in private education of a number of elementary and secondary school students (especially in urban areas), private education, like public education, is encountering many hurdles. The shortage of facilities and educational supplies is probably the most important of them. Therefore, many secondary graduates are not qualified for admission to universities and are also unqualified for the labor market.

Justice and Equality of Opportunity

The studies conducted by the Central Department of Statistics and Informatics have shown that there is a clear inconsistency in educational levels among provinces, and between the rural and urban areas. This inconsistency has been a significant challenge to development. The weakness of education infrastructure is clearly visible in quality and quantity in remote rural areas and sporadically in poorer urban neighborhoods.

8.1.2 Challenges

8.1.2.1 Rise in Illiteracy Rates

The levels of illiteracy in Iraq reached a noticeable high during the past two decades along with a decline in the levels of reading and writing as the percentage of illiteracy to 28 percent of the total population aged 10 years and older. These percentages clearly vary between rural and urban areas, and between provinces. The increase in illiteracy levels contributes to reducing Iraq's rank on World Bank's Human Development Index.

8.1.2.2. Significant Deficit in Educational Facilities

The structural inability of premises to absorb students and the inability to offer educational opportunities are two of the main reasons that drove waves of students to flee the educational system, resulting in discrepancies in opportunities for education similar to the discrepancies in economic and social opportunities among provinces. Therefore, the lack of justice in distribution of education opportunities caused by making education available to all has hindered the ideal allocation of available resources and led to decline in the internal efficiency of the system. Moreover, there is a further obstacle in lack of mobility from one educational level to the next: for every three elementary schools, there is only one intermediate school (2006/2007 data). This makes the advance of graduates from one level to the next dependant on availability of facilities, not on ability, which drives some families to send their children to geographically remote schools that increase education costs.

8.1.2.3 Low Availability of Educational Opportunities

The number of school-age students (6-23 years) enrolled in schools decreased by 58 percent in 2007/2008. The dropout levels were 2.4 percent at the elementary level and 2.8 percent at the secondary level, with variations according to province, gender, and environment. This weakness was exacerbated by the failure to apply the provisions of the Law of Compulsory Education at the Elementary Level and failure to ensure that children attended and continue their studies. These factors were in addition to the influences of poverty, the poor economic status of the family, and the practice of child labor. In higher education, the percentage of dropouts reached 3.1 percent during the academic year 2007/2008. This is considered an acceptable indicator.

8.1.2.4 Limited Funding

The education sector does not receive sufficient funding to satisfy the requirements of comprehensive reform. This issue should be among the top priorities of the development plan. Furthermore, most of the financial allocations (94.4 percent) are currently paid as salaries; with the going towards other things such as capital investments. More funds must be allocated to improve the type and quality of education. As well, the expense distribution data at the various educational levels indicate inefficient spending—in addition to a tendency to favor higher education over lower levels, favor urban areas over rural areas, and males over females. This is obvious in the services that are offered to these groups.

8.1.2.5 Academic Curricula

Despite efforts since 2003 to develop courses for all levels of study and to provide education necessities (libraries, laboratories, modern teaching techniques, smartboards, roving laboratories, electronic library, computers and their accessories) to a considerable percentage of schools and institutions of higher education, there is still a need to develop study courses and provide associated supplies to keep up with international developments.

8.1.2.6 Administrative and Educational Capabilities

The shortcomings in the abilities of administrative and educational staff are the result of their limited access to updates and developments in their fields or professions. This is in turn the result of few available and ongoing training opportunities. The weakness of teacher training institutions and programs, and the staff's lack of motivation and efforts to develop, polish, and renew their skills also play a role.

8.1.2.7 Poor Quality of Education

Education in Iraq has suffered from severe deterioration due to the decrease in spending, the lack of supplies, the collapse of infrastructure, and overcrowded schools. These are compounded by the continuing prevalence of classical teaching methods that focus on lectures, memorization, and failure to stress analysis, deductive skills, and the spirit of initiative and creativity—all of which fail to optimally encourage student engagement.

8.1.2.8 Lack of Harmonization and Coordination between Graduates and the Job Market

The lack of coordination between educational institutions and the labor market has resulted in the lack of coordination between approved study, practical training programs, the needs of the labor market, and the requirements of the economic system, especially among vocational training programs.

8.1.3 Vision

Development of truly enabling conditions that contribute to raising educational levels, pursuant to standards that ensure quality; and establishment of an educational system that provides the foundation that enables an individual to be independent and develop the creative abilities necessary for independence, to achieve sustainable development objectives and create a cooperative environment that strengthen the values of good citizenry.

8.1.4 Objectives

The most important objectives are the following:

Kindergartens

- Achieve an enrolment ratio of 60 children/1000 of the population ages 4-6 years by 2013/2014
- Achieve the ratio of 130 children/kindergarten by 2013/2014
- Achieve the ratio of 14 children/teacher by the year 2013/2014.

Elementary

- Admit 98 percent of children at age 6 who are included in compulsory education and supervise their continuation until they finish their education or reach the age of 15
- Absorb 98 percent of the population aged 6 –11
- Maintain the ratio of 18 students/teacher by the target year.

Preparatory

- Enrollment of 97 percent of elementary level graduates to the preparatory level

Secondary

- Achieve the ratio of 350 students/school by the target year
- Achieve the student/teacher ratio of 14:1 by the target year.

Vocational Education

- Accept 15 percent of the graduates of the preparatory level at the vocational preparatory level by the target year
- Maintain the ratio of 6 students/teacher or trainer by the target year
- Maintain the student/teacher ratio of 14:1 by the target year.

Teacher Training Institutes

- Achieve an acceptance ratio of 2 percent of the graduates of the preparatory school
- Achieve the student/teacher ratio of 17:1 by the target year
- Gradually transfer to training educators at university levels.

Higher Education

- Maintain levels of current enrolment of the total number of the graduates of preparatory academic education, and 9 percent of the graduates of the professional education that is 14.6 percent of the technical diploma, 71.8 percent of the university education and 19.2 percent of the technical colleges
- Keep the student/teacher ratio at the university level at 12:1, and at the technical teaching level at 17:1 .

Eradicating Illiteracy

- Eradicate illiteracy in the age group of (15-45) years by the target year
- Achieve the ratio of 30 students/center by 2014

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- Achieve an improved ratio of enrollment at youth schools of those aged 10-14 years— 13,324 students with a percentage of enrollment of three percent
- Achieve the ratio of 20 students/teacher by 2014.
- Achieve a ratio of 19 students/teacher by the year of the objective
- Achieve the ratio of 107 student/school by the year of the objective
- Add 4,497 teachers in 2013/2014, an average annual increase of 750 teachers.

8.1.5 Quantitative Needs

Kindergartens

- There will be a need for additional 437 kindergartens in 2013/2014, an average annual increase of 73 kindergartens.
- The number of the children who enroll by the target year will be 133,049, an average annual increase of 22,175 children.
- There will be a need for an additional 56,908 teachers by the target year— an annual increase of 9,484 teachers.
- There will be a need for an additional 2,615 schools by the target year—an annual average increase of 436 schools—to meet the student increase of 663 per school and to replace clay schools at an average of 111 schools per year (424) and to eliminate the three-shifts schools at a rate of 71 per year (1,676) and eliminate 50 percent of two-shift schools at a rate of 279 schools per year.

Secondary

- The number of students who will enroll at the secondary level will increase to 1,847,112.
- The need for additional teachers by the target year will be 17,191 at a growth rate of 2,865 teachers per year.
- There will be a need for an additional 913 secondary schools by the target year, with an annual average increase of 162 to accommodate the increase in the number of students (10) per school and to replace clay schools with an average of 2 schools per year, (83) and to eliminate the need for 3 shifts with an average of 14 schools annually, (763) with an average of 127 schools annually to eliminate 50 percent of double shifts at schools.

Vocational Education

- The number of students who will enroll in vocational schools will increase to 72,188 by the target year.
- There will be a need for an additional 870 teachers by the target year.
- There will be a need for an additional 73 schools by the target year.

Teacher Training Institutes

- The number of students who will enroll in teacher training institutes by the target year will be 78,972, an annual increase of 13,162 students.
- There will be a need for an additional 471 teachers by the target year, an annual average increase of 78.
- There will be a need for an additional 54 institutes by the target year, an annual average increase of 9.

Higher Education

- The number of students who will enroll in universities will be 308,745, at technical institutes 42,958, at technical colleges, 61,647 by the target year, an annual average increase of 51,457 students at the university level, 7,160 at institutes, and 10,274 at technical colleges.
- There will be a need for additional 2,030 teachers at universities, an annual average of increase of 338 teachers, and a need for an additional 2,058 teachers at technical institutes, an annual average increase of 343 teachers.

Eradicating illiteracy

- There will be a need for additional 90,000 teachers by the target year.
- There will be a need for additional 60,000 centers by the target year.

Youth schools

- There will be a need for an additional 207 teachers by the target year, an annual average increase of 34.
- There will be a need for 25 schools by the target year, an annual average increase of 4.

8.1.6 Means of Achieving the Objectives

1. Conducting evaluation studies of the efficiency of primary and university education programs in Iraq
2. Adopting a wide range of planning and finance options for the processes of education and training
3. Developing and implementing educational support programs that constitute investment programs that allow all partners, regardless of their components, to support this sector at all levels
4. Issuing and ratifying suitable legislation for educational sectors, strategic plans and basic services for schools, institutes, universities and teacher service centers
5. Developing guiding judgment and responsible plans in the field of education
6. Supporting and strengthening the system of managing educational information
7. Responsibly carrying out different semi-sector policies like social gender, developing early childhood education and information and communication technology

8. Encouraging the private sector to invest in field of education under supervision of competent authorities
9. Initiating the process of course reform to develop related skills and achieve competitive education on the national and international level. The private sector can also play an effective role in curriculum building to guarantee their development in accordance to the requirements of the labor market
10. Achieving balance between education and the requirements of the labor market will require applying an acceptance policy that depends on the following considerations:
 - The averages of the population growth, the percentages of demand on higher education within an education plan in accordance with the comprehensive economic and social plan and the labor force plan to provide the market with qualified laborers in addition to new demand of the market itself.
 - Adopting an acceptance policy that takes into consideration the capacity of universities and institutes as a guide in drafting current acceptance courses the principle "Not everyone who completes the preparatory level must study at university."
 - Taking into consideration the role of the private sector in the development process and the role of domestic and foreign investment in the foreseeable future, and providing it with skilled staff
 - Building the acceptance policy in higher education on cooperation and coordination between the Ministry of Higher Education, the Department of Technical Education, and the Ministry of Education to guide graduates of preparatory education towards higher education
 - Supporting the independence of universities to enable them to draft their educational policy and show their specialties in a way that strengthens their interaction with the local society
 - Being open to international universities and entering mutual agreements to follow academic curricula developments with the objective of developing the curriculum at Iraqi universities and the Department of Technical Education to elevate them to the level of established international universities.

8.2 Health Sector

Health conditions in Iraq are considered some of the worst in the region. Indicators over the past twenty years show that the health of the population has seriously deteriorated. The survey of the life standards in 2004 shows that Iraq ranks low compared to other countries in the Middle East in attaining the development objectives issued by the United Nations. We also find a serious deterioration in these indicators compared to previous statistics.

The health system includes all preventive and treatment organizations, including prenatal health centers, school infirmaries, fixed and roving health centers, laboratories, pharmaceutical companies, and others that are directly and

indirectly linked to the citizens' health. It is no secret that Iraq has encountered extreme threats to health because of wars, blockades and the decline of human, financial, and technical capabilities in the sector, along with environmental deterioration and the destruction of infrastructure and the deterioration of citizen's economic capabilities. All of these conditions have led to an increase in deaths, a decline in health services, and increased psychological and financial burdens on citizens.

8.2.1 Previous Policies

Most of the plans and strategies before 2003 were characterized by their orientation toward central planning and implementation. The governmental sector remained dominant throughout all the previous decades, with only a marginalized role for the private sector. The Ministry of Health remained the only main provider of health services. Though these strategies have recognized preventive care's importance, they did not prioritize healthcare center roles because wars and crises made sufficient supplies unavailable.

Iraq has witnessed an increase in the averages of non-contagious diseases such as heart disease and diabetes. Moreover, there has been an increase in pollution, resulting in the spread of cancer. Despite the decrease in death rates of newborns and children under five in the 1970s and 1980s, after 1990 these increased because of wars and the economic blockade. The levels of health services provided to citizens seriously declined, qualitatively and quantitatively, because of decreased spending on health, poor planning, and the unfair distribution of health organizations and their staff in Baghdad and provinces. The training of medical and health staff was neglected, so they became isolated from the world and unable to gain modern knowledge and expertise. This caused mass overseas migration of educated Iraqis.

8.2.2 Reality

The Ministry of Health has adopted a health system that depends on primary health care as a foundation that includes providing quality health services as the primary service level; guaranteeing the integration of those services with the second level (public hospitals) and the third level, specialized centers. This will be achieved by using the family healthcare system in health centers and using the health visitor system, which introduces the bundle of fundamental health services to health centers, including monitoring and exams for women and children. These services are also provided through mother-and-child hospitals.

8.2.2.1 Institutions and indicators

Primary health centers have a labor and delivery room and an emergency room. Approximately 250 primary health care centers were created after 2003. Between 2003 and 2008, that number increased by 2.8 percent and the indicator of a main health center for each 10,000 citizens reached approximately 34,911 in 2008; the level of services provided and their quality was approximately three times less than the required level. The number of main health centers was 782, the indicator of a subsidiary health center managed by health professionals for each 5,000 citizens was approximately 58,460, and the number of the subsidiary centers was only 467. The gap between the

target and reality is wide. This requires increasing allocations and efforts to achieve the required number of centers.

Regarding the distribution of health centers among provinces, there is a clear discrepancy from one province to another. This reflects an unjust distribution of services. While there are no more than 171 centers in the capital, Baghdad, which has more than 6 million inhabitants, and we find that this number increases in the northern provinces. For example, Al Sulaymaniyah has 387 centers but less than one million inhabitants. According to this indicator, the indicator of a health center for every 10,000 citizens reached 41,741 in Baghdad, making it the most deprived province because of its high population density. It is followed by Wasit, where this indicator reached 28,123 and Al Diwaniyah, with 25,800.

The sufficiency and efficiency of health services provided is demonstrated in table 57, which shows their decrease for the years 2002-2007 as the average of doctors (specialist and non-specialist) for every 1,000 citizens was less than one (0.006), and the ratio of doctors/nurses was (1:0.4), also less than one. The ratio of doctors/nurses (male and female nurses) was (1:1.2). This ratio does not meet the required ratio of (1:4). There is also an increase in the ratio of inhabitants/hospital and the ratio of inhabitants/popular clinic. The percentage of bed occupancy is high, but it did not reach the required 90 percent.

On the other hand, data on psychological health for 2006-2007 show that one-fifth of Iraqi families are prevented from meeting basic health needs, with rural areas more deprived than urban areas, averaging two-and-a-half times more than urban areas. The percentage in rural areas was 39.2 percent and in urban areas was 15.3 percent.

Surgeries performed in hospitals, of all types (minor, medium, major, highly selective) were approximately 700 thousand surgeries in 2008 compared to 560 thousand surgeries in 2007. Many highly selective surgeries (nervous system, brain vessels, implanting and analyzing bone marrow, open heart surgery, children's surgeries) are performed; there were approximately 81 thousand operations like this annually (table 57).

8.2.2.2 Reproductive Health and Family Planning

The high number of births taking place under the supervision of specialized healthcare staff is a positive indicator in the field of pre-natal health; it increased from 50 percent to 89 percent between 1990 and 2006. Births in health facilities for the years 2007 and 2008 increased from 62.3 percent to 64 percent. This reflects an increase in the levels of health awareness. The fifth visit of pregnant women to primary healthcare centers reached 30 percent for the years 2007 and 2008; the target was 90 percent. This means that the gap is still great between reality and what must be achieved in the years 2009-2013 according to the Ministry of Health strategy. The most important reason for the low percentage of visits the demographic change that resulted from migration between regions.

Fertility rates are still high compared to other countries, at 4.3 in 2006 (4.0 births in urban areas), and 5.1 in rural areas. The percentage of births in urban area hospitals is higher than in

rural areas, at 70 percent and 55.1 percent, respectively. It reached the highest percentage among educated mothers (higher education and secondary education), at 76.6 percent, compared to 46.8 percent for uneducated mothers. This shows the role of education in increasing awareness and healthcare for women.

8.2.2.3 Mortality of Children under the Age of Five

The decline in child mortality rates for children under five in Iraq has continued since 1990, from 62 per 1000 live newborns to 41 (2006). It continued its decline to reach 35 per 1000 live newborns in 2007 and 34 per 1000 in 2008. Despite the continuous decrease in these percentages, they are still high compared to some Arab countries. In the United Arab Emirates, the child mortality rates for children under five was 11 per 1000 live newborns, and in Qatar it was 11.5 per 1000.

Infant mortality has continually declined since 1990, from 50 per 1000 births in 1990 to 35 in 2006, 30 in 2007, and 29 in 2008. The percentage of infant mortality was 85 percent for children under five years old. These compare with 11 per 1000 in Kuwait, 26 per 1000 in Saudi Arabia and Jordan, and 15 per 1000 in Syria.

8.2.2.4 Maternal Mortality

Reducing maternal mortality is a fundamental developmental objective. The objective was to reduce maternal mortality by 75 percent for the period of 1990-2015. In Iraq, maternal mortality was 117 per 100,000 live newborns in 1990. This rate decreased to 84 in 2006, still high compared to the rates in the United Arab Emirates at 0.001 per 100,000 live newborns, in Saudi Arabia 1.8, and in Jordan 41.

8.2.2.5 Life Expectancy at Birth

Life expectancy at birth in Iraq is low, at 58.2 years in 2006, down from 65 years in 1987. This is attributable to the deterioration of health and nutrition. It is considerably less than in neighboring countries: 77.3 years in Kuwait, 71.9 years in Jordan, and 73.6 in Syria.

8.2.3 Challenges

Despite some achievements in the past few years, the health sector is still facing many problems and challenges resulting from the exceptional circumstances of Iraqi society. The poor health of inhabitants has had negative effects on efficiency and productivity in the labor force for the entire country. The healthcare system continued to suffer from a gaping lack of financing, which had direct negative effects on the nature of the services provided and the scarcity and insufficiency of medical supplies. Huge numbers of patients are treated in Iraqi hospitals, exceeding facilities' capacity many times over. Yet bed occupancy in hospitals, approximately 65 percent of capacity, is low. There are other challenges related to the non-utilization of information technology in medical cases. All these challenges have made work conditions in the healthcare field unstable. The most prominent challenges that the medical sector faces are noted below.

Table 57 Key Health Services Indicators for Iraq 2002 - 2008

Indicators	2008	2007	2006	2005	2004	2003	2002
Civil Hospitals	62	60	64	68	63	65	69
Government Hospitals	159	156	155	156	155	152	143
Total Hospitals	221	216	219	224	218	217	212
Public Clinics	334	338	349	389	385	402	345
Total number of Beds	31,794	30,941	29,975	28,492	29,339	28,430	27,249
Number Admitted to Hospitals	2,027,537	1,780,719	1,869,562	1,869,060	1,924,787	1,664,059	1,703,705
Number of Patients	18,215,749	18,871,426	51,984,775	51,100,834	52,275,414		56,487,631
Total Doctors	16,721	16,299	16,518	16,788	16,022	14,747	11,024
Total Dentists	3,859	3,517	3,545	3,659	3,290	2,785	2,182
Total Pharmacists	4,399	3,358	3,448	2,977	2,531	2,313	1,634
Total Medical Professionals	24,979	23,174	23,511	23,424	21,843	19,845	14,840
Total Nurses	7,307	7,184	6,623	6,193	5,600	5,521	3,966
Total Nursing Professionals	34,823	32,833	33,332	30,137	24,763	21,068	12,533
Total in Health Professions	74,081	96,534	73,355	69,444	65,615	60,239	30,328
Number of Pharmacies		3,994	3,927	3,967	3,743	3,700	3,538
Number of Laboratories	634	598	598	599	538	631	486
Number of Ambulances	1,759	1,919	1,520	1,001	838	283	
Physicians per 1000 persons	0.6	0.6	0.6	0.6	0.6	0.6	0.4
Doctors to Nurses	0.4	0.4	0.4	0.4	0.3	0.4	0.4
Doctors to Nurses	2.1	2.1	1.8	1.8	1.5	1.4	1.1
Nurses per 1000 persons	1.2	1.1	1.2	1.1	0.9	0.8	0.5
Population to Hospitals	125,324	137,417	131,554	124,835	124,493	121,383	120,589
Population to Clinics	82,924	87,817	82,551	71,884	70,492	65,523	74,101
Bed Occupancy Rate	47.5	57.1	49.8	50.2	52.4	45.3	44.1

Table 58 Annual Allocations and the Percentage of Spending in the Health Sector for the Years 2005-2008 (millions of Iraqi dinars)

Year	Health	Spent amount	Percentage of spending percent
2005	38,000	-	-
2006	31,542	-	-
2007	98,250	28,280	28.8
2008	142,263	79,533	55.9
Total	310,055	107,813	34.8

- Limited resources for the health sector: the percentage of spending on the health sector was 4.9 percent of total governmental spending for the years 2002-2006—a low percentage and insufficient when compared to the recommendations of the International Health Organization that developing countries spend approximately \$34 per individual on healthcare. This has burdened the country with an elevated percentage of sick people and shortage of medical services.
- This is in addition to the continuous concern regarding the inability to provide required medical supplies, to raise level of medical care and achieve the developmental objectives of the Millennium Development Goals. Table 58 shows the average annual allocations for the medical sector and the percentages of implementation.
- Shortage of health organizations (hospitals, main and subsidiary health centers, and so on)
- Shortage of health and medical staff, and of organizations that provide health services
- Destruction of health sector infrastructure
- Inequal distribution of health services among provinces and between urban and rural areas
- Demographic changes in regions due to migration, a serious challenge to the practice of health policies
- Lack of a clear and approved demographic policy Unstable and unplanned increases in population that strain medical services

9. Problems related to water, electricity, sewage, discharge of medical and nonmedical waste and pollution of the environment
10. One fifth of Iraqi families are deprived of basic health needs; rural areas are more deprived than urban areas
11. Applicable legislations and laws are old and not orientated toward health care reform
12. Weakness in legislations and laws that are related to environmental care
13. Weak citizen participation resulting from dissatisfaction with services provided
14. Limited role of the private sector in providing health services.

8.2.4 Vision

A healthcare system that adopts primary healthcare as a foundation, including health services to satisfy individuals' needs according to international health standards to the extent possible.

8.2.5 Objectives

The five-year development plan for the health sector aims at building an integrated and effective system that relies on public health fundamentals to ensure the health of the country. This is done by supporting the work of providing public health care and primary healthcare to reduce the rate of sickness and death for all groups in society in general, and children and mothers in particular, including the eradication of contagious diseases and control of non-contagious diseases.

Health policies in Iraq today aspire to reconstruct the system of health services from a treatment system to an alleviative and preventive one that will reduce the burden of endemic diseases. These policies and programs should work on achieving the following objectives:

1. Reducing the patient/doctor ratio, increasing the number of beds according to the population, seeking justice in the distribution of health organizations between rural and urban areas, and increasing the number of organizations performing specialized medical tasks and providing them with the necessary equipment and supplies
2. Expanding and developing current health organizations by 50 percent
3. Establishing advanced health organizations in all provinces to increase the number of beds in health departments by 41 percent
4. Expanding primary healthcare services by increasing the numbers of health centers to cover the needs of health departments in Baghdad and other provinces by 20 percent
5. Increasing the number of specialized health centers to cover the needs of provinces for specialized services (specialized surgeries – preventive diagnosis) by 50 percent.

8.2.6 Means of Achieving the Objectives

1. Developing high-quality infrastructure and services
2. Building partnerships between the private and public sectors, supporting integration between them at all levels of construction, continuity, and efficiency
3. Controlling contagious diseases, controlling hepatitis, and eradicating neonatal tetanus
4. Expanding the range of available health services by establishing new organizations, especially in rural areas, implementing substitute projects, roving health centers, environmental study teams, commissions for evaluating the health of local societies, and so on
5. Integrating activities of formal health organizations and informal organizations and societies such as the Society of Prenatal health, Protecting the Family, women's organizations, and municipality councils to specify realistic needs and the possibilities of finance and participation
6. Developing nursing institutions and colleges, encouraging enrollment, developing medical institutions and increasing the number of graduates in addition to establishing more medical colleges, developing their courses, and modernizing them
7. Using all publicity media to deepen citizens' health awareness
8. Advancing health education provided by educational organizations, civil society organizations, and municipality councils through courses, symposiums, and publications
9. Developing national pharmaceutical industries, protecting them, and providing technical and scientific supplies in cooperation with all related formal and informal departments and organizations
10. Strengthening the capabilities of the health practitioners such as doctors, assistants, and managers, by providing specialized training and expertise to help improve the system
11. Developing a health card system to make it part of comprehensive insurance for citizens
12. Attracting migrated professionals who can participate in developing the system
13. Providing advanced technology for diagnosis and treatment
14. Developing a system for health insurance in the context of a comprehensive system of social insurance
15. Adopting a system of comprehensive quality management that guarantees effective planning, performance measures, and continuous improvement of performance
16. Finding a research and study system suited to health and environmental problems and giving an effective role to the private sector to integrate with the public sector in providing health for all
17. Caring for school health and environments and supporting coordination with educational organizations to promote school health

18. Guaranteeing the safety of food, health, and the workplace.

8.2.7 Development Indicators in the Health Sector

Indicator	Reality /2008	2009	2010	2011	2012	2013	2014	Objectives
Health center (in the rural areas)	-	-	100	200	300	400	500	500 health centers for those who have no health services
Non-specialist doctors/citizen	0.8	0.9	0.96	1	1	1	1	Non-specialist doctor/ 2,000 citizens
Non-specialist doctors	11,512	12,788	14,000	15,000	16,000	17,000	18,000	18,000
Specialist doctor/professional bed for lying down	6.1	6.1	6.3	6.5	6.6	6.8	7	Specialist doctor/7 beds ready for lying down
Dentist/citizen	7,177	7,286	7,022	6,409	5,827	5,368	5,000	Dentist/ 5,000 citizens
No. of dentists	3,859	3,859	4,124	4,654	5,272	5,890	6,508	6,508
Dentists/citizen	0.7	0.7	0.76	0.82	0.88	0.94	1	One/5000 citizen
Pharmacists/citizens	6,206	6,206	6,282	5,928	5,562	5,256	5000	One pharmacist /5000 citizens
No. of pharmacists	4,399	4,399	4,610	5,031	5,523	6,015	6,507	6,507
Pharmacist/citizen	0.8	0.8	0.84	0.88	0.92	0.96	1	1,132,254
Health professional/1000 citizen	1.4	1.4	1.8	2.2	2.6	3.1	4	4
Nursing staff/bed	1.1	1.1	1.2	1.5	1.6	1.8	2	2 staff members/bed
Bed/1000 citizens	1.1	1.2	1.3	1.3	1.4	1.4	1.5	2.5 beds / 1,000 citizens
Ratio of bed occupancy percent	47.5	47.5	52	56.5	61	65.5	70	70
Friendly hospitals for children	32	33	43.4		5.8	37.2	38.6	40
Infant death rate per 1000 live newborns	35	35	43.4		33.8	33.2	32.6	32
Percentage of underweight children, under age five (%)	9.1	9.1	8.7	8.3	8	7.6	7.2	7.2
Maternal death rate 100,000 live newborn	For 2006-2007 84	84	82.8	81.6	80.4	79.2	78	
Percentage of malnourished (%)	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Percentage of one year old children who are immunized against measles (%)	80	80	82	84	86	88	90	100
Percentage of births supervised by specialized health staff	For the year 2006 89	89	90.2	91.4	92.6	93.8	90	
Ratio of using condoms to the usage of contraceptive	For 2006 1.1	1.1	1.8	2.6	3.4	4.2	5	
Percentage of citizens liable to the danger of malaria who take effective precautions against malaria and treating it	For 2006 18.3 treatment 7.4 prevention	18.3	34.5	51	67.3	83.6	100	
Percentage of infection with malaria per 100,000 of citizens	For 2008 0.03	0.03	0.02	0.02	0.01	0.01	0	

Public Services

Percentages of relationship with tuberculosis per 100,000 citizens	78	78	70.6	62.8	55.2	47.6	40	
Death rates related to tuberculosis per 100,000 citizens 87	11	11	10	9	8	7	6	
Percentages of discovered tuberculosis cases that were treated under the supervision within the frame of the treatment system for a short term under control (%)	For 2008 87	87	87.6	88.2	88.8	89.4	90	
Percentage of coverage with the fifth visit of the pregnant mother for the primary healthcare (%)	30	32	40.7	53	65.3	77.6	90	90
Discovering the cases of tuberculosis (%)	43	43	84.3	53.8	59.2	64.6	70	70
Percentage of immunization coverage for pregnant women	80	80	82	84	86	88	90	90
Percentage of immunization coverage for the women within the age of fertility	29	29	39	49	60	70	80	80
Average of spread of AIDS among women whose age is between 15-24 per 100,000	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

8.3 Housing

Proper housing is a right of every person and a basic need that should be obtainable in both rural and urban areas within a healthy environment with integrated services and facilities. This is ratified by International conventions and national constitutions, including the Iraqi constitution. Housing is not only a right and a basic need; it plays an important role from an economic point of view and in ensuring societal prosperity. In general, investments in housing represent 20-30 percent of total fixed capital formation in the countries that have effective housing programs.

In the countries that have a surplus of financial and human resources, or unutilized resources, investment in housing becomes one of the means of utilizing these resources and transferring them to productive resources—an important means for the continuity of the national economy. Since external investments in housing is low compared to investments in other sectors, investments in housing become of great importance to activate sectors related to housing such as the construction and engineering industries. Moreover, it generates employment opportunities that can help reduce Iraq's unemployment rates.

8.3.1 Previous Housing Policies

National interest in housing in Iraq dates back to the beginning of the 1950s, when many studies were drafted at the country

level. The most prominent are the studies of Doxy Ades, a Greek organization, in 1956, the general housing schedule of Paul Servis¹, a Polish organization, in 1975, a study of the housing policy made by a group of Iraqi researchers in 1986, and the 1998 strategy of the comprehensive spatial development of Iraq until 2000. These studies, in addition to others, have tried to identify the housing reality and needs in Iraq, its provinces, and its rural and urban areas. It also tried to estimate the housing deficiency and the financial requirements to provide housing in the medium term and long term. All these studies indicated that there is a housing deficiency and need that are increasing with time, estimated by the Doxy Ades study to be 453,000 housing units in 1956, and by the Paul Servis study to be 3.38 million housing units, and by Iraqi researchers to be 402 million.

Despite this early interest in housing studies and schedules, and interest in national development plans to achieve the aim of providing a housing unit for every family, there has been no strategy or comprehensive national housing policy until now. The exception is the general housing schedule drafted by Paul Servis, which is close to a comprehensive strategy. Instead of a comprehensive housing policy, the state adopted a group of partial policies and procedures that, since the 1960s, have contributed to the current demographic credit in urban areas

¹ The names of these companies may not be accurate because they are transliterated from Arabic into English (translator).

only and in all the provinces of Iraq. The policies and procedures can be summarized by the following:

1. Providing residential housing plots of land with subsidized prices, especially for civil servants and some other sectors
2. Providing credit facilities conditional loans to build the housing units for a period of (20-30) years with the value of these facilities reaching approximately 80 percent of the total cost of the housing unit
3. Exempting rental housing units from taxes for a certain period and then imposing low taxes on them and on transferring ownership of the housing properties
4. Providing domestic and imported construction materials at subsidized prices
5. Providing supportive services that are related to housing at very subsidized or nominal prices. This has reduced the costs of building housing units and enabled the group of employees and those who have limited income of building their housing units.

These partial policies increased levels of housing production between 1975 and 1985 to approximately 50,000 units annually with an annual growth average of 0.07 percent—more than the annual average of the growth of the population of Iraq. The cessation of these supportive and stimulant policies in the middle of the 1980s was due to the financial pressures that the state was under as a result of the Iraq/Iran war. The wars and the economic blockade have had negative effects on the economic performance of the housing sector, especially in housing production. The share of the construction sector in the gross domestic product went from 6.5 percent in 1989 to 0.47 percent in 1996. This situation became worse during the period of economic blockade (1991-2003) and this has contributed to transforming the housing issue from a housing deficiency to a housing problem to a housing crisis. This situation contributed to reducing the number of housing units built between 1989 and 1996 by 97.5 percent compared to the height between 1975 and 1985. The total annual housing production of the entire country did not exceed several thousand housing units per year.

The reconsideration of the housing sector and its inclusion in the Oil-for-Food program in 1996 has helped in a limited way in achieving some improvement in the housing market. Between 2000 and 2004, approximately 200,000 housing units were built through re-supporting the housing sector by providing housing lands and construction materials subsidized by the state, in addition to loans to some groups, especially the military.

There was great attention given to the housing sector by the National Development Strategy between 2005-2007 and 2007-2010, in the form of dedicating approximately 28 percent of total investment spending to the housing sector. This spending is proportionate first, with the averages of capital formation of this sector within the overall national economy, and second, with the size of the problem; the housing deficiency is very large. Despite this interest, investments between 2004 and 2009 were 5.5 percent in 2004 and only 1 percent in 2009.

This reflects the inability of government investment to counter the problem and indicates the necessity of depending on the domestic and foreign private sectors to confront this problem.

8.3.2 Reality

The need for housing was not satisfied by the aforementioned offer, which was encumbered with many different burdens, including the severe shortage of urban land suitable for construction; the severe shortage of funding; the deterioration of housing credit due to the lack of investment in housing maintenance; and the lack of a legal and legislative structure to stimulate the private sector to produce sufficient houses to satisfy the needs of the increasing population and compensate for improper housing credit that had exceeded its economic lifespan.

The estimates of housing deficiency and housing needs in different studies, and the results of economic and social studies completed recently indicate the need for 1 million to 3.5 million housing units by 2015. Moreover, regardless of the assumptions that were used as a basis for these studies and estimates to specify the suitable typical unit for housing and evaluate the existing circumstances, the following summary of facts is pertinent:

1. The housing credit in Iraq is estimated at 2.8 million housing units
2. There is a large housing deficiency and a great need for providing housing units—no less than 1 million in the best case For the purposes of this plan, the national housing policy in Iraq that was launched by the United Nations Human Settlements program in September 2009 will be adopted
3. 27 percent of families do not have houses and the average house occupancy is higher than the acceptable average of 1.37 families per unit and 2.23 individuals per room
4. 10 percent of families and 11 percent of citizens occupy housing units that lack the minimum health and environmental conditions that must be available in any proper house
5. There is severe variation in the levels of satisfying the need for housing in different provinces
6. The deprivation indicator in 2007 reached 28.7 percent, with percentages of deprivation from 35-45 percent in the provinces of Dhi Qar, Maysan, Al Qadisiyyah, Karbala, Babel, and Sulaymaniyah. The following provinces have registered the lowest level of deprivation in the field of housing: Al Anbar, Kirkuk, Diyala and Salah Al din, where the deprivation indicator was 4-21 percent.

The problems of deficiency, house overcrowding and unsuitable housing in rural areas were deeper than what they are now in the cities and small villages because previous housing policies for rural areas did not include privileges and facilities extended to urban areas. More than 46 percent of inhabitants of rural areas suffer from high housing deprivation.

8.3.3 Challenges

Iraq will encounter serious challenges in housing in the next years, many of them inter-related. This requires dealing with them comprehensively, as one bundle. The main challenges in housing are as follows.

1. A large problem in the available land for housing regarding:
 - Severe shortage of land suitable for construction in urban areas, especially in the major cities
 - The limitation of available capital to fund housing, whether from the state or the banking system that currently rely mainly on giving loans to build housing units against mortgages
 - The limited the number of investors and companies in the housing sector, especially those who aim to serve low- and middle-income groups and areas with few inhabitants
2. The exacerbation of the problem of sporadic houses and illegally built houses, even inside the major cities, and the absence of any serious measures even to stop this phenomenon or improve and redevelop the houses in the sporadic housing areas
3. A severe deterioration of housing structures in the old cities and lanes with traces of Iraqi heritage and the absence of serious procedures and plans to protect, redevelop, or renew them according to their condition
4. The social preference of Iraqi families to live in single housing units, not in vertical houses (buildings). This deepens the problem of providing housing land without transgressing on arable lands, especially around metropolitan areas.
5. The large housing deficiency—a need for approximately 2 million housing units in urban areas by the target year
6. The need to renew and redevelop most of the housing credit in rural areas, as most of them are built of non-durable materials and are unacceptable types of housing
7. Deterioration of the situation of housing credit due to the limited capabilities and shortage of investment in maintaining houses
8. The absence of a permanent system for managing land that transforms the land regularly for this purpose and the reliance on the method of jurisprudence and periodical decisions to distribute land to certain groups and classes
9. The incomplete legal and organizational structure that governs the investments of the private sector
10. The increase in the number of families who cannot obtain proper housing and the absence of programs and procedures to transform these families to potential consumers of houses in the housing market
11. The massive size of groups targeted with free housing (martyrs and political prisoners) which could exhaust most of the investment capabilities of the state in the housing sector within the term of the plan
12. The limited offer of construction materials that are produced

domestically and imported with good specifications compared with the expected need if an ambitious housing program is initiated.

8.3.4 Vision

Providing housing to the largest percentage of individuals and families to increase the options Iraqis have for type and location of housing.

8.3.5 Objectives

1. Improve the capability of home owners to improve and expand their existing houses
2. Raise the efficiency of producing houses and reduce their costs
3. Provide proper housing to the largest possible number of the families all over the country
4. Decrease overcrowding and occupancy to acceptable limits
5. Reduce the variations in levels of housing saturation between the different provinces, on one hand, and between urban and rural areas on the other
6. Increase the government's capability to confront the needs of special groups and the classes that cannot obtain proper housing
7. Improve the quality of new houses including the efficiency of using utilities and their environmental effects.

8.3.6 Means for Achieving Objectives

The Role of the Public Sector

The public sector must focus on preparing the housing studies and plans; controlling the quality of housing production, cost, and service; guaranteeing that housing offers are consistent with demand; and coordination among competent parties providing services and infrastructure for housing areas; and paying special attention to the needs of fragile groups, especially those with special needs, in addition to dealing with the legal, administrative, and technical obstacles to the growth of housing production in accordance with demand.

The Role of the Private Sector

The massive size of the challenge and the diverse needs of those who want housing make participation from different parties in housing production necessary. Inhabitants of urban areas need high-density houses in the form of multi-storey buildings that are usually built by large construction companies with substantial capital. At the same time, there is large demand for single family homes that can be satisfied by a larger group of construction organizations. Traditionally, most of the houses in Iraq are built by small contractors who work for a single client who designs and funds the house. The housing policy must provide suitable circumstances to enable all these groups to perform their roles in satisfying demand for housing. The private sector will remain the biggest provider of housing and the source for policies to the small, medium, and

large construction and building companies in the sector. At the same time, there should be a focus on the deprived groups of inhabitants and/or remote areas that have no capacity to attract private investment. It is also necessary to transform a number of public companies of the Ministry of Construction and housing to joint stock companies that specialize and have experience in producing houses

Funding Housing

Reforming the funding system for housing is an urgent issue. More development and expansion are required in the main funding organizations to enable short-term, medium-term, and long-term funding for developing, renewing, expanding, and buying housing.

Since housing is a long-term investment and can be used to stimulate economic activity, it is necessary to make resources flow into this sector efficiently so that all low-income groups can access it. It is also necessary for commercial banks to play an important role in the issuance of funding and to be capable of entering commercial funding activity, from which they have been absent till now. The new system for funding must aim to fund the commercial bank and the national fund for housing as secondary institutions for funding that can buy and sell current mortgages instead of offering direct loans to borrowers.

The Role of Local Administration

Local government is also responsible for realizing decentralization and taking a principal role in using land, infrastructure, and housing production for deprived groups and those with special needs and in providing the flow of resources efficiently to secondary cities and rural areas.

Managing Lands

Developing the systems for managing rural land more transparently and systematically is critical, as there is a great need for increasing the offer of reasonably priced land in rural areas and their surroundings. Demand for land for housing exceeds the ability of the public and private sectors together to satisfy it. This creates a challenge for state, regional and local governments. To achieve this aim, it is necessary to assert the following:

- Transfer from a highly centralized to decentralized land and urban planning regime
- Provide infrastructure for land dedicated to housing around the cities that are undeveloped
- Transfer to vertical housing to reduce pressure for land
- Diversify the sizes of plots used for housing to increase access to those with low incomes
- Increase orientation toward constructing new cities or subsidiary cities that lie outside the major cities to establish suburbs, especially if they have economic value.

Infrastructure

It is necessary to prepare comprehensive infrastructure for all future housing areas before commencing development work,

and to abandon previous styles of housing prior to providing infrastructure to the developed areas.

Managing and Maintaining Housing

A large percentage of housing in the old areas and in the center of the cities is not in good condition and in need of reconstruction; otherwise, it is unsuitable for occupancy. It is necessary to provide sufficient funding to reform and rehabilitate this housing; any new funding system must include funding for this purpose. Supporting systems of municipal and other local control and follow-up with increased attention to housing maintenance and longevity, especially rentals suffering from maintenance problems is essential.

Housing and Construction Materials

Iraq has the capability to satisfy its needs for essential materials, especially cements, building blocks, concrete masses, plaster, ceramic, Al-Kashi² and pre-made commodities like windows, plumbing supplies, electrical equipment, and the like. The production of these materials is below the required level; implementing the housing program for the term of the plan will require more production to handle demand. It is necessary to promote manufacture of these materials, develop their quality, reduce their production cost, and make them environmentally friendly. To support the housing program and participate in its success, it is necessary to support private sector factories and stimulate them to increase production, productivity, and quality, and to privatize public companies that produce construction materials and complete their qualification processes.

Sporadic Housing

Historically, Iraq enjoys a low level of expansion of such housing, but because of wars, blockades, and poor security after 2003, there was an expansion of illegal houses, sometimes caused by the return of refugees and emigrants. While types of illegal housing vary, all types are illegal either because the inhabitants do not have the rights to use the land or because the buildings were purchased without the approval of appropriate parties. Urgent attention is required to stop this serious phenomenon and to removing infringements according to a studied plan.

Legislation

The new policies and changes in the roles of the main actors in the housing sector demand new laws and an expansion of the housing legislative framework, especially in the field of urban administration and housing on the regional and local levels. There is also a need for new types of housing production, such as the wholesaling of land from the public sector to private sector and mixed companies. The other principal pillar for developing the new framework and new laws is in regulations and legislation for funding, to guarantee lenders can acquire assets in the event of default. This demands a comprehensive new law that includes mortgages, ownership, and resale of guarantees.

² Al-Kashi is a decoration that contains a mixture of art, decoration and Arabic calligraphy in Iraq (translator).

8.4 Tourism and Heritage Capabilities

Tourism, with its background of historical and cultural heritage, plays an important role in the economic, social, and cultural development in many advanced and developing countries. The statistical evidence, economic indicators, and sector history show that tourism will be one of the most important pillars of 21st century economy, along with wireless communications and information technology. The statistics of the international travel and tourism councils show that the tourism sector participates directly and indirectly in more than 10 percent of the International gross domestic product and in creating international capital and tax returns. For example, religious tourism in Saudi Arabia reached 12 percent of GDP and in Lebanon, in normal circumstances, reaches 10 percent of GDP. The role of tourism is also evident in exports with active tourism. The percentage of exports from tourism in the U.S. has reached 12 percent, in Spain 30 percent, in Austria 33 percent, and in Mexico 20 percent.

In addition to its important role in supporting and strengthening the national economy, tourism has developmental roles and advantages in other economic, social, cultural, and environmental contexts:

- Tourism has a double effect (tourism multiplier) that results from the success of tourism-related industries and services—estimated to number 50
- Labor is a compound industry that can use this advantage to deal with problems of unemployment and operation
- It is important to develop tourist regions, especially those that lack effective economic institutions compared to their tourism potential, as a way to develop these (often) rural regions
- Tourism contributes to developing religious, historical, and cultural sites, as these are popular attractions
- Tourism attracts foreign investment, as it provides good returns
- Finally, tourism stimulates civilized cultural exchange among different cultures.

8.4.1 History and Previous Policies

Despite Iraq's tourism assets and potential, this sector has not gained the necessary attention in the past decades, especially after the wars, sanctions, and blockades of the 1980s and 1990s. The sector has further and severely deteriorated after 2003 because of the unstable security conditions.

Interest in tourism in Iraq came later than when other countries developed their tourism assets. Until the middle of the 1950s, it was no more than a random phenomenon, restricted to areas in the north and limited to affluent social groups in the summer only. Even when tourism was organized in Iraq, activity was irregular because of lack of organization, irregular investment and governmental or private sector support.

From 1940 to 1956, tourism was managed by various Iraqi committees for summer resorts while the Department of Resorts and Tourism was being established. In the 1970s, interest in tourism increased and the General Organization for Tourism was established. This period became the golden age of Iraqi tourism, as the state had a financial surplus and considerable resources were allocated to the sector and many attractions and first-class hotels in several areas were developed, especially in Baghdad, Al Basrah, Mosul, Karbala, An Najaf, Al Habaniyyah and Mosul. The private sector was encouraged to invest, especially in the field of hotels, as easy loans were available. This increased the number of hotels in Iraq to approximately 1,500 in 1980 and 1,900 in 1990.

The developmental plans in that period focused on establishing infrastructure that would serve tourist areas, especially in the provinces in the north. This had a noticeable effect on attraction in the developed areas.

A comprehensive tourism plan was created in 1975, to be implemented over ten years, but circumstances prevented that. The achievements in tourism in the 1970s were not widespread or comprehensive enough to make the industry competitive in the region, especially considering the restrictions imposed on outbound tourism by Iraq's regional neighbors. Tourism in Iraq therefore remained internal.

This General Organization for Tourism was minimized to become the General Department for Tourism toward the end of the 1980s, then cancelled in 1988 and its works, participants, premises, and facilities divided among several ministries and departments. A department for tourism was subsequently established again, and in 2001 the General Department for Tourism was administratively and financially attached to the Ministry of Culture. This change in the structure and formation reflects lack of awareness of tourism's importance, economically, socially, and culturally, and its marginal role within the entire development process during the past period.

At the end of the 1990s, a narrow opportunity for religious tourism was opened. The state maintained direct control of all activities, contrary to the principle of providing tourists with full freedom. The blockade and Iraq's low standard living also had negative effects on industry performance. For example, the number of hotels fell to 850 in 2000, and deterioration continued after 2003, when many premises were destroyed, robbed, or exploited by foreign forces. In addition, the number of hotels reached even lower levels, never exceeding 500 hotels in 2004. Moreover, the national strategic development plan for the years 2005-2007 and 2007-2010 did not show noticeable interest in rehabilitating the industry, focusing "the top-level priority" on the reconstruction of the oil, power, and main social services sector.

The state's ownership of tourism assets was at that time restricted to first class hotels, which were transformed in 1990 into joint stock companies, 51 percent owned by the private sector. Thus, most of tourism activity is practically in private sector hands, with the state responsible for planning, supervision, control, and follow-up.

The low interest level to date was not restricted only to tourism; it included the cultural and administrative sectors in general, as

this side has not received the required attention, especially because it is one of the state's responsibilities. The private sector is not expected to participate in this activity, especially in reviving heritage, developing historical and archaeological areas, maintaining them, and establishing cultural premises such as museums, theaters, libraries, and cultural centers. This makes it necessary to give the five-year plan great importance.

8.4.2 Reality

The policy of restricting foreign tourists and the restrictions imposed on the entry of foreign tourists into the country, whether for religious, recreational, civil, or cultural tourism, noticeably reflects the lack of investment and interest in this activity. Moreover, consecutive wars, economic barriers, and poor security after 2003—in addition to the deterioration of Iraqis' economic status—have limited the country's abilities and spending priorities on tourism and entertainment. This has narrowed the field of local tourism. Therefore, despite the expansion of activity, tourism has suffered a noticeable decline in the past few years in addition to its original limitations.

This can be noticed from the following:

- The withdrawal of private investment in the tourism sector, and the decrease in the number of hotels to 784 in 2008 after reaching a height of 1,900 in 1990. That is in addition to the low percentage of first class hotels among the total number of hotels. Furthermore, their locations are concentrated in the provinces of Baghdad, Al Basrah, Ninawa, Kurdistan, Karbala and An Najaf, whereas most of the other provinces have shortages of good standard hotels.
- The low rate of hotel occupancy, which does not exceed 20-30 percent due to security conditions that are still below the required standard necessary to free the flow of interior and exterior tourism. The provinces of Karbala and Al Najaf are exempt from this as the averages of occupancy are relatively high because of an increase in religious tourism after 2003, in addition to the economic and constructional revival that is currently underway in the region, and Al Basrah due to its commercial location and the return of a considerable percentage of foreign Iraqi trade to its ports.
- The poor economic performance of the industry despite its original modest size. For example, the portion of tourism in the GDP did not exceed 0.1 percent after reaching its highest level in 1986, when it was 0.77 percent. Moreover, operation within direct and indirect tourist activity showed a noticeably low percentage as it reached 20 percent compared with the nineties. Like tourism, the cultural and artistic movement in Iraq also experienced a severe setback after 2003 due to the migration of a considerable number of thinkers, educated people and artists. This brain drain phenomenon started in the eighties and has since created a huge cultural and artistic vacuum. It will require much effort to revive it.

8.4.3 Tourism and Heritage Capabilities

Iraq has most of the requirements for successful tourism. It is one of the few countries in the world that has a varied cultural mixture and ample natural resources, in addition to the ability to provide supplementary support services.

Regarding natural attractions, considered the most important, there is great variety in the region of Kurdistan where there are mountains, woods, valleys, plains, waterfalls, and water spaces. In the west of Iraq, there is awe-inspiring natural desert and semi-desert. In the south, there are swamps rich in wildlife (Al-Ahwar) in addition to the surroundings of the Tigris and Euphrates and their tributaries; their convergence in Shat Al-Arab that makes it a fertile environment for tourism. Iraq is rich with an urban, heritage and cultural variation as it is the cradle of the Sumerian, Acadian, Babylonian, Assyrian and Islamic civilizations that are distributed in the different areas and regions in Iraq.

On the religious side, there are shrines of prophets and Imams in addition to the tombs of Al Albait³ (peace be upon them), and the Awliya'a⁴ and pious people in all the areas of Iraq. Moreover, there are very old monasteries, churches, and temples, especially in the province of Ninawa.

On the environment and health side, there are important therapeutic tourist attractions in several provinces. Iraq is rich with biological diversity, especially in the western hills region; as indicated in the analysis of the agricultural sector. International organizations indicate that Iraq has a respectable level of international biological diversity.

After providing supplementary requirements for tourism, Iraq is well qualified to offer good capacity for hotels and qualified and specialized hotel services in addition to infrastructure, basic services, and a banking system consistent with international standards, to support different types of tourism such as natural, cultural, historical, therapeutic, and environmental tourism throughout the country. This represents a base from which to spread the fruits of tourism development in all areas and provinces and enable the areas that have limited resources other than tourism to utilize this side to develop tourism and related activities.

8.4.4 Problems and Challenges

Tourism and cultural and heritage activity in Iraq are encountering a set of challenges that must be dealt with if Iraq is to be capable of launching effective and efficient tourism and cultural activities. These can be summarized as follows:

1. Limited financial resources allocated to these activities by the state, the refusal of domestic and foreign private sectors to invest in this activity until now because of security conditions, and the termination of support pursuant to Law No.353 of 1980, which caused a withdrawal of tourism investment
2. Weak and under-developed support services such as

³ Al Albait are certain descendants and relatives of the Prophet Mohammad (peace be upon him).

⁴ Awliya'a are certain holy religious characters who are believed to be spiritually very close to God in Islam.

Public Services

infrastructure (airports, roads and fast vehicles, hotels, and entertainment services), especially in the attractive tourist areas such as archeological and religious sites and summer resorts

3. Banking services that are inadequate to meet international standards
4. Under-developed administration and procedures, such as granting visas and receiving tourists at the border posts, that are unnecessarily difficult
5. Low awareness in the country of tourism opportunities and the lack of methods to promote and market tourism
6. Migration of trained professional staff and the shortage of professional centers to train substitute staff
7. Lack of private or joint stock companies in tourism and cultural companies; those that exist are limited to investors who cannot meet the large investment requirements
8. Many museums and archeological, heritage, and cultural sites were destroyed or robbed in 2003 and a considerable portion of Iraqi heritage was lost
9. The lack of rehabilitation and reconstruction of most of these sites until now
10. Inadequate protection of archeological sites and their continuing vulnerability to vandalism
11. The multiplicity of parties responsible for tourism, cultural, and archeological activities. There is an overlap in the tasks and responsibilities of the Ministry of Culture, the State Department for Tourism and Archeological Affairs, and the Department of Tourism in tourism activity. There is also an overlap in the authorities of the councils of the provinces and the Ministry of Culture in the field of archeological and cultural activities.
12. Absence of a specific, long-term strategy for developing tourism, heritage, and cultural activities
13. A database of tourism, heritage, and cultural information.

8.4.5 Vision

1. Developing and creating a competitive tourism industry that can be marketed to neighboring and overseas countries to participate in the diversification of Iraq's economic base
2. Maintaining the historical heritage of the country, developing and utilizing it efficiently as a tool for developing national and international tourism, and advancing Iraq's position as important in the world's cultural and historical heritage
3. Maintaining the cultural and artistic identity of Iraq, rebuilding it, developing its attractions and re-attracting Iraqi innovators to the country.

8.4.6 Objectives

1. Support Iraq's important position in international cultural and historical heritage
2. Maintain Iraqi cultural and artistic identity, reconstructing

and redeveloping it

3. Create a tourism industry that can compete with neighboring countries
4. Raise the standard of economic performance of the sector through increasing its participation in GDP and balance of payments, generating employment opportunities to make it an effective participant in the diversification of the economic base of the country, and reducing unemployment and poverty, especially in remote tourist areas
5. Invest in the religious, historical, and natural assets throughout the country for tourism and cultural development
6. Give the private sector a leading role in tourism and in managing and operating archeological and cultural premises
7. Provide the attractions and services that attract foreign tourists, especially by providing high-quality services such as accommodation, transport, and advanced banking services
8. Integrate tourism and archeological and cultural activities by achieving balanced and coordinated growth of each and among all, as each complements the other.

8.4.7 Means of Achieving the Objectives

1. The state should continue setting strategies, plans, and programs, supervising and controlling this activity, preparing descriptions and designs or approving them
2. Continue provision of financial allocations for infrastructure that supports tourism and cultural and archeological activities, especially in connecting tourist and archeological sites with roads and providing them with electricity and other fundamental services. These are in addition to establishing and developing museums in all provinces, protecting and developing archeological sites, performing preventive maintenance on the sites, establishing libraries, theaters, cultural, and artistic centers and rehabilitating damaged sites
3. Support the private sector and stimulate it to take full responsibility for direct and indirect tourism activities, management of the archeological and cultural sites, marketing them, and establishing funds to support the tourism investment
4. Encourage foreign investment in tourism independently or through partnerships with the domestic private sector, as this activity needs huge investments that may not be available solely through the domestic private sector. This will help develop skills in managing the tourism premises and using the latest techniques in tourism promotion.
5. Complete the infrastructure, develop the supplementary services required for tourism and simplify the processes for admitting foreign tourists
6. Develop the small industries connected with tourism such as crafts and heritage professions
7. Develop tourism management and human resources to

work in the industry, including service workers

8. Revive and rehabilitate archeological and cultural sites that were destroyed or vandalized in 2003
9. Continue efforts to reacquire Iraqi cultural artifacts that were smuggled out in 2003
10. Protect archeological sites from infringements by establishing ongoing supervision
11. Deal with the increase in underground water levels in some archeological sites
12. Encourage the return of the Iraqi innovators
13. Establish institutes and training centers and train staff who specialize in tourism and archeology according to every area's tourism requirements
14. Be open to the world and benefit from the expertise and teaching institutes of advanced countries in the field of tourism and the heritage of neighboring Arab countries who have experience in the field
15. Develop tourism, publicity and media and market Iraq's archeological sites and civilization
16. Reconstruct the organizations responsible for tourism and archeological and heritage activity to guarantee the unity of taking decision and the non-distribution of responsibilities between more than one party in addition to solving the overlapping of authorities between the central and local parties.
17. Set long-term plans for tourism and heritage and cultural development on scientific bases
18. Build a computerized database of tourism and heritage and archeological activity.

Chapter Nine

Social Development



9.1 Gender and Society

The issue of women is among the most important and integral to the social fabric of Iraq. Iraq's crises have directly and indirectly taken tolls on families, and women in particular. Cultural and social factors, limited teaching and training opportunities, low education levels, and limited skills all restrict women's work opportunities and their ability to compete for work and obtain jobs. This is a requisite for satisfying family needs and guaranteeing social status that is not being met. Furthermore, there is a portion of women who work in informal economic activities that do not appear in the formal records. Some women practice economic-viable activities in their homes, but these activities suffer from being ignored or disrespected because they interfere with routine housework.

The insecure environment has negatively affected women's personal freedom and made them withhold participation in many aspects of public life. Their personal security is also negatively influenced. Despite the continuous work of nongovernmental organizations, research centers, studies, newspapers, and the continuous support of the international organizations promoting awareness and spreading the concept of gender equality, there is still a noticeable deficiency in attitudes toward women.

The Iraqi state since its establishment has been keen, with varying degrees of clarity in policies and procedures, on creating opportunities for Iraqi women to enroll in formal organizations (education, health, training centers and so on). But, they have neglected, intentionally or unintentionally, the fact that the ability to enroll is not restricted to technical procedures. It is a process of changing the culture of discrimination and building the culture of equality and justice, with all its values and psychological and legal dimensions.

9.1.1 Reality

9.1.1.1 Women and Social Variables

Crises, poverty, and wars are some of the factors that hinder progress for women and children, generating accumulated dangers in all Iraq's lives, especially the poor and the marginalized groups—including women who support their families (11.5 percent of the total number of the married women). As millions of emigrants, the poor, and the marginalized cannot deal with the dangers inherent in crises that affect their resources, any strategy that seeks to help them will need to strengthen its capabilities to manage dangers and enable people to adapt. This should be done without causing long-term suffering due to the crisis-driven cracks in the social fabric. This is the required condition to achieve permanent advancement in development.

9.1.1.2 Women and Economic Activity

It is possible to summarize the current status with a concise sentence: women's paid economic activity is limited when compared with male's activity. There are many reasons for this, as many researchers believe, and we will refer to them later. Any neglect of women jeopardizes development and represents a violation of their indivisible rights.

Age group	Males	Females	Males & Females
15-19	46.7	4.7	25.6
20-24	75.4	10.8	42.9
25-29	92.4	16.5	54.3
30-34	39.9	18.1	56.4
35-39	95.5	19.5	57.7
40-44	92.5	21.3	56.8
45-49	91.0	18.9	52.0
50-54	80.0	12.4	42.3
55-59	59.2	10.4	34.9
60-64	46.1	6.9	26.6
65 and over	20.0	3.0	10.5

Women form half of Iraqi society, but their numbers have no value if they have no social status. Though women have achieved noticeable advances in several fields—education, social work, and others—their economic activity is still low.

Table 60 shows that relative gender differences are large in all age groups, and seem higher among those who are over 25. But the picture will be different if we look at the unemployment average between the genders. It is higher among males than females except for 2006, as shown in table 61.

It is obvious that women's unemployment averages are low in the rural areas compared with the urban areas. In 2003, their average unemployment in the urban areas was 22.3 percent against 7.6 percent in the rural areas. In 2004, it was 22.4 percent against 3.1 percent. The fact that should not be ignored is that the level of women's work is high in the rural areas, but their work is invisible to professional, social, and economic measures. In urban areas, the picture is different to a great extent; the more discriminatory aspects of traditional culture give way to a more open environment, with greater recognition of the rights of women and children. Moreover, the available employment opportunities vary, giving women more choices in selecting a job.

Sex	Males	Females	Males and Females
2003	30.2	16.0	28.1
2004	29.4	15.0	26.8
2005	19.2	14.2	18.0
2006	16.2	22.7	17.5

The influence of the traditional culture is general in society, but deeper in rural areas, and more related to women's education. There are opportunities that were in most cases more available to males than females as regards the averages of enrollment, regular school attendance, or the averages of success or failure. That also includes the specializations in which females attempt to obtain skills and certificates. Consequently, this is applicable to the opportunities available in the labor market. For example, the average enrolment at the elementary stage for females is 81.2 percent against 87.2 percent for males. The gap increases in the middle stage (21-41 years) to 40.1 for males against 33.3 percent for females. The differences also are visible between rural and urban areas.

It is also important to note that the averages of enrollment also decrease among poor families more than among rich families. A study of women who support their families showed that an education qualification is an essential factor for limiting the labor market and it is one of the distinguishing bases for entry, which are generally acquired from experience in lower levels of work that don't require qualifications. The study also showed that there is a correlation between education level and fixed-income jobs, and any change in the education levels of the family has a positive effect on their positions in the other fields. When we look at the percentages of deprivation of education in general, we find that they are higher for females (47 percent) than for males (28 percent).

9.1.1.3 Women and Decision-making Centers

Though Iraqi laws prohibit discrimination that prevents women from occupying leadership or other authoritative positions, and gives women the right to equal pay for work equal to men's, social and cultural factors may undermine these good intentions.

Collected data indicates that the number of women in decision-making positions may have increased after 2003; there were 342 women in various ministries at the end of 2005—342 general managers, 86 deputy general managers, 33 consultants or general supervisors, and 8 undersecretaries. Women were 2 percent of the judges and there were 6 women in the position of minister in the interim cabinet and 5 ministers in the current cabinet.

9.1.1.4 Equality in Obtaining Resources

One of the requirements of achieving development is guaranteeing women's access to resources necessary for production— land, loans, income, inheritance. This is an essential factor in enabling them to participate in development. Access to resources means the ability to use and control them, and to make decisions concerning them; they are the economic resources.

The Iraqi Constitution of 2005 guarantees the right of possession to all Iraqi citizens without discrimination on the basis of sex. Despite that, men and women do not enjoy an equal ability to access fundamental resources and services, as women in general have fewer financial assets than men and families headed by women have fewer assets than those headed by men. This includes the rights of possessing land or housing and managing assets and businesses. The discrepancy in assets is because of the difficulty of women participating in public life.

Acknowledging women-led projects is an effective strategy for building the free economy, and also a means of supporting equality. However, there are few suitable opportunities because of family pressures on women. As well, microloan projects, to a great extent, are monopolized by men. This is not because of traditions that hinder women's participation but to women's inability to obtain the loans because of the guarantees required by the banks. Both men and women suffer from this.

9.1.1.5 Challenges

The most important challenges to Iraqi women are:

1. The increase in the percentage of illiterate women in the rural and urban areas—which is noticeably high in rural areas
2. The lack of women's awareness of their rights and their inability to demand them even when they are aware of them
3. Many women connect their careers with the idea of marriage that has priority over their study and careers. This thinking is a result of the traditional family style of raising children
4. Traditional cultural discrimination against women is still the most influential factor. Cultural or familial concerns about a girl have become a justification for marrying her off or preventing her from continuing her education
5. The percentage of enrolment of females in education, particularly in poor families, is low. Therefore, it is possible to say that traditional culture, poor education and family poverty all affect the professional situation of women
6. Displacement and migration have made women more isolated inside their homes, in addition to the burdens that they have because of those exceptional circumstances.

The challenges women face in the job market are no less important, though the women are not always as isolated, including:

- The challenges of the traditional culture to women working, which keep
- Women's participation in the private sector low because of principles and traditions that put limitations on their roles.
- The negative attitude toward women working outside their homes and the cultural preference to prepare them instead for the traditional roles of marriage and maternity.
- The traditional thinking of the Iraqi family regarding work for females is to prefer government jobs even if the salaries in the public sector are lower than the private sector's.
- The increase in the number of women in the marginal labor market or the irregular market. Their activities in this field lie in the middle between the formal employment and working for the private sector.

9.1.3 Vision

Preparing developmental opportunities and enabling conditions that create more options for women, build their capabilities, and provide them with an environment that is characterized by equality and justice.

9.1.4 Objectives

1. Make women capable and include them in the process of development
2. Implement qualitative changes in a prevailing culture based on gender discrimination by means of concentrated efforts in several fields, such as education and employment, by parties that can influence people's orientations and interpretations.
3. Adopt a national strategy that takes the initiative to raise the standard of women to make them capable, encourage equality between the two sexes, and reduce the variation in values between the governments on one hand and the rural areas and cities on the other hand
4. Reform the economic and legal institutions to ensure equality in rights and opportunities for men and women (family laws, protection from violence, property ownership, employment, political rights, and inheritance).
5. Expanding the umbrella of social security to provide all groups, especially women, sufficient security
6. Supporting the integration of social and economic policies affecting women's work
7. Making training programs more than just technical by adding components that build character, promote civilized values, and encourage initiatives, renewability, self-confidence, and the desire to participate
8. Supporting the important economic role of women in the transformation to a market economy to make her the new partner in development in Iraq.

9.1.5 Means of Achieving the Objectives

1. Amending laws and legislation to support equality and participation, and devalue discrimination
2. Giving the public freedom of opinion, encouraging discussion and dialogue, running campaigns raising awareness and changing the image of women in the media
3. Reforming the education system and curricula to give more opportunities to change society's traditional view on violence against women
4. Including concepts that support the value of equality and equal opportunity in human rights programs and promote this as a culture that confronts discrimination
5. Expanding credit opportunities and facilities and increasing the loan amounts available within a national plan to encourage the women's initiatives
6. Supporting the work of the civil society women's and other organizations by strengthening their organizations to play an important role in establishing and spreading the culture of gender equality
7. Position equality as a civilized demand that does not diminish men's rights but supports the principle of gender partnership as the way to deal with life's affairs
8. Preparing the national employment plan according to the principle of actual workplace requirements
9. Expanding training programs and training women in all specialties and fields that produce income and are consistent with national developments needs

9.2 Youth

The young (15-24) are among the most negatively affected groups in by the circumstances that assail Iraqi society. They suffered the terrible hardships of wars and conflicts; they were used to provide a livelihood during the wars; and they are the ones who have been locked into the predicament of unemployment since 2003. The youth are the hope of every society, they will be its productive and executive power, but at the same time, they are a source of great danger when they do not have employment opportunities and respectable life opportunities.

Youth want not only work opportunities, but the opportunities of life (education, training, work, entertainment, health, and more). Their demands are the demands of society itself. Weakness in fulfilling these distinct demands leaves Iraqi society vulnerable to danger. The experiences of many countries show that when war ends, thousands of young fighters confront crisis when looking for new jobs. This crisis is exacerbated when the state is slow in finding suitable opportunities to contain it or to provide the youth with at least minimum services.

Iraq's youth problem can be summarized by saying that they form a very high percentage of the demographic pyramid, as they do in many developing countries. However, Iraqi youth have suffered from multiple problems— having been victims of irresponsible policies that pushed them through the hell of war, and then failed to find sufficient and suitable employment opportunities for them, then tried to place them in the framework of a normal public life. Furthermore, no policies have given them training, preparation, health and cultural services, and so on. In the 1990s, youth centers were neglected and the ministry responsible for youth was disbanded. With the spread of poverty, marginalization, long hours spent idle, and the withdrawal of training, the phenomenon of delinquent behavior expanded among the young as psychological and social defense against failure in public life. This has caused an increase in the number of prisons and rehabilitation centers and an increase in psychological diseases related to frustration, poverty, and other rightfully distressing conditions.

9.2.1 Reality

The number of the young in Iraq is unprecedented—20 percent of citizens are within the 15-24 age group. With the increase in fertility rates in the country, the percentage of the young is expected to increase in the next three decades. The most

prominent demographic characteristics of youth in Iraq are:

In 2008, the number of young was 6.1 million female and male youths. The number is expected to be 7.5 million in 2015. Current and expected increases in the number of youth are closely related to fertility and mortality rates and to the sizes and flows of migration. The data in table 62 show that the relative percentage of youth will continue to increase over the next two decades before it starts to stabilize, and then decline. The percentage of males in the aforementioned group was 20.2 percent in the same year compared with the percentage of females which was 19.8 percent with a gap of 0.04 percent.

The percentage of youth among citizens of working age (15-64 years) was 43.5 percent in 2008. The percentage of urban youth among total urban inhabitants is approximately 19.8 percent, less than their percentage in the rural areas, which is approximately 20.3 percent of total rural inhabitants for the same year. The decline is the result of security conditions and the compulsory displacement of citizens in most of the provinces and cities.

From a purely economic point of view, the sharp increase in the number of male and female youth in Iraq and their overall percentage present economic policy challenges: the need to provide them more educational services, infrastructure facilities, and proper work opportunities. On the other hand, their numbers represent a latent capability that can be invested in national development programs.

The new economic and social changes, in addition to the changes in communications, have provided the young with opportunities to mature and achieve at a relatively early age compared to previous generations. At the same time, many essential needs go unsatisfied, especially among the unemployed. Furthermore, some groups have encountered difficulties getting married and establishing families, while

others encounter limited opportunities to participate in free discussions and developing linkages with older generations. Therefore, it is not unreasonable to see the suffering of many youth as the result of isolation and a cause of their attraction to extremism and violence. It is important, therefore, for any future social strategy to guarantee opportunities for the youth to participate fully in the process of development and to target them with these strategies.

9.2.2 Challenges

The youth are the change-makers and a positive force when they live in an environment that allows normal mental, psychological, and physical maturation and that provides employment opportunities, participation, and security. But youth can also be the source of many hazards when they find themselves in an environment characterized by threat, violence, unemployment, and marginalization.

Ignoring the situations of youth and marginalizing them increases their likelihood to engage in delinquency and crime with serious social consequences—and the possibility of engaging with terrorism imported from abroad. The result is an unstable and unsafe environment that enormously deters capital and foreign investment and leads to lost opportunities for development and reconstruction.

As well, the lack employment, especially for new graduates in the sciences, causes the educated young them look for opportunities abroad, increasing the migration of valuable Iraqi minds—a noticeable waste of human resources.

If we examine the challenges that are considered barriers to an effective investment policy to employ youth and reducing their unemployment numbers, we find the following as the most important challenges:

Age group	2005	2010	2015	2020	2030	2040	2050
0-14	11,808	12,803	13,457	14,039	15,108	15,570	15,370
percent	41.8	40.7	37.5	34.9	30.9	27.4	24.0
24-15	5,614	6,273	7,446	8,291	9,126	9,849	10,346
percent	19.9	19.9	20.8	20.6	18.7	17.3	16.2
25-64	9,851	11,375	13,842	16,350	22,432	27,772	32,608
percent	34.9	36.2	38.6	40.6	45.9	48.8	51.0
65 and over	964	1,016	1,141	1,548	2,242	3,736	5,668
percent	3.4	3.2	3.2	3.9	4.6	6.6	8.9
Total	28,237	31,467	35,886	40,228	48,908	56,927	63,992
percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat the 2008 Revision, (<http://esa.un.org/unpp/p2k0data.asp>)

1. The absence of suitable employment policies that can create new opportunities for the unemployed—due to the weak role played by the private sector and the deterioration of its organizational efficiency
2. Low levels of investments that limit the capabilities to create new ways to deal with unemployment
3. The absence of a comprehensive national policy targeting youth, resulting in the provision of obsolete and useless services
4. The multiplicity of organizations that offer services to youth, and the absence of coordination and wasting of effort
5. The limited political and social roles given to youth
6. Fear of the future associated with unstable political and economic conditions— increases in living costs, the level of unemployment, and so on cause many youth concerns about their career and future life
7. The weakness of the qualifications and experience of the specialized staff that is responsible for managing youth organizations from an administrative and technical perspective
8. The weakness of the relationship between the youth organizations and clubs with the councils of the provinces
9. The quantitative and qualitative shortage in sport and entertainment facilities for youth, males and females, and the variation in the abilities of the provinces to provide them
10. The limited financial resources allocated for youth activities and their low rank in the federal budget of the state
11. The lack of sufficient land for creating new youth projects
12. Weakness in athletic performance accompanied by lack of the cultural, technical, and scientific skills that complement performance.

9.2.3 Vision

Training the young, helping them overcome social challenges and participate effectively in building society.

9.2.4 Objectives

The developmental dimensions of the plan focus on achieving the following:

1. Concentrating governmental efforts to develop the capabilities of the youth to enable them to participate effectively in the developmental process and putting them in the framework of the public life
2. The ideal balance between the needs of the state and the needs of the youth
3. Increasing the effectiveness of the program of developing the youth through adopting an integrated course to connect the objectives of the program together.

The circumstances resulting from Iraq's myriad crises and rapid changes call for the adoption of responsive and effective developmental plans, strategies, and policies for youth. They need to be included within the entire developmental, political, and social activities and to increase their representation and participation in developmental formation. This can be achieved through the following:

1. Deepening the concept of gender equality among youth to ensure a constructive relationships between males and females
2. Training the youth to participate in setting their own policies and programs in all the fields of development
3. Developing youth leadership to enable them to play roles in the process of development
4. Developing the current social policies according to the renewable needs to guarantee effective participation of civil society in solving the problems of the youth
5. Establishing many youth and entertainment centers in a way that guarantees the education of youth; keeping them busy with beneficial and constructive activities
6. Including migrant and displaced youth and working on providing employment opportunities that achieve a respectable life for them.

9.2.5 Means of Achieving the Objectives

1. Diagnosing youth problems objectively and comprehensively through deep studies and building a comprehensive and updateable database
2. Creating a set of comprehensive, correlated, and integrated goals and objectives for youth, both they are organizational and individual
3. Finding all suitable ways to include youth in the life of their societies through opportunities to enable and employ them; building awareness of preventive and treatment programs
4. Meeting the needs of youth to facilitate their building of families
5. Finding educational and cultural facilities for youth who cannot enroll in schools
6. Studying the education problems of the young, especially in the middle and preparatory stages
7. Developing training centers according to the requirements of the labor market, in a way that provides wide opportunities for youth to participate society
8. Supporting the role of the youth in cooperative activities, in a way that provides new employment opportunities
9. Establishing psychological and social centers that can help solve youth problems
10. Adopting programs that support the culture of dialogue, achieving peace, and rejecting violence

11. Arming the youth with the knowledge, skills, and orientations that can help in finding peaceful solutions and support the culture of coexistence with others
12. Continuing to support the roles of the family, school, and local society in bringing up the youth correctly, to prevent the occurrence and growth of youth drifting away from the values and standards of society
13. Developing training centers that currently exist in the ministries by increasing the number of trainers and making the professions taught consistent with the requirements of the state and the labor market
14. Increasing the number of job centers, especially in the provinces
15. Making the youth aware of the necessity to participate in civil society
16. Increasing the awareness of, and deepening the role of the family in taking care of the youth and guiding them.

9.3 Vulnerable Groups

Dealing with these groups is one of the most important issues for the public and the partners who are concerned with development, not least because it affects the likelihood of achieving development objectives.

The vulnerable groups include orphans, homeless children, disabled people, old people, widows, divorced women, single mothers, those who are subject to compulsory displacement, and more. These groups face problems and challenges that include a high level of poverty and various forms of deprivation. Moreover, they are always vulnerable to shortage of supplies or losing opportunities to adapt to shocks.

These groups have become a large percentage of the Iraqi social picture. However, social services for them have become almost idle or limited in many areas. This has led to an increase in marginalization, poverty, alienation, and unstable families, and to diseases that result from the spread of the cities and the poor districts (randomly built districts) which contain hundreds of thousands of newcomers on a daily basis. Many areas exhibit serious problems that threaten the social fabric and the future.

The traditional security nets (charity, endowments, the extended family, the tribe, local society, and religious institutions) were helping to limit problems, especially for vulnerable groups such as disabled people, orphans, beggars, the homeless, and so on.

One of the positive important steps to decrease marginalization is the adoption by the state and its development partners of a strategy to reduce poverty, though which the state aims to guarantee the fundamental rights of children within the frame of acknowledged and approved international rights. It also aims to build the capabilities to create a level of the labor force on the local level for vulnerable groups that have competitive capabilities by adopting programs and policies to make them capable and continuously build those capabilities.

9.3.1 Reality

9.3.1.1 Persons with disabilities

Though the CSO has implemented important surveys of the number and distribution of disabled persons, those numbers and their different groups are not available yet. Comprehensive data on citizens are expected and necessary to answer many questions that we cannot today find a definite answer for. Moreover, there is a need to issue a law to make possible compensation to those disabled in wars and to victims of violence and terrorism who are not employed by the state. Additionally, action must be taken to address certain diseases spreading in Iraq, like cardiac diseases, diabetes, and the incurable diseases that may cause a form of disability like paralysis, the inability to move or speak.

9.3.1.2 Widows and Orphans

There are large discrepancies in estimates of the numbers of widows and orphans. The scan of the circumstances of living showed that eight percent of the total number of women who were included in the study, from the different age groups of the sample were widows against 55 percent who were married. Regarding the victims of the incidents that followed 2003, there are also a number of different estimations.

The report of the United Nations on human rights in Iraq in 2006 has shown that women and children are still paying a high price as a result of domestic disputes, violence, and terrorism and that the number of orphans and widows is increasing continuously. Some estimates show that the number of orphans in Iraq might be more than 4 million and they are huge burdens for their caretakers and society in general.

If we consider the difficulties and the continuous economic challenges that face the Iraqi families, it is typical to find the marginalized continuously suffering from pressure to contribute to family income though unemployment remains high and employment opportunities are limited.

9.3.1.2 Social Status

Helping the orphans work in the streets must begin by dealing determining how families meet their fundamental financial needs without relying on children's work. The programs and policies to reduce poverty should target and help the very poor families to send their orphans who work to school.

9.3.1.3 Displaced Families

All the facts indicate that Iraqi displaced families, inside and outside Iraq, are still suffering. Their suffering and difficulties they encounter are mainly in the countries of emigration as many family's savings are depleted because of the high cost of living and the lack of work opportunities. Those families have lost their main source of support because of circumstances in the countries of emigration.

9.3.1.4 Children

Children (those under 18) form approximately half of the population of Iraq. They have been the victims of terrorism, violence, and crises. The problems facing children were

exacerbated after 2003 as they continuously faced the dangers of the attacks and violence while suffering from unmet fundamental needs such as social protection, medical services, education, food, water, and sanitary services. Many children are also victims of mistreatment.

The crises that struck Iraqi society and caused the increase in vulnerable groups have made many children liable to fall in the trap of delinquency. Children in Iraq, as in all conflict zones, are the victims mostly liable to violate the law. For example, many children are cruelly treated by their families: approximately 5 of every 6 children at the ages 2-14 years were victims of the mistreatment by their mother, guardians, or a family member.

Many Iraqi families depend on one or more child to work in the streets to satisfy financial needs. Despite laws that require children to enroll at schools, the crises have forced many families to work outside the home. The indicators show that most of the working children belong to poor families and work in different areas of the cities, selling simple and easy-to-move commodities.

9.3.2 Challenges

1. The inertia of the formal service and non-service, organizations. The surrounding circumstances have exposed the fragility and weakness of their structures, performance, visions, and strategies. This has had negative effects on their policies, plans, programs, initiatives, and interactions with the public, and on the degree of their actual to the challenges that they encounter, especially with the fragile groups. This has severely restricted their effectiveness in national and civil society
2. The absence of a comprehensive vision to improve the social situation and to stop relying on partial, limited, scattered policies and procedures that are not connected, either among themselves, or to the larger development effort
3. The public sector's continued focus on spending on the social sector's material infrastructure and its increased spending on the material requirements for operating these facilities. This enables them to implement their tasks according to modern international standards.
4. The absence of coordination and integration among the effective members of the social and the public and private sectors
5. The distressed social situation that has led to the disappearance of opportunities to enable Iraqi society to develop its tools in a rational and meaningful way, and deprived it of the chance to formulate its priorities
6. The absence of programs specializing in aiding vulnerable groups
7. The social policies that lack clear visions for programs for these groups.

9.3.3 Vision

Working to enable vulnerable groups, giving them new

opportunities to merge into society, and providing them with the required care to help them play positive roles in development.

9.3.4 Policies

With the failures, consequences, and challenges threatening vulnerable groups in Iraq today in the background, the social policy must rely, in its details and general lines, on a comprehensive vision that can contain the relationships among sectors that deal with them. Education, and the cultivation process that is included in it, is not separable from the process of enabling and investing human resources, for example. As unemployment is one of the sources of poverty, social security nets are one of the important mechanisms to provide opportunities for the vulnerable groups that live in the bottom rungs of society, as are the living guarantees provided by social securities. This comprehensive vision arises from the fact that society is a single, indivisible entity.

All these indicators, and others, indicate that the burden on social policy in Iraq will be heavy. Therefore, nontraditional procedures that rely on a new concept of the social work should be applied. These should take into consideration the fact of a state that is no longer centralized whose comprehensive reach has decreased in favor of municipalities or local governments in the provinces. The future social policy in Iraq should be based on the following rules:

- Balancing what is formal and what is voluntary in finance, participation, evolution and criticism
- An active role for civil society organizations
- More openness to international and western expertise and assistance
- Relying on the results of scientific research rather than individual effort
- Stressing the role of local councils and municipalities in identifying the needs of their local societies, setting their plans, and financing their programs.

Future options for growth should adopt social policies that take necessary measures to remove the traces of crises and improve the quality of life, creating opportunities for productive labor and setting high standards for education and healthcare as a means of productive investments and the creation of the conditions and requirements for achieving security.

9.3.5 Objectives

The basic fact that is always present before those who set policies and make decisions is that we live in a society that suffers from crises—and the circumstances of the crises have lasted too long. Therefore, planning for the future and setting practical programs that are ready to be implemented in one day is not possible. Consequently, some of the phenomena that were caused by these circumstances or exacerbated because of them will continue. This includes some deprivation indicators like low income, the increase in families that are supported by women, and more. This indicates that there is a need for programs and projects that reduce the traces of the crisis.

The available option today is for the government to work, in cooperation with development partners, on implementing programs and projects that can reduce the burdens of vulnerable groups. The social security networks represent a mechanism to protect some groups that lack capabilities to participate in social life. We can identify the following most important aims within the frame of the aforementioned:

1. Treating the serious traces and burdens that resulted from the crises and had a role in marginalizing thousands of widows, orphans, disabled persons, and more
 2. Enabling vulnerable groups, through training, qualification, and awareness, to merge in society, and including them in social responsibilities and long-term development plans
 3. Achieving balance and justice in providing services and infrastructure for these groups and in all fields
 4. Activating civil society and the municipality councils to be part of the social security networks
 5. Adopting programs that achieve mutual interests and benefits and building social peace and partnerships that can reduce the psychosocial, social, and economic pressures on vulnerable groups
 6. Protecting the displaced families whose numbers have become great as the result of social problems and hard circumstances
 7. Adopting an effective system for social aids
 8. Creating a new doctrine for social work that takes into consideration the transformation from relying almost completely on the state (the official organizational frames) to rely on an effective role for unofficial societies and organizations (voluntary work), the role of individuals and groups in local society (the village, region, and the like). This doctrine will form the necessary standpoint for future social policies
 9. Working on creating a participatory citizen who participates in decision making, procedures, and their implementation, by finding activities that include citizens in social work programs—social work being an expression of mutual responsibility.
3. Developing programs in which Iraqi parties and international parties will participate, for example, offering loans to establish small projects that produce income such as the projects implemented jointly by the Ministry of Labor and the International Labor Organization. Regarding these loans, certain groups such as women who support their families, war prisoners, the unemployed (especially the youth), persons who were disabled in wars, and the like should benefit from them
 4. Supporting the organizations and establishments in civil society that are linked to the most vulnerable groups, especially widows, orphans, the homeless, and women taking care of orphans. It should also be noted that the support should be related to the concept of enabling, and free from the concept of emergency aid
 5. Forming or establishing a supreme national department for social work that includes sub-departments such as a department for caring for orphans, a department of public participation in fighting crime, and the like. It is important to connect this department with an effective formal party such as the cabinet.
 6. Developing the current condition of the organizations for social care with the different groups and classes they serve through evaluative studies that diagnose their problems and the possibilities to develop them
 7. Setting bases for a social contract between the state, the private sector, and the organizations of the civil society that aims at providing enabling opportunities and supporting the capabilities of these groups in their capacity as a party that cannot be ignored in the process of reconstruction and long-term development, including training and loans
 8. Developing organizations that offer accommodations to deal with orphans, violence, homelessness, beggars, disabled persons, old people, and others in need, including asserting the importance of voluntarily participation in the activities of these organizations, technically and financially
 9. Increasing the salary of social protection network participants to make it consistent with increases in the cost of living
 10. Studying the situation of endowments (awqaf) in a way that guarantees activating their services and distributing their resources in accordance with the aims of the strategy of social advancement
 11. Finding new finance resources that reflect the participations of individuals and groups in the programs of the security networks such as the lottery, theatrical and artistic shows, competitions, and so on
 12. Including disabled persons in the processes of decision making and in all the levels that are related to their affairs.

9.3.6 Means of Achieving the Objectives

Setting new social policy for the organizations of state and civil society will definitely make these organizations encounter new needs that demand new options. The following are examples of possible options:

1. Reviewing the implemented social legislation and implementing the amendments that are consistent with the changes that occur in reality
2. Developing some programs and procedures that were (and some still are) applicable today, like social care funds, (zakat funds) and social solidarity funds, within the framework of a national assistance fund benefiting from the experiences of some Arab countries such as Jordan and Egypt

9.3 Poverty

Poverty has been one of the most important challenges accompanying development in Iraq over the past three decades. It affects the depths of organizational structures and threatens the social fabric and the mechanisms of its solidarity. Addressing

poverty in Iraq has not been allocated the attention required because of the situations, policies, and variables at play in during the past four decades. Having witnessed relative stability during the 1970s, the challenges started to affect the structure of organizations as well as economic and social situations in Iraq after the country entered the tunnel of war with Iran in the 1980s. This was seriously exacerbated by the situation after the Second Gulf War and imposition of the international blockade in 1990. The situation became worse because of the crises that accompanied the changes in the political situation in 2003 and the violence, terrorism, and destruction of the hierarchy of organizations that accompanied them. The continuation of these crises for a long time has left its mark throughout Iraq—and the worsening poverty levels might be the most prominent one.

Despite some achievements in the past few years, many challenges and principal obstacles are still threatening security in Iraq. Approximately one-quarter of the population is living in poverty and deprivation as a result of the crises and the loss of security and stability. This was accompanied by a severe discrepancy in income levels, inequality between males and females, and visible differences in the levels of deprivation between the regions and the provinces, as was shown by many surveys in the past few years.

The Iraqi state has inherited the burden of accumulative poverty in addition to the new factors that support the continuity of those problems—unemployment, health problems, shortcomings in education and other services, the withdrawal of social work, low personal incomes, erosion of the value of the national currency, and increased inflation rates, in addition to deterioration of the conditions suitable for development and reconstruction, with the growing violence, conflict of interests, corruption and so on. All of these inputs show that inequality and poverty remain among the most important developmental challenges that the Iraqi government is trying to confront with available means in its five-year plan for the years 2010-2014.

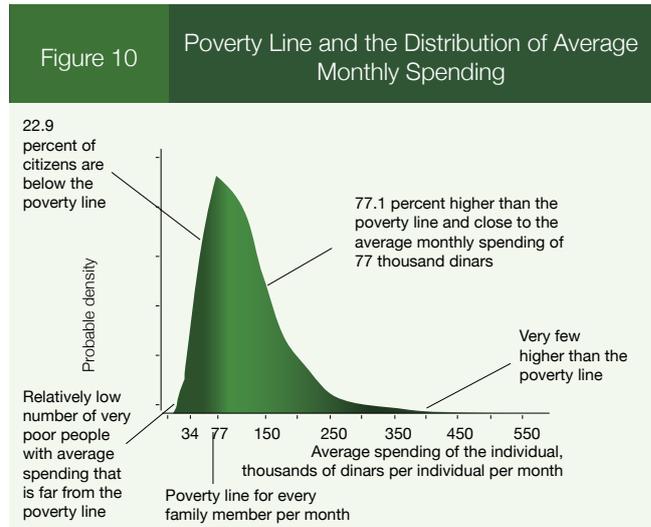
9.4.1 Characteristics of Poverty in Iraq

National Poverty Line

The starting point in any strategy to reduce poverty—and the fundamental condition of its success—is to identify those in need, where they are concentrated, in order to target them. The document of the strategy for decreasing poverty that was issued recently by the CSO, in cooperation with the World Bank, and which was approved by the cabinet in November 2009, indicated that 22.9 percent of citizens, or approximately 6.9 million Iraqis, are below the poverty line⁴ (figure 10).

The poverty gap⁵ in Iraq was estimated to be 4.5 percent. This means that the consumption of most Iraqis is close to the poverty line and the relative improvement in their incomes or the increase of their share of governmental spending on public services can rescue them from poverty, but the size of the gap is severely different among the provinces, as is shown in the figure below.

On the other hand, the distribution of individuals according to their average spending indicates that most of them are around the poverty line, and only few are away from it. For those who



are near but not at the line, this means that if a high percentage of them experience a decrease in income (loss of jobs, loss of the one who supports them, the illness of a family member) or an increase in their consumption requirements, they may be expected to fall under the poverty line.

High Percentage of Poverty in Rural Areas

The distribution of poor people differs between rural and urban areas. While 70 percent of the citizens live in the urban areas, half of the poor are concentrated in rural areas. This suggests that the economic and social conditions in rural create an environment that generates poverty. This conclusion is supported to a certain extent by a high fertility rate: the growth rate is 3.5 percent annually in rural areas compared with 2.7 percent in urban areas.

The economic activities of the poor people in the rural areas are concentrated in agriculture, hunting, forests (56 percent), and construction and building (14 percent). They practice professions that do not need high skills and education such as handcrafts (17 percent) and basic professions (15 percent). Of laborers under the age of 10, 56 percent work without a fee, most of them are women, and approximately two thirds of them are in poorest groups.

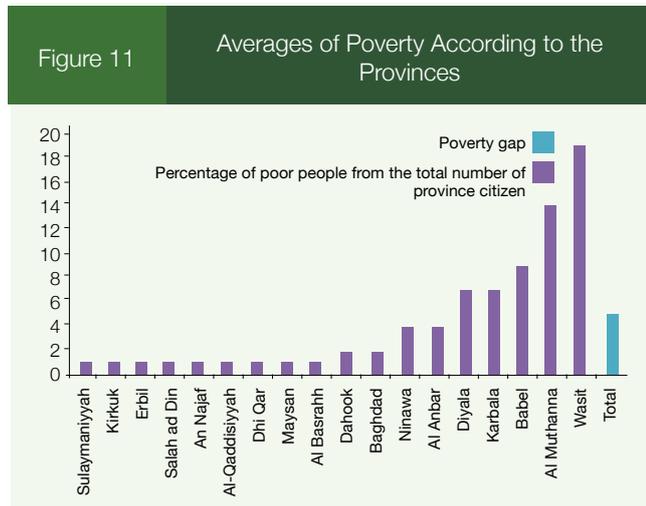
Discrepancy in Poverty in the Provinces

The provinces differ in their poverty rates and their gap. While 40 percent or more of citizens of some provinces are poor (Al Muthanna 49 percent, Babel 41 percent, and Salah al Din 40 percent), the percentage of the poor in other provinces is less than 10 percent, with the provinces in Kurdistan serving as the prime example. The poverty gap also is larger in provinces with

⁴ The poverty line was identified by the strategy for reducing poverty as 77 thousand dinar/individual/month.

⁵ The poverty gap is the size of the gap between the income of the poor and the poverty line. It is calculated with the monetary units that are sufficient to raise the standards of consumption of all poor people to the poverty line. It is calculated as a percentage from the total value of the consumption of all the citizens when the level of the consumption of each one is on the poverty line.

a high rate of poverty. As well, 13 percent of poor people are concentrated in Baghdad only and approximately 11 percent are in Al Basrah. In the rural areas, the poverty rate is high in Al Muthanna (75 percent), Babel (61 percent), and Wasit (60 percent).



Dispersion in Family Income and Spending

There is a large difference in income and spending between poor and non-poor families, especially in income. CSO data indicates that the richest one-fifth of families earns 43 percent of Iraq's total income, while the poorest fifth earns only 7 percent of total income in Iraq. The dispersion seems less sharp regarding spending: the share of the richest families is 39 percent of total family spending while the share of the poorest families is 9 percent.

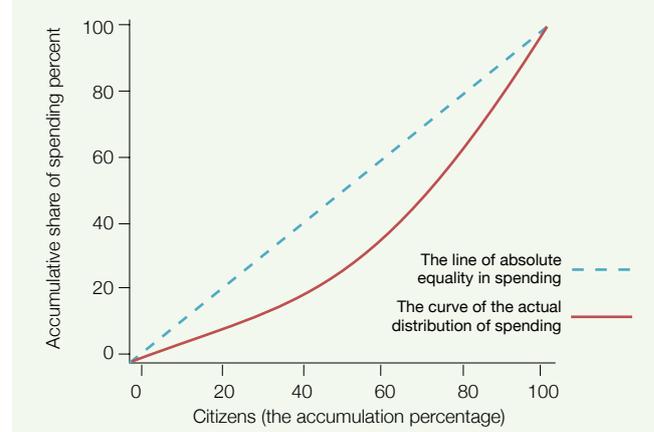
By applying the Gini coefficient, which is considered the most common in measuring dispersion, we find that the dispersion between the poor and the rich in Iraq is low when compared with the rest of the countries in the world. If we compare the value of Gini coefficient with the values of that coefficient for 128 other countries (for which we have coefficients), Iraq rank 18th, as the value of its coefficient is 0.309 compared with 0.344 for Egypt, 0.353 for Algeria, 0.377 for Yemen, 0.383 for Iran, 0.388 for Jordan, 0.395 for Morocco, and 0.437 for Turkey. The Lawrence curve shows the differences in income. The more this curve comes closer to a straight line, the fewer disparities will exist.

Weakness of the Relationship between Poverty and Unemployment

CSO's data from the comprehensive battery of social and economic surveys administered to families in Iraq in 2007 shows that there is a weak correlation between poverty and unemployment. While the poverty rate was 39 percent in rural areas and 16 percent in urban areas, unemployment in rural areas was 13.36 percent and in urban areas 15.17 percent. This means that poverty is most likely to be correlated with income from labor for those who work— who represent 89 percent of the labor force in rural areas. This is due to low productivity. The correlation of poverty with the high fertility rate and the social, economic, and environmental characteristics

Figure 12

Lawrence Curve of Spending in Iraq for 2007



of rural areas is more than its correlation with unemployment. This is indicated by low average of participation in economic activity, as 57 percent of citizens of working age are outside of the economic activity field (they do not work and they are not looking for a job). Regarding women, the percentage is 87 percent.

On the other hand, it is not possible to deny the relationship between poverty and low employment. The results of the employment and unemployment surveys for 2008 showed high unemployment related to limited work hours for workers 15 and over: 23 percent for males and 53 percent for females; 21 percent in urban areas, and 43 percent in rural areas.

9.4.2 Challenges

Alleviating the Negative Traces of Economic Reformation on the Poor

The Iraqi government has adopted an orientation toward the market economy since 2003. Since that year, it implemented a bundle of reformations that have led to a noticeable improvement in individual real income—a direct result of the ability to control the inflation rate and fix the value of the national currency. However, some of these reforms have had negative effects on poor people. For example, the policy of reducing governmental support for oil products caused an increase in average family spending per month on accommodation, water, and fuel from 13 percent in 1993 to 29 percent in 2007, doubled family monthly spending on transportation from 5 percent (1993) to more than 10 percent (2007) because of the increase in fuel prices. This shows the importance of adopting procedures that consider poor people and reduce the negative effects of reforms on them. One of the most important procedures that was actually applied was the establishment of the social protection network system and its implementation started in 2006.

Maintaining Security and Stability

Though the deterioration of security has negative effects on all citizens, their effects are more damaging to the poor because of their lesser capabilities to deal with circumstances like loss of

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income, increased prices, and scarcity of commodities.

The negative effect on their loss of jobs and material assets is also visible. Undoubtedly, the ability to reduce poverty remains limited while instability is increasing; it is causing economic and social situations that are unhealthy for the security for the citizens.

Guaranteeing “Good Governance”

Creating the proper environment to implement the strategy requires the government to set “good governance” as the top priority in governing, establishing organizations, managing the economy, improving the performance of public administration, and fighting corruption—in addition to other procedures that guarantee the improvement of the political, economic, and social environment, improved efficiency of government performance, improved decision-making mechanisms for setting policies and establishing and developing organizations that support economic growth.

Means of Achieving the Objectives

Higher income from work for the poor

Income from work is the main source of income of poor people. The decrease in this income is one of the causes of poverty. Therefore, the strategy aims to increase productivity, create employment opportunities, and ensure easy access to loans for the poor by:

1. Providing factors to increase the productivity of agricultural work for the poor
2. Setting lending programs for activities that give income for the poor
3. Establishing a system to review the minimum daily wage rate according to the variations in the national poverty line
4. Establishing effective job centers that are easy for the poor to approach and work with
5. Providing governmental support for initiatives of civil society to support the poor
6. Establishing or activating evening crafts centers and quick training programs for the poor for professions that produce income especially for the poor.

Improving the health standards of the poor

The plan aims to improve the health and the care and services that are given to the poor, with a stress on preventive health services and treatment health services. These policies include improving primary healthcare services, extending potable water and sanitary sewage services to poor areas, increasing the coverage of these areas with the activities of the extended immunization program and the positive health programs and improving the nutritional status of the poor by

1. Providing improved healthcare services to the poor that are easy to access
2. Increasing health awareness in poor areas to control dangerous behavior and contagious and non-contagious diseases
3. Setting a government program to extend potable water and sanitary sewage services to poor areas
4. Supporting coverage of poor areas with the activities of the extended immunization program
5. Improving the nutritional status of the poor
6. Setting programs to support positive health for the poor.

9.4.3 Objectives

The plan aims to achieve the objectives consistent with the strategy for alleviating poverty and with national efforts to achieve the millennium development objectives. In light of what has been achieved in improving food security indicators, child and maternal mortality, and school enrollment since 2004, if we assume that implementation of the five-year plan has begun and the political situation and security are stable, it is expected the plan will reduce the national poverty rate by 30 percent compared with the 2007 rate. To achieve this, the plan must adopt strategic objectives as follows:

1. Higher income from work for the poor
2. Improving the health standards of the poor
3. Expansion and improvement of education of the poor
4. Better housing environment for the poor
5. Effective social protection for the poor
6. Fewer discrepancies between men and women

Expansion and improvement of education of the poor

The enrollment rates at the post-elementary level show large differences between the poor and the non-poor, and the rural and urban areas. For example, the enrollment rate of the poor at the middle stage is only half that of the non-poor. The results of the social and economic scan in Iraq showed that this difference is attributed to the carelessness of the family or the individual—45 percent of the reason—followed by absence of a school (18 percent), and social reasons (12 percent). This suggests low awareness of the importance of education and the inability of the educational system to provide sufficient schools and supplies.

This objective can be achieved by the following:

1. Issuing a law regarding, and instructions for, compulsory primary education—and activating it, especially in rural and poor areas
2. Giving priority to establishing elementary, intermediate, and preparatory schools in poor areas
3. Amending the law and instructions for the protection network and connecting it with registration of children of included families for primary education
4. Improving the efficiency of education in poor areas and urban and rural areas
5. Implementing procedures and activities to reduce the number of illiterate people
6. Preparing and applying courses to connect professional education with the labor market, especially in the agricultural and rural sectors.

Better housing environment for the poor

The poor suffer from the problems of the environment in which they live. These include low housing standards, overcrowding, pollution, and unsuitable infrastructure. Electricity cutoffs are still happening continuously and for long hours—16 hours per day in some places. Though most houses are connected to the public water network, the percentage of poor families that are not connected is more than double the percentage of non-poor families (33 percent compared with 14 percent). Moreover, many cities suffer from problems in the water provision at least once per week, or have poor-quality water

Sanitary sewage services are available only in some areas of Baghdad and some other cities. These exist only in some parts of other provinces. The houses of 35 percent of the poor have no connection to the public network and no waste basin, compared with approximately 20 percent of the non-poor.

Current estimates indicate that there is a housing credit of not more than 2.8 million units. Some of them are below minimum standards.

To establish a better housing environment for the poor, the following should be implemented:

1. Extending the government's projects to build suitable housing units for the poor with easy occupancy terms
2. Setting and applying programs to encourage the participation of the private sector in low-income housing
3. Creating and maintaining a suitable environment around the houses.

Effective social protection for the poor

The principle of including families or individuals in the aid network is that they have no or low income, but reviewing the targeted groups may not be consistent with this standard because:

- Correcting the targeting system requires separating those who are eligible for continuous social care—disabled persons, widows, old people, and others, from those who are temporarily ineligible for aid until the causes for their income change are eliminated.
- The social protection policy should watch two important factors—the percentage of poverty and the poverty gap. The Ministry of Labor and Social Affairs has specified that the percentage of inclusion of poor people in every province is 20 percent. This means that it has adopted one standard, regardless of the percentage of poverty and its gap in every province.

Undoubtedly, canceling the system of ration cards completely will hurt poor people severely. Moreover, the vulnerable groups who are not poor but who are close to the poverty line will be negatively affected. This threatens to include them in the poverty trap. When the effects of this on the poor are observed, withholding components of the ration cards from all families will increase the national poverty rate from 23 percent to 34 percent, according to the social and economic scan of the families in Iraq. Therefore, it is necessary to implement a process of reforming the ration card system gradually, as the resources saved from spending on the cards will be directed to meet social protection needs. This will negatively affect the income of the poor.

Means of achieving the objective

1. Establishing and implementing procedures that guarantee good application of the social protection network
2. Setting and implementing procedures to supply aid to the poorest and neediest people.

Fewer discrepancies between men and women

The plan aims to reduce the discrepancies between men and women, whether in favor of men or women. Making women better economically enabled by achieving equality in education and employment opportunities and earning a fair income are considered among the fundamental bases to reduce the poverty among women. The social factors that cause their poverty are no less important than income factors, as social traditions impose restrictions that generate and reproduce poverty, especially in rural areas.

The results of the social and economic scan of the families in Iraq have shown that there is a gap between the two sexes among poor people in enrollment at the different education stages, in illiteracy, and in participation in economic activity.

The rates of girls' enrollment in elementary schools are low compared with those of males. The social gender gap of the poor is very large in rural areas—approximately 40 percent of girls in these areas are not enrolled in elementary schools, compared with approximately 20 percent in urban areas that are not enrolled. There are cases where the difference is not in favor of men. For example, the rate among the poor of full enrollment at the secondary level favors of females because males want to leave their studies and find a job.

Illiteracy among the poor at age 10 and over is 38 percent for females compared with 18 percent for males. The gap in rural areas is larger than in urban areas—46 percent for females and 19 percent for males. The rate of economic participation by poor women is 11 percent, compared with 78 percent for males.

The reason for the differences between the men and women in general is not legislative inertia, but social and cultural factors.

Means of achieving the objective:

1. Extending programs that deal with factors that cause low rates of females' enrollment in elementary, intermediate, and secondary schools
2. Preparing and implementing specialized training programs for poor women to increase available employment opportunities for them
3. Issuing legislation and programs to achieve social security for poor women.

Chapter Ten

Spatial Development and Sustainable Environment



Spatial Development and Sustainable Environment

10.1 Spatial Development

10.1.1 Spatial Development Policies in Iraq

Iraqi national interest in the spatial dimension of development began in the 1960s, as the 1965-1969 National Development Plan emphasized the concept of spreading industries throughout several Iraqi provinces, such as the paper, glass, and mechanical industries that took hold in Alexandria. This affected rural-to-urban migration and from there came the initiative to spread development outside the major urban areas of Baghdad, Mosul, and Basrahh.

Systematic thinking and adoption of spatial development as a method of planning development in Iraq began in the early 1970s. This led to the establishment of government agencies specializing in the spatial dimension (1972 Regional Planning), which took responsibility for the various aspects of the spatial development planning tasks. Interest in spatial dimensions continued, and several studies and province development plans were completed. In addition, indicators were defined for regional development and urban planning systems in Iraqi cities, based on the potentials and features of spatial development in the provinces.

Spatial development aims primarily to distribute the fruits of the basic development process in a balanced and equitable way among the provinces. It seeks to reduce economic, social, and urban disparities among the regions of the country on the one hand, and between urban and rural areas on the other hand. It does so by exploiting and efficiently investing in potential and relative advantages available in each province or territory. In other words, spatial development seeks to create relatively balanced development among regions; achieve some kind of balance by maximizing economic development growth rates on the national level; and create an even distribution of development benefits among the country's regions, achieving the principle of integrated development.

There are many factors behind directing investments in its various forms (public or private) to some areas while excluding others. Some of those factors are related to the capabilities of one area—also known as the spatial advantage—and the availability of financial and human resources to receive these investments as compared to areas that cannot fulfill that requirement. This applies to production, industrial, agricultural, and tourism activities, some of them market-related, others dependent on the areas' need for services and infrastructure.

Successive state economic plans have attempted to focus on spatial development. Indeed, they have emphasized the mitigation of the dual spatial development phenomenon characterized by developed and less developed cities. They have also worked to find a spatial development pattern that is better suited to developmental requirements in the country. This work has included distributing and spreading investment and development projects, particularly those unrelated to vital underground resources, in a way that enhances sustainable spatial development while protecting the environment from pollution and achieving consistency between development and environmental policies.

Over the past forty years of regional planning, spatial development has focused on a number of basic principles that can be summarized as follows:

10.1.1.1 Industrial Site Policy

Since the early 1960s and 1970s, there has been a clear direction in Iraq emphasizing the necessity of spreading economic development and industry across all provinces; creating balanced spatial development; reducing economic and social disparities; distributing population in a balanced way; and stopping it from becoming concentrated in large urban areas. The industrial site policy is one of the policies adopted for both individual and large industrial complex projects. Industrial development indicators, consisting of workforce distribution and value added for each province, reflect a clear trend towards lowering Baghdad's dominance of the industrial structure in Iraq. It went from accounting for about 60-70 percent of the value of these indicators in the early 1970s to about 39-42 percent at the beginning of this decade. However, the absence of a comprehensive spatial development policy in Iraq has reduced the significance of the industrial site policy. That is because it has not been used in a manner that achieves spatial development goals in a comprehensive way. This has, in turn, led to the concentration of population, as well as economic, social and urban activities in some cities but not others.

10.1.1.2 New Cities Policy

This has been one of the tools to stop population concentration. This policy began to appear in Iraq to combat increasing population growth in Baghdad specifically and other major urban areas like Basrah and Mosul in general. This arose as a result of economic development and its concentration in those areas. Several studies were conducted to surround Baghdad with cities, aiming to attract new population waves, absorb overpopulation, and create a suitable investment environment for new industries. Among the cities proposed were the new cities of Zubaidiyah in the Wasit province and Thar'thar in the Anbar province. The hope was for the population of these cities to reach 300,000 and for them to provide services and have economic activity independent of Baghdad.

In addition to proposing these new cities, other proposals were made for satellite cities close to Baghdad, such as Husainiyah, Nahrawan, and Saba'a al Bur. These cities were created and helped limit population concentration in Baghdad.

Advisory studies on spatial development also suggested developing existing cities located within the regional impact of major cities. As a general rule, these proposed new cities were not created. Further, population growth was limited to existing cities and some of the aforementioned satellite cities.

10.1.1.3 Policy of Development Centers (Poles)

This policy and the attempts to implement it in Iraq are one of the procedures aiming to redistribute the benefits of development and spread them spatially, as well as redistribute the population.

10.1.1.4 Rural Settlement and Development Policy and Plans

The rural settlement policy focused on the bases and standards for selecting main villages that could be considered hotbeds for rural development, so those (mother) villages can accommodate the villages nearby to get rid of arbitrary rural spatial distribution and the difficulty of offering services to them.

This plan for rural settlement was adopted in 1980. It was implemented toward the end of 1982 in accordance with scientific and practical methods used to select the cities that would be candidates for development. This selection was performed by analyzing economic, urban, and social data for all villages. The rural settlement and development plan managed to reduce the number of villages in Iraq from approximately 12,000 villages, inhabited by four million rural residents, to approximately 4,000 villages.

The experiment of selecting candidate villages for development was relatively successful. The reasons behind that may have been the participation of farmer representatives in selecting the villages that would be candidates for development. This indicates the importance of local community involvement in the planning process. Iraq's involvement in consecutive wars as of the early 1980s prevented implementation of this plan and reinforced underdevelopment, poverty, and deprivation in rural Iraq.

10.1.1.5 Policy of Spatial Distribution of Investments

Since the mid-1970s, the issue of investment has remained an important dimension of restructuring spatial development in Iraq. It has also been a means of reducing developmental disparities among provinces, as well as between urban and rural areas; and a means of spreading industries, agricultural development, land reclamation, and infrastructure, particularly roads, throughout Iraq's provinces. In the 1970s and 1980s, some of the most prominent attractions in Iraq were Akashat in Anbar, where a large industrial phosphate fertilizer complex was set up, and the Baiji industrial complex in Salah ad Din province, operating in the chemical, refining, and petrochemical industries. These two provinces attracted 9.9 percent, 6.2 percent, 10.2 percent, and 6.9 percent of the investments associated with the 1976-1980 and the 1981-1985 national development plans. The Khor Al-Zubair area in Basrah also possessed a primary development attraction. It attracted the iron, steel, and petrochemicals industries, as well as power generation stations and refineries. It was the largest development attraction in Iraq, as it attracted approximately 21.2 percent of the total investments from the 1976-1980 national development plan. Alexandria, in the Babel province, also constituted another development attraction. It specialized in both mechanical and military industries. In addition to those major attractions, substantial investments were directed to a number of other provinces, to create secondary attractions in provinces like Maysan for food industries and Diyala for electrical industries and poultry farming.

Those indicators confirm that the 1970-1974 plan ushered in the Baghdad province's prominence in regards total investment allocations, with a share of 23.9 percent, followed by the Basrah province, with a share of 14.8 percent. In other words,

38.7 percent of total allocations were concentrated in two provinces. This preferential treatment continued during the implementation of the 1976-1980 development plan, with a few exceptions consisting of the emergence of new growth attractions (Salah al Din and Anbar) with 6.2 percent and 9.9 percent, respectively, of that plan's investment allocations. This seems a significant shift in spatial dimensions toward new places that represent growth attractions and reduce the dominance of traditional central attractions. However, the 1981-1985 development plan stressed the need to reduce the economic and social development divide among Iraqi areas and to work toward improving the balance between developed and less developed areas. The plan also confirmed expanded provisioning of public services to low-income groups, and increased attention to reducing spatial inequalities between rural and urban areas. Despite these objectives, however, reality shows the continuing disparity among provinces. Indeed, Baghdad continued to receive the majority of allocations, at 37.5 percent. This confirms the disparity in spatial distribution of this plan's investments. Among the indicators confirming the opinion that regional disparity persisted is the indicator measuring the magnitude of labor working in the industrial sectors in the Baghdad province. That indicator was 52.1 percent as compared to the total population, which was 24.07 percent.

Per capita investment in the 1981-1985 plan reached 976 dinars. Some provinces exceeded the national average, Anbar and Salah al Din, for example, where the per capita investment was 2,678 and 2,394 dinars, respectively. This reflects a trend of redistributing income toward new provinces outside main development attractions. It also reflects the superiority of the two major attractions, the Anbar and Salah al Din provinces, over other provinces. Therefore, investment distribution in this plan was not careful to distribute development benefits over a larger number of provinces.

Figure 13 shows per capita investments from the 1970-1995 national development plans. At first glance, this distribution appears to reflect an important aspect of spatial development theories. The figure shows that development cannot be brought to all places at the same time, and that there is a hierarchy and a gradual process for expanding development. In turn, this means the continued superiority of the major developed attractions that contributed to comprehensive growth in their areas and surrounding areas. However, this cannot be practically proven in Iraq as large areas in the country continue to have low growth rates and are not affected by regional development in other areas.

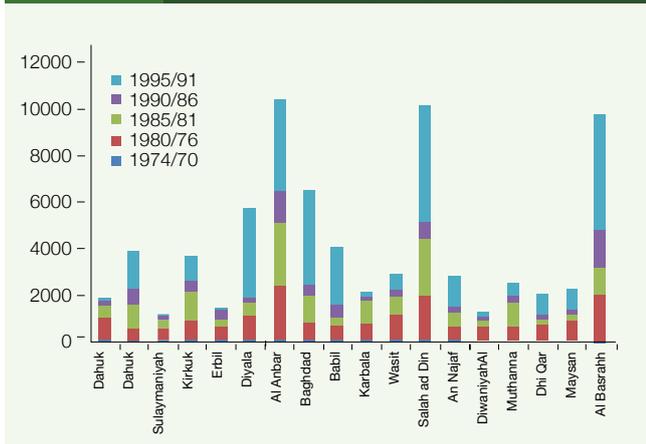
The 1986-1990 plan confirmed continued and complete support for the military and promoted the economic objectives related to raising the standard of living among the population and achieving balanced development by analyzing the reality of spatial development. The plan concluded that it was crucial to reduce the concentration of spatial investments in traditional provinces. The plan also concluded that the actual reality did not represent the optimal solution because of continuing disparities in development levels per the plan's diagnostic criteria.

In addition to these analyses, the plan added a number of objectives with an emphasis on setting principles for regional development, such as reducing investment quotas for developed

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provinces, particularly with respect to the industrial sector; reducing the focus on economic factors when distributing projects; setting development criteria and indicators to help prioritize Iraq's provinces; and identifying the types of activities and events spatially.

Figure 13 Spatial Distribution of Per Capita Investments in the 1970-1995 Development Plans (in Iraqi dinars)



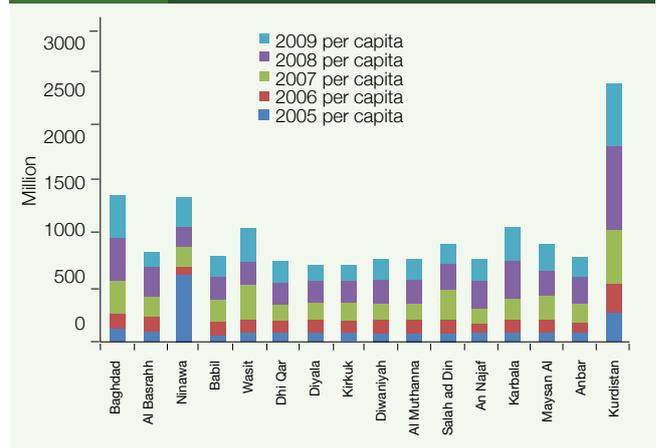
The 1986–1990 plan indicators show that there was a clear decrease in the relative magnitude of allocations earmarked for the Baghdad province, 21.7 percent as compared to 37.5 percent in the 1981 - 1985 development plan. There was continued relative focus on the two new development poles, Anbar at 13.9 percent, and Salah al-Din at 6.6 percent. These provinces attracted several vital projects, for example, the highway in the Anbar province and the construction of industrial and university projects in the Salah al Din province.

The general framework of the 1991-1995 economic and social development plan (the first plan after the 1988 war ended) and its requirements in terms of reconstruction and rehabilitation should be analyzed. It is worth noting that the events of the 1990 war, along with the international economic sanctions in the form of economic embargo that followed, significantly affected the development process in all of its aspects, trends, and priorities. Indeed, that plan was not even issued pursuant to a law. However, its goals stressed directing resources rationally to achieve comprehensive development; raising the population's standard of living; correcting disparities in the national economy; and offering new public services, particularly in the education and health sectors. On the spatial level, the plan's objectives included stressing the need to expand the social services offered so as to reduce spatial disparities by adopting planning standards for each service offered. Its detailed goals also included the need to establish new cities so as to reduce population concentration, attract population and investment movements, achieve balanced population distribution in rural and urban areas, organize the migration movement, and offer appropriate spatial conditions to mobilize human resources spatially.

As noted regarding the aforementioned goals, there was clarity in addressing the details of development goals spatially. This was performed in a way that reflects the reality of the current

disparity. For example, the Baghdad province still enjoys a notable majority of investment allocations, at a rate of 37.6 percent. The reason for that is known. Specifically, it arises from the damage suffered by the infrastructure in many economic sectors as a result of the excessive population concentration, which directly affected the other regional economies. New distribution standards were adopted after 2003. Indeed, one of the important standards in distributing allocations among provinces is population and its relative magnitude in each province. To a large extent, this standard reflects the actual need for investments. This is because people are the main target of every development effort. Consequently, the larger the population is in a province or municipality, the greater the need for investments. This is particularly pronounced in the public service and infrastructure sectors. Figure 14 shows that per capita investments in the Kurdistan region were the highest as compared to Iraq's other provinces.

Figure 14 Spatial Distribution, Per Capita Share of per capita investments 2005-2009 Iraqi Dinar



There is a disparity in the pattern of spatial distribution of investments by economic sector and activity. If the magnitude of investments within provinces is supposed to be commensurate with the population, the degree of need, and deprivation of certain public services and infrastructures, then the magnitude of those investments in productive sectors, like tourism, for example, must be commensurate with the potential development of each province and its relative advantage. Additionally, there are many economic activities that have requirements that necessitate spatial orientation toward one specific place and not others. This orientation serves a number of provinces or the country as a whole, and thus makes it difficult to calculate the magnitude of the investment as being for the province in which it is located.

10.1.2 Principal Features of Spatial Development in Iraq

The attention given to the spatial dimension of development in the 1970s and until the mid-1980s achieved results in terms of the distribution of economic activities and population, and the change in migration trends. Indeed, population growth rates fell in the Baghdad province from 6 percent to 2.9 percent in 1997 and the rural population growth rate rose from 0 percent to 3

percent. In addition, seven provinces were attracting people, despite Basrah's transformation into a province where the war conditions drove people away—and, combined with the economic sanctions, led to a lack of policy continuity. Thus, the policies had a reduced impact in the 1990s. In any event, there were and continue to be common general features in spatial development in Iraq. They can be identified as the following.

10.1.2.1 Spatial Concentration of Economic Activity and Population

Starting in 1950, and continuing on to 1995, most plans indicated a clear focus on the levels of economic and social development in a limited number of provinces. This generated a growing movement in mass migration toward these centers in a way that largely contributed to the spatial disparity between the developed and underdeveloped provinces in all aspects of economic, social, and urban development. These influences were reflected in the method of the population's spatial distribution: heavily populated centers were the same centers that enjoyed economic growth, so they continued to attract growth away from other areas. As a result, there was a correlation between the level of urbanization and economic development. Table 63, shows the relative distribution of population concentrations and investments in the Baghdad province for the period of 1965–2007 as compared to Iraq as a whole.

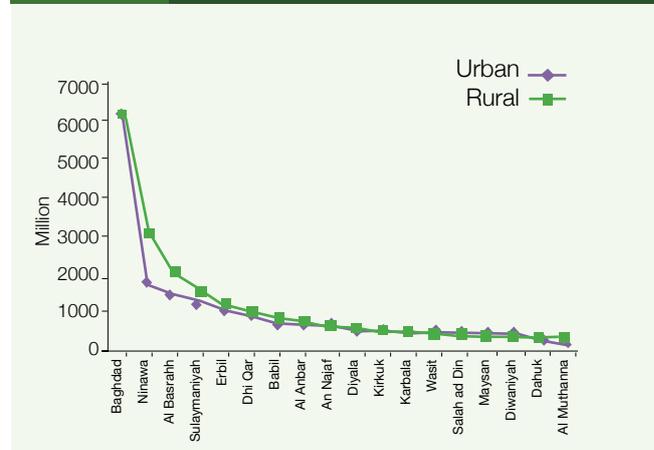
Concentration percent	1965	1977	1987	1997	2007
Population concentration as a percent of total in Iraq	25.4	26.6	23.5	24.5	24.1
Investment as a percent of total in Iraq	30.7	20.7	37.5	37.6	16.4

10.1.2.2 Loss of Hierarchy in the Human Settlement Structure and Continuation of the Dominant City Phenomenon

The spatial economy model in Iraq shows Baghdad's control as a dominant city at the urban structure level as compared to other Iraqi cities. Its dominance was reflected in most development plan results. The total population of the second largest city after Baghdad was one-sixth of Baghdad's. This contrasted sharply with the fifty percent rule set by the infamous Zaif principle.

Figure 15

Hierarchical Rankings of the Population in Iraq's Major Cities



The application of hierarchical rankings in most provinces shows a population concentration in one dominant city. Indeed, the urban system in the one province is not far from this vision. In addition, when looking at the size of the cities and urban areas, and their hierarchical sequence, we note that there is one dominant city within the province's urban system, and that it represents a center and developmental attraction in the province that attracts the majority of developmental investments.

10.1.2.3 Duality of the Spatial Economy

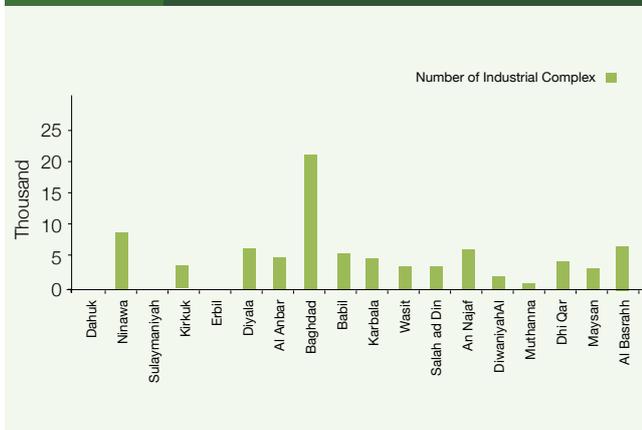
Based on the results that can be deduced from the spatial development experiment in Iraq, there is a clear duality in development. Indeed, there are major developed and underdeveloped centers in the cities and regions. These are characterized by their relative advantage in terms of development and external resources (like land resource) and are more successful in attracting investments in its various forms, public and private, than other centers. Growth can be noted in those areas due to the rise in sectoral growth rates for various sectors of economic activities, like building industrial facilities, for example, (figure 16), population growth rates, per capita national income, or level of urbanization, as well as the scarcity of economic resources.

MoP conducted a study to evaluate the disparity in the levels of spatial development. To do so, the ministry used the regional income disparity coefficient, which accurately and clearly reflects the problem of regional disparities. The study concluded that the coefficient was very high, approximately 5.28, pointing to a considerable disparity in income levels among provinces. It also points to the concentration of wealth and income in certain provinces, particularly Baghdad, which is an obvious feature of Iraq's spatial economy.

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Figure 16

Spatial Distribution, Industrial Complex Construction by Province



10.1.3 Relative Spatial Advantage and Developmental Potentials

Determining the economic and geo-strategic role of any region or province, on the national level, depends on many factors, including the area's available capabilities, comparative advantages, and location within the territory of the country with its specific demographics, ethnicity, and so on. Moreover, some cities have economic and cultural roles within the country that go beyond their territory. This also requires accurate identification, as well as the establishment of programs and developmental curricula that ensure achievement thereof. At this point, it is crucial to identify the most important comparative advantages for development resources and their spatial distribution within the provinces and regions.

10.1.3.1 Spatial Dimension and Relative Advantage of Oil Resources in Iraq

According to geological studies, Iraq has about 530 geological sites, which gives a strong indication of the presence of massive oil reserves. Only 115 of those sites have been drilled. Of those, 71 have been proven to contain enormous oil reserves distributed among many fields. Of the 71 fields discovered in Iraq, only 27 have been used, including 10 giant ones. The oil and gas fields currently producing output are concentrated in the Basrah and Kirkuk provinces. The provinces of Maysan, Baghdad, Dhi Qar, Diyala and Ninawa place second in terms of importance. However, there are still more undiscovered and undeveloped fields throughout the majority of Iraq's provinces, with the exception of Al Diwaniyah, Babil, Anbar and Dahuk.

Southern Oil Fields

The bulk of Iraq's oil reserves are concentrated in the southern province of Basrah, where there are 15 fields, 10 of which are still producing and 5 of which are still awaiting development and production. These fields contain an estimated oil reserve of more than 65 billion barrels, approximately 59 percent of total Iraqi oil reserves. The oil reserves in the provinces of Basrah, Maysan and Dhi Qar combined total around 80 billion barrels, approximately 71 percent of total Iraqi reserves. The most notable southern fields in Iraq are the following.

Northern Rumailah field is the largest Iraqi field, extending from the western side of Basrah and southward, with its southern portion in Kuwait. The majority of its wells are in Iraq. It first produced in 1970. It is the ninth largest oil field in the world and one of the finest because of its layered nature that allows easy production. During the 1970s, it consisted of 20 wells—this figure has now increased to 663 production wells.

Majnun field is a giant well in the Maysan province and produces approximately 100,000 barrels per day. If its productive capacity is developed, it could produce 600,000 per day. Omar River field is also in the Basrah province. It has many undeveloped locations. Its production capacity remains modest at approximately 1,000 barrels a day. However, after development its capacity could reach 500,000 per day.

Western Qarnah field is another of the largest Iraqi oil fields. It, too, is located in the Basrah province and represents the northern stretch of the Rumailah Northern field. Production began in 1973 and it is believed to contain reserves totaling at least 24 billion barrels. It produces 300,000 barrels a day, and could reach around 700 thousand barrels per day if developed further.

Southern Rumailah field and Al-Zubari field (Southern fields in Basrah) were first utilized in 1949 and produce approximately 220,000 barrels per day. There is also the Al-Lahees field west of the city of Basrah, which has been worked on in stages since 1972 and which exports to the Al-Faw port and Al-Touba field.

The giant Al-Hulfayah field is close to the city of Umarah in the Maysan province in southeast Iraq. It contains more than 3.8 billion barrels of oil reserves. It is located in the same province as the Abu Gharb and Barazkan fields. Production there started in 1973. The oil in it is referred to as Basrah and Fakkah field crude oil.

Northern Oil Fields

The oil reserve in Kirkuk is estimated at 13 billion barrels, which amounts to 12 percent of total Iraqi oil reserves.

Kirkuk Field is the fifth largest oil field in the world in terms of volume. It is a plateau with the small Zaab River cutting through it, about 96.5 kilometers long and about 4 kilometers wide. The depths of Kirkuk field wells range between 450 to 900 meters. Each well produces an average of about 35,000 barrels per day. When first utilized during the era of the Iraqi kingdom, the Kirkuk field had 44 wells. After nationalization of Iraqi oil in 1973, the field consisted of 47 production wells, 88 monitoring and exploration wells, 1 water injection well and 55 closed wells. The Kirkuk field comprises more than 330 production wells and is still expanding.

Bay Hassan field is located west of the Kirkuk field and parallel to it. Bay Hassan's wells are deeper than Kirkuk's wells, with depths ranging from 1,500 to 3,000 meters. Production there began in June, 1959. Jambur Field is north of Kirkuk and is parallel to the Kirkuk and Bay Hassan fields. Production there began in August, 1959.

The Khubar field is in the Kirkuk province, while the Ayn Zalut

Nadib field in the Ninawa province and the Batma field are located close by in a mountainous area. In addition, there are the Safiyah field, which is adjacent to the Syrian border, and the Al-Qayarah field in Ninawa province.

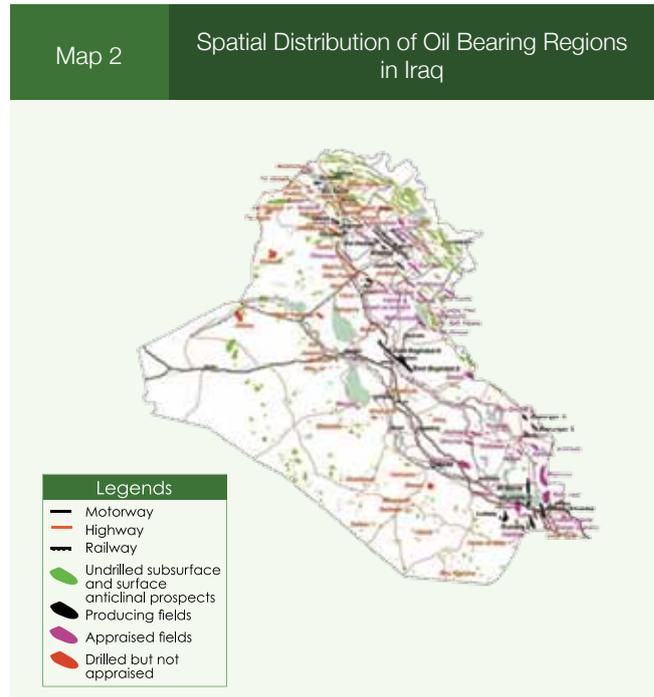
Investments were made in a number of oil fields in Kurdistan recently. However, production is currently limited to 100,000 barrels per day, with the hope of increases in the near future.

Mid Oil Fields

East Baghdad Field: It was thought to have small oil reserves. However, it has turned out to have a much larger capacity than initially thought. It has northern extensions and its production capacity is around 20 thousand barrels a day. It is estimated that total production could reach 120 thousand barrels a day if it is fully developed.

Khanah Oil Field in the Diyala Province and other fields in Al-Anbar in the western portion of the country.

Table 64 shows the distribution of productive oil fields in the southern, middle and northern provinces. Map 2 shows the spatial distribution of current and potential oil fields in Iraq.

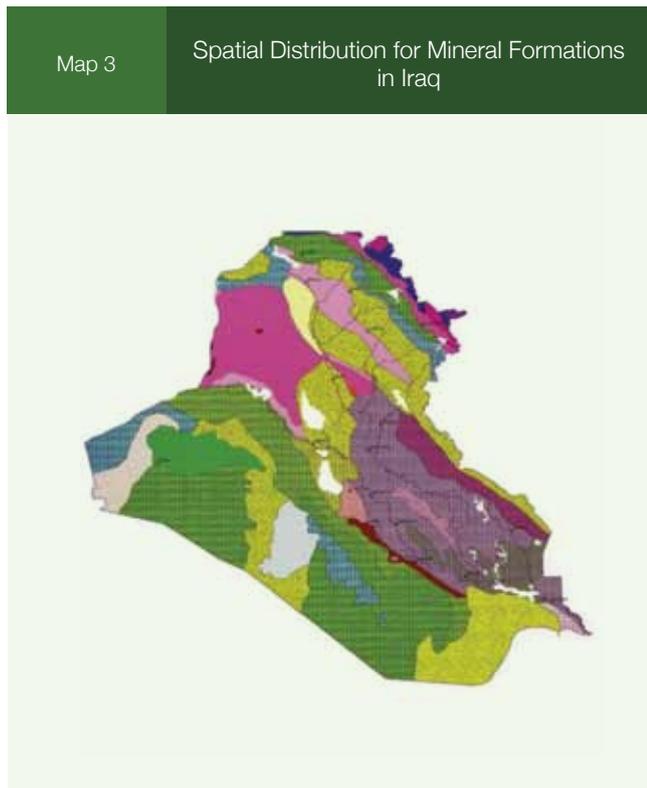


Province	Field	Number
Basrah	North Rumailah, South Rumailah, Al-Zubair, Omar River, West Qurnah, Al-Luhais, Al-Tubah, Al-Subah, Al-Hulfayah	9.0
Maysan	Majnun, Al-Barzakan, Abu Gharb, Fakkah, Al-Umarah	5.0
Wasit	Al-Ahdab	1.0
Dhi Qar	Nasiriyah Field	1.0
Baghdad	East Baghdad	1.0
Diyala	Khanah Oil	1.0
Kirkuk	Kirkuk, Jambur, Bay Hassan, Khubaz	4.0
Ninawa	Ayn Zalat, Al-Qayarah, Safiyah, Batma	4.0
Al-Anbar	Ukaz Field	-

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10.1.3.2 Distribution of Mineral Ores and Comparative Advantage of Provinces

Map 3 is a spatial economic and geological map showing the distribution of the areas with natural mineral resources in Iraq. The map shows that there are provinces rich in some minerals, in terms of the quantity of available reserves or mineral variety. Other provinces' lack of those resources affects their ability to attract investments commensurate with the resources available.



Al-Anbar province is considered one of the richest in Iraq for its many types of available resources, such as limestone, dolomite, phosphate, sand, gypsum deposits, glass sand, cement, clay, and iron, that is, nine resources in large quantities. As a result, the phosphate industry was subsequently established in Ukashat, along with the glass industry and others.

Ninawa province is another with deposits of limestone, sand, sulfur, gypsum, clay, and cement materials. It contains 95 percent of Iraq's sulfur reserves.

Sulaymaniyah province contains raw materials and mineral resources—gypsum, copper, lead, nickel, iron, sand, limestone, cement, and clay, as well as a large proportion of dolomite, accounting for 57 percent of this resource's reserves.

Muthanna province contains raw materials needed in the cement and chemical industries. It contains 57 percent of the country's dolomite reserves and 19 percent of its limestone reserves.

Erbil province is yet another province rich in metals like copper, chromium, nickel, manganese, iron, zinc, and lead.

Kirkuk province contains deposits used to make clay bricks and gypsum, as well as sand and significant deposits of tectonite and sulfur.

Karbala province is known for one of the most important mineral sand sediment deposits, containing 42 percent of this resource, in addition to deposits of limestone and the mud used to make cement and clay bricks.

Najaf province, together with Karbala province, contains the largest site for sand sediments in Iraq. It also contains 17 percent of Iraq's limestone sediment reserves, as well as dolomite.

Salah al Din province contains 48 percent of plaster deposit reserves, 20 percent of gypsum reserves, and 6 percent of total sulfur reserves, ranking second after Ninawa province in this reserve.

Diyala governorate is famous for its large quantity of brick clay, in addition to small plaster and sand deposits.

The rest of Iraq's provinces, particularly Wasit and Diwaniyah, Basrah Dhi Qar, and Maysan contain sand and clay. The Baghdad and Babil provinces are among the poorest in terms of mineral resource deposits, with the exception of clay deposits that can be used to manufacture clay bricks in Muhawil and Al-Qasim in the Babil province. Table 65 shows the spatial distribution of mineral resources with comparative advantages in Iraq's provinces.

10.1.3.3 Indicators for Analysis of Advantage and Industrial Settlement

The location factor standard is one of the most common indicators in spatial analysis. It is used to estimate a territory's relative share of certain industries. This standard compares the relative share of any region of a given industrial activity to that of another standardized area in the same activity. It is used for purposes of comparing data at the national level. This method allows use of several variables to measure the location's factor. These include the number of workers, added value, and production value. An analysis of the comparative advantage indicators for the provinces of Ninawa, Baghdad, and Karbala indicates that they have attracted many industrial projects in various industrial activities. This reflects the phenomenon of industrial concentration in those provinces, as they had different location factors that have attracted all industries and their different branches.

The provinces of Diyala, Babil, Najaf, and Diwaniyah attracted projects from the majority of industrial branches, except for extractive industries. The location factors among these provinces varied for different industries. Wasit, Salah al Din, Al-Muthanna, Dhi Qar, and Basrah provinces attracted six industrial branches where the location factors varied from one industry to another and from one province to the next. Anbar province attracted five industrial branches and focused on the construction industry, as it had a high location factor of 4.5. The food, textile, wood, paper, construction, and metal industries were distributed among all provinces and were considered prevalent industries because of the abundance of primary

Province	Available resources
Al-Anbar	Phosphate, dolomite, limestone, gypsum, sand, quartz, "glass" sand, cement, clays, iron
Ninawa	Limestone, sulfur, gypsum, sand, plaster, cement clay
Muthanna	Brick clay, cement clay, limestone, salt, sand, plaster
Kirkuk	Plaster, sand, brick clay, cement clay
Karbala	Cement clay, limestone, gypsum, sand, plaster
Salah al Din	Rock, sand, sulfur, gypsum
Diyala, Wasit, Diwaniyah, Maysan, Dhi Qar, Babil, Baghdad	Cement, brick clay
Sulaymaniyah	Lead, zinc, iron, limestone, sulfur, gypsum, plaster, sand, cement clay
Erbil	Copper, chromium, nickel, manganese, iron, zinc, lead, limestone, gypsum
Dahuk	Lead, zinc, larium

resources and the growing demand for industries that require dissemination in many regions.

Chemical industries were concentrated in most provinces, with the exception of Anbar, al-Muthanna, Dhi Qar, and Maysan. The highest location factors were recorded in Salah al Din and Basrah provinces, with factors of 3.89 and 3.45, respectively. Chemical industries are concentrated in the cities because they represent large markets for their products, and consumption patterns typical of urban populations. The oil refining industry is less prevalent than others, concentrated in the provinces of Ninawa, Salah al Din, Basrah, Baghdad, and Diyala. The extractive industries have been concentrated in the provinces of Ninawa, Baghdad, Karbala, Salah al Din, and Al-Muthanna. The Ninawa province recorded the highest location factor—6.3— for this industry. Finally, manufacturing industries were concentrated in the majority of provinces, but recorded a very high location factor of 15.50 in the province of Dhi-Qar.

10.1.3.4 Relative Advantage of Agricultural Development in Provinces

The new plan provides a detailed analysis of agricultural potential and limitations. When analyzing the sector, its focus will be on the sites most favorable for agricultural production and where provinces have a comparative advantage in agricultural spatial terms with respect to appropriate crop composition per square mile and livestock productivity. For example, the average wheat crop productivity in Iraq in 2007 reached 350.8 kg /sq mi. The provinces of Najaf and Diwaniyah came in at first place with an average of 644.6 and 666 kg/sq mi., respectively. The province of Ninawa had the lowest productivity rate with 169.1 kg/sq mi., despite it having the country's largest area for wheat crop cultivation. The provinces of Diwaniyah and Wasit had the highest barley productivity rate per square mile with 303.7 and 428.7 kg/sq.m, respectively. The provinces of Salah al-Din and Wasit achieved the highest rate of palm tree productivity with 73.9 and 74.5 kg, respectively. (See figures 17, 18, 19.)

Figure 17

Average Wheat Crop Production in Iraq (kg/sq mi)

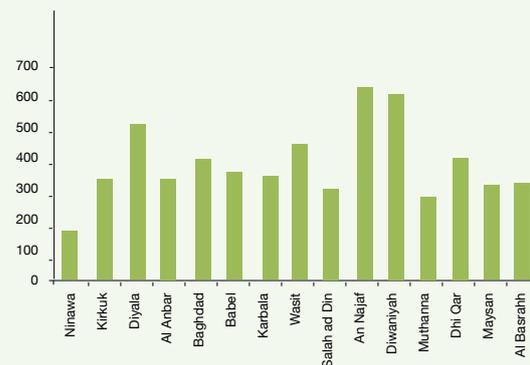
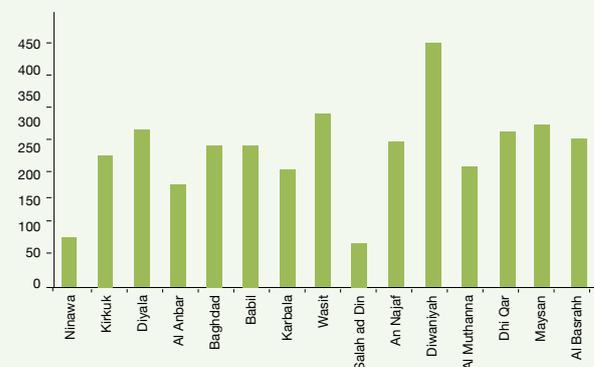


Figure 18

Average Barley Crop Production in Iraq (kg/sq mi)



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Agriculture provides food needs as well as products utilized in manufacturing. According to the 2001 calculation, the Wasit, Babil, and Baghdad provinces had the largest number of cows at 147,656, 142,421 and 135,725 head, respectively. The provinces of Baghdad, Basrah, Maysan, and Najaf placed first place in buffalo rearing, with 34,346, 14,348, 11,061, and 10,403 head, respectively. The Ninawa province occupied first place in the number of sheep, totaling 1,193,769 head, and the provinces of Diyala and Wasit came in first in the number of goats, with 122,982 and 130,347 head, respectively.

10.1.3.5 Relative Advantage of Tourism

Iraq has significant and diverse tourism potential. Indeed, its varied climatic conditions, terrain, and environments provide it with exceptional natural areas that are unique tourism spots with significant comparative and competitive advantage regionally and internationally. It also has a vast cultural and religious heritage that the country has cherished since ancient times and that creates the potential for religious and archaeological tourism. Furthermore, the northern mountain regions, with their unique surface characteristics, are an important tourism attraction for their beauty, mild summer weather, and snowy winters. As well, the central and southern regions are characterized by their flat terrain, through which pass through the Tigris and Euphrates rivers. The dense orchards on both sides of these rivers make them very attractive from a tourism perspective as they are ideal for picnics. Moreover, there are numerous lakes that are good areas for establishing tourist activities, including Lake Habbaniyah, Lake Razzazah, the lakes formed by the Mosul, Haditha, and Tharthar dams as well as natural marshes. See map 4.

Archaeological evidence points to the existence of ten thousand archaeological sites in the country. They cover an era spanning from the Stone Age more than 100,000 years ago to the more recent Islamic periods. Iraq is distinguished by its vast potential in the religious tourism industry. With its provinces' tall minarets and golden domes with beautifully ornate decorations that tell the ancient stories of prophets, imams, and scholars. There are also several ancient churches and monasteries in northern Iraq. The country has many tourism facilities, hotels, and hotel apartments to serve religious and other tourists (figure 20).

10.1.3.6 Spatial Dimension and Relative Advantage of the Road Network in Iraq

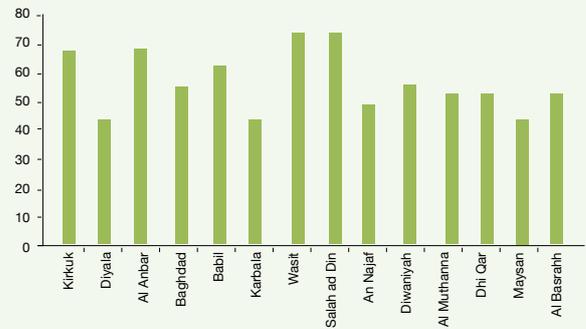
Iraq has a wide network of public roads and highways that is close to 42,000 km in total roadways. Most of the network was constructed during the 1970s and 1980s. The majority (map 5) extends longitudinally, parallel to the Tigris and Euphrates rivers, with the exception of the northern areas, where traffic volume has increased and is causing many problems.

10.1.4 Spatial Disparity of Development and Deprivation Levels

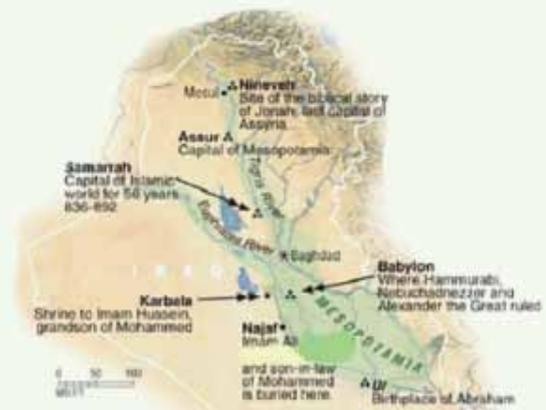
10.1.4.1 Spatial Disparity of Development

Over the past four decades, spatial development policies clearly tended toward focusing development on specific provinces. This resulted in a clear disparity in levels of development among the provinces, on the one hand, and between rural and urban

Figure 19 Average Palm Tree Production in Iraq (kg)



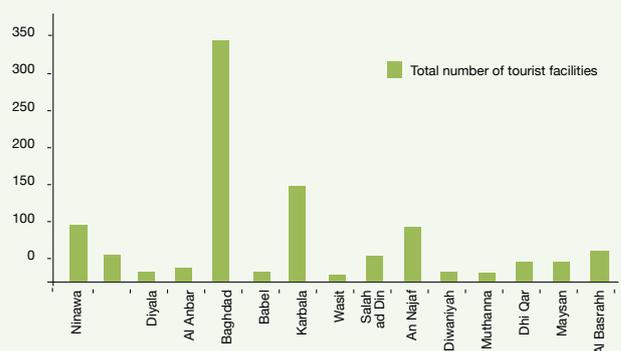
Map 4 Tourism potential



Legends

- Archaeological area
- Modern cities with important architecture and antiquities

Figure 20 Spatial Distribution of Tourism Facilities in Iraq



Map 5

Road Network in Iraq



- Dhi Qar, ranked 18th
- Wasit, 17th
- Al-Sulaymaniyah, 16th
- Dahuk, 15th
- Diwaniyah 14th
- Diyala, 13th
- Maysan, 12th.

The relatively developed provinces are:

- Najaf, 11th
- Erbil, 10th
- Kirkuk, 9th
- Al-Muthanna, 8th
- Babil, 7th
- Karbala, 6th.

The advanced provinces are:

- Ninawa, 5th
- Al-Anbar, 4th
- Salah I Din, 3rd
- Basrah, 2nd
- Baghdad, 1st.

areas, on the other. At the province level, studies in this area confirm three distinct levels of economic, social, and urban development, described as “advanced,” “relatively developed,” and “underdeveloped.”

According to studies prepared in 1991, there are 8 underdeveloped provinces:

According to a more recent study (2009), the least developed provinces are Diwaniyah, Maysan, Al-Muthanna, Dhi Qar, and Diyala. The relatively developed provinces are Najaf, Kirkuk, Ninawa, Salah al Din, Wasit, and Karbala. The most developmentally advanced provinces are Basrah and Baghdad, with the latter ranked in first place.

Province	Economic situation	Protection and social security	Education	Health	Infrastructure	Housing	Standard of living index	General standard of living index
Ninawa	48.5	29.1	30.8	28.2	55.3	23.1	34.2	11.0
Kirkuk	22.5	33.7	22.2	29.8	61.8	13.5	21.0	3.0
Diyala	44.1	49.3	16.4	30.6	83.8	18.3	33.7	9.0
Anbar	26.8	29.5	15.1	16.5	48.2	3.9	11.6	1.0
Baghdad	21.6	35.9	16.7	21.3	34.3	28.2	18.4	2.0
Babil	38.2	27.0	40.3	24.6	74.4	35.1	35.3	13.0
Karbala	41.1	28.1	52.1	13.3	59.5	39.0	34.0	10.0
Wasit	42.6	26.1	32.7	37.9	59.6	34.5	36.3	14.0
Salah al Din	38.2	39.9	33.6	21.9	72.3	21.0	33.5	8.4
Najaf	42.2	29.2	38.6	18.7	40.5	33.0	30.3	7.0
Diwaniyah	47.3	34.1	39.3	39.8	63.5	46.5	44.4	16.0
Muthanna	55.3	35.0	46.3	26.3	63.4	39.1	44.8	17.0
Dhi Qar	51.9	33.6	35.8	26.9	74.7	45.2	42.9	15.0
Maysan	44.4	31.3	51.7	53.2	87.9	44.5	56.6	18.0
Basrah	40.7	20.0	21.6	27.6	66.4	25.5	29.6	6.0
Kurdistan								
Dahuk	44.7	34.5	40.4	40.0	30.2	30.4	34.2	12.0
Sulaymaniyah	18.2	30.3	29.8	29.5	35.6	35.0	24.5	4.0
Erbil	22.4	31.3	33.7	38.3	32.9	31.1	26.4	5.0
Iraq	34.1	32.6	27.9	27.2	52.8	28.7	28.7	

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10.1.4.2 Deprivation and Living Standard Indicators

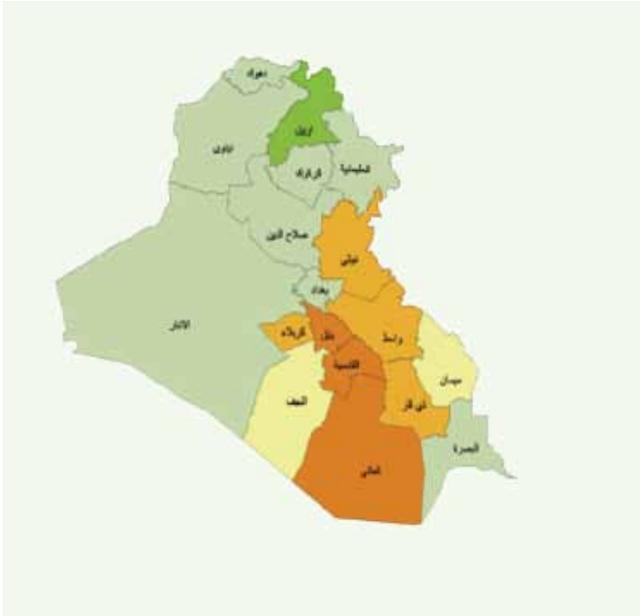
The spatial deprivation and standard of living (table 66) was adopted by the National Report on the State of Human Development. It depicts the spatial deprivation in provinces in education, healthcare, infrastructure, housing, housing surroundings, and economic situation. Thus, it depicts where basic human needs are not met.

There is a large scarcity in Al-Muthanna province, which is ranked in last place among Iraq's provinces in terms of the number of deprived families across all indicators. Regarding the seven areas of deprivation listed in the table, the Maysan province had a rate of 87.8 percent in the area of infrastructure due to the decline in that sector. The Diwaniyah province had a rate of 46.5 percent in the housing area. The Ninawa province had a rate of 48.5 percent in the economic situation index. The Maysan province had a rate of 56.4 percent in the general standard of living index.

The high deprivation levels and low standard of living in rural areas as compared to urban areas and cities was very clear. The deprivation levels in rural areas in education, health, and housing were three times higher than those in cities. Indeed, the study suggests that the standard of living in Iraq is linked, to a large extent, with urbanization levels. Thus, what the rural populations suffer is greater than urban areas (map 6). For example, when analyzing the deprivation levels in the rural areas of Karbala, the picture becomes clearer: the percentage of households classified as deprived is 58.5 percent in the education sector and 94.4 percent in the infrastructure sector. This is the case in rural areas for other sectors; in general, their rate of deprivation is greater than that in the rest of Iraq.

Map 6

Deprivation Rates Among Families in the Provinces



The provincial poverty index mentioned in the National Report on the State of Human Development showed that poverty

increased above the national average of 18.8 percent in three provinces. The provinces with a poverty index lower than the national average were Karbala 16.2 percent, Basrah 17.5 percent and Anbar 16.4 percent. In contrast, the rate for Muthanna was 30.0 percent and for Maysan was 30.2 percent. The latter was the worst off according to the poverty index. Perhaps the biggest problem in this province was the lack of access to drinking water, which amounted to 46.9 percent. This province also had the highest illiteracy rate of any province, at 34 percent among adults. The provinces of Dahuk and Salah al-Din were ranked 16th and 15th, mainly because of the high rates of illiteracy among adults in Dahuk, estimated at 41 percent, and the low life expectancy in Salah al Din, at 36.2 years. The human development report sees clear differences among the provinces in the Kurdistan region, where Erbil made significant progress in education, health, and income compared to Sulaymaniyah and Dahuk. However, in the rate of female enrollment in education, Sulaymaniyah surpasses Dahuk and Erbil; this will deepen the current disparities if planning authorities do not address this difference.

10.1.5 Spatial Developmental of Potentials

There are several factors that provide Iraq with the appropriate platform to correct the development spatial structure in distributing economic activities and services in a more balanced and complete way. These include its diverse natural terrain and soils suitable for agriculture and construction industries, the presence of the Tigris and Euphrates rivers and their tributaries, the large hydrocarbon resources, and the presence of primary and secondary development centers in Iraq's provinces in general.

Development has to be conducted in a manner consistent with the economic, social, and human features of each province. It should also work to reduce the development disparities among provinces and between urban and rural areas, thereby preventing dual spatial development phenomenon and uneven hierarchical spatial distribution.

The plan has adopted a regional spatial analysis method. This provides the opportunity to maximize growth rates in many parts of the country through better exploitation of local resources, building of regional partnerships, and establishment of development hubs consistent with local potential.

10.1.6 Spatial Development Challenges

1. Continuing dominance of the dual spatial development phenomenon, with the limited developed areas, especially in major cities and central province cities that take up the largest share of economic activity, services, and infrastructure as compared to the underdeveloped regions, particularly in the rural districts and counties
2. Continuing presence of extreme spatial concentration, particularly urban, in a very limited number of large cities. Baghdad, Mosul and Basrah account for 55 percent of the urban population
3. Absence of a comprehensive policy for urbanization
4. Continuing migration from rural to urban areas, and from villages to cities, along with the subsequent depletion of

small rural towns' productive human resources, and the pressure that puts on already scarce housing and public services in the cities attracting new populations

5. Continued lag by rural Iraq in terms of low levels of income, lack of services, and the concentration of poverty in rural areas, coupled with the difficulties of spreading basic services, such as education and health, to rural villages, particularly those with populations of less than 200-300 people
6. Continuing existence of large disparities in services and infrastructure, as well as residential overcrowding in certain provinces and, to a larger extent, in urban as compared to rural areas—reflecting deprivation levels and unsatisfactory fulfillment of basic needs in regions that benefit less from development as compared to developed regions
7. The arbitrary urban sprawl on farmland and the excessive violations during recent years of different land usages, especially within the limits of the cities' basic designs
8. The growing desertification problem, as well as lack of vegetation in desert and semi-desert areas and in the mountainous regions
9. The absence of basic rural settlement plans, a reflection of the indiscriminate use of land, particularly agricultural land
10. The absence of long-term plans for regional land use and the lack in most Iraqi provinces of industrial or investment zones planned on a scientific basis; these limit the deployment of spatial investments
11. The weak link between economic and industrial development policies, particularly urbanization and population distribution policies
12. The emergence of inequality between provinces with respect to obtaining water shares for agricultural and other uses, exacerbated over recent years by the limited water resources entering Iraq from countries north of the Tigris and Euphrates rivers and their tributaries
13. The lack of thorough use of the Jazeera and southern deserts to develop natural pastures, resulting in decline in herds of sheep, cows, and goats.
14. The low level or lack of use of water bodies to develop fish resources
15. The weak (east–west) interconnection of road and railway networks
16. Poor exploitation of tourism potential across Iraq's regions, and reliance only on religious tourism, which is very limited compared to the overall neglected potential of historical, archaeological, natural, and recreational tourism, despite the tremendous potential in those areas.

10.1.7 Spatial Vision

Creation of comprehensive and continuous spatial development in Iraq's provinces so as to create equitable opportunities for access to public services and infrastructure; reduction of the development gap between urban and rural areas; and optimized use of natural resources and capabilities of Kurdistan

and provinces unaffiliated with a region. These measures would lead to achievement of spatial development equality in line with the needs, capabilities, and relative features of Iraq's different regions and provinces. They would also contribute to resolving duality in spatial development, the extreme concentration of populations, and the current economic situation.

10.1.8 Spatial Development Objectives

1. To limit the dual spatial development phenomenon in Iraq as a whole, as well as within each province
2. To limit high population concentrations to a few cities, put an end to the dominant city phenomenon in Iraq as a whole as well as within each province, and to stimulate the growth of medium- and small-sized cities
3. To stimulate growth in rural areas and reduce development disparities between them and urban areas by developing sectoral policies, particularly agricultural and rural development policies
4. To reduce the great disparity in public services and infrastructure available among provinces and within each province; further, to reduce the disparity in satisfying basic needs in the aforementioned areas and adopt that approach as a basic requirement for comprehensive spatial regional development
5. To work on reducing unplanned urban sprawl onto farmland, particularly reclaimed farmland or land falling within the scope of future reclamation programs
6. To adopt basic plans for land use in rural settlements with the aim of rationally using land and preserving agricultural land
7. To effectively address the problem of desertification and lack of vegetation in desert areas and rural Iraq
8. To exploit the potential of exclusive areas like mountains, marshes, bodies of water, the countryside, and the western desert by intensifying their use in accordance with their natural uniqueness and comparative advantages
9. To strengthen the transport network in Iraq so as to establish means of linking cities, particularly small and medium-sized cities
10. To develop and build capabilities in the planning area; prepare long-term strategies for spatial development based on knowledge partnerships and coordination; reduce poverty and slums on the outskirts of cities; and generally improve the economies and quality of life in rural areas.

10.1.9 Means of Achieving the Objectives

1. Adopting an investment policy that secures the distribution of:
 - Providing services and infrastructure in proportion with population size in provinces and settlements, with their level of deprivation in previous periods, and with the specifics of cities and provinces
 - Encouraging productive economic activities,

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particularly agricultural and industrial, and promotion of tourism in accordance with the capabilities and comparative advantages of Kurdistan and unaffiliated provinces, with ensured economic efficiency in that respect

- Supporting major infrastructure facilities like airports, ports, metro tunnels, highways, railway networks, dams, reservoirs, research centers, and specialized hospitals consistent with hierarchical structures that provide an effective system in Iraq; distribution of active strategic and vital projects, and completion of Iraq's interconnection with the surrounding region.
 - Investing in the principle of site-neutral activities so as to develop areas facing problems or those suffering from poor development potential.
2. Creating at least one integrated and environmentally friendly industrial area, planned using the latest principles and criteria, outside a city in each province, after ensuring provision of all infrastructures so as to be ready to accommodate local private sector and foreign investors
 3. Supporting and encouraging domestic and foreign private investments in underdeveloped regions, through tax and customs incentives, credit facilities, and acquisition of land for investment purposes under lenient terms
 4. Implementing integrated rural development plans aimed at nominating main villages according to the basic scientific foundations of population size to ensure the availability of service programs and infrastructure to the rural population
 5. Reinforcing coordination between economic and industrial development policies, particularly policies on urbanization and the distribution of settlements
 6. Preparing integrated and structured provincial plans to organize regional land use and provide a suitable investment environment at the local and regional level; and ensuring promotion of development in development centers and attractions while achieving economic integration among regions and unaffiliated provinces
 7. Encouraging research and development in all provinces by coordinating among universities and business centers to create new methods and products on an experimental basis
 8. Creating development poles which serve more than one province or city in order to raise productivity and create the potential for competition.
 9. Strengthening local planning institutions in the area of planning, monitoring, and evaluation of the national plans' implementation of five-year goals and projects
 10. Strengthening the regional information database and upgrading analytical capabilities for local planning personnel in a manner that contributes to future developments in the methods and strategies associated with preparing development plans

10.2 Sustainable Environment

10.2.1 The View of the Environment in Iraq

10.2.1.1 Before 2003

Over the past three decades, Iraq has suffered clear environmental neglect and faced many problems and challenges. Their causes vary: irresponsible decisions taken with no consideration of future consequences and complications; developmental policies with severe environmental consequences adopted based on the idea that environmental deterioration is just the price to pay for development. These environmental issues were exacerbated by the population increase, the rise in the number of poor people, who place pressure on natural resources, the lack of reliance on modern methods to address pollution produced by wars, and the poor relationship between the economy, the environment, and people.

The results include clear deficiency in ecosystems and changes in the natural features of Iraq's environment—among them, the recession of bodies of water, desertification, losing green spaces, a growing salinity problem, and water scarcity. These problems were exacerbated by a decline in the quality of services and infrastructure, leading to sewage accumulation, waste accumulation, and the implementation of energy production projects and manufacturing industries that do not comply with Iraqi or international environmental standards.

These essentially nullified all of the environmental laws and regulations adopted over the past three decades, as well as the targets set by official bodies to protect the environment. In 1974, the Higher Association for the Human Environment was formed, following Iraq's participation in the 1972 Stockholm Conference on the Human Environment. This entity did its job until the Higher Council for the Human Environment was formed in 1975. This entity was renamed the Council for Environmental Protection. The Directorate General on Human Environment was established in the same year. In 1986, the Higher Council for Environmental Protection and Improvement was established under Act 76. The Law aimed to protect the environment, prevent pollution, develop public policies, prepare action plans, and put controls on environmental contaminants. It expressed opinions in Iraq's international relations on protecting and improving the environment, as established under Article 12 of the law establishing the Council for Environmental Protection and Improvement (which replaced the Directorate General for Human Environment). It also aimed to examine a range of disciplines, including those related to environmental pollution in Iraq, propose solutions for them, examine all environmental pollutants, and follow up on environmental safety and improvement. In 1997, the law cited above was repealed and replaced by Law 3 of 1997 on Protecting and Improving the Environment. It aimed to protect the environment, including territorial waters, from pollution, and reduce its effects on health, the environment, and natural resources. Environmental policies and plans were drafted in an attempt to ensure achievement of environmental sustainability to secure the rights of future generations.

Article 18 of the law stressed the need for a technical and economic feasibility study to be included in any project having an environmental impact. It also set forth penalties for those

who violate the law's provisions. Despite the early attention paid to the environment, there was a lack of attention given to the environmental dimension in economic and developmental decisions in Iraq. This was particularly true during the wars and under economic sanctions that weakened the role of such legislation in protecting and improving the environment. Consequently, Iraq lacked environmental security, and thus lacked proper infrastructure, specialized environmental staff, environmental planning and awareness, and environmentally friendly technology.

10.2.1.2 After 2003

After 2003, the view on environmental action changed from a sector-specific approach to a more comprehensive one. This is evidenced by a set of procedures, steps, and constitutional provisions, such as Article 114, paragraph 3 of the Iraqi Constitution of 2005 which mentioned "Drafting an environmental policy to ensure environmental protection from pollution and preserve its cleanliness in cooperation with regions and unaffiliated provinces." In addition, the Ministry of Environment was established—a serious step toward changing the prevalent traditional view based on separating the environmental dimension from economic and social dimensions in development interactions. Parliament ratified a law on protecting and improving the environment in 2009. It is considered one of the most effective laws in addressing environmental problems and developing strict controls to deal with them. A special provision in the law provided for establishing environmental police to hold offenders accountable. A set of goals was also adopted, including building a special database on the Iraqi environment that details pollution levels, causes, water and air protection, biodiversity, noise reduction, and raising environmental control levels.

The NDP 2010-2014 emphasizes the importance and necessity of integrating environmental, social, and economic dimensions in order to reach sustainable development in Iraq and of renouncing traditional planning methods focused only on economic considerations. The plan adopts a modern planning style, giving the environment the attention it deserved after three decades of clear neglect. In addition, the goals and projects in the plan are based on urban, economic, and social criteria. This makes environmental considerations an integral part of the decision-making process, to ensure harmony between strategic plan objectives and environmental goals.

10.2.2 Environmental Status in Iraq

10.2.2.1 Air Pollution

Sources of air pollution vary in Iraq. The most important are:

1. Modes of transport and their increased numbers, low quality, and age
2. Industrial activity and cessation of emission treatment systems in most industries
3. Expanded manufacturing of bricks and cement, which relies on traditional means of production that do not use dust filters and consume large quantities of fuel

4. Archaic methods of waste disposal, such as burning household waste and dumping toxic hospital waste
5. Electric home supply through use of small generators void of efficiency standards.

The various sources have polluted the air in most Iraqi cities and suburbs, with a tendency toward increasing pollution levels as city size and polluting activities increase. These problems are exacerbated by poor environmental legislative deterrents for offenders and weak monitoring and surveillance systems. The leading types of air pollution are lead, floating particles, concentration of carbon dioxide, sulfur, and falling dust.

The effects of industrial air pollution were reduced after 2003 as a result of halting most industrial projects, particularly private sector projects. In contrast however, pollution caused by transport in cities grew worse after 2003 due because more vehicles were running on low-quality imported fuel. Data included in reports issued by the Central Bureau of Statistics and environmental reports issued by the Ministry of the Environment confirm that most air pollution sources crossed national borders. For example, lead concentration in Baghdad peaked at 12.1 micrograms/m³ as compared to the national standard of 1.5 micrograms/m³ in 2007. Particle concentration also exceeded the national average of 350 micrograms/m³ in Baghdad during all months in 2006. Some pollution concentrations are not measured because of lack of measuring instruments or, to the extent they exist, equipment malfunction. There is also a lack of some analysis equipment. These factors are likely to hinder environmental work in Iraq.

10.2.2.2 Water Pollution

Industrial and human activities contribute to polluting water—specifically rivers, lakes, and coastal waters—by dumping untreated contaminated water into them, seriously affecting quality. The main types of water pollutants in Iraq include: liquid industrial pollutants, organic pollutants, effluents from hospitals, sewage water, car washes, lubricants, oil pollutants, and drainage water.

Iraq suffered environmentally as a result of industrial development during the 1970s. Many industries lacked environmental requirements and standards at the time, whether from a location standpoint or in terms of liquid sewage treatment. Liquid sewage is characterized by high concentrations of pollutants, and is directly dumped into water and sewage networks. Weak environmental oversight of industrial activities has made matters worse, as has noncompliance with environmental requirements. There are 221 hospitals in Iraq, for example, 159 of which are public hospitals. Per the Ministry of Environment's data from the year 2007, 15 of the public hospitals dumped their waste in rivers, 34 dumped their waste in sewers, and 85 lack processing units altogether. As for the 72 private hospitals in Iraq, none of them have processing units, with the exception of one hospital in the Kirkuk province.

Sewage is characterized by high organic material concentrations which are collected by sewage systems and pumped to private stations for treatment within the acceptable standards before disposal in the water supply. Current stations are old, poorly

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maintained, and do not treat waste efficiently. Moreover, there is a lack of chemical treatment unit plants, as well as a lack of absorptive capacity in those stations as they receive more water than their capacity allows. When the Ministry of Environment followed 30 wastewater treatment plants, it found that 6 stations disposed of their waters in rivers, 5 disposed of it in dumpsters, and 11 were not functional. The remaining plants were functional. The situation is no different in garages and car washes. In Iraq, there are 443 garages, 167 of which use paint spraying systems; of those, 43 dispose of their liquid waste in sewers, 68 in septic ponds, 33 in adjacent land, and 15 in dumpsters.

10.2.2.3 Soil Pollution

The Iraqi environment is facing deterioration in the quality of its soil elements and degradation of their physical, chemical, and biological properties. This has caused productive land to become barren (desertification) or to become less productive. The causes are various: human activities such as clearing of trees for agricultural, fueling, or construction purposes; high soil salinity; an unscientific approach to the use of fertilizers and agricultural pesticides; over-irrigation; the removal of vegetation covers; unsustainable management of solid waste. All of these in have led to desertification, salinization, deforestation, lower crop yields, and threats to income among communities that rely on the soil.

10.2.2.4 Desertification

Arable land is deteriorating due to poor management, inadequate techniques, erroneous practices, and harsh natural conditions, including the high saline content of Iraqi soil, especially of alkaline saline (50 percent of arable land) and the four percent of arable land exhibiting high salinity soil, versus 26 percent of the non-saline soil. This problem were exacerbated after 1990 in the form of an increase of 3.1 percent in the amount of land affected by salinity, and the significant deterioration in vegetation cover, in addition to 0.6 percent increase in areas covered by shifting sand dunes. Some sources suggest that the reality is far worse than what the official figures show, but lack of accurate data and monitoring mechanisms make the true assessment of desertification in Iraq impossible at this time.

10.2.2.5 Solid Waste and Garbage

There are no specific data on solid waste management. However, the reality can be indicated by the following:

1. The lack of data on the quantities and characteristics of hazardous waste and inability to identify its sources; the fact that some provinces dispose of hazardous waste by dumping it with municipal waste
2. Waste disposed of in some economic activities by burning in illegal incinerators to reduce disposal costs—some dangerous and capable of causing serious environmental pollution by producing dioxins and furan toxic compounds that are harmful to public health
3. Lack of technical facilities dedicated to transport, storage, processing, burying, and burning hazardous waste in provinces. Indeed, according to reports from provinces,

hazardous waste has accumulated in Iraq in places not intended for storage or at sites where it remains for many years, waiting to find successful solutions for disposal. This creates significant health and environmental risks that lead to polluted air, soil, and water.

4. Poor management of solid waste due to lack of efficient staffing
5. Hospital incinerators located near residential communities, adversely affecting the environment and the population in the vicinity with toxic fume emissions (dioxin and furans which are cancerous) and other emissions (nitrogen oxide, sulfur, and carbon) that cause irritation and diseases of the eye and respiratory system
6. Dumping sites in Baghdad and provinces that have no environmental requirements, leaving as options arbitrarily throwing waste in illegal dumping sites and, in some cases, leaving waste outside legal dump sites because there is no regulatory system controlling transport or disposal of waste
7. Lack of specialized vehicles used in waste management as compared to those required by international standards, and the limited number of employees and their low skill level
8. Lack of supervision and means of control, along with the absence of records detailing the quantities of waste collected and transferred to temporary sites
9. The majority of butcher shops are without processing units for solid waste (furnaces) or liquid waste (treatment basins).

10.2.3 Challenges

The Iraqi environment has suffered and continues to experience numerous problems because of increasing population growth, unsustainable development growth in various sectors, and the lack of modern technology for treating pollutants that result from the different developing sectors. All of these factors have a negative impact on the environment. In addition, the consecutive Iraqi wars have exacerbated pollution problems, particularly in the air, water, and soil. These various factors, coupled with people's abuse of their natural surroundings, have translated into an unfriendly relationship with the environment.

Events in 2003 and beyond are still casting a shadow on the environment. Despite significant improvement in the management of work, projects, and services in multiple areas, many problems with negative environmental impacts persist and are causing damage and serious repercussions. The most pressing challenges are as follows.

1. The pollution of all environmental elements, especially in major cities, and the absence of comprehensive monitoring, control, and follow-up systems that can precisely determine the reality of environmental damage, including radioactive contamination
2. Continuing shortages in electric power supply from the national grid and the increasing use of small electric generators to meet domestic, commercial, and industrial

- needs, resulting in damage to the surrounding environment by burning large quantities of fuel, gasoline, gas oil, and sometimes black oil in inefficient, highly polluting internal combustion engines
3. The insufficiency of current environmental laws, regulations, and specifications, and the need to update them to match international advancements in this area, especially with respect to the issue of climate change
 4. The low level of human and material resources and the shortage of technical expertise at environmental institutions, particularly at the local level
 5. Lack of integration of the environmental dimension in development activities has created a dichotomy between environmental, economic, and social dimensions, distancing them from the objectives and mechanisms for sustainable development
 6. Iraq's weak and limited participation in international environmental activities
 7. The weak capabilities and lack of interest in environmental impact assessment studies, particularly with respect to strategic projects, and the lack of experience in this area
 8. Lack of attention to technological and environmentally friendly sources of clean energy
 9. Low environmental awareness among citizens in general, and investors in particular, who neglect environmental standards for private economic gains
 10. The use of heavy products such as black oil to run power plants and many other industrial activities, such as brick manufacturing, as well as use of stone ovens that use electric generators within residential and commercial neighborhoods
 11. The clear decline in green spaces due to neglect, lack of irrigation, and removal of vast numbers of trees for security reasons and for use as alternative fuels in other instances, which has led to an increase in areas with exposed soil, the main source of rising dust.

10.2.4 Vision

Protecting the environment and tackling sources of environmental pollution by planning a sound environmental management approach aimed at transforming the approach to dealing with natural resources to a more sustainable one that preserves biological diversity, raises environmental awareness, and promotes the principle of environmental citizenship to achieve the MDGs.

First Goal: Promoting Sustainable Development

Means of achieving the objective:

1. Adopting defined and environmentally sustainable investment projects that various ministries, local communities, federal and regional governments participate in selecting.
2. Instituting a special system for environmental impact assessment in Iraq to ensure that investment projects included in the development plan meet environmental requirements and specifications.
3. Reinforcing international cooperation through signing environmental agreements with neighboring countries to protect the environment, as well as joining international environmental conventions.

Second Goal: Monitoring the Environmental Status

Means of achieving the objective:

1. Developing an integrated system for environmental monitoring, evaluation, and follow-up.
2. Monitoring the types and sources of pollution and measuring them against national and international standards.
3. Importing and developing devices for measuring pollutants for follow-up and analysis purposes.
4. Promulgating a set of environmental legislations that include laws, regulations, instructions and environmental standards aimed at protecting and improving the environment and preventing pollution so as to match global developments in this area.
5. Using environment-friendly technology in addressing sources that threaten the environment, especially solid waste.

Spatial Development and Sustainable Environment

10.2.5 Objectives and Means of Achieving the Objectives

The current development plan seeks to put this strategic vision for the environmental sector in Iraq into effect by adopting a set of objectives and means of achieving them.

Objective: Promoting Sustainable Development

Means of Achieving the Objectives

1. Adopting defined and environmentally sustainable investment projects that various ministries, local communities, federal and regional governments participate in selecting
2. Instituting a special system for environmental impact assessment in Iraq to ensure that investment projects included in the development plan meet environmental requirements and specifications
3. Reinforcing international cooperation through signing environmental agreements with neighboring countries to protect the environment, as well as joining international environmental conventions.

Objective: Monitoring the Environmental Status

Means of Achieving the Objective

1. Developing an integrated system for environmental monitoring, evaluation and follow-up
2. Monitoring the types and sources of pollution and measuring them against national and international standards
3. Importing and developing devices for measuring pollutants for follow-up and analysis purposes
4. Promulgating a set of environmental legislations that include laws, regulations, instructions and environmental standards aimed at protecting and improving the environment and preventing pollution so as to match global developments in this area
5. Using environment-friendly technology in addressing sources that threaten the environment, especially solid waste.

Objective: Protecting Air Quality

Means of Achieving the Objectives

1. Reducing emissions from contaminated sources
2. Preventing indiscriminate burning
3. Using environmentally friendly technologies in existing and future activities
4. Controlling pollution emissions from major industrial activities and power plants
5. Implementing a program to use renewable energy, particularly generating solar power.

Objective: Protecting Water from Pollution

Means of Achieving the Objectives

1. Working to develop a vision for the rational use of water resources and protection of its quality
2. Expanding coverage of water networks and improving the quality of drinking water
3. Using modern technologies in sewage networks
4. Adopting appropriate environmental planning for lakes and beaches
5. Criminalizing water pollution.

Objective: Ending Desertification

Means of Achieving the Objectives

1. Expanding agricultural areas and preserving natural resources
2. Reducing urban expansion in cities and working to develop rural areas
3. Upgrading slums to become environmentally friendly settlements
4. Addressing the issue of soil salinity and preventing it from expanding
5. Building an information database for plant and animal species, establishing natural reserves and protecting endangered species.

Objective: Environmental Awareness

Means of Achieving the Objectives

1. Introducing "environment" as a subject in secondary and tertiary education, and strengthening the principle of environmental citizenship
2. Strengthening the role of civil society organizations in dealing with environmental problems and promoting environmental awareness among members of the community
3. Providing space for environmental advertising in audio and audio visual programming
4. Educational training programs for state employees on the importance of environmental sustainability as a human right.

Objective: Reinforcing Regional and International Cooperation

Means of Achieving the Objectives

1. Ensuring Iraq's participation in environmental conventions and protocols, both regional and international
2. Signing bilateral cooperation agreements between Iraq and different countries, as well as regional and international organizations

Objective: Developing and Building Environmental Capabilities

Means of Achieving the Objectives

1. Supporting environmental specializations in scientific departments at universities and institutes, while seeking to develop curricula in line with global developments
2. Setting up rehabilitation, development, and training programs for environmental personnel inside and outside Iraq, especially province employees.

Chapter Eleven

Private Sector



11.1 Status of the Private Sector before 2003

Iraq has not experienced stability in the distribution of economic activity between the private and public sectors since the middle of the last century. Since its establishment and until 1950, the private sector in Iraq had a privileged position among the state's priorities, benefiting from extensive state support and financial aid. Further, the private sector continued to contribute in its economic role under the umbrella of state care.

The decline in the state's financial resources, as compared to those of the private sector elite— major landowners, business owners, and property-owning investors—best explains why the private sector's role was so important up until the mid-20th century. However, this role started to decline after 1950 in favor of the public sector, following signature of an agreement between the government and the foreign oil companies working in Iraq at the time. Pursuant to those agreements, profits would be shared equally between them. The private sector's role declined further in 1964, when the state decided to nationalize private activity (banks). The economic arena was increasingly the territory of the public sector as the state expanded its intervention therein, fueled by growing oil revenues that helped the state adopt large-scale development programs. Accordingly, the state's role changed from the sponsor of private sector activities to the direct organizer of some of the country's economic activities, particularly infrastructure activities in which investment became a priority, in order to support the private sector.

This fact made most industrialists and businessmen in Iraq turn to imports instead of investing in industry and managing large projects. This was driven by the fact that those activities were low-risk, had a short trade cycle, and saw continuous demand.

In the early 1970s, particularly after the nationalization of oil in 1972, the public sector dominated all economic activities, and almost completely neutralized the private sector's role. Indeed, private sector activities, particularly commercial activities, declined when the Ministry of Trade assumed responsibility for the food and grain business and monopolized importation of those items. Accordingly, the volume of private sector commercial activity declined significantly until the first half of the 1980s, its share declining to 5.4 percent in fixed capital formation, 7.2 percent in agricultural activities, 2.9 percent in conversion industry activities, and no more than 0.4 percent in social development services. Home ownership remained the highest proportion of the private sector's gross capital formation at 79 percent (using fixed prices).

In the second half of the 1980s, the years during when Iraq was embroiled in the First Gulf war, there was a shift toward public policy welcoming the private sector, the result of the conditions created by the war at that time. The government announced an "open door policy as regards the private sector" and acted upon it by declaring its withdrawal from direct intervention in agriculture. The reason behind this move was the country's political and economic confusion; the government's failure to accomplish food security; and public investment's failure to achieve its goals in the agriculture sector.

Table 67 Public and Private Sector Shares in Generation of Gross Domestic Product at Current Prices for the Years 1974 – 2002

Year	Public sector (percent)	Private sector (percent)
1974	67.0	33.0
1979	80.0	20.0
1980	83.0	17.0
1987	69.0	31.0
1990	54.0	46.0
1995	7.0	93.0
2002	75.0	25.0

The government culminated its stated policy by adopting a series of measures to encourage the private sector and return to the economic arena. An economic liberalization and privatization program was adopted in 1987—the Administrative and Economic Revolution. Its most prominent features included selling government farms and public sector factories; liberalizing the labor market from restrictive laws and regulations; establishing a stock market; providing mechanisms to compete in banking activities; encouraging Arab investments; providing incentives to private sector institutions; and instituting laws that supported and expanded the private sector's role in the economic arena. At the same time, the government reduced its support to public sector institutions, and shelved its policy of setting price ceilings on a large number of goods. These measures enhanced the private industrial sector's prestige and expanded its role in economic activities. This was clearly reflected in the share of total added value generated by the manufacturing sector, which exceeded 50 percent.

The door to private sector participation in other economic activities was also opened. This was particularly true for commercial activities following implementation of the policy for importation without external conversion. The private sector dove into commercial activities and essentially crowded the public sector out of this field after 1991, following imposition of international economic sanctions on Iraq. Indeed, commercial projects overtook the investment projects aimed at meeting the need for commodities that the state was prohibited from importing under the economic boycott, particularly commodities listed on provision cards.

The shift in roles between the public and private sectors was neither a planned program adopted by the government, nor a goal in an economic policy the government sought to translate into reality. Instead, it was forced on the state to mitigate the effects of the First and Second Gulf wars. It was further promoted by the legal framework that allowed the private sector to trade with the outside world during the economic sanctions period.

The distribution of roles between the public and private sectors did not resolve Iraq's economic crisis. Rather, it had negative effects and exacerbated economic problems. This was evidenced by the rapid increase in consumer prices and the high rates of inflation. These were compounded by the failures caused by the new import rules that were supposed to

have offered advantages to importers— failures that included exportation of the Iraqi currency to neighboring countries and its sale at low rates; the increase in inflation rates; orientation of investments towards the foreign trade sector; and speculation. These failures also contributed to the government's inability to develop the appropriate legislative, financial, and economic frameworks for privatization. The results worsened the crisis of the Iraqi economy. To deal with them, the government had to retreat from its policy through a set of procedures that included lowering prices; increasing subsidies to the agricultural sector; increasing the salaries of state officials; passing a law freezing the prices of some consumer goods; and establishing a low cap on the profits of public sector and mixed companies.

From this reality, we can deduce the most important features of the private sector for the period before 2003, namely that it was dominated by individual work, and small facilities in terms of organization, investment, or production. Investments tended to be geared toward activities with guaranteed profit by searching for projects in which the capital repayment period was short. There was also dependency on government support, making the private sector weak in the face of competition from imported goods.

In light of the above, we conclude that during this period, the private did not have a realistic chance to play a prominent role in advancing economic growth rates. The reason is that, for 40 years, the public sector was subjected to violent shocks, policy fluctuations, and discouraging laws that promoted ownership fragmentation, and kept the private sector away from some economic activities. In addition, the private sector became more like a contractor for the public sector. Thus, its activities became linked to those of the public sector, and the latter kept the private sector's role marginal in the country's overall economic performance.

This was the situation of the Iraqi private sector before 2003, despite the fact that most development plans included the need to encourage the private sector. In reality, however, that was not done or made part of approved plans and programs. This, in turn, caused the private sector's role to swing between neutral and effective. Further, its total and sector contributions fluctuated and were affected by the country's economic and political circumstances during that period.

11.2 Status of the Private Sector after 2003

The Iraqi private sector faced new setbacks during the transition period after 2003. These were caused by the stoppage of private industrial projects because of destruction, high production costs, or lack of local demand for the project's products, as local markets were flooded with imported goods. The setbacks were exacerbated by the lack of security and the targeting of capitalists' families, which resulted in regulators and capitalists fleeing to neighboring countries in search of stability, safety, and a home for their funds. Indeed, Iraqi investments in neighboring countries grew significantly. Further, Iraqi investors were among the top non-national investors in those countries. This explains the very limited role of the private sector in the country's investment activities. The International Monetary Fund

estimated total private investments (Iraqi and foreign) in the Iraqi economy at US\$1,080 billion or 4.2 percent of gross domestic product in 2004. Its absolute value increased in 2005 to reach \$1,161 billion or 3.5 percent of gross domestic product.

Absence of an appropriate investment climate, political instability, the Iraqi investor's weak financial position, and the limited amounts of money available to the banking system may be some of the reasons behind the private sector's limited role and significance in financing development in Iraq.

In order for this sector to take an active role in the development process and reconstruction, the state began defining the foundations of its development strategy for the three years 2007–2010. It made revitalization of the private sector one of the main pillars of its three-pillar strategy. It did so by maximizing its revenues and savings, thereby making it an active sector in economic activity, a generator of employment opportunities, an enhancer of sustainable growth, and a participant in financing development. This approach was in execution of Article 25 of the Iraqi Constitution of 2005, which requires the state to reform the Iraqi economy in accordance with economic principles and in a manner that ensures investment of all of its resources, diversifies its sources, and encourages and develops the private sector.

The strategy adopted a set of means to achieve these goals. They included economic reform programs, privatization and restructuring of state-owned enterprises and banks, encouragement to merge existing investment projects, and continuation of the process of becoming a World Trade Organization member. They also included the specification of methods for investment partnerships between the private and public sectors, particularly the BOT (build, operate, transfer ownership), BOO (build, own, operate), and BOOT (build, own, operate, transfer) methods.

Despite the visions and goals of the strategy, the reality indicates that none of these goals was accomplished during the three years. That may be because the security and political situation prevented growth, development and investment; or the lack of a defined role for the private sector because of the blurry economic policy adopted; the fluctuations in development orientations; or the lack of specification as to the approach to managing the Iraqi economy. The 2010–2014 development plan was adopted to remove this uncertainty and shed light on the features of the economic policies to be adopted by Iraq for the next five years. The plan also defines the private sector's role in development and implementation of plan objectives, speaking specifically to the private sector's role in helping fund projects in the estimated amount of 46.2 percent over the plan years. This participation would strengthen the private sector's sustainable interactive partnership and competitive role. It would also ensure that the Iraqi economy transitions to a market economy at the lowest economic and social cost.

Redistributing roles in economic activities in favor of the private sector over the life of the plan requires a set of procedures, including working to streamline and simplify government procedures at the business level in Iraq; reforming the commercial and regulatory framework; and developing a transparent and simplified institutional and legal framework

to encourage the private sector business. There is also the need to lay the foundations for rehabilitation of state-owned facilities in a manner that is coherent, clear, transparent, and comprehensive, and that encourages privatization and transfer to the private sector. Government banks must also be restructured to promote integration and privatization, as well as expansion of lending avenues.

11.3 Challenges Facing Private Sector Development

1. Absence of a suitable investment environment that encourages mobilization of the local and foreign private sector's potential and capabilities in support the national economy
2. Lack of clarity on the private sector's role in effective development, along with absence of a clearly defined vision for this role once the economy is restructured and its production base is built
3. Overly complex government procedures on the business front that have pushed businessmen and investors out of the Iraqi arena
4. Shortage of laws and regulations that activate the private sector's role in economic activities, limiting the possibility of maximizing this role and eroding its competitiveness
5. Shortage of the specialized banking system's credit capabilities has limited the possibilities for lending and borrowing by the private sector to finance its investment objectives, and limited the effectiveness of specialized banks
6. The Iraqi stock market lags behind and is far removed from developed financial rules and principles adopted internationally, which has undermined the Iraqi investor's financial strength
7. Increases in interest rates are considered a monetary constraint on the credit offered to the private sector by government banks for investment purposes
8. Reliance on state protection and support systems as opposed to competition has caused the Iraqi private sector to disregard efficiency and competitiveness standards in its investment decision-making process
9. Economic reform programs lack the necessary economic, financial, legal, and administrative measures necessary to restructure public institutions. This has limited the possibility of commencing privatization operations or merger of public or private institutions. If they do commence, these operations will be far removed from proper economic, accounting, financial, and legal standards because these requirements are absent
10. Inadequate infrastructure and basic services for the private sector have led to the deterioration of the private sector's competitive position locally, regionally, and internationally
11. The private sector's inadequate knowledge, information, and technology base; its inability to absorb or keep up with rapid changes in the global market—factors essential to competition and access to foreign markets.

11.4 Policies

1. An economic policy that has a clear vision and goals, is founded on building the economy by defining, describing, and distributing roles between the private and public sector, and does so in a manner that ensures gradual transition to a market economy at the lowest cost. The implications of this policy can be seen in the current plan:
2. A tax policy that enhances the private sector's role in economic activities and supports its economic and financial roles through tax incentives, rates, and the scope of deductions
3. An investment policy that makes infrastructure and basic services a strategic goal (electricity, water, fuel), supports the effectiveness of private investment, and enhances access to foreign investments in the economic arena. The current plan clearly embodies this policy.
4. A national employment policy whose objectives are defined based on a vision of the private sector as a generator of employment opportunities and a supporter of sustainable growth
5. A fiscal policy supportive of the principle of competition for private sector activities (the private industry sector), particularly as regards social security systems, as well as labor rights and wages in the private sector
6. An enhanced production policy aimed at diversifying the production infrastructure through the private sector
7. An economically efficient credit policy that seeks to grant concessionary credit to the private sector at attractive interest rates to support productivity goals (agriculture, industry, and tourism)
8. Development of the Iraqi stock market so it embodies a proper and technologically advanced foundation based on international standards for financial service provision; enhances the prestige of Iraqi investors; and secures their international financial dealings in a modern dynamic manner.

11.5 Vision

An interactive, participatory, and competitive private sector that supports sustainable growth.

11.6 Objectives and Means of Achieving Them

Objective: Enhancing the Private Sector's Developmental Role

Means of Achieving the Objective

1. Increasing its percentage contribution in gross domestic product generation and capital formation by mobilizing its investments in agriculture, industry, and tourism
2. Increasing its percentage contribution in job creation by expanding the scope of the organized private sector
3. As private sector savings are a key source for funding plan projects, attempt to keep native capital in Iraq and bring back that which is currently overseas
4. Making the private sector a source for diversification of commodity supply using the method of private integrated industrial complexes

Objective: Partnership between the Private and Public Sectors

Means of Achieving the Objective

1. Determining the forms of partnership and choosing the most appropriate, possibly including collaborative partnerships and contractual partnerships (BOOT, BOO, BOT)
2. Legislating and activating a privatization law
3. Establishing support for technological projects and expanding their adoption.

Objective: Promoting an Environment that Encourages Investment

Means of Achieving the Objective

1. Adopting flexible policies that respond to local and international economic changes
2. Expanding establishment of economically feasible shareholding companies
3. Completing the law and regulation system that supports the private sector and the market economy
4. Developing banking systems, capital markets, and lending plans
5. Updating economic regulations that support a market economy while aiming to achieve the plan's social objectives
6. Relying on transparency as the basic premise for building the investment relationship between the private sector and the state
7. Developing the government institutions' capabilities to contribute to private sector development.

Objective: Privatizing of Public Sector Projects

Means of Achieving the Objective

1. Developing the Iraqi stock market from an administrative, technical, and technological perspective
2. Instituting a flexible and transparent privatization law that protects state and worker rights from a financial, economic, and social perspective
3. Offering stocks for public subscription as well as adopting the Golden Arrow method for the state in the early stages
4. Providing workers with a portion of the shares of the companies sold.

Private Sector

Objective: Developing the Banking Systems and Supporting Financial Institutions

Means of Achieving the Objective

1. Liberating interest rates and exchange rates and reducing restrictions on the flow of capital
2. Developing financial risk management technologies and systems to mitigate the impacts of said financial risk
3. Revitalizing private banks to promote the effectiveness of the private sector's financial transactions
4. Strengthening banking systems' technical and guidance roles to provide support and financial advice to private sector investors

Objective: Developing the Private Sector's Competitive and Export Capabilities

Means of Achieving the Objective

1. Examining potential export markets and creating a database thereof
2. Completing the export infrastructure consisting of cold storage, cargo shipping, and port services
3. Focusing on quality, packaging, and marketing, as well as encouraging the establishment of private marketing companies
4. Orchestrating extensive marketing campaigns in regional and international markets through exhibits, business meetings, as well as in Iraqi embassies and business attachés abroad
5. Developing business partnerships with the various economic blocs to enhance trade and access to those markets

Objective: Strengthening the Private Sector's Role in Regional Development

Means of Achieving the Objective

1. Distributing roles between the state and province on the one hand, and the private sector on the other hand
2. Promoting decentralization in the management of development facilities, and involving the private sector in local and regional plan and program preparation
3. Activating the private sector's role in developing slow-growing provinces to generate more effective growth using incentives and inducements
4. Encouraging the private sector to participate in province development plans, particularly those stated in the plan, as well as good investment opportunities such as those indicated in the plan.

Chapter Twelve

Good Governance



Good governance and proper regulation are basic prerequisites for progress in all fields, including economic progress, social welfare, and the achievement of justice in the population. Making sound decisions is one of the important pillars in the development process. The governance framework varies based on time, place, and subject; it is a flexible concept. However, it must be formulated around eight specific elements: the rule of law, participation, transparency, responsiveness, collective opinion, justice, inclusiveness, effectiveness, efficiency, and accountability.

Based on the above, good governance expresses a broad concept that encompasses the mechanisms, processes, relationships, and institutions through which citizens express their interests, exercise their rights and duties, and resolve their differences. In light of the broad concept encompassed in this term, the national development plan's objectives cannot be achieved without developing the country's capabilities in all its aspects, levels, and geographic locations. The legitimacy of the government, its powers, and capabilities is embodied in its work with the people and for the people. That is the best approach to achieving plan goals. Accordingly, developing Iraq's capabilities and enabling it to perform its core functions and provide services that meet society's needs requires modernization of the public sector and guiding it towards decentralization, while at the same time, reducing corruption.

12.1 Modernizing the Public Sector

Diversifying the national economy and supporting the private sector are considered crucial to growth and building future models. It cannot be achieved without reforming and modernizing the public sector. Current government structures are characterized by excessive centralization; functional overlaps; weak inter-ministry coordination; lack of developed and efficient data systems and analyses; wide expansion in civil service; lack of adequate skills; weak human capital; inadequate financial management and monitoring capabilities; and the absence of proper mechanisms ensuring citizen participation in the decision-making process. Therefore, the reform process requires modernization of the functional structure of the country's institutions, organization of their relationships, and training of its staff to ensure efficient and professional participation by the entire population.

Public sector reform requires building more capacity to create an environment conducive to successful management and responsiveness to crises. This can be achieved by empowering the private sector rather than leaving its potential untapped in the shadows of public sector dominance. It is worth noting that development of the civil service system is crucial if the country decides to improve its capabilities; implement a system of accountability and responsiveness to variables; and maintain its commitment to the Millennium Development Goals. As citizens expect the state to provide opportunities and services, reform must be a top priority. That is the key to ensuring change at the various management levels.

12.2 Orientation towards Decentralization and Local Government

This trend is headed toward more decentralization, on both the political and administrative fronts. This constitutes a profound shift in the government decision-making process. Decentralization can foster greater accountability and responsiveness in service provision and can strengthen citizens' ability to participate in the decision-making process and claim their rights. There is a marked weakness in institutional structures and human capabilities at the local level with respect to planning and implementation. Thus, it is necessary to empower and strengthen them so they can achieve the objective of promoting decentralized management and planning. Giving local governments a greater role in managing and planning does not mean that their thinking should be on the local level (province or province). Rather, they should integrate their plans and strategies with those of nearby provinces and the country as a whole.

12.3 Combating Corruption

Financial and administrative corruption is among the most important challenges to good governance in Iraq. Anticorruption institutions and newly formed agencies (Integrity Commission, Office of Financial Control, and general inspectors in the ministries) represent the active and critical organizations combating corruption. They can also contribute to making public administration more effective by limiting corrupt activities, improving resource management, and pursuing perpetrators. It is crucial to build up the human capital in these organizations; have strong community-based agreements to combat corruption at the individual and societal levels; and promote integrity, transparency, and accountability. All of these factors enhance institutions' ability to do business with confidence and continuity.

12.4 The Plan's Priorities for Improving the State's Capabilities

In light of the above, the priorities of the development plan for improving the country's capabilities at the national and local levels require adoption of the following elements:

12.4.1 Rule of Law

Law is a common denominator that affects society's daily life with respect to preparing and implementing the plan. Everyone must abide by it. In order for ministries, independent departments, and provinces to be committed to implementing the plan, within the time and costs specified for the projects, legislative bodies should promulgate laws pertaining to that implementation. In addition, clear and specific instructions and contexts must be provided. This requires:

1. Review of the financial administrative law; as well as reevaluation of the tasks contained therein and distributed by the Ministries of Finance and Planning and the

beneficiary ministries. This will increase implementation efficiency and is consistent with the ministries' specialties.

2. Identification and separation of the authorities and procedures required of provinces and the country's ministries. This will allow them to be accurate and clear with respect to determining the responsibility for implementation. This will also remove any duplication and conflict that may occur.
3. Distribution of authorities among leading entities and decision makers in the ministries and provinces, as opposed to limiting them to ministers, deputies, and governors.
4. Taking the necessary steps in earnest to create an investment climate for the local and foreign private sector, and reviewing all the laws and regulations that hinder such investment, without affecting the government's role in programming and monitoring the gradual transition to a market economy, competition, and freedom of prices.
5. Studying the issue of decentralized disbursements, using treasuries in the provinces that are supplied with staff trained in this task.
6. Reviewing procurement and processing procedures; rewriting them to help speed up implementation; identifying the points of control based on the cycles of these procedures; and removing any duplication.
7. Taking steps to craft a prudent fiscal policy that creates complete balance between resources and uses of them; achieving the required level of development in accordance with this plan; and working to increase financial resources.
8. Crafting a prudent monetary policy that balances the functions of this policy in addressing the issues of inflation, interest rates, and development plan needs in terms of credit to implement the projects.

12.4.2 Participation/Building Partnerships

The plan will attempt to have all society members and institutions participate in the development process. The most important participants in this domain are likely to be the following:

1. Women: The plan seeks active participation by women in the areas of development plan formulation and decision making.
2. Youth: Giving youth leadership positions in the country and in society so they can express their views. This requires laws and regulations.
3. Civil society organizations: First, they must be organized and existing ones reconsidered. Second, their identity must be verified (do they really exist, or are they fictional?). Thereafter, they must be provided with the opportunity to effectively participate in planning, monitoring, and follow-up activities.
4. Local authorities: The role of local authorities (province councils) must be activated along with that of civil society organizations to ensure participation by all parties involved

in the development process via freedom of expression and active participation.

12.4.3 Transparency

In the context of the planning process, transparency means disclosure and publicity. Disclosing activities should encompass officials, companies and institutions, each within the purview of the roles and duties assigned to them, and to the extent relevant to the plan. Financial, accounting, and statistical data are supposed to be provided for each project included in the plan. This applies to the ministry as well as agencies unaffiliated with a ministry, a region, or a province.

12.4.4 Responsiveness

Within the context of the plan, responsiveness means the response proffered by executive institutions to the concepts, perspectives, and projects of the plan. It also means the plan's response to society's needs and aspirations.

12.4.5 Consensus Orientation

In all societies, there are many and varied views and wishes, and they may be contradictory. The plan must, both during the preparation and implementation phases, use the consensus or majority vote approach. In addition, this approach must be publicly disclosed.

12.4.6 Equitability and Inclusiveness

The goals of the National Development Plan include improving the quality of life for all segments of society and thus, there must be equitable opportunities for them to participate in the development process. Vulnerable groups should be given special priority. Doing so requires:

1. Empowering civil society organizations to express their opinions and participate in selecting and implementing the projects that would improve citizens' quality of life
2. Instituting laws that emphasize collective views, inclusiveness in decision making, and inclusiveness with respect to deriving benefiting from said decisions

12.4.7 Effectiveness and Efficiency

The plan's effectiveness will be manifest in results that serve the general community at the least social cost, both tangible and intangible. Its efficiency means sustainable resources and preserving the benefits of future generations of natural and environmental resources. In this regard, there should be elements of sustainability in choosing plan projects. For example, there must be a trade-off between the type of technology and the community's or region's needs (the balance between the intensity of using work and the intensity of using capital). This requires:

1. Improving and building institutional capabilities, which requires the presence of efficient elements, identifying powers and responsibilities, and ensuring participation of all responsible parties in the decision-making process

2. Paying attention to human development as one of the pillars in the economic development process, requiring programs for the advancement of education, training and health, as well as for the provision of other social services
3. Organizing the executive administrative structures within the provinces to increase their efficiency in implementing their tasks
4. Developing the capabilities required to prepare technical and economical feasibility studies, and evaluating the environmental impacts on the project and regional levels
2. Financial records and statements that are prepared and audited in accordance with the principle of significant transparency and certainty
3. Commitment by the ministries and other agencies to prepare and submit comprehensive feasibility studies about projects to be implemented
4. Working to approve the annual budget prior to commencement of the fiscal year so executive agencies can oversee implementation at an early stage of the fiscal year

12.4.8 Accountability

Accountability is an important aspect of good governance. In the case of joint stock companies for example, they must disclose their budgets or report financial performance to the company's general assembly. This practice should be followed by all segments of society as well as plan implementation partners, including the government and private agencies. Accountability should be supported by the following:

1. A package of regulations framing the principle of accountability and acting as a reference for all development partners
5. Reviewing the financial procedures related to making disbursements and receiving payments at specific times, and in accordance with the priorities of the implementation process
6. Preparing plans to combat both types of corruption (administrative and financial) at institutions. This requires development of laws and regulations, as well as their implementation in full.
7. Reviewing the procurement and processing procedures and rewriting them in a form to help speed up implementation; in addition, identifying control authorities at each cycle of the procedure and eliminating any duplication.

Chapter Thirteen

Monitoring and Evaluation



Monitoring and Evaluation

13. Monitoring and Evaluation

Preparing the plan in accordance with a sound methodology and realistic data is a prerequisite for its success. However, it will remain incomplete unless supplemented by clear and specific mechanisms for implementing, reviewing, and evaluating the extent to which these objectives are achieved. It will also hinge on distribution of roles between the state and regional governments, the private sector, and civil society organizations, each within their own purview. Accordingly, and to ensure proper implementation of the plan and receipt of annually updated feedback about the processes, the plan document offers a series of procedures that can be summarized as follows:

13.1 Monitoring

With regard to office monitoring, there is a need to issue monthly follow-up reports by sector, ministry, non-ministerial agency, and province. These reports would show financial disbursements and material implementation of the plan. They would also highlight any deviations or obstacles and propose solutions to overcome them at an early stage.

At this time, monitoring capability is below the required level. It must be strengthened by doing the following:

1. Increasing the sample of projects monitored so it is no less than 10 percent of the total annual projects
2. Ensuring these projects are representative of all financial sectors and activities and are distributed throughout all provinces
3. During the monitoring process, focusing on projects with strategic and vital importance, those with significant development implications, and those that add new technologies. This should be done both during the implementation and operating phases.
4. The monitoring process should encompass all legal and contractual aspects of the projects, disbursement rates, material implementation rates, implementation quality, and degree of compliance with applicable laws and instructions.
5. Enhancing participation by planning monitoring units within the provinces particularly in the case of projects of a local nature
6. Revamping the Central Monitoring Directorate within the MoP so it can carry out the office and field monitoring procedures, and supporting specialized staff in their monitoring duties throughout the ministry and its planning units
7. Completing automation of monitoring systems throughout the MoP, as well as other ministries, non-ministerial agencies, and provinces, and connecting those systems to a single intranet network with access features for each entity based on its functions and area of specialization, to render office monitoring of projects fast and flexible
8. Holding quarterly and annual meetings for planning and monitoring supervisors, to include all ministries, non-

ministerial agencies, and provinces and aim to resolve problems and difficulties in project implementation. They would also be used to propose amendments to the systems and instructions associated with monitoring implementation of the investment budget projects.

9. Preparing monthly, semi-annual and annual reports detailing the results ascertained while monitoring implementation of plan projects. These reports would be submitted to the secretariat of the Council of Ministers, the Economic Commission, and the House of Representatives to apprise them of the progress made on plan projects and provide them with guidance through recommendations and proposals.
10. Reevaluating the allocation priorities and levels for projects listed in the five-year plan's project schedule and slated for implementation during the following year. This reevaluation would be conducted in light of implementation results attained during the previous year; changes in the financial situation; the possibility of adding or deleting new projects per the updated financial situation; and the realities of the implementation capabilities available to the different agencies.
11. Continuing to reevaluate and modify the instructions and authorities associated with annual implementation of the investment budget. Further, gradually conferring more authority to the relevant ministries and provinces.

13.1.1 Evaluating Achievement of Plan Objectives

Annual monitoring of implementation of the projects set forth in the plan would be performed based on the rate of financial and material disbursements. The quality of implementation would also be verified to ascertain whether or not it is sufficient to confirm achievement of the plan objectives. Accordingly, it is necessary to:

1. Develop an integrated, automated system to monitor and assess the extent to which objectives are being fulfilled in all economic, social, urban, environmental, and administrative fields. This system would depend on specific, accurate, and measurable indicators that are internationally approved.
2. Link the system via an intranet network to ministries, non-ministerial agencies, and provinces to ensure ease of use and operation. These entities would be able to enter the system and operate it, each within the scope of its own responsibilities and powers.
3. Establish a specialized division to monitor achievement of five-year plan objectives within the Public Investment Department at the MoP. This division would be responsible for managing, operating, and modernizing the proposed system.
4. Hold an annual conference sponsored by MoP to present and evaluate the extent to which plan objectives have been achieved. The MoP would provide background documents for the conference, indicating the extent of achievement. It would also detail any deviations from the objectives and proposals to remedy them. In addition,

ministries, non-ministerial agencies, and provinces would present reports on progress in achieving plan objectives within their sectors, using the indicators included in the proposed system.

5. Adopt the results of the annual conference, which would be attended by representatives from the higher authorities, the House of Representatives, and the media, as well as civil society organizations and academicians. These results would be adopted as a principle document in the review process and would be used to update plan goals and means of achieving them. It would be subsequently used as a reference.
6. Launch a major information campaign to mobilize and define the plan, its objectives, and the means of achieving these objectives. The campaign would also define the roles required by all partners, including public and private sectors, academicians, civil society, the general public, international partners, and donors.
7. About one half of the investments required to achieve the objectives is expected to come from the local and

foreign private sector. Thus, the partnership between the public and private sectors and the bonds governing this partnership are very necessary to achieving plan objectives. The country should ensure the appropriate investment climate, the basic fundamental structures that encourage local and foreign investors to participate in the fields and activities set by the plan.

8. To the extent there are increases in state budgets, or savings achieved there, during plan years, priority must be given to the plan's investment projects. This would help achieve plan objectives; compensate for any variations in the anticipated participation by domestic and foreign investments; and strengthen the coordination and cooperation between the Ministry of Finance and the MoP in this area.
9. In 2012, review and revise the plan, its priorities, its objectives, and the policies to achieve these objectives, as needed based on changes in the reality of the Iraqi economy, the available financial and human resources, and the extent to which objectives were accomplished during the first two years of plan implementation.







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The Iraqi Scholar Hussein Ali Mahfouth described Iraq saying:

“Iraq is the Paradise of Eden. It was here that Adam landed, and where Man was born. It was here that writing was invented, and where history was born, and where Shari’as and laws were introduced and where civilization also was born.... Iraq is the ancient veiny great country and melting pot of all the Creation and people and where the world of human beings, races and ethnicities met together, and where peoples and tribes collaborated, and where followers of religions, creeds, sects, beliefs, opinions, ideologies, doctrines, and trends met. It is rather like a heavily fruitful orchard, and a fantastic and terrific rug knitted-over the years- by all the hands and painted with all colors, and combining all shapes. What a wonderful and superb texture. It is a word of four letters combining four remarkable concepts. The letters are: “ein”, an acronym for “izzah” (i.e. delight); “ra”, an acronym for “ref”a” (i.e. sublimity); “alef”, an acronym for “asalah” (i.e. originality); and “qaf”, an acronym for “qedam” (i.e. antiquity). It is a word revealing supremacy and elegance, fraternity and strength, and a country of civilization and urbanism. There is a metropolis and a civilization over each span of the hand of Iraq; and beneath each span of the hand, there is a city and a civilization. In fact, a civilization gives birth to civilization, and urbanism gives birth to urbanism. It is a country of knowledge and accomplishments, a country of inventions, innovations, and discoveries, a country of Messengers and Prophets, saints, the pious, Prophet Mohammad’s companions, and later followers. It is a country which has been honored by religious leaders and which took pride in scholars, the virtuous, literary figures, writers and poets. Therefore, you should know and appreciate Iraq properly...”¹

¹ -Hala Magazine, 2nd Issue, February 2006, P. 3.

National Development Plan 2013-2017

Chapter One

Developmental Harvest - Analysis and Evaluation

Introduction:

First: Geo-strategy of Iraqi

Since ancient times Iraq has been depicted as being the skull of Arabs, the center of the Earth, substance of countries, the center of the world, the greatest of the regions and most honorable locations. It is said that Iraq is a water beach or seashore. It was so named because it is on the shore of the Tigris or because of its proximity to the sea, or due to having large numbers of palm trees therein. The name of Iraq is an Arabic or Arabized name since ancient times². Iraq has been enumerated in the History of Nations and Kings by Al Masoudi more than (300) times.

Iraq is a place characterized by the presence of the two great rivers, humanity response to their challenges has led to the establishment of advanced irrigation systems and water flourishing civilization, identity of which is based on water and the presence of a unified authority able to manage life. Its geographical location and topography as a prolific open wadi have formed the border amid diversified civilized cultural forces or even conflicting forces living in spacious wide plateaus and mountain chains that kept driving migrations and invaders throughout history, and affect decisively the demographic and cultural composition of the Iraqis, as well as the formation of the state and its existence and practices.

Geo-strategically determination of the role of any country depends, inter alia, on the available potential and comparative advantages in that country, as well as its location within the surrounding regional district, demographic and ethnic privacy... etc.. More than that, some countries play economic and cultural roles beyond the range of the surrounding circle. An initial reading of the comparative advantage of the resources and capabilities of Iraq shows that Iraq has - according to geological studies - about 530 geological structures giving strong indications on huge oil **shows**. Only 115 of these structures have been drilled, including 71 proved to contain huge oil reserves spread over several fields. The Iraqi discovered fields amount to 71 fields, of which

² Lonkrik S. Hamsly, 4 centuries of Iraq modern history, translated by Ja' afer Khayat, No. 1425, page 9.

27 fields have been exploited, 10 of which are mega fields. The geological, economic and spatial maps show the distribution of deposits of mineral resources in Iraq and having governorates rich of certain mineral materials both in terms of volumes and reserve quantities available or multiple types of these materials.

This great potential has made Iraq enjoy huge and massive resources by possessing a stockpile ranking as the third-largest oil reserve in the world, and that ranks tenth in the proven reserves of natural gas, making it an influential player in the cycle of the civilization machine and a key player in the global economy, and a strong contender at the regional level as well as the high-level potential of oil derivatives production at competitive prices for low cost production and extraction of oil in Iraq, compared with other countries. In addition, Iraq has the potential and competitive expertise in the field of sulfur-related industries, along with extensive production of nitrogenous and phosphate fertilizers, as well as very high reserves of silicate which is one of the purest types of silicate in the world.

Besides its human distinctive resources, Iraq is endowed various water resources represented by the Mesopotamia and a strategic location at a geographic place as a gateway to the east and west with the possibility to become dry canal for transport thus shortening distances between them in addition to the economic benefits and geopolitical advantages that bolster Iraq's status and its importance for the future.

Second: Why Evaluation and Updating?

The first half of the Development Plan years 2010-2014 witnessed real translation of some of the total and sectoral goals adopted by the plan through the mobilization of economic resources and using them to serve the planned development paths and enhance its vision towards the envisaged future and thus the development harvest is distributed amongst achievements that have been interpreted by the nature of the applied sectoral policies, as supported by economic, institutional and environmental factors in addition to failures diagnosed in terms of the significance of the selected development evaluation indicators which have limited the possibility of progress by proportions of goals implementation for reasons fueled by the challenges of the transitional phase under which the Iraqi economy lives since 2003, leading to create

separation stations between what is real and what is planned, noting that these stations have deepened the effects of drilling grooves in its economic, social and environmental conditions. Therefore, the development scene seemed somewhat confused. All such situations and conditions imposed a reality calling for the need and importance of sustainable follow-up to the achievements realized and an in-depth analysis of recurrent failures.

The state of correlation between those tracks would boost opportunities for sustainable development and a higher quality of life for the general population. Thus, the justifications to develop new national plan for the development would be a guarantee to lay the foundations of a society that reflects an approach of rights and social justice that promotes the unity of the national supreme interests. Those interests aided with the values of unified identity shall be an indispensable condition to ensure the continuity of development in a diverse society like Iraq.

Based on the foregoing, it can be said that the planning process may not be launched from zero but based on the outcome of experiences years ago and a new reality as well as a forward-looking development vision to achieve high levels that ensure sustainability of the welfare of current and future generations. In order to choose the future of our economy and alternatives to our development approach and to set its trend controls under variable economic, social and environmental conditions, it is inevitable to evaluate the realized achievements of the early years of the National Development Plan 2010-2014 and diagnose bright spots that promoted achievement rates ahead as well as marking the failures and the negatives that have eliminated attainment of goals or postponed same until an unidentified date, a matter that required building a new plan for the next five years 2013-2017 to be an incubator for the sustainable achievements and be repellent of cons and their causes and a window for a secure future and promising rights while pursuing continuing efforts to build a society of care, tolerance, moderation, and progress and to establish civil values in an environment characterized by integrity and commitment criteria.

Among the most influential justifications in explaining the imperatives of modernization and construction of a new five-year plan are the following:

- 1- Translation of the official declaration enumerated in the National Development Plan document 2010-2014 that the developmental follow-up of the plan targets be in mid 2012 and through monitoring achievements and diagnosis of failures in order to adjust the plan tracks and trends in harmony and consistent with the stated economic policy orientations.
- 2- Relative improvement in the level of security stability, despite the fact that the political scene is still confused and dominated by the different views and mistrust among the partners in the political process.
- 3- To keep pace with global economic developments and the effects of the financial crisis and its impact on the overall economic situation in particular oil prices and exports, one of the determinants of the financial resources available in Iraq.
- 4- Developments in oil production and exports and increased expectations over the medium term through the oil licensing rounds.
- 5- Nature of transition challenges to market economy that created volatile environment repercussions thereof have been distributed to cover all the joints of the Iraqi economy strongly supported by the application of the shock style in the beginnings of shift as well as the reluctance to implement stages of transformation, methodologies and deportation of its supporting legal legislations such as the privatization law to an indefinite period of time let alone stumbled restructuring of the public sector institutions and the absence of the prevailing institutional environment of the private sector. These facts imposed a reality that requires renewed planning vision to follow up these challenges.
- 6- Iraq is still subjected to the provisions of Chapter VII of the UN Charter that would hamper the effectiveness of the economic policy being applied in Iraq. Pillars of that policy have been entrenched by the National Development Plan 2010-2014, particularly in areas related to attracting foreign direct investment which the plan assumed would be the supporting channel with the local private

sector to finance 46% of the total plan investments. This fact explains the reasons behind the suspension of certain objectives of the plan and the reluctance in the implementation of some others, which in turn weakened the foundations of the existing partnership between the public and private sectors (foreign and domestic). The same had also hampered the remaining settlement of Iraq's foreign debt and hindered balanced and fair settlement to the problems of border demarcation and distribution of economic resources in common with other countries, including oil and water.

- 7- Deep-rooted sustainable consumption pattern: Iraq's adoption of the open-door policy has undermined its ability to control the results of the policy application and impact on the economy and society. It was the fastest port in meeting the requirements of the new life consumer pattern which is mainly the legacy of political economy of war and siege over more than three decades as evidenced by the general budget behavior which is associated with oil revenues and turned the consumption pattern from a consumer war pattern to a consumer pattern mixed with consumption luxury on par with deteriorated economic efficiency and the confiscation of the State real development in directions that had never been calculated nor planned. That legacy sticks to the budget since 2003 until now, but rather, intensified the consumer tendencies as evidenced by the higher consumer spending increased by 70% compared to expenses of investment that did not exceed at their best 30% to compensate society against the previous deprivation and to simulate market products of globalization under the dumping policy of goods in Iraqi markets as well as building consumer models and lifestyles that mimic the created consumer tendencies thus the national savings departed their position in the hierarchy of the development financing sources in Iraq and the oil proceeds still rank the first enhancing sustainability of the structural imbalances in the financing, producing and trading sources and responsive to the dependence of the Iraqi economy and its oil revenues on the traumatized foreign demand and supply and feeding the free ride phenomenon in the economy.

8- Disruption of the Iraqi Economy Structure:

The continued occupation of oil sector of the first position in generating of the GDP, exports and financing of plans and investment programs that would enhance the status of the imbalance between service and productivity sectors, and weaken the sectoral entanglements and reduce the rates of non-oil sectors in generating product, thus constraining the shift possibilities from a royalty economy to a production economy, making the goal of diversifying the production structure an unattainable dream as evidenced by the high economic exposure to the outer world, which requires more effective and sustainable overall policies to reduce the exacerbation of the structural imbalances and the depletion of non-renewable resources and a non job opportunities generating growth.

Development path for the years 2010-2011

Achievements Harvest and Failures Indication

The first years of the plan life experienced a combination of factors, internal and external, some of which served as push factors and others as pulling factors that have positively and/or negatively impacted the economy performance and left their fingerprints on the rhythms of total and sectoral movement of variables and then on the course of development completion rates in terms of values of base year for 2009.

First: Economic Growth: rates close to the target

Iraq did not experience structural changes in the economy. The general trend still confirms the priority of the oil sector in generating output, and this is consistent to some extent at the stage with direct the plan investment policy which called for the temporary admission in the event of continuity unilateral economy in order to increase the oil production and exports rate to strengthen the financial position of Iraq driven by the financing of the development and reconstruction programs. Therefore, the structural imbalance of the economy for the period 2009-2011 was deliberate in appearance but hardly sustainable in its content for a decade.

A - National income and per capita income: upward trends

- The size of the national income has increased from 120428.4 trillion dinars in 2009 to 143029.6 trillion dinars in 2010 at current prices and to 188041294.0 dinars in 2011 by an annual change rate of (18.8%). That increase is achieved driven by correlation of the international and local factors together. Slack of effects of the global financial crisis on the oil prices and global demand thereon as well as the response of the investment policy to their objective adopted in the plan in making the oil sector assume first place in the hierarchy of investment appropriations by (15%) of the total investments have had influential impact in achieving that increase.

- The average per capita from the national income at current prices increased from (3803.3) thousand dinars in 2009 to 4409.5 thousand dinars in 2010 to 5659.3 thousand dinars in 2011 by annual average change of (15.9%).

B- GDP: Quantitative Trends and Qualitative Trends

1 = Target Responsive Quantitative Trends

- The plan targeted to achieve an increase in GDP by (9.38%) as annual growth rate during the years of the plan. Data indicated that the gross domestic product at fixed prices has achieved growth rate of (5.9%) in 2010 and (8.6%) in 2011, which are high rates compared to the targeted general rate in the plan. The government was keen to continue the implementation of economic and social reform programs sided with the government initiatives like the agricultural initiative as well as close striving to improve and activate the economic management efficiency especially in the oil sector and that keenness had a role in the progress towards achieving the goal.

Figure (1) growth stages during the first years of the plan

- The statistical compass recorded a rise in the value of GDP with oil at fixed prices for the period 2009-2011, increased from (54720.8) million dinars in 2009 to (57925.9) million dinars in 2010 and continued to increase in 2011 to reach (62896.9) million dinars with annual average change of (8.6%) compared to 2010, and achieved increases in the value of GDP played a positive role in attaining the goal set in the plan (9.38%). The GDP without oil and at fixed

prices has increased from 30843.1 million dinars in 2009 to 33826.3 million dinars in 2010 to 35736.3 million dinars in 2011, by annual average rate of ().

Table (1) GDP with and without oil and the average per capita for the period 2009-2011 at fixed prices (1988 = 100)

Items	2009	2010	2011
GDP with oil (million dinars)	54720.8	57925.9	62896.9
GDP without oil (million dinars)	30843.1	33826.3	35736.3
Average per capita of GDP (thousand dollars)	3.5	4.2	5.4

- The average per capita from GDP decreased from (1.8) thousand dinars in 2009 to (1.7) thousand dinars in 2010 by annual change rate of (-5.6) compared to 2009 affected by the foreign offer shock gained power from the effects of the global financial crisis in 2009 on crude oil prices and exports, but rose again to reach (1.9) thousand dinars in 2011 by annual change rate of (11.8%) compared to 2010, exceeding the effects of the crisis and its repercussions on the oil market.

1- Qualitative trends: an imbalance and distortion

- The contribution of commodity activities with oil in generating GDP at current prices increased from (57.1%) in 2009 to (60.8%) in 2010 and to (66.9%) in 2011, while the contribution of the distributive activities constituted only (15.3%), in 2009 decreased to (14.8%) in 2010 to (12.8%) in 2011. The same is applicable to the service activities contribution of which in generating the GDP decreased from (27.6%) in 2009 to (24.4%) in 2010 to (20.4%) in 2011. These facts confirmed continuity of the oil sector to assume the first rank in generating the GDP which maintained sharpness of distortions in the economic structure and the continuity of unilateral economy while the goal enumerated in

the plan which was represented by diversity of the production base was posted to future stages.

Table (2) the relative importance of the economic activities in the generation of GDP with and without oil at fixed prices for the period (2009-2011) (%)

Economic activities	2009 %	2010 %	2011 %
• Commodity activity with oil	59.0	59.9	59.5
• Commodity activity without oil	27.4	29.8	29.1
• Distributive activity with oil	9.7	10.5	10.7
• Distributive activity without oil	17.2	17.9	18.7
• Service activity with oil	31.3	30.6	29.8
• Service activity without oil	55.4	52.3	52.2
Total	100	100	100

- Contribution rate of the commodity activities without oil in generating GDP increased from (27.4%) in 2009 to (29.8%) in 2010 and fell to (29.1%) in 2011 in favor of the distributive activities which increased from (17.2%) in 2009 to (17.9 %) in 2010 and to (18.7%) in 2011, while the service activities assumed the lead in rates of generating GDP without oil compared to the remaining activities which rated (55.4%) in 2009 and fell to (52.3%) in 2010 and to (52.2%) in 2011. Perhaps the nature of sectoral investment policy applied during the period 2009-2011 and the executive measures adopted in the translation of its goals is a reason to explain the hierarchy of those trends.
- The agricultural sector contributed to generate (7.3%) of GDP with oil in 2009 at fixed prices, the percentage increased to (8.1%) in 2010 and then declined to (7.6%) in 2011. While the manufacturing industry contribution in generating GDP was only (2.9%) during the years 2009 and 2010 and fell to (2.7%) in 2011. The oil, mining and quarrying contribution assumed forefront in generating GDP by (43.9%) in 2009 decreased to (41.7%) in 2010 affected by the repercussions of the global financial crisis and then resumed their rise to become (42.9%) in 2011.

Second: investments and sources of funding: Materialized financing and slow-moving accomplishment

A - Planned and actual investments

1 - Annual investment plans:

The idea behind the birth of the medium-term National Development Plan 2010-2014 is ascribed to the failures and problems faced by the preparation of the annual investment programs and accompanied difficulties in the development of medium and long-term comprehensive development visions, and determination of project priorities and integration based on the development annual approach as well as the widening gap between planned and actual investments as indexed by the indicator of the financial implementation efficiency, which was marked by decline in most economic sectors generating extremely serious consequences and an increase in costs and a deterioration in the level of public services and infrastructure without realizing the goals and the planned social and economic programs which was negatively reflected on the performance of the national economy and the level of social well-being of citizens, specifically groups and poor segments. That has undermined the huge investment revenues allocated by the State towards investment fields. Therefore, the National Development Plan 2010-2014, adopted a national system for monitoring and follow-up according to the modern methods believing that preparation and implementation should be under controls to ensure results of high quality amounting to the well-planned level and help the economic decision-maker identify the level of the investment project implementation within the plan and nature of their track.

The annual investment plan for 2010 included about 20220 projects while the regional development program included (1195) projects. The plans was set up to express and reflect the development directions included in the five-year plan under the responsibility of the Ministries and all governorates in an effort to create the following bases:

- Providing the requirements of economic construction by focusing on the reconstruction of infrastructure projects.
- Provide job opportunities through the investment projects implementation.
- Provide the requirements of the successful security and stability imposition by giving them priority in the implementation.
- Improve the quality of life by giving priority to satisfy the basic needs of the citizens and provide better services by the state.

The investment approach allocations of the first year of the plan including the regional development program, Kurdistan projects and Ahwar recovery recorded an amount of (25683414.6) million dinars, while the actual investment expenditure was (19895190.0) million dinars by disbursement rate of (77.5%) which is lower than in 2009 that was (88.6%) (Table -----). The same table indicates an increase in planned investments in 2011, reaching (38212789.8) million dinars, while the actual investment for the same year was (28809059.660) million dinars and by financial disbursement rate of (75.4%) which is less than the years 2009 and 2010. The reluctance to implement projects and postponing other planned investment objectives by the implementing authorities perhaps explains the decline in expenditure rates during the years of the plan; however, the sectoral distribution scene of such actual and planned investments reflects the following facts:

Table () allocations of the planned and actual investment and the efficiency of the financial spending broken down by economic sectors for the period 2009-2011

- Allocations of the planned investment approach (including regions development program, Kurdistan region projects and Ahwar recovery) recorded an increase from 15083111.5 million dinars in 2009 to 25683414.6 million dinars in 2010 to 38212789.8 million dinars in 2011.
- The investment priorities within the national development plan have been distributed to give precedence to the oil and electricity sectors as the oil sector is the main source of financing for development and the electricity sector is the basic structure to achieve any development and evolution in the productive and service sectors. Within this direction, the industrial sector gained the highest share of the planned investment allocations thereby increasing from (4577404) million dinars in 2009 to (8312072.4) million dinars in 2010 and to (13731246.8) in 2011. However, the spending rate decreased from (96.9%) in 2009 to (93.5%) in 2010 and to (91.1%) in 2011.
- In terms of importance, the industrial sector is followed by the building and services sector where the total allocations to the sector increased from 2859392 million dinars in 2009 to 6789842.6 million dinars in 2010 to (4609023.6) in 2011. Yet, the financial implementation rate dropped from (75.7%) in 2009 to (69.3%) in 2010 to (59.1%) in 2011.
- Despite the high investment allocations budgeted to the agricultural sector which increased from (1098255) million dinars in 2009 to 1633233.0 million dinars in 2010 to 2310672.4 million dinars in 2011, yet the financial spending efficiency rate has significantly dropped from (83%) in 2009 to (52.9%) in 2010, but it increased to (61.6%) in 2011. That increase was interpreted by the

State directions towards paying attention to the agricultural sector and projects of the agricultural initiative. The same applies to the education sector in which the spending decreased from (75.4%) in 2009 to (36%) in 2010, and increased to (57.8%) in 2011. For the transportation sector, the spending efficiency indicated rate of (73.7%) in 2009 decreased to (43.5%) in 2010 and then increased again to (71.9%) in 2011. The result was the low efficiency of the implementation of the investment at the level of total economic sectors from (88.6%) in 2009 to (77.5%) in 2010 to (75.45) in 2011.

Schema () shows planned and actual investments by economic sectors in 2009

Schema () shows planned and actual investments by economic sector in 2010

- The investment allocations to the Kurdistan region increased from (2303338) million dinars in 2009 to (3438448.404) million dinars in 2010 and to (4354964.253) million dinars in 2011. Furthermore, the efficiency of the investment implementation increased from (99.2%) in 2009 and stability by (100%) for 2010 and 2011.

2- Provinces Development Program

- Allocations of the provinces development program (except Kurdistan) formed rate of (12.7%) of the total investment allocations for the year 2010 and the percentage (12.8%) in 2011 and thus were in line with the figure contained in the development plan of (12.5%).
- Total allocations of the provinces development program (except Kurdistan) increased from (2568319) million dinars in 2009 to (3265644.3) million dinars in 2010 and to (6534790.6) millions in 2011, while the efficiency of the financial implementation decreased from (92.9% in 2009 to (67%) in 2010 to (56.6%) in 2011, which indicates a decline in the development efforts and the inability of the provinces to translate their planned goals in the program.
- Karbala Governorate achieved the highest financial implementation rate in 2010, exceeding what is planned in the program, and a growth rate (118.6%), followed by Anbar province in the second place and by financial implementation rate of (100%) and Baghdad by (85.2%) .

Schema () shows the relative importance of the allocations of provinces development program 2009-2010

Schema () shows implementation rates of the provinces development program projects for the years 2009-2011

B- Fixed capital formation:

- The total fixed capital formation at fixed prices increased from (5919.8) millions in 2009 to 10155.5 million dinars in 2010, an absolute increase of (4235.7) million dinars and an increase of (71.6%).
- The public sector played the role of the largest investor during the years 2009-2010 and has had an outstanding role in the formation of fixed capital contribution of which increased from (93.2%) in 2009 to (96.3%) in 2010. Perhaps the continued lead of the oil sector being a development pillar and a basic source for hard currency and funding investments explains the central and outstanding role of the public sector.
- The private sector contribution decreased in the fixed capital formation from (6.8%) in 2009 to (3.7%) in 2010, these percentages drive us to stand long examining the plan assumptions in relation to the private sector responsibility for financing (46%) of the total investment plan. The move away from this goal is explained by reluctance to generate attracting investment environment to enter the private sector within the investment arena.

- Total fixed capital formation kept away from the planned goal of (43.5) trillion dinars in 2011 and at current prices and stable at 24.8 trillion dinars in 2010 and by deviance rate of (-43%).
- High deviance rate of the private sector's contribution in the planned fixed capital formation to (24.8) trillion dinars compared to the actual (1.6) trillion dinars and by (-92%) while deviance rate of the public sector contribution in the planned fixed capital formation did not exceed (23.4) trillion dinars from the actual (23.2) trillion dinars was about (-0.8%).

Table (3) planned and actual fixed capital formation for 2010 at current prices, distributed by the public and private sectors (trillion dinars)

<i>Sector</i>	<i>Planned capital formation</i>	<i>Actual capital formation</i>	<i>Deviance (%)</i>
Total	43.5	24.8	43-
Public sector	23.4	23.2	0.9-
Private sector	20.1	1.6	92-

Third: Trends of public and private sectors: static roles

- Contribution rate of both private and public sector in connection to generating the GDP at current prices for 2009-2010 was characterized by relative stability, where the proportion of the public sector contribution was (66.1%) in 2009 decreased to (65.4%) in 2010, while the contribution of the private sector in generating GDP did not exceed (33.9%) in 2009, rose slightly to (34.6%) in 2010 to emphasize the humble role of the private sector in the management of development activities evidenced by its contribution in the fixed capital formation which did not exceed (1.6%) trillion dinars and accounted for (6.4%) of the total fixed capital formation at current prices in 2010.
- The relative importance of the private sector contribution in generating GDP at current prices differed by economic activities where the figure reached (100%) in the activities of agriculture, ownership of houses and personal services,

while its contribution to the manufacturing activity was (27.9%) of gross domestic product in 2009, increased to (39.7%) in 2010 and that this increase was explained by increasing numbers of industrial facilities of the private sector, whether large or small and medium-sized. The large enterprises increased from (412) facilities in 2009 (420) facilities in 2010 while the medium-sized enterprises increased from (50) in 2009 to (55) in 2010. The small enterprises have increased from (10289) in 2009 to (11126) in 2010.

- Lack of diversity has been the hallmark that haunted the private sector investment policy limiting the possibility of investments access in a wide range to public sector-monopolized areas for example its contribution to the generation of GDP in the education and health sectors did not exceed (15%) of the total GDP in these two sectors for the years 2009-2010.
- Total investment projects of the private sector approved by the National Investment Commission at the provincial level was (281) projects in 2010 at the value of (10.1) billion dollars, rose to (298) projects in 2011 at the value of (13.2) billion dollars, bringing the total allocations of investment for these projects was (23.3) billion dollars which accounted for only (27%) of the total planned investment for the private sector in the plan amounted to (86) billion dollars. This percentage looks outwardly low but high inwardly with the evidence of the oil licensing rounds and the striking movement of construction, housing and reconstruction lead by the private sector investment; however dearth of data and information about the activities of this sector and lack of documentation is one of the reasons to justify the low actual investment rate passed by the plan.
- Continuing to involve the private sector in the rehabilitation of public companies under contract for a limited period not to exceed (15) years starting from 2007 in accordance with the Public Companies Law No. (22) of 1997 article (15) Third, for the rehabilitation and development of public industrial plants to access the designed production capacities and raise their efficiency. An annual plan has been passed to announce the companies to be rehabilitated by the State. 76 investment files have been processed up to 2010 as well as announcement of rehabilitating of (18) industrial companies in 2011 but the

degree of turnout degree by the private investors was poor due to aging of those companies.

Fourth: fiscal and monetary goals: harmony and severability

A - Fiscal policy: Budgets for Consumption and Development

- 1- The financial policy being applied in Iraq through their public budgets for the years 2010 and 2011 derived their objectives from the government's policies listed in the Prime Minister's speech to the government of national partnership on 22/12/2010 and the National Development Plan 2010-2014 and the Poverty Alleviation Strategy in 2009.
- 2- The materialized financial reform was fleshed out in two strategies of the federal budget; the first: budget strategy during 2011-2013 and the second: federal budget strategy for the medium term 2012-2014 and the essence of the reform is:
 - Eliminate deficit by setting max limits to the total expenditure
 - Development and reconstruction through raising the proportion of investment expenditure up to (50%) of the total public expenditure.
 - To pass hedging fixed price for oil based on realistic and rational estimates.
 - Increase non-oil revenues through budget support to the mechanics of the transition to a market economy by expanding the tax base.
- 3- Iraq continued to follow budget of items in designing and implementing their financial program including the flaws and gaps; however, that approach involved certain bright points as follows:
 - To adopt the medium financial framework model in the analysis of results for preparing and implementing of the budgets for the previous years.
 - Adoption of 2010 and 2011 budget on poverty indicators when distributing spending allocations among the disadvantaged provinces.

- “Oil well supply” has been the criteria adopted by 2011 budget in the allocation of petro dollars revenues among producing and affected governorates by the oil resources.
- 4- The budget for the period 2009-2011 continued to estimate revenues based on single possible precautionary price which is marked by sclerosis and lack of flexibility towards influencing the mechanics for changing the budget revenue flow and then their expenses. The Iraqi economy started to grow when injected by oil financial resources produced by positive foreign supply shock and this economy shrinks when spending leaks exceed the injection level into economy.
- 5- The federal budget for the period 2009-2011 was characterized by its dependence on oil revenues as a principal source of financing expenses by (88.47%) in the 2009 budget decreased to (85.68%) in the 2010 budget and to (90.19%) in the 2011 budget, making the performance of fiscal policy and ranges of ability to achieve its goals linked and correlated with the positive and/or negative effects left by external supply shock on the international energy market.
- 6- The non-oil revenues in the 2009 budget constituted only (11.53%) increased to (14.32%) in 2010 and fell to (9.81%) in 2011. The proportion of tax revenue of the total public revenue was (6.04%) in 2009 dropped to (2.12 %) in 2010 to (1.78%) in 2011, which indicates the effectiveness of the fiscal policy in achieving their financial function.
- 7- The federal budget did not experience a substantial change in addressing the imbalance in the structure of public expenditure where it remained tending to the public spending trends in favor of the operational expenses on the account of the investment expenses within the budgets 2009-2011 where the operating expenses ratio accounted for (82.6%) of the total public spending in the 2009 budget and dropped to (77.8%) in the 2010 budget then increased again to (80.44%) in the 2011 budget. Therefore, the investment expenditure increased from (17.4%) in 2009 to (22.2%) in 2010 and then decreased to (19.56%) in 2011. This imbalance in the public spending

- structure is interpreted by the indicators of consumer welfare and breadth of the free ride phenomenon in the economy.
- 8- The high spending on salaries and wages items from the total operating expenses in 2009 to reach (52.8%) in 2009, but declined to (32.4%) and then resumed to go up to (54%) in 2011, while the rest of the operating expenses inputs within the manufacturing expenses accounted for (46.7%) in 2009 increased to (67.5%) in 2010 and fell to (46%) in 2011. These high rates would post certain declared investment goals of the plan to further long time and transfer the current stage burdens and failures to the next generation.
 - 9- The Iraqi economy is still exposed to aggregate demand pressure which strongly acted through the spending budget multiplier effects thereof are beyond the limits of expansion in fiscal policy itself generating inflationary gap on which the monetary policy tried hard to narrow using their strict tools resulting in dropping inflation rate from (7.1%) in 2009 to (2.5%) in 2010 and then increased to (5.6%) in 2011. Thus, the inflationary effects of the general budget became hallmark as long as fed by proceed expenses never subjected to the tax multiplier which, if passed, would enable the budget to attain economic balance through balanced budget multiplier.
 - 10- The budget swung between the cases of deficit and surplus during the period 2009-2011 and followed volatile trends strongly influenced by the factors of the positive foreign shock or the negative side bringing about a deficit in the 2009 budget of (346.2) billion dinars, and a surplus in the budget in 2010 of (116.023) billion dinars and a higher value surplus in the budget in 2011 of 30359.3 billion dinars, affected by the high crude oil prices and increased production and export rates.

B- Monetary policy ... Realized Functions

The management of monetary policy is one of the most important functions of the Central Bank of Iraq based on Article 4 of Law No. 56 of 2004. That policy has sought to provide opportunities for economic stability by influencing the levels of liquidity and control of the trends and stability in domestic prices and to maintain

jobs and prosperity. It also played a pivotal role in establishing the elements of economic growth through their indirect instruments of monetary policy as re-discount price, mandatory reserve requirements, open market transactions and liquidity management options like treasury transfers and inter-bank lending.

Trends of that policy have been linked to essential reform measures in which promoting monetary market bonds and brokerage transactions synchronized with the necessity of external financing market stability and support the stability of the Iraqi dinar foreign value. Their balance has led to achieve two strong price indicators of the market indicators adopted by the monetary policy to achieve its stated goals namely: interest rate and Iraqi dinar exchange rate against dollar. That issue has enhanced the monetary transition mechanism to influence the balance of the monetary market and then stabilize real activity. Thus, the monetary policy adopted since 2003 has turned to be fruitful through selecting appropriate nominal determinants. The indicators of the monetary policy interest rate have achieved its goal in realizing the Iraqi dinar return and exchange it to attractive currency strong enough to face inflationary expectations. The bank interest rate index has decreased from (15%) to (7%) in 2009 and to (6%) in 2010 and became attractive power of the dinar and best management in the development of monetary savings and financial intermediation, and the right and proper way to address the phenomenon of inflationary expectations.

The exchange rate signal has had the greatest impact in reducing inflation and raising the external value of the Iraqi dinar. Thus, the monetary policy achieved their base goal in influencing the nominal exchange rate to reach the real levels equilibrium exchange rate through the auction of foreign currency thus positively reflected on the general level of prices, especially imported goods prices and production inputs as well as the fact that the auction is a means to applying indirect monetary policy in the management of the economy liquidity control their levels to achieve the desired balance in the monetary market and promote the financial stability opportunities.

Monetary policy has also contributed in building strong foreign currency reserves and led to high-quality mainstays in maintaining foreign economy stability and establishing a favorable climate for the launch of investment. Therefore, we note their achievements for the period 2009-2011 through:

- Increased money supply within the narrow concept (currency in circulation + current deposits) from (37300) billion dinars in 2009 to (51743) billion dinars in 2010 by an increase of (38.7%).
- Increased current deposits from (15524) billion dinars in 2009 to (27401) billion dinars in 2010 by an increase of (76.5%).
- Change in the components of money supply, where the contribution of currency in circulation rate dropped from total monetary supply from (58.0%) in 2009 to (47.0%) in 2010 in favor of deposits which increased to (53.0%) in 2010.
- Increased balance of net foreign assets to (68139) billion dinars in 2010 by an increase of (9.7%) compared to 2009.
- Success in reducing the inflation rate to (2.5%) in 2010 and then increased again to (5.6%) in 2011.
- Stimulate investment activity by reducing the interest rate for four times in 2009 whereby it was dropped from (15%) on 4/2/2009 (7%) in 21/6/2009, during that period two drops took place. The Central Bank of Iraq reduced it once in 2010 from (7%) to (6%).
- Local currency exchange rate stability against the dollar up to (1170) dinars in 2009 due to the stability factor in the foreign exchange market, where quantities sold of the U.S. dollar in the auction of foreign currency increased from (34) billion dollars in 2009 to (36) billion dollars in 2010 noting that the quantities sold included cash transfers and sales, and that the bulk rate tended to remittances by (94%) and (85%) for the years 2009 and 2010, respectively.
- The State-owned banks still play a larger role in the granting of credit by (66%) in 2009 and increased to (75.4%) in 2010, while the contribution of private banks in the granting of credit did not exceed (34%) in 2009 and fell to (24.6%) in 2010, which means that private banks are of conservative nature in

the credit granting although the magnitude of their capital and what is being granted by the regulations in terms of credit capacity of up to eight times their capital.

- Until the end of 2010, the number of Iraqi banks came to (7) government banks and (38) private banks, (7) foreign banks and (7) banks partnered with foreign banks partnership proportion ranged between (20-75%) of the total capital. The value of Iraqi banks' capital was approximately (2.4) trillion dinars in 2009 increased to (2.9) trillion dinars in 2010. Share of the private banking sector was (73.8%) in 2009 increased to (79%) in 2010, distributed to (37.6%) for civil and commercial banks and (17.6%) Islamic banks and (18.6%) branches of foreign banks operating in Iraq.
- Despite the banking policy efforts towards improving of the banking density index for the period 2009-2011 by increasing the number of banks and expand the spatial distribution pattern horizontally and vertically; however the achievement was modest. The number of banks in 2010 increased only by one bank compared to 2009 owned by the private sector. So, the progress made towards achieving the target of reducing the density is hardly indicated. The average density population/bank has decreased to (38484) people in 2010 compared to approximately (40000) people in 2009.
- The specialist banks did not witness remarkable expansion in the numbers and never felt activities in their events. Noting that activities of these banks are beyond the market rules where loyalties thereof are usually guided and aided within their service conditions. The number of real banks are only (3) in 2010 (Cooperative agricultural, industrial, real estate), all state banks and with 67 branches, and the value of credits granted was (1346) billion dinars in 2010.

Fifth: Population and the labor force: high demographic growth and limited employment opportunities

1 - Population: surveys without census

- Repeated postponements of the General Census of Population and effectiveness thereof is limited to numbering and limitation which postponed an opportunity available to Iraq to integrate the population data effectively into the development activities.
- The average population growth maintained its high rate which stood at around 3% until 2011 influenced by high total fertility rate of 4 births per woman in 2009 to 4.6 births in 2011.
- Life expectancy at birth increased from 58.2 years in 2009 to (69) years in 2011, which had a clear reflection on the age composition and then constituted the population pyramid, which was characterized by youth and vitality.
- Age group rate decreased to less than 15 years from 41% in 2009 to 40.2 in 2011, while the proportion of the age group 15-64 years increased from 56.1 in 2009 to 56.9 in 2011, which means increasing the driving force in the economy. The age group 65 and above constituted only 2.8% of the total population in 2009, increased to 2.9 in 2011 and stability thereof is interpreted by impairment of the health policies efficiency especially the preventive one.
- Young rate 15-24 years (a category defined internationally) was 20% in 2009 rose to 20.2% in 2011, which requires promising and advocating policies for young people.
- Males' rate accounted for 51% of the total population in 2009 fell to 50.9% in 2011 in favor of females whose rate has increased from 49% in 2009 to 49.1% in 2011.
- Increased population proportion in urban areas by 69% of the total population in 2009, while rural population proportion accounted for 31% for the same year. This imbalance has continued for the years 2010 and 2011, which explains the lack of spatial policy response to the requirements of sustainable growth.

2 - Manpower: Jobs Without growth

- The unemployment rate declined from 15% in 2008 to 11.1% in 2011.

- Declined participation rate in the economic activity from 46.8% in 2008 to 42% in 2011 influenced by economic, social and institutional factors.
- Widening gap between men and women participation in economic activity to 56.6% in 2011 after it was 50% in 2005.
- Reduced gap in the women and men participation in the labor market in urban areas than in the countryside, it fell from 60.65 in urban areas and 57.7% in rural areas in 2003 to 57% in urban areas and 51% in rural areas in 2011, respectively.
- Protected employment accounted for 47.6% in 2011. The proportion of female workers in the protected work was 58.6%, which is more than that for males 45.6% for the same year.
- Underemployment rates continued to increase whether the appearing and non-appearing by 38.6%, 61.4% respectively. Perhaps the nature of the employment policies applied of selective nature explains the reasons for rates to rise.
- Disguised unemployment and underemployment represent two features adherent to the employed. Perhaps the non-deliberate employment decisions and nascent laws stand for causes of continuity of such features among the employed within the manpower.
- High rate of unemployment among youth of the age group 15-29, where the ratio between males 15.5% and females 33.3% in 2011, higher than the overall unemployment rate of 11.1%.
- Relative correlation between level of education and unemployment rate of which increases with the education level rise. It was 12.7% for those of preparatory educational level and more and 24.2% for those with institute educational level or above.

Sixth: Sectoral Development: Tangible Development Efforts

1 – Agricultural Sector: Diversity Tidings:

The agricultural sector responded to the objectives of the National Development Plan 2010-2014 influenced by the applicable pricing and marketing policy in addition to the measures taken to protect domestic products, which contributed to encourage agricultural producers to expand production and the return of agricultural producers to the production cycle thus generating new job opportunities in the Iraqi countryside and greater possibility to accommodate the national strategy results in order to alleviate poverty.

The push forward factors towards diversity in the flora and fauna production were not accompanied by remarkable progress in creating legal environment that would take part in ceasing disruption of areas and agricultural possessions of lands and orchards to keep them within the production loop.

a- Agricultural production

Iraq has large areas suitable for irrigated agriculture estimated at (44.46) million donums the greatest part thereof was influenced by the problem of salinity over flooding due to the groundwater, especially in the central and southern regions due to poor operation and maintenance works and lack of integrated puncture networks which had been reflected to the agricultural production in quantity and quality. However, the policies that accompanied the application of the agricultural initiative, which was approved in 2010, have had a positive impact on production and yields of the acres and composition of the crop.

The flora and fauna production indicators for 2010-2011 reflect the following:

- 99% of the target production of wheat crop in 2011 was achieved and attained high productive levels of (525.6) kg / acre of irrigated wheat, which represents the percentage (105%) of the target yield level at the end of the plan. Baghdad achieved the highest level of yields at the provincial level (687.3) kg / acre.
- Acceptable success and increase close to the target rates of plant crops such as barley (97%), maize (52%), rice (81%), tomato (69%), potatoes (56%), dates (113%) in 2011.
- The vertical expansion in the strategic crops and in the irrigated areas by sprinklers has achieved increase in the production levels. Average yield per

donum based on total cultivated area amounted to (429.3) kg / dunum for the winter season in 2011. However, this increase is less by (13.4%) compared to 2010.

- Greens and tomatoes production rate achieved an increase to the levels of 2011 by (13%) compared to 2010, while the production rate of potatoes and dates achieved an increase (160% and 117%) in 2011 respectively compared to 2010. These increases in the greens production rates that are ranked second in terms of the relative importance in the plant production, came in response to the use of modern techniques that have been applied to small areas like greenhouses and sprinkler system and instillation.
- Rice crop rate decreased in 2011 by (89%) compared to 2009 due to water rationing and reduced planted areas yet rose in 2011.

B- Animal Production:

- Number of farm animals modestly increased during years 2010 and 2011 by (7%) for sheep and goats, and (1.9%) for each of the cows and buffaloes.
- Red meat production rate in 2011 increased by (1.8%) in 2011 and fish (12.7%) and milk production (3%) compared to 2010. Perhaps the lack of base herds and poor genetic traits of local species as well as lack of animal fees production, poor visual and guidance which lack communication with scientific research played a role in influencing the animal product growth rates for the years 2010 and 2011.
- Numbers of chicken meat fields increased from (1745) fields in 2010 to (2092) fields in 2011, thus increasing chicken meat production rate by (5.7%) which is more than what was planned in 2011.
- Eggs production increased from (704) million eggs in 2009 to (926.2) million eggs in 2010 and to (970) million eggs in 2011, by an increase of (4.8%) compared to 2010, which seems modest. Perhaps incomplete projects of poultry infrastructure especially Osol project at Abu Ghraib and forefathers projects in Samarra has had a noticeable impact in the non-accelerating growth

in this field thus undermining competitive abilities of the local product compared to the imported one.

2 - Water Resources: Exacerbated External Threat

The growing need for water resources continued in Iraq as a result of continued population growth and economic and social development against a decrease in water resources due to expansion of water resources investment in the riparian States on the rivers incoming into Iraq which had positive and/or negative results on the efficiency of carrying out the objectives during the first years of the plan, as follows:

- No progress has taken place in increasing water storage of the dams constructed and implemented in order to reach the plan target by (33) billion cubic meters due to failure to approve the implementation of Bakhma dam with storage capacity of (14.4) billion cubic meters, not to mention the lack of referral of implementing permanent treatment to Mosul dam so far and postponing Tak Tak dam, Khazar Komel project which precluded the storage increase by 20 billion cubic meters.
- Endeavors for the water resources development have been translated through expansion in the water harvest within proper areas and using wastewater following treatment. 114.346 million cubic meters were added to the volume of storage made available to the end of 2010 while work is still underway to add storage capacity of (127.4) million cubic meters through the implementation of (7) small dams (Alond in Diyala province / Khassa jay in Kirkuk, Ka'ara/2 and Ka'ara/4 and Masar in Anbar, Shehabi in Wasit and Dwairage in Missan.
- To adopt a set of measures aimed at rationalizing water consumption through the deployment of water users' associations in all provinces and awareness for the participatory management and reduce the expansion of plantations of high water consumption, and the adoption of new techniques in irrigation and agriculture such as sprinkler system, protected agriculture to achieve the sustainable development.

Land Reclamation and irrigation and puncture projects: slow moving progress

- The goal of integrated reclamation of 1600 thousand acres is still elusive. Total reclaimed lands during the plan years (actual integrated reclamation) has not exceeded (84) thousand dunums in 2010 and 2011, partial reclamation (192) thousand dunums both accounted for (12 %) of the total target.
- Due to lack of financial allocations and the magnitude work to be performed and because of scattered efforts, number of prevailing projects to the reclamation processes was not more than (47) projects in 2010 then decreased to (45) in 2011 equal to those in 2009.
- A remarkable progress noticed in the completion of the estuaries represented by Euphrates eastern puncture which completed 200 km by 77% of total length amounting to 261 drainage capacities was 385 c. meter/second at the end of 2011. While excavation works of east Gharraf puncture were completed by 100% end of 2011 length of which is 172 ;l by drainage capacity of 26 cubic meter/second.
- 2011 has witnessed remarkable progress in the works of maintaining irrigation and puncture projects where completed lengths increased by (128%) compared to 2009. Quantities of removed sediments increased like dredging works from (12.3) million cubic meters in 2010 to (12.7) million cubic meters in 2011. In addition, concrete lining works increased from (1.263) million square meters in 2010 to 1.668 million square meters in 2011. Steams and punctures were cleared by an increase of (22757) km long in 2010 to (23562) km long in 2011.

Groundwater: sustainability of investment

- 2010 and 2011 experienced an increase to the actual number of wells implemented as planned. In 2010, it was planned to drill 1200 wells in the various governorates of Iraq. 1403 wells were drilled by implementation efficiency of (117%), while it was planned to drill 1300 wells in 2011. Only 1463 wells were drilled by implementation efficiency of (113%). (30-40 persons benefit from each well for potable water and irrigation of plants).

Iraqi Marshlands: Recovery Project

- 38% of total Ahwar area amounting to 5589 sq.km has been reconstructed in 2010 and the rate increased to 46% in 2011.

Iraq's share of water: coordination through international conventions and legislations

- To invest political and economic relations as a pressure card in the area of international waters.
- To beef up efforts to ratify the United Nations Convention on the International Watercourses Law for non-navigational purposes of 1997 as the best legal framework for the faire apportionment of water.
- To strengthen negotiating capacity
- To exert pressure on the neighboring countries to exchange information and operating plans.
- To conduct joint measurements on the key definition locations as an important basis when determining the size of revenues.
- 2011 marked formulating policy strategy specific to negotiate with neighboring countries about Iraq's water quotas and to support the negotiation system. Some progress was achieved in this track through the preparation of the draft law of the National Council for Water and the formation of the Supreme National Committee for Water that takes responsibility for managing water resources in Iraq and prompts the negotiation process.

3 - The industry and energy sector: the leading activities

- Investment allocations mobilized to the industrial sector were increased from (32.4%) in 2010 to (36.3%) in 2011. The share of each of the activities of electricity, oil, and manufacturing industry was (16.6%, 12.1%, 3.6%)

respectively in 2010, while the share of those activities was (13.7%, 18.8%, 3.6%), respectively, in 2011.

- Contribution rate of the industrial sector in the generation of GDP declined from (48%) in 2009 to (46%) in 2010 and then rose again slightly to (47.4%) in 2011. Despite the relatively low simple decline, the rate indicates contribution in generating half of the GDP.
- The extractive industry contributed by (43.6%) in the generation of GDP in 2009, decreased to (41.7%) in 2010 and then rose to (43.2%) in 2011, while electricity accounted only for (1.6%) in the generation of GDP in 2009. The rate settled at the border of (1.5%) for 2010 and 2011. The manufacturing industry rate remained at the border of (2.8%) for the years 2009-2011.

4 - Oil and Gas: Price Generosity

- Crude oil production increased from (2336) thousand barrels / day in 2009 to (2554) thousand barrels / day in 2011, an increase of (9%) compared to 2009 and this increase is a natural result to the increased number of discovered wells and increased number of oil well drilling. However, the increase is less than the planned one by (11%) due to the complicated procedures for the signing of licensing rounds.
- Exported oil quantities increased from (1906) thousand barrels / day in 2009 fell to (1890) thousand barrels / day in 2010, then returned to rise to (2165) thousand barrels / day in 2011 due to the development of transmission lines of crude oil and building new lines and rehabilitation of the current export platforms and building a new floating platforms.
- Crude oil storage capacities during the period 2009-2011 stabilized at the borders of (9400) thousand barrels, because the planned reservoirs need four years to construct.

- Gas production increased from (1395) million cubic feet/day in 2009 to (1426) mcf/day in 2010 and to (1574) mcf/day in 2011. The increase is ascribed to the nature of the productive policies that extended to the oil sector during that period.
- In order to maximize the increase in the quantity of petroleum products, the existing refineries were developed by increasing refining capacity from (449) thousand barrels/day in 2009 to (598) thousand barrels/day in 2010 and to (605) thousand barrels/day in 2011, by an increase of (34.7%).
- 2010 and 2011 witnessed continuing deficit in the production of gasoline and white oil production, as well as gas oil. Perhaps the length of time needed to establish new plants for the production of derivatives would interpret the deficit between supply and demand for these derivatives.

Some achievements have been suboptimal due to the problems faced by the oil and gas activity during 2010-2011, most notably:

- Routine and administrative procedures adopted in the assignment of tenders and the delay in the opening of credits, as well as the reluctance of some of the international companies in the implementation of their obligations.
- The technology used for the separation of gas from oil and oil refinery is outdated in addition to the aging transport pipeline networks.
- Laws and regulations that impede investment for foreign companies including the Government contracts law and investment laws.

5 - Electricity: Future Hopes

- Electric power production increased from (5258) megawatts in 2009 to (6149) megawatts in 2011, by an increase of (17%), but the actual production for 2011 is less than the planned by (25%). Perhaps the instructions of the government

contracts and delaying the credit opening in addition to the lack of expertise are among the most prominent reasons that explain the production gap.

- Per capita consumption of electricity increased from (1400) kw/h in 2009 to (1700) kw/h in 2010 and to (1800) kw/h in 2011, by an increase of (29.5%) for the period 2009 - 2011. This increase is still far from the planned one due to aging of the network and for being exposed to acts of sabotage, abuses and irrationality in the consumption of energy by individuals and institutions.
- The efforts made to improve the efficiency of the electrical system and to stop the degradation through rehabilitation of transformational stations, lines and cables by tangible completion rates that raised from (5%) in 2009 to (20%) in 2010 and increased to (60%) in 2011 for plants 400 kv, while the percentage of completion decreased by 30% to 132 KV stations in 2011. Given the length of time needed by the production lines for the purposes of rehabilitation and lack of response from international companies to invitations made to them and delaying the opening of letters of credit are all reasons affected the levels to achieve the goal of improving the efficiency of the electrical system for the years 2010-2011.
- The environmental Strategy was developed in the electricity sector in cooperation with international organizations, UNDP, and UNEP in 2010; however it did not achieve the full targets due to the limited use of the environmentally friendly technology and use of heavy fuel in the operation of gas stations.

6 – Manufacturing Industry: Deferred priority

- The manufacturing industrial activity achieved contribution rate in generating GDP for the years 2009-2010 by (2.9%) and the percentage declined to (2.7%) in 2011.
- The manufacturing industrial activity witnessed a deviation in the realized production rate in 2009 compared to the planned production by (51.5%) increased to (52%) in 2010 and dropped again to (51.2%) in 2011.

- There was an effort towards strengthening the role of the private sector in the manufacturing industry during the years 2010-2011 by granting incorporation licenses and promoting investment in this activity. Thus, number of projects increased from (213) fully incorporated projects with invested capital of (67.3) million dinars to (452) projects in 2010 with invested capital of (102.3) million dinars and to (574) projects with invested capital of (221.8) million dinars. This actual increase did not amount to the planned level in completing the objective due to non-determination of the proper mechanism that should be expanded through the private sector participation.
- In order to develop the industrial sector and entrench the foundations of private sector participation in the activities of this sector, three industrial cities were established in the provinces of Basra, Dhi Qar and Ninawa, in addition to proceeding with the topographic examinations and surveys plus the primary soil investigations to an industrial in Anbar province. The achieved proportion was (35%) to 2011.
- The private sector participation rate in the generation of industrial product accounted for (27.9%) in 2009 and rose to become (39.7%) in 2010 and the reason is due to the increase in the number of private industry in that period.

Infrastructure sector: achievements below the needs satisfaction

Water and Sanitation: Projects awaiting completion

A - Pure water:

- The number of projects for the liquefaction services and development project increased from 245 projects in 2009 to 251 projects in 2010 and rose to 260 projects in 2011 on the outskirts of Baghdad and the provinces. Further, projects intended for the rehabilitation increased from 275 projects in 2009 to 367 projects in 2010, but it fell in 2011 to only 72 projects. Perhaps the reduced allocations earmarked for projects and rehabilitation from (9.25%) in 2009 to (3.57%) in 2010 and then increased to (3.93%) in 2011 is a logical

explanation for the lack of horizontal expansion in liquefaction projects to cover all serviced areas.

- The rate of potable water network-serviced people in Baghdad was 100%. For the other provinces, the rate increased from (77.4%) in 2009 to (80%) in 2010 to (82%) in 2011. This increase is explained by the establishment of assembled water units and solar-powered units.
- Production of potable water quantities in Baghdad increased from (2250) thousand cubic meters / day in 2009 to (2350) thousand cubic meters / day in 2010 and to 2740 thousand cubic meters / day in 2011, which led to the reduction of scarcity from (35.8%) in 2009 to (21.7%) in 2011. At the same time, potable water production capacity increased in the provinces from (3228) thousand cubic meters / day in 2009 to (3835) thousand cubic meters / day in 2010 and to (3945) thousand cubic meters / day in 2011. With continued population growth, scarcity rate remained at (20%) for the years 2009 and 2010 and decreased to (18%) in 2011.
- The per capita share of potable water in Baghdad increased from (300) liters / day in 2009 to (325) liters / day in 2010 to have the target (98.5%) of the plan achieved and then the share increased to (350) liters / day in 2011 realizing the objective by (97.2%) of the plan. In the provinces, the per capita share developed from (300) to (320) to (335) liters / day for the years 2009, 2010, 2011 to have achieved the objective by (96.9%) in 2010 and (93.05%) in 2011.
- As a result of the implementation of the Rusafa water project and repairing large water networks and other ongoing projects, waste rate decreased from (40%) in 2009 to (35%) in 2011.
- Numbers of desalination projects in the provinces that suffer from high salinity, especially the southern provinces increased from (64) Projects for the years 2009 and 2010, with a production capacity of (34,980) cubic meters / day to (959) projects in 2011 with a production capacity of (54,670) cubic meters/day.

B- Sanitation:

- Numbers of qualified projects in the sanitation sector in both Baghdad and the rest of the provinces have not increased and the number remained at (3) projects in Baghdad for the period 2009-2011, and (29) projects in the provinces during 2009-2010 increased to (31) projects in 2011, which confirms inability to cover the population served by (100%) in Baghdad and by (35%) in the provinces.
- Sewage network lengths in Baghdad increased from (21444 m) in 2010 to (1112359) m in 2011 while rainwater network lengths in the provinces increased from (3445297) m in 2009 and to (3696236) m in 2010 and to (5077647) m in 2011.
- Absorptive capacity of the sanitation networks in Baghdad remained at the limits of (684000) cubic meters / day for the period 2009-2011. A modest change to the absorptive capacity of the sewage networks at the provincial level has taken place and increased from (551652) cubic meters / day in 2011, by change rate of (18.1%) only.
- Rate of sanitation network-served population in Baghdad rose from (75%) in 2009 to (80%) in 2010 to (82%) in 2011, while the percentage in the provinces rose from (25%) in 2009 to (26%) in 2010 and (30%) in 2011.

Transport and Communications: Achievements below Ambition

A - Transport: Suspended variety of activities

Roads and Bridges Activity:

- Slow progress has occurred to the improved current road network when (254) km of main roads only have been completed, (367) kilometers of rural roads, (46) km secondary roads and in 2011. No progress was made to improving the situation of border roads, and perhaps the security conditions, and lack of annual allocations for projects and the lack of specialized technical personnel and administrative routine, played a role in stalling the completion of the target set in the plan.

- Maintenance of more than 100 km of main and secondary roads.
- The number of bridges amounted to 1260 concrete and steel bridges and (52) floating bridges distributed throughout Iraq according to data in 2011. More than 36 bridges have been maintained in 2011.
- No weighing stations on the major roads between provinces and the commercial outlets between Iraq and the neighboring countries have been implemented but 22 stations in 2012 distributed to five governorates to be implemented in 2012 have been awarded.
- Cancellation of the road intersections with railway lines is still underway as well as rural road construction in accordance with programs covering the largest proportion of villages and agricultural projects to ensure linking agricultural production areas with the markets. The work is still going on in rehabilitation of external roads with marks the warning and directory signs.

Civil Aviation Activity:

- To the end of 2011, no construction of new airports has been commenced and no aircrafts have been added to the Iraqi air fleet. The work was only centered within the scope of rehabilitation of airports in Baghdad and Basra in slow-paced steps that never cater for the objective. Perhaps the suspension of the General Company for Iraqi Airways dissolution has reinforced continuity of absence of the strategic vision designed to activate the civil aviation activity.
- Training has been relied upon through development courses from both inside and outside Iraq for the development of national cadres and to create new and enhanced qualified cadres of the Iraqi air fleet.
- The stalled ability to cover the increase in passenger traffic on international and domestic transport via the Iraqi Airways planes by 100% completion rate in 2010 dropped to 86% in 2011 while the domestic transport achieved 66% in 2010 fell to 42% in 2011.
- The movement of goods by air has not indicated advanced valuable amounts in completion. Incoming shipped goods decreased from (8272) tons in 2010 to

(7916) tons in 2011 while the amount of outgoing freight was (128) tons in 2010 increased to (400) tons in 2011.

Railway Activity: Progressive Decline

- The single lane railways have not been doubled. The actually implemented line lengths amounted to (108) kilometers of the total planned of (220) kilometers by (49%) in 2011. Perhaps the lack of annual allocations for rail projects, and the complexities of advertising and referral procedures, and the signing of contracts are objective reasons to be far away from the objective.
- 50% of the designs of the intersections of railways with roads.
- Most of goals have been idle some of which are related to updating the communication and signal systems and reinforcement of the Iraq geographic location as a link between East and West, and equipment of the railway network with modern trains, train wagons, new trucks and electrification of the railway.

Ports Activity:

- Iraq has four commercial ports (Umm Qasr, Khor Al-Zubair, Abu Flus, and Maqal). Number of existing berths was (48) docks and the actually working (43) wharfs in 2011. The total capacity available amounted to (15.9) million / ton in 2011.
- Iraq has two oil export ports namely Basra and the deep port. Load of the first port has increased from (33.2) million tons in 2010 to (34.1) million / ton in 2011. Load of the second port has increased from (0.7) million / tons in 2010 to (1.7) million / ton in 2011.
- Depths in the in the shipping lanes and berth sidewalks improved to be (5.6-12) meters.
- Transition to the stage of building advanced ports to keep pace with the developments taking place in the international ports like the construction of Al

Faw port as well as building several berths in the ports of Umm Qasr and Khor Al-Zubair and dry canal.

- There has been a remarkable growth of the role of the private sector in the implementation, operation and provision of services to ports activity. Contracts of joint operation with the private sector to the ports pavements and yards have been concluded.

Transport of passengers and goods by truck

- The target to provide (300) commuter buses during 2010 and 2011 has been achieved by (134%) as (709 buses to support internal transport and (86) Busrd to support international transport in 2010 have been imported with the provision (246) Buses during 2011.
- Growth rate in the number of passengers increased in 2011 compared to 2010 by (3.35%).
- The private sector has been outsourced for cooperation in the field of joint operation of the passenger buses within Baghdad city with regular steps and follow-up and supervision of the company.

B- Communications:

- There is a relative increase in the number of electronic switches did not exceed (1.6%) for the years 2010 and 2011 compared to previous years.
- An increase in the total telephone lines in 2010 and 2011 has been achieved by (13.7%), the largest increase realized in those years.

Maritime Shipping

- Buying multipurpose vessel with capacity of (15-20) thousand tons.
- Contracts were signed for joint operation and rehabilitation of marine staffs.

Land transport of goods by truck

- Actual load of (747.5) thousand tons in 2010 was transported by realization rate of (71%) from the already planned to be transported amounting to (1050)

tons. In 2011, realization rate was (319%), where the actual load transported was (2342.5) tons and planned tonnage (732.9) thousand tons.

- There is an increase realized in the quantity of goods transported in 2011 by (248%) compared to 2010.
- The realized revenues in 2010 were (39.1) billion dinars by (112%) of the plan amounting to (35) billion dinars. In 2011, actual realized revenues amounted to (59.1) billion dinars by (141%) of the already planned (41.7) billion dinars.

Services Sector: a faltering step

Housing Activity: Exacerbated Deficit

- The provision of descent housing to the largest number of households across Iraq amounting to 2 million housing units is a difficult task as evidenced by the modest completion rate of (12.73%) of the total projects in 2011. (9%) of the total residential units of (28,707) units has been completed. This was attributed to poor efficiency of contracting firms in the public and private sectors alike.
- Numbers of borrowers from the Housing Fund in 2009 increased to (3175) borrowers. Despite the low number (2829) of borrowers in 2010 reduced to (2148) in 2011; however it rose in 2010 to (4185) borrowers. The interpretation of such change is ascribed to people expectations that the interest rate would drop on loans.
- Disparity rates between the provinces in the granting of loans have been reduced in accordance with the rate of housing deprivation. Missan governorate was ranked the province most disadvantaged by (44.5%) with the highest proportion of loans (13.5%) in 2011.
- To adapt regulatory and institutional and technical procedures in a manner to generate sustainable spatial activity through:
 - Rehabilitation of the concerned personnel to cope with the problem of housing deficit during the period 2010 and 2011.
 - To change housing loaning laws that would stimulate demand for housing production through the elimination of the interest rate on housing loans

amounting to (6%) to become (zero%) while the admin fee to be only (2%), reduce disparity within the loan limit between Baghdad, Qada and districts to be (35) millions in Baghdad and (30) millions in the provinces, districts and sub-districts alike in 2011.

- Endeavor to alleviate degree of overcrowding. Building permits granted to the private sector rose by (15.8%) for the period 2009-2011, while the number of new building permits, additions and amendments, demolition and reconstruction rose by (20.7%) of the total number of permits in 2011.
- Only one housing project for the persons of special needs has been completed in Basrah by (1416) houses under construction while the other projects are still to be referred and awarded by completion rate of (37.6%) only in 2011.

Tourism, Culture and Heritage: Promising Treasures

- The proportion of investment allocations for culture increased from (66.62%) in 2009 to (86.1%) in 2011 after the inclusion of the Baghdad project, the capital of Arab culture.
- The share of tourism of the total allocations of investment increased from (19.08%) in 2009 to (21.38%) in 2010 and then dropped to (5.77%) in 2011. That is attributed to decline of tourism activity within the religious tourism under the administration of the General Secretariat of the holy shrines, thus they are self-financed.
- Allocations of archaeological projects decreased from (15.29%) in 2009 to (8.12 9% in 2011, because the responsibility for archaeological projects have been entrusted with the provincial council and local administrations within the regions development program.
- Allocations for the tourist sites rehabilitation dropped from (84%) in 2010 to (49%) in 2011, which posted the plan goal in the leveraging the economic performance of the tourist sector and increasing their contribution in the generation of GDP and job opportunities.

- Numbers of hotels and touristic accommodation decreased from (662) in 2009 to (590) in 2010 with negative change rate of (-10%), due to poor service in general and tourism services in particular as well as the security situation that led to the suspension of natural and archaeological and therapeutic tourism.
- The private sector has made progress in the field of tourism activity, with the number of hotels increased by change rate of (2.4%) between 2009 and 2010. Share of the private sector was (98%) of the total hotels, apartments and tourist complexes. The share of the public sector did not exceed (2%) in 2010.

Seventh: Social and Human Development Indicators:

If the period (1990-2010) has seen a significant decline in social and human development indicators, followed by some successive achievements and interest in human development, and a focus on the social dimensions of economic development, certain improvements in human and social development indicators are shown by the data contained in the following paragraphs, which relate to the vital statistics of the population and education and health services, social care and other aspects of service. These indicators reflect the overall relative progress to the quality of life of citizens in the living standards of the Iraqi family thanks to what has been accomplished during the period in all service areas.

First: Education: the quantitative development and qualitative stability

The basic trends of education in the National Development Plan 2010-2014 were based on the integration of human capital as a directing path to development. It is an approach that leads to enhance and develop the capabilities of the Iraqi people during its full educational life cycle from education in early childhood and up to higher education as well as the other knowledge building pathways. The plan included basic trends most notably is equality for all to attend to comprehensive educational system, based on making available and achieving equal educational opportunities by supporting the expansion of the construction of schools and complete absorption of all pupils in the school age, girls' education, illiteracy and adult education; improve the learning outcomes depending on the updated educational system and quality

assurance, building on the reform of the school and the rehabilitation of the teacher through the development of professional and scientific skills; curriculum and student activities development; employ technology to improve the educational process, development of vocational education and improve its quality, as well as Gifted and Talented care. It has also focused on reducing disparities in enrollment rates between rural and urban areas and between provinces; and provide equitable distribution of opportunities for higher education of all types to meet the needs of societal demand in all areas; as well as raising the efficiency of institutional systems through rehabilitation and institutional support and development departments, capacity and scientific research, as well as encouraging community participation in the establishment and management and financing of higher education institutions.

The Plan has achieved the following accomplishments:

1- The educational opportunities

Enrollment in the educational system has witnessed a mixed trend during the years 2008/2009 and 2010/2011 by stage:

- Kindergarten stage, relative improvement took place from 63 children per thousand to 80 children per thousand, with highest increase of (25%) of the plan.
- Primary: No improvement in the enrollment rates, they remain within 91%.
- Secondary: the percentage of enrollment was (88%), deviation from the target by (97%) by (9%).
- Vocational: the enrollment indicator decreased significantly from the target rate of (14%). The percentage dropped from (9%) to (1%) for the same period.
- Enrollment rates in the teacher training institutes did not achieve any progress, and remained steady at 1%.
- University enrollment rates for the mentioned period rose from 8.3% to 12.3%, by an increase of (4%) of the target.

2- Educational kits

A - Student / School Index

- Kindergarten index has seen a rise from the rate of 130 student / school according to plan to 217 student / school, by the deviation rate of (40%).
- Primary rate dropped by 4 students / schools (from 350 to 346 students).
- Secondary rate rose by 7 students / schools (from 350 to 357 students).
- Institute for the teacher training has declined from 366 to 282 students.
- Vocational education decreased by 9 Student / School (from 200 to 191 students).
- Higher Education: numbers of government colleges rose from 201 to 238.
- Technical education: number of colleges has increased from 9 to 13 and the institutes maintained their numbers of 27 Institutes.

B- Student / Teacher

- Kindergartens: rate of child / teacher for years 20 to 26 student / teacher, increased by deviation of 12 child / teacher.
- Primary: the rate remained constant by 18 student / teacher, identical to a target in the plan.
- Secondary: the rate remained constant by 14 students / teacher, identical to a target in the plan.
- Vocational education: decreased from 9 to 5 student / teacher toward improvement. (Target is 14 students / teacher).
- Teacher training institutes: rose from 7 to 14 students / teacher, conforms to the target.
- Higher education has risen slightly to university education from 11 to 12 students / professor.

3 – Leakage

- Leakage rate in the primary education for the academic year 2009/2010 decreased from 2.9% to 2.5% for the academic year 2010/2011.
- Leak rate in secondary education decreased from 3.7% to 3.2% for the above period.
- Leak rate in the higher education dropped from 1.9% to 1.5%.

The data reflect the fact that the education system in Iraq continued to suffer from a structural and systematic defect in most of their track despite graduating hundreds of thousands of scientific and humanity disciplines. It is still faced by a lot of troubles. Often loses the ultimate goal of nurturing influential and active learners. Since childhood, the culture of fear and weakness is inherent to the character of the young students and young people in various stages of study and are subject to an education system that depends on traditional method based on backward useless curricula and based on dictation and listening. Also, the efforts of civil society organizations and the private sector in this area are still modest, and coordination between the different actors involved in these programs is weak, with a large deficit in the number of educational facilities and poor quality in addition to educators lacking the right educational and scientific efficiency.

• **Private Education**

- The contribution rate of the private sector in the educational process has increased. Number of private schools increased for the years 2009/2010 and 2010/2011 from 286 to 558 schools including: kindergarten from 125 to 223; Primary from 87 to 156; Secondary from 74 to 176 schools. The number of students enrolled in those schools increased from 4999 to 63070 students.
- Number of private universities and colleges increased from 19 to 23 for the above mentioned period. Their students amounted to 27,614 representing 18.8% of the total enrollment in all the universities and the Technical Education Commission.

- (25) Kindergartens for the period (2009-2011) in the public sector have been completed; the realized rate is only (17%) which is low.
- In evolution index of the private kindergarten numbers, the development plan succeeded in achieving the goal of stimulating the private sector to assume an important role in the education sector as the number of kindergartens rose from (125) to (223).
- In evolution index of the number of primary schools, the schools completed rate increased to (42%) in 2011 plus the effectiveness of supportive government legislation and incentive to include the private sector in the field of private primary education.
- In another sign of evolution, the number of intermediate and secondary schools, the government completed schools 2009-2010 hit the rate of (26.5%) a modest percentage based on the great helplessness in this sector. The rate for vocational education was (21.4%).
- 8 new specialized universities were created under the decision of the General Secretariat of the Council of Ministers on 25/8/2009.

Although the many achievements on the level of knowledge and skill building, the indicators refer today to problems or imbalances may have affected the educational development and the knowledge building in general, most notably:

- Illiteracy still constitutes the biggest obstacle in the educational system, as illiteracy rates are still around 20% of the population, with very low enrollment rates of illiteracy centers not more than 2%.
- Despite the attainment rate of 91% of students in the primary education, these rates decrease to 36% in the intermediate education and 18% in the secondary education.
- Disparity lingers between males and females in enrollment at all levels of education and between urban and rural areas and between provinces.
- Continued sharp shortage in the number of school buildings up to (6000) Schools was reflected on the high incidence of double and triple in the schools,

and high rates of overcrowding in classrooms because of the population increase.

- In light of the high population growth and inadequate human and material resources and technology, the quantitative part of education progresses on the account of the qualitative development. The knowledge attainment has grown very low with poor analytical and creative abilities of graduates which call for taking drastic measures to address the problem.

Second: Health: Incomplete Services

Despite the successive crises Iraq experienced and their effects to the total health conditions, yet such conditions have witnessed a relative improvement in health indicators over the past few years. The health strategy within the National Development Plan 2010-2014 was based on seeking to build a health care system to provide universal coverage of health services for all citizens; focus on developing the infrastructure of health care and control and funding them, to ensure effective services to citizens; with continued expansion in the establishment and primary health care units in all provinces.; as well as the development of public hospitals and clinics and health care services, which provides needs in urban and rural areas; besides enhancing capacity building opportunities in the medical and nursing fields; endeavor to insert the prevention and early detection in all aspects of the health system and to enable people to participate effectively in improving the health, care, and prevention of diseases.

The most striking signs of improvement:

- Significant improvement in life expectancy at birth rising from 58.2 in 2006 to 69 years in 2012.
- Decline in the mortality rate of children under five from 41 deaths per thousand live births in 2006 to 38 deaths per 1000 live births in 2011.
- Low rate of infant mortality of 35 deaths per thousand live births in 2006, to 33 deaths per 1000 live births in 2011 for Iraq in general and 30 deaths per 1000 live births in the Kurdistan region.

- The human resources for the years 2009-2011 experienced a gradual rise in the index of doctor, dentist, pharmacists per 10,000 of the population:

Index	2009	2010	2011
Doctor/population	0.72	0.74	0.75
Dentist/ population	0.16	0.17	0.18
Pharmacist/population	0.19	0.20	0.20
Health professionals/ population	1.5	1.6	1.7
Nursing staff/ doctor	1.4	1.4	1.5

The hospital and specialized centers (health care secondary and tertiary) witnessed:

Index	2009	2010	2011
Bed/1000 people	1.14	1.15	1.17
Bed occupancy rate %	51.6	51.4	60.1
No. of children friendly hospitals	36	37	37

- Lower prevalence rates associated with tuberculosis per 100,000 hundred thousand of the population from 78 to 65.
- High rates of chronic diseases during the period 2010-2011 from 50% to 74%.
- The number of medical and popular clinics rose from 298 in 2009 to 353 in 2010 and then to 2011.
- Adoption of programs to include the basic health service package in primary health care centers to ensure the actual needs of the people and in accordance with the optimal geographical distribution, and spread of health houses in non-populated areas and spaced groupings.

However, the health care system faces a number of challenges associated with the conditions of societal transformation, including:

- Decline in government funding and high rates of morbidity due to population growth as well as the high cost of medical supplies and services, along with a clear shift of balance in favor of the operational issues that impinged on the level of health services
- Increased pressure on the health care system, particularly public hospitals, which today operate using highest capacities, as well as their concentration in urban areas.
- Low medical staffs to the population compared to global standards, as well as neighboring countries.

Third: Women: The Limping growing role

Despite the many achievements in the field of narrowing the gender gap, especially in the areas of education, health, employment and political participation, yet, the efforts are still faltering and the gap is still wide, and that there is a lot of legal and legislative provisions have yet to be reviewed and filling gaps therein.

The indicators reflect evolution at the gender level:

- ✚ Low economic activity rates for women from 14.2 percent in 2003 to 13% in 2011.
- ✚ Low women representation rates in the parliament to 25% down from 27.3% in 2007.
- ✚ Illiteracy rates are still high among Iraqi population up to fifth of the population, but the rate is more among women.
- ✚ Narrow gender gap in primary education (0.93), but widens in intermediate and secondary education to reach (34% and 37.5% respectively).
- ✚ Decline average age of first marriage for women from 23.5 years in 2009 to 22.4 years in 2011.
- ✚ Decline in women's representation in government from six ministers in 2004 to one minister of the current Ministry.
- ✚ Low female bread winners from 11.5% in 2006 to 7.7% in 2011.
- ✚ Doubled divorce rates in Iraq from 28690 in 2004 to 53840 in 2010.

- ✚ Low participation gap between women and men in the labor market in urban areas compared to rural areas. The gap between women and men was 60.6 in urban areas compared to 57.7 in the countryside in 2003. The rate fell to 57% in urban areas compared to 51% in rural areas in 2011.

Fourth: Youth: institutional development and values challenge

The challenges facing the youth remained as they are- in part, and represent a heritage excreted by decades of economic mismanagement and poor investment of human and material resources. The consequences of the successive wars reinforced their negative conclusions in addition to the crises conditions. It spite of changing economic and political conditions, and the tangible achievements made in the field of youth, this segment continued to face serious challenges that hinder the chances of sustainability and progress:

1. Educational indicators

- Youth enrollment rates in education are still low (18% intermediate and 14% for higher education).
- There is a clear disparity in enrollment rates between young males and females (44.4%) for males (33.5%) for females.
- Rate of dropouts from the education for the age group (15-24) has exceeded half because of the unwillingness of many of them in the completion of the study.
- Despite the relative improvement in the rate of literacy among young people, illiteracy rates are still high among them, as the percentage of illiteracy among the age group (20-29) years is 16.3% of the total youth, stood at 21.2% among females compared to 11.7% for males.

2. Indicators of economic activity:

- * Recent surveys have shown relative low rates of economic activity for young people aged (15-24) years compared to previous surveys.
- * There is a trend of increasing economic activity rate for young people in rural areas compared to urban areas (37%) rural versus (27%) for urban.
- * The difference in the rates of major economic activity for the class (15-29) years between males and females remains large in favor of males (63.4%) compared to (12%) for females.
- * The economic activity rate among young females is characterized by being high in rural areas compared to urban (14%) in rural areas (6%) in urban areas.
- * Highest rate of economic activity among young people (15-24) in 2011 was recorded between a diploma holders or higher (61%), among males, highest economic activity recorded among illiterate was (76%). Among females, the highest rate among the diploma holders or above was (50%).

3. Unemployment indicators:

Despite the low youth unemployment rate during the years 2008 - 2011, the youth unemployment rate in the age group (15-29) amounted to 18.2%, which is higher than the overall rate of unemployment in Iraq 11.1%, for males 15.5% vs. 33.3% for females.

- ✚ Unemployed rate among intermediate certificate holders or below is (13%), while the rate increased among the certificate holders higher than the intermediate is (24%).

Lots of value codes retreated among the youth like volunteering, participation and responsibility, to be replaced by indifference, fear of power, and loss of confidence, self-centric and the desire to emigrate. Some kind of social disintegration and separation has taken place between the youth and the community in which they live.

Fifth: Social Development:

Areas of social development include a broad range of stakeholders ranging from childhood to old age; from the start-up phase of the study until retirement. They are all covered by the government responsibilities to its citizens, and the responsibilities

of citizens to their families and their communities. The government has taken during the period of the plan relatively effective measures to enhance social conditions with the consolidation of the values of tolerance and maintain the constants with enhanced opportunities for social integration.

The National Development Plan 2010-2014 in the field of social development sought to: give special attention to the fragile categories and limited income to improve their living conditions and strengthen opportunities for social stability and beef up the institution of the family; and to observe considerations of balance between the rights and duties of the development partners in terms of State and public institutions, the private sector and civil society - in the fields of investment and expenditure and operating; expand the base of participation, which enhances the contribution of the private sector and civil society to support and improve the current social protection system to ensure it meets the needs of the target groups; promoting social responsibility among all citizens; integrating disabled into labor force; support the professional future of people at-risk (economic participation of women, youth and unemployment). The development indicators in the field of social development reflect the following:

1- Social protection Network

- The amounts paid to the categories covered in the period (2009, 2010 and 2011) were between (142.552, 684.150 and 462.644) million dinars, through four annual payments.
- The number of beneficiaries from the network decreased by (131%) between 2009 and 2010 due to changes in the network coverage controls for women, and the Department of Women's Affairs assuming the job beginning of 2010.
- Rates of beneficiaries returned to increase to (24.4%) between 2010 and 2011.

2 - Disabled:

A - Institutes of Mentally Retarded

- The beneficiaries rate from the mentally retarded institutions increased during 2009, 2010 and 2011 (2.4%) and (5.1) respectively.
- Benefit rate from the institution capacities increased in the number of beneficiaries during the years in question (75%, 76.8% and 80.7%, respectively).

B- Institutions of the physically challenged

- Numbers of the beneficiaries from the institutes of the physically challenged persons for the above mentioned period increased between 2009 and 2010 by (8.3%) and decreased between 2010/2011 by (0.33%).
- Benefit rate from the capacity witnessed increase in the number of beneficiaries during 2009 and 2010 by (44.5% and 48.2%), but dropped slightly in 2011 by (48%), the majority of whom were male.

3 – Orphanages

- The number of the State orphanages during 2009 and 2010 was (19) rose in 2011 by (21%).
- The number of beneficiaries during the period 2009/2010 and 2010/2011 increased by (0.3% and 17.2% respectively).

4 - The elderly: the percentage of utilization of capacity from the elderly care homes during the periods mentioned above was (72.4% and 79.1% and 85% respectively).

- Completion of non-institutional care services include a variety of programs like: program for foster families, help paralyzed children program within their households and help disabilities program.
- The associations and charitable organizations play a key role in the provision of care services and social support widely to the poor and needy, distributed to

the areas of education and private training, child care, health care, and care of the disabled, the elderly and other areas of social solidarity. The development plan 2010-2014 stressed on the important role of NGOs and charities in providing support to the needy.

A - Poverty and living standards: serious programs to achieve equity:

The national strategy process designed to alleviate poverty was accompanied by taking important steps, inter alia, the establishment of an executive secretariat in which the ministries and concerned authorities are represented. The State during the year 2011 provided about 570 billion Iraqi dinars allocated part of them to build schools, health and the establishment of low-cost parks. It also allocated amounts to the most poverty governorates. The State also allocated budgeted money for the social care. .

Eighth - Spatial development: a means of achieving justice

The Development Plan aimed to address the imbalance of development in Iraq to reduce the spatial variability with its economic, social and construction dimensions whether between provinces or between rural and urban environment. The plan also targeted the treatment of distortion in the urban structure of Iraq represented by domination of Baghdad on this structure at the national level and the dominance of the provincial centers to the rest of the urban structure within the province.

The diversity of natural conditions, terrain and arable soil and the presence of the Tigris and Euphrates and their tributaries in addition to the blessing of huge carbohydrates, the existence of major/minor development centers in all provinces in Iraq provide an adequate basis for the springboard to correct imbalances in the structure of spatial development through redistribution of investments geographically

to be a more balanced and integrated form and commensurate with the economic, social and environmental features and characteristics for each province or part of it and to achieve the achievements in the field of reducing development disparities between provinces and between urban and rural areas and eliminate the phenomenon of bilateral spatial development and hierarchical distribution that is never appropriate for human settlements.

The achievement of these changes at the spatial structure level requires a long time in addition to database based on surveys and statistics. As this is not available in many fields, then the achievement indicator due to the plan implementation shall be hard to accurately determine. However, there are several indicators towards achieving justice and fairness in the distribution of the development fruits represented by the following:

- 1- The development of special software for regions development based on the distribution of a certain proportion of the investment budget reached in 2012 about (20%) to all the provinces and on the basis of population volumes of the provinces has contributed significantly to reduce development disparities, particularly in the provision of services between provinces and within the components of the same governorate.
- 2- There is an improvement in the degree of deprivation for the provinces that were less favorable of the development fruits in the past decades as a result of directing investments to them commensurate with the relative characteristics and needs.
- 3- There is a relative improvement in the urban system towards the development of small and medium-sized cities (Talafer and Fallujah, Samawah ...) with the continued dominance of Baghdad on the urban structure.
- 4- Three industrial cities under construction.
- 5- Started to give attention to Integrated Rural Development and through the allocation of land for the establishment of modern rural villages aimed at the development of the promising areas in the Iraqi countryside through the

allocation of agricultural engineers and agricultural graduates of vocational high schools.

- 6- Promote decentralization in the management of development in the governorates and give local governments the necessary powers to develop plans and identify priorities and follow up the implementation of development projects.

Ninth - Environmental Sustainability: to modernize the development approach

The Development Plan 2010-2014 was launched to make sustainable development a principle milestone in all its implications giving priorities in connection with its strategic goals, development activities and selected projects seeking to integrate the environmental dimension with economic and social dimension in development activities and thus succeeded in making considerations and environmental standards an integral part of development decision-making process at the total and partial level thus achieving tangible progress to the effectiveness of implementing the strategic objectives of the plan noting the progress degree never come close to the ambition level at the national and international level.

1- In the field of environmental control and monitoring: selective evolution

- Monitor and evaluate the air quality based on 10 fixed monitoring stations distributed in Iraq governorates in 2010.
- Monitor and evaluate the water quality, depending on 148 stations distributed along the rivers in 2011.
- Monitor and evaluate the marshes, biodiversity and pollution sites and inventory control and chemicals events of mine affairs for humanitarian purposes.

2 - In the use of environmentally cleanest technologies: eco-friendly policies

- Rehabilitation and rebuilding of dust precipitators for 14 cement plants.

- Reduce the amounts of tetra lead Ethyl added to gasoline to become (0.15) g / Pb / liter in 2010.
- Reduce the sulfur content in crude oil production and gas oil to 50 ppm as a first stage in 2010.
- Reliance on non-renewable energy alternatives such as solar and wind in irrigation techniques, industry and domestic services.

3 - In the fight against desertification:

- The desert crawling was encountered through sand dunes stabilization, which cover an area of 4 million acres and the treatment was carried out by 500 thousand donums in 2011.
- 57 deserve oases have been established to take advantage of the western desert resources for food security.
- Development of vegetation in desert areas through the implementation of the 16 stations of natural pastures during the period 2006-2011.
- Increasing numbers of nature reserves to 13 covered all of Iraq's provinces in 2011.

4 - In reviving the marshlands:

- 2710 square kilometers of marshes have been dumped in 2011.
- Hydrological monitoring stations have been installed to control the entrances and exits of the water in the marshes.
- Drilling, clearing and rehabilitation of canals and streams feeding the marshes.

5 - In the field of waste removal and recycling:

- The amount of waste removed was 48 thousand / day in 2011.
- Waste removing services covered a rate of 91.3% in urban areas and 7.5% in rural areas in 2011.
- The number of regular landfills was 32, irregular 357 sites in 2011.

- The number of machinery used for removing waste was (13882) in 2010 and covered the rate of 96.7% of the services of Baghdad.

6 - In the field of international cooperation:

- Iraq during the period 2009-2011 acceded to more than 11 international environment conventions 7 of them were officially announced while the remaining is being studied to pave the way for accession during the next period.

7- In the field of environmental awareness raising:

- Iraq sought to introduce sustainable environment and development into the educational curricula for various stages during the years 2010-2011. Also It has concerned with preparing publications concerned with environmental culture in terms of pamphlets and posters as well as the preparation of TV programs and documentary films related to the environmental work.

Tenth - Poverty alleviation strategy: serious programs to achieve social justice

The results of the poverty measurement and analysis show that poverty rates in Iraq are about 23%. Poverty is centered in rural areas to a greater extent than urban where the rates are 39% and 16% respectively. It is found that poverty not deep-rooted in evidence by the poverty gap of 4.5%, but rises in the countryside to 9% and three times higher than it in urban areas 2.7%.

The national strategy objectives for poverty alleviation have been set after approving its application in 2009 and the implementation of programs and activities contained in the outputs and outcomes of the strategy. The objectives are highly harmonious with the objectives of the National Development Plan and national efforts to achieve the third Millennium Development Goals to translate the goal of reducing the

incidence of poverty at the national level by 30%, i.e. reducing the poverty rate from 23% to 16%.

The two-pronged strategy included: poverty alleviation and continue to enhance the chances of social integration to ensure fair and balanced participation of the components of the Iraqi society. Therefore, the National Development Plan has paid attention to the subject of poverty by giving adequate space of the development effort during the years of the plan in order to address the cumulative burden of poverty and shaking of the human security pillars of the Iraqi people. However, this interest has not been embodied on the ground due to non-allocation of investment needed to fund programs and activities contained in the outputs and outcomes of the strategy in 2010.

The actual implementation started only in 2011 through the implementation of the national development plan projects of the strategy – concerned ministries, which covered some of the poor areas and the level of Iraq. The coverage rate increased in 2012 after the allocation of 707 billion dinars has been reduced by 30% to reach to 495 billion dinars from the investment budget for the purposes of the implementation of the strategic activities within the amounts allocated to ministries and provinces covered by the amount of support. The amount was distributed to the projects of priority to the poor as well as the activities that achieve more goals. The projects cover the seven poorest governorates and most disadvantaged namely (Muthanna, Babylon, Salahuddin, Wasit, Diyala, Karbala, Qadisiyah). They ensure participation of both the private sector and civil society organizations. These projects are centered in the following scope:

- Support small loan fund for the poor
- building low-cost housing complexes.
- Eliminate the mud schools
- Strengthening of primary health care services

Among the most prominent investment projects that have been implemented and financially aided from the budget allocations for 2012 that falls within the activities of the poverty alleviation strategy and taken part in achieving more goals than the outcome at the ministerial level as well as at the provincial level are the following:

The achievements in 2012 heavily subsidized by the investment allocations estimated at 495 billion dinars are only compensation for the failures of delaying implementation for the years 2010-2011 and affected to a large extent by the absence of investment allocations to the Strategy activities during the above mentioned years, as well as poor coordination, communication and connection between focal points and the executive body of the strategy, not to mention the absence of active backing by government agencies to the executive side of the strategy and the poor partnerships with the private sector, civil society and discarding the executive body capacity building. Besides all the foregoing, land allocation problems remained one of the most important challenges facing the implementation processes. Consequently there is an urgent need to supportive legislations to apply the terms of the strategy, including exceptional decisions to move at a steady pace to ensure real implementation of the contents of the strategy and their trends to achieve a fairer society.

Eleventh– Third Millennium Development Goals (MDGs): National Adaptation and meaningful completion:

Iraq was one of the developing countries that responded to the Millennium Declaration, which included a set of values and principles regarding human dignity and human rights such as freedom, equality, solidarity and tolerance. They have been expressed through eight goals and 18 targets and 48 indexes called the Millennium Development Goals, Iraq sought to adapt those goals nationally in 2009 in order to:

- Deepen understanding at the national level to gain ground on some of the Millennium Development Goals and the slow pace at the level of the others and then to find out the elements of success and the reasons for failure.

- Establish and involve national coalitions composed of partners (governments, communities, private sector, civil society organizations) to work together to develop a practical plan prompting raise of achievement level and addressing obstacles that hinder progress in rates.
- Stimulate collective action and push for more efforts and resources for the benefit of the Millennium Development Goals.
- Ensure the strategic reorganization of national efforts and consistency with the global developments.
- Provide a systematic approach to overcome the bottlenecks and bright points in the development process.

Iraq succeeded in settling those goals through having them integrated into the national strategies such as strategy of poverty alleviation and the National Development Plan 2010-2014, which was characterized from the previous plans by their interest in the distribution of the development fruits equally and fairly at the level of Iraq as a whole, and according to levels of deprivation, need and volumes of population in the area of services and infrastructure , and according to the capabilities and comparative advantage in the production sectors. These tracks have made it a plan beyond the issue of the absence of intellectual and practical base of the sustainable human development that has distinguished the previous plans and driven them off the standards to improve the quality of life. It has also concerned with the environmental dimension, by adopting sustainable development as a road map for their development effectiveness. It also gave the plan an outstanding interest to the social and human aspects like caring for fragile categories in economy, poverty alleviation by 30% over the rates for 2007, woman empowerment and promotes equality with men, good governance and mitigates the bilateral spatial phenomenon through the support of administrative decentralization and local governance in all provinces. Thus, the development plan was designed to be integrated and merged with their priorities into the third Millennium Development Goals and the six outcomes of the national strategy for poverty alleviation to have the right to be called “national development plan enhancing completion rates of the Millennium Development Goals third.”

The progress in implementing the Millennium Development Goals in 2011 and comparing them with 2007 has been monitored, reflecting clearly the nature of the economic, political and social positive/negative changes so that follow-up results will be the basic compass relied upon in evaluating efficiency of the economic performance to the total and sectoral plan goals, aspects of the human development and a basic criterion to build and design goals and priorities to the next national development plan 2013-2017 ..

Progress monitoring in achieving the goals in 2011:

The first goal: to eradicate extreme poverty and hunger:

- Lower proportion of people living on less than two dollars and a half a day from (13.9%) in 2007 to (11.5%) in 2011.
- Access of southern provinces to the goal is not expected in 2015 for the growing proportion of people, whose daily spending is less than 2.5 dollars in 2011, including Muthanna (29.4%), Dhi Qar (37.8%), and Nineveh (26%) and Basra (16.1%).
- Lower poverty gap rate from (5%) in 2007 to (2.6%) in 2011 and continued disparity in realizing this goal among the governorates.
- High GDP growth rate per capita from (0.8%) for the period 1997-2007 to (2.1%) for the period 1997-2011.
- Lower rates of unemployment among young people aged (15-24) years from (30%) in 2008 to (22.8%) in 2011, but unemployment remained higher among young females than young males.
- Lower rate of underweight children less than five years of age from (15.9%) in 2000 to (8.4%) in 2011, but the southern provinces compared to the rest of the provinces have been suffering from high proportion of underweight children less than five years of age.
- High rate of food deprivation for the southern provinces compared to other governorates.

The second goal: Circulation of primary education: progress in goal

- Iraq has gained ground in the net enrollment rate in primary education when increased from (76.3%) in 2000 to (85.8%) in 2006, to about (92%) in 2011, and is expected to arrive in 2015 to 95% with the continued disparities in the rates achieved between males and females and at the level of urban and rural areas and between provinces.

The third objective: to promote gender equality and empower women

- Girls enrollment ratios to boys in primary education increased from (85%) in 2000 to (88%) in 2006 to (94%) in 2011. Also the rate in secondary education increased from (66%) in 2000 to (75%) in 2007 to (85%) in 2011.
- Rate of women working with pay in the agricultural sector at the level of Iraq in 2011 increased to (14.7%) compared to (12.1%) in 2008, with a wide variation among the provinces, Erbil was ranked the first with (19.8%), while Ninawa ranked last by (7.8%).
- Gender equality in Iraq is not expected to be materialized due to the influence of cultural and social factors, and that access to the goal requires longer time.

Fourth goal: Reduce the infant mortality rate

- The rates of children mortality less than five years of age declined significantly. The children mortality rate- less than five years of age, decreased per 1000 live births from (101) in 1999 to (41) in 2006 and then to (38) in 2011. And thus the goal is achieved.
- Rate of infant mortality decreased from (50.0) per 1000 live births in 1990 to (35) deaths per thousand live births in 2006 to about 32 deaths per thousand live births in 2011. Thus, the rates are still far from 2015 target.

Fifth goal: improving the health of mothers

- Birth rates undertaken under the supervision of a qualified competent person between (2000 and 2011) witnessed a remarkable increase from (72.1) to about (91) respectively. In addition, deliveries under the supervision of a qualified person in the countryside significantly compared to urban, increased from (60.2%) in 2000 to (78.1%) in 2006 to (84.5%) in 2011.
- Rising demand on using contraception in most provinces during the period 2000-2011, rising from (43.5%) in 2000 to (49.8%) in 2006 to (52.5%) in 2011.
- Birth rate among adolescents: a modern revised indicator used to monitor the phenomenon of premature births for teenage girls aged (15-19) years. The results of the cluster survey in 2011 showed that the rate of teenage births is (82) births per thousand women aged (15-19) years.
- In the field of pregnant medical care, the percentage of mothers who received tetanus toxoid vaccination was (63.2%). These percentages vary according to the educational level of the mother as it was (81.7%) of the mothers with qualification, compared with (49.1%) for the uneducated. No change has been brought about on the rates between provinces for the years 2006-2011.
- The unmet need in the family planning field between 2006 and 2011 slightly decreased from (10.8%) in 2006 to (8.0%) in 2011.

Sixth goal: the fight against HIV/AIDS and other diseases

- The number of AIDS cases in 2010 was (12) only (10) of males and (2) females, mostly in the province of Baghdad. This number had fallen to (11) in 2011 out of them (7) males and (4) females.
- The number of cases is very few because of health awareness and conservative social education which annually does not exceed 10-11 cases. Thus, the goal has been achieved.

Seventh goal: ensuring environmental sustainability:

- Despite the improvement in the proportion of people who can get steadily improved water source, there is a discrepancy between the provinces in the proportions of individuals by the main source of improved water. Rural and remote areas suffer from lack of access to services and bringing potable water is very hectic and costly usually borne by women.
- Rate of housing units associated with the public water network improved from (81.3%) in 2007 to (84.5%) in 2012, while the proportion of the population receiving steadily improved water source increased from (83.3%) in 2000 declined slightly in 2006 to (79.2%) and then increased again to (86.8%) in 2011.
- Rate of population who can benefit from improved sanitation services increased from (92.5%) in 2000 to (93.8%) in 2011.

Eighth goal: the establishment of a global partnership for development:

- The development partners in the implementation of their activities in Iraq depended on the National Development Strategy (NDS) and the International Compact for Iraq (ICI) to upgrade the welfare of the Iraqi people by four areas namely: promoting economic growth; revive the private sector; improve the quality of life; promote security and good governance.
- In the area of debt relief, the Group of Paris Club reduced their official debt of 114 billion dollars in 2003 by (80%) of the nominal value of the debt balances.
- Although Iraq's delay in accessing the modern communication technology and informatics, it has made great achievements over the years 2004-2012.
- Rate of households with a fixed telephone line was (5.1%) compared to (94.3%) of the households with a mobile phone.

- Rate of households owning personal computers has increased from (5%) in 2004 to (17.2%) in 2011. At the same time, rate of households having satellite has increased from (40%) to (96.1%) for the same period.

Conceptual Framework of
the Plan
2013-2017

The preparation of this plan was confronted with conditions that were not much different from those in preparing the plan for 2010-2014, in economic, social and environmental inputs. Despite the relative achievement of the first year in the previous plan, it is still far from the rates that the plan aimed at in many areas.

The 2013-2017 plan represents a new stage in development planning and is the first phase of a strategic vision to improve society and the economy.

The constitution, national strategies and millennium development objectives, form a reference framework to support this vision, which aims at a flourishing and diversified economy, led by the energy, agriculture and tourism sectors as development axes, while the private and public sectors and civil society will be partners in development, whereby the centralized and decentralized roles in the management of development are integrated. The directions of the federal budget are compatible with the objectives of the plan to achieve monetary and financial stability, and to bridge the gap between urban areas and the countryside in the governorates, to ensure equal opportunities for both genders in economic participation, and building knowledge and skills suitable for the knowledge economy and the labor market requirements, and to guarantee comprehensive medical care for a healthy society and population, and to raise the level of good social care to cover the needs of vulnerable categories, and to improve social development while achieving environmental sustainability to establish the foundations of a green economy. All these represent options for future directions that will satisfy the ambitions of Iraqis and allow it to build a bridge between a tragic situation and the development to which it aspires.

This plan will clarify the growth pattern of the previous one, and incorporates all local and international changes, in particular the level of security and the fluctuation in international oil prices and the positive change in Iraq's oil production due to the production licenses, and its effect on economic and social development and the indicators of sustainable human development. This requires adopting policies and programs that will take into account current affairs and adopt future objectives for Iraq to take off and become an advanced nation that is constantly growing and providing a suitable income for the present generation and fairness to future generations through and their rights,

rather than satisfying current needs, to arrive at a society that is stable, homogeneous and achieving.

Assumptions of the plan:

This plan assumes five basic hypotheses that will be the take off points for the plan and its implementation.

- 1- Public and private sectors and civil society are partners in establishing the foundations of a successful conversion to a market economy
- 2- Preparing a suitable economic, social and environmental framework, also good and transparent governance, that will lay the foundations for sustainable development after 2017
- 3- Adopting balanced development supported by attracting sector and regional axes to develop a method to establish the vision of the future.
- 4- Developing the competitive capacity of the economy is a necessary condition to accelerate merging it with the regional and international economy, and is fundamental for the conversion to a market economy
- 5- Adopting the principle of right in setting development priorities to improve the quality of life

Basic principles of the plan:

- 1- The planning will be based on factual inputs
- 2- The plan is to establish the identity of the Iraqi economy in the long term, in order to provide the suitable conditions to transform it from an income based nation to a productive nation
- 3- Establishing an empowering environment for society and the economy during the years of the plan, and for 2012 to become the beginning of the sustainable development stage
- 4- Focusing on growth that will generate jobs to decrease unemployment and poverty on the principle of fairness.
- 5- Activating the role of the private sector through diverse investment management whereby the private sector will become a strategic partner at this stage (and increase its proportion in generating GDP

- to 70%) with a flexibility that will encourage ambition and confidence among investors
- 6- Continue with empowerment as a method of building human capacity in order to establish a knowledge-based economy and to enhance the role of women and youth in development
 - 7- Focusing on the principle of communal partnership in drafting policies and goals and adopting programs and setting priorities of development projects. This became clear during meetings with sector representatives with the ministries and the governorates and CSOs during the plan preparation to achieve a general agreement that will harness resources and efforts to reach the planned goals
 - 8- Giving economic, social and environmental considerations equal weight in the plan
 - 9- Taking into consideration the effect of the change in the demographic balance according to age groups, and its effect on economic growth, through adapting investment expenditures in the federal budget to generate suitable jobs, and adapt social security directions to respond to the needs of vulnerable categories, considering levels of deprivation between the countryside and urban areas and between governorates
 - 10- Growth will improve during the years of the plan with the contestant improvement in security and political stability.

The philosophy of the plan:

First: A proposed development module, this is based on the assumption that balanced development has elements of imbalance in the main structures of production. Unbalanced development includes elements of balance imposed by the nature of interconnecting relationships between economic sectors.

Based on that, balanced development powered by attracting selected sectors for growth (energy, agriculture and tourism) will form the main and secondary arteries for development, according to capabilities in the governorate which are the base of unbalanced development.

- 1- This is what the module represents in the plan. The energy sector, and the oil sector specifically, will become a financing artery while

the others will grow during the years of the plan as they will cause changes in structures in other sectors (economic, services, human and environment). This requires planning to develop and adapt these arteries to make them priorities in the strategic plan objectives, and to make it an effective and positive way to prepare foundation for economic take off.

This requires an effective development management that will highlight the roles of the State and the private sector in implementing the investment objectives of the plan, so that the general investment will generate market incentives and encourage private sector investment. Private investment should be able to break the limitations of available supply through its flexibility in effective and productive investment decisions, allowing expansion in private establishments which have really adapted to the required economic development.

Second: philosophy of economic management

The roles between the private and public sectors were linked to the domination of the State and its control of surpluses from oil revenues .This has caused a type of relationship that has changed through time but in all cases it was not aimed at development, and therefore emphasized the control of the public sector and exclusion of the private sector or limiting it from achieving development which was monopolized by the Sate.

The plan therefore seeks to rebuild the role of the private sector to complement the public sector, which will continue to have a strategic role during the plan. And the plan seeks to create an empowering and participating environment that will attract capital and expertise and merge them with the development systems that support the private sector in various ways to enhance the conversion to a market economy according to the principle of efficiency and competitiveness.

Principles supporting the development module philosophy

First: diversity and partnership: adopting diversity in investment management of development projects as a base for achieving planned objectives and establishing an effective partnership between the private and public sectors.

Second: power in decentralization

Decentralization is incorporated in the constitution, which stipulates directly elected government institutions to be responsible to its citizens to be considered as the implementation of good governance. Based on these principles, which admit the existence of an independent entity for local units that have special interests that are distinct from national interests, allowing external administrations that can be organized locally not centrally but without contravening national goals.

Third: Green investments

As a green economy will achieve an improvement in welfare and social equality, and reduce environmental risks and the lack of ecological resources and also enhance biodiversity, the plan will merge environmental inputs in the development system so that investment in the environment will become the basis of a green economy by adopting eco-friendly projects and policies that will reduce harmful emissions and reduce desertification and the pollution of air, water and soil and, to revive the marshes and maintain biodiversity and expand green spaces. The plan also calls for reform of policies and changing regulations and imposing environment taxes and adopting regulations for imported goods

Fourth: empowerment and equal opportunities

Empowerment is needed for sustainable human development and equal opportunities by gender, and the reduction of poverty.

Fifth: suitable work

Developing the labor force and improving labor market management and providing a suitable investment and legislative environment for job opportunities, particularly for the young, for a better life.

Challenges

Despite what has been achieved during the past years, there are still wide differences in social and economic realities, and the Iraqi citizens aspirations for a higher level of welfare, there are still strong political and security challenges that impact directly or indirectly on stability and the ability to implement development projects. These challenges can be defined as follows:

1- Economic challenges:

- Oil revenue continues to be the main source for financing the plan and has monopolized finance, production and exports and limited other options in the Iraqi economy.
- Capital accumulation sources are embodied in fixed assets with no sources from productivity sources or technical progress.
- The lack of a complementary, active and competitive environment where the private sector has a limited role and follows the public sector's activities which makes it unresponsive to be transformed to a market economy.
- The banking sector has not kept up with global developments in the fields of financial and monetary systems and in IT, which limit investment by the private sector.
- The low efficiency of the trading sectors has led to a decrease in production and an increase in imports.
- The labor market in Iraq is still traditional and has not kept up with economic developments and knowledge, nor is it responsive to the type of labor force needed, which has caused a relative increase in unemployment due to the lack of an effective employment policy and a weak role for the private sector.
- The continued imbalance in public expenditures in favor of operational expenses rather than investment expenditures has also contributed to the imbalance between supply and demand.
- The low competitiveness of economic sectors as a result of applying policies and the high costs of production and lack of protective legislation for national products, in particular the customs duties and the decreasing role of the State in supporting local products.

- Unorganized economy forms a large part of the economy and it is affected by internal and external changes causing labor shortages, also financial and administrative corruption and tax evasion. This also affects economic stability and statistics causing disturbances in distribution of financial resources and the labor market.

2- Social challenges

- Human development guide for 2011 indicates that Iraq is among the last ten countries in the world in human development (its rank is 132). This ranking reflects the status of human development in Iraq in the areas of health, education, environment, gender gap and poverty.
- The transformation to a market economy has caused huge social costs due to the lack of protective and effective social policies such as social security.
- The continuing crises have had environmental impact on Iraqi society: it increased the number of vulnerable categories which have become a burden on the federal budget.
- Illiteracy is still the biggest obstacle in the education system, and a fifth of the population is illiterate as shown by the low rate of participation in eradication centers which is below 2%.
- The very high shortage of school buildings is the most important problem for the school years 2009- 2010, 2010-2011, and many schools had to have two or three sessions because of over crowding
- Increased pressure on public health centers which are working today above their capacity, compared to the private health sector, due to the lack of security and the low cost of health services and the higher rate of disease.
- Lack of consistency between investment allocations for health care and the population density. There is also imbalance in the indicators of the number of doctors required for the population.
- Despite the rise of youth numbers in the population, employment policies are still unable to provide suitable jobs.
- Iraqi women are still finding difficulties in achieving leadership roles in political and legislative institutions which are dominated by men. There are also no real or effective partnerships in most of the legislative, judicial and executive authorities.

- No consistency between the output of high education and the labor market. Humanitarian subjects are still the main studies in universities, which is a waste of higher education output.

Third: environmental challenges

In Iraq, water, air and soil are still suffering from the high level of pollution, despite a relative improvement in the last few years, which has negatively impacted sustainable human development indicators.

- The laws and regulations in Iraq are incapable of confronting environmental issues
- Lack of trained staff in environmental work.
- Low awareness of the environment has weakened the social responsibility of the citizen regarding the environment.
- Incomplete implementation of international treaties has not been followed up by the bodies concerned, which reflects negatively on the relationship with international partners
- Low or non-existent private sector investment in the environment has contributed to the deterioration in Iraq's environment and its ecological systems.
- Absence of a policy for rural development and the continued difference between governorates and legislation in favor of urban areas has made the countryside ecologically threatened
- Lack of awareness of the importance of a green economy to improve the environment

National Development Plan 2013-2017
Financial Sector ...Budgets for
Consumption and Development

Financial Sector ...Budgets for Consumption and Development

First: Current financial policy in federal budget

To analyze the structure and policies of Iraq's economy adopted by the government to improve overall economic performance, it is necessary to look at directions of financial policies and their effects in addressing cyclical economic changes, and methods of maintaining stability. The performance of the policy in Iraq and in evaluation of its outputs for 2009-2011 will be through its main tool, i.e. the general budget. One of the main features of the budget is its correlation with the economic cycle. This correlation can be variable oil prices in the international energy market and its effect in the budget as a natural consequence of Iraq's reliance on oil revenues as the major source of funding its budget, reaching 93% in 2009, 95% in 2010 and 96.6% in 2011. In the budget estimates an estimated price of oil was adopted which is fixed and inflexible. Iraq's economy grows once it is injected with oil revenues when the price of oil rises in the global market and expenditure exceeds revenue. This fact has influenced financial policy in Iraq, which has focused on operational expenditures rather than investments. Operational expenses were 82.6% of the budget in 2009, 87.8% in 2010, 86.5% in 2011. This higher rate indicates excessive consumption, while wages and salaries and government subsidies and social security benefits which constitute 50% of operational expenditures and 40% of total expenditure. Accordingly, this trend will postpone achievement of sustainable development objectives to an unknown time for the foreseeable future. And will transfer the obligations and failures of the current phase to the next generation. If we calculate the costs of these obligations according to current values we will reach what is called generation disorder.

This trend continued in 2009-2011 and caused pressure on the economy due to the high demand, which caused doubling the expenditure budget with the effect beyond normal increase in financial policy, thus caused an inflation gap which the monetary policy has worked hard to narrow using strict measures to reduce inflation from 7.1% in 2009 to 3.1% in 2010. Inflation will continue to be a feature in the budget as long as it is fed by revenues subject to increasing the taxes which, if adopted, will enable the budget to achieve economic balance.

To limit these effects on development, investment and operations, two strategies were adopted for the federal budget over three years. The first strategy for the period 2011-2013 and the second one was a medium term strategy for 2012-2014.

Both of them drafted financial policy and specified its objectives through federal budgets and NDP 2010-2014, and anti-poverty initiative of November 2009, as well as government policy announced by the prime minister in 2010. The goals of both strategies were:

1. Decreasing deficit by setting a ceiling for gross expenditures, aimed at a gradual reduction to reach a more sustainable level.
2. Reconstruction of Iraq by increasing investment expenditure to reach 50% in the medium term, through moderating operational expenses and devoting any increase in revenue to investment.
3. To break correlation between economic and budget cycles caused by oil prices. In other words reducing the connection between expenditures and oil prices by adopting a fixed price for oil based on realistic and reasonable estimates.
4. Increasing non-oil revenues through supporting the movement of the economy from one sided type to diversity type economy where the private sector has an important role, and state revenues are diversified which requires increasing tax revenues.
5. Settlement of accumulated loans since 2008 till 2011, including financing of the public sector and the ministry of trade and government bonds and other expenditures without allocations and delayed obligations.
6. Increasing governorates shares of investment. The 2009-2011 budget redistributed investment allocations between the central government and the governorates according to the constitution and governorate law for 2008 and budget laws 2009-2011. Based on these laws the petrodollar law was adopted. i.e. oil revenues are allocated according to the source. The 2012-2014 budget called for a return to the principle of distribution by population as stated in the constitution, and incorporating oil petrodollar allocations within a unified regional reconstruction program, to be distributed to the eighteen governorates according to their populations, with special support for damaged governorates.

7. Adopting the principle of expenditure ceilings as this will encourage ministries to set realistic plans that will support investment and focus on high priority services. This is now the basis of budgets estimates.

8. Improving sustainable human development and converting poverty by increasing allocations for these sectors: health, education, drinking water, sewage and electricity. More than 23% of Iraq's population is below the poverty line and are unemployed. This is one of the priorities of the budget which will continue during the NDP 2013-2017 plan to achieve the government priorities in its new 2013-2015 programs through the following financial policy tools:
 - Improving work environment in the ministry of finance.
 - Encouraging investment in the private sector initiative.

The first program's objective is to increase revenues through developing revenue sector (custom and taxes) and increasing staff capacity, as well as restructuring and development of the banking sector through upgrading and utilization of modern methods. Another objective is to update method of preparing budgets and their stuff, as well as regulating financial matters between state and governorate department by employing modern systems for electronic transactions as in advanced countries.

As for encouraging private sector investment, there are efforts to structure banking to serve local and foreign investors through foreign exchange means and transactions with international banks especially after Iraq is no longer under chapter seven conditions. Investment projects will be announced for industry, agriculture and services, as an attractive opportunity for private investment. Financial policy in the next phase will review the factor affecting such investment, especially taxes and custom duties, in order to achieve a suitable environment for private investments.

Type of budget

The general budget is defined in the financial management law of 2004 as "a financial program based on annual estimates of payments received and expenditures and money transfers and government transactions" it is clear from this definition that Iraq is still

using traditional concepts in preparing budget: the department adopt traditional rules in preparing the budget which comply with administrative regulations. This method balances item for the implementation of the state's financial program.

As this methods includes monitoring but no planning when allocating resources, focusing development policies on unclear objectives and directions, and this direction is not towards sustainable development. It became necessary to adopt a more scientific method to cope with scientific developments in this field, especially as most of the budget estimates are more like guesses.

With the continued adoption of balanced items in the financial program with all its faults, especially by not employing the principle of productivity of expenditures and No consideration of social and economic standards in allocations. However there are some bright spot which Iraq achieved during 200-2011:

1. Adopting a medium term financial model for analysis of pervious budgets, to find out the degree of responsiveness of those budgets to the governments priorities .
2. In the 2010-2011 budgets, the poverty indicator was adopted a some of the factors that will determine the degree of deprivation when distributing allocations between governorates.
3. One of the standards adopted in the 2010-2011 budget in allocating petrodollar was "revenue at source".
4. The national poverty line is the basic criterion for defining the category that is covered by social security. For allocating expenditure to this item.

Financial decentralization was one of the most complicated challenges in the preparation of the 2009-2011 budget. The financial administration law does not have clear mechanisms for decentralized financial management. There is still an argument about the concept and implementation of a federal decentralized system. Accordingly the implementation of decentralization items in the 2009-2011 budgets became complex challenges that cause many administrative, financial and organizational problems.

Iraq therefore needs a much longer period to reform the budget according to scientific principles. It also need qualified and trained staff on advanced accounting and

financial foundations , as long as there is an intention to change the budget in the coming years to become a performance and programs budget.

General Expenditures:

General expenditures in Iraq during 200-2011 increased from 69165 Billion Dinar to 84657 Billion Dinar in 2007 and to 97454 Billion in 2011,. These expenditures were 53% of GDP in 2009 and 2010, and 46% in 2011. This level of expenditure can be explained by current expenditures on staff salaries, pensions, ration card, social protection network, and the Kuwaiti war compensations, and the nature of the institutional system which extends horizontally, and compensation for terrorist operations as well as supporting state owned companies.

Current expenses form a high percentage of total expenditure: 87.25 in 2009, reduced to 72% in 2010 due to world economic crises, and decreased again to 68.48 in 2011 as a result of state policy to direct investments towards sustainable development. Consequently investment expenditures increased from 21.75% of total expenses in 2009 to 27.97 in 2010 and 31.52 in 2011. This embodies a real intension to reduce the consumption nature of public expenditure, and implementing economic rules for sustainable development based on the need to invest revenues from non-renewable source in income producing areas, in order I ensure the rights of this and future generations. The financial policy for the years 2013-2017 adopt this principle by changing expenditure policy trends towards investments, which will reach 40% in 2017, at the same time adopting the principle of moderating public expenditure and criterion of productivity on it.

Revenues:

Revenues increased in 200-2011 from 50408 Billion Dinar in 2009 to 61735 billion dinars to 2011 . revenues were 38% of GDP during 2009-2011. Perhaps oil revenues which form 90 of oil revenues explain the relative stability of revenues in GDP, as indicated by their close correlation with the ratio of oil revenues in GDP which was 37% in 2009 and 35% in 2010 to 34% in 2011.

The increase of oil revenues is the cause of distortion in the revenues. Oil revenues are expected to rise between 2013-2017 as shown in table (1) to reach 1049073.935 Billion Dinar in 2013 and will reach 217050.900 Billion Dinar in 2017.

Table (1)

Oil revenue estimates for 2013-2017

Year	value of oil exports according to MOO estimates (Billion Dinars)
2013	104907.935
2014	126613.025
2015	135656.812
2016	180875.750
2017	217050.900
Total	768721.937

The expected increase in oil revenues will cause a decrease in non-oil revenues, which were 14.56 in 2009 and 9.21% in 2010 and 11.20% on 2011. It is estimated to be 6.5 in 2013 as shown in table (2), increasing to 6.6% then decreasing again in the next three years to 5.7%, 4.7% and 4.3%

Table (2)

Estimates of non-oil revenues for the period 2013-2017

Item	2013	%	2014	%	2015	%	2016	%	2017	%
Direct taxes	1313.9	17.8	1539.2	17	178.4	20.9	2115.2	23.5	2478.8	25.3
indirect taxes	6084.35	82.2	7540.756	83	6546.30	79.1	6887.548	76.5	7307.716	74.7
	2				3					
gross non-oil revenue	7398.3	-	9079.9		8274.70		9002.7		9786.5	
					3					
gross revenue	112306.	-	135692.92		143931.		189878.45		226837.4	
	235		5		515					
percentage of non-oil revenue from oil revenue		6.5	6.6			5.7		4.7		4.3

These percentages are clear indicator of non-diversity of development financing sources which are affected by free economy policies implemented after 2003, during which all imports were exempt from custom duties (except reconstruction fee of 5%). All imports of food and medicine were fully exempt reducing revenue from customs which is linked to taxation. Taxation revenue also decreased because of many types of evasion, the result of which was a decrease in taxation revenue from 6% of the total in 2009 to 2% in 2010 and to 1.78% in 2011. In addition most of state companies suspended production, causing a major loss of non-oil revenues, and non-settlement of utility bill by a large portion of consumers.

Accordingly the NDP for 2013-2017 will increase non-oil revenues via tax reforms based on international standards and complying with the conversion towards market economy. This policy will achieve an increase in revenues that will improve productivity of public expenditure programs and in providing support to deserving categories fairly, while improving compensation for civil servant. The plan will also restructure state organization converting them to shareholding companies and reviving these surpluses under private management, through an environment that is attractive for private investment. The plan will also raise the effectiveness of connecting public service fees and improve quality of these services as well as collecting of customs duties when the customs law is applied

Total deficits and surplus:

Deficit or surpluses in federal budgets are affected by external rather than internal factors, caused by energy prices in the international market. The budget for 2009-2011 had a deficit of (-346.2) billion dinars and the surplus in 2010 of 116.23 billion dinars while the budget of 2011 had a surplus of 30359.3 billion dinars. These surpluses are due to the higher prices of oil, and increased productions and exports. The opposite is also true for the budget difficulties which are affected by economic, financial and social causes, such as subsidies for improving the quality of life of Iraqis and reducing poverty and unemployment through allocations to social security networks.

The 2013-2017 NDP will adopt the strategic goals of the federal budget 2011-2013 and the medium term budget 2012-2014, to reduce deficits future budget by its investments policy based on the productivity of expenditures.

Challenges:

1. Poor financial governance is a source of risk for the budget as it generates new commitments which are unplanned for, because no allocations were made to cover costs of projects and no clear policy or mechanism available for management of delayed payments projects, causing exposure of the budget to unexpected financial needs.
2. Many and different financial risks faced by the budget, which are unexpected financial commitments on the government, as well as risks linked to the possibility of not achieving expected revenues or that the estimated expenses will be exceeded.
3. Continuing adoption of traditional method of item balancing in general budget causing disparity from the plan vision.
4. The continued low revenue from non-oil source as a result of tax exemptions and tax evasion, and no new measures for fines and fees for new types of fines and fees to increase this revenue. There is also no program to collect taxes due on foreign oil companies and their subcontractors according to law no. 19, which will also increase tax revenues.
5. Accumulated loans have reached 27 million dinars, part of which goes back to decades, and the other part are expenditures without allocations in the budget.
6. Oil revenues are the main source of funding the budget, which makes prediction and uncertainty features of budget estimates and the ability to achieve its objectives.
7. Continued disparity in public expenditures in favor of current expenses over investment expenditures causes increased demand in the economy, in contrast to the inflexibility of the production system and its inability to respond to this increase causing arise in price levels and more imports, thus increasing the economies exposure to the outside world.

8. The current expenditure budget does not have the classification of expenditures for the audit bureau to monitor investments expenditures causing contradictions in data.
9. Continue starting investment projects and contract without prior allocations, which distorts expenditure estimates.

Vision:

A financial policy responsive to the objectives of the federal budget strategy in achieving sustainable development and a high quality of life for the Iraqi citizen.

Objectives:

First objective: Reducing budget deficit by:

1. Complying with fiscal discipline in public expenditure.
2. Implementing ceilings for public expenditures.
3. Increasing non-oil revenues.
4. Careful analysis of oil prices to ensure realistic estimates of oil revenues, and reducing linking expenses to oil prices in order to reduce changes in public expenditure.

Second objective: Reducing distortion in public expenditure by:

1. Increasing investment expenditures to reach 40% of total expenditure in 2017.
2. Increasing current expenditures to reach 60% of total expenditure in 2017.
3. Directing all expected increases in oil revenues towards investments.
4. Current expenses growth must be determined by natural growth which is 7.5 %, 3% for inflation, 2.5% for population growth. Investment expenditures to grow at rate of 21%.

Third objective: Increasing non-oil revenues and sources through:

1. Increasing taxation base and its sources, and imposing local taxes in governorates to enhance financial decentralization.
2. Capacity building of taxation staff and increasing collection.
3. Reducing tax exemptions.

4. Introducing fees and fines such as in other countries.
5. Collecting taxes, fees and fines from mobile telephone companies.
6. Activating customs law and implementing it.
7. Collecting fees for telephones, water and electricity.
8. Collecting taxes due on foreign oil companies.

Forth objective: Reform of financial management via:

1. Raising efficiency by:
 - Improving credibility of the budget and its ability to follow up in commitments.
 - Employing transparency in the budget through improving financial relationships between the central and local governments.
 - Insuring the budget relationship with government priorities through building a medium term financial framework and budget strategy.
2. Developing accounting and auditing systems.
3. Developing a financial management system to approach the international standard.

Fifth objective: Changing rules of revenues distribution to achieve financial decentralization by:

1. Adopting the population as a basis rather than the source in allocating petrodollar revenues.
2. Removing the petrodollar item from budget law for the next years, and adding these allocations and others to the regional development program to be distributed directly to governorates based on population.
3. Training staff and technicians for drafting governorates budget based on new regulations.

**GDP Plan
2013-2017
and Investment Ceilings**

Introduction:

Iraq's economy is one sided, depending on oil revenues to finance investments and consumption. Despite past and present attempts to change this situation, giving the private sector an economic diversity and a bigger role, yet the only method of planning in Iraq is that the economy will become diversified and the private sector will have a large role in social and economic activities. The government must give greater attention to allowing the private sector more investment freedom.

Within the structure of the economy, and the participation of various activities in GDP and their links, as well as added value to the oil sector, Iraq's economy is achieving good growth rates after the failings of 1980-2002.

1- Government policies:

1-1 Investment policy – NDP 2010-2014

NDP objectives in economic development through state investments covering all social and economic sectors, while inviting private sector to participate.

The plan adopted a growth rate of GDP of 9.38% during the plan, with priority in investments to these sectors:

First: Production of crude oil, which is the main funding method of development.

Second: Electricity.

Third: Agriculture.

Forth: Social development services.

Fifth: Transport and communications.

Sixth: conversion industry.

The table below shows the progress achieved in GDP for 2001-2011

Table (A) GDP by fixed prices (Million Dinars)

Activity	2009	%	2011	%	Compound annual rate
Crude oil production	23879.7	43.58	27160.6	42.94	6.6
Non-oil commodity activities	8472.6	15.46	10494.8	16.59	11.29
Distribution activities	5303.2	9.68	6739.2	10.65	12.73
Service activities	17134.4	31.27	18854.6	29.81	4.9
Total activities except oil	30910.2	56.42	36088.6	57.06	8.05
Grand total	54789.9	100	63249.2	100	7.1

Note: please see table 1 in annex for details.

First - General growth rate in the table is 7.1%, which is near the target rate of 9.38% in the plan. It is clear that economic growth is approaching the planned growth for 2010-2014, noting that this progress was due to several reasons such as:

- (1) Only two years of the plan have passed, which is not enough to give full results of investments. There are delays in implementation procedures.
- (2) There are other unplanned factors, such as ongoing projects which have not been completed during the plan.
- (3) The role of the private sector in activities that have added value.

Second – oil activities are nearly half of GDP, emphasizing that the economy is dependent on this sector.

Third – it is noted that there is a positive distribution of GDP between non-oil sectors, which is desirable.

1-2 Fiscal policy

Revenues

Table (B) State revenues in annual budget (Million Dinars)

Years	2009	%	2012	%
Oil revenues	88.5	48871708	97.4	99657735
Non-oil revenues	11.5	6371818	2669163	2.6
Total	100	55243526	100	102326898

Table (B) indicates that most revenue is from oil activities, with hardly any other source of finance in the budget.

Expectations for 2013-2017 are that this will continue.

Table (C) shows amounts and distribution of other revenues

Table (C) Expected other revenues (Billion Dinars)

Years	2013	%	2017	%
Direct taxes	17.8	1313.9	25.3	2478.8
Indirect taxes	44.3	3274.3	36.8	3600.1
Treasury share of public company profits	37.9	2810.1	37.9	3707.6
Total	100	7398.3	100	9786.5

Expenditures

Table (D)

Operational and investment expenditures for 2009-2012

	2009		2012		Growth rate
	Million Dinars	%	Million Dinars	%	
Workers compensation	20632554	44.9	31891962	39.9	15.6
Commodities and services	6477928	14.1	13581281	17	28
Interest	275761	0.6	1930676	2.4	91.3
Subsidies	3009979	6.6	3009915	3.8	0.001-
Donations	1787408	3.9	2820405	3.5	16.4
Social benefits	5482087	11.9	5722476	7.2	1.4
Other expenditures	3449185	7.5	9965085	12.4	42.4
Non-financial assets	1219611	2.6	2790649	3.5	31.8
Pensions	3606549	7.9	8232584	10.3	31.7
Total operating expenditures	45941062	82.6	79945033	68.3	20.3
Investment expenditures	9648659	17.4	37177897	31.7	56.8
Gross total	55589721		117122930		28.2

It is natural that expenditure policy is linked to the transitional stage Iraq is passing through. Beside the investment budget, it has absorbed part of unemployment and assisted low income groups as follows:

- a) The two items, workers' compensation and pensions, are 52.8% of total operational expenditure in 2009, 50.2% in 2012, 43.6% in 2009, and 34.3% in 2012. In spite of the improvement of these two items in the budget, they are still very high, being higher than investment expenditures. The reduction in their percentage in 2012 is due to the increases in the budget.
- b) In addition, expenditures such as subsidies and others, are also affecting the operational budget, and consequently on demand in the local market- which is already short of goods and products.
- c) Consumption expenditure is also affecting money supply.

1-3 Monetary policy

Table (E) Monetary supply

Year	Money supply Million dinars	% Current deposits	% Currency
2009	37300	42	58
2010	51743	53	47
2011	62620	55	45

Source – Iraq Central Bank (ICB)

- a) ICB data indicate that money supply (M1) which directly affects inflation, grew during 2009-2011 at an annual compound rate of 30%, with an average of 34% during that period.
- b) We also notice the opposite effect of the amount of deposits in 2009-2011 and the reduction of currency in circulation. This leads us to conclude that it will help control inflation, especially in the price index of consumer products. However, if we look at inflation from the view point of reducing GDP, the inflation rate will reach 18%, which indicates the need to reconsider adopting ambitious investment plans.

2- NDP 2013-2017

Investment policy in the next five years

Introduction – Oil production policy

To improve financial resources and support development efforts, the ministry of oil has signed contracts with a number of international oil companies to increase crude oil production and exports.

The expected production increase will average 17.9% during 2012-2017, and oil exports will increase by 26.2% annually during the same period.

Therefore, export revenues at 85 dollars per barrel will reach (768721.9) during 2013-2017, with an average annual rate of increase of 27.7% during that period.

2-1 General framework for NDP 2013-2017

At its meeting in 2012, the planning committee adopted a very ambitious development policy, both in vision and objectives as well as in confronting challenges. It leaves no doubts that development efforts must include all social and economic activities without exception.

2-2 Investment plan

According to the general framework, investment in economic activities will consider:

First: general directions of development activities.

Second: capacity of activities to achieve high implementation rates.

Third: the variation between secondary activities of development will affect priorities within the activities.

For example, tourism within service activities or under the item in the plan of 'construction and services'.

Tables Annex

Table (1)
Development of GDP based on 1988 fixed prices by sectors and activities
for 2009-2012
in Billion Dinars

Code	Activity	2009	2010	2011	Growth rate 2011-2009
1	Agriculture, forestry and hunting	4020.4	4713.4	4816.5	9.5
2	Minerals and quarries				
2-1	Crude oil	23789.7	24100.8	27160.6	6.6
2-2	Other types of minerals	157.6	166.7	169.6	3.7
3	Conversion industry	1587.4	1687.7	1727.1	4.3
4	Water and electricity	921.6	978.8	1057.6	7.12
5	Building and construction	1785.6	2635.8	2724	23.51
6	Transport, communication and warehousing	1350.8	1451.7	1551.7	7.17
7	Retail and wholesale trade, hotels and others	3484.8	3836.2	4151.3	9.14
8	Finance, insurance and real- estate services				
8-1	Banks and insurance	467.7	810.4	1036.2	48.84
8-2	Home ownership	6871.3	7077.4	7289.8	3
9	Personal and social development services				
9-1	Personal and social development services	9615.1	10089.3	10877.4	6.36
9-2	Personal services	648	667.4	687.4	3
	Total	54788	58216	63249.2	7.44

**Estimates of GDP in 1988 fixed prices
by activity for target year 2017
First alternative**

	Activity	2012 Million Dinars	Targeted growth rate %	2017 Million Dinars
1	Agriculture, forestry and hunting	6843.4	19.74	16847.7
2	Minerals and quarries			
2-1	Crude oil	37536.0	18.69	88400
2-2	Other types of minerals	354.0	24.31	1050.9
3	Conversion industry	2018.0	12.47	3632
4	Water and electricity	1870.6	27.08	6199.6
5	Building and construction	6183.4	30.6	23493.3
6	Transport, communication and warehouses	4242.2	32.06	17041.7
7	Retail and wholesale trade, hotels and others	10366.5	34.19	45109.2
8	Finance, insurance and real- estates services			
8-1	Banks and insurance	1961.1	30.35	7380.5
8-2	Home ownership	8407.7	10.28	13713.9
9	Personal and social development services			
9-1	Personal and social development services	13644.0	28.58	47959.7
9-2	Personal services	793.3	12.69	1442
Total of activities except oil		56674.2	26.53	183870.5
Total of activities		94210.2	23.6	272270.5

**Estimates of GDP in 1988 fixed prices
by activities for target year 2017
Second alternative**

	Activities	2012 Million Dinars	Targeted growth rate %	2017 Million Dinars
1	Agriculture, forestry and hunting	6843.4	17.76	1550.8
2	Minerals and quarries			
2-1	Crude oil	37536.0	18.69	88400
2-2	Other types of minerals	354.0	21.88	952.1
3	Conversion industry	2018.0	11.22	3435
4	Water and electricity	1870.6	24.37	5566.7
5	Building and construction	6183.4	27.54	20867
6	Transport, communication and warehouses	4242.2	28.86	15071
7	Retail and wholesale trade, hotels and others	10366.5	30.77	39647.8
8	Finance, insurance and real- estates services			
8-1	Banks and insurance	1961.1	27.32	6560.4
8-2	Home ownership	8407.7	9.25	13086.5
9	Personal and social development services			
9-1	Personal and social development services	13644.0	25.73	42860.8
9-2	Personal services	793.3	11.43	1362.63
	Total of activities except oil	56674.2	23.8	164913.7
	Total of activities	94210.2	21.9	253313.7

**Estimates of GDP in 1988 fixed prices
by activity for target year 2017
Third alternative**

	Activity	2012 Million Dinars	Targeted growth rate %	2017 Million Dinars
1	Agriculture, forestry and hunting	6843.4	12.34	12244.6
2	Minerals and quarries			
2-1	Crude oil	37536.0	18.69	88400
2-2	Other types of minerals	354.0	15.19	718.1
3	Conversion industry	2018.0	7.79	2937.1
4	Water and electricity	1870.6	16.92	4088.1
5	Building and construction	6183.4	19.12	14833.4
6	Transport, communication and warehouses	4242.2	20.04	10573.6
7	Retail and wholesale trade, hotels and others	10366.5	21.37	27301.7
8	Finance, insurance and real- estates services			
8-1	Banks and insurance	1961.1	18.97	4674
8-2	Home ownership	8407.7	6.42	11478.8
9	Personal and social development services			
9-1	Personal and social development services	13644.0	17.86	31036
9-2	Personal services	793.3	7.93	1162.1
Total of activities except oil		56674.2	16.38	121047.5
Total of activities		94210.2	17.3	209447.5

Expected investment

1- Funding:-

According to revenue committee record, the revenues for the five years 2013-2017 are expected to be:

Oil revenues	812.3	
Allocated for investment	318.8	39.25%
(-) Kurdistan share	264.8	

Size of Investment	First alternative	Second alternative	Third alternative
Oil, including ministry of oil investment budget	161	161	161
Remaining activities	240.1	206.9	1303.3
Total	401.1	367.9	291.3
Available from investment budget	264.8	264.8	264.8
Private sector investment	136.3	103.1	26.5
%Percentage	34	28	9.1
Targeted growth rate %	23.6	21.9	17.3

Note: when selecting an alternative, consideration must be given to projects under construction which have reached 5500 projects with a value of more than 210 Trillion Dinars.

Gender

Introduction

Culture place a major role in the current view of society of man and woman, and uses all methods that give men the privilege of setting and modifying the social system in all its aspects, based on values of historical and social structures for most of life inputs in the society.

Cultural references based on different values have played a central role in the relationship between genders in Arab society. The following development indicators show the strong influence of the diverse cultural product in binding a social system which accepts the social statues between genders.

Those concerned with development are aware that theoretical consideration will not bring about results intended. To confront this shortage, a female vulnerable was added to the development plans and programs, in new perspectives of development that does not concentrate on economic growth but also its role in enhancing human and humanitarian development. In this context gender became a central goal in development plans.

Based on this the State has in past few years adopted many important policies and initiatives to alleviate discrimination against woman, such as establishing a Ministry for woman affairs and in Kurdistan the high council for women, which aim to draft suitable institutional framework to bridge the gender gaps and support the participation of women in development.

First: analysis of the current situation

In order to activate the positive role of woman in development, and to complement the efforts of the government in the previous period, the main directions of empowering women in the development plan of 2010-2014 were: increasing women's participation in politics and the economy, and eradicating all forms of this discrimination, and achieving equality among genders. This is an objective which Iraq has committed to achieve by 2015 and is one of the millenniums goals.

Indicators:

- Illiteracy rates are still high in Iraq but higher among women. Recent surveys show an increase of illiteracy among women with differences among age groups: 16% for 12-19 age group, 20% for 20-29 age group and 21% for 30-39 age group. For those over 50 the rate is 66.6%.
- Statistics show a low academic level for Iraq women in the 15-54 age group, 22% cannot read or write, and more than a third of them have not finished primary school, and only 18% have finished secondary school. Illiteracy increases with age. In Kurdistan this rate is 32% compared to the rest of the country 19.6%. It is higher in rural areas than in urban areas (16%).
- The gap between genders in primary education is very narrow (1% in 2010). The gap widens in secondary education to reach 36% as there are no laws that prevent the family from denying a girl's wish to attend secondary school.
- The average first marriage age has decreased from 23.5 years in 2009 to 22.4 in 2001. The number of married women below 15 years old increased from 5.4% in 2006 to 5.7% in 2011. Women who married under 18 years old rose from 22.6% in 2006 to 24.2% in 2011. Early marriage is a huge burden on women and includes house work, pregnancy and birth.
- In spite of the increase of women members in parliament of 2003, it decreased in the current parliament to 25%, while it was 27.3% in 2007. The number of female ministers dropped from 6 – 1 in the current cabinet.

- Although the number of cancer patients rose in Iraq, breast cancer which afflicts women is the highest type of cancer (34.7%).
- Recent surveys show that rural women give birth to two more children than the counterparts in urban areas. Those who do not have degrees give birth to three children more than those who have degrees which show the relationship between education and fertility rates. Education also encourages a higher age for marriage and the better chance to enter the labour market.
- Recent surveys show a positive indicator in that the number of women who supporting their families decreased from 11.5% in 2006 – 7.7% in 2011.
- Divorce rates in Iraq rose from 29000 cases in 2004 to 60000 in 201, an increase over 100%. This is caused by many problems with social and economic causes, incompatibility, health and infertility, and not supporting the wife and children, early marriage, domestic violence, second marriage, abandoning the wife and adultery and other causes, and this is an indicator of the deterioration in the quality of life.
- Marriage rate in Iraq decreased from 262000 in 2004 to 230000 in 2011 (12.2%) , perhaps the cause the high coast of marriage, complexity of life, educations and others, the table below shows rate of marriage and divorce in Iraq from 2004- 2011.

Table showing marriages and divorces from 2004 to 2011

2011	2010	2009	2008	2007	2006	2005	2004	
59515	53840	52649	44116	41536	35627	33348	28690	Divorces
230470	245022	246430	243056	217221	234852	258259	262554	Marriages

- Population estimates of women who are 55 years and over are about a million (6.7%). And represents 53% of 55 or over population. 42% are widows and 23% are heads of family and over two third of them are littered.
- Participation of women in the economy dropped from 14% in 2003 to 13% in 2011. Their participation in rural areas is 14% compared to 75% form men. Their participation in urban areas is 13% form women and 76% from men.
- The gap in the labour market increases in urban areas, which was 61% compared to 57% in the countryside in 2003. The rate dropped to 51% in 2011.
- The Survey shows that 11% of women in the 15- 54 age are wage earners. This rises to 13% in urban areas and drops to 6% in the countryside. A majority of women 57% do not earn wages for a number of personal reasons or for lack of suitable jobs.
- Many Iraqi women are still subject to violence in various forms. Recent surveys show that women have suffered some acts which are considered violence against women in other places. 46% of girls between10-14 have suffered violence from a family member.36% of married women have also suffered some form of violence.
- In spite of arise in women's participations in politics and society, it is still limited. A survey shows that 85% of women believe that they should vote and 68% believe that they should be nominated as well.

Women's participation in elections rose from less than 50% in 2005 to more than 67% in 2010. However less than one woman in ten participate in a club or a union or a party or an association.

- The discrimination provides men rights which are denied to women.46% of women believe there is discrimination , especially in ht e countryside (60%) , and the second reason is due to customs and habits (31%). In general, there is discrimination in favor of men. As for equality in rights and obligations, 30% of women think there equal while 39% think otherwise.

- Even though Iraq legislation does not discriminate between men and women in all areas, the social and cultural factors are still the main limitations. Iraqi laws do not discriminate in wages either. Political changes after 2003 have enhanced the situation of women and raised their participation in parliament, from 7% in 1999 to 25% in the last years. In governorate councils, their participation is about 45%,

Table shows number of women in decision making positions in 2011

S	Ministry	Deputy	DG	Assistant DG	Consultant/ Expert
	Health	-----	1	-----	-----
	Municipalities	-----	-----	2	-----
	Science and Technology	-----	1	1	-----
	Youth	-----	-----	2	-----
	Culture	-----	1	15	11 experts
	Communications	-----	2	-----	1 consultant
	Electricity	-----	2	4	33 experts
	Finance	-----	2	28	-----
	MOFA	-----	3 ambassadors	1 Minister Plenipotentiary	9 consultants
	MoD	-----	1 Brigadier	2	-----
	MoP		8	1	1

Second: challenges

Even though, Iraqi women have achieved much in various areas, but they are still confronted by serious challenges such as:

- Social and cultural values impose restrains on their participation, work and movement, in cultural framework that is dominated by paternalism
- Low academic levels and training opportunities, low chances of political participation, denial of working in specific jobs, and increased burdens in the home and at work.
- Women are still prisoners of a rigid culture that imposes restrains on their movements and exposes them to violence, cruelty and negligence in many aspects.
- This culture spreads and takes root in society in general and in rural and urban societies in particular. This culture those who defended even among women.

- Even though modernism has entered Iraq, this culture still limits the roles of men and women, and indicators of women's independent or equality with men is still far from being attained. Also they do not have access to high positions in the State.
- Although women participate in public life, this does not give them independence and equality with men. We do not see real partnership in most of the executive, judicial and legislative authorities.
- The Iraqi families' ideas about suitable work for women are still very traditional. Government job is the most sought after. They still have high unemployment and long searches for jobs, leading to an increase in women in the unorganized labour market.
- The domination of these cultures has weakened women's confidence in herself and her dependence on men or family. This caused their initiatives in the economic limited, while contributing to the culture of violence against her.

Third: the vision empowering Iraqi women and expanding options available to them, and providing a suitable environment that will provide equal opportunities and sustainable fairness.

Fourth: objectives

The NDP provides a reference framework for development that emphasizes integrated perspectives for developing the status of women, and empowering them to participate in social and economic development. The strategic foundations of the plan confirmed concern with women's affairs and improving their capabilities through a national plan, and removing all obstacles to their participation in development activities. The plan also contains policies and objectives that deal with the status of women in fields such as education, health, social welfare and the labour force.

The State directives have also dealt with implementation mechanisms to deepen this participation. In this context the council of ministers approved the national employment policy in 2010 which is designed to effect a real change in women's role in development.

To achieve these objectives, the plan is based on several axes and basic policies, all of which are aimed at the final objectives of empowering women and equity in opportunities.

The plan is to achieve the following:

1. Incorporating gender on development planning

The gender gap will not disappear by itself. It needs intentional intervention and effective planning to ensure their full participation. To confirm the principle of their participation in planning, the plan is to:

- Spread awareness about the importance of gender on development results.
- Estimating the needs of development projects from women's view point.
- Increasing consultation with official and unofficial institutions to evaluate the conformity of these topics to state priorities.
- Coordinating plans and programs for women for education, training, health, preservation of environment, combating poverty, economic empowerment, awareness and civic education, tourisms, IT, and social welfare.
- Improving opportunities for gender needs in order to:
 - Participating in all areas related to social development
 - Ensuring gender is present in all steps of development
 - Benefits of development returns
 - Providing a practical framework for developing programs and projects
 - Empowering rural women

2- Capacity building and empowerment

Empowerment is the best way to help women overcome challenges, and the make their voice heard in all the State authorities with a real and effective participation. This requires new mechanisms and knowledge to enable them to work in more sectors, extending to the countryside and to the marginal communities, and dealing forcefully with poverty, violence, discrimination and unjust cultural practices. This can only be achieved by raising other level of women in the economy in society and in law:

- This requires legislation for empowerment of women.
- Knowledge and awareness by women of their legal work and political rights.
- Respecting the rights of women's and their freedoms through awareness campaign for women and the general public.
- Strengthening national and local women's organizations through management and skills training.

3- More opportunities for women's education and capacity building

The plan is:

- Doubling efforts to eradicate illiteracy by compulsory primary education and establishing centers for women only.
- Finding solutions for illiteracy in older women beyond the learning age.
- Increasing women's participation in training and capacity building within State departments and the private sectors.
- Increasing awareness of rights and setting intensives for girls to participate and continue in the learning process.
- Forbidding gender discrimination in schools in all education stages, and removing all forms of gender discrimination from schools curriculums and redirecting training programs towards capacity building and equal opportunities.
- Taking gender into consideration in preparing the plan and drafting policies of Ministry of higher education.
- Expanding women's options to benefit from the information and communication revolution.
- Improving professional options for women and training in non-traditional areas.
- Directing women to study science and technology in universities to enable them access to suitable jobs.

4- Enhancing women's support environment

The states of women is fully supported by the legislative and executive authority in Iraq, this is reflected in the priority given to the economic and social development program. These programs cover education, health,

work and family and will help to make these policies and mechanisms successful. The plan is to:

- Engage in outreach activities with decisions makers and society, to ensure that women's rights are indivisible human rights, which the State and society must respect.
- Requesting parliament and civil society to provide an empowering environment that will decrease marginalization and exclusion.
- CSOs will provide training and capacity building to women to improve their competitiveness and employment in the public and private sectors.
- Connecting with local and international organizations and UN agencies to build a real partnership to improve the classic the view of women in society.
- Providing a role for media in gender issues.
- Giving public opinion freedom to discuss and distribute awareness materials.
- Exert efforts to build women's capacity to enable them to take decisions about their family life through media campaigns on behavior and attitudes.
- The Ministry for Woman will coordinate with other ministries to develop legislation concerning women that is consistent with the State policies.

5- More opportunities for communal and political participation

The plan is:

- Adopting capacity building measures for a bigger role in politics and parliament.
- Effective participation in parliamentary committees, particularly those committees concerned with national reconciliation and resolution of local conflicts.
- Enabling women to assume leadership roles in CSOs concerned with issue so peace reconciliation and construction
- Representing women better social dialogue structures to improve their job opportunities and lower gender discrimination

- Inciting decisions makers' conscience on women issues.

6- Women's economic empowerment

This is the basic principle for fairness and equal opportunities. The plan is to:

- Provide more opportunities and participation in economy
- Developing plans by ministry of woman and planning and civil service to draft a comprehensive national plan to define the actual needs of female labour in all sectors.
- Utilizing directives and procedures in the national employment policy of 2010 to strengthen women economic activity.
- Improving job opportunities for women in the private sectors and encouraging them to invest and work in it.
- Adopting specific measures to reduce female unemployment

7- More social and health care for women through:

- Caring for all and handicapped women for social justices
- Improving birth services and building maternity centers and enhancing national awareness campaign of breast cancer risks.
- Organizing campaigns for environmental awareness and radiation pollution. Establishing centers for awareness of dangers of landmines.
- Providing special aid to women in marginalized communities.

8- Drafting budgets based on gender

Adopting the concept of gender in preparing budgets requires an intentional intervention. Any policies that the national budgets achieve to avoid any damage caused by neglecting the needs of man and woman are different from each other. The main objective is to have existing budgets in body the principle of equal opportunities between genders, through:

- Inputting gender in the general budget in order to achieve equality in chances and empowering women.
- Establishing gender units in ministries and other institutions.

- Including gender in annual reviews to determine the size of investments directed by gender as is required.

9- Building social culture to confront gender based violence

One of the main national goals to confront violence against women must be represented by:

- Effecting a radical change in women's view of themselves, and building a social culture that will accelerate efforts to curtail this phenomenon.
- Making gender violence as a priority in national agendas
- Enabling decision and policy makers and development partners to learn about violence on women.
- Increasing number of homes for women who suffered violence
- Enacting a law to protect women against violence.
- Establishing information systems for gender violence.
- Constant evaluation of victim information system and subjective analysis of the data.
- Establishing priorities based on indicators that will clarify the level of suffering and pressure.
- Establishing documentation center for gathering data and studies regarding this field.
- Using this data and studies as input for preparing plans and programs to gain support for policies regarding violence on women.
- Using these studies as indicators of progress or delay in achieving millennium goals.

10- Enhancing a gender equality cultures

The plan will:

- Adopt programs to enhance gender culture, to improve their awareness of their rights and duties.
- Inviting writers and thinkers and painters to change the negative image of women and highlight the importance of their role in the nation's progress through art works and media.

- Bridging the gap between what is stipulated in the constitution and legislation and the actual practice and applied in women's life.
- Reviewing laws to ensure no conflict with the constitutional principle that affirms women's right to equality with men.

11- Positive participation by women in peace building

The sociological and emotional aspects of women play an important role in increasing the trust of society in marginal groups by providing sociological and material support to them through:

- Encouraging women in leadership positions in parliament and political parties to make constant visits and field follow up of handicapped and orphan care institutions
- Women's CSOs will conduct material and moral support campaigns for families of widows and IDPs
- Improving women's opportunities to assist in resolving social, family and individual problems
- Increasing opportunities for women's representation in international organizations and forums that deal with women's affair.

12- More involvement of women in private sector through:

- Developing coordination through women's committee in the ministry for women to encourage non- government establishment to find work possibilities for women, and to prepare women through rehabilitation and training for work in those activities.
- Requesting licensing authorities for economic activities to assist women obtaining the required licenses
- Providing facilities such as lands or areas within city limit and preparing them for industrial projects for women workers.
- Facilitating loans and credits for women as a basis for improving family income.

14- Developing small projects for women

These initiatives will never be enough to achieve the required objectives unless there is change from all society segments and social and culture

work should emanate from the base is the real force towards the required change. The plan aims to:

- Enhancing directives and policies for activating women's participation in small projects
- Establishing centers for small loans
- Supporting the ministries for women, labour and social affairs by activating productive family programs and other projects of small activities that will raise their standards of living
- Increasing women's benefits from handicraft skills which includes the following services:
 - Training on technical skills and services necessary for implementation such as tools and mechanizes
 - Marketing services through exhibitions seasonal and permanent exhibitions.
 - Technical services through design and modeling centers and training on production activities
 - Improving women's training centers with capacity building and linking project to market needs
 - Preparing sound feasibility studies and coordination with stakeholders in determining the required projects and drafting training plan accordingly.
 - Improving mechanisms for targeting women and providing flexible financing packages

Awareness campaign of breast cancer risks: unprecedented results

Breast cancer is one of the most widespread diseases with 32% of all cancers that afflict women. Statistics show that there are 20 incidents for every 100000 women. This cancer usually afflicts women after the age of 50 but it has been appearing lately in younger ages due to the deterioration of the environment, nutrition, health and sociology. Studies show that 95% of women can be saved if it is discovered early. This highlights the need for health awareness programs to treat this disease which requires early procedures for protection against serious consequences if delayed. The highr committee for breast cancer testing in Iraq was formed in 2008 as a framework for the efforts of several

ministries. The ministry for women conducted an extensive national campaign during 2008 and 2009 with the support of WHO and UNFIM . Tens of seminars and conferences were held as well as leaflets explaining protection and treatment of the diseases. In 2009 there was an increase in the number of visitors for early diagnoses. The number of visitors was 4300 in 2009 compared to 2400 in 2008. In Krbala there were 135 cases and Babylon 86 cases in 2009. The statistics show that there are more cases in urban areas than in the countryside's with two thirds to one third due to the type of food and pollution.

Sources: Ministry of Human Rights, annual report on women 2009.

Good Governance

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Introduction:

If good governance means in itself the system of traditions and institutions through which the power is practiced in the country, including the processes of election, monitoring and changing those acting for the governance's affairs, the ability of the authorities to formulate and implement effective policies, the citizens' and the country's respect for the institutions that control the management of the activities and the economic and social events¹, then those meanings show that governance represents a complex phenomenon that has its reflections on the economic, social and human development, and that a good governance will ensure the respect of the citizens' political, civil and humanitarian rights by providing equal opportunities for everyone, subject to the culture of performance and achievement to reach their political, economic and social options. Furthermore, good governance will guarantee the equality of all citizens in front of the law, and will protect them from the managerial surpass, or from the repressive procedures carried out by the executive authorities. Good governance also means the presence of specialized bureaucratic patterns capable of developing and executing qualitative evolving policies, and the guarantee of providing the public services efficiently. On the other hand, it is important to realize the fact that providing the services and the easiness of getting them, does not necessarily mean the realization of good governance. The opportunities of the citizen going to the elections could only be a futile exercise when the circumstances of economic destitution rein, or reducing the available options for the citizen in order to get an honest justice which leads to depriving the citizens from performing their legal rights. Therefore, good governance is an indispensable condition to achieve a real economic and human development.

¹ -Kaufmann Daniel, Kraay Aart, Mastruzzi Massimo, „Governance Matters IV: New Data, New Challenges”, the

If the word “governance” summarizes both the institutional framework and the government’s capabilities, and the current interaction processes between the government and people, and it’s a neutral concept that consists of the complex mechanisms, the processes, the relationships and the institutions through which the citizens and groups express their interests, practice their rights and duties, and resolve their disputes, then good governance pays attention to the distribution and management of the resources in order to respond to the common problems, it is also acknowledged by the principles of participation, transparency, accountability, supremacy of law , efficiency , equity and strategic vision. Therefore, non-improving the government’s capacity, at all levels and branches in all geographic locations, and non-developing the relationship between the government and people, makes the goals of policies, programs and national development plans hard to achieve.

According to the constitution of 2005, legislative, judicial and executive powers are independent. Both legislative and juridical powers should be part of the national development plan in order to maintain independence in the planning, investment, institutional development programs and the projects. Hence, good governance should include the three branches of the government, as well as the independent committees formed under the constitution.

Current Situation

The need for good governance emerges as an effective tool of reform, through which the political, economic and administrative powers are practiced in managing the economic resources to rotate the national economic wheel towards the rise of the governments’ institutions (public, private and civil society), to attain the economic growth and the societal well-being.

As long as governance is an integrated system of the three main axes of reform (administration, finance, judiciary), based on the foundations of the rule of law, participation, transparency, accountability, responsiveness and efficiency, it

guarantees an effective observation of good economic governance by expanding public participation, strengthening decentralization, activating regulators and increasing the ability of the national economy in the employment of savings and increasing the rates of investment, in addition to the expansion of the concept of development to include ,besides the economic goals, other targets that aim at providing a decent standard of living for the citizens based on equality and respect of human rights.

If Iraq, under the circumstances and the great challenges today, is in need of a methodology and to exert an effort at the national, regional levels and the provincial level to develop infrastructures, and to reach an effective implementation mechanism for the government, then the citizens, despite the variation in their segments, professions and cultural and educational levels, are part of the country's reconstruction, which is the only condition for stability and long-term development.

By a look at the administration in Iraq, a weakness in the pillars of good governance is noticed, which is a consequence of cumulative negative events that lasted for decades, and from which the Iraqi administrative system suffered, which caused a major challenge to the realization of development programs and projects, and a waste in efforts, energies and money.

First: Decentralization and local governance

Decentralization of local affairs' governance plays an important role in the areas of achieving and increasing the administrative efficiency and effectiveness by achieving the efficiency in performing services and eliminating the bureaucracy that coexists with the centralization of power, through the contribution in investing available resources and activating the role of general participation in proposing and completing development projects and thereby providing the services to the beneficiaries at the lowest costs.

The ability of decentralization of local affairs' governance in achieving and increasing administrative efficiency and effectiveness is related to a set of variants; of which the most important is the relationship of the centralized government with local governance, whenever this relationship is based on reasonable legal limits, and to cooperation, support and assistance, the ability of local governances administering their affairs increases, with an emphasis that decentralization is not limited to the transfer of the authorities of the federal powers to the local powers only, but to enabling the local powers to face the financial and investment burdens necessary to develop their regions, and that the variance in the local powers' revenues will not lead to a variance in the levels of development between them.

Going back to decentralization as a system that was practiced in Iraq since the formation of the Iraqi state in 1921, boosted by the release of the first law of governorates in 1969, which gave some authorities to local councils and the smaller administrative units that form the governorates, through the higher committee of local administration, followed by the release of the interim Iraqi constitution in 1970 which confirmed the decentralized form of the state where it stated (in the first section/ Article- 8B) on dividing the republic of Iraq into administrative units organized on a decentralized basis.

After the political transition in 2003, the law of administering the Iraqi state for the transitional period for the year 2003 was issued, which affirmed in its two articles the fourth and the tenth that the decentralization in administering the Iraqi state is the future political and administrative form for Iraq, it also devoted the eighth section of the same law for the provinces, the governorates, the municipalities and the local committees from which the state is formed, then it was followed by the coalition authority order no. 71 for the year 2004, which stated that Iraq will be republican, federal, democratic and pluralistic, and that the authorities in it will be shared between the federal government, provincial governments, governorates, municipalities and local administrations ... etc. and that the provinces and governorates will be organized on a basis of decentralization and delegation of authorities to the local and municipal governments, and afterwards the permanent Iraqi constitution in 2005 within its

fifth section/ chapter 1 (provinces, article 116) stated that (the federal system in the republic of Iraq consists of a capital, provinces, decentralized governorates and local administrations), also article no. 110 of the constitution determined the specialties of the federal authority, with an identification of some issues within the mutual specialty of the federal government and the governance of regions (article 114), and what remains is shared by the provinces and the governorates that are not part of a province (article 115).

Challenges

1. The overlapping of powers and authorities between the federal government and the local governments where a formula of exclusion prevailed instead of harmony and unison, and the existence of many constitutional gaps that affected directly or indirectly the whole process of planning, monitoring and public participation and involving the public sector, starting with the acting constitution for the year 2005, and the requested adjustments, as an example and not for limitation (handling the aspects relevant to foreign and local investment and treating the intersection of authorities between the federal and the local government, and surpassing the unfamiliar terminology such as the sovereign external trade and reconsidering exclusive mutual powers).

With regard to the law of governorates for the year 2008, it requires interpretation of what are the local legislations, systems and instructions to organize the administrative and financial affairs, and activating the role of local governments according to paragraph (5) from article (7), in addition to the need to clarify what is meant by formulating policies and setting strategies by the governorates in such a way that doesn't conflict with the national development and re-forming the authorities between the central government and the local authorities.

2. A limited role for the councils of governorates in some areas that have a strong connection to the local competence such as the selection of managerial leaders and the preparation of operational budgets.
3. Duplication in the instructions and authorities of each of the ministries and councils of governorates, which mainly reflected on the execution of the defined plans.
4. Weakness in adopting the administrative decentralization in the devolution of powers in both central and local levels, in addition to the weakness in the competencies and expertise of the administrators in dealing with the systems and methods of administrative work.
5. The current administrative structures still reflect a centralized approach in their orientation and paths despite the constitution's support for decentralization.

Goals

1. Increasing the degree of administrative decentralization in the federal ministries and the governorates.
Methods of achievement:
 - a. Activating and developing legal and administrative frameworks to increase decentralization.
 - b. Reinforcement of the systems and procedures that support decentralization.
 - c. Adopting mechanisms that strengthen the role of provinces in development planning.
 - d. Spreading the culture of administrative decentralization.
2. Supporting the development of financial management in Iraq.
Methods of achievement:
 - a. Finding sources to generate local resources to be at the disposal of local administrations.

- b. Reviewing the law of financial administration and reconsidering the distribution of the tasks listed within it between the ministry of finance, planning, and the beneficiary ministries which will increase the execution competency and will merge with the ministries' specialties.
 - c. Studying the decentralized exchange issue through the treasuries in the governorates and supplementing it with personnel trained in this task.
3. Supporting the capacities of local governments in providing services.
- Methods of achievement:
- a. Increasing the proportion of the resources allocated to the investment budget for the development of provinces.
 - b. Working on making the provision of local services the responsibility of local governments in coordination with the departments in the governorates.
 - c. The expansion in the devolution of powers to local governments.
 - d. Adopting programs to develop the capabilities of the members of local and municipal councils.
 - e. Reinforcing the interaction with the advisory parties and the specialized scientific centers.

Second: Public sector modernization

1) Public Participation

The increase in public participation in the process of governmental decision-making is considered a key part of the democratic process and in the reinforcement of civil society, which needs the adoption of the concept of integration or social solidarity, guarantees of freedom of speech and expression, and opening good channels for dialogue and communication between all levels of society.

Public participation is the process that includes dialogue, interaction and exchange of information, and providing different points of view to reach participation, by taking decisions about a certain subject by interested individuals or groups or those positively or negatively affected by that subject, whether it was a project, a program or a policy. This means briefly that it's the way through which the social reform that allows all citizens to participate in the gains of development can be conducted.

Through a review of the available data for the year 2011², it showed that 54% of those included in the ministries that the study covered, confirmed the weakness in participation and a huge centralization in policy-making and formulating the results, while the public participation in decision-making and strategy-formulation for the councils of governorates, the sector of business, the citizens and the organizations of civil society reached its lowest level with a percentage of 18%, which indicates a lack of or poor public participation in decision-making and policy-formulation.

And with regard to the mechanisms of communication and the devolution of authorities, the percentage of those who confirmed the need for development was 72%, which means that there is an urgent need to amend the legislations and the regulations that allow a wider range for delegation in order to achieve progress in communication between the ministries and their formations, as well as strengthening the role of the councils of governorates in selecting leaderships, and participating in setting budgets, in the consistency of powers and in determining the labor requirements between the councils of governorates and the sector ministries.

2- A field survey conducted by the National Center for Administrative Development and Information Technology with the support of ESCWA on the assessment of public participation plans in four service-sectors / 2011

Challenges:

1. Poor participation of the parties involved (citizens, local councils, civil society organizations and the administrative formations in the ministries) in setting the priorities and the decision-making mechanism.
2. Lack in the culture of public participation in the mechanisms of control, follow-up, accountability, and taking corrective actions.
3. A decline in the role of current plans in achieving the expected results.
4. Weakness in financial management that depends on a robust financial planning in preparing operational and investment budgets.

Goals:

First Goal: The adoption of participatory planning in the sector ministries when forming policies and strategic plans with local governments, citizens and civil society.

Methods of achievement:

1. Designing programs to enforce the culture of public participation in (sector ministries and the councils of governorates) to build the competences of managerial leadership and the members of the councils of governorates in adopting participation in setting priorities and making plans, and the mechanisms of implementation and follow-up.
2. Reinforcing the capabilities of the ministries in building communication networks with the active parties in the mechanisms of decision-making.
3. Activating the coordination between the sector ministries and the councils of governorates, and working in a coherent and harmonious way in ordering financial allocations for the sake of the country and eradicating the self interest phenomena in ordering allocations.
4. Activating research institutions in the service ministries to study the needs of the citizens and the business sectors.

Second Goal: The adoption of public participation in determining the financial allocations for the operational and investment budgets between the service-ministries and their departments in the localities.

Methods of achievement:

1. Switching to performance and program budgeting in the preparation of budgets.
2. Training the employees on the preparation of budgets through participation and the mechanisms of planning and financial monitoring to provide a larger space of financial decentralization.
3. Developing monitoring and accountability systems and rectification of institutional performance.

2) Public/ Private Partnership

Partnership is considered an effective development tool for cooperation between the governmental institutions and the private sector and civil society in supporting development efforts and enhancing the quality of public services, and it is considered a participation process between all parties in the process of policy-making, starting with determining priorities, then the strategic planning, financial resource deployment, execution, follow-up and evaluation. There is no doubt that the success of such a process depends on several factors, on the top of which is having a supportive and encouraging legal framework to the partnership, and institutional arrangements suitable for cooperation and role sharing.

The new Iraqi economy inherited disorganized and unstable situations in the relation between the government and the public sector, starting with the nationalization of economic establishments in 1964 and the control of the companies of the public sector, and then the onset of the new appellation of a mixed sector as a start for the concept of partnership between the public and private sectors through the release of law no. 103 for the year 1964 which described the incorporations of mixed sector as the companies in which the state contributes with a percentage of 51% of the capital, then it was followed by the company law no. 21 for the year 1997 which allowed the establishment of mixed investment companies, followed by the law of public firms no. 22 for the year 1997 that gave the right to the public companies to enter into partnerships with Arabic and foreign firms, while the law did not allow partnership with the local

private sector, making the concept of partnership fall short in achieving its primary goals.

And despite the confirmation of the national development plan 2010-2014 of the key role of the private sector in development, and the importance of finding a suitable environment for its work, and creating partnerships between it and the public sector, yet it continued to represent a public orientation that did not include any specific programs to push the partnership process forward. Through a review of the results of the screening of companies' plans in some of the service-ministries for the year 2011³, it showed the absence of partnerships between the two sectors with a rate of 72%, as well as a lack of a clear vision of participation with a rate of 59% for those who have partnerships. This reflected on the lack of clarity for the partnership programs with a rate of 70%, also the partnership process suffers a lack of organization in the (administrative, financial and technical) aspects with a rate that varies between (71%-75%). On the other hand, the role of civil society is very weak in the triangle of partnership which includes (public sector, private sector, and the civil society) which is considered a mediator between the citizen and the state.

Challenges:

1. The limited experience of the country in Public-Private Partnerships.
2. The absence of a clear business framework that organizes Public -Private Partnerships.
3. The lack of readiness of the public sector to deal effectively with the private sector.

3- A field survey (evaluation of public private partnership plans) conducted by the National Center for Administrative Development and Information Technology with the support of ESCWA on the assessment of public participation plans in four service-sectors / 2011

Goals:

First Goal: Reinforcing the partnership between the public and private sectors in the fields of service-provision and infrastructures.

Methods of achievement:

1. Strengthening the abilities of the involved ministries in all aspects of public private partnership management.
2. Preparing an investment plan for each sector which takes into account the integration aspects of investment between the public and the private sectors.
3. Supporting the abilities of the private sector in providing services.
4. Restructuring public companies towards privatization while guaranteeing the workers' rights.
5. Adopting modern methods of public private partnerships represented by (constructing-operating), (constructing -operating-delivering), (constructing -operating-maintaining-delivering) ... etc.

Second Goal: Encouraging investment and stimulating the growth in a way that serves economic and social development.

Methods of achievement:

1. Imposing a special legal, institutional and organizational framework for the public private partnerships.
2. Developing the legislations and laws that support the partnerships in the targeted sectors.
3. Reinforcing the tasks and the independence of the legal system including the settlement of disputes and applying the contracts.

3) Civil Service

Civil service means the group of systems and institutions that interpret formulate and execute the policies of federal and local governments.

Although Iraq was considered one of the developed countries in its competences in public sector administration, with highly efficient civil personnel and a social welfare program, yet the effects of years of wars and international isolation led to a flaw in the administrative competences of the civil service, in addition to the lack of investment in the core areas of the public sector, and the duplication in the number of its employees due to a lack of alternative employment opportunities in the private sector, in spite of the emergence of numerous efforts after the year 2003, and the release of the law of federal service council in 2009, which was not formed until now. Also the performance of administrative governmental system in Iraq does not correspond with the nature of the functions assigned to it, as this sector suffers a low level of services, complication of procedures and a delay in the completion of transactions in addition to financial and administrative corruption and the overstaffing in the administrative system which cost a high proportion of the general federal budget.

Challenges:

1. Duplication in the roles and tasks between the institutions of the public sector.
2. A mismatch between the organizational structures and their internal systems with a rate of 60% due to the introduction of new administrative formations.
3. Current administrative leaderships are characterized with the centralization of powers and lack of delegation.
4. Shortage in human resource planning and poor distribution of workforce.
5. The absence of standards that have clarity and transparency in the selection of efficient administrative leaderships.
6. The absence of job descriptions in most administrative formations which reflected negatively on human resources and opened the door for the random hiring and promotions and in identifying the training needs.
7. The absence of clear standards in recruitment and performance evaluation.

8. Lack and obsolescence of legislations and laws, and not activating some of them (civil service law no. 24 for the year 1960 and the law of federal service council of 2009).
9. Complexity of administrative procedures and the lack of attention to the issues of documenting procedures.
10. The absence of clear standards to measure institutional performance.
11. Inflation in the administrative system (Introduction of public ministries and institutions) in the absence of clear scientific vision for the public administration structure.

Goals:

First Goal: Raising the efficiency of the governmental administrative system

Methods of achievement:

1. Speeding up the enactment of a modern civil service law.
2. Setting a comprehensive modernization program for civil service systems.
3. Building human competences through a performance-oriented training.
4. Setting a policy of rationalizing the size of the governmental system.
5. Reforming the institutional system (organizational structures, internal systems, job descriptions and employment requirements) according to modern management standards.
6. Improving the communication mechanisms between the governmental institutions, the federal government and the local governments.

4) E-government

The reform of the public sector cannot be effective unless information and communication technologies have a key role in modernizing the business tools that allow raising levels, speed up the completion of transactions, simplifying the procedures and enhancing the level of control in addition to providing accuracy to the follow-up of transactions and giving accurate statistics about completed transactions.

Iraq has sought to set and implement advanced policies about e-government, which is considered an important tool that could help in promoting transparency and accountability, realizing that the success of the e-government project is linked to the enhancement of the general administration and the provision of a possible transparent administrative environment to work in.

The reciprocal cooperation between the e-government committee and the UN Development Program (UNDP) since 2009, had a significant impact where several initiatives were taken and applied, and the most important was the international conference for e-government under the slogan (Building electronic Iraq and e-governance), which was held in December 2009 and produced several recommendations that had an impact in formulating the e-governance plan for the year 2010.

In this area, the following was done:

1. Holding the first train-the-trainers program in 2010, where the approaches of the national training program for e-governance were determined.
2. Launching the Iraqi electronic gateway through internet in July 2011 which contained interactive and information services.
3. Launching the Iraqi environmental interface document in December 2011 related to the exchange and access to information.
4. Expansion in the train-the-trainers program where 200 expert trainers were trained in the different ministries, who contributed in spreading the e-governance culture in the ministries and governorates.

Within the first phase of the project of public sector reform, a screening for electronic readiness/2010 was performed where the data for the year 2010 showed that 91% of the ministries have local area networks (LAN), or wide area networks (WAN), and that the proportion of the linked computers to those networks reached 63%, which is considered a good sign for the possibility of exchanging information and communication between the ministries. As for the field of proficiency of work on computers and the use of the internet, which is considered the basis of the work of the e-government, the proportion is still weak where the number of employees that know how to use the internet reached 16%

from the total number of employees, but as for the number of employees who know how to use computers the proportion reached 43% of the total number of employees.

Challenges:

1. Legal challenges: the absence of legislations that support and organize the work of e-government such as (e-signature, e-commerce, computer crimes and the definition of identity), and the lack in adopting electronically sent documents in the implementation of the instructions of the government contracts for the year 2008.
2. Administrative challenges: The absence of change management that leads the process of transition into electronic government models, considering that changing the relationship of the governmental system with its internal and external environment in this field, requires redesigning the administrative process with which the administrative system deals, resistance to change and the weakness in the competences of human resources.
3. Technical challenges: Those challenges enter in the framework (assignment of forming the necessary IT infrastructure that correspond to:
 - The need for huge financial investment to find technical information.
 - The digital gap as result of the educational, economic and organizational barriers that makes access to the digital world a difficult process.
 - Weakness of infrastructure in fields of communication.
 - Lack of a solid sustainable computer network for government communications.
 - Limited access to the World Wide Web and the high subscription costs.
 - Lack of mechanisms of cyber security and modalities to deal with the attacks of a hostile nature (E-terrorism).
 - Lack of banking systems for the mechanisms of e-payments.

Goals:

First Goal: Development of a knowledge-based society and filling the digital gap.

Methods of achievement:

1. Setting the legislations and the laws that support e-government such as (e-signature, e-commerce, computer or IT crimes and the definition of identity).
2. Designing programs to develop human competences in the information and communication systems.
3. Increasing the investment in information and communication technologies in public institutions to achieve good governance.
4. Spreading and supporting the new e-government services inside the governorates to enhance the principle of equal opportunities.
5. Developing an institutional framework to organize the work of e-government.
6. Creating awareness and rehabilitating the public sector's employees in the standards of the Iraqi environmental interface.
7. Developing systems and work procedures to apply e-government.

Second Goal: Reinforcement of the interaction between the citizens and the state to enforce the participation of civil society in general affairs and promoting social integration.

Methods of achievement:

1. Spreading electronic awareness among the citizens, the business sector and civil society organizations.
2. Coordination with the training and development centers in the universities.
3. Developing programs to reduce computer illiteracy.
4. Conducting awareness workshops for the decision-makers, senior management and leaderships in the center and governorates.

Third: Integrity, Transparency, Accountability and Anti-corruption

Iraq has faced major challenges represented by the wars that led to spreading the corruption phenomenon in its multiple forms, and relegating the role of the public control on the performance of the government and its private

institutions, especially after the year 2003, and the invasion of a wave of violence and terrorism and instability, which encouraged bribery, pilfering, fraud and looting charitable aid.

In order to face those facts, Iraq seemed to make a progress in developing the institutional framework of the anti-corruption plan. The government ratified the UN convention against corruption in 2008, and Iraq is also a member in the anti-corruption team work of Middle East and North Africa, in addition to setting a multi-faceted strategy to fight corruption in January 2010.

Since 2003, the government also supported capacity building in :(integrity commission, Financial Supervision Bureau, offices of general inspectors, prime minister coordination office for regulatory affairs and the joint council of anti-corruption), and Iraq became a candidate member in the initiative of extraction industries transparency. In this context, the government expanded the scope of public disclosures of oil production and revenues. The legislative supervision has improved, where the council of representatives and the governmental integrity committees conducted general reviews for the executive authority, and also an integrity committee had been established in the parliament of the province of Kurdistan.

Challenges:

1. Illegal interventions by political parties and assemblies in the affairs of most ministries and instate institutions that are not linked to a ministry.
2. The spread of social, political, and administrative values that incubate corruption, protect it or endure it.
3. Weakness in the culture of anti-corruption.
4. Weakness in the banking system and its inability to control the proper application tools of procedures and requirements to prevent money laundering.
5. Not applying scientific standards in appointments to high positions, especially the leadership ones, by depending on the quota style and political considerations.

6. Weakness in the procedures of cooperation, coordination and integration between public institutions and the entities: (integrity commission, Financial Supervision Bureau, offices of general inspectors) to combat the phenomena of corruption.
7. Poor transparency in financial transactions especially in the field of revealing the results of budget implementation and disclosing financial interests.
8. Failure to punish the officials accused of corruption and abuse of position.
9. Weak confidence in governmental institutions particularly the ones that provide direct services to the employees, especially with the spread of the phenomenon of bribery.
10. A conflict of interest in granting contracts lead to unfair competition, a waste of public money and a low level of implemented projects.

Goals:

First Goal: Protecting the society from corruption, and promoting a culture of integrity.

Methods of achievement:

1. Adopting a national program to protect the society from corruption crimes and setting mechanisms and regulations to shield the national economy from the negative practices and raising the moral standards of the employees.
2. Reforming the educational system in a way that ensures spreading a social culture starting from school by teaching the youth the risks of corruption and planting virtue, morality and a proper education.
3. Revealing cases of corruption after releasing the judicial rules in this regard and announcing it to the public, following the concept of transparency.
4. Developing procedures for building databases and the data required to take the right actions and decisions in the fields of anti-corruption.

Second Goal: Building a state of law and good management and promoting the culture of human rights protection.

Methods of achievement:

1. Developing the necessary legal measures to enhance the supremacy of law and activating the capabilities of the organizations specialized in executing anti-corruption procedures.
2. Simplifying and streamlining administrative procedures and conducting periodical institutional self-assessments in order to achieve efficiency in providing services to the citizens.
3. Developing a system of tenders and contracts and building it according to the concept of transparency to ensure the foundations of competition and equal opportunities as per the standards of the free market.
4. Enhancing the role of the regulatory systems to guarantee the creation of coordination and cooperation procedures between them and promoting the citizen's trust in these systems.
5. Reinforcing the procedures of regulation, control and internal supervision in all government departments to enhance the management's ability to control and reduce the risks of collusion and fraud.
6. Adopting the principles of good governance through the application of relevant agreements and laws especially the United Nations convention against corruption.

Third Goal: Establishing the culture of integrity, transparency and social responsibility in the public function.

Methods of achievement:

1. Developing the legislations that oblige the officials to provide financial statements.
2. Adopting programs and methods to spread the culture of integrity and transparency in the institutions and the community.

3. Activating the functional behavior rules and promoting the culture of ethical behavior in the public and private sectors.

Fourth Goal: Increasing the efficiency of the administrative leaderships in the government system.

Methods of achieving:

1. Setting standards for the nomination to occupy leadership positions.
2. Avoiding quotas, and considering efficiency and qualifications as a base in occupying public positions.

Fifth Goal: Strengthening the surveillance and accountability procedures in performing public services.

Methods of achieving:

1. Taking the appropriate procedures against those accused of bribery and abuse of position.
2. Advertising in the official websites of the ministries and the organizations not associated to ministries, about all the restrictions and instructions related to the completion of citizens' transactions.
3. Simplifying the procedures of transactions in a way that realizes their completion in the least loops, clearly and transparently.
4. Adopting automated information systems to monitor incoming and accomplished transactions.

Fourth: The rule of law, human rights and access to justice

Establishing good governance requires reinforcing the country's competences based on the rule of law, which assumes that the law and not the individual is the only good reference that can be invoked in administering the country's affairs and the rule in adjusting the relationships between the components of the state and the society on the basis of equality and equal opportunities. The rule of law could be strengthened by separating the powers, which forms the

cornerstone of a correct democracy, and by the availability of a complete and stable legal organizations starting with the constitution and reaching to any regulatory statutes, whether issued by the government or any other institution, in a way that protects human rights and conserves the rights of citizenship as approved by international conventions and the international community, and provides a guaranteed environment for a fair, independent and neutral judiciary.

1) The constitution and separation of powers.

The constitution that represents the top of the legal hierarchy, forms the supreme legal document which is considered the origin for all legislations- where the law does not derive its constitutional character except by the return to one set of legal rules or more from the constitution articles, and the authorities cannot be considered legitimate unless their permits, formations and mechanisms were stated with direct reference to the constitution.

The Iraqi constitution determined in Section 3, the components of the federal authorities where article (47) of the constitution stated:

“Federal authorities consist of legislative, executive and judicial powers that practice their competencies and duties on the basis of separation of powers”.

The concept of separation of powers is based on the distribution of powers and the guarantee of the independence of the three government authorities and preventing the monopolization of those powers by one person or one party, and this concept depends on two main pillars which are:

- The state’s functions should not be controlled by one organization.
- Dividing the state’s functions into three occupations, where each is independent from the others, both organically and functionally, which ensures the absence of abuse, despotism and monopolization in using authorities.

Experience has shown in the democracies that preceded Iraq, that the absolute separation of powers is an unpractical concept that did not succeed and could

not be achieved because of its incompatibility with the group of authorities which all emanate from a single origin and from one party that is independent from other parties, but relations of cooperation and coordination must be built between the organizations that practice those authorities.

The parliamentary system is considered the right form and a good model for the concept of separation of powers with its sound sense, where power is distributed in the country between three establishments; legislative, executive and judicial, without an absolute separation of powers, but by creating cooperation and participation in exercising some authorities, especially between the legislative and executive powers. As for the judiciary, it should be in isolation of the conventional conflict between the two other authorities, and it should have a degree of independence that corresponds with what it should be characterized by, in practicing its serious functions, of independence, integrity and distance from the political streams and doctrinal conflicts of different types.

Challenges:

1. Lack of awareness among some politicians in the area of separation of powers and the lack of their awareness of the independence of the judiciary power from the legislative and executive powers.
2. Legislative process in Iraq is proceeding at a very slow pace and is not parallel to the political transformation that has occurred in Iraq, where it was transformed from a totalitarian system to a democratic system.
3. Democratic thought in Iraq is still not clear, and the country is still experiencing a return to tribal systems, religion and sects Weakness of the spirit of citizenship and retrenchment behind vulnerable interests.
4. The failure of the political parties and civil society organizations in performing their responsibility of enlightening the public on democracy.
5. Lack of real legislation (law regulating the work of parties) to ensure the democratic practice.
6. The continuing fragility of the security situation.

Goal: Stabilization of the concept of separation of powers.

Methods of achievement:

1. Strengthening the competences of the government and members of the council of representatives in the field of separation of powers and the importance of the independence of the judiciary from the executive and legislative powers.
2. Raising among politicians the awareness of the importance of the concept of separation of powers.
3. Strengthening the competences of the judicial system (court personnel and judges).
4. Enhancing the security situation and the working environment for judges and public prosecution.
5. Strengthening the mechanisms of surveillance and accountability in the legislative, executive and judicial authorities.
6. Speeding up the issuance of legislations that support the concept of separation of powers.
7. Strengthening the competences of civil society organizations to contribute in spreading the awareness of the importance of the separation of powers and enhancing the paths of democracy.

2) Human rights and the supremacy of law.

Good governance and human rights promote each other, whereas the principles of human rights provide a set of values to guide the actions of government and other active political and social parties, it also provides a set of performance criteria based on which the entities could be subject to accountability. Moreover, the principles of human rights contribute in promoting good governance by developing legislative frameworks, policies, programs, budgets and procedures. On the other hand, the application of human rights depends on the existence of a cooperative environment of legislations and institutional frameworks as well as having a political and administrative environment responsible for meeting the rights of citizens.

Iraq's situation is due to what it went through, wars and conflicts, over the last decades, and what accompanied it in many violations in rights and freedoms, and sacrifices in which Iraqis gave a lot of martyrs, which required the development of institutional formations after the year 2003 that work on promoting and respecting human rights. The Iraqi constitution of 2005 also included issues of human rights in the second part (rights and freedoms), and Iraq was chosen as an observer member in the UN subordinate committee on human rights in Geneva. Also in the past period, several studies, reports, and initiatives, that included observations for human rights violations, was accomplished and was submitted to the Iraqi government and to the concerned ministries.

The Iraqi government has given great attention to improve Iraq's record and programs in the areas of commitment to respecting, activating, protecting and promoting human rights and to ensure that all are applied. In order to achieve that, a sector committee of governmental and non-governmental institutions was formed, and with the assistance of national, regional and international expertise they prepared a national plan for human rights that aims to enhance the respect of all rights through programs, policies and legislations that are effective in the activities conducted by the institutions, each according to its authority and powers.

The national strategy for human rights was launched on 15/1/2012, and included recommendations for women and children and other recommendations concerning human rights.

Challenges:

1. Children: Children form half the population of Iraq, and because of the wars and difficult situations, a large proportion of children suffer from deprivation and malnutrition, also the percentage of orphans in the Iraqi society increased and was accompanied with a deterioration in the children's living and educational conditions, in addition to the existence of thousands of homeless who are considered the most dangerous on

society and the state, as they are used in practices that could reach to addiction, murder and terrorist operations.

2. Mendicity (begging): This phenomenon has spread since the beginning of the nineties of the last century because of poverty and deprivation and it has a negative impact on the reputation of the society and the state.
3. Women: women in Iraq form half of the society, and are considered the most imperiled by violations of human rights laws through what they are in exposed to in the form of violence based on gender discrimination.
4. Victims of violence: Iraq suffers from an increase in the victims of violence because of the deterioration in the security situations.
5. Refugees and emigrants: Iraq is still suffering from the repercussions of the forced displacement due to the economic, security, political and social conditions which led to deterioration in living standards. There is also the problem of Iraqi refugees in the countries of the world, who did not get legal approvals and are subjected to forced deportation.
6. People with disabilities and special needs: Wars and violence in Iraq contributed in raising the percentage of people with disabilities and special needs.
7. Prisons and detention centers: There are criticisms directed at this sector as the prisons do not comply with international standards in addition to the delays in resolving cases.

Goals:

First Goal: Establishing a comprehensive system of human rights and entrenching of the rule of law.

Methods of achievement:

1. Adopting international norms and standards of human rights within the judicial system.
2. Activating the government's capacity in fulfilling its obligations under international human rights agreements.

3. Strengthening the capabilities of the institutions concerned with human rights in achieving their goals in monitoring human rights, verifying their violations, protecting and promoting them.
4. Strengthening the capacity of national and local authorities to set up modern statistical databases that could be reliable in documenting and sustaining human rights violations.
5. Reinforcing the role of civil society organizations in dealing with human rights issues within a legal framework that corresponds to international standards.
6. Providing legal and institutional protection in dealing with vulnerable groups such as minorities, internally displaced persons, refugees returning home and the disabled.
7. Promoting human rights awareness in the educational curricula, the state's institutions and all segments of society.
8. Developing policies and activating the institutions concerned with the rule of law.
9. Strengthening the management of the judicial system and the criminal courts to correspond to international standards and to reduce the average time for resolving disputes and increase the number of magistrates.
10. Providing a structure to promote the rule of law and access to justice.

Second Goal: Upgrading living and life standards for Iraqi people.

Methods of achievement:

1. Expanding the scope of institutional and preventive health care.
2. Expanding the scope of access to basic education and upgrading higher education and scientific research.
3. Providing and improving public services) water, electricity and sanitation) in residential areas.
4. Increasing the efficiency of social safety networks, and to ensure its access by eligible applicants.

5. Protecting and improving the environment by reducing pollution in air, water and soil.
6. Rehabilitating and expanding cultural, religious and entertainment venues.

3) a fair judiciary

The judiciary forms the foundation on which the rule of law depends, in that it's the main reference that was assigned to interpret the laws to be applied; it resolves conflicts and protects the rights of individuals and groups; it is the safety valve for peace and democracy; it is a primary lever of development, as without trust in the judiciary and a sound legal environment, the impulse towards investment and development will diminish.. It is also the essence of the concept of separation of powers which is the cornerstone of a true democracy and forms a guaranteed environment for the rule of law, based on the hypothesis of an independent and neutral judiciary.

Iraqi laws and legislations ensured the concept of judicial independence since the founding of the Iraqi state, where the constitutions (1925, amended 1970, 1990 constitution draft) confirmed it, also this concept was guaranteed by the Iraqi constitution of 2005 which states in article (19) first (the judiciary is independent and is governed only by law).

Challenges:

1. The need to restructure the institutions of the judicial system.
2. The collapse of the security situation and what it produces in an anxious work environment for judges and public prosecution.
3. Delays in the reform of recruitment procedures in the judicial system.
4. The justice system does not reach those in need from vulnerable social groups.
5. Weakness in the competences of the members of the judiciary.

Goals:

First Goal: Promoting judicial independence

Methods of achievement:

1. Legislative reform and reconsidering the texts in line with international standards.
2. Developing mechanisms for organizing and developing the judicial work between the Supreme Judicial Council and the judicial institutions in the provinces and the governorates that are not part of a province.
3. Spreading awareness of the necessity to respect the judiciary and ensuring its independence.

Second Goal: Promoting the institutional capacity of the judicial system.

Methods of achievement:

1. Restructuring the institutions of the judicial system in line with international standards.
2. Simplifying the procedures of litigation and completion of transactions.
3. Supporting the automation of the criminal courts systems and data integration.
4. Strengthening the accountability control mechanisms in the judicial system.
5. Enhancing the competences of those who work in the judicial system.
6. Reforming the recruitment procedures of the public prosecution office, judges and lawyers considering their efficiency and competence.

Third Goal: Spreading the legal culture in society

Methods of achievement:

1. Promoting the role of the civil society in advocating and observing the legislative amendments in parliament.
2. Securing and improving citizen access to justice.

Health

A Healthy Community and a Healthy People

Introduction

The right to the enjoyment of good health lies at the heart of basic human rights. It has long been recognized as the means and objective of every development effort. Real investment for development seeks first to enable people to participate effectively in economic, social and political life, and contribute to the sustainability of an accomplished and prosperous community. Therefore, ensuring health and welfare is instrumental to achieving sustainable economic and community development goals.

In light of this, governments should make this right accessible by providing optimum health care, since it is a natural and fundamental dimension of achieving greater productivity and providing security and stability. Moreover, providing equitable access to health services to citizens is one of the basic and fundamental factors for building a welfare state.

Health conditions of Iraqi citizens have been ever improving as a result of introducing an advanced health system and integrated network of primary health care since the seventies of the last century. However, wars and crises caused health conditions to deteriorate. The health system in Iraq is heavily burdened due to the emergence of hundreds of thousands of disabled people, not to mention the spread of different types of cancer and birth defects arising from environmental contamination by radiation from the use of internationally banned weapons during the war. Furthermore, there is a high rate of mental illnesses and chronic diseases such as heart disease, diabetes, high blood pressure, and other types of diseases. In addition, certain communicable diseases, some of which disappeared in the seventies and eighties of the last century, recurred again due to poor environmental sanitation, health services and infrastructure.

Based on the fact that people have high value and are the cornerstone of every development humanitarian effort, Iraq is seeking to expand the provision of primary health care services to all citizens and develop a health system that meets international standards, to be managed professionally, and to provide affordable services to all segments of the community. The aim is to achieve a relative improvement through institutional rules and comprehensive coverage, ensure justice in distribution and improve its quality, and keep up with Arab and international developments.

After developing several policies, strategies and programs, efforts concerted to create the first national development plan 2010-2014 to be worked on and updated in 2013-2017.

The current situation

Health situation analysis, if available, allows citizens and policy-makers to depict the features of health care infrastructure and levels of preventive and curative services provided to people. This in turn helps develop a system that would provide safe and effective health care for people, and help them live long, healthy and creative lives. The notes highlighted in this context are the basic building blocks of an effective health system that ensure sustainability, quality and accountability, and serve as guidelines for the health sector.

Indicators:

In general, indicators demonstrate that there is a progressive development in health levels when compared to previous years, as detailed below:

1. Child Mortality:

- Infant mortality rates decreased from 35 in 2006 to 33 per thousand people in 2011. These rates are still high compared to many countries in the world: the United Kingdom (4.9); Hong Kong (4.7); Singapore (2.3); Malaysia (6.1); Thailand (13.0); Philippines (26.0); and Indonesia (31.0). Infant mortality rates in the neighboring countries are as follows: Kuwait (11,000), KSA (26, 0000), and Jordan and Syria (15,000). (Source: World Bank).
- Children under 5 mortality rates have decreased from 41 to 38 per thousand people. Despite the continued decline of these rates, they are still high compared to some Arab countries. In the UAE, the mortality rate of children under five per 1000 live births is (11), Qatar (11.5) per thousand, with the exception of Yemen, where it reached (105) thousand.
- Male infant mortality is higher than female infant mortality. It increased to (36) deaths per thousand live births among males, as against (30) deaths per thousand live births among females.

- Infant mortality is high among mothers with low education levels; (37) deaths per thousand live births, while it is low among mothers with medium and high educational levels; (28) deaths per thousand live births. This also applies to mortality of children under five. Women's education reflects positively on children's health and survival.
- Infant mortality is higher in rural areas than in urban areas, totaling (36) deaths per thousand live births in rural areas, compared to (31) deaths per thousand live births in urban areas.
- On the other hand, recent surveys indicators show a relative decrease in children health conditions, as follows:

Indicator (Children under 5)	MIC S3 (2006)	MIC S4 (2011)
Malnutrition (Underweight)	7.6	8.4
Stunting	21.4	22.3
Adynamia	4.8	6.9
Diarrhea	13	14.5
Exclusive breastfeeding at less than six months	25.1	18.6

2. Life Expectancy at Birth:

Life expectancy at birth increased significantly in recent years. While it stood at (58.2) in 2006, i.e. (61.6) years for women and (55) years for men, it has risen to (69) years in 2011, i.e. (70.6) years for women and (67.4) years for men. It is an indicator that reflects improvement in overall health, economic and cultural conditions. Despite this rise, life expectancy at birth rates in Iraq is still lower than the neighboring countries: Kuwait (77.3 years), Jordan (71.9 years) and Syria (73.6 years).

3. Human Resources:

There has been no significant increase over the last three years 2009 - 2011 in terms of the indicator of doctor, dentist, pharmacist/compared to 1000

people. The average annual increase amounted approximately to (0.01%) in general. The rate of health care providers/1000 people increased by (0.1%) annually. The same applies to the nurse/doctor indicator, which increased from 1.4 to 1.5 over the same years. Despite the Ministry of Health commitment to appoint and attract university and medical and health institutes graduates to work at health institutions, there is still deficiency in health and medical staff. This deficiency may be attributed to population growth which prevents achieving full sufficiency, in addition to lack of proper care dedicated to medical staff. The following table shows medical staff to population ratios.

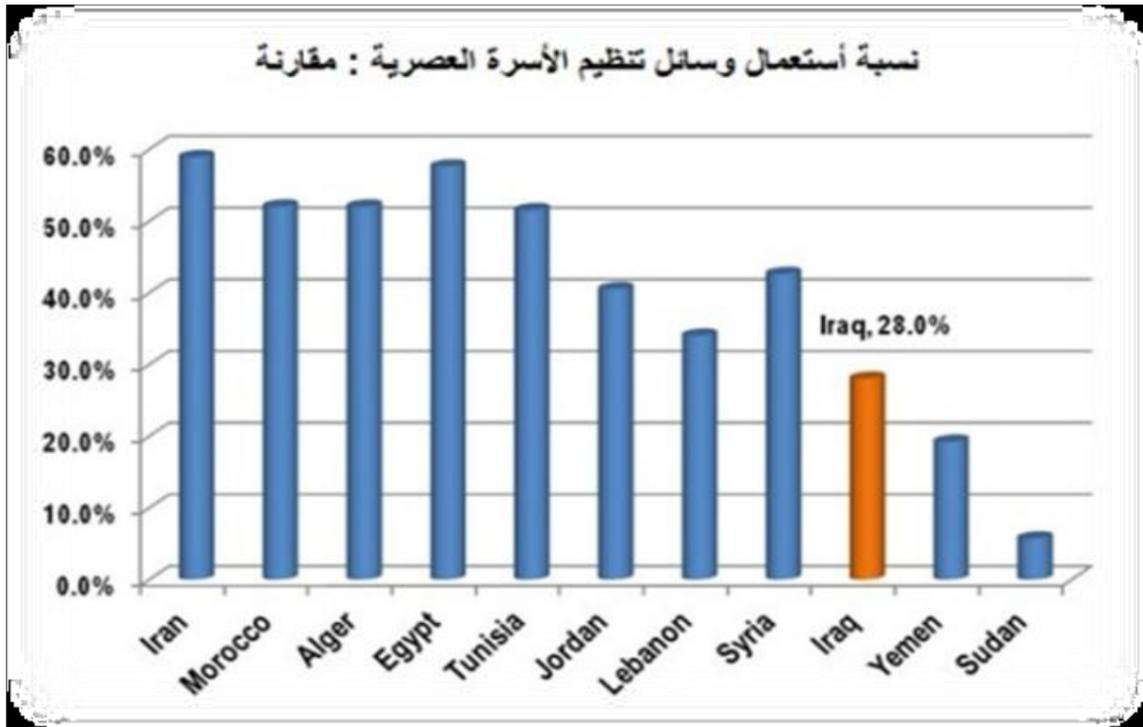
- Vaccines: Increase of vaccines rates (MMR, polio, measles and hepatitis) by more than 10% over the aforementioned period.
- Bed capacity: Bed capacity significance is reflected through bed occupancy rate indicator which stood at 60.1 in 2011, and bed/1000 people indicator which stood at 1.17.

4. Reproductive Health

Despite that the Ministry of Health adopted a health system that relies predominantly on primary health care in providing health services in accordance with quality standards, while ensuring the integration of these services with all levels of service provision, there are still communities in villages and remote areas that lack primary health care services in general, and integrated reproductive health in particular.

- The rate of condom use increased between 2009 to 2011 from 1.1% to 2%. This is an indicator which reflects a significant improvement in awareness of male reproductive issues.
- Recent surveys indicate that the percentage of using modern family planning methods amounted to 28% among married women, which is a low percentage compared to some neighboring Arab countries.

Figure () shows the percentage of using modern family planning methods in Iraq compared to some neighboring Arab countries

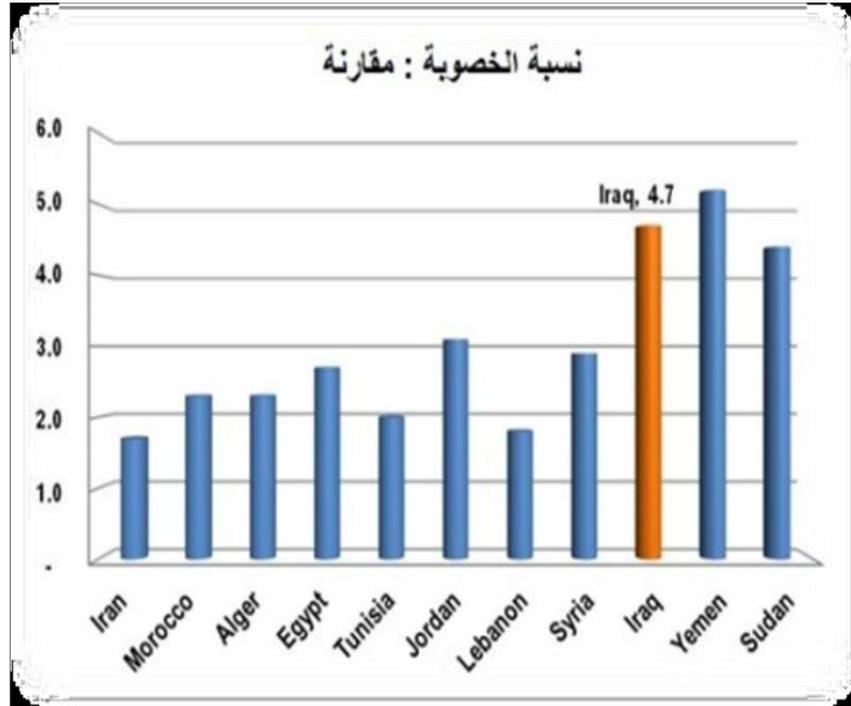


Percentage of Using Modern Family Planning Methods: Comparison

- The percentage of unmet need (women who want to delay or prevent pregnancy and who do not use any contraceptives) amounted to 22% of married women of childbearing age.
- The percentage of married women aged (15-49) years, or their husbands, who use contraceptives increased from 49.8% to 51.2% between 2006 and 2011, which reflects increased level of public reproductive awareness.
- Early marriage and Iraqi women's long fertility period are among the factors affecting reproductive health. The percentage of women aged (15-49) years who got married before the age of 15 years increased from 22.6% to 24.2% between 2006 and 2011. The percentage of women of the same age group who got married before the age of 18 increased from 5.4% to 5.7% during the same period.

- Fertility rate in Iraq is 4.6 children per woman, which is high compared to some neighboring Arab countries, excluding Yemen.

Figure () shows fertility rate in Iraq compared to some neighboring Arab countries



Fertility Rate (Comparison)

5. Communicable Diseases

a. Malaria: Undertaking epidemiological monitoring program in Iraq resulted in the elimination of malaria.

b. Tuberculosis (TB): Iraqi citizens still suffer from the presence of this disease in many circles. However, there are positive indicators that show a relative improvement over the last three years, as follows:

- The rates of TB cases per 100,000 people decreased from 78 to 65/100000.
- TB-related deaths per 100,000 people decreased from 11 to 10/100000.

- TB cases detected and cured under observation according to a short-term observed treatment increased from 88% to 89%.
- TB detected cases increased from 46% to 61%.

The indicators that have not improved during the period 2009-2011 are as follows:

- Percentage of food insecure population which is estimated at 3.1.
- Percentage of births attended by health care providers which is estimated at 89%.
- Prevalence of HIV among pregnant women within the age group of 15-24 years per 100,000 which is estimated at 0.1/100,000.

In contrast, recent surveys show a decline in some health indicators, including:

a. The rates of viral hepatitis (A, B, C, D) have doubled according to the following indicators:

- The rate of viral hepatitis A has doubled from 5.2 to 14.4.
- The rate of viral hepatitis B increased from 6.1 to 10.4.
- The rate of viral hepatitis C increased from 1.75 to 3.6.
- The rate of viral hepatitis E increased from 0.55 to 1.2. Viral hepatitis can be transmitted by water pollution or unwashed fruits and vegetables.

b. Decrease of women immunization coverage over the period 2009-2011

- i. Decrease of immunization coverage for pregnant women from 80% to 75%.
- ii. Decrease of coverage of pregnant women fifth visit to primary health care centers to 32%.
- iii. The percentage of immunization coverage for women of childbearing age (15-49) stood at 29%.

6. Chronic Diseases

Premature deaths caused by primary incommunicable diseases for the age group below 60 years per 100,000 people, including: Deaths resulting from

four reasons: (heart and vascular diseases/high blood pressure, brain vessels, and heart failure), (chronic respiratory infections), (cancer) and (diabetes). Mortality rate increased gradually over the years 2009, 2010 and 2011 from 49.42 per 100,000 people to 49.99/100000 and to almost 50.5/100,000 respectively, due to the increased cases of these diseases.

7. Ministry of Health Budget Allocations for the Years 2007-2012:

- Despite the relative increase in the Ministry of Health budget from 3% to 7.6% of the state budget for the years 2007-2010, it dropped to 7% in 2011, and then to 5.5% in 2012.
- Operational (current) budget allocations of the total budget of the Ministry of Health did not go below 80%. Instead, it rose to more than 95% during the period (2007-2012) at the following rates: 81.2%, 96%, 88%, 80%, 81%, and 87%. The operational budget allocations include (wages, salaries, commodity supplies, service requirements, maintenance, and purchase of non-financial assets). The remaining percentage is set aside for the investment budget consisting of investment plan projects allocations.
- Despite the limited allocations of health services for the years mentioned above, there were also low rates of implementation of these allocations. The financial expenditure did not exceed (20%) of the annual allocations for 2010 and (57.5%) for 2011.

Ministry of Health Budget (Allocations) for 2007-2012

Year	Operational	Investment	Gross
2007	1,860,750,000,000	430,500,000,000	2,291,250,000,000
2008	2,247,343,520,000	100,000,000,000	2,347,343,520,000
2009	3,650,936,315,000	481,500,000,000	4,132,436,315,000
2010	4,632,416,965,000	1,127,000,000,000	5,759,416,965,000
2011	4,672,442,839,000	1,050,000,000,000	5,722,422,839,000
2012	4,941,930,189,000	735,000,000,000	5,676,930,189,000

Source: Annual Report of the Ministry of Health

8. Hospitals and Specialized Centers Services (Secondary and Tertiary Health Care).

- In 2011, the number of public and private hospitals across Iraq totaled 327, including 231 public hospitals, of which 66 are educational hospitals.
- In 2011, the number of public hospitals totaled 148, while the number of specialized hospitals totaled 83.
- In 2011, the total number of beds in public hospitals amounted to 44,464, compared to 42,459 beds in 2010, an increase of more than 2000 beds. The average distribution of these beds to population is 1.3 beds per 1,000 people.
- Popular clinic services are offered through health insurance clinics which totaled 313 clinics in 2011 across Iraq, and 343 popular clinics.
- The number of specialized centers (tertiary service level) totaled 68, the largest number of which is concentrated in Baghdad province (17 centers), followed by Basra (8 centers). These centers are not available in Maysan, Diyala, and Salahuddin provinces.

Health Indicators (2009-2011)

S.	Indicator	2009	2010	2011
1	Doctor/People	0.72	0.74	0.75
2	Dentist/People	0.16	0.17	0.18
3	Pharmacist/People	0.19	0.20	0.21
4	Medical Care Provider/1000 People	1.5	1.6	1.7
5	Nurse/Doctor	1.4	1.4	1.5
6	Bed/1000 People	1.14	1.15	1.17
7	Bed Occupancy Percentage %	51.6	51.4	60.1
8	Number of Baby Friendly Hospitals	36	37	37
9	Infant Mortality Rate per 1000 Live Births	00.35	-	00.33
10	Mortality Rate of Children under Five per 1,000 Live Births	00.41	-	00.38
11	Percentage of Underweight Children	7.6 mix 3%	-	8.4 mix 4

	under Five Years (%)			
12	Percentage of Food Insecure Population	3.1 - 2007	3.1	3.1
13	Percentage of Births Attended by Health Specialists	89	-	89
14	Rate of Condom Use to Contraceptives Prevalence	1.1	1.1	2
15	Percentage of the Population Exposed to Malaria who Take Effective Measures to Prevent and Treat Malaria	None	None	None
16	Malaria Cases per 100,000 People (%)	None	None	None
17	Prevalence Rates of TB Cases per 100,000 People	78	78	65
18	Rates of TB-Related Deaths per 100,000 People	11	3	10
19	Percentage of TB Cases Detected and Cured under Observation according to a Short-Term Observed Treatment (%)	88	88	89
20	Percentage of TB Detected Cases	46	49	61
21	Percentage of Coverage of Pregnant Women Fifth Visit to Primary Health Care Centers (%).	32	32	32
22	Percentage of Pregnant Women Immunization Coverage	80	68.9	75
23	Percentage of Immunization Coverage for Women of Childbearing Age (15-49)	29	27.5	29
24	Rate of HIV Prevalence among Pregnant Women Aged 15-24 Years per 100,000	0.1	0.01	0.01
25	Rate of Viral Hepatitis A	5.2	15.8	14.4
26	Rate of Viral Hepatitis B	6.1	9.6	10.4
27	Rate of Viral Hepatitis C	1.75	3.6	3.6
28	Rate of Viral Hepatitis E	0.55	0.7	1.2
29	Decrease of Premature Mortality Caused by Primary Incommunicable Diseases for the Age Group below 60 Years Per 100,000 People	49.42	49.99	50.5 (Approximately)

9. Deaths Caused by Accidents:

Crude mortality rate increased in 2011 to 4.16 per 1,000 people, compared to 4/1000 people in 2009 and 2010. The continued increase of mortality rates caused by accidents result in many social problems, not to mention the heavy burdens placed on health institutions. The number of examined deaths in the Forensic Medicine Section in 2010 amounted to 15464, which rose to 15492 in 2011. The primary causes of these deaths according to 2011 data are as follows: traffic accidents (20%), gunshot wounds (16%), various kinds of burns (9%) and electric shock (6%). Most of these incidents require education and awareness to reduce or avoid these deaths, in addition to improving the security situation.

10. Congenital Malformations: The number of congenital malformations and handicapped births increased between 2010 and 2011 from (2997) to (3287) by (9.7%), which represent account for (0.3%) of total live births in both years. Most of these cases were concentrated in Baghdad and Nineveh.
Source: Ministry of Health (Annual Report 2011)

11. Natural and C-Section Births: It is recognized that C-Section surgeries are performed to save the mother and the infant in the event of obstructed labor, however, misusing this method endangers mothers and infants lives. The rate of natural births decreased between 2006 and 2011 from (79.4%) to (75.1%), respectively, while c-section births rose from (20.6%) to (22.6%) between the abovementioned years. The universal permitted percentage of c-section births is (15.7%). Source: MICS 3 findings for 2006, and I.WISH findings for 2011.

Second: Challenges

Iraq vast area and the variation in population density and its wide spread pose challenges to narrowing the disparity in the level and efficiency of health services on one hand, and ensuring comprehensive coverage on the other. In this context, the provision of basic health services through primary health centers, especially in rural areas, should be ensured, particularly in terms of maternal and child care services, health education, preventive services and so on. As the rural areas do not provide attractions for the private sector such as those provided by urban areas, they will remain

dependent on government health services to a large extent. The health care system also faces a number of challenges associated with community transformation conditions including:

1. Decline of government funding: The Ministry of Health allocations include the budget of the health institutions, centers and departments of the Ministry, as well as providing preventive, curative and health services to citizens, in addition to medicine and medical supplies allocations. The diminution of government funding of health services intensifies the burden for consumers of health services against rising prices of medicine and treatment. The wide gap between the contemplated funding of health services provided by the government and the actual need for the growth of the health sector leads to providing substandard services.
2. Increased pressure on the health care system: Iraq adopts a dual system for health care. While public health care enjoys considerable support from the state, private health care system is growing at a rapid pace but is concentrated in urban areas.
3. Increased pressure on public hospitals, which operate beyond their capacity, despite that the public sector resources are higher than those of the private sector, which reflects negatively on the public health system.
4. The health system in Iraq is unable to meet treatment requirements, especially for affluent people who seek treatment outside Iraq, which causes serious material losses.
5. The changing lifestyles and demographic indicators. Iraq faces growing population rates, which were in 2007 10 times higher than population rates in 1927. If fertility rates (4.3) continue to grow at the current pace, population rates will double again in 23 years. Children account for the largest proportion in the population pyramid, which places pressure on the health care system, and reflects lack of proportionality between health care requirements and the current system.
6. Environmental sanitation coverage problems. There is a certain percentage of people who still does not steadily receive improved sources of water, despite that the percentage of people obtaining such service during 2007-2011 increased from (79.2%) to (89%). There is also still relatively

high proportion of people who does not have access to improved sewage. In addition, problems related to waste treatment and management incurs additional preventive and curative commitments to the health system.

7. Continued deterioration of the security situation in some provinces.

8. Migration of human capital, including highly qualified doctors and faculty members in medical and health specialties.

9. Poor society participation as a result of citizens' lack of satisfaction with the level of services provided.

10. High rate of drug and alcohol misuse.

11. Poor primary services (electricity, water, sanitation, and roads).

12. Poor coordination between other sectors and ministries.

13. Technology gap between Iraq and other countries.

Third: Vision

“A healthy society and physically, psychologically and socially healthy population.”

Fourth: Mission

Reducing morbidity and mortality rates for all segments of society while ensuring sustainable healthy development and delivery of health services to citizens.

Health Sector Strategic objectives (2013-2017):

First: Developing an advanced and integrated health system based on advanced health human resources, advanced health services, effective governance, efficient health financing system, and state-of-the-art medical techniques.

Second: Reducing mortality rates for children under five by 50% compared to 1990 rates (according to the Millennium Development Goals)

Third: Reducing maternal mortality by 75% compared to 1990 rates

(according to the Millennium Development Goals)

Fourth: Controlling communicable diseases (according to the Millennium Development Goals)

Fifth: Reducing morbidity and premature deaths caused by primary incommunicable diseases by 5% compared to 2009 rates.

Fifth: Quantitative Objectives

The table entitled (Target Development Indicators) of the National Development Plan (2013-2017) addressed several indicators that reflect the strategic directions and goals specific to the health sector represented by (29) numeric indicators. In addition to the indicators adopted by the National Development Plan 2010-2014, this table includes indicators of communicable diseases (viral hepatitis) and an indicator of chronic diseases (reducing rates of premature mortality caused by communicable diseases for the age group below 60 years old) per 100,000 people. These indicators are compatible with the strategic directions derived from the actual requirements of the health sector reality and its developments.

Table () Showing Indicators, Targets, and Estimates for the Plan Years (2013-2017)

S.	Indicator	2013	2014	2015	2016	2017	Target in 2017
1	Doctor/People	0.75	0.75	0.76	0.77	0.78	0.78 Doctor/1000 People
2	Dentist/People	0.18	0.19	0.2	0.23	0.25	0.25 Dentist/People
3	Pharmacist/People	0.2	0.22	0.23	0.24	0.25	0.25 Pharmacist/ 1000 People
4	Medical Care Provider/1000 People	1.8	1.85	1.9	0.95	2	2 Health Care Providers/1000 People
5	Nurse/Doctor	2.6	2.7	2.8	2.9	3	3 Nurse/Doctor

6	Bed/1000 People	1.2	1.2	1.25	1.3	1.5	1.5 Beds/1000 People
7	Bed Occupancy Percentage %	61	63	65	67	70%	70%
8	Number of Baby Friendly Hospitals	37	40	42	44	46	46 Baby Friendly Hospitals
9	Infant Mortality Rate per 1000 Live Births	22	21	20	19	18	18/1000 Live Births
10	Mortality Rate of Children under Five per 1,000 Live Births	28	27	26	25	24	24/1000 Live Births
11	Percentage of Underweight Children under Five Years (%)	7	6	5	4	3	3
12	Percentage of Food Insecure Population	3	3	3	3	3	3%
13	Percentage of Births Attended by Health Specialists	93	93	94	95	95	95
14	Rate of Condom Use to Contraceptives Prevalence	4.2	4.5	5	5.5	6	6
15	Percentage of the Population Exposed to Malaria who Take Effective Measures to Prevent and Treat Malaria	None	None	None	None	None	100 Treatments
16	Malaria Cases per 100,000 People	None	None	None	None	None	0

	(%)						
17	Prevalence Rates of TB Cases per 100,000 People	45	40	30	30	25	25
18	Rates of TB-Related Deaths per 100,000 People	1.3	1	0.5	0.5	0.5	0.5
19	Percentage of TB Cases Detected and Cured under Observation according to a Short-Term Observed Treatment (%)	89.4	90	91	92	93	93
20	Percentage of TB Detected Cases	69	70	70	70	70	70
21	Percentage of Coverage of Pregnant Women Fifth Visit to Primary Health Care Centers (%).	37	45	60	75	90	90
22	Percentage of Pregnant Women Immunization Coverage	75	85	85	90	90	90
23	Percentage of Immunization Coverage for Women of Childbearing Age (15-49)	35	50	60	65	70	70
24	Rate of HIV Prevalence among Pregnant Women Aged 15-24 Years	0.01	0.01	0.01	0.01	0.01	0.01

	per 100,000						
25	Rate of Viral Hepatitis A	12	11	10	9	8	8
26	Rate of Viral Hepatitis B	8	7	6	5	4	4
27	Rate of Viral Hepatitis C	2	1	0.9	0.8	0.7	0.7
28	Rate of Viral Hepatitis E	0.9	0.8	0.7	0.6	0.5	0.5
29	Decrease of Premature Mortality Caused by Primary Incommunicable Diseases for the Age Group below 60 Years Per 100,000 People	49	48	47	46	45	45 per 100,000 People

Sixth: Qualitative Objectives

1. Upgrading the Kind, Capacity, and Coverage of Health Services Infrastructure:

Efforts will continue to develop and expand health facilities in all directions and in all urban and rural areas. Opportunities will be enhanced to provide secondary and tertiary health care services, while remote and disadvantaged areas will be provided with access to primary health care services. This requires extraordinary efforts during the period of the plan through:

- Expanding primary health care services, and opening more new clinics and community clinics in remote and rural areas.
- Assigning additional clinics and increasing the range of services in disadvantaged urban and rural areas.
- Primary health care services should be the foundation of a future people-centered health system. Such care should be the first medical

step for communication and providing adequate and quality health services. Support should be provided to patients through the health care system.

- Developing national programs to preserve people health, through developing a primary health care model with sufficient accommodation capacity, appropriate funding and coverage for all residents, high-quality services, and is trusted by people.
- Enhancing secondary and tertiary health care services by establishing and developing new hospitals in line with the needs of society, such as national cancer institutes and specialized rehabilitation centers.
- Managing health and medical services for emergencies, crises and disasters in an integrated and efficient manner and with faster response to variables.
- Ensuring the smooth flow of health services, by drawing a roadmap that promotes access opportunities, especially in remote and disadvantaged areas, and identifying flaws, gaps or opportunities that will ensure the provision of services.
- Completing a personal database that determines the capacity and training needs of human resources to facilitate planning for service network that will be the basis for a comprehensive health care system.
- Developing the statistical health information system, adopting a unified information system for all health institutions, and monitoring and evaluating such information quality.

2. Keeping Abreast of Scientific Developments in the Health Field:

Technological developments create opportunities for significant improvements in the coverage and quality of health care, and assist in providing primary care services to communities in rural areas. This requires reforming the health care system, with a focus on the following key areas:

- Adopting an integrated electronic information system.
- Increasing the efficiency and capacity building of human resources and overcoming the shortage in health care professionals.
- Enhancing participation in national, regional and global research activities on communicable and incommunicable diseases.
- Taking advantage of technological and scientific developments in the field of medical application and knowledge.
- Using most advanced modern technologies in diagnosis and treatment.

3. Ensuring Regular Service Delivery:

This objective is based on adequately determining roles and regulating functions that provide service. Under this approach, the Ministry of Health exercises its close control, supervises the health care sector, and enforces legislation. It also includes imposing a series of measures based on standards that enhance care quality in the public and private sectors and ensure patient safety. The key initiatives under the plan include, *inter alia*:

- **Reviewing legislation and laws:** to continue to review the legislation in force, and propose new regulations, to ensure their approval, adoption and preference.
- **Reviewing financing options:** According to this option, the management is allowed to increase costs, while ensuring easy access to health care by people. This option includes adopting a cost-sharing policy that will allow citizens to choose to purchase health services without prejudice to the interests of the family.
- Ensuring integration between hospitals and primary health care centers with respect to public health services and primary health care.

4. Building a Healthy Community based on Disease Prevention

Social transformation in general, unhealthy food consumption, and increased wrong behavioral practices, increase health risks, as well as chronic diseases

such as high blood pressure, diabetes, heart disease and blood vessels, in addition to communicable diseases. This in turn augments health care cost and the demand for high-cost and long-term treatment. In order to build a healthy community based on disease prevention, the plan seeks to:

- Adopting the results of national surveys diagnosing the gaps in the health system for development and empowerment purposes.
- Developing technical and health capacity in line with the global medical developments and society requirements.
- Diagnosing rooted social and cultural factors causing the decline of some health indicators.
- Reducing rates of morbidity and premature deaths caused by incommunicable diseases.
- Providing palliative care for people with chronic diseases and cancer, especially for elderly people.
- Monitoring the implementation of the anti-smoking national program.
- Activating the national strategy for promoting diet, physical activity and health.
- Providing updated data on the national epidemiological situation of incommunicable diseases.
- Providing integrated medical rehabilitation services for persons with disabilities in order to integrate them into the community.

5. Building a Culture that Promotes Healthy Lifestyles:

Achieving a health care system that focuses on the prevention of chronic diseases and their causes and consequences requires changing thinking patterns, together with re-allocation of resources to promote prevention and early intervention in every aspect of health care. This structure can be enhanced through:

- Promoting community awareness of healthy lifestyles and health care services, and enabling people to participate in self-care to maintain good health.
- Encouraging significant community-based initiatives to reduce the demand for health care services by building a culture promoting healthy lifestyles.

- Individuals and communities should play a greater role in maintaining their health individually and collectively, while the government seeks to create circumstances that enhance chances of living in a healthy and clean environment.
- Expanding health awareness campaigns, including campaigns that promote physical and mental health and encourage anti-smoking, alcohol and drug activities, and targeting children and adolescents at schools, as well as women and the elderly to ensure better health outcomes.
- Raising the health level of workers in shops, factories, water treatment plants, hospitals, kitchens and familiarizing them with good health behaviors, habits and practices.
- Encouraging accomplished healthy lifestyles and promoting sport and recreational activities which will enable people to adopt healthy lifestyles. Sport activities raise the level of entertainment programs.

6. Improving Health Human Resources Quality

In view of the fact that investment in health human resources is the cornerstone of the health system, the trend during the plan years is towards building health capacity through the government use of internal and external sources, and cooperation with training institutions to train workers in the health field. Efforts for meeting the growing demand for quality health care services should also focus on the following:

- Increasing allocations of doctors and other specialists training on health care.
- Improving and expanding post basic training for nurses and allied workers in the health care field.
- Creating a material and moral incentives system and restructuring the salaries of health sector employees, particularly doctors and nurses.
- Improving the quality of professionals who provide health care through accreditation certificates, privileges and structured training.

- Adopting a comprehensive program to restructure the health sector based on public administration modern methods which reinforce justice and equality concepts.

7. Improving Reproductive Health Services

The development construction of the family will enhance the opportunities for improving women's health and children well-being. Investment in childhood is an investment in the future of the human capital of Iraq. In this context, the following steps should be taken:

- Preparing comprehensive health programs aimed at protecting women, especially reproductive health and violence against women programs. Family planning services are available to beneficiaries.
- Providing high quality pregnant women care services, and ensuring safe and secure births by skilled personnel.
- Promoting community awareness of reproductive health concepts and maternal and child health care.
- Providing quality health care services for abortion and post-abortion cases.
- Developing programs and strategies to protect children health, including breastfeeding, proper nutrition in early stages, focusing on vaccination programs and promoting school health programs.
- Providing access to expanded program of immunization services in all primary health care centers.
- Enhancing the activities and indicators related to child health and monitoring mortality.
- Supporting and developing family planning program, building and developing the capacity of the staff providing family planning services, and promoting the participation of other sectors, particularly the Ministry of Education and the Ministry of Women and Civil Society.

8. Developing Mental Health Services

Distressed communities suffer from high rates of psychosomatic diseases resulting from post-trauma stress disorders, such as mental and neurological diseases, which require concerted efforts for developing mental health services through:

- a. Implementing care models based on mental care services promoting community-based services and integration in community.
- b. Reducing effects resulting from the social stigma to ensure patients access to quality health care services in a suitable environment.
- c. Enhancing people's awareness of challenges and the effects of augmenting mental and neurological problems.

9. Developing Policies and Programs for Preventing and Mitigating Communicable and Incommunicable Diseases. This requires national effort that is based on:

- d. Implementing national policies and plans to prevent and control communicable diseases and mitigate incommunicable diseases.
- e. Enhancing interventions to reduce common adjustable main risk factors for diseases.
- f. Supporting and promoting research on the prevention and control of communicable and incommunicable diseases.
- g. Promoting partnerships for prevention, ensuring control, and eliminating implications.
- h. Monitoring communicable and incommunicable diseases, considering their determinants and evaluating progress at the national level.

10. Developing Administrative and Organizational Structures

Since the health situation in Iraq suffers from accumulated problems, and in view of the difficulty to cover all programs for physical and human reasons at the same time, achieving comprehensive coverage of health services and quality assurance requires:

- a. Developing administrative and organizational structures in order to grant powers to local agencies and authorities to perform their assigned tasks more efficiently, and in a decentralized manner.

- b. Considering government health facilities as independent cost centers subject to evaluation and accountability on the basis of appropriate performance standards.
- c. Determining priorities with regards to personnel development, implementation and follow-up, and giving priority to the outputs to ensure that implementation focus on efforts that have the greatest impact.
- d. Conducting intensive and organized communications with all stakeholders that are directly related to program management or expanding the scope of communication with health care community, in order to ensure the involvement of community and development partners in building a healthy community in which individuals enjoy long and creative life.

11. Enhancing the private sector role in providing health services, and focusing the state role in ensuring efficient health services and providing coverage of all segments of society in all areas. This can be accomplished through:

- a. Motivating the private sector by the State to establish health projects, by providing facilities, tax exemptions and so on.
- b. Enhancing bank credit allocated to funding health development projects.
- c. Strengthening the private sector role in raising community awareness in the field of health care and services.
- d. Encouraging the private sector to build new facilities in easily accessible locations, in order to foster a culture developing creativity opportunities and active life models for children.

The successful implementation of health policies and programs of the 2013-2017 plan are determined by the levels of cooperation and coordination among development partners and other sectors. Health is a common target, and everyone is responsible for its development. It is important to highlight the most important links between the health sector and other sectors such as environment and education. Building community health culture requires support and coordination among a large number of stakeholders to ensure effective health care services.

National Development Plan 2013-2017
Housing sector

Housing

Housing is a human right and a basic need. A citizen must have housing in both rural and urban areas, with a healthy environment and full services and facilities. In addition, housing is a human right with an important role to play from the point of view of pure economics. It has an important role in the formation of fixed capital and providing jobs, as it is an intensive user of labor, either directly or through links to other activities such as construction, electrical and sanitary works and others. This is why many countries with surplus funds invest in this sector. In other words, housing should be looked at as a productive sector and not only a social objective to satisfy living requirements.

The 2010-2014 NDP has clearly identified the size of the housing problem in Iraq and its growth during the past four decades, transforming it from a problem to a stifling crisis caused by the increasing gap between huge demand and low supply. This is mainly due to the severe shortage of suitable land for housing in urban areas, as well as shortage of funding, and the deterioration of existing housing due to poor maintenance. The legislation to activate private sector in housing investment has not yet been completed. The plan has set an ambitious goal of two million housing units during its five years. This will reduce the shortage, overcrowding and occupancy rates to acceptable levels. It will also reduce the differences in housing levels between governorates on the one side and rural and urban areas on the other, through an integrated system of ways and means represented by activation and determination of the roles of the private and public sectors and developing and updating housing finance, urban land management, enhancing local government management of housing lands and insuring infrastructure and in housing production. Also by maintenance of old units, improving building materials industry, slums, administrative and legislative reforms in the housing sector.

The enabling role in the plan for the public sector, and the emphasis on the role of the private sector and foreign investments in housing production, did not achieve any significant results on the ground during the past three years, either in production or in providing housing lands or in financing or in addressing the problem of slums or expanding building materials industries, as indicated by the housing status below.

1-Status of housing

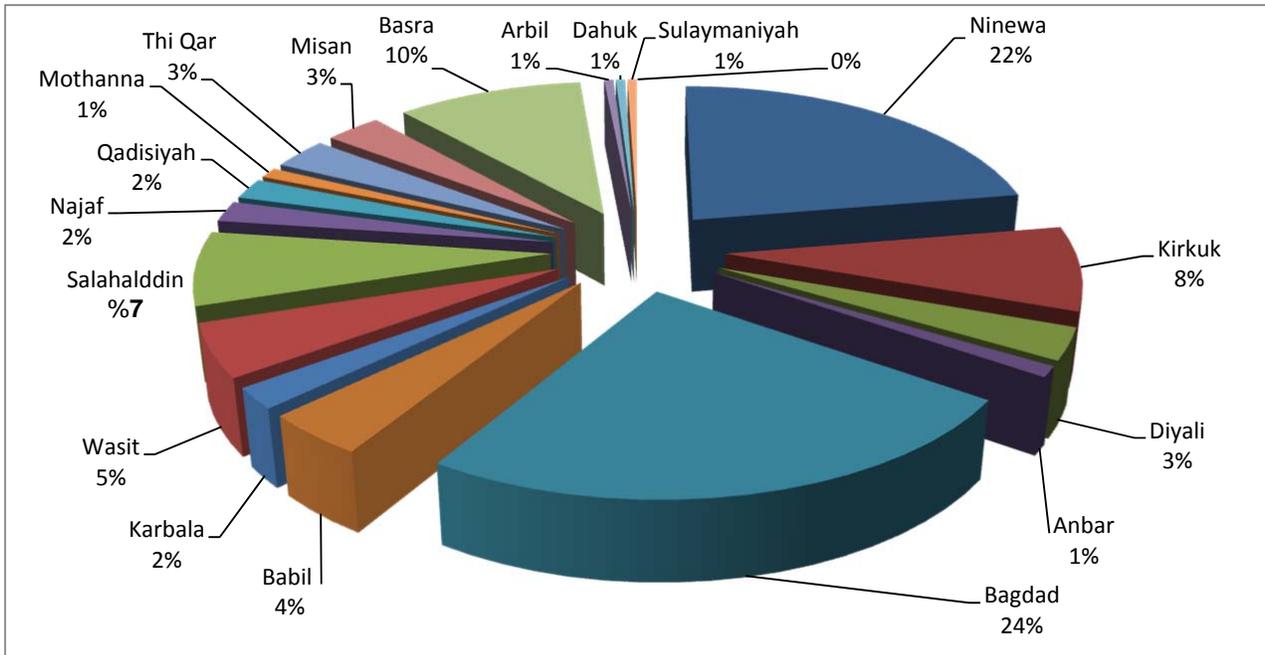
There are no accurate statistics on the status of housing in Iraq. All that is available now are the results of housing and building survey of 2009 which provides the number of persons and families and total number of houses, distributed by governorate. This survey indicates that the population is around 31,664 million, and the number of families as 4,696 million and the number of housing units as 4,810 million. The net housing shortage is 759 thousand units, 1% in Mothanna, 22% in Ninewa and 24% in Bagdad as shown in the table below.

Table showing number of inhabitants and families and number of houses and the shortage according to population survey in 2009

Governorate	Number of persons	Number of families	Total housing units	Dilapidated houses	Marginal housing + other buildings	Extended families + buildings	Mud built houses in urban areas	Current housing shortage	% of current shortage
Ninewa	3106948	425861	438885	24677	18333	25719	100070	168799	22
Kirkuk	1325853	234697	221171	12763	5399	38456	7591	64209	8
Diyali	1371035	202171	214024	7578	3324	9030	4908	24840	3
Anbar	1483359	178283	194096	3446	3459	3196	914	11015	1
Bagdad	6702538	1037189	1064175	77392	18598	71595	17060	184645	24
Babil	1729666	245682	252025	8903	4008	11704	2018	26633	4
Karbala	1013254	149408	157990	3125	3515	6590	4037	17267	2
Wasit	1150079	152777	157905	4303	1858	7468	26502	40131	5
Salahaldin	1337786	180542	204309	4737	4099	8087	36744	53667	7
Najaf	1221228	177132	183549	3938	3031	9188	1487	17644	2
Qadisiyah	1077614	140848	146733	5585	1268	5036	3411	15300	2
Mothanna	683126	84603	86038	4495	1271	1638	499	7903	1
Thi Qar	1744398	214554	220910	6214	5159	4209	3027	18609	3
Misan	922890	122847	125808	7946	3914	8383	3501	23744	3
Basra	2405434	338232	327185	18382	7822	33335	16151	75690	10
Arbil	1532081	293353	302457		2792			2792	5,0
Dahuk	1072324	152127	147578		2340			2340	0,5
Sulaymaniyah	1784853	365959	365717		3894			3894	0,5
Total	31664466	4696265	4810555	193484	94084	243634	227920	759122	100 %

The survey shows a larger number of housing units than the number of families by about 144 thousand units. This does not in any way mean that there is a surplus in available housing, but it is in fact uninhabited houses whose owners have emigrated abroad or who have gone to other areas of the country due to the security situation. Saying that the shortage is 759,000 units is also far from reality, as it represents the net shortage and not the real one, which should include rural housing which is unsuitable and built from mud or other unstable materials. Also, urban housing which is unsuitable for human habitation being below acceptable levels, and reducing overcrowding at the level of the housing unit and living room, while providing housing units to meet a population growth of 3% per year.

The chart below shows the housing shortage in Bagdad, governorates and Kurdistan



The knowledge survey of 2011 confirmed these facts, showing that 9% of houses are built from materials such as mud, wood or tin plate. 73% of these houses are in the countryside especially in Misan, Wasit, Ninewa and Kirkuk. 12% of families have overcrowded houses with more than two people occupying one room. This rate rises to 17% in rural areas, especially in Misan, Thi Qar, Najaf, Qadisiyah, Kirkuk and Ninewa and 10% of families in Bagdad.

The indicator in the knowledge survey showed 125 families for every hundred housing units donot mean that 25% of families do not have independent housing.

What confirms the inaccuracy of housing data in Iraq caused by not conducting population censuses at their specified times, or conducting special housing surveys such, as the one done by Polservice company in the middle of the 1970s, is that the estimates of housing units in Iraq were till 2009 , and the estimate was 2.8 million units. The results of the 2012 survey showed that there were 4.8 million units, an increase of two million. This is surely not caused by producing this huge extra number during the previous year, but due to inaccurate estimates and their assumptions. New housing from 2010-2012 implemented by the public sector does not exceed 4000 units, and the number of building permits was 75 thousand. Assuming that all these houses were built during these three years, and then the number of new units will not be more than 80 thousand units, which is only 8% of planned of 2010-2014. In other words, it hardly covers the needs of natural population growth.

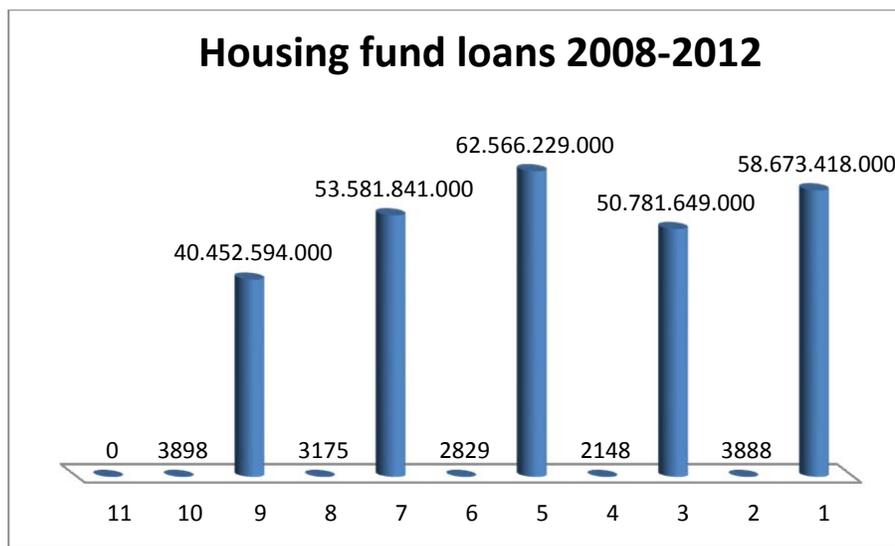
Accordingly, the plan will discuss the following facts:

- 1- Continued housing shortage of around 2 million units, with 50% in Bagdad and Ninewa.
- 2- Continued high rate of occupancy per unit and room.
- 3- Continued difference in meeting housing needs in various governorates on the one side and urban and rural areas on the other.
- 4- The increasing level of slum dwellings in many towns, not only in Bagdad.

2-Challenges

Many difficult challenges confront the solution of housing problems, which can be summarized as follows:

- a. Severe shortage of suitable land for housing in urban areas, especially the large towns. Poor urban land management, complicated procedures for allocating housing areas to developers, both companies and investors.
- b. Complicated procedures for allocating housing lands outside perimeters of master plans for cities and towns and their non-compliance with planning standards.
- c. Limited capital allocated for housing in the federal budget. The State efforts are focused on enabling individuals and companies to enter directly in housing production.
- d. Limited finance capacities of commercial and specialized banks to finance housing projects, and complicated procedures and requirements. For example, loans granted by the housing fund from 2008-2012 did not exceed 16 thousand as shown below:



- e. Weak capacities of investors and developers in housing, with few who are qualified.
- f. Deterioration of housing in town centers and old neighborhoods that have architectural values, and lack of plans and procedures to protect or renovate them.
- g. Increased number of families unable to have suitable housing, and a lack of procedures to convert these families to potential users of houses.
- h. The large number of families targeted for free housing, which requires financial resources that the state may not be able to provide during the plan.
- i. Low supply of locally produced construction materials, and imported materials that do not meet standards, compared to the expected needs for implementing ambitious housing schemes.
- j. Iraqi families prefer to live in separate housing units rather than in vertical housing which the state is adopting to meet the shortage of available lands and not encroaching on agricultural lands surrounding big cities.
- k. Poor capacities and implementation of projects, starting from feasibility studies to the preparation of bills of quantity (BOQ) and drawings, through to contracting and follow up stages.
- l. Low awareness of importance of quality in materials or execution, thus affecting maintenance and upkeep costs of housing units and their sustainability.
- m. Unwillingness of foreign investors to enter into this activity on a competitive basis and as a real investor, but only as a contractor that is guaranteed by the state.
- n. The increasing problem of partitioning existing units into small areas that are in violation of regulations, causing legal problems and pressure on services and infrastructure, particularly in Bagdad.

3-Vision

Providing suitable housing for the largest number of families and individuals and increasing their choice of type of housing and its location.

4-Goals

- a. Providing one million housing units during the plan period.
- b. Reducing overcrowding and occupancy rates to reasonable levels.
- c. Reducing housing shortage in governorates and meeting housing requirements in rural areas.
- d. Halting building of more slums, and setting up programs to solve this problem as part of solutions addressing poverty in Iraq in these areas and in the countryside.
- e. Increasing housing production and lowering costs, with suitable quality standards, including eco-friendly units, through low power consumption.
- f. Enabling owners of existing housing to improve and expand their houses.

5-Methods

As housing is such a big problem in Iraq there is no single cure that will arrest the deterioration and then it. For the solutions to be successful and effective, all means of the private sector and the state that are related to housing production or financing or lands or infrastructure, must be utilized. The plan therefore calls for activation of all these methods and procedures to achieve a significant result, especially as Iraq has progressed well in this regard by reaching an agreement with an international company to implement a housing project of 100 thousand units near Bagdad. Building companies are planning to complete 42 projects of 25200 units during 2012-2017, in addition to low cost housing in Diyala, Salahalddin, Anbar, Wasit, and Diwaniyah at the rate of 200 units for each project, as well as projects for housing the poor at the rate 200 units in each governorate, which will provide the required land.

65 housing compounds for the private sector have been approved in 13 governorates, with a total number of 10226 housing units.

Below is a list of procedures needed to confront housing problems :

5-1 Housing production in order to reduce overcrowding:

- a. Providing allocations from the federal budget of not less than 2-3 trillion Iraqi dinars annually to implement housing programs and low cost housing for low income groups and the poor, concentrating on slum areas to reduce them by 50%, as well as reducing housing shortage in governorates.
- b. Continue policy of enabling medium income persons to buy plots of land with easy loans on which to erect private houses for themselves. This method was successful in the seventies and eighties and forms a significant portion of available housing in the country producing 50 thousand units every year.
- c. Encouraging private companies to produce and supply housing, including converting state companies to public companies.
- d. Encouraging solid investment companies to participate in the housing market by implementing joint housing projects with high technology and specifications, such as Basmaya project, or any other method that Iraqi authorities consider appropriate.
- e. Giving local governments an essential role in the housing market, whether as a producer of units or in administering urban lands and providing infrastructures for housing projects, particularly small and medium sized which are within the ability of these local governments to supervise and implement, in addition to follow up and maintenance of houses, many if which require heavy maintenance.

5-2 Management of urban areas through:

- a. Accelerating completion of urban land reform which is being conducted by the UN in cooperation with German consultant, so that the project will be a guide for land management in Iraq starting with a detailed data base of urban land and their current type of use, ownership, value, method of registration and transfer of ownership etc.
- b. Converting from centralized management to decentralized management of urban lands.
- c. Converting to vertical housing to reduce needs of urban lands, especially in large cities.
- d. Revising all master plans for cities and updating them and specifying sufficient areas for current and future housing (up to thirty years). Reviewing civilian use in the cities and removing unnecessary industrial or warehousing use, and agricultural land that is no longer used for agriculture, and making these locations available for other uses such as housing, recreation, commerce and green areas.
- e. Completion of restructuring of governorates to specify land usage beyond the boundaries of the master plan of cities, such as housing, and allocating enough areas for the expansion of the cities to become new towns, according to regulations and requirements, while excluding unorganized methods currently being followed in allocating sites beyond the boundaries of large cities such as Bagdad.
- f. Establishing large protected housing compounds as a means of correcting the structural defects in Iraq's urban system represented by the domination of big cities nationally and Bagdad's domination of all urban structures within its governorate.
- g. Adopting implementation regulations to encourage house production such as selling large land areas from the public sector to private sector companies.

5-3 Housing finance

The plan calls for activation of banking credits for housing purposes, in addition to allocating 2-3 trillion Iraqi dinars in the annual budget, through:

- a. Increasing capital of housing funds and real estate bank to levels that will enable them to finance family housing and developers with preferential conditions, particularly green projects that use less energy.
- b. Activating the role of commercial banks in house financing transparently and with flexible procedures to conform to international practices. Financing will include rehabilitation and maintenance of existing housing units in addition to new units.
- c. Establishing a bank or fund for rural housing with easy conditions for lending, and by providing land freely as most housing in the countryside is below acceptable levels and built with poor materials. Rural areas have 40% of Iraq's poor who require exceptional support.

- d. Encouraging pension funds, social security and insurance companies to invest their savings in housing as partners in companies or as developers, concentrating on the middle class and low income groups.
- e. Improving organization and structure of house financing to provide guarantees to the lenders in case of defaulting on their loans. This requires new mortgage legislation for ownership and repossession of assets and guarantees.
- f. Many houses in old neighborhood are in a poor condition requiring structural repairs. They need sufficient funds to rehabilitate these houses and any financing scheme must include financing this type of use to maintain existing buildings and prevent them from deterioration.

5-4 Developing sectors for housing (building materials and contractors) through:

- a. Increasing production capacities of cement, bricks, concrete blocks, ceramics, flooring tiles, gypsum and steel, as well as other industries related to housing, thus providing many jobs in this sector.
- b. Improving quality of locally produced building materials according to quality standards, as proper use of good materials will improve life of housing units and reduce maintenance costs.
- c. Inspecting quality of imported materials such as cement and steel, to ensure that no poor quality materials are used.
- d. Increasing building materials labs.
- e. Regulating contracting sector through classification based on efficiency, capability and specialty and the quality of previous projects, as well as financial ability and equipment and engineering staff.

5-5 Slum dwellings

This has increased after 2003 as a result of poor security and emigration of families to the city. It requires governmental social actions to limit the problem and solve it in the long and medium term through:

- a. Rehabilitation of trespassers and providing them with services if there are possibilities to do that according to acceptable standards.
- b. Providing housing with acceptable specifications and moving trespassers there at low costs or on easy terms.
- c. Relocating trespassers to their current areas if legal, through rehabilitation of slums in stages.

5-6 Preservation of architectural heritage in implementing future housing projects or rehabilitation of old neighborhoods and the centers of religious and heritage towns, and providing housing designs in conformity with social requirements of Iraqi families.

In conclusion, we must emphasize that there is no agreement between state institutions and researchers about the actual shortage of housing in Iraq which ranges from 1 to 3.5 million units, and the big variation in the 2009 survey which estimated existing housing shortage in Iraq at one million. This requires a comprehensive survey of housing in Iraq if the census is not implemented, as current estimates could be too high and therefore setting ambitious plans accordingly may affect the market negatively and reduce the value of assets in this sector, which touches a large segment of society.

1-Industry and Energy

Current Situation:

The industrial sector is considered as important in strengthening the material foundations of any economy, as a result of the added value that is generated by activities, forward and backward linkages of activities and connecting it with other activities. Historically all developed countries in the world today built the foundation economy by building their industrial sector.

In Iraq the importance of this sector is growing immensely as per total economic indicators due to the fact that it is the primary generator of resources that the state's federal budget depends on, which exceeds 90%. This sector also includes oil, gas, electricity and manufacturing activities. It contributes to half the value of the GDP according to the statistic results of GDP in fixed prices for 2011. The contribution of various activities differs in the accumulation of GDP; as the crude oil sector contributes to approximately 43%, whereas the manufacturing sector contributes only 2.7%, electricity counts for 1.5%, and these are very low percentages if compared to averages in the seventies and eighties of the last century whereby the manufacturing activities alone contributed to 10% of national GDP. The following table shows the contribution of the industrial sector in results of GDP in fixed prices for the period 2010-2012 which indicates an increase in the contribution of the crude oil activity by 1.5% in 2011 in comparison to 2010 at an annual growth rate of 12.7% versus a contribution on the part of the electricity activities fixed at 1.5% at a growth rate of 8.8% annually. The manufacturing contribution decreased from 2.9% in 2010 to 2.7% in 2011.

Table below shows contribution of the Industrial Sector of total GDP in fixed prices for the period 2010- 2011

Activities	2010	Relative importance%	2011	Relative importance%	Growth rate % 2010-2011	Growth rate % 2009-2011
Extracting Industries	24266.3	41.7	27330.2	43.2	12.6	6.6
Crude Oil	24099.6	41.4	27160.6	42.9	12.7	6.7
Other Mining activities	166.7	0.3	169.6	0.3	1.7	3.7
Electricity	874.3	1.5	951.8	1.5	8.8	5.8
Manufacturing	1687.5	2.9	1727.1	2.7	2.3	4.3
Sum of Industrial sector	26828.1	46.1	30009.1	47.4	11.9	6.5
GDP /activity	58215.2		63249.2			

As a result of the importance of the industrial sector especially the crude oil and electricity activities in the total development process in Iraq, the National Development Plan has given priority to these two important activities through its invitation to allocate 15% of total investments of the plan for Oil and 10% for electricity activity, considering that oil is the primary engine of GDP generation and primary financier of for the federal balance, and the electricity activity is the primary engine for the remaining activities on one end and for ensuring welfare for the population.

The investment plan implementation activities for 2010-2014 indicate the industrial sector gaining a higher percentage of investment allocations especially for oil and electricity activities.

According to the first plan, priority allocations were for the industrial sector of overall investment allocations for 2010-2012. Allocations for 2010 reached 32.4% distributed as 13.7% for electricity and 18.8% for oil and gas, 3.6% for manufacturing, increasing to 42.9% of overall investment allocation in 2012, out of which 12.8% was allocated for electricity, 23.2% for oil and gas, and 3.5% for manufacturing.

The continuous increase in the share of oil and gas is due to Iraq's obligations to reimburse companies that won the tendering licenses, these commitments are on an increasing scale, expected to reach 85 billion USD during the plan for 2013-2017, which results in pressing need for priority given to the investment policy for the next five years.

2-Oil and Gas activity

2-1 Current Situation :

The role of the activity of oil within the performance of Iraq economy has grown significantly since the discovery of oil during the first quarter of the last century, it's growing importance during the fifties (during the reconstruction council) whereby 100% of oil revenues were dedicated to the process of reconstruction, reduced to 70% and to 50% due to development of oil revenues and to halving profits between Iraq and the foreign oil companies until the nationalization of oil in 1972.

Crude oil production and export reached its peak in 1979 at the rate of 3.5 million barrels a day as production, and 3.2 million barrels a day as export. In 1970 it was registered at 1.5 million barrels/ day as production and 1.4 million barrels/ day as export. Due to the continuous wars and sanctions imposed on Iraq the oil production and export activities deteriorated significantly only

to pick up as advancement began with production and export on an escalating level after 2003 as a result of regaining interest and priority that the state has endorsed on this sector being the primary engine effecting national economy. Daily production rate was registered at 1995 million barrels/day in crude oil production and 1535 million barrels/day in export at a development rate of 14.5% for production and 20.5% for export.

The 2010-2014 national development plans gave importance to oil activity and oil production increased to 3.2 million barrels/day for crude oil in 2012, and exports reaching 2.6 million barrels/day for the same year accompanied by development of infrastructure especially the potential export outlets.

-The Turkish line currently operating at approximately 0.4 million barrels/day with a design capacity of 1.6 million barrels/day.

-Khour al-Amya port reaches a capacity of 0.5 million barrels/day of production with a design capacity of 1.6 million barrels/day , operating three rigs of which only two are now working with a design capacity of 1.2 million barrels/day and an actual production at approximately 400000 barrels/day.

- Port of Basra that reaches a capacity of 1.6 million barrels/day, with a design capacity of 3.2 million barrels/day, and an actual production of 4 rigs with a design capacity of 1.2 million barrels/ day each. Actual production output is 400000 barrels/day.

The table below shows quantity of oil planned to be exported:

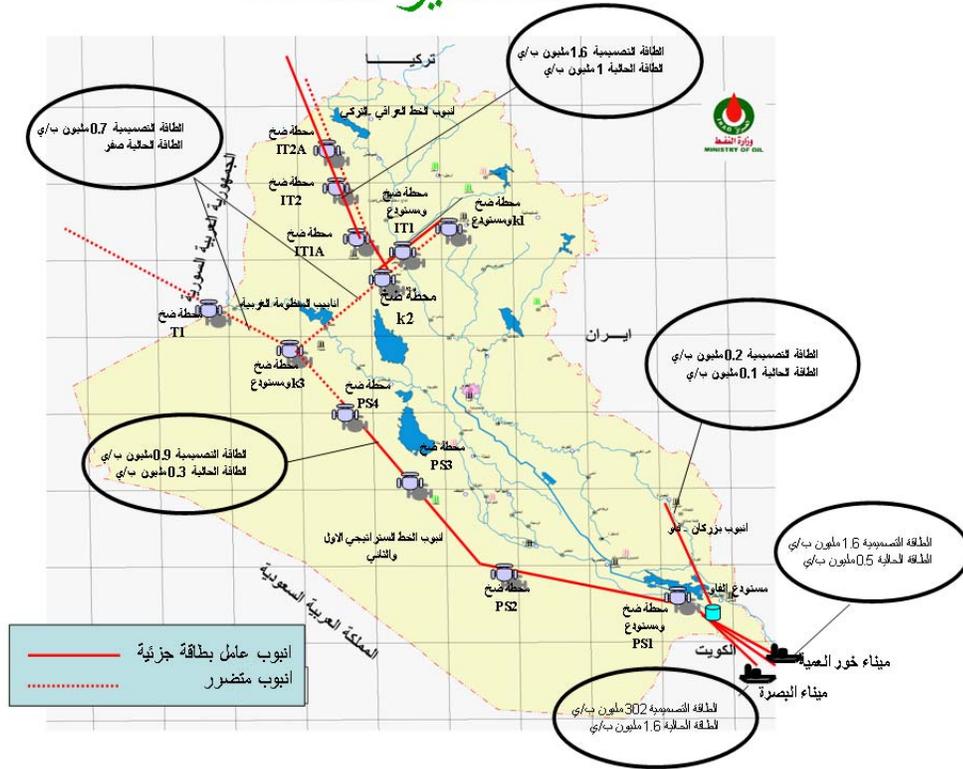
1000 barrels/day

<i>Year</i>	2012	2013	2014	2015	2016	2017
Average ex- port of Crude oil	2600	2900	3500	3750	5000	6000

The following illustration shows the crude oil export system; operating capacity and design capacity:

Crude oil governance system and available export outlets

المنظومة الحالية لتصريف النفط الخام ومنافذ التصدير المتاحة



As for matters concerning available storage capacity; it stands at (10,987) million barrels, which are considered appropriate capacities compared to production and export rates currently available, however they will be insufficient in future as target production rates are reached.

It is planned that by 1017 production will reach 30,057 million barrels/day to keep up with export capacity as is shown in the table below:

Oil Field Storage Tanks

Storage tanks	Current Situation			Planned		
	No. of tanks	Tank capacity Cubic meter	Total Cubic meter	No. of tanks	Tank capacity Cubic meter	Total Cubic meter
PSI	9	82	738	10	82	820
Tooba	4	66	264	16	66	1056
Zubair I	8	33	264	10	33	330
	10	22	220	10	22	220
Zubair II	4	58	233	16	58	928
Bazirgan	5	5	25	5	5	25
Fao	0	58	0	24	58	1392
Total	40		1744	127		4771
1000 barrels			10987			30057

The importance of oil does not stop at its part in developing Iraq; it extends to the important role it could play on the level of the world oil market due to the oil reserve that Iraq currently possesses and the capability of building on those reserves in the future in addition to Iraq being one of the most potential countries to respond to increasing demand on energy, it is expected that within the coming decade that Iraq will become the second source of crude oil in the world after the Kingdom of Saudi Arabia, this will reflect greatly on the role it will play in limiting production quantities and world market prices, as well as benefiting from this in achieving national interest for Iraq.

Iraq currently suffers from decreased quantities of locally refined crude oil. In 2004 figures reached 150 million barrels, this quantity decreased to 130 million barrels in 2007, at a decrease rate of 19.4%, resulting in a decrease of actual capacity versus design capacity at a rate of 32% for 2007. This led to a deficit in filling the need of the increasing local consumer demand for benzene, white oil, Gas oil, liquid gas and resorting to import oil products from neighboring countries and shouldering the load of high expense on the federal balance especially with continuation of subsidizing oil products including what is imported.

Quantities of refined crude oil in 2012 were registered at 700,000 barrels/day, plans are to increase this figure to 950000 barrels/day by 2017, and the plan also aims to increase significantly

the production of oil products such as benzene, gas oil, kerosene and black oil. This is achieved by rehabilitation of existing units and operating new units as explained in the following table:

year	2012	2013	2014	2015	2016	2017
Refined oil 11000barrels /day	700	800	830	830	830	950
Liquid gas ton/day	880	1220	1600	1600	2100	2600
Benzene cubic m/day	14415	19000	19600	19600	28350	36150
Kerosene	12020	15650	16150	16150	19150	19550
Gas oil	20777	24870	25650	25650	31150	32100
Black oil	40490	53900	55900	55900	59900	40000

The plans in regards to treatment and refining do not target a large increase in production of oil products, rather on upgrading quality of product in compliance with international environmental requirements especially in increasing the quality of produced unleaded benzene introducing isomerization units.

The primary handicap hindering the activity of treatment and refining processes in Iraq does the absence of foreign investors' venturing in this activity due to the high investment capital and investment risk involved; ultimately national effort is needed to carry out this component.

As for the activity involving gas, Iraq has historically not demonstrated interest in this component and this has resulted in tremendous waste of gas by burning it without making any economic use of it, rather causing environmental pollution. Iraq posses such potential in the field of gas production, registered reserves in2011 are around 126.7 trillion cubic feet, expected reserves that are as yet undiscovered are vast and are estimated at 332 trillion cubic feet and approximately 164 trillion cubic feet of free gas, the rest 168 trillion cubic feet is compromised of accompanying gas (dissolved in Iraq's oil reserve).

Iraq's constant reserves can be classified as: 70% gas accompanying oil, 20% free gas, and the remaining 10% is in gas domes. This and 83% of accompanied gas is located in the southern oil fields, while 17% is found in the northern and northeast oil fields, the only gas dome that has been discovered lies in the Majnoon field within the southern oil fields, 94% of gas reserves in domes are found in five locations in the northern fields of: Jamboor, Ajeel, Bai Hassan, khabaz and Kirkuk. Gas is currently produced only in Jamboor and Ajeel. As most gas produced tends to be accompanied gas, it is greatly affected by oil production. Free gas is found in Iraq in the gas

fields of: (Chamchamal, Kormor, Mansooreeya, jiryabeeka, khashm IL ahmar, akas and siba). Policies implemented in the oil sector achieved high production of gas since its registered rates in 2009 at 1395 million cubic feet/day to 1574 Million cubic feet/day in 2011t the increase rate of 13% compared with 2009 however they are still 145 bellow plans.

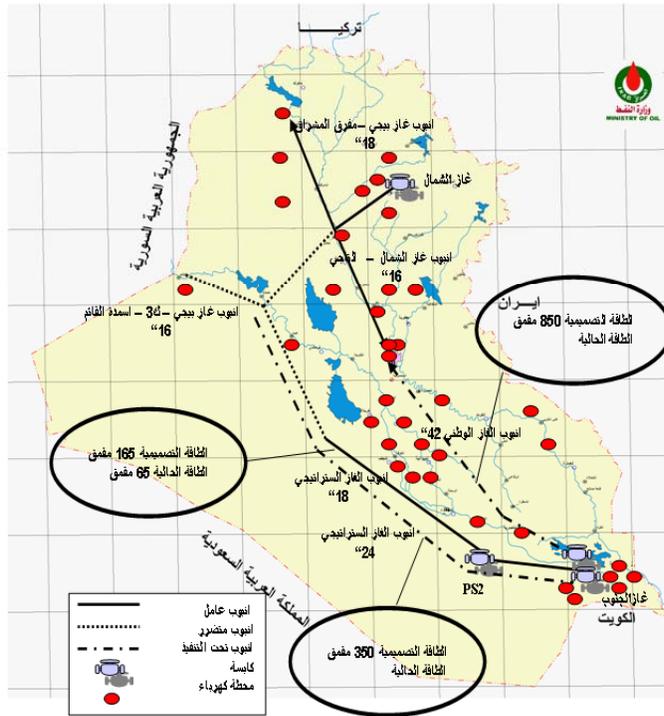
Due to the small quantity of gas accompanying oil produced and the outdated plants used for gas separation from oil, the oil sector has failed to reach electric sector need of gas energy to operate gas production plants. It is planned that gas production should reach 81 million cubic feet/day by 2017.

What grabs the attention is that 800 million cubic feet /day have been burned in the atmosphere in 2011; almost half of the quantity produced which causes great economic losses and huge environmental damage and pollution.

Iraq does not suffer from low levels of investment in gas production only, the whole infrastructure of this system involved in this activity has been vandalized through the sabotage of gas pipes as well as the depreciation of pumping stations and limitation of availability of a gas disposal system for both liquid and dry gas ; the illustration bellow shows that the total energy network available for gas disposal is approximately around 10100 cubic meters/day and that the design capacity for this system does not exceed 22700 cubic meters/day

Current and under construction dry gas disposal systems

منظومة تصريف الغاز الجاف الحالية والتي تحت التنفيذ



2-2 Capabilities within the oil and gas sector:

1. The availability of fixed oil reserves in the form of crude oil estimated at 143 billion barrels, placing Iraq at third place for oil reserve in the world.
2. The availability of huge quantities of fixed gas reserves, registered at 126.7 trillion cubic feet as per 2011 figures placing Iraq as country number 13 for world gas reserve.
3. The presence of competitive advantage for crude oil due to low cost of extraction when compared to other oil producing countries.
4. The great demand for oil products locally that has not been covered.
5. The presence of more than 80 years of accumulated expertise in this field.

6. The existence of primary infrastructure that can be further developed especially in the case of oil exporting ports.
7. The availability of investments for expansion in oil excavation and well drilling as well as insuring infrastructure due to the priority given to the crude oil and gas establishments by the state.
8. The desire of international companies working in the oil sector to invest as competition license tenders has shown.

2-3 Problems and Challenges:

1. Outdated technology practiced in oil enterprises especially technology referring to extraction and isolation of accompanied or associated gas.
2. Shortage of qualified labor specialized and experienced in this field due to the immigration of many such workers involved in the oil sector.
3. Depreciation and insufficiency of transport pipe network especially the strategic line.
4. Low response to environmental issues reference to the old refineries and the continuation of burning gas in high percentages causing negative environmental effects.
5. Continuation of subsidizing oil products which affects the efficiency of activity of oil treatment plants and refineries.
6. Weak response of foreign investors in investing in treatment and oil refinery plants.
7. Problems related to land acquisition from landowners or those with disposal rights.
8. The need for legal reform of some laws and legislations to streamline them towards facilitating procedures for investors.
9. Failure to approve oil and gas law.

2-4 Development Vision:

The increase of production, export and reserve capacity of oil and gas and related oil products within international specifications and establishing an increase in the oil and gas reserve to ensure positioning as a world leader in production and export of this very vital resource in a way that ensures sustainability and is environmentally friendly .

2-5 Strategic Goals for 2013-2017:

1. Increase in the production of crude oil from 3200 thousand barrels / day in 2012 to 9500 thousand barrels / day in 2017 through license rounds and national efforts.
2. Raising crude oil exports to expected levels of 2600 thousand barrels / day in 2012 to 6000 thousand barrels / day in 2017 through upgrading of transport lines and export platforms by building new floating downloading platforms.
3. Increasing the crude oil reserve storage capacity from 10987 thousand barrels /day reaching 30057 thousand barrels / day in 2017.
4. Increasing production of liquid gas from 880 tons / day in 2012 reaching 2600 tons / day in 2017.
5. Increasing current refinery capacity standing at 0.605 million barrels/day in 2011 to reach 1.1450 million barrels/day in 2017, through establishment of new refineries in a number of governorates with comparative advantage in this aspect and adding 70 thousand barrels/day to the Dora refinery (midland oil refinery company) as it is expected to increase production capacity of both Dora and Basra refineries by an additional 140 thousand barrels / day during 2012.
6. Strengthen storage capacity of oil products to ensure a reserve equaling 40 days consumption for: benzene, gas oil, liquid gas and 100 days reserve for white oil.
7. Decrease quantities of gas burned to 100 million cubic feet in 2017 instead of 800 million cubic feet in 2011. An agreement has been signed with Shell Oil and Mitsubishi to establish a gas company in cooperation with The South Oil Company under the name of The Basra Gas Company that is expected to utilize the burned gas and lower burned quantities by 2014.
8. Preserving the environment from pollution and solving environmental problems resulting from oil and gas activities and implementing demining and other unexploded projectile elimination programs in the oil regions and routes leading to them.

2-6 Objectives achieving policies:

In order to reach the 6 million barrel / day goal by 2017; There is a must for:

1. Development of existing oil fields and discovered ones, submitting some of these to Foreign Investment Companies in order to achieve desired objectives of plans. As a matter of fact 10 oil fields have been submitted for rounds of licensing (first – second and third by service contracts) to foreign investment companies.
2. Restructuring of public service companies to operate within market economy perspective.
3. Adherence to international standard code of health, safety and environment (HSE) through adoption of international compliance programs including environment friendly programs.

- 4.** Establish regulations and mechanism for energy saving of oil products.
- 5.** Establish support projects such as (water injection) for oil fields and consider them as a priority as well as finding suitable substitutes for river water.
- 6.** Development of existing ports and establishment of new ports that have all the health safety and environment requirements with sustainable capacity able to export allocated quantities. Iraq has started to operate floating platforms in order to expand its ports and operate at higher capacity.
- 7.** Drill and rehabilitate wells and develop supporting industry.
- 8.** Continue in implementation of modern technology related to different oil and gas activities including cleaner environment technologies.
- 9.** Grant the private sector an important role, especially in management and operating of the oil producing enterprises especially in oil projects companies, oil product distributing companies, construction and maintenance work.
- 10.** Quality control over exported oil and oil for local consumers relying on international standards (ISO)
- 11.** Increase environmental awareness and building a data bank on the effects of oil pollutants as well as establishing an integrated system for monitoring and environmental surveillance for this activity, remedying any environmental damaging effects that have not been addressed.
- 12.** Develop and build national capabilities.

There is a proposal for upgrading exports capabilities through the establishment of a new railroad with the capacity of transport of 1.25 million barrels/day passing through Syria for transport of ordinary oil and increasing the export capacity of the Turkey line to 1 million barrels/ day. In addition to establishing another line with a capacity of 1.5 million barrels/day dedicated to transport heavy oil from Najka and Gayara oil fields after mixing it with the heavy oil coming from Missan, East Baghdad and Balad oil fields in storage then to the Syrian border and the following table shows the export capacity as planned for 2017:-

The sum of export capacity after restructuring current capacity to design Capacity and completion of new proposed projects will be as follows:

System	Capacity million barrels/day
Iraqi Turkish line	1.6
Port of Basra	3.2
Al Amya Port	0.5
Export Capacity Project and the Japanese loan	3.2
Transport system of ordinary oil across Syria	1.25
Transport system of ordinary oil across Turkey	1.0
Transport system of heavy oil across Syria	1.5
Total	12.25

3- Electricity Activity

3-1Reality:

Due to the fact that electricity is the main driver of various economic activities, being an indicator of society's wellbeing in modern societies, it was one of the most important sectors that was viciously targeted and destroyed during the decades of war.

This activity was not spared from terrorism and destructive units after 2003 as it was one of the major targets. Every time the state tried to rehabilitate this important component of the infrastructure, the following crisis would destruct this important sector due to its importance which led to a huge deficit in energy generation facing the high demand from economic activity and increase in population in the country rendering electric supply not exceeding 4-6 hours per day.

The national development plan of 2010-2014 allowed this activity a great priority and called for allocation of 105 of total investment to electricity generation, transporting it and distributing it so that it would ultimately bridge the gap between supply and demand and supply different consumers with the sustainable energy elevating daily consumer levels per Iraqi individual from 18—kilowatts/ hr in 2009 to 3700 kilowatts/hr in 2014.

The development of electric power generation was not proportional to the support and priority due to this component by the national development plan and its corresponding annual investment plans, the production capacity increased from 4529 megawatts /year in 2008 to 6150 megawatts / year in 2012, which was below average demand by approximately 14000 megawatts, accompanied by an increase in individual consumption of 1100 – 1800 kilowatts/ hr, due to a number of reasons, such as failure of implementation of contracts by the American company G.E. and the German company Siemens.

Lag of implementation of most projects for technical or contractual reasons related to new projects as for existing projects, there is a clear misuse of production capacity due to shortage of fuel or failure to of fuel and oil products necessary to run these electric power plants to reach them, in addition to a low quality of fuel reaching these plants, plus the difficulty of acquiring spare parts necessary to maintain the old electricity generation plants, add to that a shortage of capable technical staff to operate the processes of electricity generation, transport and distribution. This reflected negatively on the performance ability of this system.

The production of 6150 megawatts in 2012 is accomplished through a variety of plants including gas, steam, water and diesel operated plants, 62% is generated in gas operated plants, followed by steam operated ones at 28% , hydroelectric plants come third at 8% and diesel operated plants make up 1.7% as shown in the table below.

Distribution of power generation according to method

Type of plant	No. of plants	Production (megawatts)	Percentage of participation
Gas	26	3802	62.25%
Steam	8	1730	28.3%
Diesel	6	103	1.68%
Hydroelectric	10	473	7.7%
Total	50	6148	100%

To compensate for the shortage in power production, at an average of 1200 megawatts from Iran, as of 1/7/2012 energy imports started from Syria after completion of linkages at a rate of 100-150 megawatts, there are now plans to import energy from Turkey. There are also contracts to purchase electric energy from barges, as there are now 4 barges in Basra with a total production at approximately 300 megawatts supplying electricity to Basra governorate.

Compared to limited current power production and the demand, there are a number of powers generating plants under construction to supply 17750 megawatts, some of which are gas, steam or diesel operated, planned to be operational during 1013-2015.

To keep abreast international development in the field of renewable energy an additional 50 megawatts will be added through this means in 2012 and 350 megawatts by 2015.

Current power production is being transported via a network operating at a capacity of 400KW and 132 KW, there are 27 plants transporting 400KW, line lengths ranging at 4700Km, and 220 plants transporting 132KW, line lengths ranging at 12200Km, and 463 cables. There are 20 plants transporting 400KW and 89 plants transporting 132 KW under construction, to face increase in energy demand by 2015, there are an additional 300 secondary plants 11/33 KW under construction with transport lines and cables as well as rehabilitation of networks in domestic neighborhoods that suffer from bad quality of power produced and optical pollution as a result.

3-2 Capabilities:

- a. Availability of sufficient investment in government investment budget and to ensure priority to this activity.
- b. Including the private sector and its participation in power generation and distribution if the state decides to venture in this direction.

- c. Great potential in utilizing renewable energy sources for power production especially solar energy.
- d. Availability of technical, management and financial framework of professionals experienced in this field despite the great losses of qualified personnel post 2003 stage.
- e. The availability of colleges and specialized vocational training centers to supply this activity with specialized cadres.
- f. Incentives and bonuses that are given to workers in this sector compared to other government institutions.

3-3 Problems and Challenges:

- a. Depreciation of power generating and transport units that were mostly constructed in the seventies and eighties of the last century.
- b. Inflexibility of fuel reaching power generating plants due to the adhoc construction of these plants all over the country and lack of planning of constructing fuel transport lines early on which led to reflection of this problem on efficiency of performance of these plants.
- c. Shortage of river water supply led to decrease in water levels and halting power generation using water during certain important seasons of the year.
- d. The instable security status leading to elevation of total running cost of industrial projects by setting up appropriate security systems for the protection of foreign companies.
- e. Subsidized tariffs breed irresponsible habits in power consumption.
- f. Side effects of electromagnetic radiations from high voltage electricity transportation lines and distribution networks in villages and cities.

Obstacles facing investors:-

- I. Difficulty in allocating suitable land, close to electricity plants, secondary plants and fuel lines Etc.
- II. Difficulty of acquiring the approval of the Ministry of Oil for supply of fuel.
- III. Difficulty facing the Ministry of Electricity in facilitating procedures related to purchase of energy from investors.
- iv. The absence of an efficient banking system in the country.

3-4 Future Vision

Improve the performance of electricity activity in the elements of (production-Transport – distribution) filling the actual need of the country of electric energy Through sustainable and efficient means.

3-5 Goals:-

- a. Increase production capacity of the electric system to cover increasing demand reaching 25 thousand megawatt, which will exceed expected demand in 2017 by approximately 5 thousand megawatt as shown in the table below :-

Expected MW	2012	2013	2014	2015	2016	2017
	14020	15183	16298	17494	18628	19823

- b. Upgrade consumption of individual Iraqi of electric energy from current rates by 1800KW/hr by 2017
- c. Improve efficiency of performance of electric system and stop deterioration
- d. Improve quality of services to consumers in all categories (domestic-commercial-industrial-agricultural and governmental)
- e. Power saving in all applications
- f. Improvement in environmental performance of electric activity

3-6 Mechanism of achieving goals:-

- a. Completion of production units under construction both gas and steam plants
- b. Rehabilitation of existing plants until production rates reach levels above demand on supply then establishing a plan to retire older plants after it is proven that their rehabilitation is no longer economically feasible
- c. Switching gas operated plants running simple cycles to plants running compound cycles as it is expected to increase capacities around 4000KW using this technology, utilizing the same amount of energy. Stage I will be implemented in 2013, expected to raise capacity to 2000 KW. Stage II will follow raising capacity to 2000 MW in 2016.

The following table shows

Stage I, plan in place for plant conversion

Stage II

plant	Simple cycle MW	Additional capacity compound cycle (MW)	Expected completion dates
Al Rumaila	1460	700	End of 2013
Al Diwaneeya	500	200	End of 2013
Al Anbar	1000	500	End of 2012
Al Mansooreeya	740	300	2104
Al Umara	500	250	2013
kirkuk	292	125	2013

Plant	Simple cycle	Additional capacity compound cycle (MW)	Expected completion date
Al Sadir	338	150	2013
Al Khairat	1250	600	2014
Al Nasireeya	500	250	2014
Al Najeebiya	500	250	2014
Al Samawa	500	250	2014
Shat al Basra	1250	600	2014
		2100	Expected 2016

d. Absorb added capacity and continue development and rehabilitation of Transport and distribution networks until 2017 through:-

1. Add new transformation plants 400/132 KW (27 plants) and 132/33 KW (110 plants). As well as adding new lines and cables (400 KW at a length of 2500 Km and 132 KW at a length of 4000 Km)
 2. Building secondary generation plants 33/11 KW in distribution networks accompanied by development and rehabilitation of (400 plants with cables at a length of 2500 Km)
 3. Switching wire networks to cables especially in city centers , neighborhoods and new population centers
 4. Expanding distribution networks to ensure electric energy reaching all investment projects and housing compounds in the governorates
- d. Adopt a maintenance policy in rehabilitation including transport lines to decrease loss
1. Improve environmental performance for the electricity activity, it is important:-Use of good quality fuel (gas) to increase efficiency of power generation plants and stop harmful effect on environment
 2. Use of cleaner environment technologies in transport and distribution of energy
 3. Expanding investments in renewable energy especially solar energy upon proving economic feasibility
- e. Enabling participation of private sector in development of performance efficiency of electric activity whether through direct investment in construction of generation plants or running the distribution sector and releasing distribution process to the private sector
- f. Establish management reforms in the activity through:-

1. Compile a comprehensive index covering all standard operational procedures for the electricity sector using quality management systems in compliance with international standards(ISO 9001)
2. Establishing working procedures towards decentralization such as project management. Release public contracts to improve services using the (IDMS)system
3. Implementation of e-government as a portal to management reform, as part of the Iraqi Government direction

4-Manufacturing and mining industries (excluding oil):

4-1 Reality:

Manufacturing industries played an important role in Iraqi economy in some of the development phases due to available capabilities, financial means and human resources

The country is rich in natural resources necessary for industrial different activities especially Chemical and petrochemical as well as production of construction materials, textile and food production.

As an indicator for the importance of manufacturing in Iraq's economy; its contribution reached 13.9 % of total GDP in 1988 and did not decrease below 6% before that. It was standing at 6% in 1979 even though that was during the peak of production and export of crude oil; this reflects great potential to revive the important role manufacturing in Iraq's economy, an important activity that was affected by the embargo and security situation and unrest post 2003, and its effect on large industrial projects in the country due to war destruction and the discontinuation of production in most private sector projects, the local investors opted for investment abroad which led to a drop in the percentage of this sectors contribution to national GDP to 3.8% in 1990, 1.5% in 2001, 2,9% in 2009. Despite the national development plan considered manufacturing as one of the targeted activities for diversity of national economy by concentrating on the role of the private sector both local and foreign, rehabilitation of public owned industrial enterprises and dedicating 5% of total investments budget predicted for the plan; in reality however, during 2010, 2011, 2012 its average was much lower as actual investments were 3.23%of the allowed budget. The public sector achieved some results in industrial investments; however the private sector which was meant to contribute largely within this activity did not invest more than 155 million Iraqi Dinars during 2010, 2011 in very small projects, registered at 244 projects.

The reality of manufacturing activity is very moderate which reflected on performance of this sector; shown by the following indicators:-

- Decrease of contribution of manufacturing activities in national GDP in spite of registering increase in production for this activity from 2.9% in 2009 mainly due to large increase in activity of production and export of crude oil.
- Continuity of employment of 186 personnel which is much higher than the actual need for manufacturing enterprises which effects performance of these enterprises and effecting increasing financial burden due to increase of indirect expenses
- Decreased percentage of ability of local industry to cover local demand (10% - 40%)
- Increase in percentage of certain components of the local industry; textile manufacturing and engineering industry 100%, products 40% - 100%, and decrease in chemical industries by 27% , fertilizers and phosphate by 20%
- Continuous decrease in participation of private sector in total GDP for this activity that reached 40% and this is due to continued reluctance of private sector to reactivate stalled projects or build new ones.

The five year development plan 2010-2014 targeted rehabilitation of 56 public owned companies, which would ensure development of existing production lines or adding new production lines, the result as of date is conclusion of rehabilitating 8 companies by 100% , 7 companies by 90% and 36 companies by 30% . These results are lower than expected plan until end of 2011

4-2 Problems and challenges:

- a. The low priority given to manufacturing industries in the development plans of 2010-2014 and limitation of investments directed towards this activity, leaving it up to the private sector and foreign investments, both of which did not respond to directives of the plan
- b. Outdated production lines in need of rehabilitation for existing companies and introduction of new production lines
- c. It is difficult for the local product to compete with the imported product due to dumping of cheap low quality products in the market that calls
For:
 - Activation of customs tariffs
 - Activation of protection of consumer law
 - Entering the above laws in practice
- d. Not taking into account comparative advantage and on site production needs as no clear technical standards are used to measure specialization and diversity of industrialist in each governorate, such as location criteria or analysis of industrial framework and differentiating them from criteria that contributes to raising efficiency and activeness of industrial investment
- e. Outdated banking system, inflexible methodology of financing investments
- f. Weak role of quality assurance of local product monitoring system which leads to competitiveness wit imported goods

- g. Inflation in number of workers in this activity after 2003 due to returning workers to the workplace which requires remedying at root level to eliminate this phenomenon and enable industrial enterprises to operate on healthy economic foundation in profit and loss decreasing government subsidy which exhausts federal budgets annually
- h. Shortages in electricity supply and fluctuation of voltage which negatively effects production efficiency
- i. Limited supply of natural gas that is supplied to some enterprises as a raw material for production
- j. Not passing the Ministry of industry and minerals law that activates the ministries role in accordance with market economy vision and moving from centralized management of sector activities to roles of empowerment guidance and policy making
- k. Limited use of environment friendly technology and incomplete air pollution monitoring and measurement systems
- l. Continued use of burner systems with reduced efficiency in brick factories that still burn black oil and are part of the industrial sector

4-3 Capabilities:

Iraq has tremendous industrial capabilities such as:-

- a. Availability of natural resources in most governorates in commercial and industrial quantities such as phosphates, silica, Sulfur, construction materials, in addition to carbohydrate materials, the presence of chemical industries, petrochemicals, oil products, food, agriculture, textiles, and various construction materials
- b. Capacity of local market for many of these industrial products; especially construction industry for building and construction purposes, fertilizers for agricultural use, and the ability to compete with foreign markets especially nitrogen fertilizers, phosphate fertilizers and cement
- c. A longstanding industrial legacy dating back to the middle of last century and all related experience contributing to activity of being responsible for production of 14% of total GDP in the early eighties
- d. The presence of a specialize which played an important role in past decades; its activity reached 50% of added value of total manufacturing activity in the late seventies of the last century
- e. Availability of qualified workforce and the possibility of increasing human abilities by expansion in vocational, technical and academic learning
- f. The presence of opportunities for direct foreign investment in this field, especially in areas of population advantage, in addition to the opportunity of building joint venture companies to ensure optimum use of natural resources in Iraq strengthening geological screening and metal detection

4-4 Vision:

Achieving industrial growth that shares actively in creating national economic diversity; creating employment opportunity by diverting towards market economy and developing a working environment building companies in partnership with international and local investment counterparts

4-5 Goals:

- a. increase participation of non oil manufacturing and mining activities in total GDP
- b. increase degree of coverage of different industries especially those within local capability due to market demand; such as oil refinery, food industry, fertilizer production, and construction material production
- c. increase the quality of the local manufacture component which harbors potential for that
- d. increase efficiency capability and productivity of this activity
- e. strengthening the role of the Iraqi private sector in the added value of the manufacturing activity and creating new employment opportunities
- f. strengthening integration between agriculture and manufacturing sectors
- g. strengthening integration between the public and private sectors
- h. improvement of environmental conditions for the manufacturing activities and the mining activities of non oil products
- i. creating an attractive foreign investment environment in manufacturing and mining activities for non oil products

4-6 Methodology for achieving goals:

- a. Continue to restructure public companies strengthening the principle of diverting towards market economy; it is hoped that 15 companies will be built by the end of 2012 and it is planned that 25 partnerships will be created before the end of 2017
- b. Expansion in rehabilitation of 9 companies in the private sector which ensures the country demand for steel production cement and bricks as well as export of fertilizers and petrochemicals
- c. Stop work in public companies that no longer show economic feasibility and dispose of assets in accordance to laws in force
- d. create investment associations for private ownership and foreign investment companies; create associations for companies in the governorates according to stage priorities and according to capability of investment attraction and relative advantages of various governorates
- e. build partnerships with international companies in industry that possess competitive advantage in their countries which leads to use of modern technology and can lead to technology settlement

- f. Development and modernization of banking system to keep up with international development in the fields of loaning and investment financing of private sector projects with transparent and simplified methods
- g. Development and growth of industrial technological research centers for the industry in coordination with ministry of science and technology and research centers in universities and academic institutions
- h. Push the location investment map in coordination with the governorates and their councils taking into consideration the industrial capabilities available in each governorate and its competitive advantage as well as availability of qualified workers to promote new small industry through local and foreign investment.
- i. Develop industries that contribute to achieving integrity between different economic activities especially industry that supports the infra structure of gas and oil, agriculture, and economic use of water resources, transport, communication, renewable energy and industry related to environmental reform
- j. Energizing geological screening and metal detection programs to find practical and humanitarian solutions for exact determination of metal resources in commercial quantities with the objective of utilizing these resources adding them to GDP enriching resources
- k. Accelerate finding practical and humanitarian solutions to remedy the problem of access employment in industrial enterprises that effect efficiency of performance of these establishments which causes decreased production levels, ensuring social protection for groups that cannot qualify for alternative work
- l. Continue serious work achieved in the last few years that remedy environmental side effects of industrial projects through:-
 - a. Complete processing units in industrial projects that do not posses these units whether they are water recycling units or gas and dust processing units
 - b. Prevention of setting up any industrial projects that do not protect the environment and consider passing environmental testing a basic condition for approval of new industrial projects both public and private for local and foreign companies
 - c. Use of environmentally cleaner technology and building a strong foundation for all sectors
 - d. Building a strong workforce for the industrial sector focusing on fresh employees with the aim of capacity building of performance and facilitating shift to market economy
 - e. Ensuring industry requirements for public and private enterprises, electric energy projects, fuel and gas, are continuously available
 - f. Continue legal and administrative reform for the manufacturing activity including passing the customs tariff law, consumer protection law, local Iraqi product protection law, the industrial cities and compounds law, and the privatization law

EDUCATIONAL SERVICES: KNOWLEDGE AND SKILLS BUILDING

Education is still one of the greatest concerns in both developed and developing countries. Great progress has been attained in educational facilities, school enrolments and eradication of illiteracy. Efforts continue to be exerted to improve the quality of education. Simultaneously, to cope with knowledge building and skills development, it is still a challenge that is more significant in developing countries, in regard to kindergartens, pre-university education or the various university levels, and for all the various social and economic groups, whether they are urban or rural, in towns, cities and metropolitan cities.

Planning and policymaking in terms of education and knowledge and skills building are considered to be one of the major topics to be addressed, so as to make people more conscious of the biggest challenge their future is to face. In fact, there is an urgent need to understand where they stand and what they have to do in order to improve their quality of living.

According to societal experiences, knowledge and skills building of human resources is the critical factor to attain necessary development. What such experiences have in common is to focus on an “EDUCATED PROFICIENT MAN”. This “MAN” in turn believes in the capability of his/her society to face challenges and has enough qualifications to respond to, and interact with, the given challenge of civilization after he/she has obtained modern sciences and advanced technology. Since the historical march of a society requires that generations are prepared-both in knowledge and skills-in order to have sustained development, the development of human resources for facing future challenges forms the most important priority to be considered in any plan. Development in the future will be enriched with knowledge and based, in particular, upon strong scientific grounds and high-quality education, which is the main instrument to have such a goal attained.

In this respect, the basic guidelines of education in Iraq are based on the integration of human capital as a guiding pathway for development. This approach leads to the enhancement and development of the capacities of Iraqis during their entire cycle of educational life, ranging from education in

early childhood to pre-university education and higher education, together with the other aspects of knowledge building.

The National Development Plan 2013-2017 emerges from the following issues:

- How to arrange for basic education for all Iraqis, with a high quality and have a parallel kind of integration between basic public education and vocational rehabilitation, so as to provide a suitable amount of manpower, both quantitatively and qualitatively, required by the labor market, and address the human and financial institutional requirements to have opportunities of higher education provided.
- How to redesign the educational system, ranging from the disciplinary system in society to the creation of a citizen who is capable of achievements, a liberal, critic, self-learner and a builder of the knowledge society.
- How we face both reading and civilization illiteracy and help the elderly improve their skills and knowledge by enhancing training and capacity building programs.
- How to ensure that our teachers are proficient and hardworking in every classroom.
- How to fulfill the requirements of research and technological development and of the interconnection between educational and research-related institutions and the industrial, agricultural and service business sectors.

FIRST: ANALYSIS OF THE CURRENT SITUATION

The education policy in Iraq has focused on human capacity building upon an educational basis. The major aim in this regard is to have successive generations qualified enough to deal with the ever-changing national, regional and international situations. At the same time, the national identity and social and cultural values are being emphasized. In this regard, both the Ministries of Education and Higher Education have undertaken to provide educational opportunities to all those boys and girls of school age and to enlarge the opportunity to receive quality education at other levels, e.g. higher education, including vocational and irregular types of education.

Big achievements have been realized in Iraq in terms of education and eradication of illiteracy for decades by means of a) the allocation of increasing financial and human resources so as to eradicate illiteracy, generalize elementary education and expand the scope of intermediary, secondary and higher education and, also b) the adoption of additional measures to bridge the remaining gaps between boys and girls regarding rates of enrollment at all levels and types of education. However, the educational process ,as shown by some statistical indicators, has always faced challenges and problems, which require a certain kind of institutional and societal intervention so as to have these problems addressed and mitigated.

The educational indicators in Iraq today are still low and relatively far from relevant objectives. This affirms that education—as it is a tool of empowerment—is still inferior in solving the problems of illiteracy and absenteeism from schools and the realization of equality between males and females in receiving education at all stages. Educational gender-wise disparities and geographical imbalances still exist. The disparity between males and females in enrollment, between urban and rural areas and between the governorates themselves, is today ranging between low and high ratios, which create an obstacle to the achievement of the second Development Goal of the Millennium, represented by the realization of Comprehensive Elementary Education by 2015. Also, the enrolment in both intermediary and secondary education is low.

At the same time, in light of the high demographic growth and the failure of the financial, human and technical capacities, the quantitative aspect has begun to prevail over the qualitative aspect of development. Even though the strength and directions of such factors are difficult to determine from time to time, many given variables and pieces of evidence indicate today to certain imbalances that have affected EDUCATIONAL DEVELOPMENT, particularly in the short term.

1. Educational Enrolment

The gap between the three stages (elementary, intermediary and secondary) has continued in the rates of educational enrolment. The intermediary stage has capacity for—according to the indicators of this Rate— less than 50% of the outputs of the elementary stage. The same applies to the secondary stage in comparison to the outputs of the intermediary one. This means that there

is a kind of waste caused to educational opportunities by the delay of 50% of the students in each stage to pass on to the next stage within the specified time .

1.1. Elementary Education

Gaps in the elementary education still exist although this kind of education is almost general in many countries of the world. In Iraq, at least one child out of every ten at the age of elementary education is not at school. Even children being enrolled at schools are today facing many problems, environmental, economical, social or logistical. All the same, this makes the educational process much slower, and negatively affects the level of educational quality and helps reduce the rates of enrolment at schools. In fact, girls are the most affected by this situation; they must combine between their studies and their other duties imposed by the cultural and economic environment.

The educational effort exerted during the period from 2004/2005 to 2011/2012 has recorded a remarkable amount of progress regarding the rate of net enrolment at the elementary stage; it has been raised in the elementary stage for the age group of 6-11 years from 86% to 92%.

1.2. Secondary Education

The disparity still exists at the level of educational services, particularly regarding secondary education, between urban and rural areas and by gender and governorate. Such a disparity is more severe in the secondary stage, either at the level of educational spread, school buildings (to be measured by the numbers of schools of a given stage against the number of schools of the preceding stage) or the level of the provision of educational quality requirements (e.g. the provision and operation of school laboratories, the distribution of teachers according to their years of experience). Usually, such requirements are concentrated in the Capital or in the centers of governorates; such a situation has caused many opportunities to be missed regarding the education and qualification of youth and how they can obtain academic opportunities or advanced specialties.

Despite the high rates of school enrolment recorded for the age group of 15-17 years (it was raised from 16% to be 21% for the academic period from 2004/2005 to 2011/2012), the gap is still large. The same might have

resulted from the slow progress encountered in the intermediary stage, which still has a net rate of enrolment for the age group of 12-14 years with an average of 40% as stated in Table no. (...) below.

The continuous gap between the three stages of school education reflects an obvious structural imbalance within the system of knowledge building. What the intermediary stage has capacity for—according to the indicators above—is less than 50% of the outputs of the elementary stage. The same applies as well to the secondary stage in comparison to the outputs of the intermediary one. This means that there is a kind of waste caused to the educational opportunities by the delay of 50% of the students in each stage to pass within the specified time to the next stage, which in turn forms pressure on the educational budget and a loss of financial allocations to be potentially invested in creating other educational opportunities.

Table No. (...):**Rates of Net and Total Enrolment According to Gender, Year of Enrolment, Age Group and Stage for the Period of 2004-2005/2011-2012**

Year	Rate of Net Enrolment at Age of (06-11) Years			Rate of Total Enrolment in the Elementary Stage			Rate of Net Enrolment at Age of (12-14) Years			Rate of Total Enrolment in the Intermediary Stage			Rate of Net Enrolment at Age of (15-17) Years			Rate of Total Enrolment in the Secondary Stage		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
2004/2004	92	79	86	109	88	99	45	35	40	73	47	60	17	16	16	28	23	26
2005/2006	91	79	85	110	90	100	36	30	33	65	44	54	16	16	16	29	24	27
2006/2007	90	80	85	112	91	102	39	32	36	68	46	57	18	17	18	32	25	28
2007/2008	91	82	87	112	94	103	46	40	43	71	49	61	21	20	21	35	27	31
2008/2009	94	87	91	110	98	104	39	33	36	75	51	63	17	17	17	36	29	32
2009/2010	95	86	91	112	98	105	37	32	34	78	54	66	16	17	16	36	30	33
2010/2011	95	86	91	109	96	103	38	34	36	75	52	64	19	20	19	39	31	35
2011/2012	96	88	92	111	98	110	42	37	40	83	55	69	21	21	21	42	33	38

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Source: ...

Table No. (...):**Number of Elementary Schools, Number of Teaching Members and Number of Students and Student-Teacher and Student-School Ratios (Only in Urban Areas)**

Governorate	2004/2005					2007/2008					2011/2012					
	Number of Schools	Number of Teachers	Number of Students	Student/School Ratio	Student/Teacher Ratio	Number of Schools	Number of Teachers	Number of Students	Student/School Ratio	Student/Teacher Ratio	Number of Schools	Number of Teachers	Number of Students	Student/School Ratio	Student/Teacher Ratio	
Ninawa	529	8191	280305	530	34	562	10253	288760	514	28	639	11285	319245	500	28	
Salahuddin	270	6530	125349	464	19	240	5968	83949	350	14	304	6645	99944	329	15	
Karkuk	314	6036	100552	320	17	366	6395	115382	315	18	442	7645	128058	290	17	
Diyala	218	5935	93351	428	16	241	7451	89298	371	12	285	8044	119888	421	15	
Baghdad	Rasafa/1	488	11817	264689	542	22	295	9940	157227	533	16	321	10824	178264	555	16
	Rasafa/2	340	9406	242915	714	26	310	10150	248096	800	24	366	11212	287362	785	26
	Rasafa/3	-	-	-	-	-	294	7865	184854	629	24	328	7885	181693	554	23
	Kar	159	5187	9221	580	18	181	6777	8130	449	12	179	7485	8484	474	11

	kh/1			9					5					9		
	Kar			1564					1184					1581		
	kh/2	282	6271	95	555	25	263	8119	14	450	15	300	9849	29	527	16
	Kar			1178					1038					1142		
	kh/3	142	5571	24	830	21	157	6684	07	661	16	169	6801	65	676	17
Anbar				9372					1278					1510		
		316	5475	6	297	17	493	8545	17	259	15	457	9957	80	331	15
Babel				1184					1415					1614		
		251	6633	27	472	18	257	8300	89	551	17	302	8666	66	535	19
Karbala				8808					1142					1329		
		228	5198	6	386	17	240	7318	21	476	16	265	7549	31	502	18
Najaf				1260					1460					1681		
		263	5622	67	479	22	302	7516	54	484	19	340	8357	04	494	20
Qadisiyya				9210					1144					1267		
		223	2559	8	413	36	245	7257	32	467	16	283	8146	05	448	16
Muthanna				4586					4839					5575		
		125	2191	4	367	21	160	3130	7	302	15	176	3106	5	317	18
Wassit				8512					1006					1178		
		136	5661	1	626	15	277	6220	13	363	16	321	7065	22	367	17
DhiQarr				1440					1734					1956		
		411	9003	72	351	16	421	0	19	412	16	468	1147	2	16	418
Missan				7868					9421					1204		
		184	3900	6	428	20	281	7568	8	335	12	343	8671	85	351	14
Basra				2538					3018					3528		
		623	1096	43	407	23	635	7	79	475	22	720	0	53	490	23
Total		550	1221	2599	473	21	622	1598	2833	456	18	700	1757	3254	464	19

	2	47	699			0	73	731			8	64	514		
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Source: Dr. Ali Al-Zubaidi, General Directorate of Educational Planning, Ministry of Education, Baghdad.

Table No. (...):**Table Describing the Educational Indicator of Both (Student/School) and (Student/Teacher) in Elementary Education**

Governorate	2004/2005		2007/2008		2011/2012	
	Student/ School Ratio	Student/ Teacher Ratio	Student/ School Ratio	Student/ Teacher Ratio	Student/ School Ratio	Student/ Teacher Ratio
Ninawa	530	34	514	28	500	28
Salahuddin	464	19	350	14	329	15
Karkuk	320	17	315	18	290	17
Diyala	428	16	371	12	421	15
Baghdad/Rasafa /1	542	22	533	16	555	16
Baghdad/Rasafa /2	714	26	800	24	785	26
Baghdad/Rasafa /3	-	-	629	24	554	23
Baghdad/Karkh /1	580	18	449	12	474	11
Baghdad/Karkh /2	555	25	450	15	527	16
Baghdad/Karkh /3	830	21	661	16	676	17
Anbar	297	17	259	15	331	15
Babel	472	18	551	17	535	19
Karbala	386	17	476	16	502	18
Najaf	479	22	484	19	494	20
Qadisiyya	413	36	467	16	448	16
Muthanna	367	21	302	15	317	18
Wassit	626	15	363	16	367	17
DhiQarr	351	16	412	16	418	17
Missan	428	20	335	12	351	14
Basra	407	23	475	22	490	23
Total	473	21	456	18	464	19

2. Illiteracy

Despite the big efforts exerted for the eradication of illiteracy and the education of adults, and the obvious development reflected by the reduced rates of illiteracy two decades ago, a kind of disparity is noticed in such efforts according to their significance, magnitude, constancy and outcomes. This has become the biggest obstacle in the system of educational and knowledge- building in Iraq. In fact, it has been shown that an average of 22.9 of Iraqis are illiterate; 58.9% have received the minimum basic education (i.e. both reading and writing) and only 19.8% of Iraqis have received further education and academic qualifications (i.e. secondary stage and higher) (see Iraq Knowledge Network's Survey, 2011).

Such figures vary according to gender, environment and age groups. The rate of illiteracy among females, in rural areas, has been higher than among males in urban areas. It has been noticed as well to be higher among the elderly people, who are mostly 50+ years old. Statistically, let us mention in this aspect the following sets of data:

- The surveys show a kind of disparity regarding the educational service in Iraq. Therefore, the difference has been large in terms of illiteracy due to gender, which has been recorded to be 28.5% for females and only 14% for males. The same also applies to the rate of those having received basic education, with 16.8% for females and 20.9% for males.
- According to the demographic environment, the rate of illiteracy in the countryside has been recorded to be 30.5% against 16.6% in urban areas. In terms of geographical distribution, Baghdad has the least rate of illiteracy (11.9%) followed by the rest of the Iraqi governorates (22.4) and then by the governorates of the Region of Kurdistan (26.3%).
- The total number of the centers for eradication of illiteracy in 2010/2011 amounted to about 724 distributed into 178 centers for females, 529 for males and 17 co-ed centers. The urban areas have 73.6% of the total number of such centers against 26.4% for the rural areas for the aforesaid academic year.
- The enrolment for 2009/2010 was (...) and was raised to 53403 students for 2010/2011, thanks to the new centers for eradication of

- illiteracy which were opened, with a total number of 1284 classrooms for 2010/2011.
- The knowledge disparity among the Iraqi governorates in terms of the eradication of illiteracy has been varied greatly. The Governorate of Muthanna has occupied the last rank (32.9%) followed by Missan (30.8%) and Dahuk (30.7%); however, the first ranks were occupied respectively by the Governorate of Baghdad (11.9%), Diyala (15.8%) and Babel (17.1%).
 - The Governorates of Dahuk, Qadisiya and Missan have recorded the lowest ranks in terms of basic education with 18.1%, 18.4% and 18.5% respectively. However, the first three ranks were occupied by the Governorates of Babel (22.3%), Karkuk (22.2%) and Anbar (22.1%).
 - A very low rate of enrolment at the centers for eradication of illiteracy was recorded: 1% for the age group of 15-45 for 2009-2010. This rate was raised to 2% for 200/2011. Also, the average number of students per center was raised from 22 to 73 students for the aforesaid period of time.

3. Gender Gap

Despite the obvious development in the education of females in general, it is still facing many challenges and problematic situations. The rates of illiteracy are still higher among females than they are among males, either for those who are 15+ years old or those who are 15-24 years old. Regarding the pre-university and university stages of education, many net and total rates recorded for females are lower in comparison with their counterparts in many countries of the world.

The outcomes reached by the recent surveys show that there is a kind of disparity regarding the average enrolment between male and female students. This indicates the failure of the educational system to bridge the gap of enrolment due to gender. The net rate of enrolment regarding the elementary and intermediary stages has been 93% for males against 83% for females, 40% for males against 34% for females respectively; however, there has been an equal rate of enrolment regarding the secondary stage being 18%. These are indicators of how much the educational system has been affected by the cultural norms and societal conventions hindering females from pursuing their education and from receiving equal educational

services. The outcome of this gap measurement of the net and total rates of enrolment due to gender is evident during the subject period of research as it is 11% in the elementary stage (93-83), in the intermediary stage 16% (43-50), and in the secondary stage 10% (18-28).

4. Infrastructure Problems

- There are 10451 school buildings in 2010/2011, which were raised to 10658 buildings in 2011/2012.
- The shortage in school buildings was 3762 buildings for 2011/2012.
- There was dual usage in 5502 buildings and triple usage in 609 buildings in 2010/2011.
- There were 497 schools made of mud, 1904 inappropriate schools and 6271 schools in need for being restored in 2010/2011.
- There were 295 vocational schools in Iraq in 2009/2010, 2010/2011 and 2011/2012, divided into 198 schools for industrial specialties, 87 schools for the commercial specialty and 8 schools for agriculture, as well as 2 schools for domestic arts. Of these, 205 are vocational schools for boys, and 71 for girls and 18 others as co-ed schools.
- The school buildings are today suffering from inefficient sanitary facilities (30%), improper drinking-water systems (28%) and waste water discharging systems (41%), while the buildings having no fences amounted to (17%).
- The technical skills of contractors are not good enough to realize more competent performance and make use of the annual financial allocations of the Budget; what is annually expended out of the given allocation is not more than 30-40%.
- The risks arising from defective constructions, which wastes resources and endangers the lives of the students due to the short life of the buildings and constructions caused by poor building materials, installations... etc.

5. Expenditure on Education

Despite the continuously increasing rates of expenditure on public education and higher education—out of the Gross Domestic Product (GDP) and the Public Budget of the State, (allocations were 6.9% for education and 2.6% for higher education in 2012), this allocation is still not sufficient for fulfilling the basic requirements to develop the infrastructure and improve

the academic environment. Current expenses represent the largest portion of the budget of education in Iraq. However, the investment expenses were reduced to very low levels particularly during the last years, and are an obstacle to the improvement of the educational infrastructure. That is beside the reduced levels of implementation of the investment budget, and the failures encountered in providing the requirements of academic research, including raw materials, equipment, computers and specialized laboratory apparatus.

In comparison with other countries, a student's portion of the expenses allocated to public education is still low. Therefore, to increase public expenditure on education, particularly investment in the educational infrastructure, is still an urgent need.

- The amounts allocated for the education sector for the period of 2010-2012 is about 10% of the Public Budget.
- The situation of the investment expenditure in the Ministry of Education has decreased in 2011-2012 in comparison with 2010, against a large increase in current expenditures for the last two years.
- Regarding higher education, the investment and operational expenditure has increased during 2010-2012, along with a remarkable decrease in the rate of amounts allocated to the Ministry in the Public Budget during the last two years, as described in Table (...) below.

Table (...):

The Amounts Allocated to Public Education and Higher Education in the Public Budget for 2010-2012

Ministry of Education:

Years	Current	Investment	Total	Amount Allocated in the Public Budget %
2010	5044.444	500.000	5544.444	6.5
2011	7133.005	450.000	7583.005	7.8
2012	7603.235	455.000	8058.235	6.9

Ministry of Higher Education and Academic Research:

Years	Current	Investment	Total	Amount Allocated in the Public Budget %
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2010	2198.563	350.000	2548.563	3.0
2011	2174.414	400.000	2574.500	2.7
2012	2612.382	490.000	3102.382	2.6

6. University Education

- a. Presently, there are 19 Iraqi universities. An increase has been proposed of 12 new universities, 8 of which are newly developed and have been accredited and 4 others are newly developed but still awaiting accreditation.
- b. There were 273 public colleges and 45 private colleges in 2011/2012. In this respect, the vocational fields have received more interest; there are 16 vocational colleges, 27 polytechnic institutes and 5 applied colleges being developed.
- c. Admission to Iraqi universities is estimated to be about 14%, which is much less than the world rates estimated to be 27%. Of this rate, the admission for women is 13% and for men 16%. The numbers of applicants to the Central Admission Process rose from 88837 in 2009/2010 to 112019 in 2010/2011 (with an increase of 26%).

Sr.	Institutional Type	Number of Institutions in 2009	Number of Institutions in 2012	Notes
1	Public Universities	19	12 Newly Developed	
2	Public Colleges	249	273	Increase by 24 Colleges
3	Private Universities	22	45	Increase by 23 Colleges
4	Vocational Colleges	16	16	5 Applied Colleges Newly Developed
5	Polytechnic Institutes	27	27	No Increase Realized

University admissions are 14%, which is much lower than world average of 27%, 13% females and 16% males. The number of applicants for admission rose from 88837 in 2009/2010 to 112019 in 2010/2011 (an increase of 26%)

Second: Challenges

Despite Iraq's record of achievement in eradicating illiteracy since the 60's by increased human and financial resources, yet the wars in the 80's and economic sanctions have widened gender differences in education by location. The gap is still high between rural and urban areas, which are obstructing achieving the 2nd MDG of comprehensive primary education by 2015.

1-Pre-university education

- Illiteracy is still the main obstacle in education, with lower attendance at centers
- Even though attendance in basic education has increased, and the gender gap has decreased, yet comprehensive education in unregulated sector and the quality of teaching all require more efforts and resources
- Enrollment in secondary schools is still low (40% intermediate school and 21 % in secondary school). The quality of teaching requires much improvement
- Differences between rural and urban areas are still significant in all levels of education
- Reduced allocations and increased costs due to population growth , have deprived the poor and widened the gender gap
- Many remote villages and communities are highly deprived of good education
- Shortage of adequate infrastructure is the biggest challenge for the education system in trying to build knowledge, particularly in the poorer neighborhoods of cities and in remote areas.
- Low rate of school building, and congestion in classes, with schools adopting double or triple classes.
- Obsolete components of legislative, administrative and financial systems and weak management practices.
- Attendance in vocational training still low.

- Education output incompatible with socioeconomic and knowledge economy needs.
- Poor capacities and skills of faculty, with the need for a career path compatible with the needs of teaching.
- Weak technical and communication information infrastructure at all levels
- Quantity of teaching rather than quality
- Many indicators show that there are serious problems in the development of teaching.
- Some social practices, such as early marriages and poverty at home, limit choices of women to continue their education.

2.University Education

- Access to technology and science is difficult due to poor infrastructure.
- Admissions policy is incompatible with universities capacity.
- Low correlation between education system output and the needs of sustainable development.
- Low investments in improving the teaching environment.
- Weak capacities and activities in research
- Financial allocations are limited and insufficient
- Faculty focuses more on teaching than on research, and spends less than 3% of their time on research.
- Low level of quality in management and its application
- Shortage of training for faculty, as these are focused mainly on teaching methods and building scientific capabilities
- Low coordination between units of the Ministry and the universities regarding policies and practices, such as exchanging information and statistics with the universities.
- Low participation of the private sector in drafting policies and programs for higher education
- Unplanned expansion of private higher education which is not compatible with the needs of the labor market
- Spread of materialistic values is a challenge for the education system

Third: Vision

Providing education for all, in order to satisfy the needs and ambitions of the people, to meet the needs of a civilized society and to develop scientific thoughts and concepts and innovation. It will also improve citizenship and democracy principles and human rights.

Fourth: The Message

Reform and development of the education system at all levels, to make it competitive internationally, based on a knowledge economy, and the optimum employment of human and natural resources to ensure a sustainable economy and equal opportunity for all

Fifth: Goals

Education is the main tool for building a society based on knowledge and skills. It must be developed to meet the needs, expectations and challenges that confront Iraq now and in the future. This must be achieved in the light of continuous change which is accelerating at an unprecedented level.

The most effective goal of education is to enhance these capacities and to benefit from developing all the resources of the society in a sustainable and integrated way.

Some of the strategic goals of national education in Iraq 2011-2020

- Complete legislation of Ministry of Education and Ministry of Higher Education and Universities and private colleges' law.
- Implementing the principle of academic freedom and abiding by its content.
- Establishing ethical professional behavior in all sectors of education
- Suspend using exemptions from the laws and regulations.
- Commitment by constitutional institutions to develop and support the education sector.
- Establishing rehabilitation system for technical and professional vocational centers
- Establishing national centers and institutes, independent of the

Ministries, for developing teaching establishments.

- Adopting good governance practices in all education institutes
- Preparing complete job descriptions in the Ministries and applying them.
- Protecting the Ministries from any external interventions to make them independent of politics, religion or race, through legal and constitutional frameworks.

Efforts to build skills and knowledge were launched through the following strategic initiatives:

- Improving quality of education and access to it.
- Making the school environment the best for raising youth and nationalism awareness and education.
- Raising level of teaching institutions to international standards.
- Attention given to scientific research, and encouraging inventions and knowledge capacity.
- Building an achieving and lenient society, with values of belonging and citizenship.

The national strategy emphasizes education as a basic factor for the progress of society. It is a right guaranteed by the state, and is compulsory in primary education. The state also has guaranteed reducing illiteracy and encouraging the private sector to participate in the education sector, also to develop higher education and raising local and external efficiencies while improving the quality of all stages in education, in order to prepare human forces able to participate in the work of the society and the state. At the same time, the State is encouraging scientific research for peaceful purposes to serve humanity, and to encourage innovation, invention and excellence.

First: Goals and Quantity Indicators

Education programs include establishing and expanding of infrastructure and improving school and university environment. The program has 24 projects that will address shortage of buildings and second and third school sessions while removing mud built schools and increasing higher education capacity towards high quality learning.

Total costs of these programs are 41900 Billion ID till 2020.

A. Admission

1. Increasing preschool admission to 15% by 2020.
2. Increasing primary schools admission to 95% by 2020.
3. Increasing middle schools admission to 50% by 2020.
4. Increasing secondary schools admission to 30% by 2020.
5. Increasing vocational schools admission to 5% by 2020.
6. Increasing special education schools to 7500.
7. Increasing number of schools for the gifted to 28.
8. Increasing higher education admissions from 14 to 20 %
9. Increasing admissions to higher studies in Iraq and abroad from 5% to 10%.
10. Increasing private sector participation in providing education to no less than 20%.

B. Building and Supplies

Providing sufficient buildings to meet the number of students for the period 2013-2017 and improving safe and healthy environments in education institutions as follows:

1. Building 7220 new preschools to increase admissions to 15%.
2. Building 2250 secondary schools to increase admission to 95%.
3. Building 100 new vocational schools to increase admission to 5%.
4. Constructing 294 buildings to avoid double sessions in Baghdad and the Governorates.
5. Building 67 wings to avoid double sessions in Baghdad and the Governorates
6. Rebuilding 463 mud schools
7. Rebuilding 559 schools liable to collapse.
8. Providing health, sports, and sociological services in all schools

C: Increasing schools in remote areas and villages. Increasing schools for girls in rural areas and community co-educational schools to achieve gender quality and increase the rate of females in education to 50%.

D: providing private rooms for teachers and spending on buildings and facilities and suitable reading halls in libraries, improving labs and their supplies. Also by providing computers, and connecting universities with fiber optic lines.

Table () some current and planned quality indicators

Indicator	No. of professors /rooms	No. of lecturers per room	No. of students per seat	No. of students per reading seat	No. of teachers per computer	No. of students per computer	No. of higher education students per computer
Current situation	4	4	12	19	7	24	21
Planned situation	1	2	4	6	1	6	4

This will be achieved by

1. Allocating necessary funds for school buildings and their requirements, through the annual investment programs for provincial development.
2. Encouraging private sector to build and expand their participation.
3. Cooperating with international organizations for support in school building.
4. Expanding adult education and erasing illiteracy in Iraq.
5. Adopting international standards for determining teacher to student ratio.

Second: The Quality Goals

The education system aims to build human capital that can participate in the development of the economy and society, and in implementing various programs in the private and public sector that will contribute to fulfill the

need for skills and knowledge. Focus will also be on positive values and ethics, dialogue and integrity. These values will establish good governance and assist Iraq in confronting the challenges of globalization; it will also make Iraq a good investment area.

These goals require the state to increase their involvement in education, in particular primary education and illiteracy, and to direct economic policy towards achieving the education goals which have a direct link to their development and population policies.

The NDP 2013-2017 will provide a framework for improving access to education and its quality, as well as bridging the gap through raising the standing of teaching by improving the social and economic levels of staff. The plan expects an improvement in this sector locally and nationally , and to make the community aware of its importance the state will raise this profession through:

- The work should be financially rewarding
- Capacity building of staff
- Social standing: working in education will provide the individual with a special status in the community
- Nation building: the teaching profession is responsible for building the leaders of the future who can make Iraq achieve an advanced level in human development indicators.
- Training higher management is very important as they are the basic tools for planning and implementation. They are also responsible for protecting and utilizing materials and infrastructure capabilities.

2. Reducing absenteeism

Attracting students to schools though dealing with economic difficulties by enabling low income groups to admit their children in schools

- Increasing registration in different education stages, taking into consideration the population increase in school age groups.
- Providing an environment for every student to succeed and provide assistance for those of less ability, and reducing class density
- Providing a suitable environment for students

- Community awareness of the importance of education
- Early detection of talented students, and enrolling them in special schools.

3. Illiteracy

The plan aims at erasing illiteracy through:

- Erasing illiteracy among older persons and addressing causes of higher rates in some areas.
- Compulsory education till intermediate school
- Improving capacities of national council for erasing illiteracy.

4. Bridging rural and urban gap through:

Providing full coverage of all rural areas, and reducing the gap between schools, particularly in mathematics, science and English.

This will be achieved by:

- Improving learning opportunities in remote areas and the countryside.
- Providing monetary incentives to students, especially in poor families
- Establishing intensive training programs for teachers in remote areas and the countryside.

5. Attracting and developing education leaders,

This is the best way to improve output and teaching levels in schools. Better schools attract better teachers. They are in need of continuous development and capacity building to generate a strong 'performance culture'. The plan should:

- Take steps to improve new teachers and leaders while at the same time raising standards of teachers who have been working for many years.
- Investing in leaders in all institutes, focusing on distinguished teachers and basic training programs
- Attracting and developing special talents to the teaching profession by enhancing professional standards and improving training quality.
- Improving teacher training and providing incentives to ensure good performance in schools

6. Developing support services mechanisms

This requires basic changes in procedures that affect teaching, such as suitable spread, performance and effective role of the state through the institutions concerned and local education departments to provide better services, especially for the neediest schools, including training and capacity building.

The state must continue to coordinate and improve service quality. This requires:

- Improving productivity in financial and human capacities
- Holding accountable institutions that do not produce acceptable outputs
- Providing freedom for institutes to exchange and modify in order to improve output.
- Analyzing and planning for a gradual and sustainable expansion of education institutions.
- Adopting education plans based on scientific indicators, using best practices, performance indicators, procedures, and output.

7. Achieving high quality education (curriculums and teaching methods) through:

- Revising curriculums to ensure strong foundations for developing capabilities and competitiveness and suitability to changing needs
- Revising teacher training programs to improve their content and increase implementing technical and communication skills
- For higher education, a better response to the requirements of the labor market, and increasing cooperation between industry and higher institutes
- Proving new courses according to labor market changes, on order to improve job opportunities for graduates

8- New schemes for innovation and invention

The school programs and books adopt the 'absorption' pattern based on memorization, compared to modern methods that develop thinking and innovation through using technology information systems and libraries.

The plan seeks to provide new methods based on the value of innovation. The starting point is early school as follows:

- Adopting new teaching schedules for primary and secondary education to improve innovation and invention.
- Establishing design units for school curriculums that will provide advancement of students according to their abilities.
- Allowing students to be responsible for their personal learning through discovery.
- Encouraging innovation and initiatives in all school subjects.

9- Better education for women

The traditional culture shows a negative image of women's education, with the family playing a significant role in a girl's admission to school. This attitude becomes more negative when deprivation and poverty are present, with a superficial awareness of the importance of education. These factors are linked to development programs and to media content and its ability to change people's views and raise their awareness about girls' education and their future, through:

- Achieving a higher admission rate for girls in primary and secondary schools.
- Opening more illiteracy centers in poor and rural areas, and extending compulsory education to the intermediate stage.
- Linking the benefits of social security and small loans to unregulated education and illiteracy schools.
- Adopting national awareness programs for women on the importance of education and skills that will allow them to enter the labor market.

10-Programs to strengthen values of achievements

Building human capital based on high quality education is one of the more important challenges in Iraq's development path. The education system can help the prosperity of the state and its competitiveness globally through:

- Building a knowledge society based on a culture of achievement, performance, integrity and transparency
- A society that appreciate culture, arts and their heritage. This society has a strong social responsibility and is not affected by globalization
- Revising education systems to achieve innovation and capability of self-learning.
- Improving student and teacher options for access to information systems and their use in research.

11- Maintaining Ethical Standards

Teaching ethics and values at an early age will build the person's personality. To achieve this goal, these values and ethics must be included in school programs and activities. The plan will:

- Adopt programs that will strengthen ethical standards as a model of good joint management, social responsibility and citizenship values, in accordance with civilized principles which are shared by all.
- Encouraging the community to provide programs on these values
- Requesting the media to propagate these values through their programs
- Exerting concerted efforts to determine causes of social problems and provide suitable solutions to develop a society that can achieve and innovate, built on a strong ethical base.
- Increasing fields for instilling citizenship and leniency values in fifth and sixth grades.
- Focusing on Iraq's civilization in secondary schools and higher education institutes

12- Increasing private sector participation through

- Concentrating efforts on knowledge of Iraq's civilization as a unifying role for society and its capacity for innovation.
- Increasing efforts to strengthen knowledge and understanding of co-habitation between races and religions.
- Increasing community participation and the role of the private sector in the education process.

13- Care for student with special needs

Education should extend to those who have handicaps, juvenile delinquents, the homeless and others. This requires:

- Providing a suitable environment to decrease deprivation and increase capacity building.
- Assigning special classes in state school for these students
- Developing teachers' skills in these fields
- Developing special programs for students with personal conditions that prevent further education

14 – Raising level of universities to meet requirements of a knowledge economy through:

- Independence, organizational and structural flexibility in their departments.
- Development of abilities and qualifications of human resources
- Developing programs and teaching methods
- Supporting Scientific research at an international level as a basic pillar of a modern university
- Ensuring quality as a development tool in the long and short term to spread a 'quality culture' among all partners of development
- Extending decentralization to enable each university to draft its policies based on their own goals. And to provide financial resources to the university based on performance, accountability , and transparency

15- Vocational Training

Raising attendance in vocational and technical schools and institutes, with less absenteeism and lower class room density through:

- Relocation of resources towards technical education
- Increasing admission of vocational training graduates in technical institutes
- Bridging the gender gap in technical education

South Korea: an amazing story of progress based on knowledge and skills

South Korea today is a developed country by all standards. Its economy is a trillion dollars and it is ranked thirteenth in the world. Its GDP and per capita income are among the highest. Korea is always among the highest ranked in student levels, particularly in mathematics and pure sciences and the PISA program. What is amazing is the speed at which Korea rose from the ashes of the war to a technical and economical power of consequence. Fifty years ago it had a wealth of cheap labor. Its development is based on education and human capital to improve productivity. Its education level is highly competitive globally and supports students at all levels, as well as in skills training. Education is compulsory to secondary school levels, accompanied by technical education and training through strong partnerships with Korean companies in building universities which these companies administer. The largest portion of allocations is in higher education, with over 3.6 Million students. The state has also given priority to talented persons in industry and technology.



Monetary Sector ... Stability and Development

The Iraq Central Bank (ICB) operates on a short term plan (1 year) and a medium term plan (5 years), in line with the 2010-2014 NDP, to make Iraq a regional economic power integrated in the world economy by utilizing its human, economic and natural resources effectively to attain a diverse and competitive economy with the private sector playing a leading role in creating wealth and jobs. The state will regulate the economy to ensure a fair distribution of the national income, based on the principles of democracy, the rule of law and sustainable development.

ICB supports development via its monetary policy to encourage real investment and development by lending banks, and provides liquidity in the secondary market. This will deepen monetary intervention and raise credit ceiling, enhancing funding levels. It will accelerate growth and improve utilization of the country's available material and human resources without conflicting with the requirements of stability and economic balance.

First: Monetary policy ... Achieving goals

Monetary policy is one of the main functions of ICB by providing stability through control of liquidity and stability of local prices, while maintaining a stable financial system for sustainable development that provides job opportunities and welfare in Iraq. The policy plays a major role in establishing growth through indirect tools such as discounting, statutory reserves, open market operations and liquidity management using Treasury bond auctions and interbank lending. In the 2013-2017 plans, the ICB will strengthen its role by achieving these strategic goals.

Monetary policy is linked to basic procedures that will strengthen links between the cash market and intermediary transactions, with stability of the foreign funding market and the external value of the Iraqi dinar. This has led to achieving two main indicators: interest rate on Iraqi Dinar deposits and exchange rate of the Iraqi Dinar. This has created a balance in the monetary market and stability of its activities.

The Monetary policy adopted by the ICB since 2003 has borne fruit through interest rate indicators, to achieve revenues in Iraqi Dinars and converting them into a strong currency capable of facing the expected inflation. Basic rate of inflation has dropped from 13% in 2008 and 7.1% in 2009 to 3.1% in 2010. It rose again to 6.5% in 2011, which required reducing the interest rate from 20% in 2007 to 7% in 2009, and to 6% in 2010. The Dinar today is a strong national currency and is the best tool for saving, financial intermediaries and the right way to reduce inflation.

The exchange rate had a major effect in reducing inflation and raising the external value of the Dinar. The Monetary policy has therefore achieved its basic objectives to reach the true level of the exchange rate through the foreign currency auctions. This has had a positive effect on prices, especially imports and production materials, as well as being a method for implementing an indirect Monetary policy for liquidity management needed to achieve the required balance and stability in the cash market.

The policy has helped to build strong foreign currency reserves, which will maintain economic stability and provide a suitable climate for investment. The role and effectiveness of monetary procedures required clear objectives in the national economic policy. There must be coordination and conformity between monetary and economic policies, and in a more regular form, in order to encourage investment and raise the rate of development.

In the 2013-2017 NDP, ICB will seek to raise the effectiveness of its policy to provide monetary stability and the success of the Iraqi economy, as it is the only policy that can counter inflation and reduce price levels. The ICB will continue to adopt a strong monetary policy that will keep pace with banking developments, while continuing monitoring of the banks, employing best international standards and practices. At the same time, ICB will review and revise regulations that govern the banking sector.

The ICB will encourage local banks to increase private sector credits in order to activate the economy by providing resources to productive sectors. It will also seek new initiatives to encourage banks to provide loans for small and medium projects, in order to enhance the banking sector's role in sustainable development, and the role of the private sector by making it an effective partner and competitor to the public sector, and establishing methods of transformation into a market economy.

To achieve these goals, the bank has played an important role in helping the government develop Iraq's stock market, because investment and the private sector require an infrastructure that uses modern technology efficiently. Legislation regarding monitoring of banks, money laundering and currency auctions will be updated as needed.

Cash availability and the factors that affect it

In 2010 Iraq's economy had increased cash availability M2 by 32.6% compared to 2009. This exceeded the increase in GDP by 23.4%, and is reflected by the rise of consumer prices. As ICB is responsible for cash management and regulation, it sought to maintain stability and rate of inflation within its 21st ranking, and adopted new monetary policies to confront inflationary conditions.

Cash availability (M1) (currency in circulation + current deposits) rose from 37300 Billion in 2009 to 51620 Billion in 2010, an increase of 38.4%. Current deposits rose from 15524 Billion in 2009 to 27278 Billion in 2010, an increase of 75.7%. This has caused a noticeable change in cash availability, while the currency circulation rate decreased from 58.3 in 2009 to 47.2 in 2010, in favor of fixed deposits, which rose from 41.6% in 2009 to 52.8% in 2010.

Indicators of cash availability in 2009 and 2010 show an increase, caused by external factors, represented by total foreign reserves of 5997 Billion Dinar at the end of 2010, an increase of 10% from 2009 due to the increase in oil revenue, as the price of a barrel of oil rose to 75.61 Dollar in 2010 from 58.96 Dollar in 2009 (an increase of 28.2%). The ICB will continue to manage cash availability to ensure stability in the exchange rate and a reduction in inflation.

Targeting Inflation

There was uncontrollable inflation in Iraq before 2003, reaching record levels. Therefore, lowering inflation and maintaining price stability were among the highest priorities of monetary policy after 200. The resumption of oil exports, and import of goods, as well as the strict Monetary policy applied to control liquidity, all led to a lower rate of inflation in a relatively short time. The inflation rate was 7.1% in 2009 and 3.1% in 2001. It rose again to 6.5% in 2011. ICB will continue to apply a policy for monetary and cash stability and lowering inflation. The removal of zeroes from the Dinar is one of the strategic goals of the bank in the next five years. This will lower inflation and cost of currency management, as well as lowering storage capacity and the need for people to carry large quantities of cash for their expenses.

Interest rate as an investment incentive

ICB has reduced the interest rate 4 times in 2009, from 15% to 7% as follows:

- From 15% to 14% as of 4/2/2009
- From 14% to 11% as of 1/3/2009
- From 11% to 9% as of 1/4/2009
- From 9% to 7% as of 21/6/2009

The interest rate has been reduced by 13 points from its highest levels in 2008 (20%). In 2010 ICB reduced it from 7% to 6%. Interest paid by ICB on bank deposits in 2009 was 267 Billion Dinars (184 Billions to government sector, and 83 Billion to private sector). The policy will encourage reinvestment during the next five years by lending banks through the secondary market to provide liquidity and raise credit capacity, thus improving optimum utilization of available and potential economic and human resources.

Stability of the exchange rate

A level of stability in the foreign exchange market was achieved in 2010 with the Dollar to Dinar exchange rate at 11170 Dinars per Dollar in 2009. The Monetary policy succeeded in achieving a gradual rise in the value of the local currency, despite the pressures on it. There was a large increase in money supply as a result of the policy adopted in 2010, as indicated by government expenditure in the national budget for 2010. Many factors contributed to the stability of the exchange rate, such as increased foreign reserves at ICB due to improved oil exports, and the continuous public auctions for foreign currency and its role in absorbing some of the excess local liquidity. This stability in the foreign currency market was indicated by the amount of Dollars sold in public auctions which rose from 34 Billion Dollars in 2009 (daily average 126 M Dollars) to 36 Billion Dollars in 2010 (daily average 137 M Dollars). 94% were transfers in 2009 and 85% in 2010.

The increase in foreign reserves also helped in financing imports and market stability of consumer products and inflation level. The control of inflation is another factor in stability of the foreign exchange market, as it increased confidence in the local economy and lowered import costs. ICB will continue its policy of improving the value of the Iraqi Dinar to make it an important tool for payments and settlements.

Banking development (credit activity)

The banking sector in Iraq is composed of seven government banks and 36 local and foreign banks (6 foreign and joint banks, with 20-75% of the capital). Banking density is still around 40 thousand persons per branch. The total capital of banks is 2.4 Trillion Dinars in 2009, and 2.9 in 2010; 37.6% is private capital in 2009 and 79% in 2010 (37.6% for commercial private banks, 17.6% for Islamic banks and 18.6 % for foreign banks). However, credits provided do not exceed 34%, while state banks provided 66% of credits in 2009 and 75.3% in 2010. This shows that private banks are conservative in providing credits, even though they have large capitals allowing them to provide credits reaching 8 times their capital.

Credits in 2010 reached 9.4 trillion, compared with 5.7 trillion in 2009, an increase of 65%. The private sector had 90% of credits in 2010, compared with 81% in 2009. This can be explained by the continued decrease in interest rates and the commercial expansion in the economy.

Total private deposits in banks did not exceed 15.6% of GDP in 2009. This percentage is insufficient to build a strong financial sector. We should note that credits percentage in GDP do not exceed 3.8%, which is an indicator of the small size of the credit market in the country.

As for the state banks, despite their lower capital, yet they have the public's confidence being guaranteed by the government and therefore not liable to go bankrupt. These banks had 81.3% of total deposits in 2009, while private banks had 18.7%. Government deposits form the largest part, but private deposits are still deposited in state banks with a percentage of 61% of their total.

Banking sector achieved good results in 2009, 2010 and 2011, and developed its investments and improved its efficiency, through legislative updates and revisions to provide competitiveness in local and international banking and financial services:

1. Regular revision of polices to confirm their conformity to international standards and practices.
2. Establishing rules and controls for banking institutions, and revising them continually while implementing monitoring standards.
3. Continue restructuring and reform of banking sector.
4. Develop banking through diversity of its operations within and without Iraq.
5. Establishing support companies for banking sector, especially for funding small and medium projects.
6. Opening the Abu Dhabi Islamic bank , so that Arabic and foreign banks are now 7 in number.
7. Increasing number of foreign exchange companies to 32 companies, with 10 new companies added during the year.

The ICB will continue to encourage banks to direct their efforts to the market and the required financing to support the development process and accelerating it by reducing the statutory reserves maintained by the banks to 15% of their deposits, 10% to be kept at ICB and 5% in the bank's vaults. The ICB will continue restructuring and reform of the banking sector, and to comply with the legislative amendments required in the plan for monitoring financial institutions.

Lowering banking density

In view of the modest rate of banking density, the ICB will seek to improve it by increasing number of banks and their geographical distribution. So far, only a modest amount has been achieved, and the number of banks only increased by one in 2010. The total number of banks has reached 44 of which 7 are state owned. Therefore, banking density only decreased to 38484 compared to 40000 during 2009 - 2010.

This indicates the need for expanding banking services, considering the necessity of the actual expansion in the market, which must be met by an equal level in the financial sector, and this the ICB hopes to achieve in the next five years.

Development of specialized banks

This is one of the direct tools that the monetary policy employs to direct credit towards specific sectors or projects. Often, the activities of these banks go beyond market rules, as the banks are supported by certain terms and conditions. Only three such banks existed in 2009 (agricultural, industrial and state banks) with 76 branches. These banks provided credits worth 969.1 billion dinars in 2009. It is therefore necessary to adopt a strategy for expanding the activities of these banks, as they provide credits to consumer sectors owned mostly by private people. This will assist achievement of objectives of the next plan, especially the agricultural sector.

Raising foreign reserves

ICB seeks to improve foreign reserves and stability of the local currency exchange rate, while covering costs of imports. Accordingly, foreign reserves increased from 44.3 billion dollars in 2009 to 50.6 billion dollars in 2010, an increase of 14.5 % due to improved oil revenues. Despite this increase, the ratio of foreign reserves to GDP decreased to 29% in 2010 from 32% in 2009. If GDP is calculated on fixed prices, the rate decreased from 53% to 52%. This decrease is caused by ICB policy in controlling inflation, and increased cash availability through foreign exchange auctions. This limited increasing foreign reserves. The increase in these reserves enabled Iraq to cover its coverage of imports to reach 13.8 months, compared to 12.8 months in 2009, which is an encouraging indicator by international standards.

ICB will manage its foreign investments (gold, special drawing rights deposited in the world bank as reserves, and negotiable bonds issued by foreign governments or central banks or international organizations), so that it will ensure security, liquidity and profitability, through geographic diversity and types of currency and tools (certificated of deposits, current accounts) in solid banks and financial institutions.

Second: challenges

1. Low compatibility between monetary and fiscal policies which reduces effectiveness of monetary policy in cash and financial movements.
2. Continued growth of cash availability in adopting an expanding expenditure policy that will increase inflation, despite limiting liquidity.
3. Regional tensions causing demand for the dollar may destabilize exchange rates, inflation rates and currency auctions, to allow possibilities of foreign currency smuggling, corruption and money laundering.
4. Strict ICB policy for inflation control has improved cash stability without the same effect on the sustainable development of Iraq's economy.
5. Continuing open imports policy could lead to a lower exchange rate for the dinar and increased inflation pressures.
6. Limited role of specialized banks in funding private sector development investments, which is contrary to the economic policies of the plan to give the public sector the major role in development. The absence of state support for these banks will diminish their capacities and lower their activities.
7. Low effect of the decrease on interest rates on credits provided by private banks, due to their conservative nature, thus affecting private sector investments.

The vision: Adopting special measures that will maintain monetary stability and contribute to achieving sustainable development.

Objectives:

First objective: Improving monetary policy by:

1. Encouraging local banks to increase credits to the private sector and provide loans to medium and small projects.
2. Supporting non-banking financial institutions (money markets) in their role of providing finances from surplus monetary units to units with monetary shortages.
3. Developing monetary policy tools in the secondary market for government bonds.
4. Adopting a monetary policy for banks in accordance with best international practices and standards.
5. Complete revision of legislation that governs banking, money laundering and currency auctions.
6. Improving existing coordination between cash and monetary policies to ensure stability.

Second objective: Implementing project for removing zeros by:

1. Printing new currency in international presses.
2. Specifying amount of currency in circulation outside the banking sector, as well as deposit balances in all banks.
3. Setting a timeline for exchanging the currency within two years of announcing the change.
4. Improving storage capacity of currency means of transport and number of treasurers.
5. Keeping the old and new currency in circulation for two years with gradual exchange.
6. The ICB will purchase a new plant to destroy old currency and convert it to pulp that can be used in paper factories.

Third objective: Maintaining exchange rate of local currency through:

1. Lowering inflation.
2. Increasing foreign reserves.
3. Continuing currency auctions based on actual needs for foreign currency.
4. Allowing private and government banks to sell dollars with a fixed price set by ICB.

Fourth objective: Improving the role of banking sector in development by:

1. Continuing restructuring and reform of banking sector.
2. Encouraging mergers between existing banks through attracting more local and foreign investors.
3. Improving banks monitoring system.
4. Flexibility in statutory reserves by the banks, based on credit market needs and levels of liquidity.
5. Directing banking credits towards productive sectors.

Fifth objective: Lowering inflation through:

1. Control of money supply in favor of current deposits.
2. Adopting a realistic interest rate that will encourage saving.
3. Improving flexibility of productive sectors through fiscal and monetary tools.
4. Adopting open market procedures.

Sixth objective: Enhancing foreign currency reserves by:

1. Diversity in management of foreign reserves to achieve security, liquidity and profitability.
2. Extending cooperation with other central banks and strong international institutions, to ensure diversity of currencies, tools and entitlements.
3. Regulating public auctions to counter smuggling, corruption and money laundering.

4. Improving ICB assets management to a very high level to ensure security of assets with reasonable financial returns.

Seventh objective: countering money laundering through:

1. Preparing information exchange programs for coordination with authorities concerned with money laundering within Iraq.
2. Complete compliance by banks with money laundering law.
3. Complying with international standards issued by FTAE.
4. Coordinating between ICB money laundering unit with integrity commission and ministry of justice, ministry of interior and the judiciary.
5. Coordination with corresponding units in neighboring Arab and other countries on information exchange concerning money laundering and financing terrorism.

Eighth objective: Employing information technology in ICB work mechanisms by:

1. Setting up a new banking system that will satisfy current and future requirements of ICB.
2. Connecting ICB branches with the data center via a local network IIBN.
3. Setting up a system for linking banks to clear return payments such as ATM, foreign transfers and credits and debits cards (Electronic clearing room).
4. Developing and upgrading payment system software and all its components.
5. Completing implementation of automation project for the ICB.

Population - Youth

Introduction

The UN defines youth as those who are between 15-25 years old. In Iraq this was extended to 29 years. In general, youth do not form a homogeneous group as there are usually differences in their cultural, economic, social and geographic situations between the various regions and within a region.

In every society, youth is represented as building blocks of the economy and the community as they hold the promise of a better future for the community and is perhaps the most important human resource in it.

The increase of the percentage of youth in a community has positive and negative aspects. The positive aspect is that they are a demographic gift that leads to a reduction in the support required and the possibility of supplying the economy with its growing need for a labor force. The negative aspect is that this large number of youth causes pressure on social services and on the labor market and creates a big challenge for planning and development. Any shortcomings in policies and procedures could lead to a social and economic marginalization of a large category of the population, i.e. the youth. As a result, the nation cannot compete with an economy that is directed towards globalization, and so the demographic gift becomes a demographic burden.

The participation of youth is a major investment opportunity in the development process. Which is why aspiring societies try to reduce the marginalization which affects the youth politically, economically, socially and culturally, and to increase their degree of intervention in order to enhance sustainability and fairness and help them in having more opportunities in the target areas, as well as building confidence and strengthening the social capital and the youths' capacity to satisfy their livelihood needs to ensure their sustainable role in development.

1- First: analysis of the situation

In Iraq, we find that youth are not only its most important capital but they also constitute the largest section of the population. According to statistics for the year 2009, the number of youths was 9.3 million and that 28% of Iraqis are between the ages of 15 and 29.

- About 5.4% of young females work privately and 41% work in government and 58% work in the private sector. Males are similar in that 17.5% of young males work privately, 71% in the private sector and 27% in government.
- Government sector remains the most attractive for graduates while the private sector was more attractive to secondary school graduates.
- The ratio of youths working unprotected rose to 52% compared to 48% who work in a protected environment. These figures require amending social security laws to cover all workers.

2- Unemployment indicators

- Youth unemployment decreased between 2008-2011 due to the employment policy adopted by the State after 2005 in increasing the number of staff in the security sector.
- The ratio of youth unemployment (15-29 years) reached 18.2% in 2011 which is higher than the average level in Iraq (11%). 15% were males and 33% females.
- This survey in 2011 also showed that 13% of secondary school certificate holders were unemployed while 24% of those who had higher degrees were unemployed. This high rate of unemployment for university graduates was caused by the admission policies of the universities that do not conform to the labor market needs.

Second: challenges

These challenges can be said to be inherited from decades of poor economic management and human and financial resources investment. This was increased by the many wars and crises the country went through. It is a serious obstacle to an effective and fruitful policy to utilize the capacities of the youth and their employment.

- 1- The population increase is a development challenge in Iraq. The population of Iraq increased dramatically as a result of previous population policies which aimed at encouraging population growth since the 1970s. Iraq's population in 2007 was more than ten times its population in 1927. The population in Iraq in July 2011 was 31.6 million. And if the fertility rate of 4.3% continues, the population of Iraq will double within 23 years.

- 2- Increase of youths' share in the population. This will continue to increase in the next two decades before it levels off and then starts to go down. The increase in the number of youths in the 10-14 age group means that most of them are in the teenage stage which requires the State and society to provide programs and projects that will improve their health and education.

The needs of the 15-19 and 20-24 age groups are different, as they are about to enter a new stage that requires a choice between work or completing their studies and forming a family.

This high proportion of youths of working age in Iraq means that they have two development options:

- First option: to deal negatively with this gift and continue wasting it.
 - Option two: to deal positively by investing in preparing human capital with knowledge, information and skills and to widen the participation of youths in the work place and increase productivity and achieve a real decrease in economic support rate. Otherwise seizing this gift and utilizing it may be wasted.
- 3- The ineffectiveness of the unemployment policy which can generate job opportunities for unemployed youth and the weakness of the private sector and its low organizational efficiency as well as the low investment rates.
 - 4- Absence of a comprehensive national policy for the youth sector has led to undefined services provided to them and therefore with no benefits.
 - 5- The number and variety of institutions that provide their services to youths has led to poor coordination and wasted efforts.
 - 6- The limited political and social role assigned to youths.
 - 7- The concern of youths for the future in view of the political and economic stability in the county. With the increase of cost of living and levels of unemployment, many youths feel the pressure for their future.
 - 8- Low level of rehabilitation and experience of staff appointed to run youth institutions administratively and technically.

- 9- Weak life skills acquired by youth in their daily lives (such as inherited professions and vocational skills) and how this reflects on the levels of participation by youths.
- 10- The huge gaps between social strata which reflect the way youths grow up and their relationship with each other.
- 11- Limited financial resources allocated to youth activities and their low importance in the federal budget.
- 12- Lack of initiative and achievement among Iraqi youths as well as focusing on employment in the government exclusively, as it offers guarantees of continuity regardless of what happens to the economy from local or international factors.
- 13- The absence of many values among the youth such as volunteering, participation and responsibility, to be replaced by negligence and loss of confidence and focusing on themselves and the desire to emigrate and a sort of social dissolution occurred as well as a separation between the youth and the community they live in

Strategic objectives of the Ministry of Youth

- 1- Raising youth and sports levels through pioneering projects
- 2- Implementation of giant scientific, cultural and sporting projects based on national interest.
- 3- The search for scientific, literary, cultural and sporting talents and providing them with all facilities to improve
- 4- Adopting economic support projects for youths in coordination with banks, and providing guarantees to them. Also supporting them in establishing small project to improve their standard of living.
- 5- Establishment of social guidance centers to identify problems of the youth and finding suitable solutions.
- 6- Establishment of development centers for crafts for young men and women.
- 7- Establishment of the young woman's project and participating in finding problems they face and their solutions.
- 8- Encouraging the spirit of volunteering among the youth and participating in the building process by implementation of volunteer projects and programs in the plan.

- 9- Enhancing the feeling of belonging to the nation among the young.
- 10- Activating the liveliness of youths and directing it toward national strategic goals.
- 11- Making youths the center for propagating non- violence and peaceful living, and discarding rough and violent habits
- 12- Directing youths towards moderation and away from extremism
- 13- Instilling the spirit of dialogue and accepting the opinion of others among the young
- 14- Ensuring that the young are an effective participant in building Iraq's economy.
- 15- Achieving high sporting levels in coordination with the National Olympic Committee of Iraq and supporting them.

Third: the vision

Efforts to make the youth a basic force in effecting change and a principal partner towards sustainable development, with social responsibilities and ambitions towards communal participation, a youth that is aware and educated and capable of competing with the youths of other countries with an exchange of experiences and cultures with them.

Fifth: objectives

The basic direction of the plan is to care about the youth and develop their capacities , through a national strategy, and to remove obstacles to their participation in development activities and to improve their capability through implementing mechanisms to increase this participation, and deepening and strengthening as well as building a solid foundation for takeoff, according to a medium and long term view of the future of the youth and sports ,in parallel with worldwide developments through the following objectives:

First objective: extending youth options and their participation in all aspects of life through:

- Giving youths an essential role in drafting policies and improving their role in decision making
- Improving national accord (political and communal) through youth participation in planning, organization and execution.

- Inserting youthful elements in boards of clubs and institutions, and also on the level of local councils
- Finding youths with handicaps suitable work and implementing laws that can achieve this

Second objective: raising the cultural level of the youth and improving skills and intellectual and physical capabilities and enhancing innovation and providing them with the required expertise, and confirming their role in building the cultural life of Iraq through:

- Instilling values of loyalty, belonging and achievement and the rules of democratic practices among the youth.
- Adoption of scientific, cultural and sports projects based on national foundations
- Establishment of youth centers that will adopt modern scientific and cultural programs to spread the values of moderation in its social and behavioral concept
- Providing a suitable environment for creative youths on the scientific, technical and literary , cultural and sporting levels
- Providing infrastructure for practicing various amusement activities.
- Support and development of summer camps and encouraging scouting activities.

Third Objective: developing citizenship, belonging and civil rights values among Iraqi youth by:

- Special legislation for individual and group civil rights
- Developing awareness program for youths on civil rights and citizenship
- Establishing strong foundations for national and humanitarian cultures and making the youth aware of the basics of rights and duties.
- Expanding on volunteer work values and increasing initiatives and accomplishment, and providing regulations for civil work that require a youth volunteer program.

- Setting up social guidance centers to recognize youth problems and find solutions for them
- Setting up unified national criteria to ensure that youths are not involved in internal conflicts, and monitoring anything that might disturb national unity.
- Drafting development policies and programs to enhance awareness and social responsibilities and moderate behavior in youths.

Fourth objective: empowering youths politically, economically and socially through:

- Providing suitable training and preparation to enable them to meet challenges and market requirements, and economic, political and social changes.
- Reformation of the education system, linking output to the labor market
- Developing vocational guidance programs to direct students towards needed scientific disciplines.
- Expanding available options to allow them equal gender opportunities at work.
- Organizing training sessions in the skills required by the labor market, such as IT, and coordinating with labor offices to prepare youths for available jobs in cooperation with the national employment committee.
- Establishing a fund for loans to youth projects.

Fifth objective: achieving a real decrease in youth unemployment by:

- Activating the role of the national employment policy to spread awareness about non dependence on the public sector for work, especially for females.
- Providing suitable job opportunities in coordination with banks, and providing guarantees for establishing small projects to improve their income.
- Adopting economic support projects through development of vocational centers for young men and women.

Improving cooperation with ministries and government institutions and NGOs, particularly those that deal with the young, in order to establish joint ventures and programs to raise their levels.

Sixth objective: improving learning and lowering absenteeism by :

- The national education strategy should adopt serious programs and activities to treat the low level of secondary education students.
- Confirming compulsory education policy which will lower illiteracy.
- Increasing illiteracy eradication classes at youth centers in cooperation with adult education institutes.
- Providing intensive measures that will lower absenteeism
- Adopting modern education curricula as these are the main tools in development and empowerment.
- Developing moral and educational programs encouraging virtue in youth and avoiding vice and laziness.
- Improving the basic structures of youth centers and the learning establishment and preparing young leaders, and developing infrastructure in governorate, district and sub-district centers.

Seventh objective: improving health levels among the young and the services provided through:

- Improving and developing youth friendly health services specially in schools and universities.
- Activating medical plans suitable to the health and sociological needs of youth.
- Allowing youths to receive social and sociological guidance specially for those who suffered trauma
- Improving health awareness in public health, birth, sociology, protection behavior and a healthy life style
- Increasing the role of youths in environment issues and linking this with the needs of development and sustainability

Eight objectives: improving technology levels in various fields by:

- Using IT and communications positively
- Using IT in school and university education systems
- Increasing availability of IT in poor and countryside areas

Ninth objective: the role of sports centers for all ages:

The plan is to convey the national strategy message to raise sports and youth levels through focusing on the following:

- Supporting the sporting environment in Iraq such as , playing fields, covered areas, Olympic swimming pools, athletics stadiums and sports centers to provide opportunities for sport activities to everyone
- Developing sectors concerned with sports and providing human and financial resources to improve representation in international tournaments
- Continue in capacity building and development of HR in sports and encouraging the private sector to invest in sports
- Increase sports in all stages of education, and finding talents with special care for handicap sports
- Improving sports medicine and establishing such units in all governorates
- High achievement in sports in coordination with the Olympic committee and supporting them
- Working with ministries and governorate councils and civil society organizations which are concerned with youth or sports.
- Facilitating access to programs and services available in sports, entertainment and relaxation.

Population

Iraq's Renewable Wealth

The international conference for population and development was held in Cairo in 1994 to confirm the link between population and development, and the importance of responding to the increasing needs of the population as one of their guaranteed rights. A person will therefore become a development objective and its method of implementation. It also became clear that it is the type of population and not the number that is the basis on which to build population policy goals. These goals are governed by the principles of sustainable human development which demands more options in education, health, income, and a cleaner environment. These options represent the basic capabilities provided by human development, such as long life and acquiring knowledge and ensuring a sufficient income to enjoy a suitable standard of living. In addition to this, they should also enjoy political and social participation which was called for by the national study of human development in Iraq in 2008. The population can be considered a dynamic variable that affects and is affected by the development process. That is why its inclusion in national development plans is an absolute necessity

First: the current situation: housing policy... new trends

In the last three decades, Iraq has witnessed demographic changes caused by wars and political events. However, these changes and the level of political interest in them indicate a neglect of population issues. Government interest is still not serious or visible and was not one of its priorities, and there is no national policy for population that aims at effecting changes in the factors of population growth to minimize population challenges that are obstructing Iraq's sustainable growth. Until recently, Iraq dealt with population issues separately and independently from social and economic development plans, and in legislation. This caused the deepening the gap between improving the standard of living of people and lowering poverty from one side, and the objective of economic growth on the other side.

The 2010-2014 development plan confirmed the importance of including population inputs with development activities to provide a measurement of the effect of population on development through demographic indicators and the effects of development on the population through its quality indicators. This required adopting a national population policy with declared and research objectives and population growth rates that are compatible with the

requirements of sustainable development and the labour market, while maintaining the rights of future generations and ensure equity in allocation of financial resources in federal budgets and regional development programs, to enhance decentralization and sustainable expenditure. However, during the period of 2009- 2011 we did not observe any action towards this objective, even though it was one of the main priorities of the national committee for population policies. This was due to the postponement of the population census and restricting its activities to counting only, which deprived Iraq from using population inputs in development plans. However, the expected role of this committee in adopting central objectives for drafting and implementing a national policy and finding the supporting climate to allow monitoring population indicators, will, to a certain extent, improve the ability to use population inputs in development planning until the higher council for population policies is formed in the next few years.

Despite this, when we follow the new directions of population policies aimed at raising the population through increased births and fertility, for a population growth rate compatible with the demography of Iraqi society and with economic, social and cultural objectives that will encourage and facilitate marriage, and to raise life expectancy from 60 to 70 years.

The previous plan also focused on labour force development with a view to raising the number of economically active persons, and to increase the labour force with people of working age, and to increase the ratio of women in the economy (if it doesn't affect the fertility rate negatively). To maintain fertility rates as planned, several maternity care projects were provided in the social services sectors, in particular nurseries and primary education and maternity hospitals. To ensure achieving positive demographic indicators, i.e. The negative effects of education on fertility, priority was given to appointment of married persons and providing facilities to satisfy housing, sanitary and nutritional requirements for children, from local or external sources.

The 2013- 2017 plan will continue to adopt a population policy that is compatible with social and economic development without neglecting humanitarian priorities, but giving them a higher priority than economic priorities, based on the principle of right which the plan has adopted. This will be done in accordance with the principles of sustainable human development and according to a balanced vision that incorporates the principles and objectives of the international work program of the conference which confirmed

the need to provide more options to the needs of families and individuals rather than focusing on fertility, and to extend the base of maternal health services rather than focusing on family planning programs.

This direction of the plan aims at building the foundations of several principles that Iraq will adopt to affect a leap in understanding the link between population and development, and to define priorities of funding, investment, international cooperation and participation. The plan expects these principles to become a suitable framework and receive popular and official support for this policy.

These are the principles:

1. Interpreting the link between population development in order to lay the foundations of sustainable development
2. Embodying the principles of human rights in all population policies based on the principle that a human being is the aim of development and its means
3. Improving the quality of life with control of production and consumption and maintaining the welfare of future generations.
4. Equality in gender and empowering women to achieve their ambitions through learning and jobs.
5. Including demographic factors and dynamics in development strategies and planning.
6. Importance of international cooperation and the partnership between the State, the private sector and NGOs in implementing population programs, with emphasis on the need for consistency in international cooperation.

Demographic Map of Iraq

1. Population and growth rate:

The 2010-2014 plan did not anticipate a decrease in population growth in the medium term. It has therefore maintained a high rate and settled at around 3%, which explains the population increase from 31.6 million in 2009 to 33.3 million in 2011 and 34.2 million in 2012, (a total increase of 8.2% compared to 2009). According to population projections, it is expected that the population will be 35.1 million in 2013 and 38.9 million in 2017.

The increased fertility rate from 4 births per woman in 2009 to 4.6 in 2011, explains the increase in population and its rate of growth. It has become a

burden on resources and the environment and it is expected to remain high till 2017.

These demographic facts indicate a continued rise in Iraq's population, which was confirmed by UN estimates. It is expected to reach 48.9 million in 2025, and 80 million during the next fifty years if this growth rate is maintained. In Iraq there are social values and customs that deter Iraq from population stability which is the third stage of demographic transformation, unless a population policy is adopted that aims to lower the population is supported by social awareness and can evaluate the consequences of population pressure on development and the environment.

2- Population by age group

The demographic balance of the population by age group for the period 2009-2012 was affected by a decrease in infant mortality and an increase of life expectancy at birth. The first indicator dropped from 35 deaths per thousand live births in 2009 to 32.5 in 2011, and to 32 in 2012. It is expected to drop to 31.7 in 2013 and to 30.2 in 2017. Life expectancy at birth increased from 65 years in 2009 to 69 years in 2011 and is expected to rise to 69.2 in 2013 and to 69.7 in 2017. This will have a marked effect on the age group structure of the population and the population pyramid which emphasises youth.

In spite of the absolute increase in numbers for the age group- less than 15 years- from 12.97 million in 2009 to 13.4 million in 2011 and 13.6 million in 2012, this age group decreased from 41% in 2009 to 40.2% in 2011 and 39.9 % in 2012, and continues to drop to 39.5% in 2013 and 38.1% in 2017. However this drop does not exclude it from being the consumer category in the economy and thus exerting pressure on resources and the federal budget, as it forms a third of the Iraqi population. Statistics show the effect of this demographic trend on the 15-64 age groups which reached 17.8 million 2009 and increased to 19 million in 2011 and 19.6 million in 2012 to form 56.1% in 2009 and 57.2% in 2012 then rising to 58.6 in 2017.

The increase in working age population means an increased labour force while at the same time underlines the importance of adapting economic policies to cater for the growth of job generation and upgrading the efficiency of the labour market to become more regulated and balanced and in harmony with the supply and demand of labour, in order to make full use of this increase, and to allow Iraq to enter a new stage where the age group forms more than half of the

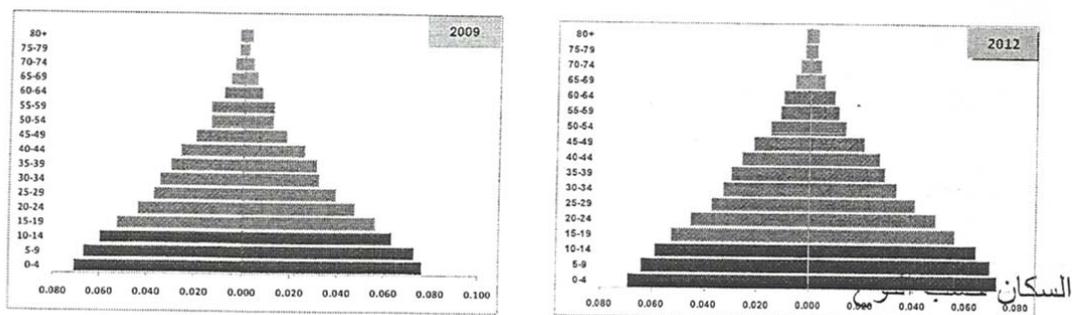
population. In other words, this category will reach its peak while children and the old reach their lowest levels, and the period where these age groups are in balance will only be for one generation. Therefore, we must utilize this development opportunity which provides saving, investment and improvement in family life styles for development to reach 15%. This is therefore an opportunity provided by the gender change in the age structure; it is a gift that if we do not use it will be a waste of capacities and energies and its integration with the labour market in 2022 to provide suitable work for every able person as a right, and it will adversely affect unemployment and poverty rates. It will also close the poverty gap to allow Iraq to reach the first millennium goal.

The age group 15- 24 has reached 20% in 2009, and 20.2% in 2011, and 20.3% in 2011, it will stabilize at this rate until 2017.

The age group 15- 29 is the group defined nationally for youth. This group was 27.7% in 2009, 27.9% in 2011, and 28.1% in 2012. It will increase to 28.2% in 2013 and to 28.5% in 2017. The rise in this rate requires adopting political and social policies that advocate youth while providing jobs to raise their participation in the economy.

The age group of 65 and over was 2.8% of the population in 2009, and 2.9% in 2011 and 2012. This will not change in 2013 but it will reach 2.17% to 3.3% in 2017. The stable rate of this age group can be explained by weak health and preventative policies and the rigid executive and institutional mechanisms, with life expectancy at birth to stay at 69 years from 2009-2012. It is expected to reach 69.2% in 2013 and 69.7 % in 2017. We must therefore give special consideration to this age group to become the longest living, healthiest and strongest socially by expanding coverage of state health care and social security.

Distribution of population by age group 2009-2012

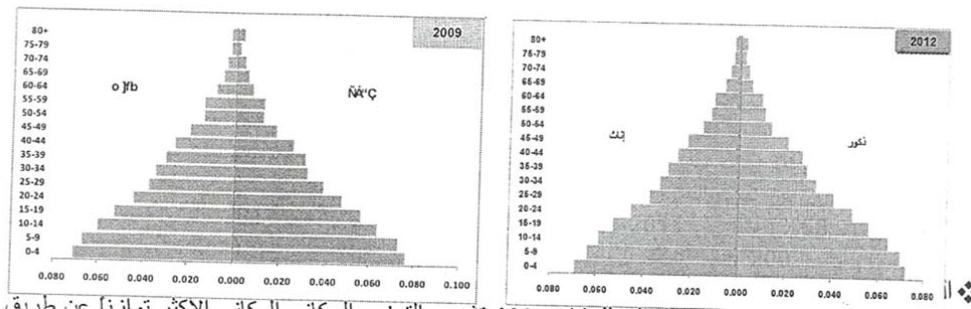


Statistics show a demographic balance in gender in 2009- males 51% to drop to 50.9% in 2011, 2012 and 2013 and to 50.8% in 2017. Women were 49% in 2009 and 49.1% in 2011, 2012 and 2013, and will continue to rise to reach 49.2% in 2017.

Gender distribution in Iraq is 104 males to 100 females, according to 2009 statistics. This will drop to 103 in 2017.

In the three age groups, we find that the under 15 age group is 105 males to 100 females, and in the 15-64 age group it is 103 to males for every 100 females. In the 65 and over age group, the male rate is 89 to 100 females according to population studies for 2017. These facts requires the NDP to adopt policies responding to gender on all sector levels to ensure that the concept of gender is well understood in all parts of the economic system.

Distribution of population by gender 2009-2012



One of the goals of the population conference in 1994 was to encourage a balanced population by sustainable environmental development and reviewing policies that contribute to population concentration in big cities. However this has not been achieved in Iraq, where the urban population in 2009 reached 69%, and expected to reach 69.4% in 2013 and 70.3% in 2017. Rural population was 31% in 2009. Projections for 2013 are 30.6% and 29.7 in 2017.

These numbers are caused by internal migration and low security and compulsory displacement and increased violence, as well as absence of policies for rural development. Climate change is also a cause for migration due to desertification and drying up of the marshes. The plan must respond by adopting a national strategy for rural development and implement programs as part of State agricultural projects initiative in 2008, and continue supporting

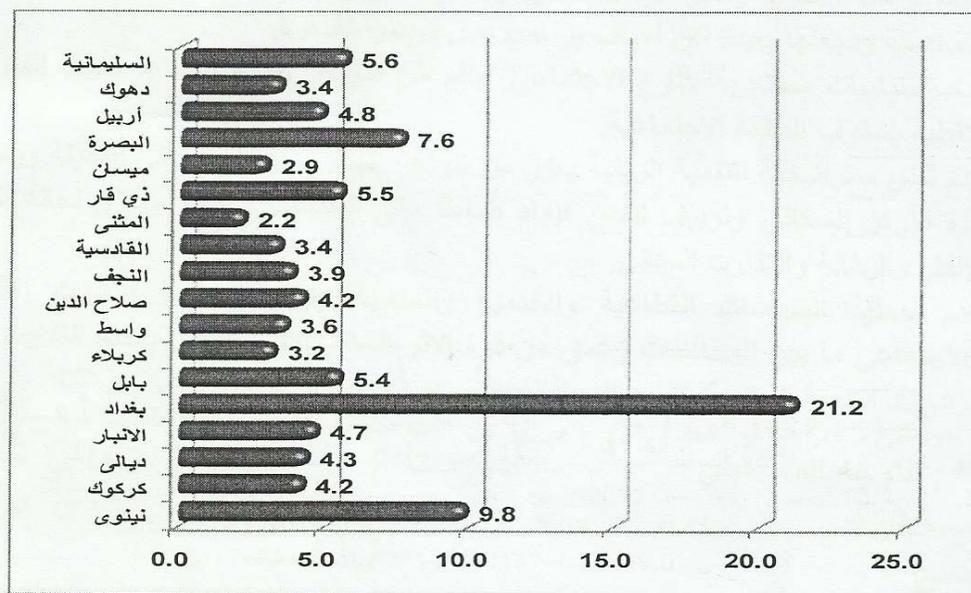
regional development by increasing investment allocations, and close the poverty gap.

Population Geography

Iraq, like other developing nations, has imbalances in the geographic distribution of population and the domination of the capital Baghdad, causing negative environmental, economic and social effects. The population of Baghdad in 2012 was 21.2% of the total population in an area of 1% of the country. 1/5th of Iraq's population lives in Baghdad, Basra and Nineveh. In contrast, there are three provinces with half the area of Iraq but only 11% of its population. These are Anbar which is 1/3rd of Iraq's area with a population 4.7%, and Muthana with an area of 12% and a population of 2.2%, and Najaf with an area of 6.6% and a population of 3.9%, according to 2012 figures.

The plan will combine population input in its development policies in order to reduce social and economic differences, while improving services and raising their coverage of the population, in particular drinking water, municipal services, sewerage, health and education to enhance sustainable human development indicators and reach millennium goals.

Distribution of population by province 2009



Order of governorates:

Sulaimanyah, Dohuk, Erbil, Basrah, Missan, Thi-Qar, Muthanna, Qadisiyah, Najaf, Sala-Din,

Wasit, Karbala, Babylon, Baghdad, Anbar, Dyala, Kikuk, Nenievah

Second: challenges

- 1- Repeated postponement of the population census will make demographic prediction inaccurate
- 2- The weak correlation between population and development will deepen the negative effect of population on development, environment and resources, and could obstruct efforts to alleviate poverty and lower unemployment.
- 3- Low efficiency in implementing health goals in policies and institutions will increase demographic age disorders and change population indicator trends, and lower sustainable human development indicators.
- 4- High rate of unemployed women will contribute to increasing women's poverty especially in rural areas.
- 5- Non adoption of rural development will increase migration to the city and population concentration, causing pressure on goods and services.
- 6- Weak sector services and spatial policies and non implementation of these policies has increased economic and social differences between provinces, and increased the negative effect on the population.
- 7- The continued rise in population growth will revive unsustainable production and consumption patterns, leading to improper allocation of economic resources and wastage of funds with more imports.

Third: the vision

A population policy that is integrated and in harmony with economic development directions, to effect quantitative and qualitative changes in the lives of the population and attain sustainable development, justice and equal opportunities, according to the principle of right.

Fourth: Goals

First Goal: including population inputs in development plans and programs through:

- 1- Increasing the awareness of decision makers of the importance of population as an effective variable in development.
- 2- Preparing population projections side by side with social and economic projections in estimating future needs of education, labour force, and the demand for goods and services.
- 3- Research and studies that will determine population trends and its relationship to development.
- 4- Adapting general expenditure directions in the budget to population inputs

Second Goal: the gradual effect of population growth rates by:

- 1- Adopting a national population policy to overcome challenges through direct and indirect State intervention to effect required changes in population growth factors.
- 2- Adopting a national programme to regulate the family by encouraging women of child bearing age to use family planning means, as the level of use in Iraq is very low.
- 3- Increasing awareness campaigns to change behaviour and avoid early and late pregnancy and encourage having fewer children.
- 4- Increasing social services and family planning as an effective tool to combat poverty with priority given to poor areas.
- 5- Establishing a State institution for women's health that will define health priorities and market them and conduct health research to unify indicators and distribute them to State organizations, international and non-governmental agencies

Third Goal: raising life expectancy at birth to surpass 70 years in 2017 through:

- 1- Reducing infant mortality rates, and for children under 5
- 2- Effective health policies and a developed health system
- 3- Social systems that can supply the needs of the aged with health insurance and social security

- 4- Increasing coverage of State support in health and social security for the aged to live longer and healthier
- 5- Increasing the number of homes for the old with more State support.

Fourth Goal: benefits of the demographic gift through:

- 1- A population policy that will satisfy the needs of the young and improve demographic benefits through increasing economically productive young persons.
- 2- Adopting planning principles in capacity building of the young to enable them to participate in development and policy making.
- 3- Adapting economic policies towards increasing jobs and making use of the demographic opportunity.
- 4- Planning to develop technical education and vocational training using programs consistence with labour market needs.
- 5- Creating an attractive environment for private sector investment, to provide sustainable development and job opportunities for young persons.
- 6- Incorporating concepts of maternal health in school curriculums and provide information on it to the young, while providing pre-nuptial testing services, in particular in rural and slum areas.
- 7- Helping the young to have access to life skills to provide a means of living through training and loans.

Fifth Goal: Gender equality through:

- 1- Adopting State policies and programs that ensure the rights of women and young girls to have equal opportunities in learning, and narrowing the educational gap between men and women, in job opportunities and in parliament. Also to protect them from gender based violence by planting values of respect in their minds through education and the media.
- 2- Reviewing legislation to ensure gender equality and their rights
- 3- Empowering programs for women by teaching and maintaining their health and removing all types of exploitation and violence.
- 4- Adopting women-friendly employment policies to raise their participation in the economy.
- 5- Including gender issues in environmental planning in order to maintain the environment and protect it from the negative effects of poor utilization of natural resources by the population.

6- Adopting a national strategy to raise the standards of Iraqi women.

Sixth Goal: limiting internal and external population movements through:

Internal movement:

- 1- Activating provincial development policies in less developed areas and supporting regional development financially to achieve this goal.
- 2- Increasing investments in rural areas that have many pockets of poverty, using strategies for reducing poverty and limiting internal movements of population, while reducing population concentration in the cities.
- 3- Activating decentralization mechanisms to exert a positive effect on internal migration.
- 4- Improving the quality of life in big cities, especially the services infrastructure, in order to deal with the inflation in city populations caused by migration.
- 5- Redistributing the labour force by sector and by area to achieve a development balance between urban and rural areas.

External movement:

- 1- Achieving a stable security to limit emergency migration.
- 2- Limiting brain drain and youth migration through improving development performance and generating work opportunities.
- 3- Incorporating population policies and emigration inputs within development policies in order to define population challenges and causes of emigration.
- 4- Establishing foundations of human security as basic rights in development through an environment that is conducive to stability to ensure limiting emigration.

Social Development

Based on Integration and Fairness

Introduction

The crises and conditions in Iraq have created changes in society, directly or indirectly, in all its segments. There is deprivation in education, health, housing and social protection. The protection of persons and communities from these dangers and helping them to overcome challenges are among the main priorities of the state, in order to establish comprehensive social development and improve security and stability.

In spite of these challenges, social development in Iraq is overcoming these obstacles toward a social policy that defines the relationship between official and un-official parties of society, with focus on citizenship, partnership and equal opportunities, with special emphasis given to low income groups to improve their living standards, through education, health and direct cash subsidies.

Social development begins from childhood till old age. It is the state's responsibility towards citizens, and the citizens' responsibility towards their family and local community. The policy must therefore help people to deal with their daily requirements. The state needs to take effective measures to enhance the values of solidarity and forgiveness. The population is growing in number, with a large number of vulnerable categories. The state's efforts to improve care are aimed at establishing a cohesive society with a safe a healthy social structure.

While the policies in crisis affected communities try to heal the wounds, the available options to decision makers are to confront the real causes, through interventions to strengthen development progress. This means more attention to the method of improving people and their lives in rural and urban areas.

After drastic changes in politics and the economy in 2003, the government set a national development plan for 2010-2014, guided by the 2005 constitution, in order to bridge the gap between the poor social situation and the required development.

This was followed by a development plan for 2013-2017 to establish an environment that will include vulnerable categories in society and the labor force, with access to education and medical services through increasing participation of the private sector and civil society.

First: Current situation

Social development is based on providing social care and support to the poor and those with special needs, through Ministry of labor and CSOs. The services provided are:

**First: Financial and in-kind assistance,
And second: direct services through centers.**

The constitution has set general rules of equality in rights in article 14. In article 29 it confirmed the state obligation to protect mothers, children and the old, as well as social security for individuals and the family, and, in addition, to provide health care for a free and decent life with suitable income and housing (article 30). The article also guarantees health and social care in cases of diseases or incapacity or homelessness or unemployment and will protect them from ignorance

First: Childhood:

According to article (1) of the treaty on children, a child is defined as any person less than eighteen years old. The age group 0-17 is 49.3% of Iraq's population in 2011.

a. Birth Registration

THE charter for children's rights states that every child has the right to have a name and nationality. Child registration is essential to ensure their rights. Registration of children below 5 years of age increased from 95% in 2006 to 99.1% on 2011. This is due to increased awareness among families.

b. Orphans

The rate of orphans for 0-17 age group was 8% in 2006-2011{ (6%) have lost one parent and 2% both parents}. These rates were 5% and 3% in 2011. The survey shows that orphans who live away from their parents are prone to exploitation, as their parents are far away and cannot help them. Orphan rates in schools are around 0.84 compared to non-orphans.

The Ministry of labor provides orphan care through:

- 32 orphanages in 2012 with a capacity of 1040 children.
- The number of orphans was 460 in 2012.
- There are significant differences in orphan numbers in the governorates with more males than females

c. Child Labor

This is a clear violation of international treaties and labor laws. It is a real problem in Iraq caused by the wars. Children are used in the labor market in very poor conditions by employers who exploit their needs. The growth of the unregulated sector attracts child labor in unsuitable conditions.

The survey of child labor shows that the rate for 5-14 age groups has dropped from 11% in 2006 to 7% in 2011, 10% of them work in rural areas and 5% in urban areas, with 8% male and 9% female. The highest rate for child labor was 8% for the 12-14 age groups. Working children are less likely to continue their education (6%) compared to 10% for non-working children

Age group	Child labor rates	
	2006	2011
(5-11) years	10	5 %
(12-14) years	12	8%
(5-14) years	11	7%

In comparing child labor rates in other countries it is higher than Bahrain(5% for example), but less than many developing countries (India 12%, Yemen 23% Sierra Leone 48%)

The shortage of data on child labor has caused inconsistent interventions with continuing high poverty and violence, unemployment and lower income opportunities

Second: The Disabled

Article 32 of the constitution states that the government will care for the disabled and integrate them in society. They constitute a significant portion of Iraq society because of the wars, terrorism and violence. No accurate numbers of disabled are available.

The state provides care services to the disabled through:

1- Mentally disabled services:

- 17 mental disability institutes, 35.3% in Baghdad and the rest in 10 governorates.

- Number of disabled who benefited was 842 in 2012 (598 males, and 244 female)
- Not all governorates were covered by these services.

2- Physically disabled services

- 34 institutions, 35 % in Baghdad and the rest in other governorates.
- Number of persons who benefited in 2012 was 2051, 1262 males 789 females.

3- Workshops and associations

- Number of workshops that will employ disabled persons was 11, with a capacity of 775, mostly in Baghdad.
- Number of persons who benefited from these workshops was 339 in 2012, 175 female and 164 males.
- Not all governorates are covered by these units.

Third: The aged

With the decrease in fatality rates, the rise in life expectancy means more old people. The 65 and over group was 1.016 Million in 2010, expected to rise to 3.736 Million in 2040, and the ratio of the aged will rise from 6.6% in 2040 to 8.9% in 2050.

The Ministry of labor provided services through nursing homes for the old with:

- Eleven homes in 2012 in Baghdad and seven governorates.
- Number of persons who benefited was 391 with another 241 severely disabled.

Fourth: Juvenile Delinquents services

- The number of school and reform centers for young convicts and homeless was 9 in Baghdad and Nineva.
- The number of Juveniles was 1275 in 2012 in Baghdad and Nineva and 83 in Kurdistan- mostly males.
- There are two centers for the homeless in Baghdad for males and females, and 85 persons use them.

Fifth: Social protection network

- Basic human right principles guaranteed by the constitution means that the state will provide care and protection to its people
- The project was started in 2005 by providing support to the poor and weak in the form of cash subsidies. These amounted to 142.552 million Dinars in 2009 and 684.15 in 2010 and 462.644 in 2011.
- The number of persons who benefited dropped between 2009 -2010 due to changes in eligibility of women.
- The number of persons benefiting rose in 2010-2011 to reach 363316 in 2012.

Beneficiaries	Number
Young orphans	1701
Married student continuing education	1548
Disabled due to senility	54431
Disables due to illness	123280
blind	11122
Paralyzed	21140
Unemployed	149677
Orphaned student	417
Total	363316

Sixth: non-institutional care services such as surrogate mother family programs and paralyzed children assistance and helping the handicapped

Seventh: The family is a development project

The constitution guarantees equality and non-discrimination based on gender, race, language or religion and confirms that the family is the foundation of society. It has provided the means to protect and support its entity and protecting mothers, children and the old. This requires a social development system that is effective and based on widespread participation by all sectors.

The family is undergoing continuous change in its structure and function such as: increasing number of unmarried females, Spinsterhood, and a rise in divorces and the average age in first marriages.

These changes have led to new relationships within the family and increased challenges. It is therefore necessary to increase efforts to spread values and customs that will embody ethical and moral characteristics by establishing parenthood as the basic pillars, for ethical, healthy and harmonious characteristics. We must also consider new families and families with dual incomes. There is an intense need to preserve the sanctity of marriage and family relations.

The Ministry of labor, civil societies and CSO's provide a varied group of services in: , private education and training, child care, health care, care for the handicapped and the old and others.

Other government institutions such as religious endowments and government councils also provide in-kind assistance to the poor and weak, in two types:

First: in-kind assistance, cash and wages

Second: direct services through centers

Table of actual development indicators for 2009-2010

Si.	Actual					
	Indicator	2009	2010	2011	2012	
1	Orphans	Number of state institutes	19	19	23	22
2		Social researcher	6.8	5.9	6.2	10.3
3		Teacher	7	5.1	5.5	4.9
4	Old and severely handicapped	Number of homes	8	9	10	11
5		Social researcher	26.8	29.3	31.8	22.8
6		Service employee	4.18	4.5	4.7	4.8
7	Disabled	Institutes	51	51	51	51
8		Social researcher	21.7	22.9	23.2	23.2
9		Teacher	5.2	6.6	5.6	6.6
10	Protective workshops	Persons receiving wages	35	34.9	28.1	29.7

11	Kindergartens	Number of children per Kindergarten	42	43	41	42
12		Number of children per nanny	52.7	58.2	58.8	58.3
13		Number of children per nanny	15.2	16.7	12.5	12.7
14	Juvenile	Number of schools and reform centers	9	9	9	8
16		Social researcher	56	56	55	52
17	Number of persons benefiting from 84 Billion allocation for poverty problems		No funding for loans			10000
18	Number of persons benefiting from 150 Billion USD lending fund		Funded by Ministry of finance (73501) unemployed was funded	Suspended		Fund organization stage
19	Social protection network	Number of persons covered	734572	317468	395126	Cause of Shortage is trespassing on network 363316
20		Social researcher	66	61	58	54

Eighth: Poverty

Social justice and equality in public services has been a part of development work in Iraq for many years. In spite of that, there are differences in living standards because of unfair distribution of public resources on areas and individuals based on gender. There are also differences between town and

country in income. An increasing number of town dwellers are living in slums which don't have basic facilities. These differences are a main cause of tension that might cause social upheavals.

Although many attempts have been made to reduce poverty, especially in poor urban areas and in the country, the rate of poverty is still high. Iraq has prepared a national strategy in 2009 to provide a database for measuring poverty indicators and determining the social sectors and geographic areas where there is a concentration of the poor. It will also help to find the causes and factors that caused poverty, in order to draft suitable policies to deal with this problem permanently.

A new executive committee was set up by the Ministries. In 2001 7 billion dinars were allocated for school building, and social care allocations were increased.

The problem of poverty is complicated, and to reduce it requires progress in achieving development goals and by improving income in general and the poor in particular, and achieving balanced development and work for all, eradicating illiteracy and providing social services and care. All these are part of the permanent solution of poverty.

The plan of 2013-2017 will address these challenges to achieve sustainable development.

495 billion dollars were allocated to small loan funds for the poor, implemented by the Ministry of work. Regulations have been approved for the 7 poorest governorates using the ration card.

Governorate	Loan amount
Mothanna	14 billion
Babil	12 billion
Salahalddin	12 billion
Wasit	11 billion
Karbala	11 billion
Diyali	11 billion
Qadisiyah	11 billion

Categories included

- Registered and unregistered unemployed of these governorates.
- Unemployed disabled persons (50% or more disability).
- Displaced persons returning to their original areas.
- Widows and divorced women who support their families.
- Victims of terrorism and freed prisoners.
- Persons who support unstable families.
- Beggars.
- Persons who were included in previous loan programs but did not receive loans.

Loans will be provided based on population density and living standards in these areas.

A committee will prepare feasibility studies for the projects to be financed.

Small projects support law

A fund will be set up in the Ministry of labor called support of income-producing small projects, to:

- Provide new work opportunities and reduce unemployment.
- Provide support to persons from the poorest areas who are willing to work,
- Preparing and training job seekers from these categories to conform with labor market needs, and training them accordingly.
- Improving productivity.
- Monitoring labor market activities and changes.
- Assisting employers from these categories.

Fund capital is (150) billion dinars. The categories included in this law are exempt from project fees. It is expected that the law will be applied in 2013.

Second: Challenges

It is not easy to define social development and work in Iraq in the near future as there are too many variables. However there is awareness that there is something wrong in the social situation caused by complicated and

widespread social and behavioral problems, while fiscal, technical and human capacities are limited. Any factual vision of the social development plan must be based on current indicators and their variables. These are the most important challenges:

- 1- The conversion to a market economy means that there is a social price to be paid (an increase in the poor and marginalized category, at least in the early stages of conversion), as there are no social policies to protect them such as social security.
- 2- The events that Iraq went through before and after 2003 have caused increases in orphans, homeless, beggars, handicapped and women who support their families, as well as other groups which need special attention.
- 3- Official bodies who apply social policy such as Ministry of Work have a shortage of financial and human resources.
- 4- Most of legislation and human rights regulations are old and do not meet the new circumstances in Iraq after 2003.
- 5- Even though more than five years have passed since preparing work and social security projects, children's law was drafted, and social protection networks planned, nothing has been approved yet.
- 6- The subsidies provided to vulnerable sectors do not keep pace with rising prices.
- 7- The fast changes in Iraq have caused many complicated social problems, with their effects on children and family, such as common law marriages or refraining from marriage due to economic conditions, divorce, addiction, drugs, and deviation.
- 8- No statistical data or accurate databases available on: family movements, women and children in the unregulated sector, beggars, the homeless and others.
- 9- Civil society and the private sector which could be very useful in planning and implementing social policies are weak and do not have the experience needed.
- 10- Most schools and reform centers do not have the proper conditions to rehabilitate inmates. These institutions do not meet the needs of the numbers of inmates or in available facilities. Many

governorate centers do not have these institutions and police stations become a substitute.

- 11- Low allocations to Ministry of Work despite the huge tasks of the Ministry.

Table indicating the allocated amounts to the Ministry of Labor and Social Affairs from the General Budget for the years 2010-2012

Years	Current	Investment	Total	Allocation percentage from the General Budget
2010	244.653	24.000	268.653	0.3
2011	1015.396	18.000	1033.396	1.1
2012	641.629	105.000	746.629	0.6

Third: The Vision

To build a welfare society that enjoys stability and security based on effective social institutions, where the people enjoy protection and justice with ethics of accomplishment, participation and social responsibility.

Fourth: quantitative goals:

If there is a link between social policies and services, then in Iraq's conditions today the policy goes beyond these services to include justice, equality, dialogue and forgiveness in order to establish solid foundations to ensure care of the society and its cohesiveness. The security situation is the common factor, whether in the context of institutions or various sectors or circumstances that led to it. The outcome of implementing a real social policy in Iraq will depend on its comprehensiveness and how realistic it is, to reach target categories.

The NDP plan 2013-2017 aims at laying the foundations of an integrated social development, empowering women to enhance their role in society and to prepare the youth to be the leaders in the future, and providing protection for children and caring for the old, and to care for the handicapped to enable

them to have a development role, and to strengthen family ties to overcome the challenges of modern life.

As long as the State has the prime responsibility in drafting and implementing programs and policies effectively to achieve social and economic development goals, it is important that these goals and the tools that are used to achieve them are in agreement with the State commitments to achieve international development goals (the child rights agreement and MDG).

Table of the developmental indicators (targeted and estimates) for the years of plan 2013/2017

Si.	Targeted					
	2013	2014	2015	2016	2017	
1	Orphans	22	23	23	23	23
2		10.3	9.9	9.7	9.6	9.1
3		4.9	4.7	4.6	4.5	4.5
4	Old and severely handicapped	14	16	18	18	19
5		21.7	20.9	20.3	20.0	19.4
6		4.7	4.7	4.7	4.7	4.7
7	Disabled	55	59	62	64	67
8		22.1	21.2	20.9	20.6	20.20
9		6.5	6.5	6.5	6.4	6.4
10	Protective workshops	30.6	31.7	32.9	34.2	35.4
11	Kindergartens	45	46	51	52	53
12		57.1	56.3	54.7	54	53.9
13		11.4	11.2	10.7	10.5	10.5
14	Juvenile	9	11	14	15	16
16		66	81	96	96	96
17	10000	10000			30000	
18	17000 Beneficiaries of Loans from (5-10) million	One year grace period	4000 beneficiaries by repayment through	5000 beneficiaries by repayment through	6000 beneficiaries by repayment through	

				loan returns	loan returns	loan returns
19	Social protection network	509375	800000 increase in subsidy from 100-175 dinar targeting unemployed	800000 Special inclusion (loans plus jobs)	800000 Special inclusion (improving targeted category)	Zero subsidy to unemployed
20		61	84	159	159	159

Fifth: Special goals

The development planning process in Iraq provides a framework for considering all factors affecting the lives of the population by analyzing them. The NDP is an integrated program for economic, social and spatial development. Among its priorities are poverty, unemployment and balanced development, as well as providing social services and welfare. This will improve the policies and achievement of goals related to living standards and social welfare. The other factor is the financial resources of the state which can be used to overcome poverty and improve social care. These resources enable quick and direct action while waiting for permanent solutions.

To achieve the national program of building a safe, stable and sustainable society, the plan has set some goals which will help to achieve the final goal of social development based on fairness.

These goals are:

1- Caring societies that will assist deprived categories

Social policies always play a role in re-engineering the actual situation, culturally and socially, in order to establish a system of justice that will provide stability and security. Accordingly, these policies will create a non-divisive environment, to develop in a unified fashion represented by the

national identity. On this basis, the main objective of development is that the individual will feel the rewards in quality of life, job opportunities, good income, better services, healthier environment, social security and hopes for a prosperous future. The State commitment to achieve human security and social protection will be through:

- Developing methods that will provide a sound environment for including vulnerable groups in society and the labor force.
- Enhancing social awareness of the importance of social work in individual and group levels.
- Strengthening social work institutions, especially volunteer activities, through widening participation by civil society and the private sector to increase the number of beneficiaries of social protection.
- Enhancing local community development by involving citizens and government employees and the retired, to play an effective role in leading development programs.
- Continue efforts to improve human development indicators and quality of social services.
- Increasing public services to meet the requirements of growth in population, economy and construction, and to the needs of low income groups.
- Effecting a real change in social security taking into consideration the new role of the state in a political environment based on democracy and decentralization, as well as the expected role of CSOs , especially in empowerment issues.

2- A Civil society that is innovative and productive

Article 43 of the constitution stipulates the State's duties to enhance CSOs and develop them to achieve their objectives. CSOs are striving to achieve social goals beyond their own goals and to link volunteer social work and these institutions with what the State can provide.

One of the main aims of the constitution is to lay the foundations for future developments, and to reduce as much as possible the possibilities of conflicts or disturbances in social life, and to increase safety and security through established institutions for social work on the basis of justice,

respect for others and loyalty to Iraq. The constitution therefore embodies a realistic vision and a futuristic vision.

CSOs, which have become an important part of the national social security network, can revive volunteer activities, which existed before and after Iraq's independence, through private associations and organizations. With the increased authority of the state their role receded. Achieving these goals will be by:

- Improving civil society institutions and organizations, and establishing networks between them and all other active parties in development, locally and globally.
- Empowering civil society and improving its capacity to define the needs of local communities.
- Balancing rights and duties of development partners, whether the State or public institutions or the private sector in investment and work areas.
- Setting investment priorities in activities and areas commensurate with population density, to guarantee sustainable development and improving living standards.
- Providing a supporting framework for implementation of social development programs that require civil society to stand side by side with the public and private sectors in development.
- Adopting effective and clear criteria to prevent the formation of informal CSOs or those without a clear support from the society.
- The CSOs programs must be clear and free from government control. Their leaders and members will help build and strengthen the national security network.
- Providing sufficient funds for their activities in proportion to the results of their programs.
- CSOs must have clear standards for the targeted categories and specific means to reach them. They must assign priorities to the groups that need special care, such as women who support their families and the handicapped.

3- Developing local communities through participation

This policy is to emphasize that every individual, regardless of their sect, religion or situation, is able to participate and contribute to the development of these communities. Successful implementation of the strategies requires setting up many joint types of councils that will translate these goals to reality. The plan will:

- Share responsibilities between active forces in the community by appointing local committees.
- Focusing on capacity building to enable the community to administer their daily activities in order to achieve self-reliance.
- Developing rural areas by implementing community development programs to raise their social and economic levels.
- Capacity building for the rural population to enable them to participate in decision making to improve their living standards, as well as providing training programs on required skills to establish agricultural projects.

4- Strengthening the family institution to confront challenges

The family is the cornerstone of productive and innovative nations, whose citizens enjoy health and renewable energy. It is the main institution that will satisfy the emotional and physical needs of the individual, and it is a necessity for achieving good economic and social results. The living areas of families and communities require a suitable environment that will strengthen relationships and family ties as well as building healthy community.

The plan will:

- Enhance building strong family units and instill positive family values and shared responsibility between its members, while strengthening the marriage institution which is a priority in development.
- Launching awareness campaigns to improve the family's status and welfare, locally and nationally.
- Planting positive family values for more flexibility, integrity, solidarity, and cohesiveness in the family.

- Focusing family support services and programs on encouraging fair sharing of resources, responsibilities and duties.
- Expanding range of special programs on awareness of the roles and joint responsibilities in marriage, and creating an atmosphere of understanding in those who are entering into marriage.
- The State will increase the number of family services centers to provide treatment, consultations and other services.
- Establishing social institutes to implement training programs in daily development, sociology, and social service, and to guide volunteers and CSOs members, as well as retraining and rehabilitation of workers in social service

5- Ensuring protection and welfare for children

The plan will provide an environment that is socially and emotionally friendly with the priority of protection and welfare of the children, as an investment in childhood is an investment in the human capital of Iraq's future, through:

- Improving the role of the community effectively to provide protection to children
- Enhancing child protection by dissuading them from indulging in undesirable social practices, and protect children from family abuse
- Exert efforts to improve the family institution and raise child welfare to ensure continuity in development.
- Improving child care services and support programs for capacity building of care givers, and developing existing care institutions such as orphan care and the homeless and delinquents, and rehabilitation centers.
- Establishing centers for child activities (sports, social, learning and counseling) to enable them to reduce psychological stresses and improve opportunities for social integration.
- Improving preventive and rehabilitation programs to reduce the effect of social problems in the child's life.
- Preventing violence against mother and child in all forms

- Building an organic relationship among generations (transferring positive experiences from father to child)
- Establishing child rights culture and its best interest.
- Increasing support for marginalized children
- Developing care institutions for children with special needs
- Benefiting from social policies in other countries and employing initiatives that can benefit Iraqi children.
- Providing a social, educational environment suitable for the child.
- Ensuring protection of the child from violation, by completing child protection policy.

6- Preparing old persons for leading social roles

Social transformations have caused changes in the functions and structures of the family. The increasing number of old persons, as well as other economic and social facts, will affect the function of the family in general and on the old in particular. The plan therefore intends taking certain measures to provide a suitable environment for the old to keep them active and safe through:

- 1- Providing health and welfare opportunities for the old to live in dignity.
- 2- Preparing an environment that will allow them to live independently, as active members of the community and family.
- 3- Developing community support for their care and to benefit from their life experiences.
- 4- Improving infrastructure that is friendly to the aged and provides health care at reasonable prices.
- 5- Encouraging new initiatives for social work, especially for the old, and to protect them during the absence of their families.
- 6- Establishing enough old people homes with sufficient funding, and providing more family awareness programs to care for the old.

7- Including the disabled in society and empowering them through:

- Providing transport and buildings to satisfy their life needs.
- Diagnosing handicapped children before starting school to ensure suitable care
- Preparing rehabilitation and treatment programs for disabled children at an early age, and providing parents with support services to face this problem.
- Encouraging the family and the community to bear the social responsibility for care and rehabilitation through implementation of rehabilitation programs, which are available in specialized centers supervised by sociologists and doctors, with good communication skills in order to perform their humanitarian roles.
- Extending programs that can provide real help to the disabled in access to jobs in the open labor market.
- Exerting efforts by the State to establish specialized teaching institutions and vocational schools for the handicapped.
- Improving social responsibility among the citizens regarding the disabled.
- Continue implementing social rehabilitation programs to provide soft loans to vulnerable sectors.
- Increasing capacity of the centers for the severely handicapped.
- Enhancing care for autistic children in mental disability institutions, and for other critical cases.

8- Improving justice and fairness through an effective protection network

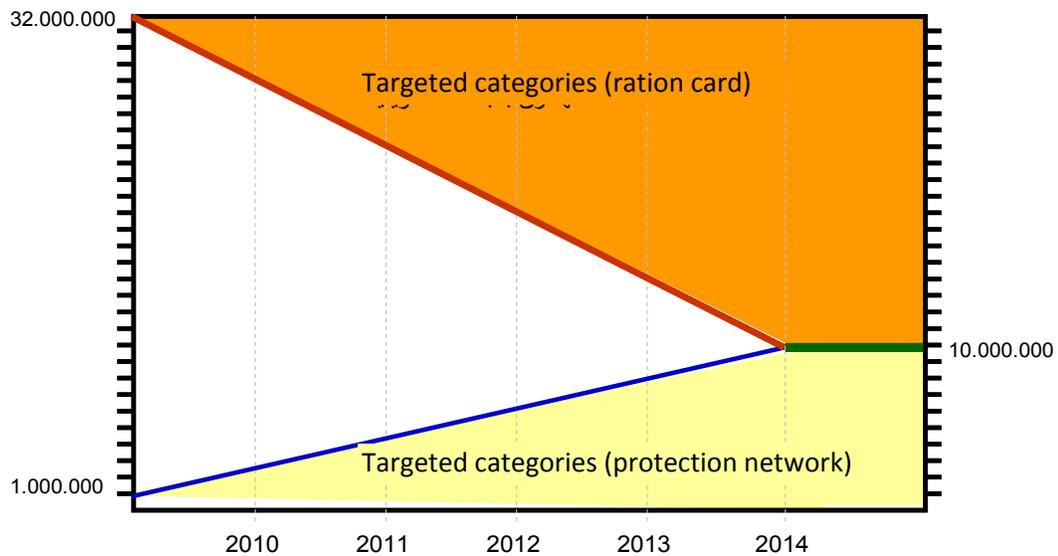
Poverty will always be a threat to some segments of society, no matter how much progress is achieved. It is therefore necessary to provide a network, not only to address poverty, but to deal with it before it appears. Such a network is one of the constant challenges for addressing poverty issues.

Linking ration card with social protection:

Families that are below the poverty line will be linked through the ration card so that their basic needs are met, as well as needy families above that

line. Figure 7 shows the intersection that must occur between targeted families with the ration card system and those with the social protection network. Directing part of expenditures on the ration card to meet requirements may contribute to increasing the proportion of expenditures by the targeted group. It will also multiply the materials allocated for social protection and improve the income of the poor.

Figure showing linkage between ration card and social protection for the poor.



Source: Ministry of Planning, National Strategy for Poverty Alleviation

The priorities of the plan are to target most needy categories of social care through:

- Adopting practical criteria to determine needs.
- Setting up a database for these families.
- Improving service centers.
- Developing wage payments system.
- Improving the existing network to ensure its response to the needs of the weak.
- Conducting media campaigns for awareness by the targeted categories of network help and knowledge of their basic rights.

- Providing jobs to the unemployed in coordination with various work sectors.
- Providing jobs by benefiting from investments and development projects.
- Increasing number of families who receive cash support.
- Extending cash subsidy systems, connected to conditions of school attendance and vaccinations against diseases to benefit from the cash subsidy.
- Expanding social projects for the care of the poor, orphans and children, by building and improving orphanages and enabling girls in productive projects and training young people in some professions such as carpentry.
- Updating social protection law.

9- Care for juveniles in detention centers and rehabilitating them through:

- Developing vocational programs in carpentry, tailoring, electricity and mechanical skills.
- Building reform facilities according to international standards, to include juvenile courts, schools and a health center.
- Convicted juveniles and children to be reunited with their families.

10- Providing an environment for including the weak in society and the labor force, and to ensure their access to social services by:

- Capacity building of workers in marginal sectors.
- Improving work regulations and conditions to include them in the labor market.
- Developing social research and staff.
- Employing modern technology in social services.
- Benefiting from international experiences in support and empowerment of these groups.

11- Enhancing capacities of social work institutions for sustainable development by:

- Providing suitable work for the unemployed and new entrants to the labor market.
- Ensuring meeting safety and health requirements at work.
- Enhancing the principles of basic rights in the work place.
- Expanding types of social services provided by the Ministry.
- Developing principles of social equality to support the poor and needy.

12- Spatial development for a fair distribution in social fields

by:

- Concerned Ministries to coordinate with local governments to satisfy the needs of its communities throughout the country.
- Emphasizing the principle of social partnership and dialogue to improve work opportunities.
- Capacity building on local government level to support social work.
- Participation in social surveys of families, poverty and unemployment.

13- Enhancing private sector role in providing social services

through:

- Encouraging the private sector to establish development projects by providing facilities and tax exemptions.
- Adopting standards to ensure quality of services and their coverage of all segments of society in all Iraq.
- Improving banking credits for funding development projects in social and humanitarian areas.
- Enhancing the private sector role in spreading social awareness on family protection, childhood and social care.

Sustainable environment- Green economy

The status of the environment....the beginning of the end

There are many reasons for the degradation of the Iraqi environment and its direct and indirect effects on the living and nonliving components of the environment. Perhaps the high population growth of the present has caused pressure on the environment as a result of the disruption of the relationship between resources and population, which is explained by the growing need for food, energy, housing and water resources, not to mention the increasing pressure on the environment by the increase in waste, both solid and liquid, and the population practices that threaten continuation of life in the eco system, is one of the powerful reasons in causing environmental damage. The increase of urbanization, which is caused by population movements towards the city by three fold, has increased pressures on urban development and its limited capacity to absorb the high population. This has caused a drain in resources and an increase in environmental degradation. This situation became worse after 2003, with an increase in violence and insecurity, which led to high rates of internal migration between the provinces and the emergence of slum housing which is one of the main elements that threaten the eco system.

We must not forget that the desertification and the degradation of the quality of arable land were among the causes of this degradation. 42% of the area of Iraq is desert, and the other areas are suffering from desertification such as the movement of soil and sand dunes which affect main cities ,especially the capital Bagdad. Human activity works side by side with natural conditions to increase the impact of this phenomenon. The random situation of natural plantations and overgrazing and the limited availability of systems and technologies suitable for irrigation and drainage, and the lack of effective systems to maintain green spaces, and urbanization and unsustainable use of natural resources, are all factors that played a role in increasing the environmental damage. This is accompanied by low awareness of the environment on society, despite determined efforts after 2003, accompanied by weak environmental monitoring systems , which are a safety valve for early warning about the beginning of any environmental degradation, as well as their obsolescence and lack of follow up and analysis by the responsible executive departments, thus the severity of environmental problems.

The fluctuating and modest increases of financial allocations in the general budget for protection and improvement of the environment, and lowering pollution, which increased from six billion in 2007 to 12 billion in 2008, then down to 9 billion in 2009 and to 6 billion in 2010, were due to the consequences of the international economic crises and the low price of oil in 2009. The allocations rose in 2011 to 14 billion but were reduced to 7 million in 2012, with 9 billion planned for 2013. These allocations have enabled Iraq to make progress, and in the past three years there have been several achievements in eco-friendly activities

and adopting supporting strategies and programs for these activities, in order to limit pollutants and wastes, and reduce the use of harmful materials in production, and to develop waste management to become a source of power generation in future, and thereby a lower rate of pollution in the atmosphere , water and soil.

The investment projects which received eco approval contributed to raise national work mechanisms and adoption of international eco standards to comply with international regional and national requirements. These are the facts about achievements and subjective explanation of completed projects between 2009 and 2011, and other projects which are planned for the year s2013 to 2017, which will enhance sustainable development in Iraq. In the next stage the decisions of the Rio conference will be adopted as a green economy is the tool for sustainable development and requires gradual conversion, correlated to the capabilities and social and economic properties of each country.

Executive reality....programs, projects and polices

The next five years will witness national efforts and international support to restore the environmental infrastructure which was destroyed during decades of war and economic sanctions, foreign occupation and deterioration of security. There have been efforts to bridge the technical and development gap in the environment compared with developed countries and to apply effective policies and implementing the goals stated in the national strategy to protect the environment with a work plan for 2013 to 2017 that will satisfy national aspirations, and a plan that is designed to stop the deterioration of the eco system and reduce consumption and production patterns that are unsustainable , and the effects of climate changes, such as desertification and increased pollution of the living environment and increased wastes. Perhaps the programs that Iraq has implemented as of 2009 and what they contain in existing and planned projects, will improve implementation and translating these goals into reality despite the problems and technical, financial, institutional and legislative challenges that may confront and obstruct achieving these goals. The environmental situation in Iraq has two faces: the first face shows a negative environment while the second face shows elements of a positive environment, both of whom define the mechanism to reach a green economy.

1. In the field of sustainable development

Iraq sought to lay the foundations of sustainable development during 2009-2011 in many parts of the economy and its production and service activities, and seeks to consolidate these foundations during 2013-2017 through completing its programs, projects and polices which have already begun. Iraq will continue to adopt a gradual method in changing non-ecofriendly materials production, especially for petroleum products, where the quantity of

lead added to petrol before 2003 was 0.48 grams as an upper limit, and was reduced to 0.15. The actual limit now is between 0.5 to 0.1 grams. So the reduction is 80% so far. Existing refineries will be rehabilitated by adding isomerization units and improving petrol to achieve unleaded gasoline. The sulfate content in all operations to produce kerosene and gasoil will be reduced from 50 parts per million in 2011 to the international level of 10 parts per million in 2017.

It is also planned to get rid of hydrogen sulphide gas in power stations by fans. We have also extended renewable energy projects (wind and solar energy) and will continue to increase them during the next five years. Even though there are only fifteen such projects, yet they represent a positive step towards using renewable energy as a substitute for polluting sources of energy. Among these projects for sustainable development are:

- Execution program of the national strategic plan to eradicate desertification and drought 2011 included several projects for building a database to monitor and evaluate deteriorating eco systems, and rehabilitate environment system with capacity building of concerned bodies.
- Projects emanating from Iraq joining the Vienna treaty and the Montreal protocols which aim at complete elimination of production and consumption of Ozone depleting materials.
- Emergency Environment management project, in cooperation with the World Bank to build capacities in government environment institutions.
- Investment project for monitoring air quality in Bagdad and the provinces, of which 2 stages have been completed in 2010. In 2011 the program was extended to include more provinces. Accordingly, 6 integrated stations for monitoring and measuring air pollutants were installed and operated. It is expected to extend the geographic area of the project in the next few years.
- Remote sensing project to monitor sewage waste water in the Tigris and Euphrates rivers.
- Remote sensing projects to monitor water resources in Baghdad, to examine chemical, physical, and biological pollutants that are directly dumped in the rivers. 14 stations were erected with 7 on each side and covered 92 km² of the river length. 2 other stations were installed on the Diyali River and one station on the main drain in 2011.

- Continue implementing projects for building large industrial complexes with high eco standards. After completing studies and designs , complexes were built in Basra, Thi Qar, Ninewa, and Anbar in 2011 and more will be built in the future.
- One of the factors that improved implementation was the high level cooperation received after Iraq signed international environment treaties. The implementation process was based on planning and national capacity building, as well as adopting a system for measuring the eco effect of projects, productive and services activities, as well as supporting legislation and formation of the environmental police force.

However, the reduced financial allocations in the budget and shortage of trained staff and the absence of applying the principle of “who pollutes pays” are some of the problems that affect implementation, as well as the more serious challenge of insecurity.

2. Monitoring environmental situation

Natural phenomena: like other countries, Iraq is also affected by climate change including heat retention and lower rainfall and increased annual averages of temperature and humidity, increased evaporation, dust storms and thunderstorms.

Iraq is monitoring these changes through 10 fixed stations in 2011, four of which are in Baghdad, Basra, Mosul and Ratbah, and the other 6 in Kurdistan. As a result ,there has been significant progress in monitoring the environment, enhanced by regular and continuous readings of natural phenomena. However, the results were less than expected because of the small number of these stations ,which Iraq will increase during 2013-2017, making it an early warning system and a measurement of pollution.

Water resources: Iraq is adopting an integrated system to monitor and follow up water resources, in accordance with the regulations for the preservations of water resources, no. 2 for the year 2006, and protecting rivers from pollution, no. 25 for the year 1967, also the law for improvement of the environment ,no. 27 for the year 2009.

Monitoring is usually done through samples of water from the monitoring stations, which number 148 in 2011. The monitoring program includes checking Ph values and bio Oxygen requirements and dissolved salt concentrations and percentage of heavy minerals and Oxygen, and bacteriological and chemical tests. 14 sub stations were installed on the Tigris river and 2 in Diyala, and one on the main drain. These are the real effects of the remote

sensing projects as the 2011 results showed an increase in the concentrations of dissolved chlorides, sulfates and solid material in the river.

-The monitoring system also checks oil pollution in internal waters, through three points. In 2011 a national plan was prepared to respond to oil spills in coordination with Japanese Agency for International Cooperation (JICA) and the plan will be ready by end of 2012. In spite of these positive aspects, the limited use of ecofriendly technology and reliance on traditional methods of water quality monitoring, are some of the challenges that face the environment in Iraq.

3. Protecting and improving air quality

The significant progress in reducing air pollution is a result of the implementation of many projects and programs during 2010 and 2011, with air monitoring programs using fixed stations in Baghdad, Basra and Ninewa, and increasing the number of stations for air quality tests and readings to 17. Six others will be added in 2012 to cover Najaf, Karbala, and Misan, as well as adopting national regulations for air quality and emissions and update of rules and regulations concerning the environment.

Other factors that will improve air quality are the policies of industry, electricity, energy, communication and transport towards limiting pollutants by using air scrubbing systems, and the expansion in production of renewable energy such as solar and wind power . These industries are the main sources of air pollution of poisonous gases and the increase of heavy elements such as lead.

Industrial activities:

Dust filters in 14 cement factories were rehabilitated in 2011 to protect the air from the damaging effect in the work area and people's health and damage of crops. This plan will be continued in 2013-2017 to lower the dust emissions of ovens ,using renewable energy sources ,of which 15 projects have been already implemented.

Electricity

Iraq suffers a large shortage in the supply of electricity, which made it a priority in the plan of 2010-2014 and in this plan too.

As is well known, electricity generation requires fossil fuel which generates negative environmental effects, with the emissions of NOX, COX, SOX and N ,and steam and gas turbine stations. It is no different in the stations where the intensity of electro magnetism

affects human life and even its genes if the living area is within the danger area. Iraq is considering internal stations insulated with SF6. However,, its oxidation and burning will cause poisoning and cancer.

In addition to these negative conditions ,we find that most generating stations do not have air treatment systems and the purification systems are very low in efficiency and therefore they only operate at 50 to 60% of their operational life, thus widening the gap between supply and demand, as well as the difficulty of providing their needs such as 10000 liters of water per day for steam turbines which requires heavy investment to overcome these problems.

There is a move to use ecofriendly technology by using steam turbines for their economy and quicker response to provide power as compared with gas turbines which have limited production and high operational costs. Solar heaters will be distributed to houses saving 150 MW as from 2013.

A time table has been set to convert single cycle stations to multiple cycles, which will utilize the hot air produced by gas turbines to operate stream turbines without using liquid fuel.

Gas from the oil fields is expected to reach 2110 m cubic feet per day of which 770 are used and the rest burned. Iraq is taking measure to utilize the gas fully in power stations.

In the next five years Iraq will use LPG as a fuel together with petrol and diesel as LPG is less polluted through the following steps:

- a. Building gas stations in Baghdad to be followed by other governorates.
- b. Adding LPG systems to existing stations.
- c. Providing gas to housing compounds, with consideration to safety and environment.

Iraq transport network:

Since thirty years ,Iraq has not developed its transport networks or paved roads or built new roads. The infrastructure of roads has not been rehabilitated which has impacted Iraq's open trade policies. The number of cars imported rose by 127% compared to before 2003 to replace 80% of old cars. This positive effect on the air quality and the negative effect due to the absence of environment controls on imports ,especially the type of fuel, caused an increase of pollution. This increase in cars has also caused traffic congestion which became worse with many check points ,that also increased air pollution with nitrogen oxide and carbon monoxide.

In the next five years, Iraq will adopt procedures to limit the negative effects of an open trade policy, particularly of cars, in accordance with international treaties regarding eco-friendly imports.

4. Water pollution

There are two types of water resources in Iraq: Surface water and aquifers.

Surface water is composed of the Tigris and Euphrates rivers, while aquifers extend over many areas in the country, with a high level of salts and nitrates.

To overcome the shortages and quality of water resources due to climate change and pollution levels caused by unprocessed sewage and industrial wastes, Iraq is implementing regulations for water preservation and water maintenance instructions for environment protection and improvements laws.

Drinking water:

79% of the population receives drinking water, 86% of urban areas and 62% of rural areas and 100% in Bagdad in 2010. It is expected that these rates will improve in the next five years with the completion of strategic water projects in Basra and Rasafah.

Irrigation water:

Iraq needs to ensure its water needs for agriculture and development. It is one of the priorities in the plan. In 2010 and 2011 several irrigation schemes were implemented with efficient use of water resources, among them Azizieh project (3000 donums) for animal feed crops using modern irrigation methods, and Jazeerah irrigation scheme. These projects were expected to raise the arable area and crop production towards achieving food security. Iraq is building pioneering systems using solar power in modern drip irrigation systems. A unit has been built for glass houses using wells and solar power to operate pumps. In the five year plan, this type of projects will be extended to solve the low level of water received from the joint rivers between Iraq, Turkey and Syria.

Waste water:

1. Treatment of sewage water:

Statistics of the population of Iraq that is served by sewage networks show that 60 % of the population use septic tanks while 18% do not have any services. The problems of the sewage stations in Iraq are caused by having only three of them in operation, which explains the reduction in coverage. In addition, there is an increase in organic matter and most of the stations are old with little maintenance ,and insufficient processing units and low capacity. Many overflow during rainfall. Sewage water mixes sometimes with drinking water which affects public health. The electric shortages also affect these stations. The new plan will import high technology stations that are linked by satellite to provide readings with field equipment to provide information on line.

2. Water treatment in oil projects:

Water treatment units are installed in three refineries with a capacity of 1200 m³ in the north and 1380 m³ in middle Iraq and 470 m³ in the south. 2 more units will be installed in the next five years. The refineries have signed a contract with a Korean company for recycling industrial water.

A plan has been set to deal with oil spills in coordination with JTCA.

Water accompanying oil in the north is 24 thousand barrels per day which is treated and injected in oil reservoirs to raise their pressure. In the south it is about ten to fifteen percent of daily production and a joint study with Japan has been conducted to recycle the water and inject it in the reservoirs.

5. Desertification

This means total or partial collapse of eco systems and converts areas to deserts due to a concentrated exploitation and poor management, as well as the negative effects such as dry climatic factors. The areas affected by desertification have increased in Iraq in the last years due to climate change and other factors. If left alone, this will have serious economic and social consequences. The state will take effective measures through:

1. Stopping the encroaching desert on arable land. The authorities have taken the following steps:

- A. Fixing sand dunes in the south and in the middle. 500 thousand donums were treated in the last period. Sand dunes cover 4 million donums. By the end of 2011 the following has been accomplished:
 - Mud coverage of 560 thousand donums.
 - Sand screens 782 km.
 - Producing 210750 plants.
 - Gathering 192 ton of seeds.
 - Digging channels 80 km in length.
- B. Establishing 57 desert oases, with another 7 under development.
- C. Developing plant cover of desert areas through natural grazing stations. 16 were established with another 78 in the next five years.
- D. Hammar basin and water harvesting project which aims at:
 - Developing pastures to combat desertification and maintain eco balance.
 - Using rain water by erecting small dams and sand barriers.

2. Increasing grazing areas which form 9.2% of Iraq's area through:

- A. Increasing nature reserves which number 13 in 2011.
 - B. Extending artificial forest areas as natural forests are only 4% of total area. Forests increased from 9316 donums in 2009 to 10866 donums in 2010, to bring the total of both types to 71637 donums in 2011, which indicates that Iraq is intensifying the green belt.
3. Stopping having fallow agriculture lands due to drought and lower water resources through:
- A. Using drip and spray irrigation as the water portion will be enough to double the irrigated area and increase farming by at least 200%.
 - B. Planting crops that use less water.
 - C. Exploiting renewable aquifers.
 - D. Improving water harvesting by building small dams.
 - E. Employing desalination technology.
 - F. Applying intensive rice farming to reduce water needs by 50%.
4. Implementation program of national strategy plan to combat desertification and drought:
- A. Establishing a data base, and monitoring deteriorating eco systems.
 - Establishing data base on desertification.
 - Constant observation and evaluation of desertification and drought.
 - Using GIS technology to survey and appraise water resources.
 - B. Projects for rehabilitation of threatened eco systems will include:
 - Rehabilitation of peninsula area.
 - Rehabilitation of the northern desert.
 - Rehabilitation of the southern desert.
 - Rehabilitation of plains area in the east.
 - Using basin areas to combat desertification.
 - Using treated sewage water for planting a green belt in Bagdad.
 - C. Capacity building projects by bodies concerned with desertification to include:
 - Establishing a national center to build capacity of managing desertification and drought strategy.
 - Eco awareness on desertification.

The areas which need rehabilitation are estimated at 12.400 million donums, of which 4.420 million donums were rehabilitated by the end of 2011, leaving 7.900 million donums for the 2013 to 2017 plan. This requires completion of irrigation projects at a cost of 2 million dinars per donum.

6. Rehabilitation of the marshes:

The marshes are the largest eco system fed by the waters of the Tigris and Euphrates. It has a diversity of species and wild life that is threatened with extinction. The area is estimated at 20000 km² (permanent and seasonal marshes, depending on water resources during drought and flood seasons). The marshes were dried up by the previous regime destroying that eco life including rare animals and birds, and the migration of the people, on the pretext of establishing agricultural products and building military roads. After 2003, the project of rehabilitation started by flooding the area using the following method:

- Digging and rehabilitating streams and channels that feed the marshes.
- Building main regulating centers at the inlets and exits of the marshes.
- Establishing regulators on feeding channels.
- Erecting hydrological observation stations to control water inlets and exits.

By the end of 2011, 2710 km² were re flooded, which is 48% of the total area (5560km²).

The new plan will achieve the goals through:

- Optimum water management of available resources entering the marshes.
- Protecting water sources from pollution and maintaining a good standard of water quality by building main drains.
- Activating the concept of sustainable development through regular quality tests.
- Focusing on southern marshes (Hammar, Qurna and Howaizah) by preparing studies to analyze pollution of the marshes, in order to ensure their sustainability and maintaining it within international standards.
- Monitoring fishing to ensure safe methods in the area.
- Spreading eco awareness among the marsh people.
- Crating a balance between maintaining the eco system of the marshes and the social environment of the population and their needs.
- Implementing UN treaty for moist lands, which Iraq joined, to ensure the sustainability of the marshes within international standards.

7. Developing waste management and recycling:

Iraq is planning sound management of waste, particularly solid waste, both hazardous and nonhazardous, which requires special treatment to ensure eco safety and the health of the community, through an integrated and interlinked system. Implementation has started since 2010 with the best methods that will satisfy eco standards at the least cost. This includes a national policy for solid waste management and a guide for policy makers in order to raise

the environment level in most provinces. The plan includes a technical, legal, institutional, financial and social framework. In 2011 a plan was set up for Basra, Thi Qar and Anbar provinces, which will last for 25 years over three stages:

First stage: rehabilitation of staff who implemented the 2010 plan.

Second stage: increasing number of staff and equipment and dumping sites.

Third stage: constructing solid wastes recycling plants and using wastes to generate electricity and produce fertilizers and other materials.

As a result, the quantity of waste was 48 thousand tons per day in 2010 of which 42600 kg were hazardous wastes from health establishments. Waste removal services were available to 65.7 % of the population, (urban areas 91.3%, and rural areas 7.5 %) in 2010. This is because waste disposal is not available to the countryside. In Iraq there are 4250 municipalities classified into five levels according to the population. These municipalities are responsible for waste collection and treatment.

The number of official dump sites has reached 32 and unofficial sites number 357 in 2010. These are exposed lands or neglected or natural depressions. Waste disposal through dumping was 77% and by burning 27%, and by dumping in empty spaces 24%. There was no recycling or conversion to energy or fertilizers in 2010.

The quantity of hazardous waste was 42000 tons per day in 2010, with 8000 tons in Baghdad. It becomes more dangerous because hazardous wastes is mixed with ordinary wastes to become dangerous, especially in health centers that have no modern incinerators in hospitals, and no dumping sites for hazardous wastes. It is therefore necessary to build and apply schemes similar to the waste disposal sites in Kirkuk, which has an area of 120 hectare, of which 60 are actually used for waste collection. It is important to raise eco awareness among citizens of the danger of waste accumulation in general and dangerous wastes in particular, especially if we learn that 90% of environmental problems are caused by low awareness. The low number of compacting machinery (13832 in all municipalities) is one of the factors for this phenomenon. Bagdad has 3072 machines and Mothanna has 262, most of them are not operating due to lack of spare parts.

The plan will address these problems through good waste management, not only by the public sector but also by the private sector which has an equally important role in waste management through participation in recycling projects and utilizing organic remnants for power generation.

8. Peaceful uses of outer space:

The international conference for sustainable development emphasized the benefits of space technology and its applications in enhancing sustainable development. This confirms the relationship of space with human development and represents the nucleus for a strategy to confront global challenges such as protecting the environment of the earth, resource management and utilizing space applications for human security and welfare and improving space knowledge, education and training, and improving public awareness of space activities.

The Rio conference emphasized using spatial data for sustainable development and increased awareness by decision makers of the benefits of space technology and sciences and their application to meet the needs of society in sustainable development.

Iraq has started collecting, managing and analyzing and disseminating data and its applications using remote sensing technology since 1987. In 2004 a national centre for GIS was established, and a plan was included in the national strategy of statistics which was launched in 2008. This is an integrated scheme for implementing surveys and censuses through the use of GIS technology.

Iraq uses GPS systems to determine the coordinate of samples and for gathering information for analysis. A statistical map and atlas were produced.

Iraq is now involved in a survey of peaceful uses of space technology in the government sector in 2012, to evaluate state institutions' use of space technology, to build capacities and increase cooperation locally and globally.

The 2013-2017 plan will adopt peaceful use of outer space in the following fields:

- Building infrastructures and applications of this technology.
- Installing GIS that will be used in planning follow up and decision making.
- Improving the exchange of the services and products of this technology and utilizing common resources.

The plan has adopted the visions of the national strategy for peaceful uses which are:

- Employing space technology for sustainable development by:
 1. Increasing use of geographic data obtained by remote sensing for development purposes.
 2. Using GIS for sustainable development process.
 3. Capacity building in space sciences.
 4. Developing space communications using satellites.

9. Eco awareness:

No matter how strong are the programs directed at sustainable development, they will remain of limited use unless there is social awareness that believes in their importance. This highlights the importance of eco awareness in maintaining the environment, and to exploit natural and economic resources reasonably to ensure sustainable development and the rights of future generations.

The ministry of environment law number 37 stipulates spread of eco awareness and education and activation of the role of civil society in this field. Iraq achieved the following during 2010-2012:

- Including environment and sustainable development subjects in schools, and establishing eco studies in universities, and preparing theses in this field.
- Eco awareness in schools.
- Conducting conferences, forums and discussion groups about the environment.
- Preparing printed materials about eco culture.
- Issuing a magazine on life and the environment (42 issues to date).
- Preparing T.V programs with environment topics and interviews with responsible persons.
- Preparing documentary films on the environment.
- Conducting environment tournaments in schools.
- Organizing environmental exhibitions in Bagdad and the provinces.
- Organizing theatrical programs and awareness plays.

The plan will emphasize the importance of modern methods in communication and social networking, as they cost very little and are easily accessed by users. Empowering citizens to protect the environment and their active participation in decision making and responsibility is one of the main conditions for measuring the degree of eco awareness among the citizens.

Challenges:

1. Insecurity has negatively affected sustainable development in:
 - Legislation.
 - Actual implementation of planned projects.
 - Slowing economic transformation process and structural adaptation which has raised costs to become more than the benefits.
2. Distorted the relationship between resources and the population due to the continued growth rate of 3%, and the expanded urbanization which is exerting pressure on the urban environment and using resources extensively and polluting the atmosphere.

3. Widening the financial gap between environmental allocations in the budget and the costs of protecting and improving the environment.
4. The distorted relationship between specialized human resource needs in environmental work, and the number and types of training programs for capacity building, which affected the efficiency of implementation of the goals, postponing them to unknown times.
5. Continued environmental damage, not only due to lack of legislation (there are already more than 13 laws, including the constitution), but because of no implementation of these laws regarding punishment of violators.
6. Limited use of eco friendly technology, especially in industry, and continued reliance on traditional methods that have a negative effect on the environment and on levels of pollution and gases that deplete the ozone layer.
7. Environment studies are still not part of higher education polices, which has led to low awareness among the people and specially the youth, to delay the principle of environmental citizenship till further notice.
8. In spite of trying to lay the foundations for the development programs applied in Iraq through including environment and human rights conditions in any development project, this has still not covered all activities or services or production projects, especially projects dealing with energy.
9. The variable degree of compliance with international eco standards arising from increased international cooperation between Iraq and other international institutions (Iraq is party to more than 11 treaties), due to the difficulties and obstacles in adapting these standards nationally.
10. Absence of a national strategy for development has led to impromptu implementation of projects.
11. The private sector is not a participant in environmental activities despite repeated calls, as it is one of the main players in establishing sustainable development in Iraq.
12. Global climate change has limited the effectiveness of imported eco-friendly technology, and the positive effects of monitoring systems. It also affects implementation of programs regarding desertification and drought.
13. The continued fluctuation in electricity supply has created a number of environmental problems in many elements of the environment such as water, air and soil, also on humans and their personal and health security.
14. Absence of treaties regarding water sharing with Turkey, Iran and Syria will make water shortage and drought the most serious problem in Iraq in the 21st century.

The vision:

Towards a green Iraqi economy based on incorporating eco policies as an integral part of comprehensive economic policies to reach sustainable growth.

Goals and methods of achieving them:**First goal: "Protecting and improving air quality".**

1. Adopting programs according to the cause of air pollution which are: natural sources, fixed industrial sources, moving industrial sources and noise.
2. Increasing the number of fixed monitoring, measurement and testing stations to cover all Iraq.
3. Establishing an ecological data base using modern electronic methods.
4. Producing and using clean fuel.
5. Adopting more eco-friendly protection technologies.
6. Using renewable energy (solar power, wind power, hydroelectric power and biomass power) to reduce emissions.
7. Improving international cooperation on air quality as a condition of awarding contracts.

Second goal: "Protecting and improving water quality":

1. Signing treaties with neighboring countries to determine water shares flowing into Iraq, on the principle of fairness and partnership.
2. Taking appropriate measures to adapt to the effects of climate change on water needs, caused by drought and low rainfall.
3. Integrated and sustainable development of water resources through development programs, capacity building and consumption regulations.
4. Rehabilitation of the marshes by:
 - Joining international and regional support with national efforts.
 - Limiting shortages of water and deterioration of its quality.
 - Lowering migration to the city.
 - Providing jobs through increased investments.
5. Improving water quality monitoring programs to include:
 - Adding more measurement and monitoring stations.
 - Increasing frequency of bacteriological and chemical tests.
 - Monitoring highest and lowest measurements of water pollutants.
6. Improving sewage water treatment programs to include:
 - Increasing number of treatment plants.
 - Increasing capacities of treatment plants.

- Extending sewage service networks connected to the treatment plants.
- Increasing usable amount of recycled water rather than pumping it back to the rivers.

Third goal: “Limiting deterioration of lands and combating desertification”.

1. Adopting a national plan to manage and utilize lands and define deteriorated sites.
2. Adopting sustainable management program for desert oases for the northern and eastern deserts through:
 - Setting up viable oases.
 - Reviving desert areas that were affected by drought.
 - Limiting urban sprawl on arable lands.
3. Continue implementing desertification programs and treatment of poor soil by:
 - Increasing green belts around towns and areas affected by desertification.
 - Improving efficiency of irrigation water usage.
 - Reducing effects of sand storms by utilizing GIS technology.
 - Limiting soil movement and erosion.
4. Treatment of soil pollution by:
 - Determining areas with minefields and unexploded bombs.
 - Improving irrigation methods to reduce salinity.
 - Determining locations of soils polluted with chemicals and oil derivatives.
5. Maintaining national plant cover by:
 - Adopting a green environment policy by exploiting abandoned lands.
 - Setting up projects for rehabilitation and development of natural pastures and regulating grazing, especially in desert areas.
 - Sustainable management of forests and woods.

Fourth goal: “Maintaining the environment of the sea and the coasts”.

1. Limiting coastal water pollution using:
 - Programs to monitor sources of pollution linked to pollution from oil activities, and how to prevent it and its quantity and causes.
 - Programs to monitor sources of pollution linked to pollution from non-oil activities, and how to prevent it and its quantity and causes.
 - Adopting indicators for sea water quality and residues for comparative purposes.
2. Activating sustainable management of sea fisheries by registering types of fish and estimating their numbers
3. Establishing indicators for sea and coast pollution. The amount of pollution in fish tissues is an indicator of the level of sea pollution.

4. Improving methods and tools of fishing and eliminating methods that are not eco friendly.
5. Determining coastal and sea locations and managing them as eco reservations to maintain biodiversity.
6. Determining the types of sea creatures that can be used as pollution indicators.
7. Developing coastal areas through environmental maps.

Fifth goals: “Sustainable preservation and exploitation of biodiversity”.

1. Monitoring and documenting national progress towards achieving biodiversity goals in 2020, which were set by a conference in 2010.
2. Adopting a national program to protect biodiversity that includes:
 - Studies and projects on the infrastructure component of the environment that will ensure sustainability.
 - Comprehensive field surveys to determine quantity and quality of all local species.
 - Total evacuations of local species from urban areas as there are no eco procedures that allow it.
 - Advanced methods of eco management to lower damage of natural biodiversity.
3. Establishing a national gene bank for local species, where advanced data on genetic structures can be documented and their DNA entered.
4. Activating the role of the natural history museum and the natural grasslands to maintain, document and spread information on local species.
5. Improving relations with specialists in international museums and universities for scientific cooperation in classification of local Iraqi species
6. Setting up an operations room to monitor and record intruding types into the Iraqi environment to ensure bio safety and security.
7. Specifying the natural habitats that are threatened in the marshes, rivers and coasts, and monitoring the changes and funding their protection requirements, and organizing national days for their sustainability.
8. Including biodiversity in schools to increase awareness of the subject.
9. Updating laws relating to territorial waters and protection of natural species.
10. Training staff on protection of species and building their capacities.

Sixth goal: “Improving and developing waste management”.

1. Developing an integrated management system for non hazardous wastes to confirm:
 - Participation of the private sector with the public sector in recycling projects.

- Providing a detailed data base and a research road map in waste management.
 - Improving monitoring of performance by unifying these activities within one institution.
2. A developed hazardous materials management system, whose activation requires:
 - The existence of an institutional and administrative organization to support waste management technically and legally.
 - Setting up dump sites for hazardous waste according to stipulated conditions.
 - Enacting legislation and defining mechanisms for dealing with hazardous waste.

Seventh goal: “Limiting oil pollution”.

1. An integrated institutional and legislative organization aimed at setting preventive measures in cases of intentional oil spills.
2. Providing logistic and financial support to bodies responsible for control of oil spills.
3. Training engineering and technical staff on dealing with oil spills.
4. Employing modern technology for control and treatment of oil spills.
5. Improving the role of monitoring organization for observing trespassing cases that might increase oil spills and water pollution.
6. Activating the role of popular participation, together with CSO’s in raising awareness of dangers caused by oil spills.
7. Applying articles of international and regional agreements on transport and control of oils products in order deal with regional oil spills.
8. Developing technical tools for loading crude oil on tankers to limit oil spills and to deal with sunken ships which is one of the main reasons of oil pollution.
9. Using modern technology for early warning and establishing a data bank for this purpose.

Eight goal: “Limiting radiation pollution”.

1. Setting up an information data base about radiation sources in Iraq.
2. Training technical staff on radiation measurement, detection, evaluation and means of protection.
3. Evaluation and monitoring of sites that are polluted by radiation, especially by depleted uranium.
4. Determining dump sites for radiation waste and developing technology for treatment.
5. Issuing legislation to regulate treatment of radioactive wastes.
6. Adopting a licensing system to control the movement of radiation sources.

7. Establishing environmental specifications for radiation according to international standards.

Ninth goal: “Integrated management of toxic chemicals”.

1. Determining toxic and hazardous chemicals, local and foreign, resulting from industrial, agricultural and military activities and generated by hospitals, health centers and labs.
2. Setting up a strict and continuous observation mechanism for handling of toxic and hazardous chemicals.
3. Establishing rules and regulations for transport of these chemicals within and without Iraq.

Tenth goal: “Developing a legislative and institutional framework for the environment sector”.

1. Developing the program of evaluating the environmental effect by activities and projects in order to achieve sustainable development.
2. Amendment and updating policies and legislation for the environment.
3. Abiding by treaties and agreements on the environment and applying them as goals.
4. Forming a capable and effective judicial system for the environment, and an environment police force to maintain the eco system.
5. Establishing Data bases for information and environmental indicators.
6. Review the structures of environmental institutions and units in the ministries for more effective action.
7. Preparing a plan for awareness and education programs on the environment to increase citizens’ understanding.
8. Adopting the principle of an environmental thumbprint for imported goods and services to ensure health, safety and quality.

Eleventh goal: “The public sector is a permanent and effective partner in the environment”.

1. Priority in granting bank credits to projects that will commit to environment quality standards.
2. Increasing tax exemptions according to degree of compliance with environmental standards.
3. A program for monitoring environmental violations and applying the principle of reward and punishment where needed.
4. Incorporating environmental issues in laws and regulations that deal with the economy, customs and finance, which are related to the work of the private sector.

National Development Plan 2013-2017

Culture, Tourism and Archeology

Culture, Tourism and Archeological sectors are important factors for social and economic development in both developed and developing nations. It is a major source of national income, providing jobs through its projects and activities. Tourism plays a big role in developing the citizens awareness of culture. On this basis, nations have set strategic plans to exploit their cultural and touristic assets, and the goals to be achieved.

The changes that Iraq has witnessed recently, accompanied by a fundamental transformation of political, economic and social conditions after 2003, have had a structural effect on all sectors and activities in the country, which prompted the state to adopt effective policies to confront these challenges confidently and realistically. The NDP for 2010–2014 outlined development based on social diversity, partnership and integration. The NDP for 2013–2017 aims at establishing the basis of an enabling environment to raise the levels of the economy, culture and services in society, and improve the labor force to provide suitable work, and expand participation by the private sector and civil society in supporting Iraq's economy and social security.

First: Culture

Iraq has a rich artistic and cultural heritage through the civilizations that existed there. Writing first appeared in Mesopotamia, followed by the cultures of the nations that ruled through the ages. Iraq's diverse culture was due to a collection of many components of religions and races which existed since creation. All this has enabled Iraq to continue to establish a cultural and artistic presence in this world, in which many civilizations are competing. Iraq is working hard to sustain the development of its cultural achievements

and to preserve its historical position in the world, especially after the unstable conditions and repeated wars which have delayed progress in this sector.

This explains the importance of investment in the construction of cultural icons and rehabilitating them, so that this sector can play its part in cultural activity through administration of these facilities and marketing them to assist economy and national product.

A. Current Situation

The 2010–2014 NDP started projects such as: Baghdad the capital of Arabic culture in 2013. Allocations were provided for each project. However these were late additions to the investment program of the plan, and so required more time to prepare. This caused a delay in expenditure and lower completion rate. A special ministry has been set up for culture which will be able to complete these projects, as well as the Baghdad project for 2013.

- There were 24 culture houses in 2012 in Iraqi governorates.
- There were 8 centers for children’s education in culture in 2011. 4 more centers will be opened in 2012.
- (5) Culture centers abroad (USA, UK, Sweden, Lebanon and Iran).
- In spite of the huge potential of this sector to attract tourism, the facts show a low number of tourists (41) in 2011, because of the security situation. However this could be a promising activity in the future.
- The private sector has a very limited role in cultural activities, especially after 2003 where many artists and poets were kidnapped or killed, forcing many of them to emigrate.
- Local and foreign investments do not participate in investing this activity.

B– Challenges

1. Limited foreign investment and difficulty of contracting with international construction companies.
2. Delay in approval of sector investment plan causing delays in announcing tenders.
3. Weak supporting services and infrastructure causing delays in completing projects.
4. Staff have limited capacities and potential in relation to accelerating technology and knowledge development.
5. The acquisition of land for an Opera House is still facing problems.

C– Vision

Producing a national Iraqi culture that is unified and multi-faceted, which educates children to ensure the preservation of our cultural inheritance through the ages, and extending connections with Arab and international cultures.

D. Goals

1. Enhancing national culture sector to take full responsibility in management of cultural facilities through

- ✚ Increasing and developing numbers of culture facilities in support of literary, artistic and cultural movement.
- ✚ Providing opportunities for participation by Intellectuals and exploiting their intellectual and artistic creations, to establish a culture of national belonging and preserving cultural diversity.
- ✚ Reform of administrative and legislative regulations to enable the sector to play a special role in development.
- ✚ Developing cultural capabilities through establishing institutes and training centers for staff in each area.

- ✚ Establishing solid foundations for child culture and benefiting from international experiences, to build a generation that will respond to the values of a civilized society.
- ✚ Activate international treaties concerning Iraqi culture
- ✚ Support and sponsorship of CSO Cultural activities in accordance with state objectives.

2. Establishing cultural institutions and enabling their staff to market services and cultural products

- ✚ Building culture palaces and towns in every governorate.
- ✚ Building a culture house in every district.
- ✚ Developing small cultural industries such as handicrafts.
- ✚ Developing and capacity building of cultural staff to conform to accelerating technology and knowledge development.
- ✚ Exchange opening of culture centers with other countries to achieve constant intellectual and cultural outreach.
- ✚ Developing small cultural industries such as handicrafts.
- ✚ Restructuring official bodies responsible for cultural activities to ensure unified decisions.

3. Protection of cultural sites and activation of preservation programs for Iraqi documents and the national archive.

- ✚ Continue efforts to retrieve the cultural inheritance which was smuggled out of Iraq in 2003, such as portraits and works of art.
- ✚ Rehabilitation of cultural sites which suffered destruction and damage.
- ✚ Setting up monitoring programs of continued violations of culture sites.

4. Strengthening private sector investment in culture through:

- ✚ The state will encourage private sector to establish a film industry, theaters, book publishing, and sponsorship of talent.
- ✚ The state to adopt standards ensuring efficiency of cultural services , covering all segments of society on all areas.
- ✚ Bank credits allocated for development projects that have a cultural damage.
- ✚ Holding cultural conferences, festivals and exhibitions for books, art, and literature.

5. Establishing a virtual digital library

- ✚ Visual and audio cultural and artistic activities in Iraq to be stored on servers and connected to the internet.
- ✚ Increasing interaction with the Arab countries and the world to benefit from stored information.

Second: Tourism and Archeology

Iraq has an abundance of archeology and heritage sites spread equally over all areas. It has the most significant civilizations of the old world (Sumerian, Babylon, Assyrians, and Acadian) , with scrolls and tablets , as well as antiquities in shrines and museums , plus many that are still under the earth. These antiquities have a very important significance as they represent the many stages of Iraq's ancient history, going back to 6000 years, and to the Islamic age.

Tourism and archeology were among the goals of the 2010–2014 NDP, and the 2013–2017 NDP also focuses on this vital sector as one of the attractions for development investments

1– Current situation

Iraq has diverse tourist potential, which, if properly exploited, can make it one of the leading tourist destinations in the world. It has civilization extending to thousands of years, the oldest in the world. This makes it attractive for historical and cultural tourism. It also has a religious heritage consisting of shrines and tombs, as well as holy places for other religions, making it a special attraction for religious tourists, and which for the past 20 years has been a major source of income.

Iraq also has natural resources in mountains, valleys, plains, caves, deserts and water surfaces (artificial and natural lakes, marshes, rivers, and mineral water wells) all of which are attractions for nature tourism.

The participation of tourism in aspects of development in Iraq can be achieved through investing in it and establishing tourist projects and rehabilitating existing ones. Work is under way to complete a tourist and archeological survey of Iraq as an important step to activate this sector, as well as the need for administrative and legislative reform. This includes restructuring to conform to the new law of the ministry which was approved in 2012, and to resolve the overlap of authorities between local governments and central ministries, and to establish regulations for building and managing tourist facilities, and their classification.

The sector was neglected after 2003 with many sites plundered or destroyed requiring huge efforts in reconstruction and rehabilitation.

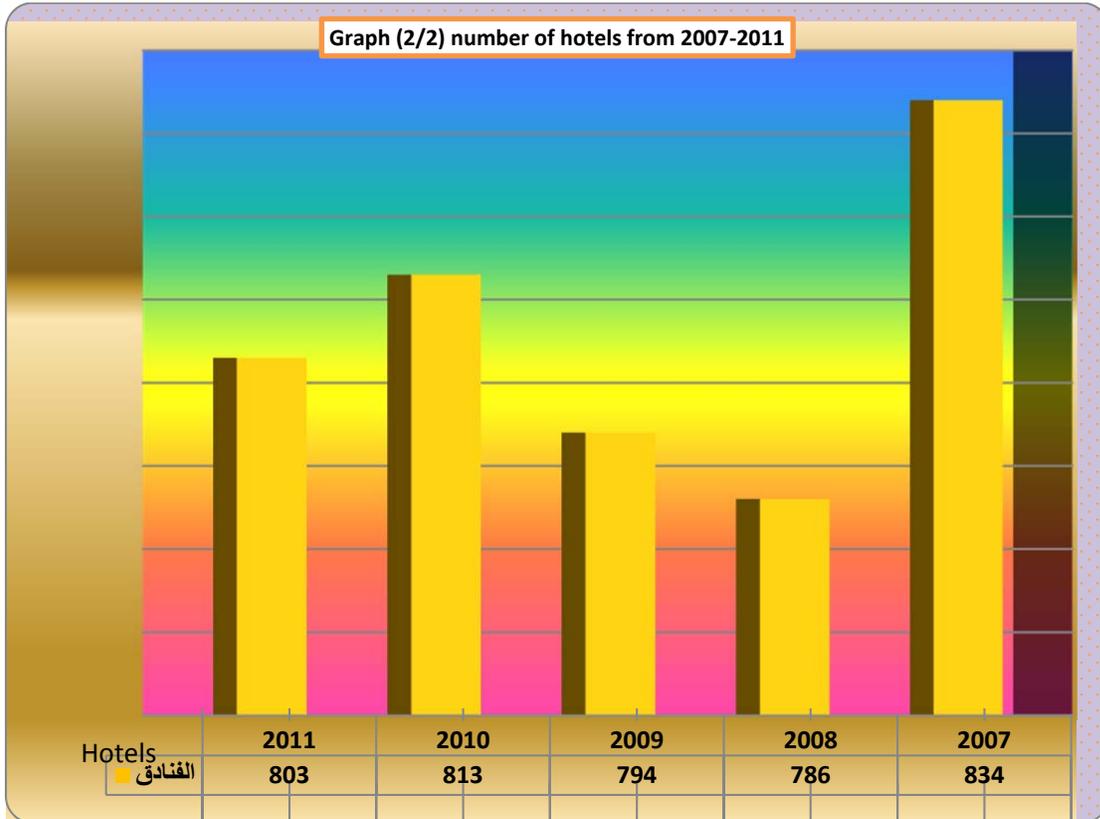
A– Tourism

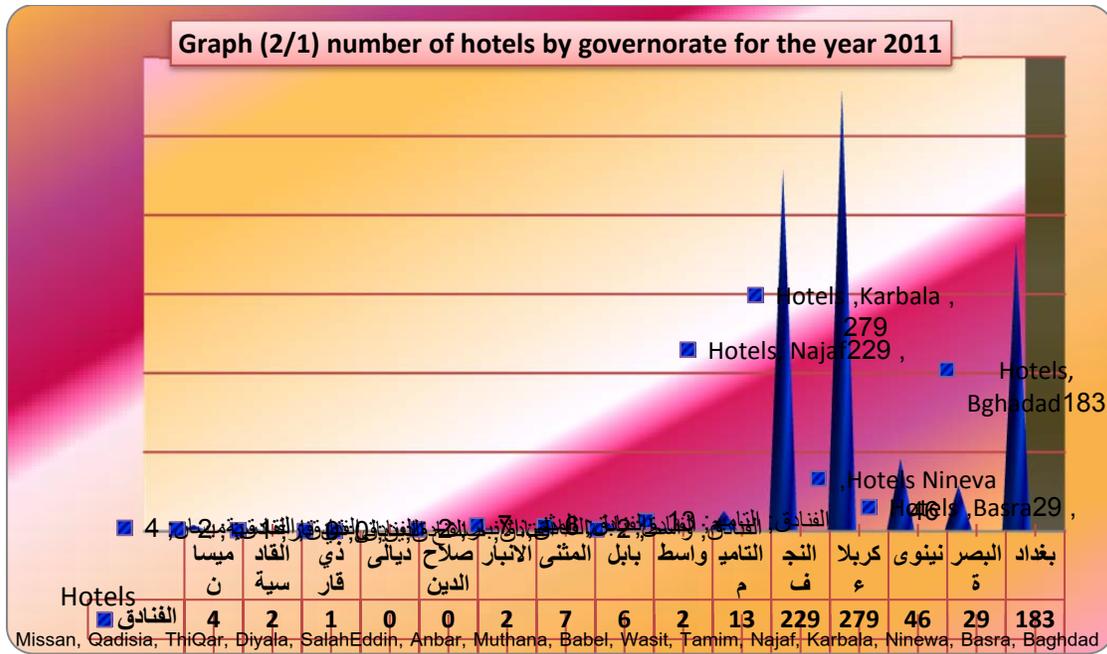
1) Tourist Accommodation

- No increase in number of hotels in the private and mixed sectors during 2010–2011. The number of private sector hotels in 2011 was 182 compared to 175 in 2010. Hotels in the provinces also dropped from 615 to 612. Number of hotels in Iraq was 803 in 2011 compared to 834 in 2007.

- Hotels were 279 in Karbala, 229 in Najaf, 182 in Baghdad, 46 in Ninewa and 29 in Basra.
- Total number of restaurants in Iraq was 327 in 2011 compared to 569 in 2007
- Total number of operating hotels in Iraq was 766, and 47 hotels were closed.
- The number of five star hotels dropped to eleven, four star hotels were 55, three stars hotel were 243 and two stars hotels were 256, and the one star hotels were 55.

Figure below shows total number of hotels in Iraq for 2001–2011





- The number of tourist agencies was 460 in 2011 compared to 201 in 1999, an increase of 129%.
- Baghdad had 254 companies in 2011, and 168 in the provinces, which shows that there is potential for tourist facilities in all Iraq, in spite of the exceptional conditions.

2) Human Resources

- Three institutions for hotel management were opened in Najaf, Karbala and Basra to prepare qualified tourism staff.
- The sector still has a shortage of qualified teaching staff in tourism, and a lack of modern teaching and training equipment.
- Shortage of teaching and training staff who are familiar with international tourist developments, and non-availability of new books and literature for teaching. This requires establishing more tourist institutes in Iraq and training programs outside Iraq, in addition to colleges that have hotel and tourist departments.

3) Foreign Tourism

Statistics show a relative improvement in number of visitors to Iraq after 2003:

- Foreign tourist groups visited archeology and culture sites in Iraq during 2010–2011.
- Increase of religious tourism after implementing tourist agreements with other countries and MOUs with others.
- Tourism was slow from 2003 till 2006, but increased gradually to reach 1.5 Million in 2011 of whom 1.3 Million were Iranians.

4) Tourist revenues

Tourism income for 2010 – 2011 was estimated at 21695128173 Dinar in 2010 and 16521621590 in 2011 as shown in the table. Most tourist facilities are operating at a loss as their revenues do not cover salaries of their staff.

The difficulty in calculating tourist revenues is caused by:

1. Absence of banks at border crossings which causes loss of government fees.
2. Shortage of tourist staff, and difficulties faced by tourist companies
3. Difficulty in collecting service fees from companies that provide entry visas to Iraq, without consulting the authorities, to bring in tourist groups.
4. Some border crossings do not send visas to the proper authorities for registration and collecting of fees.
5. No committee available for negotiating with Kurdistan authorities to determine prices and services.

Table () actual tourism revenues 2010–2011 in Iraqi Dinar

Type of revenue	2010	2011
Commercial activity revenue	19429995632	14949311250
Service activity revenue	433854596	568290062
Transfer revenues	1755615522	934954668
Other revenues	75662423	69065610
Grand total (Billion Dinar)	21695128173	16521621590

5) Private sector

Despite setting strategic objectives for tourist development in Iraq through private and public investments (local, Arabic and foreign) , yet the situation indicates the absence of an effective participation by these sectors in tourist investment despite the many projects that are prepared for private investment

B) Archeology sector

This represents a huge natural treasure with unlimited potential for the future. Its current situation is as follows:

- Survey of archeological sites in 15 governorates (except Kurdistan) of 1000 sites. Work is under way to complete the survey.
- Implementing protection law of Iraq's antiquities which prohibits buying or selling of Iraq Artifacts.
- Implementing intellectual property rights law in regard to any items related to Archeology.

- Nearly 116 thousand Artifacts were retrieved by April 2012, in cooperation with several countries, as well as through people in various provinces.
- The number of pieces received from citizens was 12000 (scrolls, tablets and Artifacts) (Gold, Silver and bronze in 2010).
- The number of pieces that were repaired was more than 2000 in that year.
- Completed and ongoing projects were:
 - A. 10 projects for protection and rehabilitation and excavation of archeological sites and their maintenance.
 - B. Joint committees with concerned bodies to process private citizens permits for repair or constructing of heritage buildings.
 - C. Forming joint work teams with the Sunni endowment for maintenance of mosques.
 - D. Preparing a specialized team for repair and supervision of heritage buildings
 - E. Naming 49 heritage buildings in various areas of Iraq.
 - F. Rehabilitation of Khan–Shilan as a museum for the twenties revolution.

Table () showing ongoing investment projects in archeology sector

Name of project	Location	Date	Year listed	Actual completion rate	remarks
Structural protection of Kifil site	Babel	2006	2011	—	Work is suspended
Rehabilitation of heritage khans	Karbala	2011	2011	%0	Extended for one year due to non-expenditure of annual allocation
Salvage explorations of archeology sites	Governorates	2007	Ingoing	%0	
Maintenance of Hatra	Ninewa	2007	Relisting 2012	%0	
Maintenance and rehabilitation of Toutinji house	Ninewa	2009	2012	%0	
Rehabilitation of	Baghdad	2009	2009	%5	

exhibition halls and labs of national museum					
Salvage maintenance of Nimrud city	Ninewa	2009	2010	%0	Extension for four years due to non-expenditure of annual allocation
Salvage maintenance of Ashor city	SalahEddin	2010	2010	%50	

Second: Challenges

A- Tourism

1. Instability and violence in some governorates.
2. Trespassing on tourism facilities by state organizations and citizens.
3. Delay in acquisition procedures of lands for tourist projects.
4. Insufficient financial allocations for reconstruction and rehabilitation of existing projects, and delays in execution of new projects.
5. Difficulties in providing licenses and renewing them and classifying facilities and awarding tourist levels.
6. In spite of the potential of tourism, its participation in the economy through revenues is not well defined due to difficulties in collecting revenues and receiving required data.
7. Financial resources for tourism are very limited while private sector and foreign investment is almost non-existent .
8. Pollution and health hazards to tourists caused by low sanitary conditions on hotels and unqualified staff.
9. Limited marketing of tourism due to qualified staff shortage.
10. Complicated procedures and medical tests before granting entry visas due to security situation.

11. Shortage in support services caused by low investment and government spending on tourism. Infrastructure such as airports and rapid transport, hotels and entertainment are still suffering from low level service, especially in archeology and religious sites.
12. Legislation that obstructs implementation of tourism projects.
13. Shortage of electricity and fuel for generators at tourism facilities.
14. Poor service at border crossings as tourism is confronted with long procedures for granting visas and accepting tourists at its borders.
15. Implementation of tourism investment plan still affected by its links to the ministry of culture and now to the ministry of archeology.
16. Non-cooperation by local governments in allocating lands for tourism projects, considering it a commercial activity, particularly in evaluation of land prices, rather than preparing sites and supervising projects according to tourism law.
17. Limited authorization to bodies implementing projects in the annual investment plan.
18. Low awareness of tourism in the country and absence of marketing techniques.
19. Emigration of professional and trained staff, and the small number of training centers available.

B. Archeology

1. Many sites were plundered and damaged due to terrorism and military operations, as well as poor storage.
2. Destruction of archeology sites and artifacts and low awareness of the value of this heritage, and widespread trading in artifacts.

3. Lack of specialists in maintenance of our cultural inheritance such as paintings and houses
4. Loss of control on governorate archeology department, especially concerning stored assets.
5. Archeology sites have low protection making them vulnerable to transgression. In addition ground water levels nearby have risen due to irrigation and drainage.
6. Insufficient archeology expeditions to maintain sites, and limited engineering and specialist staff.
7. Low financial compensation for owners of artifacts.
8. Many transgressions on sites and spread of random digging and violation of these sites.
9. Exclusion of some sites by UNESCO.
10. Delay in implementing projects and not utilizing the financial allocations due to delays in procedures.
11. Difficulty in developing a qualified staff in light of continued emigration, coupled with problems in employing foreign experts to assist.

Third: Vision

Directing, encouraging and developing tourist activities and rehabilitation and maintenance of our heritage in order to strengthen tourism to become a cultural icon and a sustainable revenue generator.

Fourth: Objectives

1. Legislative and administrative reform that will improve the tourism industry and maintain our heritage by:

- A. Restructuring to conform to the new Ministry of Tourism law of 2012.
- B. Resolving overlap of authority between local and federal government, and establishing rules to regulate tourist facilities and their activities and classification ...etc.

1– Protection of existing and other unexcavated archeology sites as they are considered a national and human heritage by:

- A. Drafting regulations for protection of archeology sites.
- B. Coordination with MOD, MOI and national security for maintenance for these sites.
- C. Providing protection requirements, such as cameras, weapons and equipment.
- D. Building observation stations in districts remote from town centers.

2. Establishing, rehabilitating and developing museums through:

- A. Expanding Iraqi museum storage and rehabilitating rooms and labs with equipment.
- B. Rehabilitating administration building and child museum rooms and updating monitoring system.
- C. Increasing allocations for museums.
- D. Capacity building of staff in museum activities and in development
- E. Setting up data bases on tourism, heritage and archeology.

3. Maintenance and revival of heritage and the history of civilization through:

- A. Increasing financial allocations and expanding awareness of these activities, to reflect the deep roots of Iraqi civilization and its historical and human role.
- B. Limiting trespassing on heritage buildings.
- C. Rehabilitation of museums and heritage houses in Baghdad and governorates.
- D. Updating electronic survey of our heritage and establishing a data base for these sites.
- E. Building museum of Karbala.
- F. Increasing allocations for development and revival projects.
- G. Improving media coverage and tourism marketing.

4. Maintenance and repair of heritage buildings and archeology sites, and preserving their architecture by:

- A. Allocating funds to the department of project investigations and exploration (75) project.
- B. Acquisition of land owned by private citizen within important archeology area.
- C. Allocating fair compensation according to value of property.

5. Activating private sector investment ion tourism

- A. Encouraging sector to build hotels and apartments, possibly in cooperation with mixed sector.
- B. Encouraging private sector to establish tourism projects to enhance its role in GDP.
- C. Adopting standards to ensure efficiency of tourist services and coverage of all areas
- D. Development of bank credits for financing tourist projects.

Transportation and telecommunications Sectors

Transport and Communications sector is considered one of the important sectors in any economy; the importance of this sector is evidenced in the direct and daily impact of its activities on the lives of citizens, as every citizen needs to move and communicate in order to accomplish his everyday tasks and other activities.

This sector is also characterized with its unique relationship with other economic sectors and its direct impact on their growth and development, and its direct impact on the economic integration of the country, therefore, it is not possible for other economic sectors to evolve and grow without the needed infrastructure and the efficient services of the transport and communications sector, as every type of land usage requires a network of roads and transport the is suitable to such usage.

The extension of the transport and communications sector infrastructure for long distances and its coverage for more than one area and more than one province requires huge investments for the purpose of construction and maintenance.

Also, this sector is characterized with numerous opportunities for the private sector contribution (Iraqi and foreign) and investment in the implementation and operation of many of its projects.

1. Transport Sector

The transport sector activities consist of roads and bridges, passenger transport, cargo transport, railway transport, ports, shipping and civil aviation. This plan will address each of these activities in terms of current situation, visions and objectives and means of achieving such objectives. Overall, the transport sector is seeking to build an integrated, efficient and secured transport network, and ensure the balanced use of its different systems in line with the spatial distribution of population and economic activities in a way that will enhance Iraq's geographical location in this area.

This vision can be achieved through the following:

1. Increasing the efficiency of the existing transportation network and its capacity.
2. Integrating transport network systems among each other.
3. Increasing the efficiency and improve the performance of the transport sector institutions, facilities and its public companies, and raise their efficiency in the areas of management and operation.
4. Develop and activate the transport of goods through rail, and protecting the road network from being damaged.
5. Reduce accidents on the transport network.
6. Reduce travel time and provide short routes far away from city centers.
7. Contribute to strengthening the economic independence of Iraq.

8. Reduce transportation costs.
9. Strengthen Iraq's geographical location in the transport and transit trade.
10. Increase the sector's contribution to GDP.
11. Strengthening the role of the private sector in the various activities of transport, especially operations and service delivery.

1-1 Roads and Bridges Activity

1-1-1 Current Situation

This activity falls within the responsibility of the General Authority for Roads and Bridges in the Ministry of Construction and Housing, which is responsible for the implementation and maintenance of bridges on rivers and roads outside the cities, which include highways, arterial roads that connect provincial centers and border crossings and secondary roads linking districts, counties and, rural roads linking residential compounds in the villages and countryside with secondary and arterial roads.

The total length of highways (outside the municipal boundaries and the Municipality of Baghdad) is about (48 941) meters, as follows:

- Highways = 1084 km
- Arterial roads = 11254 km
- Rural roads = 10357 km
- Border Roads = 11000 km
- Secondary roads = 15246 km

As for the bridges, there are (1260) concrete and steels bridge, and (52) floating bridge scattered throughout the country, however, this network did not cover the needs of the country, especially rural roads, which is considered one of the cornerstones necessary for the development of the rural community. According to international standards, each 100 inhabitants / km² of population density required 1 km / km² of roads, and road density in Iraq is around (0.19) km / km², and what is required is for this ratio to reach (0.75) km / km², which means that the road network should be increased up to (240 000 km), noting that the density of the population in Iraq, according to 2011 estimates is (79.5) person/km², and if we are to exclude the unpopulated desert areas, the need for new roads is up to (20,000) km according to the above criteria.

Before 2003, Iraq's highway network was considered to be in a fairly good condition in terms of efficiency and capacity, but due to what it has suffered during the events of 2003 and its aftermath, this network suffered significant deterioration and most of its parts was destroyed and damaged as a result of military operations and acts of sabotage and lack and security and periodic maintenance. This has led to a low level of efficiency for the road network and its capacity, in addition to the loss and damage of most of the boards and cautionary and instructive signs for highways and expressways. Therefore, the

rehabilitation of the current road network is one of the plan priorities in the field of roads and bridges activity.

The stoppage of the railway activity after 2003 and the reliance on the road network for the transport of goods has born pressure on the road network, and the absence of control over the axle loads and vehicles exceeding the allowed loads, contributed to the destruction and sabotage of large parts of the roads network.

On the other hand, the increase in the number of vehicles that entered the country after 2003, has largely increased the vehicular movement between secured provinces which in turn caused pressure on highways especially single-aisle roads, and with the absences of traffic control on these roads and the halt on the granting of driving licenses and the weak control over driving licenses and their holders; all has led to increasing the number of traffic accidents, especially fatal accidents on these roads.

The deterioration of the security situation after 2003 and the accompanying social, economic and security effects resulted in lowering the efficiency of road works quality control.

The increase in fuel and asphalt prices after 2003, led to increasing the cost of execution and maintenance of road projects, this has been largely accompanied by an increase in the global prices by the end of 2007 and during 2008, leading to stopping most of the projects that had been awarded before the increase of petroleum products and asphalt prices, such projects have not been executed during that period due to the inability of contractors to keep up with the high prices of work aspects, and this situation continued until 11/9/2007, where a mechanism to compensate contractors due the abnormal rise in work prices has been approved.

1-1-2 Possibilities

1. The presence of solid companies with the Ministry of Construction and Housing.
2. A dedicated staff with high capabilities.
3. Reliance on road and bridges transport due to the weakness of rail transport at the current time.

1-1-3 Problems and Challenges

1. The bulk transfer of goods on the road network generates significant pressure on the network and contributes to its destruction in light of the decline of rail transport of goods.
2. Lack of control over loads and axial loads transport vehicles which in turn lead to the destruction of the road network.
3. Lack of substitution roads between provinces and cities.
4. Lack of ring and inner roads around cities.
5. Problems associated with land acquisition such as owner's objections especially those of peasants and farmers.
6. The need for huge investments in the roads activities required for the rehabilitation and the implementation of new projects.

7. Weak quality control system.

8. The sovereignty of the main one level intersections between roads and railways.

1-1-4 Vision for Roads and Bridges Activity

A balanced hierarchical road network integrated with other transport systems, which provide for a less trip time and cost and increases security and decreases negative environmental impact.

1-1-5 Objectives

The objective of the roads and bridges activity for the duration of the plan concentrates on two axes:

1. First Axis:

- Improve the current situation of current road network through the rehabilitation of existing roads and reconstruction of bridges that were damaged as a result of war and military operations and acts of sabotage and fixing signs and significance warning and indicative signs.
- Regular maintenance of the road network and existing bridges using modern and sophisticated techniques that are faster and more economical such as (Cold In Place Recycling of Asphalt Pavement) to carry out the rehabilitation and maintenance work.

2. The second axis is to increase the capacity of the existing network and to raise its safety level for users, and protect it from damage through the following:

- Complete the remaining parts of the highways that have been implemented earlier and complete linking those roads with urban centers that have not been linked so far.
- Construction of new highways, especially Highway No. (2) to connect urban centers with each other, and complete the linkage between Iraq and other neighboring countries that have not been linked with highways so far.
- Continue to create second corridors arterial and major single roads especially roads that have reached their capacity limit.
- Expanding the construction of cross roads between provinces which helps in largely reducing trip time.
- Expansion the construction of cities ring roads which contribute to reduce urban congestion and reduce traffic through urban centers.
- Continue the implementation of the remaining stages of plans to replace floating bridges with fixed bridges.
- Continue to cancel intersections between roads and railway lines.
- Furnishing highways with warning and indicative signs.

- Protect the ground road network from excessive loads through the establishment of vehicle weight stations, to preserve the road network from the effects of vehicle weights and axle loads that exceeds the allowed limits.
- Continue programs for the construction of rural road and intensify such programs to cover the largest possible proportion of the rural villages and agricultural projects in order to provide linkages between agricultural production sites and markets.

Quantitative targets for this activity are illustrated in the following table:

Table No. (1)

Number of roads lengths and bridges that are needed to be established for the period 2012-2017

Year Details	2012	2013	2014	2015	2016	2017	Total
Highway Roads/km	–	116	40	282	248	600	1286
Arterial roads/km	75	93	146	291	161	175	941
Main Roads/km	485	807	775	541	788	1108	4504
Secondary Roads/km	115	246	104	273	225	185	1148
Concrete Bridges/ No.	8	25	20	16	11	13	93
Bridges	–	8	6	7	4	4	29
Steel Bridges / No.	–	–	–	–	–	2	2

1-1-6 Means for achieving objectives

1. Direct investments that commensurate with the importance of roads and bridges activity and their social and economic roles in the rehabilitation of damaged roads and bridges, and create new roads with their different types of highways, arterial, secondary and rural areas.
2. Development of rail transport to ease the transport of goods on the roads.
3. New legislation or amending the existing legislation to impose fees in certain proportions to use main and arterial roads and the use the bridges, to ensure the availability of adequate amounts needed for the sustainable periodic of roads and bridges.
4. Improve the performance of roads and bridges quality control during the execution of road and bridges projects through the provision of sufficient laboratories necessary for the performance of laboratory tests for roads and bridges, and controlling the loads and vehicle axis weights for road and bridge projects through the establishment of Weighing Stations to control the loads and vehicle axis weights.

5. The introduction of new and advanced technologies that may produce economic returns in the rehabilitation and maintenance of roads, and to provide access to its success.
6. Strengthening the role of the private sector in the delivery of services.

1-1-7 Private Sector

The local private sector and foreign investment can play a role in the establishment of highways infrastructure and axes, provided that such roads and bridges are available for free for the same routes, as the private sector can effectively contribute in the provision of services such as the construction of integrated rest stations (in accordance with regulations and designs determined by agreement with the General Authority for roads and bridges), with the need to strengthen the role of the state as a regulator and an observer at all stages (design, implementation, operation and service delivery).

2-1 Passengers and Goods Land Transport

1-2-1 Current Situation

The Public Company for Passengers Transfer was founded in 1938 and registered in the name of passenger transfer department, which was responsible for the transportation of passengers only within Baghdad. The company operated on a central financing system and was turned into a public company for passengers transport under the Companies Law No. (22) for the year 1997 to start operating on a self-financing basis for the activity it is entrusted as stipulated in the company rules of procedure number (10) of 2000, which aims to transfer people by its buses within the city of Baghdad and between provinces and between Iraq and neighboring countries and to provide internal transport services. Finally the Public Company for Passengers Transfer has been merged with the Public Company for the Transfer of Passengers and Delegations under the name of Public Company for the Transfer of Passengers and Delegations according to the Council of Ministers resolution no. (338) for the year 2008, hence, "Delegations" became one of the company's departments.

The Public Company for Passengers Transfer used to own a large fleet of buses and a number of employees that is commensurate with the operation of this fleet, the company faced significant damage in its assets as a result of military operations and looting that accompanied the entry of foreign troops into Iraq.

The company activities in the transport of government passengers stated to diminish in 2003 and the period that followed, and its activities were very limited, whether for transportation within or between cities, or it was not as organized as before.

During 2008, the passengers transport activity regained its gradual organized activity by running buses between safe cities during the day and night, while transportation within cities has been regained within the city of Baghdad in cooperation with the Baghdad Provincial Council and started running lines between universities and key areas in Baghdad, and it is hoped that this experience be shared across all other provinces.

While the number of the Public Company for the Transfer of Passengers and Delegations totaled (1633) bus in 2002, the number of the company buses until September 2012 totaled (945) bus, of which there are (795) operating bus and (115) bus out of service and (35) bus under write-off, and the number of

currently operating routes is (30) route within the city of Baghdad and (3) routes for students transport (there is a hope to increase this number increase during the coming period to 5 or 6 routes) and (4) routes within the provinces and (14) routes between Baghdad and the provinces. And as a result of the destruction and administration chaos that the passenger fleet has suffered, there has been a decrease in the number of transported passengers from about (130) million passengers in 2002 to approximately (5.2) million passengers in 2012.

After 2003, the private sector took almost the entire lead in activities related to transport services within and between cities, and the successive increases in the prices of petroleum products, including gasoline and gas oil (kerosene) have forced the private sector to raise the prices of transport within and outside the cities, and such high prices have started to burden citizens; especially students and low-income people.

The number of the Public Company for the Transfer of Passengers and Delegations employees until September 2012 totaled (4254) employee, though more than half of them are considered as surplus and negatively affects the efficiency of the company's performance.

With the improvement in the security situation, demand for passengers transport within and between cities started to increase, and with limited activity of railway nowadays, the reliance on bus transportation became the only solution currently available.

The work on implementing public transport projects within cities such as metro, tram or train, especially in the city of Baghdad, has become an urgent necessity for the purpose of providing public transport service for people in a quick and safe manner and relieves congestion in cities and reduces pollution.

The prices by which the Public Company for the Transfer of Passengers and Delegations operates, despite the increase in such prices, are still much lower than that of the private sector, in addition to the fact that the buses owned by the company are newly manufactured, air conditioned and safe with some services being provided throughout the trip, therefore, citizens started to prefer private sector buses.

2-2-1 Possibilities

- 1- The growing demand for bus transportation inside and outside cities.
- 2- Reasonable prices and excellent services compared to the private sector.
- 3- The establishment of public transport projects within cities such as metro and tram.
- 4- Launch transport tariffs to be comfortable and provide support for the elderly, students, children and people with special needs.

3-2-1 Problems and Challenges facing Passenger Transport Activity

- 1- Limited financial allocations for this activity.
- 2- Continuation of the unstable security situation in some cities and provinces and continued obstructions and security barriers in the public streets and subsidiary.
- 3- Limited public transport bus fleets within and among cities.

- 4- Slack in the administrative and operational bodies of public transport activity and its impact on the low levels of performance.
- 5- The presence of unregulated private sector that uses vehicles that does not has the required specifications and that are polluting to the urban environment.

4-2-1 Vision

Ensure the provision of public transport within and between cities and between through a sustainable environment-friendly highway and low-income people, students, youth and the poor.

5-2-1 Objectives of Passenger Transport Activity

- 1- Operating (130) two shift routes in the city of Baghdad and the provision of around (1500) bus to operate those routes. Table (2) shows the quantitative targets for passenger transport activity represented in the numbers needed buses during the five-year plan (2013-2017) for the purposes of internal transport and transport between cities.
- 2- Prepare studies and designs for Baghdad metro project and work on its roll-out in the last years of the five-year plan.
- 3- Modernizing the passenger transport fleet that operates within and between cities with modern and comfortable buses that meets the environmental determinants.
- 4- Operate on the principle of discriminatory wages for student groups and young people with special needs and incorporated in social welfare programs.
- 5- Leaving ample for the private sector in (passenger transport) and provide the necessary support, particularly in the field of ensuring the provision of subsidized transport modes with easy financing terms.

Table (2)

Number of current and needed buses and number of expected passengers and travelers for the period 2013-2017

Years	Internal Transport		Between cities transport (passengers/intl./tourism)		No. of passengers in thousands	No. of travelers in thousands
	One deck bus	Two deck bus	Buses	GMC		
2010	10	60	86	–		
2011	--	–	116	130		
2012	–	100	–	–		

2013	-	100	-	-	8424	
2014	-	-	100	-		1620
2015	-	100	-	-	8424	
2016	100	-	-	-	1560	
2017	-	50	50	-	4212	810

6-2-1 Means for achieving objectives

- 1- Seriously thinking about scheduling Baghdad Metro project as a long-term solution to the problem of passenger's transportation and ease of traffic congestion in the city of Baghdad and improve the city's environment.
- 2- Support the private sector and re-organize its activities in the field of passenger transport and secure the needed infrastructure for its activity especially private passenger garages with high specification.
- 3- Provide transportation modes for the private sector on concessional terms and determine their operating age to ensure its safety elements and economical and environmental sustainability.

7-2-1 Role of the private sector in Passengers Transport Activity

In most countries of the world, public transport activity in general, and passenger transport through buses within cities is particularly, is usually supported by the state whether it is operated by the state or the private sector, with the exception of a very small number of countries where passenger transport through buses and public transport in generally is profitable, therefore, the scenarios presented to operate passenger transport activity inside the cities for the duration of the five-year plan is:

- 1- State continues operating and supporting passenger transport through buses activity with prices that are appropriate for the low-income people and the poor and students.
- 2- State continues to operate passenger transport through buses activity and the launch of profitable transportation tariffs while granting the elderly, children and students the needed or appropriate support
- 3- Allowing the private sector to operate passenger transport through buses and allow them to launch their own transport tariff, while keeping the state's role as regulator and observer, and determine the buses quality and specifications, and provide state support for some segments of society such as students, the elderly and people with special needs that are covered through the social protection system.
- 4- In the long run, the state should completely abandon operating passenger transport activity and transfer this activity to the private sector and, limiting the state role on control and follow-up and determining the quality and specifications of vehicles and tariffs.

3-1 Land Transport of Goods

1-3-1 Current Situation

Iraq used to own a large fleet to transport goods by trucks that belonged to the ministries of transport and trade. This fleet has been looted and damaged and what remained from it is a modest numbers compared to the actual need.

Due to the failure in managing this activity and the large numbers of employees compared to the actual need, there is currently around (4670) employee working at the Public Land Transport Company which is number that exceeds the company's actual need, and this has significantly affected its performance efficiency.

That five-year plan objective for this sector is to convert the entire activity to the private sector after rehabilitating it for the high flexibility that the private sector enjoys in managing such activity, or achieve a public and private partnership in this activity with the need to:

1. Strengthening the state role as a regulator and an observer for the transport of goods by land trucks.
2. Development of rail transport for the purpose of maintaining the road network and not subjecting it to more damage, in addition to the significant economic savings achieved using rail transport for goods.

2-3-1 Possibilities

1. The growing demand for land transportation of goods by truck due to the continued weakness in railways for such purpose.
2. Achieve a public and private partnership in this activity

3-3-1 Problems and Challenges

1. Administrative and operational slack in the company's staff.
2. Limited number of trucks needed to meet demand on the internal and external transport.
3. Competitive rail transport in the case of rehabilitation.

4-3-1 Vision

Transferring the entire activity to the private sector after rehabilitating it for the high flexibility that the private sector enjoys in managing such activity, or achieve a public and private partnership in this activity

5-3-1 Objectives

1. Modernization of the Public Land Transport Company fleet through the supply of new trucks with the highest specifications
2. Infrastructure developments of the company branches, and equip them with workshops (fixed and mobile) and prepare them to accommodate trucks.

The quantitative objectives for this sector are illustrated in the following table:

Table (3)

Item	2013	2014	2015	2016	2017
Planned Load	3000	3500	4000	4500	5000
Manifest	1469000	1500000	1440000	1400000	1000000

6-3-1 Means for achieving objectives

1. Signing new contracts for the purpose of operating trucks at their maximum capacity
2. Sign joint operating contracts with strong companies
3. Buy trucks (Tank) with high specifications

7-3-1 Private sector in Land Transport Activity

The private sector plays an important role in land transport operations in Iraq through the officially licensed civil companies that are specialized in the transport of goods through contracts signed with the Public Company for Land Transport.

4-1 Railway Activity

1-4-1 Current Situation

Rail transport is one of the important and vital parts of the transport sector whether for passengers or goods, as rail transport, especially for goods, is characterized with the ability of long-distance transport and relatively appropriate cost compared with other transport media.

Iraq is one of the leading countries in the use of rail transport in the region due to its large network covering large parts of the country; the first train steered in Iraq was in June 1914.

There was a great dependence on railway network for the transport of passengers and goods great at its first inception, but after the development of the road network in Iraq, al large part of the land and railway transport activities turned road transport in particular with regard to the transfer of goods. Therefore, the presence of an effective rail network very is considered very essential as it would contribute greatly in maintaining the road network, especially highways from damage due to heavy truck traffic.

The lengths of the Iraqi railways in 2011 totaled (2627) km, of which there is (2158) km main lines and (469) km of sub-lines, The number of operating locomotives reached (85) locomotive out of (414) locomotive and (35) transferred locomotive out (131) and (48) passenger coaches out of (307) coaches and (2490) truck for the transport goods out of (9315) truck, while the number of passengers during 2011 totaled (271299) passengers, and the weights of transported goods reached around (703) thousand tons.

Table (4) shows the total Iraqi railway activity for the period 1979 to 2011 and notes that in spite of increasing the lengths of railroad during the mentioned period, railway transport activity has declined dramatically from millions of passengers and millions of tons of goods annually to hundreds of thousands, that continued until 2007 and the numbers started to increase in 2011.

This is illustrated in the following table

Table (4)**Total Railway Activity for the period 1979-2011**

Years	Lines Length (Km)	Numbers of passengers in thousands	Transported loads in thousand tons	Earned Revenue Million JD	
				Passengers	Goods
1979	1645	3351	6493	2286	20609
1988	2389	3865	6109	8124	18990
2002	2272	1248	5227	1131	22687
2004	2272	63	439	57	4977
2007	2272	4	165	15	1049
2008	2295	107	257	740	4318
2011	2627	271	703	1974	9766

Large parts of the Iraqi rail network is currently suffering from obsolescence and the antiquity of its designs, in addition to disruption in the signaling and communications systems and some routes are in bad condition, this has led to a decrease in the railway operational speed and endangering the safety of passengers and cargo. Works on rehabilitation of some routes have started in order to increase its operational speed and enhance its specification, also works have started to double the single routes to increase its capacity and ensure higher safety levels.

A new communications system have been introduced for the control between stations and locomotives through the use of radios for linking the stations and between locomotives, this system compensates for the old wired system with a Global Positioning System (GPS) to follow the movement of trains and know their location.

Most operating rail lines are in the standard system, and the current operating lines are f Baghdad - Basra and Baghdad - Samarra and Mosul Rabia and Baghdad - Fallujah, and hopefully the other remaining parts of the above mentioned lines will gradually be put into operation with the improvement of the security situation and rehabilitation.

Work has stated to doubling the Baghdad - Basra and Baghdad - Mosul, Hamam Al Alili - Sabounieh, Sabounieh - Rebiya lines, in addition to modernizing and rehabilitating existing lines in order to increase their efficiency, operational speed and enhance their specifications.

2-4-1 Possibilities

rail transport enjoys great opportunities for development and modernization, as the size of Iraq and its regional geographical location and long its experience in the field of railway transport and the establishment its basic infrastructure in most areas of Iraq qualifies it to expand the railway network, as most of Iraq's imports and future exports are being handled at the ports of southern Iraq and ports of the neighboring countries, and transit trade which can be reinvigorated in Iraq through these ports and it is possible to transport goods for longer distances and in larger quantities more efficiently and economically through the exploitation of this mode of transportation

Accordingly, this railway transport activity can be significantly developed with available opportunities to develop and modernize it, and the use of the best technology in this area, moreover, the global transport network between East and West (East Asia and Europe) will not integrate without passing through the Iraqi territories, and this necessitates that Iraq should start working on developing its own railway transport infrastructure, being a suitable and cheap option long distance whether Iraq wants its ports to be the station that receives the goods or the ports of neighboring and nearby countries are the receiving ports.

The estimated amount of goods in transit that are expected to be transported through Iraqi ports to Turkey, Syria and Europe is up to (35) million tons per year in the usual case, and (60) million tons in the optimistic case. A feasibility study for the port of Faw showed that this quantity of goods in transit requires the establishment of a special double railway, with the need for having suitable rail networks in Syria and Turkey and to take the necessary steps to conclude political understandings and trade liberalization measures in Iraq and countries that goods will pass through.

The expansion of the rail transport network will contribute to easing the pressure on the transport of goods on highways and arterial roads between cities, and by that reducing the damage being inflicted on these roads as a result of heavy loads and in many cases loads that exceeds the allowed axial loads.

3-4-1 Problems and Challenges

1. Competition between road transport in both of its forms, passengers and cargo, and rails transport, especially after the development of highways arterial roads and in Iraq.
2. Lack of integration between railway network in Iraq and the presence of important areas that are not covered by this very basic infrastructure.
3. Obsolescence of large parts of the existing network and vehicles, and disrupted signals and communication systems.
4. Low operating velocities degree, making it repellent for the transportation of passengers and cargo.

5. The huge investments required by the railroad activity in the building and furnishing these lines with signs, communications and the provision of locomotives and passenger vehicles and goods transporting trucks.
6. Limited possibilities of the Projects Department at the headquarters of the General Iraqi rail Company, which do not commensurate with the responsibilities of the company to implement current and future projects. The proposal is to reshape the General Authority for the implementation of modern rail projects and entrust it with the implementation of the proposed mega-projects or the rehabilitation of the company to implement public transport projects to be a specialized in the implementation of railway projects only.

4-4-1 Vision

Rebuilding Iraqi railways network so that it can keep pace with global railway networks and the growing requirements in the field of transport with modern specifications and high speeds that are consistent with the development of other sectors in the country and, ensures the linking of Iraq north with its south and its east with its west and, enhance its link with neighboring countries in a way that best serves the national interests of Iraq.

5-4-1 Objectives

First: Quantitative Objectives

Table (5) shows the quantitative objectives for railway activity during the five-year plan period (2013-2017) represented in the increase of rail axes lengths, increase in the main and sub rail network length and stations and the increase in the capacity of passengers and goods transport.

Table (5)

Quantitative objectives for railway activity during the five-year plan period (2013-2017)

Years	increase of rail axes lengths (km)		main and sub rail network length and stations (km)		capacity of passengers transport (million passenger)		capacity of goods transport (million tons)	
	Yearly	Cumulative total	Yearly	Cumulative total	Yearly	Cumulative total	Yearly	Cumulative total
2011	-	1906	400	3515	1	2,5	1	6
2012	800	2706	2087	5602	4,2	6,7	38	44
2013	140	2846	1165	6767	23	29,7	58	102
2014	2157	5003	6233	13000	35	64,7	233	335
2015	400	2331	1400	4884	4,2	6,7	38	44
2016	1000	3331	2400	7284	23	29,7	58	102
2017	1500	4831	3375	10659	35	64,7	233	335

Second: General Activity Objectives

1. Complete doubling the single lines.
2. Implementation of new high specification axes.
3. Cancel all railroad intersections with roads.
4. Equipping railway network with trains modern trains and trucks for the transportation of passengers and goods in a way the meets the needs of the citizens and the national economy and, the rehabilitation of existing ones.
5. network, which will be implemented in the coming years including the communications system with satellites that is currently under implementation, which determines trains location at any time for the purposes of avoiding accidents and trains holiday.
6. Increase the speed of passenger trains to be (140) km / h in the first phase and, (250) km / h in the second phase.
7. Strengthen Iraq's geographical location as a link between East and West and meeting the demand for goods in transit transfer through the establishment of efficient and effective infrastructure that is able to meet this demand and, through the promotion of the railway link with neighboring countries (Syria and Turkey) in a way the serves the national interests
8. Electrifying the railway.

6-4-1- Means for achieving objectives

1. Allocating the necessary investments to develop and modernize rail transport activity and create new projects.
2. Encourage the private sector to invest in this sector, especially in the areas of employment and service delivery and, allowing the private sector to open agencies in rail transportation to attract transfer requests through this medium.
3. Reshape the General Authority for the implementation of railway projects to take on the responsibility for the implementation of projects and award them to specialized companies in this area, or rehabilitate the General Company for the implementation of transport projects (existing) to be specialized in the implementation of rail works only.
4. The growth and development of rail engineering and technical facilities in the implementation and establishment of self-national railway projects and ensuring the availability of the specialized rail construction requirements ant equipment's so as to ensure the creation of highly specialized national facility in this area.

5. Development and modernization of the Railway Institute and its laboratories and equipment and, develop its working methods and establishing controls to stimulate its training facilities and encourage students to join them.

7-4-1 Private sector role in railway activity

The railway activity, similar to the rest of the transport sector activities, is characterized by the magnitude of the investments required for the implementation of its infrastructure, therefore investors wish to invest in this area is usually only limited to the implementation of infrastructure in axis that are highly feasibility are good transport axis or high and continuous demand for passengers transport. While in the operation and service delivery area, the door is widely open to the private sector. The use of Iraqi territory as a dry conduit for transit trade between East Asia and Turkey, Europe and Syria will increase the chances of attracting investors to invest in this activity, in addition to rail hubs that are associated with the religious cities and promote religious tourism in the country.

5-1 Ports Activity

1-5-1 Current Situation

Basra is considered the only water access for Iraq to the outside world and thus, this site represents an important geostrategic center for Iraq and its interaction with the outside world and, his economic tool for securing important part of its imports needs as well as a main port for the export of crude oil and the rest of Iraqi products as rare as they are now.

So, ports and maritime transport activity have enjoyed much interest over successive eras in Iraq, especially in the seventies of the last century, and this site became a center of economic activities associated with the imports and exports.

Ports Activity is financed and is fully managed by the state through the General Company for Iraqi Ports.

Currently, Iraq has four commercial ports and three platforms (operating) to export oil. The number of commercial piers ports is (46) piers with a capacity of (16,650) million tons per year, and table (6) shows the commercial Iraqi ports and piers in each port and currently available depths of its interfaces piers.

Table (6)

Iraq's Commercial Ports and number of piers in each port

Port Name	Capacity Million tons/year	No. of piers	depths of interfaces piers (meters)
Om Qaser	7,5	22	12-5,6
Khor Al Zoubir	6,4	12	8-3
Abu Al Folous	0,5	3	6
Al Ma'qal	2,250	9	8-6
Total	16,650	46	

The economic blockade imposed on Iraq and ports suffering some damages during the recent war, all has led to obsolescence of machinery and equipment that works on operating the port and failure of large numbers of them. War has also been the reason for the increased numbers of sunken ships in shipping corridors and the reason for discontinuing some activities such as the dredging of those corridors, which, in turn, led to deterioration of the depths and the decrease in the numbers of submersible in it and in the piers interfaces. Also, the sunken ships in the shipping corridors constituted a barrier towards the entry of ships and towards other operations such as dredging and maintenance of these corridors, all this had a negative impact on the performance and efficiency of commercial ports and piers.

It is noted that the ports activity have declined after 1990 due to the economic blockade, where Iraq's imports have been secured from neighboring countries ports, and until the year 2002 the intake cargo totaled around (9) million tons in 2002 and this is due to the signing of Iraqi oil-for-food agreements and an increase in the foreign trade activity, however, this has dropped in 2004 and 2005 to around (3) and (6) millions tons due to deterioration of the security situation, to increase once more in the after years to its previous levels.

The quantities of goods that have been handled in the commercial ports of Iraq in 2011 reached a total of (12.8) million tons, where the total capacity for the operating port piers is around (16.650) tons per year. Therefore there are available and unused capacities, and this requires a close consideration for the imports and exports quantities for Iraq as a whole and from Iraqi ports and neighboring and nearby countries ports for the purpose of understanding and knowing the total numbers. in case that such numbers are larger than (12.8) tons per year, this requires a consideration for exploiting those unused capacities as the reason might be the reluctance of ships to dock at the Iraqi ports and prefer docking at neighboring countries ports, and thus ways to attract these vessels to Iraqi ports should be explored, or there should be a consideration for increasing the efficiency of ports performance through furnishing and equipping ports piers with the necessary equipment for handling and transportation equipment within the port, and connecting them with national transport system with appropriate costs.

During 2007 and beyond, the General Company for Iraqi Ports made efforts through its self-financial abilities and through investment budget to rehabilitate the reservoir absorbent excavator (Al Zubair) and excavator (Tahrir) and the purchase of Excavator (Taybah). And in the field of recovering sunken ships, the ship (Al Walid) and the ship (Hanan) have been recovered in 2008, and the ship (Queen Mary) and tanker (Tadmour) and excavators (Al Obour and Gaza) have been recovered in 2009, and in 2010 the ship (Al Baheth Al Arabi) and the excavator (Palestine) have been recovered, while in 2011 carrier (Dukan) have been recovered, and work is underway to recover other target through the company's revenues and investment budgetary allocations and the Japanese projects loan. In the field of oil transportation, the number of ships that carried crude oil in the oil ports of Basra and the deep-water ports was (253) ships with a total tonnage of (35.7) million tons in 2011, while the number of commercial vessels reaching to the four ports for the same year amounted to (2209) ship and a total load of (12.8) million tons.

Despite the magnitude of ports activity in Iraq, what is has achieved from annual surpluses did not exceed (69) billion dinars in 2011, and in best cases, did not exceed the (82) billion dinars in 2005, this is due to lack of management and operating processes development and obsolescence of many equipment

and the hiring of more than (10) employees, where more than one-third of them is considered as a surplus.

2-5-1 Possibilities

The main potential for the development of Iraq's port activity is represented in:

1. Large deficit between the design capacity of existing piers that are up to (15) million tons per year, and the expected demand of Iraq's future imports and exports, which has been estimated around (53) million tons in the year 2018.
2. The availability of sea front within Iraq's territorial waters that allows the establishment of a port that receives giant trading ships with tonnage up to (120) thousand tons, and convert Iraqi ports from secondary ports to main ports so as to enhance Iraq's geographical location as liaison to link the East and the West and enhance transit trade, with the need to develop railway network infrastructure towards this goal.

3-5-1 Problems and Challenges

1. Iraqi ports faces strong competition by nearby countries ports (as the United Arab Emirates and Qatar) and neighboring countries ports (Kuwait, Jordan, Syria, Saudi Arabia, Iran), and the nearby and neighboring countries ports has achieved great progress and development during the past two decades, while the performance and efficiency of the Iraqi ports have declined during the same period due to the economic conditions and wars experienced by Iraq, in addition, the Iraqi ports has not seen any remarkable development on the local and global level.
2. The current depths of navigational corridors and piers interfaces are between (5.6 to 12 m), and this does not allow them to receive giant containers and full loads ships, therefore, the current ports remains as secondary port and the transportation costs are still relatively high and non-competitive compared to other ports, as result Iraqi traders shifted their imports to rely on neighboring countries ports.
3. Default in the management and operations systems of Iraqi ports, and not using modern electronic systems in the fields of administration and operation, and not being able to keep up with the latest global developments in this area.
4. The large number of sunken ships in the navigational corridors especially those affecting the entry and exit of vessels coming to Iraqi ports.
5. Shortage of naval units (excavators, pullers, ships, cranes, lightning ships, survey boats, marine pollution boats, water and fuel tankers) and shortage of specialized ports equipment and cargo handling equipment and obsolescence of the existing ones.
6. Low government investments towards ports activity, as the total investments directed to this activity during the period 2007-2011 did not exceed (460) billion dinars, and the size of expenditure did not exceed (40%), in addition to the reluctance of the private sector to invest in the execution of infrastructure related to this activity.

7. Low level of employees' qualifications working in this sector and the lack of proportionality between the technical staff and administrative staff and the existence large surplus of used labor, which negatively affects the efficiency of this activity as a whole

4-5-1 Vision

Primary and secondary ports that meet the country import and export needs and that are able to compete with neighboring and nearby countries ports and Iraq's starting point for dry channel to link between Asia and Europe, Turkey and Syria.

5-5-1 Objectives

First: General Objectives:

1. Raise the capacity of existing ports and their navigational corridor.
2. Exploit the available and unused capacity of current and ports amounting to approximately (3) million tons per year, and reduce dependence on nearby and neighboring countries ports in Iraq's foreign trade by increasing the current Iraqi ports capacities.
3. The transition to the phase of establishing main ports that are capable of receiving giant ships and reduce transportation costs to make the Iraqi ports more competitive with the alternative ports and creating one of the most important dry canals.
4. Strengthening the private sector role in the implementation, operation and provision of services to the port activity.

Second: Quantitative objectives

1. Increasing the current design capacities of Iraqi port's piers targeted within the plan until 2017 as illustrated in table (7)
2. Commence the establishments of Al Faw Great Port during the plan period as illustrated in table (8).
3. Recovery of sunken ship from navigational corridors and port piers during the plan period as illustrated in table (9).

Table (7)

Current design capacities of Iraqi port's piers targeted for the year 2017

Port Name	2012		Expected number of piers to be added during the plan period 2013-2017	2017	
	No. of Piers	Capacity Million tons/ year		No. of Piers	Capacity Million tons/ year
Om Qaser	22	7,5	19	41	14
Khor Al	12	6,4	13	25	10,650

Zoubir					
Abu Folous	3	0,5	-	3	0,750
Al Ma'qal	9	2,250	5	14	3,6
Total	46	16,650	37	83	29

Table (8)

Targeted Quantitative quantities by the establishment of Al Faw Great Port

Item		2018	2038
Containers piers	No. of piers	11-10	22
	Ton/ year	3000000	7000000
General Goods piers	No. of piers	7-6	22
	Ton/ year	10000000	40000000

Table (9)

Quantitative objective for ports activity on sunken ships recovery for the period 2012-2017

Item	2012	2013	2014	2015	2016	2017	Total
Om Qaser	1						
Khor Al Zoubir	2						
Abu Folous	1						
Al Ma'qal	2						
Total	6	3	3	3	4	4	23

6-5-1 Means for achieving objectives

1. The establishment of the Al Faw Great Port.
2. Allocate the necessary funds for the development and expansion and modernization of existing ports or offer them for investment.
3. Performing procedures to develop and modernize the work methods removing barriers faced by this activity through the following actions:
 - Contracting with an international specialized consulting firm to provide consultancy and proposals and solutions to improve the efficiency and improve the performance of the

General Company for Iraqi Ports, including its role as a regulator and an observer for the private sector performance, to be able to compete with other companies in neighboring and nearby countries.

- Preparing marine services requirements for oil ports (the ports of Basra and al Ameen) and liquid gas port in Khor Al-Zubair.
- Deepening and drilling and furnishing of navigational corridors leading to the ports, and the establishment of television and electronic control systems for the movement of ships and vessels
- Modernizing piers ground handling equipment in order to achieve the ability of handling cargo within the required limits.
- modernizing and strengthen the naval fleet units that provide marine services to the ports, provided that this update includes drilling rigs, pullers and marine signal vessels and passenger ships and work and connectivity boats.
- Introducing modern and electronic systems in the field of administration and operation of port activity.
- Prepare a comprehensive plan for the development and rehabilitation of ports facilities and build new qualified facilities and activation of Ports Training Institute.
- Recovering all sunken ships from navigational corridors in Khawr Abdullah and Khor Al-Zubair and Shatt al-Arab and Shatt al-Basra.
- Develop and modernize the shipyard and ports marine pitfalls, and complete what is under construction and building new shipyard that meets the special requirements for vessels repair.
- Modernizing ports in terms of housing, water and general services for importers and exporters and port workers.
- Any proposal to amend the wages and service prices offered by the Iraqi ports and maritime agencies should be more carefully and thoughtfully considered and takes into account prices imposed in neighboring and nearby countries ports so as the ensure that these prices are competitive, as Iraqi ports are located at the end of the Persian Gulf and prices should serve as a magnet for ships and ships.
- Reconsider the excess number of workers and employees.

7-5-1 Private sector role and the possible contribution in ports activity

- The private sector can play a major role in the establishment of some infrastructure and their operation and service delivery, and it is possible to clear the way in front of the private sector to operate container piers at base level. In the case of private sector reluctance to contribute to the establishment of infrastructure, the state should establish

the needed infrastructure and should not leave things hanging, and make way for the private sector in the field of operation and service delivery.

- The current private sector role in port activity is in the unloading and shipping works performing as unloading contractors, as well as in tenders execution field for projects in general and the maintenance of some tools and equipment.
- There are some projects and business that the private sector can contribute to their implementation through investment which can be summarized as follows:
 1. The establishment of Al Faw Great Port.
 2. Create (13) multi-purpose piers at Umm Qasr port with a design capacity of (3750) thousand tons / year.
 3. Create (4) container piers at Umm Qasr port with a design capacity of (2000) thousand tons / year.
 4. Create (13) multi-purpose piers at Khor Al-Zubair port with a design capacity of (4250) thousand tons / year.
 5. Invest in the Ma `amir pier in Al Faw with a capacity (100) thousand tons / year.
 6. Managing, operating and the development of the ports Al Ma'qal and Abu Folous.
 7. Business services such as take-off and anchorages and provide services to ships in port.
 8. Operating ports piers especially private container piers

6-1 Maritime Transport Activity

1-6-1 Current Situation

Currently, Iraq has (3) ships and would hopefully be enhanced with other ready ships or the manufacture of tailor made new ships. The maritime transport activity is one of the important and profitable activities at the same time, although the aim of supporting this activity at this stage is to create a nucleus of an Iraqi naval fleet, and once this nucleus is created, the expansion in the construction of such fleet will be through its own revenues and profits achieved by the core ships of this fleet.

Work is currently underway for concluding agreements for joint transfer with international maritime transport companies to transport Iraq's exports and imports of and providing employment and training opportunities for Iraqi staffs.

In the area of river transport, work has almost stopped because of the security situation and the scarcity of water and lack of rivers submersibles and the need for their dredging, in addition to the presence of obstacles in the rivers course from the remains the affected bridges by previous wars and because of the construction of temporary and floating bridges and service bridges, and any consideration for reviving this activity is linked to the dismissal of the above causes.

The number of the General Company for Maritime Transport employees which is responsible for the management and operation of this activity is (2420) employee, and despite the suspension of the company's activity for Maritime transport and work suspension of the company staff, there are numbers of employees who are a surplus to the company's need and who were appointed after 2003, and those represent a burden on the company's balance sheet.

2-6-1 Possibilities

1. Ensure that the company has technical staffs of accumulated experience
2. The establishment of river piers with different capacities ranging from (330) thousand tons to (500) thousand tons in Baghdad, Cote, Amarah, Basra and 14 side rivers with different capacities.

3-6-1 Problems and challenges faced by maritime transport activity

1. The initial need for relatively large investments to form the nucleus of a new Iraqi naval fleet that includes ships to transport containers and miscellaneous cargo and full ships.
2. Shipbuilding on request takes time and requires the provision of appropriate allocations for it.

4-6-1 Vision

A national fleet that offers the best services for ships coming towards Iraqi Ports

5-6-1 Quantitative objectives for maritime transport activity

The quantitative targets for maritime transport activity are represented by the provision of the vessels needed to transport Iraq's exports and imports of goods, especially grains and food, and seek to form the nucleus of the Iraqi commercial fleet. Table (10) shows the number of ships to be purchased during the years of the plan (2013-2017), their type and capacity over the years of the plan for maritime transport and maritime agencies.

Table (10)

Quantitative objectives for maritime transport activity during the period 2013-2017

Requirements	Capacity	Required number	Distribution of ships according to years				
			2013	2014	2015	2016	2017
Molded ships	50 thousand tons	8	3	1	2	2	-
Building multi-purpose ships	15-20 thousand tons	2	1	-	1	-	-
Container ships	1000-2000 container	4	3	1	-	-	-

Purchasing passengers transportation ships	15-20 thousand tons	2	–	1	–	1	–
Purchasing ro-ro ships	5-8 thousand tons	3		1	1	1	–
Total		19	7	4	4	4	–

6-6-1 Means for achieving objectives

1. Provision of large government investments
2. The entry of foreign private sector in the joint operation field.

7-6-1 Private Sector Role in Maritime Activity

The entry of Iraqi private sector in the field of maritime transport seems very restricted at the moment and is limited to its possession of small vessels due to the huge investments required to build large ships in addition to crew and personnel wages working on these vessels and the strong competition by neighboring countries and companies fleets. Due to the importance of this activity in providing the country needs, especially food and grain and military, and due to the fact that this activity is very profitable; the entry of the foreign private sector in the maritime transport activity should preferably be in a joint operation format with the necessity to form a national fleet of ships and vessels to meet the necessary country needs and make use of this activity profits.

7-1 Civil Aviation Activity

The Civil Aviation activity is represented by the activity of the General Civil Aviation Establishment and the General Company of Iraqi Airways. The General Civil Aviation Establishment activity includes airports in all parts of Iraq, while the activity of the General Company of Iraqi Airways includes air transportation by this company aircrafts.

1-7-1 Current Situation

The main activity for the of the General Civil Aviation Establishment is the civil aviation in Iraq in general and the operations and management of the civilian air traffic in addition to the commercial internal and external air transport operations.

Currently, Iraq has six international airports which are (Baghdad, Mosul, Basra, Erbil, Sulaymaniyah and Najaf) and work is underway to rehabilitate and modernize the airports of Baghdad, Mosul, and Basra.

1. Baghdad International Airport: Baghdad International Airport consists of three buildings (Samarra, Babylon, Ninawa) the capacity of each of is (2.5) million passengers per year and each building contains (6) air bridges for aircraft parking. The airport contains airport two runways for aircraft landing and take-off; the first runway length is (4) km and (60) meters width, and the second runway length is (3.3) kilometers and (45) meters width with two escape ways, the first is (4) km long and (45) meters wide, and the second is (3.3) km long and (30) meters wide in addition to an aircraft parking. The airport also contains buildings for

(air control, communications, fire, Operator, stores) and a building for car park. The airport is equipped with all the devices that ensure the safety of air traffic and providing services for travelers.

2. Basra International Airport: consists of one building with a capacity of (2) million passengers per year and contains (5) air bridges for aircraft parking. The airport contain one runway that is (4) km long and (60) meters wide with escape road of (4) km long and (45) meters wide in addition to an aircraft parking. The airport also contains buildings for (air control, communications). The airport is equipped with all the devices that ensure the safety of air traffic and providing services for travelers.
3. Mosul airport: consists of one building with a capacity of (500) thousand passengers per year and a runway (2.8) km long and (45) meters wide with aircraft parking that can accommodate up to (3) aircrafts, the airport also features a building for air control and telecommunications and the airport is equipped with equipment that ensures the safety of air traffic and provide services for travelers.
4. Sulaimaniya International airport: An international airport classified as (CAT I) that consists of two air and ground sides; the airside consists of a runway (3.5) km long and (45) meters wide with parallel الزوغان road that is (3.5) km long and (30) meters wide, in addition to other sub escape road and an aircraft parking with a capacity of (3) aircrafts. The Ground side of the airport includes a one-level building for travelers with a capacity of approximately (350) thousand passengers / year, and a fuel Storage.
5. Erbil International Airport: An international airport classified as (CAT I) that consists of two air and ground sides; the airside consists of a runway (2.8) km long and (45) meters wide and an aircraft parking with a capacity of (5) aircrafts with parallel sub escape road. The Ground side of the airport includes a small one-level building for travelers, with an approximate capacity of (150) thousand travelers / year, and a fuel Storage and buildings for fire engines and ground equipment as well as an electricity building.
6. Najaf International Airport: consists of a travelers building with a capacity of (3) million traveler / year, an aircraft parking can accommodate up to (4) aircrafts, with a runway (3) km long and (45) meters wide.

Founded in 1988, the Iraqi Airways is considered the national carrier with regard to air transport, noting that its first creation was on 29/01/1946 where it administratively belonged to the Iraqi Railways.

In 2002, and as a result of economic blockade conditions, international traffic was restricted to relief flights to Syria and pilgrimages, while internal transportation was restricted to domestic flights (Basra - Mosul) and free transportation of goods for the company and civil aviation to run Basra and Mosul airports.

In July 2004, Baghdad airport was received from the multinational forces, and the company received its locations and started reconstruction and operating works and actual operation began on 9/18/2004. At that time the operation was limited to Amman, Damascus and charter flights.

In 2005, the company's headquarters building in Baghdad International Airport was rehabilitated, and four Boink aircraft were rented, Sulaymaniyah airport have been rehabilitated by the company, and (Sulaymaniyah, Irbil, Dubai, Istanbul, Cairo, Beirut, Tehran) lines were launched.

In 2008, the Iraqi Airways owned two aircrafts in addition to (3) leased aircraft, the number of flights for the year 2008 totaled (3494) international flights and (1916) local flights, while the number of incoming passengers reached (120,282) passenger for the international flights and (57764) passengers for internal flights, and the numbers of departures was (113,226) international passenger and (56306) internal passengers. This year also witnessed a marked improvement in the civil aviation activity, as Iraq managed to open new lines with both Turkey and Scandinavian countries, and there is hope to open other lines with f Athens, Paris and London, it is also hoped that the Iraqi Airways activity will be regained after reaching on the settlement lawsuits and cases brought by Kuwait Airways.

The year 2008 was characterized by obtaining the air investor certificate (AOC), the opening of new offices in Iraq for the Iraqi Airways, determining a code for Najaf International Airport, modernizing the company's fleet with aircrafts that were government owned and leasing other aircrafts, in addition to the signing of a cooperation agreement with Boink company for a modern and sophisticated information system.

Currently, the Iraqi airways own two idle aircrafts and 6 aircrafts rented from the Ministry of Finance and 5 aircrafts on mutual operation basis with the Pilgrimage commission.

Despite the relative improvement witnessed by the civil aviation activity, it still needs a lot of development in order to offer a comfortable international and national air travel and adjustment of aircraft takeoff schedules and reducing tickets prices. The following table shows the current situation of Iraqi Airways during 2010 and 2011

Table (11)

Number of Passengers and incoming and outgoing freight during 2010 and 2011

Data	2010			2011		
	Planned	Actual	Achieved	Planned	Actual	Achieved
International transport	367680	361606	%99	514752	445912	%86
National transport	79037	52648	%66	102748	43381	%42
Incoming frights/ Ton	39513	8272	%21	55318	7916	%14
Outgoing frights/ Ton	252	128	%51	353	400	%113

Civil aviation activity needs to be developed and supported in many ways, as this activity represents the country interface and its gate to the outside world, therefore it must be taken care off and be at the level it deserves.

During the next five-year plan, and for the purpose of promoting religious tourism, it is expected to start the construction of the Middle Euphrates International Airport (designs completed by a French company), which will be in the province of Karbala and mediates the provinces of Karbala, Hilla, Najaf,

and its impact can be extended to the provinces of Diwaniyah and Samawah. The table below shows the movement of arriving and departing flights as well as the number of arriving and departing passengers during 2011 and 2012.

Table (12)

Arriving and departing flights and number of arrival and departures during 2011 and 2012

Data	2011			Until 31/5/2012		
	Planned	Actual	Achieved	Planned	Actual	Achieved
Arriving flights	12310	11589	%94	5473	6477	%118
Departing flights	12310	11625	%94	5491	6477	%118
Arriving passengers	899629	855423	%95	366530	521040	%142
Departing passengers	900783	862372	%96	372449	509653	%137

2-7-1 Possibilities

1. The growing demand for transportation by Iraqi Airways aircrafts.
2. Iraq's geographical location as a link between East and West.
3. The presence of tourist and religious attractions

3-7-1 Problems and Challenges

1. The slow implementation of rehabilitation works for existing airports.
2. The company does not own an integrated air fleet as its fleet consists of a limited number of owned and leased plans and outdated plans.
3. Not being able to resolve Kuwaiti cases and lawsuits.
4. Inflation in number of non-specialized staff which is affecting the company's performance and financial results.
5. Some of the management and operation methods of the Iraqi Airways dose not comply with International standards.

4-7-1 Vision

High-level aviation administration and a new Iraqi air fleet with modern aircraft.

4-7-1 Objectives

1. General objectives

- Rehabilitation of existing airports.
- Construction of new airports in areas with high demand and touristic attractions, especially religious tourism.
- Rebuilding the Iraq's air fleet.
- Develop the existing staff and the creation of new young one.
- Strengthen the role of the Iraqi Airways as the national carrier.
- Meeting the growing demand for transport by Iraqi Airways aircrafts.

2. Quantitative Objective. Table (13) shows the quantitative objectives for civil aviation activity during the plan period

Table (13)

Quantitative objectives for civil aviation activity during the plan period 2012-2017

Year	Number of aircrafts		Number of passengers	
	Incoming	outgoing	Arrivals	Departures
2012	13906	13906	992301	1008847
2013	16223	16223	1129170	1155431
2014	18540	18540	1266039	1302015
2015	20857	20857	1402908	1448599
2016	23174	23174	1539777	1595183
2017	25491	25491	1676646	1741767

The quantitative targets for air transport activity in the rebuilding of the Iraqi air fleet for the period of 2013-2017 is represented by the provision of (34) passenger plane by (15) long range aircrafts and (19) medium and short range aircrafts and (6) cargo aircrafts with long ranges and large capacities, as shown in Table (14).

Table (14)

Number of aircrafts expected to be added to the Iraqi air fleet during the plan period

Aircraft Types	2013	2014	2015	2016	2017	Total
Long range aircrafts	3	2	2	5	3	15
Medium range aircrafts	5	4	3	5	2	19
Cargo aircrafts	–	–	2	2	2	6

Total	8	6	7	12	7	40
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While the quantitative objectives for expected passenger's numbers (national and international) and cargo (incoming and outgoing) to be transported on Iraqi airways during the five-year plan (2012-2017) is illustrated in table (15)

Table (15)

Planned national and international transportation for Iraqi Airways for the coming five years

	Year	2012	2013	2014	2015	2016	2017
1	International Travel (passengers)	500940	1083252	1516552	1971517	2464397	2710836
2	National Travel (passengers)	48036	173643	225735	293455	366819	403500
3	Incoming cargo (tons)	47436	108423	151792	346085	795997	1034796
4	Outgoing cargo (tons)	924	692	969	1259	1574	1732

6-7-1 Means for achieving objectives

1. The use of global expertise in the development of this activity.
2. Pox solution to the Kuwaiti lawsuits against Iraqi Airways.
3. Directing the government and foreign investments to build new airports.

7-7-1 Private sector role

In the area of infrastructure, the private sector can play an important role through:

1. The construction of new civil airports by investors (both aerial and ground).
2. The construction of the aerial parts of the airports by the states (runways, escape roads , air control towers, aircraft parking yards), and offering the ground parts (passenger halls, restaurants, cafeterias, duty free shops, garages ...) to the private sector to execute by investing in areas with high economic and technical feasibility as high attraction zones such as religious touristic areas.

In the operations field, the private sector can contribute independently or through joint operation, while in the field of service provision, the private sector can play an important and active role, for example, the duty of the General Company of Iraqi Airways can be confined to transport passengers and baggage on board of its aircrafts and marketing for that, and the way can be left open for the private sector to provide services in the following fields:

- ❖ Hospitality Services
- ❖ Aircraft maintenance.

- ❖ Provide services to aircraft while they are at the airport (electricity, air conditioning, cleaning).
- ❖ Cargo.

2. Telecommunications Sector

The telecommunications sector consists of the following activities:

1. Communications activity (includes switches and networks and messaging).
2. Postal Services.
3. Internet and information technology (will be discussed in the telecommunications activity due to the similarity in the way of operation, and the use of almost the same infrastructure for communications activity).

2-1 Communications Activity

2-1-1 Current Situation

Due to the important role played by the communications sector in civil and military fields, this sector's infrastructure has suffered, during successive wars, from strikes that led to almost total destruction, also the deterioration of the security situation and terrorist and sabotage acts since 2003 resulted in stopping the maintenance and re-rehabilitation of the infrastructure in hot and unsecured zones especially the fixed phone network.

On the other hand, the formation of the Media and Communications Commission withdrew most of the powers and responsibilities of the Ministry of Communications and assign to them to the Media and Communications Commission, this caused a foot-dragging in the implementation of a clear telecommunications policy in Iraq during the period 2003 – 2011, and confusion was evident in this area in terms of the quality of the projects that are proposed and the constant change in determining priorities among them.

In 2002, Iraq used to own (285) electronic switches distributed across all provinces, the number of telephone lines was around (1183) thousand lines and telephone density per 100 person for Iraq as a whole was around (4%). In 2011, the number of switches was (331) switch, and the number of telephone lines was (1956) thousand lines and telephone density per 100 person (6.8%) for Iraq as a whole and (10%) of the province of Baghdad. The number of post offices for the same year was (379) office for all provinces in Iraq, while the number of post office boxes was (58486) box, and as shown in table (16).

Table (16)

Major KPI's for the telecommunications sector during the period 2002-2017

KPI	Number of Switches	Total numbers of phones (in thousands)	Post Offices	Post Boxes
Year				

2002	285	1183	314	44218
2003	279	1128	–	–
2008	296	1525	355	53627
2009	310	1650	376	57273
2010	315	1720	379	58612
2011	331	1956	379	58486
2012	345	2191	384	58490
2017	360	3366	388	58510

The International Network Services (Internet), is considered a new service in Iraq, as the number of operating service centers totaled (19) center in 2001 and (55) center in 2003 and (26) center in 2006, while the number of centers operated by the private sector reached (30) centers during 2003 and (15) center during 2005 and (5) centers during 2006. With regard to the current situation of the mobile phone network, and despite the delayed entry of this technology to Iraq until 2003, the number of activated lines has increased significantly reaching (25363.6) line in 2011, and the coverage of these networks ranged between 40% to 95%. Perhaps the main reason behind this is the cheap subscription card (SIM) and the disruption of fixed telephone services and the desire of the Iraqi citizen in the acquisition of a mobile phone and use it as a proof for keeping up with technology and take advantage of its features, but the levels of providing mobile phone service has worsened in recent period and mobile phone companies did not take any effective actions to improve service in spite of forwarded warnings.

The level of this service is still below the required level, and it requires more efforts to ensure efficient service provision whether for government departments or citizens.

And in order to take advantage of the geographical location of Iraq and to strengthen its role as a link between East and West, North and South, work is underway to connect Iraq to neighboring countries through a network of hubs and optical cables.

The telecommunications sector has become one of the important and profitable sectors at the same time, and state revenues can be significantly enhanced through this sector activities, also the field is widely open for the private sector to contribute to the construction and operation of this sector many projects through partnership contracts or through complete investment, while maintain the state right to the sector supervision and regulation.

The general framework adopted by the telecommunications strategy in Iraq for the coming period is the outputs of the World Summit on the Information Society phases and the General Arab strategy for Telecommunications and Information Technology 2007 - 2012, and the Regional Action Plan for building the information society in ESCWA countries and the Millennium Development Goals.

The second report for the national indicators for monitoring the Millennium Development Goals adopted by the Central Bureau of Statistics in May 2009 show that the adopted indicators are:

- Number of fixed telephone lines and mobile phones per 100 person.
- Number of personal computers calculated per 100 person.

Table (17) shows the adopted indicators and values for base years and target values for 2017, where we note the raise in the tele-density in 2011 to (6.8%) compared to (5.6)% in 1990, against a quick evolution for the use of mobile phone and families owning personal computers and using Satellite.

Table (17)

Indicator	Base number	Base year	Current number	Year	Targeted for 2017
Fixed line per 100 person	%5,6	1990	%6,8	2011	%25
Mobile line per 100 person	0	1990	%76,3	2011	%100
% of families owning a personal computer	%3,6	2004	%18,1	2008	%20
% of families using satellite	%32	2004	%88,3	2007	%100

2-1-2 Possibilities

2-1-3 Problems and Challenges

- Inability to carry out maintenance works of the terrestrial telephone network in hot zones.
- The collapse of the telecom network infrastructure and obsolescence of communications apparatus.
- Lower rates of implementation from this activity allocation.
- The absence of a specific telecom law for frequency use and allocations.

2-1-4 Vision

A qualitatively sophisticated Information and Communication Technology infrastructure, and upgrading telecommunications to reach international standards to ensure quality and the provision of high-level services and keeping pace with global developments in this area and achieving e-government.

2-1-5 Objectives

1- General Objectives

- Expand fixed line penetration in urban and rural areas and to achieve high levels in universal access and universal services.
- Providing adequate infrastructure suitable for the application of e-government services.
- Reduce disparities in mobile penetration in urban and rural areas.

- Expand computers penetration.
- Expand Internet penetration.
- Reduce the cost of using telecommunications and Internet service proportionally to citizen's income, and make their prices accessible to broader segments of society, particularly school and college students
- Improve the quality of telecommunications services and the Internet.
- Promoting the use of broadband services at reasonable prices.
- Improving and expanding communications bandwidth through international gateways.
- Best use of frequencies and controlling international mobile phone calls and Internet service through access gates.

2- Quantitative Objectives

Table (18) shows infrastructure indicators for information technology and telecommunications and access, we will note that some of these indicators were ambitious relying on national indicators for monitoring the Millennium Development Goals such as the number of telephone lines and the number of mobile phone subscribers as well as for families with computers

2-1-6 Means for achieving objectives

In addition to securing the necessary investment allocations to achieve the objectives of the activity, either through government or private and foreign investment, there are a number of supporting issues that will assist in realizing this activity objective:

1. Support the Telecommunications and Media Regulatory Authority and enhance its operational capabilities necessary for the application of the rules and instructions.
2. The creation of an enabling environment through the development of laws and regulations for the telecommunications and information sector including the Ministry of Communications law, by restructuring the ministry to include information technology functions within its responsibilities, as well as through the enhancement of the regulator role to create a fair and competitive and transparent climate for all parties in order to encourage investment, and activating the role of the private sector, and seek to protect consumer and simplify licensing procedures for telecommunications services.
3. Transfer of developed expertise by entering strategic partnerships with international companies in the field of telecommunications services provision.
4. Ratification of intellectual property rights agreements and to prevent illegal copying of software and artistic and intellectual creations.

Table (18)

Information technology, telecommunications and access indicators

Indicator	Current situation	Targeted in 2017
-----------	-------------------	------------------

Fixed line per 100 citizens	%6,8	%25
Number of mobile phones subscribers per 100 citizen	%76,3	%100
Number of computers per 100 citizens	%1,5	%5
Number of internet subscribers per 100 citizen	%14	%20
Number of internet subscribers/ broadband per 100 citizen	%6,3	%10
% of families with computers	%18,1	%20
%of families with internet access at home	%4	%10
% of population covered with mobile phone service (coverage includes most areas)		%100
Internet access tariff (20 hours per month) in USD and as percentage of annual individual income	%8	
Mobile phone usage tariff (100 minute usage per month) in USD and as percentage of annual individual income	%5	

2-1-6 Private Sector Role

Private sector can play an important and big role in the telecommunications sector as it is considered one of the profitable and high return on investment activities, in addition to the fact that its services is witnessing an increasing demand by citizens, governments and companies. The areas that the private sector can intervene in are:

1. Mobile telephone services
2. Fixed telephone services
3. Wireless telephone services
4. International information network (Internet)

2-2 Post Activity

2-2-1 Current Situation

Despite the developed postal services in Iraq and the good service provided by it in the past in light of the weak and limited phone service and the lack of modern means of communication represented in mobile phones and the Internet, the current situation of the postal service in Iraq is currently very low and almost non-existent and is unreliable.

2-2-2 Possibilities

2-2-3 Problems and Challenges

- Not including postal development projects within the priorities of the telecommunications sector.
- The slow use of modern and advanced communication systems in postal work.
- Weakness of available opportunities for this activity and the use of traditional work methods.
- Lack of beneficiaries trust in the service level.

2-2-4 Vision

Rebuilding the postal activity to offer fast and reliable services.

2-2-5 Objectives

- Improve the quality of postal services, specifically the traditional services offered by the Postal and Savings Department, and the introduction of new postal services.
- Development of the Iraqi postal services both internally and externally with all countries to reach global postal services level.
- Increasing the proportion of home delivery mail distribution.
- The integration of postal sector activities with the economic and governmental activities in order to implement the government's e-government and e-commerce programs, and ATM applications and others.

2-2-6 Means for achieving objectives

- Separating the postal activity from telecommunications, and the formation of an independent entity, as a public company, for starter, and later considering giving the private sector a role in this activity.
- Develop a clear strategy for the approaches that can be adopted to give effect to postal activities.
- Develop an action plan that includes human capacity building, modernizing the postal activity infrastructure in Iraq, and make the most of information and communication technology to improve postal services and linking them electronically
- Make the most of ICT and other banking technologies to improve savings services and increase the confidence of citizen in this service.
- Introducing a strategic partner for the Postal and Savings Service that should provide administrative and technical expertise and modern technological systems to increase efficiency and improve the level of service.
- The need for the Postal and Savings Service Department to on feasible commercial basis and be able to compete in a free market environment, and reduce its dependence on government subsidy.

- Continue to encourage the private sector to invest in the development of international mail exchange in Iraq and in the courier mail activity.

3. Storage Sector

3-1 Current Situation

Storage is considered a strategic base structure due to the fact that it is related to ensuring food security for the general public especially the availability of grain. This sector includes silos and grain storage warehouses (wheat, barley, rice), and it is one of the Ministry of Commerce / General Company for Grain Trade activities.

The number of grain storage silos in the provinces of Iraq is (45) silo in various capacities, with storage capacities for each silo ranges between (10 - 150) thousand tons of both types; vertical granary and dome-shaped granary.

Due to link between storage and food security and as a result of the wars experienced by Iraq, it was necessary to secure the availability of good stocks of major cereal, therefore, the storage capacities have been increased to reach around (3.6) million tons of wheat and barley in 2011, and around (470) thousand tons of rice, distributed across all Iraq provinces. At the lead of the storage capacities comes the province of Ninawa followed by Sallaheddin and then Baghdad and Diyala, and at lowest comes the wheat and barley storage in the provinces of Karbala, Muthanna, Dhi Qar, Sulaymaniyah. As for rice, the storage capacities for this basic strategic grain are concentrated in Diwaniyah, Najaf, Baghdad, Ninawa, as in the table (19).

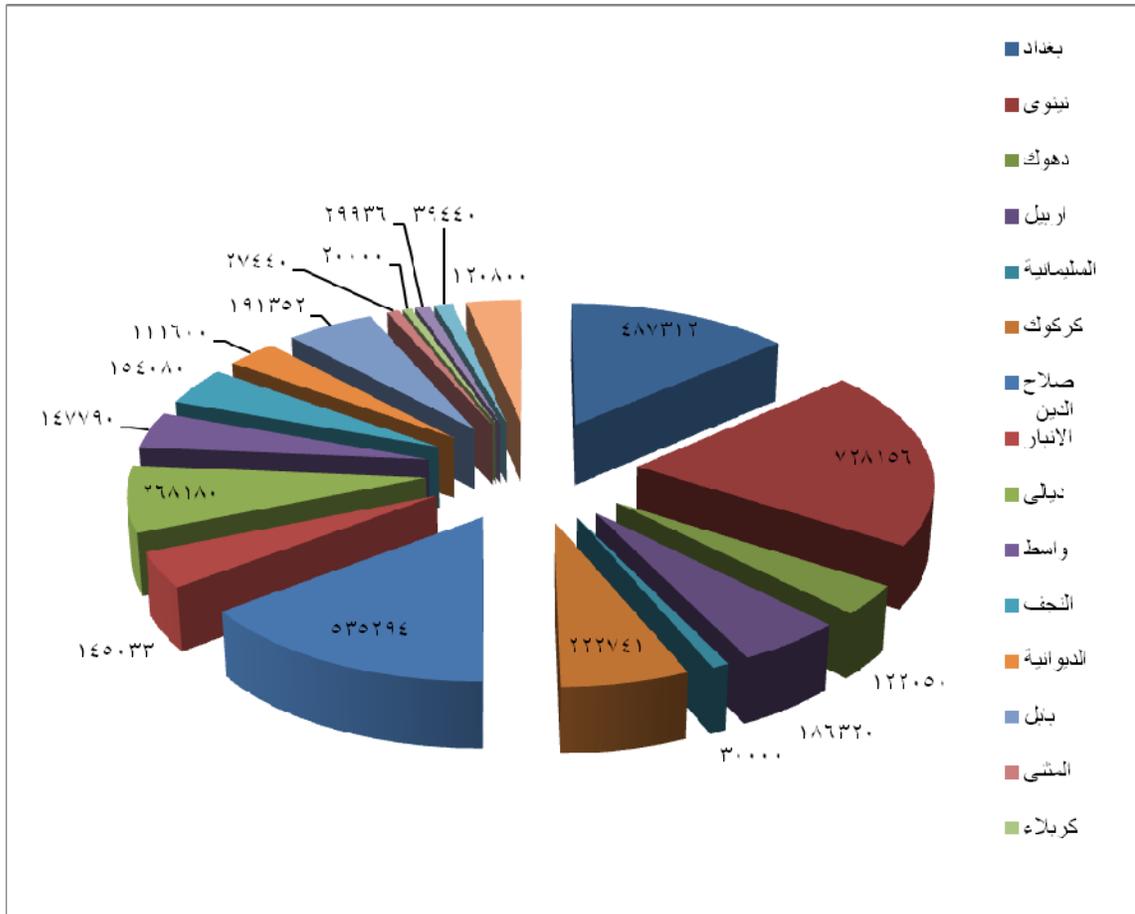
Table (19)

Storage capacities for the General Company for Grains Trade Warehouses and Silos until 2011

Province	Storage capacities for the General Company for Grains Trade Warehouses and Silos (Wheat and Barley)				Current storage capacities for Rice
	Benzat	Punkers	others	Current total Storage capacities/ Tons	
Baghdad	315500	171812	0	487312	52795

Ninawa	315758	333508	78890	728156	41581
Dahuk	103400	17250	1400	122050	864
Erbil	96000	90320	0	186320	6827
Sulaymaniyah	0	0	30000	30000	2362
Karkok	20000	62741	140000	222741	7994
Sallaheddin	245600	289694	0	535294	23727
Al Anbar	10000	135033	0	145033	9047
Diyala	124300	143880	0	268180	26020
Waset	44110	95680	8000	147790	16780
Al Najaf	63000	91080	0	154080	78574
Diwaniyah	15000	96600	0	111600	84366
Babel	93000	98352	0	191352	24990
Muthanna	8000	19440	0	27440	10829
Kurbula	10000	0	10000	20000	6951
Dhi Qar	20000	9936	0	29936	7105
Misan	10000	29440	0	39440	34910
Basra	120800	0	0	120800	34047
المجموع	1614468	1684766	268290	3567524	469769

Diagram showing the storage capacities for Wheat and Barley distributed across provinces until 2011



These storage capacities in all forms shown in the above table as below the national production and national imports level, therefore, there is a need to add new storage capacities to secure the usual need and ensuring the availability of a strategic storage of main grains and compensate for obsolete silos.

3-2 Problems and Challenges

1. The obsolescence of several silos and their need for rehabilitation.
2. Back dated management and operations methods for silos.

3-3 Vision

Secured and sustainable storage methods to accommodate for the food security requirements of strategic crops (wheat and rice)

3-4 objectives

1. General Objectives

- Ensuring the availability of strategic stocks of wheat and rice for at least six months
- Building new silos and good locations for the storage of wheat and rice.

2. Quantitative Objectives

Table (20) illustrates the suggested storage capacities to be added during the five plan period 2013-2017 taking into consideration population growth.

Table (20)

Suggested storage capacity to be added during the plan period (2012-2017) distributed according to provinces

Province	Wheat Silos current storage capacity / Tons	Province grain needs for 6 months (wheat and barley)/ Tons	Suggested silos storage capacity / Tons
Wast	42000	95000	60000
Al Anbar	10000	120000	120000
Kurbula	10000	83000	80000
Najaf	60000	104000	60000
Babel	93000	143000	60000
Muthanna	10000	60000	60000
Dhi Qar	20000	152000	120000
Basra	125000	207000	120000
Misan	10000	83000	80000
Diwaniyah	15000	92000	80000
karkok	20000	106000	100000

Sallaheddien	10000	106000	100000
Total	425000	1351000	1040000

Table (21)

Suggested storage capacities according to plan period 2012-2017

Province	2012	2013	2014	2015	2016	2017
Kurbula	-	30000	-	-	-	50000
Dhi Qar	30000	-	-	-	-	90000
Waset	-	-	60000	-	-	-
Diwaniyah	-	-	80000	-	-	-
Misan	-	-	80000	-	-	-
basra	-	-	-	120000	-	-
Al Najaf	-	-	-	60000	-	-
Karkok	-	-	-	60000	-	40000
Al Anbar	-	60000	-	-	60000	-
bable	-	-	-	-	60000	-
Muthanna	-	-	-	-	60000	-
Sallaheddien	-	30000	-	-	-	70000
Total	30000	120000	220000	240000	180000	250000

3-5 Means for achieving objectives

- Increasing the storage capacities by building new silos and rehabilitating the available ones
- Allocation of needed amounts.

Water and Sewage

In spite of continuous emphasis in development plans on the importance of water and sewage services and their direct link to human health and sustained environment, and the achievements of the seventies and eighties in the progress of these services, which reached 95% of urban areas and 75% of rural areas, yet decades of war and economic sanctions and the deteriorating security situation have caused a regression in these services. Drinking water coverage became 48%. The quality and quantity were also very low, particularly sewage, which is at a near standstill, even in Baghdad, which had a modern sewage system in the eighties.

The NDP has given these services priority, to cover all Baghdad with drinking water and sewage treatment, and to lower the rate of areas not served by drinking water networks to 10% in other urban areas, and to 26% in rural areas, while increasing sewage services, other than in Baghdad, to 35%.

To find out the situation of these services, we will analyze the data for Baghdad and other governorates in Iraq

1: Drinking water

Drinking water is considered a basic necessity for good health and a human right. It is important in particular for women and children, especially in rural areas, as they carry water for long distances. This sector has not developed since 1990, and the number of families that use good quality water does not exceed 82% in 2011, while the supply is unstable. A more important problem is the pollution of the network as a result of leakages in pipes and storage tanks estimated at 20-40%. Problems in efforts to provide safe and sanitary water in rural areas are huge, which is a challenge for achieving MDG of 91% of families.

The survey in 2011 showed that only 59.7% of the populations receive piped water to their homes, with big differences in water supplies between governorates and rural and urban areas. Potable water is available for 83% of the people, 97% in urban areas and 76% in rural areas. 65% of families use public water networks as the main source of drinking water. The public network provides 25% of users with water for less than 2 hours a day. 47% of Families in rural areas use public networks compared to 72% in urban areas.

Water salinity is one of the main causes affecting the public network, and very few families in Basra and Misan use public water networks.

1-1 Water Services in Governorates

1-1-1 Status

Water is produced from 261 projects and from more than 3250 water collectors with various capacities for 14 governorates, as well as districts in Baghdad. Over 22 Million people are covered by this service and actual users are 17, 8 Million.

The Ministry of municipalities provides this service in qualities conforming to international standards, and to include areas that were not serviced before, while reducing shortages and waste, through its projects and collectors spread in all areas.

7.9 Million Cubic meters of water are produced daily; as the daily requirement is 8,991 Million, the shortage is 1,091 Million cubic meters and the rate of un-served areas is 82%. There is a variation in the rates of shortages in the governorates, with 4% in Salah Eddin and Najaf, 6% in Basrah and Karbala, 46% in Baghdad Governorate and 30% in Thi Qar governorate as, shown in the following diagram:

1-1-2 Water capacity in governorates

- Operating projects in all governorates number 261 with 3200 water collectors to produce potable water.
- There are Water networks that provide potable water to the people.
- There are central labs in the governorates in addition to the national center in Baghdad for testing of water quality.
- Tankers distribute water in remote villages.
- 30 water projects under construction.
- Many experienced staff available.
- Contracting companies are providing funding for water projects.
- Good capability of ensuring required water resources for water projects.
- Good capability of providing fuel to operate water projects.

1-1-3 Water Problems in governorates

- Old networks that require replacement.
- 14% of water wasted in networks and pipes.
- Obsolete water projects in some districts that require rehabilitation or replacement.
- Delay by contractors in implementation of new projects.
- Continuing decrease in water resources causing a lower water level.
- Low annual allocation for water projects in investment and operating budgets to provide fuel, maintenance and sterilization materials.
- No allocations in regional and governorate development plans to construct and replace networks and to supply and install water treatment units.
- Insufficient fuel to operate generators in projects.
- No regulations to deter abusers of water networks and pipelines.
- Insufficient staff allocations.
- Non implementation of revenue collection which only represents 9% of the operational budget.
- Low price of water sold, which is fixed regardless of consumption quantity.
- Water gauges do not register quantity of water correctly.
- Unregulated and unofficial subscriber uses water without paying.
- Engineering staff need training on new technology.
- Private sector has no role in this activity.

Table showing number of water projects and collectors and population and shortages by governorate in 2011

1-1-4 Vision

To provide potable water to all Iraqi citizens in quantities and specifications conforming to world standards.

	Governorate	No. of projects	Produced water quantity M3	no. of operating water collectors	produced water quantity M3	total water produced	population of governorate	to requirement of water	short age in production M3
1	Nineva	41	727591	75	97997	825588	2994979	883379	%7
2	Kirkuk	16	393876	215	265936	659812	934698	752396	%18
3	Baghdad	10	226080	137	252067	478147	2097473	705803	%46
4	Diyala	25	237043	147	219366	456409	1662386	570511	%25
5	Salaheddin	20	336200	177	282410	618610	1351150	551769	%4
6	Babel	18	245920	264	391741	637661	1765065	758978	%12
7	Najaf	13	248960	118	233270	482230	1155087	501007	%4
8	Karbala	7	242620	124	215283	457903	961638	509668	%6
9	Wassit	21	185500	202	247350	432850	1131790	531941	%13
10	Anbar	21	372418	155	177003	549421	1600188	624073	%5
11	Misan	13	68600	230	383222	451822	867265	501522	%11
12	Muthana	7	116110	62	115738	231848	65229	298647	%14
13	Qadisia	15	198773	175	188531	387304	1046264	564983	%22
14	Thi Qar	18	109140	141	270182	379322	1718957	383952	%30
15	Basra	15	237000	214	652960	889960	1992029	852876	%6
	Total	260	3945831	2436	3993056	7938887	21937198	8991505	%18
	Desalination units		86	43120					
	Solar Energy units		728	14300					
	Grand total		3250	4050476					

1-1-5 Goals

First: Including areas not previously served with water service.

- Indicator of water users

- A. To increase users from 82% in 2012 to 98% in 2017.
- B. To reduce wastage from 40% to 25% in 2017.

Methods of achieving goals

- A. Improving execution of current projects on time.
- B. Erecting new projects in areas that were not served, or expanding capacity of existing projects to reach their design limit.
- C. Insuring operating requirements such as fuel, power, staff, filtration materials, and sterilization and purification materials.

Achievement indicator

-Reducing ratio of people who do not have safe drinking water from water projects or collector units to 2% in urban areas and to 15% in rural areas.

- A. Priority in rehabilitation of existing projects and erecting new projects in governorates that have a high shortage.
- B. Erecting desalination plants in governorates with high salinity, especially the south.
- C. intensifying water security programs in villages and rural areas.

Third: Overcoming shortage of water projects

Achievement indicators

- A. Increasing Operating water projects from 261 in 2012 to 374 in 2017, of which 30 are under construction, with 83 new projects during the plan.
- Increasing production from 3986738 M3/day to 14486138 m3/day, in order to reduce shortage to 2%.

Methods

- A. Completing and building 113 projects in all governorates financed from central investment budget.
- B. Ensuring sufficient water share for existing and new projects from reliable sources.
- C. Inviting foreign companies to implement water projects, and not resorting to inefficient companies.
- D. Implementing projects on time and avoiding conditions that will extend the period of execution.

Fourth: Insuring good quantity and quality of water according to international standards, reducing waste and shortages by:

- A. Increasing per capita consumption from 300 Ltr per day to 350 Ltr per day, by implementing new projects.

- B. Reducing water shortage to 2%.
- C. Reducing wastage to 25%.

- Methods

- A. Reducing wastage through rehabilitation of distributions networks.
- B. Consumer awareness of water usage especially for non-drinking purposes.
- C. Providing consumers with water gauges in housing units.
- D. Reducing receivables of water services and linking rates to consumption levels.

**Number of water projects proposed during 2013-2017
(2017-2013)**

Sr.	Governorate	No. of New projects
1	Ninava	7
2	Salaheddin	4
3	Anbar	18
4	Wasit	7
5	Najaf	5
6	Babel	1
7	Karbala	1
8	Qadsia	4
9	Thi Qar	1
10	Misan	7
11	Basra	3
12	Baghdad	4
13	Kirkuk	9
14	Diyala	11
15	Muthana	1
	Total	83

Total production capacity 269000 M3/hour

1-1-6 Private Sector

Water sector provides many promising opportunities for local and foreign private sector participation, to work separately or jointly with the government on projects. These include:

- A. Establishing projects on BOT (Build, operate and transfer) basis.
- B. Provide consulting services for economic and technical feasibility studies, environmental reports, and design and supervision of project implementation.
- C. Maintenance of water networks.

D. Quality control of inputs and outputs of water production, and observation of water quality at the consumer level.

1-2 Water services in Baghdad

1-2-1 Status

In Baghdad water distribution and production is through 8 treatment projects and water collectors in the outskirts. Drinking water is pumped to 8 ground reservoirs for pumping to the networks in Baghdad. There are nine pumping stations that serve residential communities.

The investment plan for Baghdad is based on a standard set in 1982, which specifies a daily per capita consumption rate of 500Ltr /day. Accordingly these plans included the Rasafah treatment plant with a capacity of 910 thousand cubic meters per day, and installing 16 tanks on both sides of the rivers, together with new distribution networks, as well as renewing 150 older networks. However, the postponement of this project caused a large difference between supply and demand, mainly due to population increase, and has now reached more than one Million cubic meters per day, causing water shortages, especially in summer.

In addition, pollution is also a concern, because of its effect on health and the environment. Pollution was caused by flooding of sewage water, breakages in the pipelines and some abuses by people .

In 2010-2012 there was good progress with an actual increase of 4900000 M3/day, reducing shortage from 1200000 M3/day to 760000M3/day. This was due to more expenditure to rehabilitate projects. Most families within Baghdad have access to potable water in varying rates. The following table shows Baghdad water project quantities and areas served.

Per capita share rose by 8.3 % in 2010 and 16.6% in 2011. 454,249 Kms of water pipes were installed and 190 thousand Kms were renewed in 2011 (41, 8%).

Achievement rate of the 2010-2014 NDP for Baghdad was 60% of plan. This was due to delays in project implementation and non inclusion of some projects in investment budgets such as tanks and the second stage of Rasafah project.

In any case, water quantity and quality is higher than in other governorates, and achieving the goals in Baghdad is easier.

1-2-2 Problems, challenges and Capability in the Baghdad area are no different from their counterparts in other governorates.

1-2-3 Vision

To provide sufficient drinking water with good quality for all of Baghdad's population.

1-2-4 Goals

First: increasing production from 2,740 Million M3/currently to 5,644 Million M3 in 2017 to close the gap.

Second: Increasing per capita consumption from 225 Ltr/day currently to 400 Ltr/day in 2017.

Third: Improving water quality

Produced water quantities by water projects and collector units in Baghdad for 2011

Sr.	Project name	Project location	produced quantities 100 cubic meter / day 1000'	Areas supplied with water
1	Al-Karkh water	Al-Tarmia	1150	2B Taji reservoir, Abu Ghraib reservoir, northern reservoir, southern reservoir, 2B reservoir, east Tigris project reservoir +Tarmiyah area
2	East Tigris water except station 2B	Sabe' Abkar	579	Rusafa: - Al-Mahdi district, Basateen district, Shaab district, Tunisia district, Alrabeaa district, Albaidaa district, Jamelah district, Kahira district, Waziriya, Mustansiriya district, Sadr City, Magrib district, Nidal district District 9 Nisan and its areas and surrounding areas i.e. Rusafa except served areas
3	Alkaramah water	Al-etiefia	155	Alkathimiya area Al-etiefia and part of the northern Karkh will be supplied for areas (208 , 206 , 413 ... 409 , 407)
4	Al-Qadsia water	Al-Qadsia	90	Qadisiyah area and its surrounding areas (215 , 213 , 211 , 205 , 614 , 612 , 616 , 610 , 606 , 604)
5	Aldora water	Assyrian district	100	Most of dora areas will be supplied for areas (, 820 833 ... 821 , 823 858 856 , 852 , 850 , 818 ... , 804 , 802 , 848 , 846 , 840 ... 822)
6	Alwathba water	Al-Ewadia	76	Rusafa center and part of Alathamiya will be supplied for areas () 119 ... , 109 107 122 ... , 108 , 104
7	Alwehda water	Al-Karada	72	Al-Karada will be supplied for areas (906 , 905 , 904 , 903 , 902) 910 , 908
8	Al-Rasheed water	Al-Rasheed camp	45	Zaafaraniya will be supplied for areas (, 977 961 951 , 949) (979
9	Alsadr water	Kesra and Attash	95	Alsadr areas will be supplied
10	Al-Jadria water	Al-Jadria	58	Al-Karada areas will be supplied (929 , 913 , 911 , 901)

11	Al-Kathmia water	Al-Kathmia	90	Al-Kathmia area will be Supplied
12	Water collectors	Miscellaneous	230	Remote areas from filtration projects
Total			2740	Two Million and Seven Hundred and Forty Thousand m ³ /day

1-2-5Methods

- A. Completing current and new projects to a high standard.
- B. Erecting high capacity tanks.
- C. Upgrading housing networks to reduce wastage and ensure good quality.
- D. Extending water projects to new housing areas.
- E. Upgrading pipelines.

As shown in the following table

- F. Providing enough storage capacity for sectors when water projects are not operating, or improving supply at peak times.
- G. Extending raw water networks to avoid using drinking water.
- H. Utilizing maximum capacities of water production projects.
- I. Maintaining pressure in pipelines.
- J. Tracking violations and breakages in the network to ensure optimum utilization and reduce wastage.
- K. Control system and database for water networks.
- L. Increasing awareness of water consumptions patterns.
- M. Gradually increase supply of water linked to consumption rates.
- N. Improving sampling and testing of water quality.
- O. Installing gauges in all buildings and ensuring collection of bills.
- P. Capacity building of technical, financial and administrative staff.
- Q. Ensuring water inlets from rivers are free of pollution.

Five year plan 2013-2017 for Baghdad water department										
Sr.	Project name	Estimated total cost	Annual allocation (amounts in Million Dinar)						Project location	Type of Project
			2012	2013	2014	2015	2016	2017		
1	Upgrading drinking water networks for residential districts (install	118000	18919	8000	15000	15000	15000	13697	Baghdad	ongoing

	and supply)									
2	Install drinking water networks for reorganized new districts (install and supply)	40000	11321	5000	5000	5000	6198		Baghdad	ongoing
3	Rehabilitation of filtration projects	300000	10565	20000	50000	50000	50000	53965	Baghdad	ongoing
4	Install drinking water transfer lines	100000	8065	5000	20000	20000	20000	17465	Baghdad	ongoing
5	Install raw water transfer lines	80000	7385	5000	15000	15000	15000	21549	Baghdad	ongoing
6	Provide ductile and plastic pipes with accessories	100000	18071	10000	20000	20000	17777		Baghdad	ongoing
7	Establish ground reservoirs (R3, R9)	115000	27881	20000	36324				Baghdad	ongoing
8	Rasafah water project (establish filtration center with all electrical/mechanical works)	1448495	200011	110000	155037				Baghdad	ongoing
9	Studies and design	12000	2566	2000	576				Baghdad	ongoing
10	Removal of obstructions for Al-Rasafah water project	10000	1493	24	2000	2000	1059		Baghdad	ongoing
11	Establish electrical station for Al-Rasafah water project	26426	6779	1000	2127				Baghdad	ongoing
12	Al-Rasafah water project (second stage)	869097	0	0	173000	500000	190000	6097	Baghdad	new

13	Prepare studies and design for establishing the second stage of Al-Rasafah water project and reservoirs	15000	0	1000	5000	4000	3000	2000	Baghdad	new
14	Establish ground reservoirs (R1,R2,R8) in Alathamiye, Alshaab and Alzaafaraniyah	165000	0	5000	80000	60000	20000	—	Baghdad	new
15	Establish ground reservoirs (k3,k5) in Alkarkh and Alkathimiyah	50000	0	2000	25000	20000	3000	—	Baghdad	new
16	Expansion of Aldorah water project to a capacity of (225) Ltrs per day	60000	—	—	12000	20000	20000	8000	Baghdad	new
17	Establish ground reservoirs (R4,R6)	82000	—	—	—	—	17000	65000	Baghdad	new
18	Establish ground reservoirs (k1,k4)	65000	—	—	—	13000	35000	17000	Baghdad	new
19	Acquisitions of land for Al-Rasafah water project	55000	—	1000	10000	15000	15000	11750	Baghdad	ongoing
Total		4787115		19524	626064	759000	428034	216523		

2- Sewage

Iraq has many challenges in Sewage: 84% of the population use improved sewage facilities, but only 26% have access to public sewage networks and this rate is only 2% in rural areas, according to 2007 statistics. 30% of families use a public sewage network, 40% use septic tanks, 25% use underground absorption pits. It is worse in the countryside where 7% use open absorption pits. The survey of 2011 showed that 96% of Iraqi population use improved sewage methods, 99% in urban areas and 90 in rural areas. The rate decreases for sewage connected to a pumping station, to reach 4% in rural areas

and 33% in urban areas. The survey of 2011 showed that 59% of families said that the service is bad or very bad, and 85% in rural areas.

One third of families have public sewage services, 66% in Sulimania and Baghdad. Nationally, 53% of families with higher income have access to the public network, compared to 9% of families of low income. 40% of these families use septic tanks or covered pits, 35% use unsafe methods.

Iraq could achieve 96 % of coverage of improved sewage facilities but it is confronted with fixed supplies for treatment of pollution as a result of infrastructure deterioration. 83% of waste water is not treated which caused very serious health and environmental problems

2-1 SEWAGE services in governorates

2-1-1 Status

This is below required levels, with 26% of the population in the governorates without service (except Baghdad and Kurdistan) in 2009. In 2003 the percentage was 7% of who receive service. Lack of attention in the past has caused pollution and a real danger to health, as most waste water is returned to rivers and streams whose waters are used by many dwellers and villagers who do not have drinking water supplies.

2010-2014 NDP called for 48 new sewage projects, many of which are now being implemented, raising coverage to 32%. This will improve services in the governorates during the next 2 years. The table below shows the status of sewage in the governorates and coverage rate, showing big differences between them. This requires special attention for a fair distribution in these governorates to reduce the differences.

Sewage network water projects for governorates 2012

Sr.	Governorate	Design capacity M3	number of people serviced	percentage of people serviced	no. of heavy sewage stations	no. of pumps	network length Kms	no. of Manholes of heavy networks
1	Ninewa	17820	86713	7	7	19	104.5	3488
2	Kirkuk	3500	9000	2.6	2	5	15	870
3	Salahalddin	59000	195200	69	20	62	483,3	526
4	Diyali	21600	22610	8.5	1	5	73.34	0
5	Anbar	7000	35500	5.6	6	12	2.5	3750
6	Baghdad	3000	12000	5	6	10	8	150
7	Babel	12000	55000	27	13	22	128	6682
8	Karbala	41000	235000	25	4	14	224	4000

9	Najaf	42000	180000	41	7	17	365.37	1740
10	Diwaniyah	12000	156000	20.8	19	31	243.4	3351
11	Wasit	0	0	0	1	2	180	0
12	Mothanna	37000	148000	54.76	46	5	16.277	1620
13	Thi Qar	18000	126000	3303	14	11	180.973	4785
14	Misan	36000	209000	91	31	68	1049.7	4800
15	Basra	118100	1000000	38.9	65	98	965	163.2
	Total	326100	2536023	32.42	242	381	4162.939	57610

2-1-2 Potentials

- a- Priority given to sewage services in 2010-2014 NDP, as shown by high number and capacities of projects under construction.
- b- Allocating sufficient investments in annual budgets.
- c- Increasing local contractors capabilities and of local staff.
- d- Interest by foreign companies in implementing projects.
- e- Byproducts of waste water treatment, such as fertilizers, and utilizing treated waste water for irrigation and green belts around cities, as well possibility of generating electric power from biomass.

2-1-3 Challenges and Problems

- A- Shortages in coverage.
- B- Obsolescence of sewage networks, as most were built over 20 years ago and need upgrading.
- C- Violations by some persons on rainwater networks by dumping polluted water in them.
- D- Horizontal expansion of towns causing additional costs.
- E- Delay in completing projects to twice the contract period.
- F- Low level experience of local consultants after 2003, causing variation orders and delays in completion.
- G- Dangerous pollution levels caused by diverting untreated water to water sources, especially mixing of sewage with nearby drinking water networks.
- H- Reluctance of skilled and unskilled labor to work in sewage projects for social reasons.
- I- Shortages in operating supplies such as machinery, equipment, pipes and fuel, causing poor maintenance and upkeep of existing projects.
- J- Problems in allocating land for these projects, which take a long time to complete.

2-1-4 Vision

Provide a Sustainable sewage system for all governorates to exceed MDG.

2-2-5 Goals

- a- Increasing users to 53% of population by 2017.
- b- Treated water channeled back into rivers must conform to international standards.

2-1-6 Methods

- a- Completing ongoing projects.
- b- Executing 42 new projects in most governorates as shown in table below, starting from the center to districts and to sub districts.
- c- Rehabilitation of all projects and replacement of damaged parts.
- d- Allocating funds in 2013 -2017 NDP for above operations.
- e- Revising town planning and horizontal housing standards and converting to vertical housing.
- f- Incentives for workers in sewage, to improve employment levels.
- g- Improving labs in governorates to ensure necessary tests of treated water standards.
- h- Removing obstructions in rain water networks.
- i- Requiring factories and hospitals to install treatment plants and not dump waste water in sewage or rain water networks without treatment.
- j- Intensifying monitoring and quality control of water that is returned to rivers.
- k- Rehabilitation of sewage staff through training, workshops and capacity building according to modern technology.
- l- Gradual rise in sewage fees to provide the department with sufficient funds for maintenance and operations.
- m- Providing operating supplies to achieve efficient utilization of existing projects and networks.

Table showing number of new sewage projects in 2013-2017

Governorate	No. of projects
Nineva	1
Kirkuk	3
Anbar	4
Diyali	4
Salahalddin	3
Wasit	3
babel	4
Karbala	1
Najaf	4
Qadisiyah	3
Mothanna	2
Misan	5
Thi Qar	4
Basra	1
Total	42

2-2 Baghdad Sewage

2-2-1 Status

Baghdad sewage is much better than in the governorates. The city is covered by integrated sewage projects and the coverage increased from 75% in 2009 to 86% in 2011

Total design capacity of sewage projects in Rasafah is 749000 M3/day; incoming water quantity is 675000 M3/day, i.e. a shortage of 196000 M3/day. Design capacity of Karkh project is 205000 M3/day and incoming water quantity is 625000 M3/day, i.e. a shortage of 420000 M3/day. The table below shows projects' actual and design capacities and type of treatment and number of people serviced and average sewage per capita

Sewage water treatment projects

Sr.	Project name	design capacity	actual capacity	treatment type	no. of users	standard sewage / per capita
1	Sewage water filtration project in Rasafah / Rastamiyeh	175000 M3/day	225000 M3/day	Physical /Biological	(1,5) million	116 Ltr / day / capita
2	Rastamiyeh project / third expansion	304000 M3/day	450000 M3/day	Physical /Biological	(1,5) million	200 Ltr / day / capita
3	Sewage water filtration project in Karkh	205000 M3/day	625000 M3/day	Physical /Biological	(2) million	200 Ltr / day / capita

2-2-2 Capacity and Challenges faced by Baghdad sewage are no different from those in other governorates except coverage(86%) and size of projects.

2-2-3 Goals

- A. Increasing users to 95% in 2017.
- B. Diverting treated water to rivers conforming to international specifications.

2-2-4Methods

- A. Completion of new and ongoing projects during 2013-2017.
- B. Rehabilitation of all projects and replacement of damaged parts.
- C. Allocating fund in 2013 -2017 NDP for above operations.
- D. Revising town planning for Baghdad and horizontal housing standards and converting to vertical houses.
- E. Improving labs in governorates to ensure necessary tests of treated water standards.
- F. Removing obstructions in rain water networks.
- G. Requiring factories and hospitals to install treatment plant and not dumping waste water in sewage or rain water networks without treatment.
- H. Intensifying monitoring and quality control of water that is retained to rivers.
- I. Rehabilitation of sewage staff through training, workshops and capacity building according to modern technology.
- J. Providing operating requirements to achieve efficient utilization of existing projects and networks.
- K. Implementing third expansion of Karkh project, drawing and BOQ's will be ready in November 2012 by the Japanese.
- L. Implementing of 2 projects each with the capacity of 400000 m³ / day in Karkh and Rasafah.
- M. Adding treatment units (chemical).
- N. Supply and install of Scada System for Rastamiyeh project.
- O. Supply and install flow meters for measuring incoming water levels.
- P. Supply and install sludge treatment with drying and compression.

Table below shows target for 2013-2017

Five-Year Plan 2013-2017 of Baghdad Sewage Department

Sr	Project name	Estimated total cost	Annual allocation (Million dinar)						Location of project	Type of project
			2012	2013	2014	2015	2016	2017		
1	Improving and expanding sewage and rain water networks in old areas of Baghdad, and rehabilitation of pumping stations	40000	30826	2189					Bagdad	Ongoing
2	Improving and expanding sewage and rain water networks in old areas of Baghdad, and rehabilitation of pumping stations / stage two	250000	—	25000	70000	70000	70000	15000	Bagdad	New
3	Consultant services and design for Baghdad sewage department	3000	3000	*2000					Bagdad	Ongoing
4	Preparing a study of Baghdad rain water and sewage till the MASTER PLAN year 2030	3000	—	3000					Bagdad	New
5	Maintenance, upkeep and operation of treatment plants for Baghdad sewage department	35000	15904	15764					Bagdad	Ongoing
6	Development and rehabilitation of sewage treatment plants	50000	—	5000	15000	15000	8000	7000	Bagdad	New
7	Implementing of main pipelines connecting the north eastern line and the main pumping station	120000	20149	30000	30000	2549			Bagdad	Ongoing
8	Implementing main pipeline on the south west line in Karkh with pumping station	125000	20432	50000	30000	17685			Bagdad	Ongoing
9	Implementing main pipe line on the western line in Karkh and Doura pumping station no. 2	140000	32474	40000	19900				Bagdad	Ongoing

10	Implementing main sewage network for three districts in Baghdad and pumping stations	45000	11457	500					Bagdad	Ongoing
11	Study of expanding sewage treatment project in Karkh with rehabilitation of nine main pumping stations (Japanese loan)	25000	1895						Bagdad	Ongoing
12	Rehabilitation of Baghdad line	36474	14000	10000	10000	2474			Bagdad	Ongoing
13	Preparing tender documents for two waste water treatment projects capacity 400000 M3/day each in Karkh and Rasafah	50000	10000	40000					Bagdad	Ongoing
14	Implementing tender for two waste water treatment projects capacity 400000 M3/day each in Karkh and Rasafah	750000	—	—	70000	250000	250000	180000	Bagdad	New
15	Implementing main sewage line with branch networks and pumping stations to serve 2 districts in Baghdad	130000	—	15000	50000	50000	15000	—	Bagdad	New
16	Implementing expansion of waste water treatment plant in Karkh with rehabilitation of 9 main pumping stations	450000	—	50000	200000	200000	—	—	Bagdad	New
17	Rehabilitation of main Ghazalia sewage line with five pump stations	35000	—	5000	25000	5000	—	—	Bagdad	New
Total				291000,953	519000,9	612000,708	343000	202000		

Spatial Development

1.1 Introduction

Spatial dimension is an important element in achieving a comprehensive and sustainable national development. Spatial planning is the method for balancing the criteria of economic efficiency and social justice in distributing investments and the fruits of developments in areas of the country. This method focuses on the relative specialization in the distribution of economic activities over the regions and provinces, in order to improve returns of exploiting available resources. As a result, it is the best way to deal with injustice and inequality in distributing development benefits and in reducing special variations in social, economic and construction levels in various parts of the country. To implement it soundly requires a modern system distributed in hierarchical form.

In addition, spatial dimensions will ensure a more effective participation by local communities in establishing and following up implementation of development programs. In other words, spatial development is the nearest to the concept of sustainable development, as it can contain the three axes of sustainable development, which are the economic, social and environmental dimensions.

The role of location is enhanced for achieving comprehensive and sustainable development, if there are development opportunities spread over various areas of the country. This will strengthen local specialization as is the case in the diverse spatial structure in Iraq, and what results from that for possibilities of adopting development policies and methods that are different in different parts of Iraq.

1.2 Status and indicators of provincial development in Iraq

Since four decades, development has tried to decrease differences in development between town and country, and to build a new structure that is more balanced based on the principles of economic efficiency and social justice.

The goal is Economic efficiency in providing projects according to the specialty of the locations, and social justice in providing social and infrastructure services to all the provinces and districts of Iraq. But the indicators of development continue to show differences in deprivation between provinces. This can be shown through:

1.2.1 Differences in development locations

In Iraq, differences in locations continue and there is a clear evidence of concentration of social and economic progress in a limited number of provinces, particularly towns, which has increased migrations to the centers.

This has also affected the distribution of population as there is more density in centers of economic growth, and it continues to attract development elements from other areas.

The results of analysis of the inputs of some service and production sectors indicators (Table number 1) shows that Bagdad has the highest rank by achieving the highest level in productive development, while Mothanna province was the lowest, and so it has first priority for development such as cement and oil industries and the possibility of building oil refineries. It is also important to improve agriculture in the provinces.

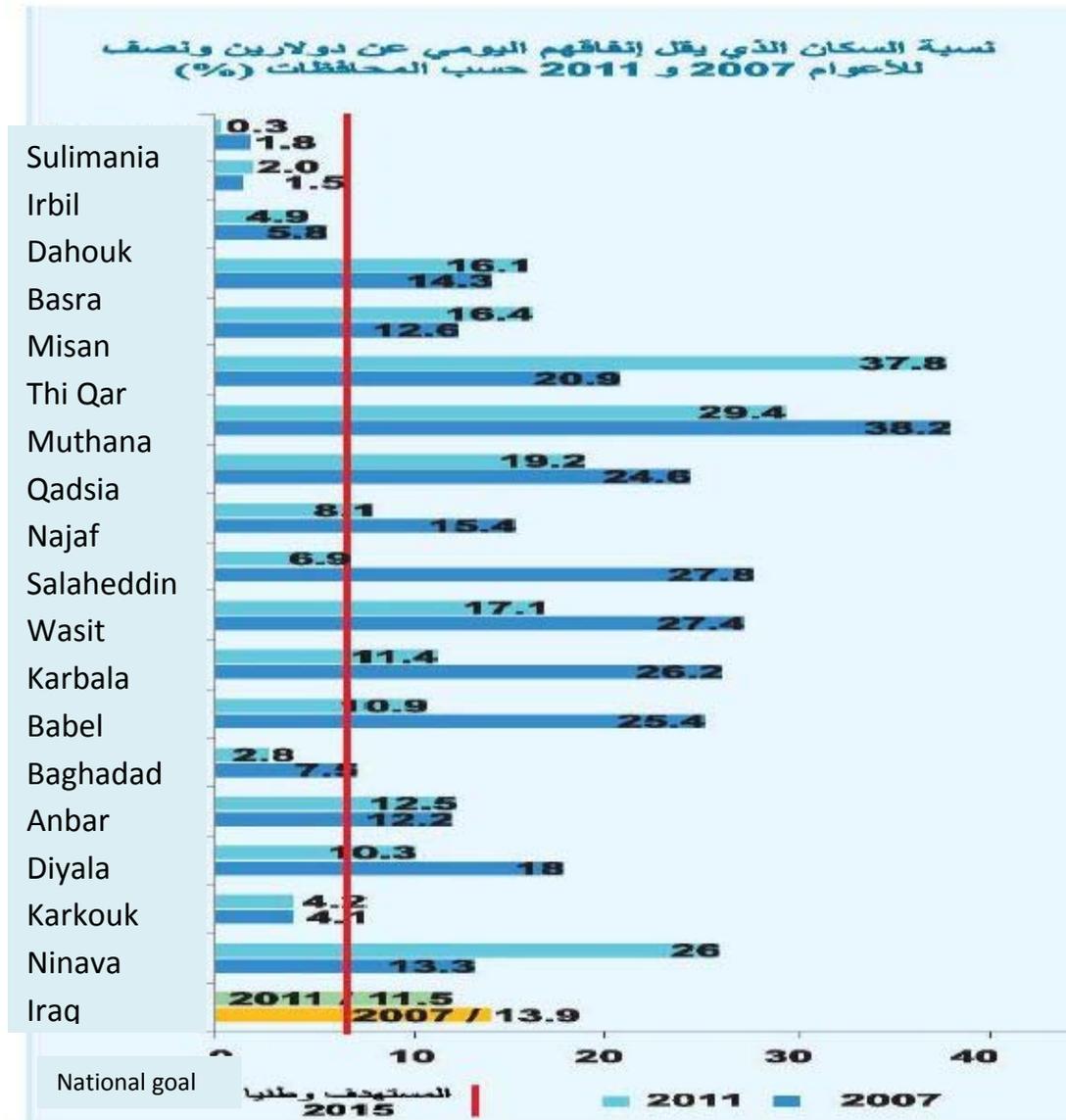
As for infrastructure services, Bagdad, Basra and Ninewa have attained high ranks, while Babil, Wasit, Diwaniyah and Mothanna where the lowest, so they will have priorities in infrastructure development.

Table 1 Standard figures for priority ladder of special development

GOV	Standard figure for productive sector development		GOV	Standard figure for services sector development
Baghdad	243.572669		Baghdad	34.82203831
Basra	87.55542484		Basra	34.91780585
Ninava	213.001454		Ninava	6.829276829
Karkouk	61.68304901		Karkouk	9.848053676
Sulimanai	139.4623866		Sulimanai	26.02974045
Dahouk	38.6851684		Dahouk	31.1374998
Irbeil	167.5152235		Irbeil	35.18339785
Salah Eddin	60.65754364		Salah Eddin	1.332181918
Diyala	73.64343439		Diyala	5.829018587
Anbar	42.90879546		Anbar	8.853506208
Babel	92.60291018		Babel	-16.52178222
Karbala	56.61429641		Karbala	21.88004078
Najaf	72.52204527		Najaf	13.10045958
Wasit	110.5827769		Wasit	-4.313054898
Diwania	81.35037584		Diwania	-2.399354186
Muthana	29.88197117		Muthana	-1.923977389
Thi Qar	85.03843283		Thi Qar	6.390889669
Misan	57.30779436		Misan	1.302166774

Expenditure indicators confirm this variation (table 1). The proportion of people whose daily expenditure is less than 3000 dinars is nearly 40% in Mothanna and Dhi Qar, while this proportion is less than 2% in Erbil, Sulaymaniyah and Dohuk. This is less than the national goals and reflects the purchasing power and general economic situation in Kurdistan compared to other areas.

Number of population that their daily spent is less than two and a half USD for the years 2007 and 2011 according to the governorate (%)

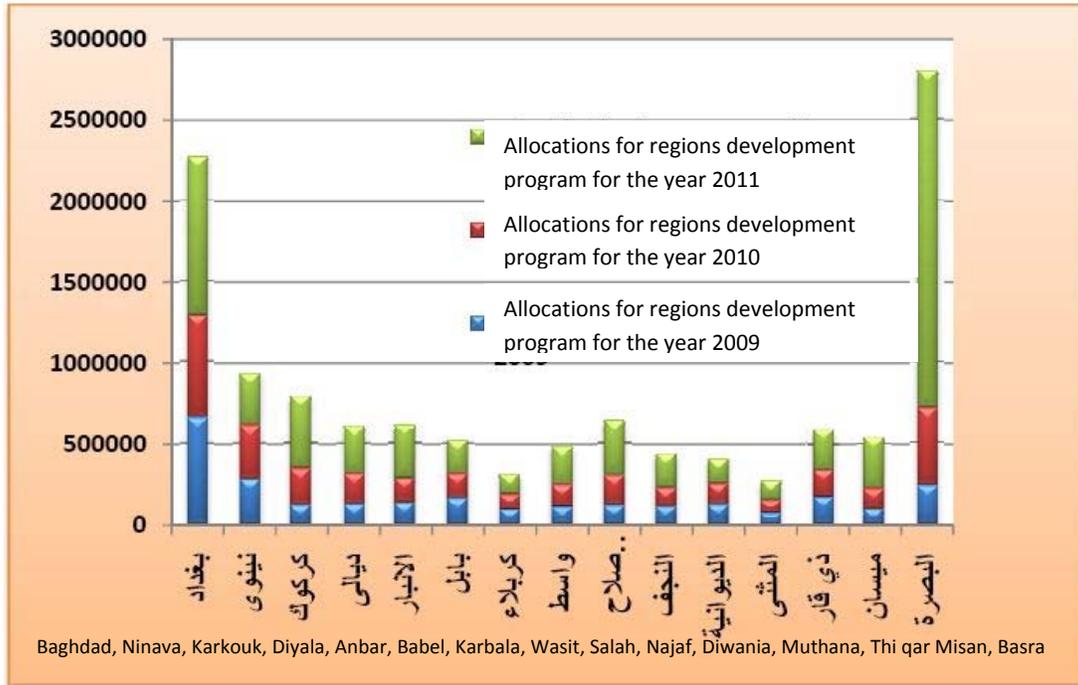


الشكل رقم 1 التفاوت المكاني في نسب الانفاق في محافظات العراق

Figure no. 1 Spatial difference in spent percentages In Iraq Governorate

To limit the differences in development in provinces, Iraq has adopted special programs for development in 2006, starting with 2.5 % of the total investment budget to around 20% in 2012. This program focuses on local services and activities based on population size. This was followed by another indicator which is petrodollar allocations for provinces that produce oil, gas and their derivatives. The diagram shows the growth of Basra's

share which is the highest oil producing area and receives more allocations than Baghdad despite the difference in population.



الشكل رقم 2 التباين والتوازن المكاني لبرنامج تنمية الاقاليم للفترة من عام 2009-2011

Figure 2: variance and spatial balance for regions development program for the period from 200-2011

The two lowest differences in development within the same province have been adopted and projects of a local nature have been allocated according to the population of the districts. 20 % of investment for the provinces was allocated to public projects covering the entire province or a group of administrative units. Table 2 shows the locations of projects in this program. With Basra as a model, the province has distributed allocations according to population densities with 23% of the budget allocated to projects that will serve the whole province.

جدول 2 التوزيع المكاني لبرنامج التنمية المحلية الاستثمارية لمحافظة البصرة لعام 2012

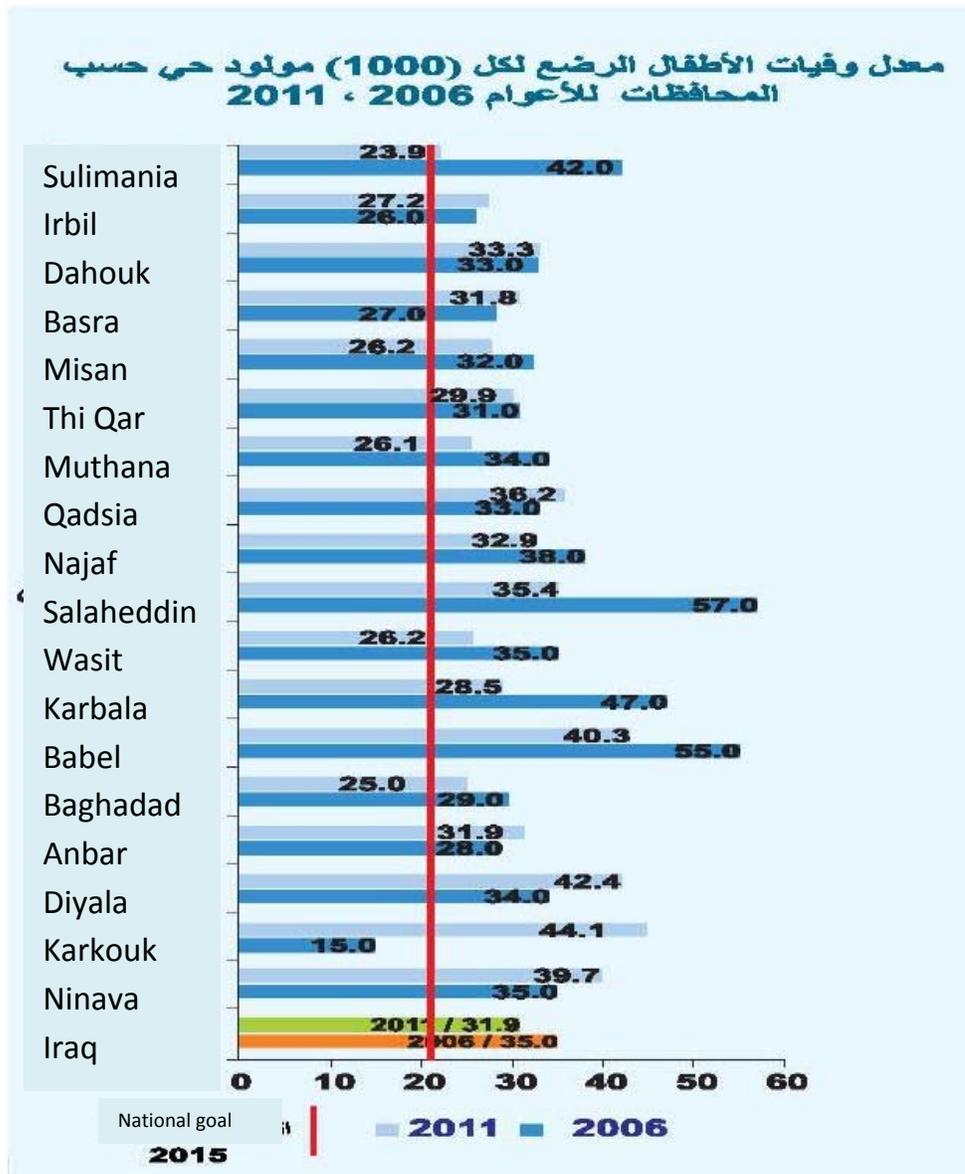
ت	المنطقة	كثافة التلية	التفصيل لعام ٢٠١٢	النسبة	درج تخصيصات به استنادا كثافة المشاريع لعام	النسب لمكثبة التلية وبرنامج البصرة
١	علم	٣٨٩,٠١٢	١٣٢,٤٤٣	%٢٣		
٢	المركز	٥٦٧,٠٦١	١٧١,١٩١	%٧٧	%٤٣,٢٥	٤٣,٢
٣	الزبير	١٧٥,٤٨٤	٥٠,٨٠٩		%١٣,٤٢	١٣,٦
٤	الفرنة	٥٥,٩٦٨	٢٧,٩٤٦		%٤,٢٨	٤,٨
٥	المدينة	٣٨,٨٦٥	١٧,٠١٧		%٢,٩٧	٢,٨
٦	نظ العرب	٧٠,٦٤٨	٢٧,٠٨٠		%٥,٤٠	٥,٨
٧	ابو الخصيب	٧٨,٦٣٥	٣٨,١٦٠		%٦,٠١	٦,٧
٨	الفو	١٥,٣٨٦	١١,٥٠٩		%١,١٨	١,٤
٩	سفوان	٤٥,٥٠٠	٣,٠٠٠		%٣,٤٨	٣
١٠	أم قصر	٣٢,٥٣٠	١٤,٣٧٦		%٢,٤٩	٢,١
١١	الدير	٤٤,١١٠	١٧,٥٢٦		%٣,٣٧	٣,٨
١٢	الامام القالم	١٨,١٨٣	٩,٥٠٤		%١,٣٩	١,٤
١٣	عزالدين سليم	٣٢,٦٤٩	٢٠,٦٨٩		%٢,٥٧	٣,١
١٤	الامام الصادق	٣٤,٢٥٣	١٢,٤٧٧		%٢,٦٢	٢,٤
١٥	الشوة	٣٦,٨٨٥	٧,٩٣٤		%٢,٨٢	١,٢
١٦	الهارثة	٦٠,٨٠٧	٢٨,٥١٢		%٤,٦٥	٥,٦
	المجموع	١,٦١٦,٩٨٤	٦٠٦,٥١٢		%١٠٠	%١٠٠

1.2.2 Deprivation

Indicators show differences in the amount of deprivation between Iraq's provinces and there is a need to raise these indicators to achieve equality and justice in the provinces and at the national level.

Figure 3 shows the differences of infant mortality, which are all above the red line, except Sulaymaniyah, which had a rate of 23.9 of deaths for every 1000 births, which is very near the national goal.

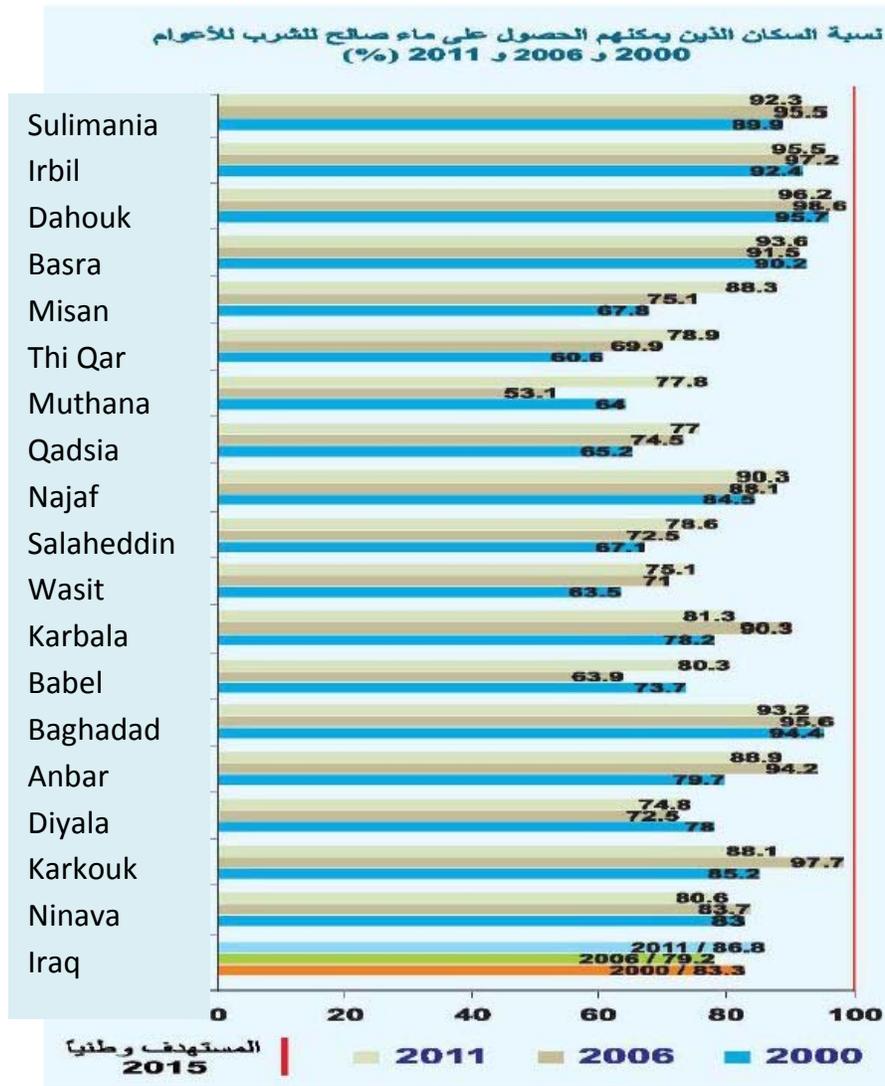
Infants mortality rates for each (1000) life born according to governorates for the years 2006, 2011



As for differences in infrastructure, the indicator for access to drinking water (one of the main indicators of provincial development in infrastructure) shows a huge difference between provinces: In Mothanna, half the population had access to water in 2006. This rose to 78% in 2011, compared

to other provinces which are close to the national goal of 100%, as shown in figure 4.

Percentage of population who have access to drinking water for the years 2000, 2006 and 2011 (%)

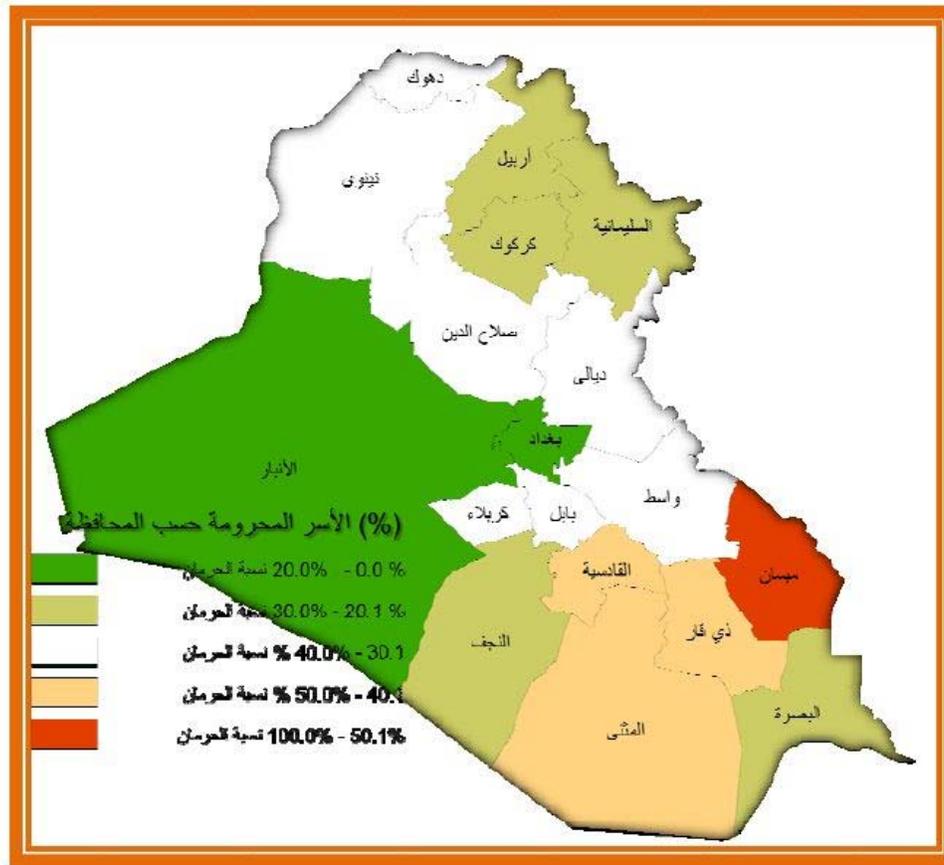


الشكل رقم 4 التباين المكاني لنسب الحرمان (البنية التحتية) من خلال مؤشر نسب السكان الذين يمكنهم الحصول على ماء صالح للشرب

Figure 4 spatial differences for percentage of deprivation (infrastructure) by population percentage index who can obtain drinking water

The latest data published in 2012 on deprivation , which relied on the economic and social survey of 2007, shows that housing is a problem that most provinces suffer from. Qadisiyah, Dhi Qar, and Misan are the most deprived, with 45%, while Anbar is the least deprived with a rate of only 5%, which is a good indicator for Anbar province. As for differences in education deprivation, the highest rate was in Karbala and Misan, where it reached more than 50%. In Misan health deprivation was more than 50% compared to other provinces in Iraq, which had a lower rate.

On the level of the general economic situation, which includes all social and economic indicators (figure 5), there was a large difference in the number of deprived families by province. The least was Anbar with 10%, the highest was Misan with 56%. The levels in Dhi Qar, Qadisiyah, and Mothanna were also high, between 41% and 50%.



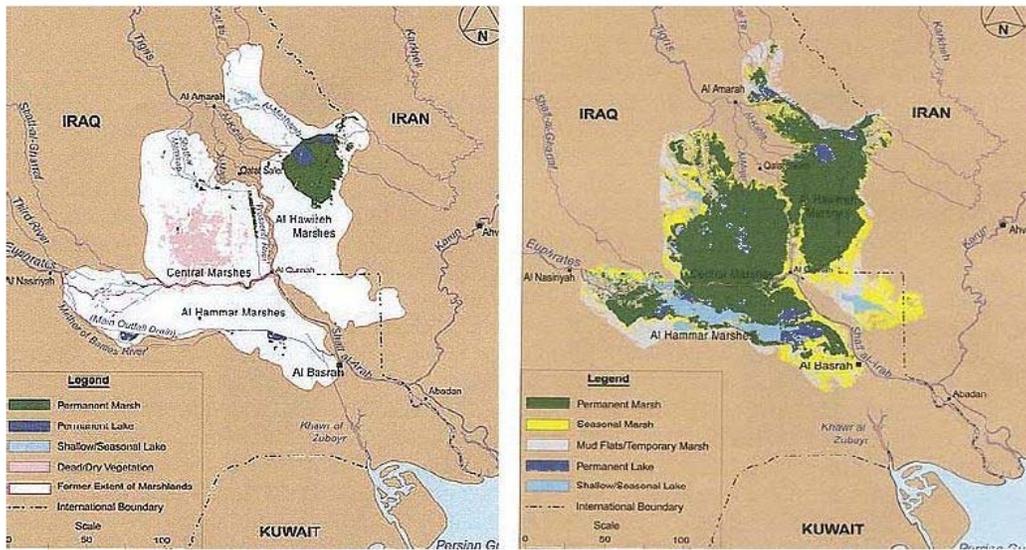
الشكل رقم 5 نسب الاسر المحرومة وفق المؤشرات المعلنة عام 2012

Figure 5: Percentage of deprived families as per the published indexes on the year 2012

1.2.3 Provincial differences between town and county

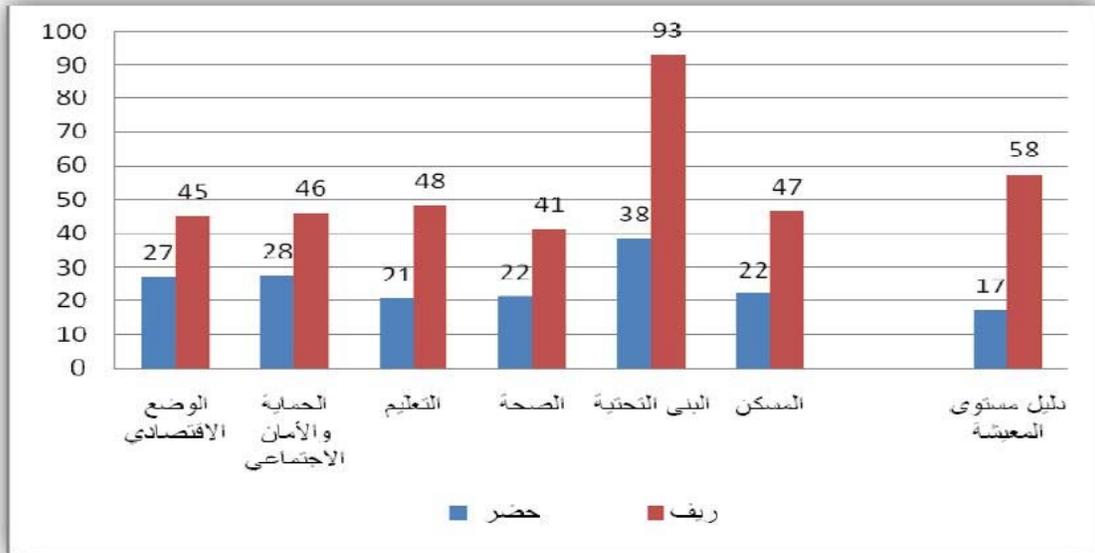
The standard of living in Iraq is closely linked to the degree of Urbanization. In general, the countryside has the highest rates of deprivation and this rate decreases with the increase of population to reach its lowest level in big cities. This is an important motive for internal migration in Iraq toward big cities, especially during the fifties and sixties of the last century.

Many coercive procedures also led to the deterioration of the countryside and its villages, such as draining the marshes in the nineties, which was followed by a large migration of village dwellers due to the lack of water on which their livelihoods depends (figure 6).



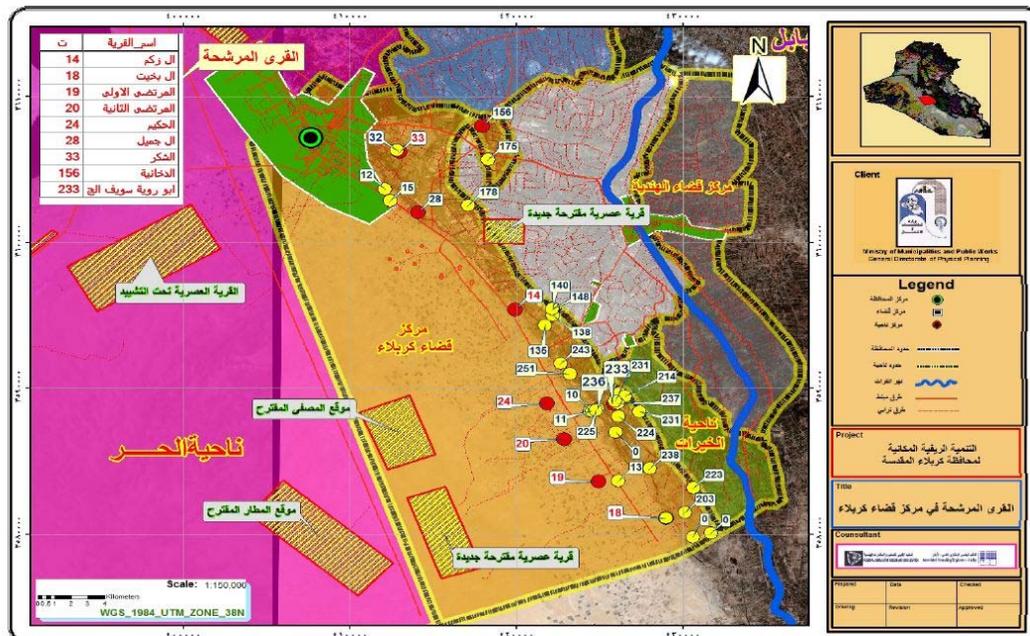
الشكل رقم 6 الصورة الاولى تظهر مناطق الاهوار قبل التجفيف والثانية بعد التجفيف

Indicators in 2012 (figure 7) show that rural areas suffer higher levels than towns. The level is 58% in the countryside compared to 17% in urban areas, according to the standard of living guide.



الشكل رقم 7 التباين المكاني بين الحضر والريف وفق مؤشرات الحرمان في الميادين الاقتصادية والاجتماعية

Other indicators show a clear advantage in urban areas over the countryside. These indicators can help in rural development plans (figure 8), which shows the plan for Karbala province, and the villages that have been selected for development, to become a model that can be adopted in other areas.



الشكل رقم 8 مخطط للتنمية الريفية والقرى المرشحة للتطوير في كربلاء

1.2.4 Loss of urban system ranking and human habitation structures

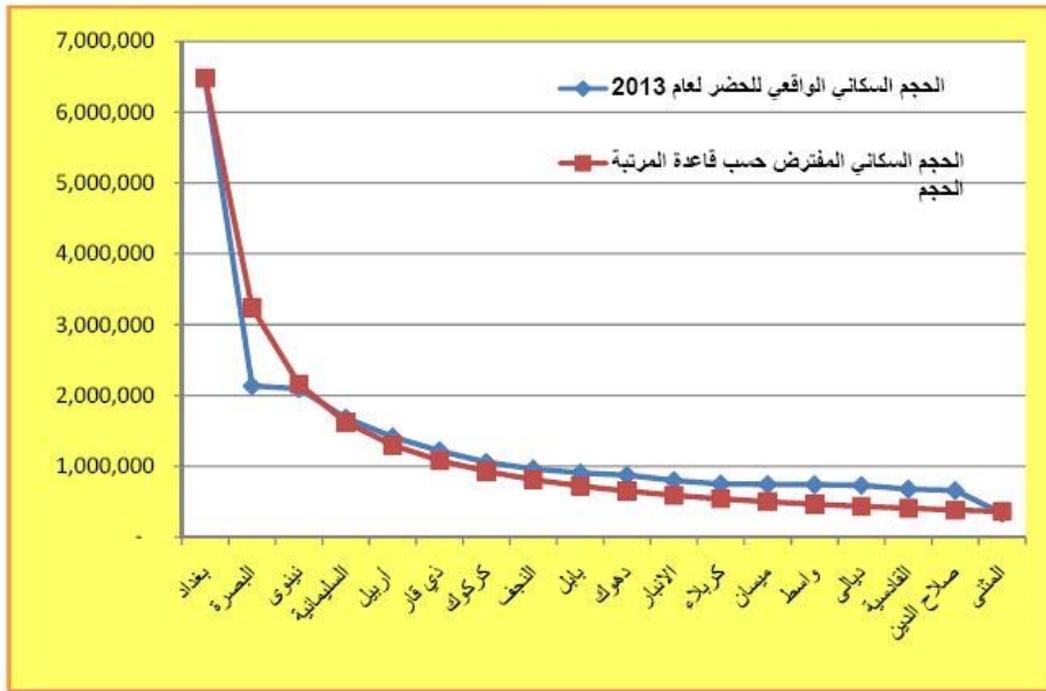
The economic model shows the continued domination of Bagdad in urban structures over other cities in Iraq in 2007. This domination was evident in most of the development plans. The population of the second largest city is 1/6th of the population of Bagdad.

The application of hierarchies in most provinces shows a concentration in population in one dominating town. The urban system in the provinces is similar when looking at the size of towns and urban areas and their higher hierarchies. We can see that there is always a dominant city that represents a development axis and attracts most investments.

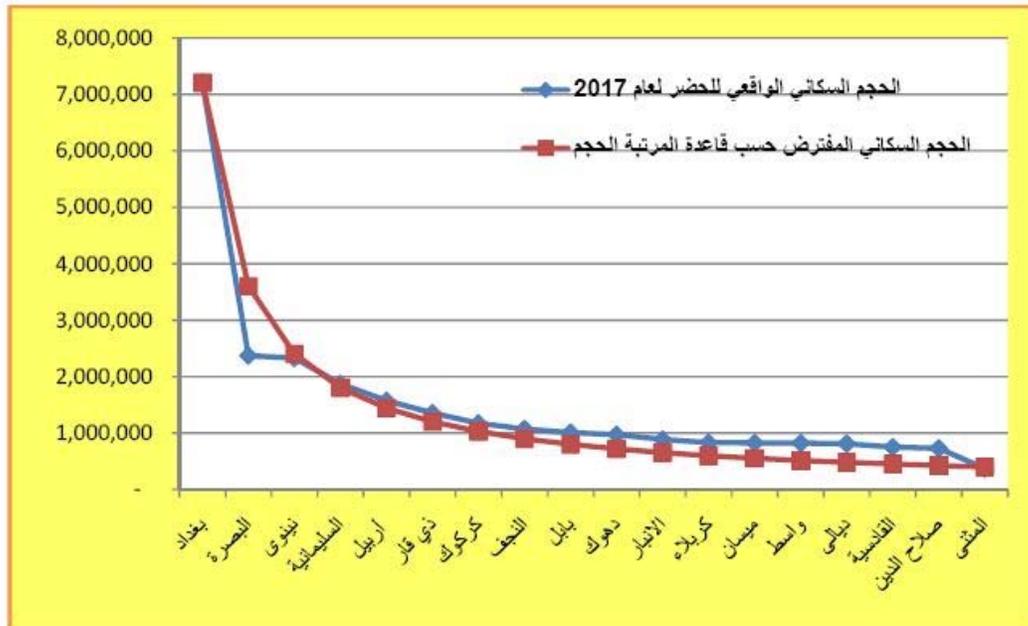
While Bagdad continues to be the first city, it is expected that there will be some progress during the next five years towards a better ranking of Iraqi cities as a result of redistribution of allocations in a more balanced form, and allocating investment and development projects in the provinces. The system of ranking Iraqi cities from 2013 to 2017 has been prepared according to projections of town dwellers in Iraq conducted by the statistics office based on the survey of 2009. And by applying the principle of hierarchies using Zaif rules. It is clear from figure 9 and 10 that this arrangement will improve gradually with the increase of development in important cities such as Basra and Sulaymaniyah.

جدول 3 حسابات تراتب النظام الحضري للعراق للخطة الخمسية 2013-2017

المحافظة	الحجم السكاني الواقعي للحضر لعام 2013	الحجم السكاني المقترض حسب قاعدة المرتبة الحجم	الحجم السكاني الواقعي للحضر لعام 2017	الحجم السكاني المقترض حسب قاعدة المرتبة الحجم
بغداد	6,478,449	6478449	7,207,972	7207972
البصرة	2,132,504	3239225	2,372,640	3603986
نينوى	2,094,123	2159483	2,329,937	2402657
السلمانية	1,680,818	1619612	1,870,091	1801993
أربيل	1,412,817	1295690	1,571,911	1441594
ذي قار	1,216,929	1079742	1,353,964	1201329
كركوك	1,053,594	925493	1,172,237	1029710
النجف	962,444	809806	1,070,823	900996
بابل	904,889	719828	1,006,786	800886
دهوك	872,247	647845	970,468	720797
الانبار	796,825	588950	886,553	655270
كربلاء	747,081	539871	831,208	600664
ميسان	740,865	498342	824,292	554459
واسط	738,728	462746	821,915	514855
ديالى	728,930	431897	811,013	480531
القادسية	674,561	404903	750,522	450498
صلاح الدين	655,791	381085	729,638	423998
المثنى	331,311	359914	368,619	400443

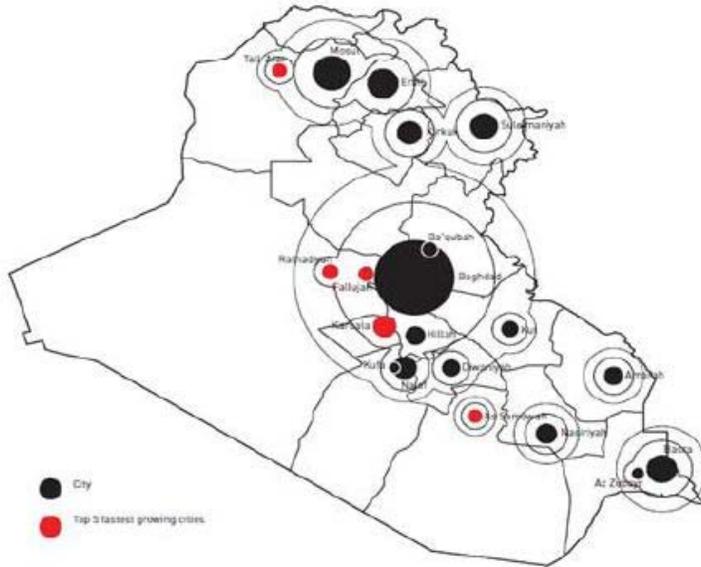


الشكل رقم 9 تراتب النظام الحضري في العراق لعام 2013



الشكل رقم 10 تراتب النظام الحضري المتوقع في العراق لعام 2017

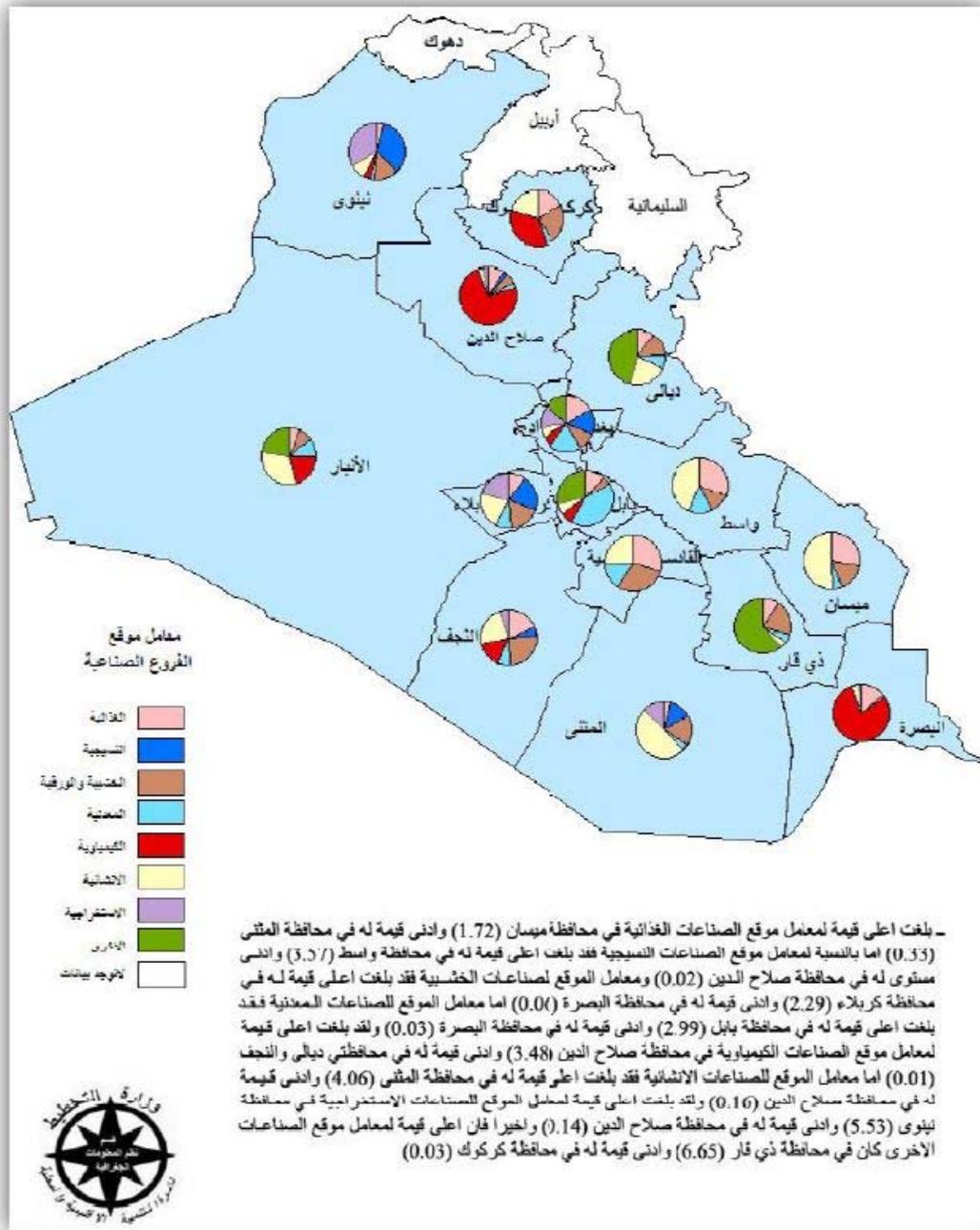
Although the traditional main centers in Iraq will continue their domination, we have noted some improvements represented by the growth of several small and medium towns with higher rates. These are Tal Afar, Fallujah, Ramadi, Karbala and Samawah, but the huge domination of the big cities is still the main feature in Iraq (figure 11).



الشكل رقم 11 يمثل موقع المدن العشرين الكبيرة في العراق ، واللون الاحمر يمثل المدن الاسرع نموا

1.2.5 Provincial differences and attraction indicators

The imbalance in the urban system reflects the duality of development through specific centers that have relatively high levels of development and location and which attracted higher investments. It is noted from figure 12, which by using location criteria, the results of the analysis show that Baghdad attracted industrial projects in most activities and this emphasizes the focus on Baghdad.



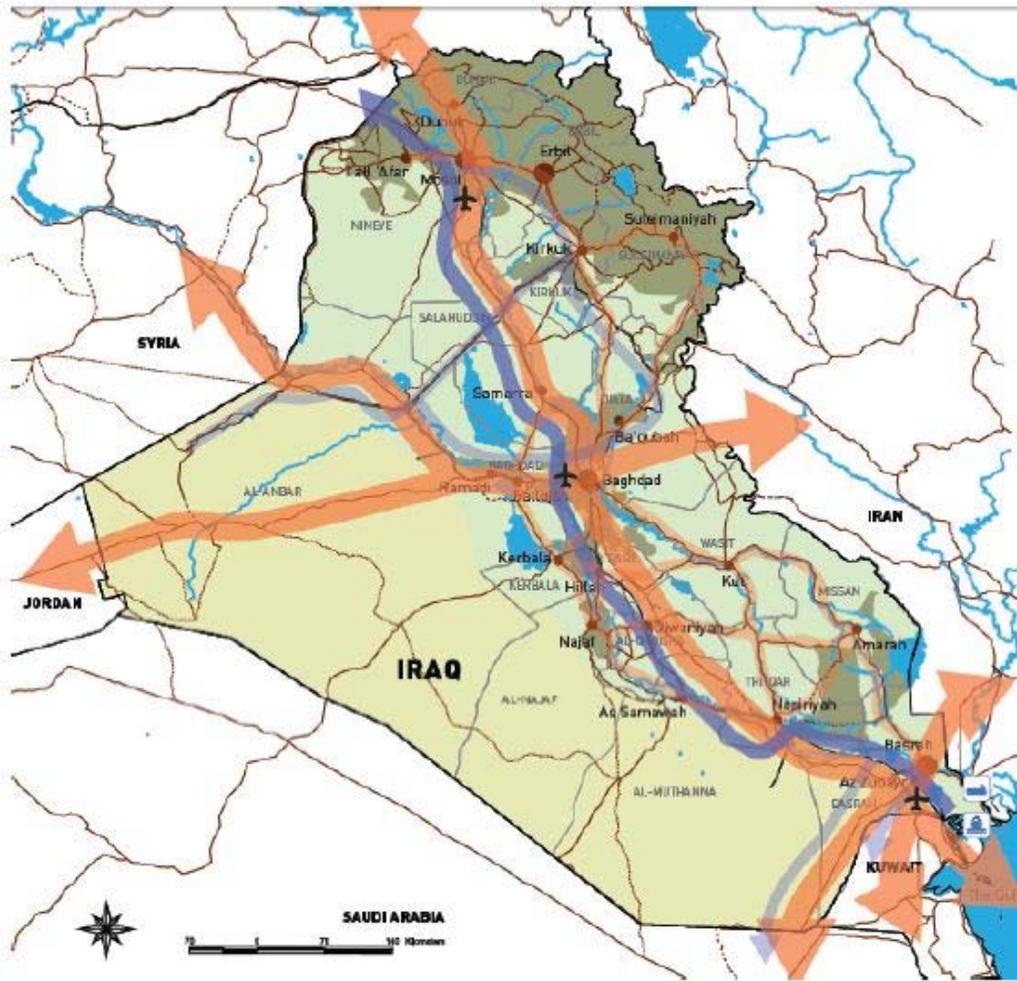
الشكل رقم 12 التباين المكاني في تحليل معامل الموقع للفروع الصناعية في محافظات العراق لعام 2010

1.2.6 Extended transportation system

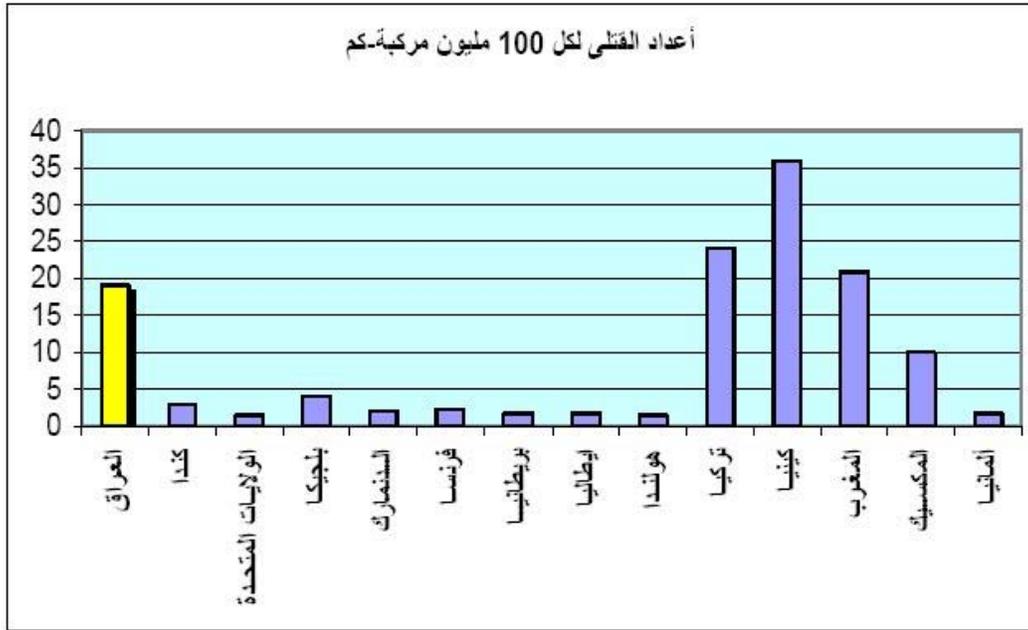
The transport network in Iraq, both roads and railways, extend along the Tigris and Euphrates rivers (figure 13), which has led to a concentration of activities and human settlements along these axes. Other areas in Iraq that

lack development axes has led to an increased level of traffic and pressure on the main roads in Iraq, requiring more road maintenance . In addition, we have higher rates of traffic accidents compared to other countries (figure 14) as well as delays in trip times which affect sectors that utilize transport.

This Longitudinal extension weakens the connection between agriculture and industry, as well as construction. This requires construction of secondary roads that will link small and medium towns and create new development axes.



الشكل رقم 13 شبكة النقل في العراق ويلاحظ تركيز الامتداد الطولي مما يتطلب محاور شعاعية وشبكية للحركة



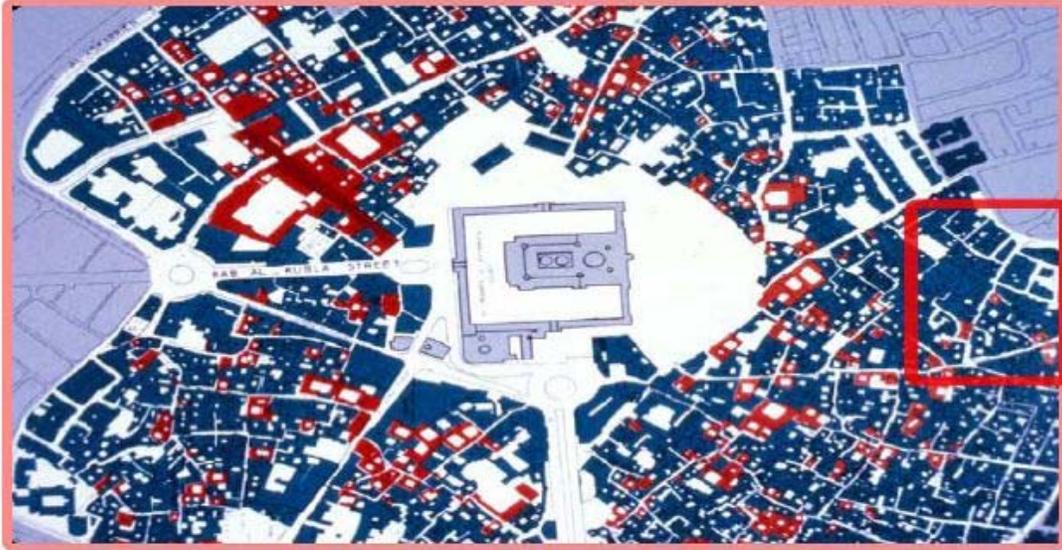
الشكل رقم 14 المعدل السنوي لاعداد القتلى في العراق نتيجة لحوادث المرور مقارنة بعدد من دول العالم

1.2.7 Deterioration of towns and historical heritage sites

Most Iraqi towns have witnessed huge deterioration in their traditional centers. Many traditional and historical neighborhoods and buildings have been damaged (figure 15). This has led to:

- Loss of archaeological and historical sites as a result of neglect or dividing it with streets for the movement of cars. This has affected its duty. As an example, Haifa street, where the old buildings behind the modern buildings have become ugly. Also the movement of vehicles causes pollution and vibrations that will affect the condition of these historic buildings.
- Loss of visual connection in old archaeological sites due to constructing high buildings without controls (figure 16).
- Destruction or abuse and lack of maintenance of neighborhoods (figure 17) and historic buildings and a rise in underground water levels, has destroyed these areas and affected their safety, causing the collapse of some of their parts. This could be intentional in order to change the type of use of the building.

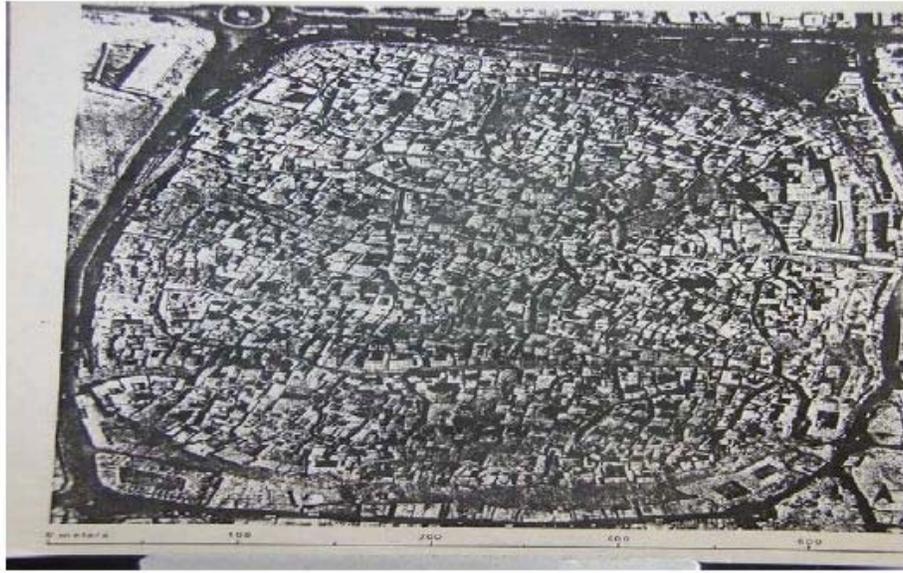
- The deformation of some historic buildings as a result of repair work using materials different from the original building.



الشكل رقم 15 الشوارع التجارية التي تخترق المناطق التراثية واثرها في تدهور المعالم التراثية في مدينة الكاظمية ببغداد



الشكل رقم 16 تدهور المشهد الحضري لمركز مدينة كربلاء اذ يلاحظ تلوث المشهد البصري بالعلامات التجارية واسلاك الكهرباء



الشكل رقم 17 الشكل يمثل قلعة كركوك التاريخية قبل وبعد ان كانت مركز حضري مفعم بالحياة الى ان تم ازالة معظم مبانيها التراثية والاثرية في عقد التسعينات من القرن الماضي

This has required adopting a development policy for city centers that have heritage sites. There have been designs made for Kathimiya district and Al-Rashid Street in Baghdad, Haramain area in Karbala, old Mosul and the centre of old Kifl town in Babil province and others. (Figure 18) shows the

plan for the city of Kathimiya in Bagdad. It is important to find practical ways to implement these plans on the ground.



الشكل رقم 18 التوسعة المقترحة للمسجد والروضة الكاظمية في بغداد

1.2.8 Overlap of authorities between federal ministries and local governments

Many problems that will hinder development have appeared, among them the overlap of authority between ministries and local governments which motivates the provinces to demand more constitutional authorities for them to overcome these problems. It is also important to activate the one-window policy to enhance foreign investments and create the ground for achieving the goals of development.

The Iraqi constitution of 2005 has clarified the distribution of authority between various administrations in Iraq, through specifying authorities exclusively for the federal government and joint authorities by the federal and local governments. In case of this dispute the opinion of the local government will have priority.

Article 110 of the constitution has specified 9 areas of federal authorities. These are:

-Drafting foreign policies including economic, commercial, sovereignty, and national security policy and its implementation, and fiscal policy, customs, currency, quality control, nationality, broadcasting wave bands, the general budget and investment budget and planning water resource policies, statistics and general census. This article has also indirectly provided other authorities, not mentioned above, to the regional authorities. The constitution, article 114, has specified several joint authorities such as: customs administration, electricity supply and distribution, development and environment policies, general planning and educational and health policies, and internal water resource policies. The constitution also gives local government priority in case of disputes.

There are a number of problems that restrict development. Among them is the overlap in authority which appeared in implementing law 21. Therefore, there were many ideas about ways to regulate the relationship between ministries and local governments. The move from a centralized to a decentralized system, where authorities are shared by the ministries and provinces, requires more efforts of coordination and capacity building, as well as activating the one-window policy to encourage investments.

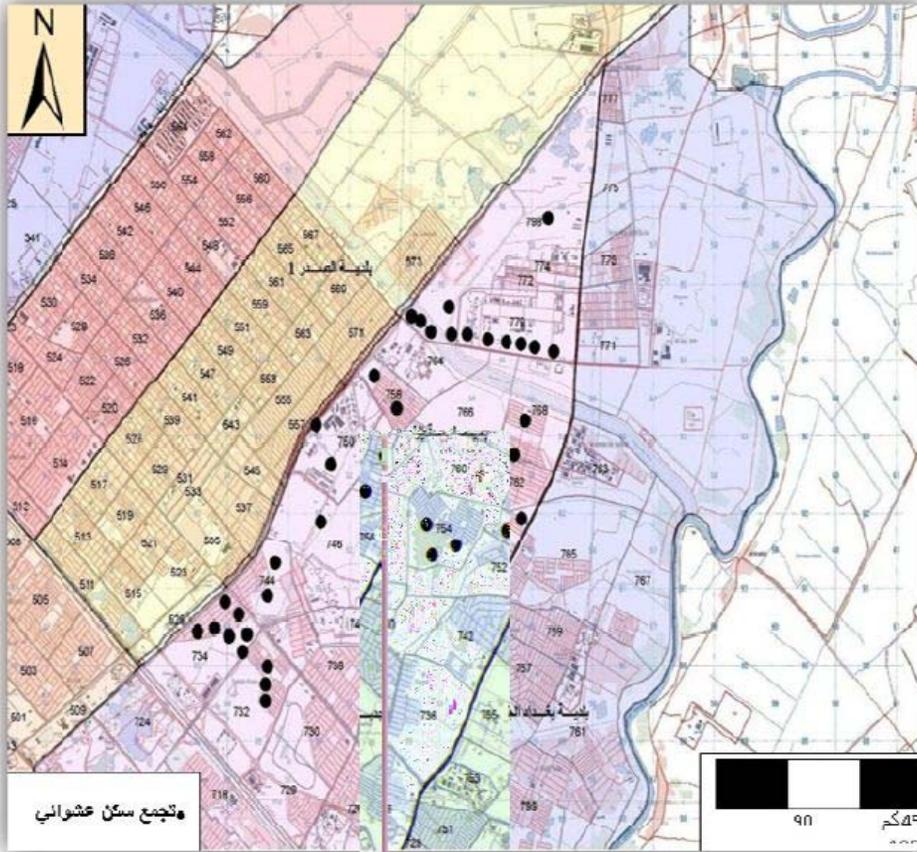
1.2.9 The spread of slum districts in Bagdad and other provinces

Slum housing is defined as arbitrary and unplanned behavior in taking over a place and living in it. Slum housing is relatively small compared to the regulated housing in town planning. These houses could be erected on lands allocated for non-housing purposes such as green or industrial areas.

This slum phenomenon is one of the features of urban inflation, and is one of the most difficult in Iraq because of inability to meet the need for housing. It also affects the environment negatively, as well as other planning problems, as follows:

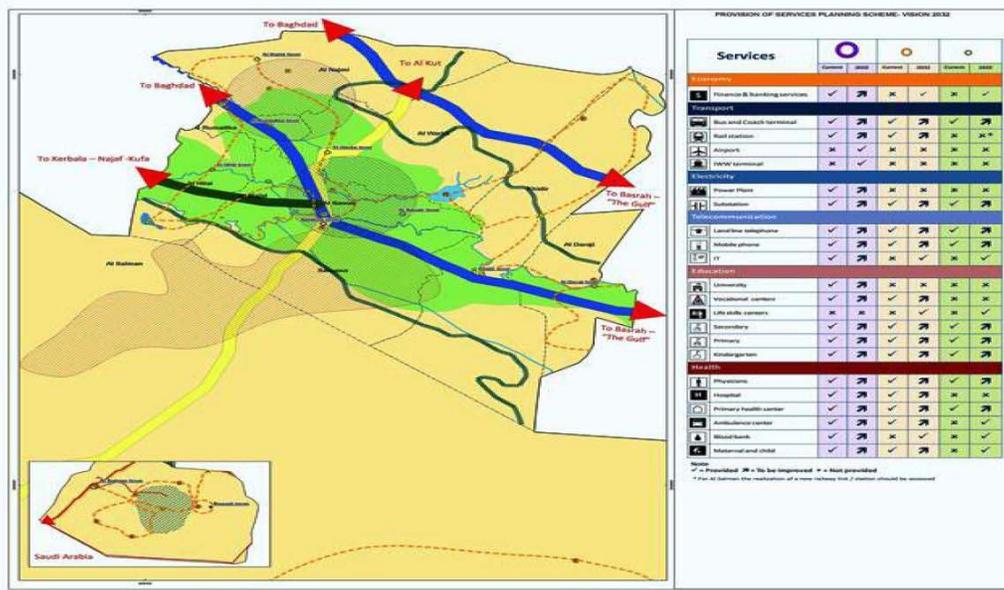
- Obstructing and delaying reconstruction projects.
- Changing the land usage from (industry, agriculture, services, transport, playground or green areas) to housing will affect the basis of town planning.
- Direct impact on the master plan.
- These areas trespass on water and electric networks in nearby areas causing pressure on services.
- Social and economic imbalances in the city, as most of these people are migrants with high unemployment and problems in schools and others.

The main indicator for this type of houses is the number of illegal buildings. In Bagdad the number was 4617 (25%) of the total followed by new Bagdad, followed by new Baghdad municipalities, Shula and Sader 1st were 23%, 16% and 11%. While in Mansur it was 0.3 % and in Karkh municipalities 0.8% and Al-Rashid1 %. The number of families living in these houses was 35 thousand.



الشكل رقم 19 التوزيع المكاني لتجمعات السكن العشوائي في بلدية الغدير ببغداد

This problem also occurred in other provinces, and it is therefore necessary to prepare plans to solve these problems. This requires much more efforts than at present.



الشكل رقم 20 جانب من المخطط الهيكلي لمحافظة المتشي



الشكل رقم 21 بدائل المخطط الأساس الذي يجري العمل على اعداده لمدينة بغداد

1.3 Capabilities and relative specialization in provinces

Structures in Iraq are varied. Basra, Misan, Kirkuk and Dhi Qar have oil fields while others have agriculture, such as Ninewa and Salahalddin. Anbar, Najaf and Mothanna have minerals that are used in cement and glass industries. Karbala, Najaf, Baghdad and Salahalddin attract religious tourism, while Kurdistan attracts summer vacations. Other provinces have border outlets important for national and local economy, such as the ports of Basra, Safwan and Shalamjah in Basra, and the portals of Trebil and Waleed in Anbar and Diyala in Munthiriyah. Rivers, ruins and a variety of topography in various provinces are the main features of diversity in Iraq.

There are different natural features and soils suitable for agriculture or construction as well as the two rivers and huge oil resources. There are also many primary and secondary centers all over Iraq that can provide the required foundations for reconstruction and development.

These can be highlighted in the following items:

Baghdad Governorate:-

This is the most important governorate in Iraq, being the capital with the largest population (one third of Iraq) which has reached 7.2 Million in 2012. Baghdad is located in Middle Iraq and has many large industrial investments as well as small traditional crafts which are sold all over Iraq as it has more human and financial resources and capabilities. It also has arable lands and water resources (the river Tigris) and touristic attractions, in particular archaeological and religious. Most of the universities, institutes, and scientific centers are located there, and it plays an important role in the Middle East and the world.

Ninewa Governorate:-

This is the second largest governorate, with a varied topography and the river Tigris and the Mosul Dam. It is important for cereal production, specially wheat and barley and produces 54% of these items, and is therefore

considered Iraq's food basket. It has many large areas of arable land and water resources from the river and wells, and one quarter of the animal resources of Iraq, as well as many industries such as textiles, ready-made clothes, dairy products, sugar, cement and medicines. It also has Sulfate deposits which are the largest reserves in the world. It also has oil and other derivatives which are used as raw materials in many industries: the Qiarah refinery produces many petroleum derivatives, especially asphalt. Due to its geographic location it has an active trade with Syria and other neighboring countries. It also has religious, archaeological and natural tourism possibilities and plentiful human resources.

Basra Governorate:-

This is the main commercial center and Iraq's economic capital. It is the only sea outlet for Iraq, with a coastline of 110 Kilometers, and the city center is 67 km from the Arabian Gulf and is its outlet to the outside world. It is bordered by Saudi Arabia, Kuwait and Iran, and connected to the outside world by sea through four ports (Khor Alzubair, Um Qaser, Maaqal and Abu Floos) and the international airport, as well as two land portals (Safwan with Kuwait and Shalamsheh with Iran). It has many sources of revenues, as it has the largest oil reserve of 68 Billion barrels of oil, which is 59% of Iraqi reserves, with 15 oil fields producing around 2 Million Barrels per day.

It also has agricultural, commercial and human potential that qualifies it to become one of the most important cities in the region. In agriculture, the type of soil in Basra is suitable for a diversity of products, such as dates and Tomatoes. In Industry, it has constituents for petroleum industries, gas and petrochemical, fertilizers and iron and steel.

For commerce, Basra has a lively trade through its borders and border crossings. Also the marshes ,with its variety of resources and beautiful scenes has helped in animal, fish, rivers and bird habitats, which are an important element of the biodiversity in Iraq. It also provides natural tourism throughout the year.

Babil Governorate:-

This is an important center in the middle Euphrates area. It is an agriculture governorate of the first order with huge areas of land and water resources and an experienced labor force, and produces cattle, poultry, fish and bees. It also has an old industrial base for textiles, machine tools and cars. Areas have been allocated for touristic projects as it has many shrines and tombs that can create widespread religious tourism. It is also the site of the oldest civilization in history, located in Babel, Keesh and Bourseeba. In the Kifl district there are 154 archeological sites, the best well known of which is the historic city of Babil, and 100 religious sites, including the shrines of Imam Qasim and Imam Hamzah. The governorate also has a trained manpower and is ready to develop economically and socially.

Karbala Governorate:-

This is one of the most important centers of religious tourism in Iraq to the shrines of Imam Hussein and Imam Abbas. It has also nature tourism on lake Razazah and Ain-Al tamer. It also has agriculture possibilities of arable land and orchards for growing vegetables and fruits. There are also extraction industries for sand quarries and the manufacture of building materials, such as cement and bricks. It has a university and several science institutions.

Diyala Governorate:-

It is located in Middle Iraq with 2 border crossings with Iran (Monthiriah and Mandali) and the shortest road to Baghdad. Its area is 4% of Iraq with a population of 1.4 Million (4.3%) of Iraq. Agricultural land forms 41% of the total area and it has large areas for fruit orchards. There are several promising oil and gas fields and large industrial establishments for electrical appliances and food and construction industries, as well as areas for tourism.

Misan Governorate:-

Misan has several common borders and crossings with Iran which can be used for trade. It represents 3.7% of Iraq's area and 3.6% of arable land. It is one of the main oil production centers and has raw materials for the manufacture of sugar-cane and paper, as well as oil, plastics and bricks. The marshes of Misan are a major tourist attraction and it can also become a center for archeological tourism with 305 sites.

Kirkuk Governorate:-

Kirkuk is the link between mountains and plains of Iraq and has 4.13% of the population. It is one of the important oil producing centers in Iraq, as well as for petroleum industries, gas, sulfate, construction and cement. Arable lands are 61% of the total area of the governorate which has a very high productivity in wheat, barley and corn. It also has touristic potentials for history and religion including churches, mosques, Shrines and Kirkuk castle.

Salahalddin Governorate:-

This governorate has 12% of the total arable areas in Iraq, as well as many large industrial projects such as Beiji refinery and Samara drug factory, cement, oil, vegetable oil and detergents. It also has religious and historical touristic potential with the shrine of Imams Ali Hadi and Hassan Al-Askari. The Tharthar Lake is a tourist attraction. The universities of Tikrit and Samara are also located there. It has a physical and human potential that, if properly exploited, can make it an important axis for agricultural and industrial development.

Al-Anbar Governorate:-

This governorate borders several other governorates (Ninewa, Salahalddin, Baghdad, Karbala, Najaf, and Babil) and also borders (Syria, Jordan and Saudi Arabia), and is Iraq's western portal with four border crossings that can be used for trade. It has the largest area of any other governorate in Iraq, with plenty of natural resources such as Phosphates, natural gas, glass sand, silicate, cement, sulfate, and other raw materials used in industry. It also has plentiful arable lands along the Euphrates River and areas for agricultural investment in the northern desert. There are also many aquifers that can be used in agriculture. Tourist attraction areas are Habbaniyah, Razazah and Tharthar, as well as Sulfate wells in Haditha which can be used for treatment purposes.

Mothanna Governorate:-

Mothanna borders Saudi Arabia from the south and south west and it has the second largest area (12%) of Iraq. It has agriculture along the river, and large desert areas that can be used for agricultural products. It also has industrial potential and raw materials for some industries (such as cement factories, and an oil refinery) it also has archeological sites and tourism attractions (lake Sawa) and a university.

AL-Qadisiyah Governorate:-

Qadisiyah lies in the middle Euphrates basin with a fertile soil and forms 1.9 % of Iraq's area. It has 14200 Donums of arable land and their main products are rice and barley. It also has a good number of cows and buffalos and rubber industries and textile manufacture, and there are several touristic areas that can be developed including the Delmaj Marshes.

Thi Qar Governorate:-

It has huge oil deposits with several producing fields which can be used in conversion industries. It is expected to be one of the main oil and gas producers with 6 billion barrels of reserves. There are many arable areas and a network of irrigation canals and water surfaces that can be exploited for fish farming, cattle breeding and tourism. Also several archeological sites.

Wasit Governorate:-

Has an area of 3.9% of Iraq and it is bordered by Iran from the east. Its situation could have important trading uses by establishing service and tourist projects. It also has arable land and water resources and produces oil from Ahdab field. It also has mineral resources such as gypsum and limestone, which are very important for many industries, as well as stone quarries. And industries for the manufacture for cement and gypsum and ceramics. The marshes can be developed to become a tourist area and a nature reserve.

Al-Najaf Governorate:-

Has areas of arable land (6.6% of Iraq) and 5% of the governorate is within the alluvial plain and the rest in the western Plateau. It has industrial materials such as limestone, gypsum, dolomite, sulfate and uranium. It is also one of the most important centers of religious tourism to the shrine of Imam Ali, as well as many archeological sites. It also has human potential which can be exploited in development with 54% of its population active in the economy.

1.3The vision

Creating an integrated and sustainable provincial development with equal access to services and infrastructure in all Iraq, and to close the development gap between urban and rural areas, and the optimum use of natural resources

and capacities of regions and governorates, to achieve a balanced provincial development proportionate to the needs and capacities of various areas in Iraq, and to limit the duality of provisional development and high concentrations of populations and economic activity, which is currently prevalent.

1.4 Objectives and how to achieve them

First objective: Decreasing differences between governorates by:

1. Allocation of investments equitably among governorates to achieve social justice in services according to schematic criteria and economic efficiency for consumers sector.
2. Increasing exploitation of governorates capabilities.
3. Employing the principle of activities that are independent of location to areas that are experiencing special problems or weakness in development possibilities.
4. Encouraging private sector to invest in less developed areas through policies of tax exemptions.
5. Preparing development studies for the different levels of development between governorates and the level of deprivation, and adopting these studies in allocation of investment in annual budgets.

Second objective: Closing the gap between urban and rural areas through:

1. Providing public services in rural areas.
2. Good utilization of natural and human capabilities in rural areas.
3. Connecting rural and urban areas in order to strengthen the use of these areas in the economy, particularly in agriculture.
4. Completing integrated rural development studies for the governorates.
5. Making services to villages nominated for development (or villages with more than 1000 inhabitants) a high priority.

6. Adopting a law for town planning in Iraq that will include villages and rural areas in municipal services within the administrative units they belong to.

Third objective: Improving the ranking of urban systems in Iraq through:

1. Locating empty spaces or investment areas in all governorates outside the centers for housing projects.
2. Utilizing special features of small and medium size towns and directing investments towards them.
3. Establishing new towns around large cities, especially those that have limited space for expansion.
4. Directing location-independent activities, such as universities and technical institutes, towards slow developing or smaller towns.
5. Transferring storage and industrial activities from city centers to the suburbs or small and medium towns, according to planning principles that consider ecological criteria.

Fourth objective: Integration of transportation systems by:

1. Completing highways and arteries between governorates, such as highway number 2, and the ring roads around large cities including Bagdad.
2. Completing connecting highway number 1 with the urban centers that it passes close to and rehabilitating this road.
3. Connecting governorates, with small and medium towns, with a road network.
4. Improving rural road networks according to priorities of agricultural and rural developments.
5. Improving road networks that connect border crossings with nearby cities which are not currently linked.

6. Implementing railway projects in areas that are not currently served, according to modern specifications, in the axes of Bagdad-Kut-Nasiriya-Basra, Bagdad- out- Amarah-Basra.
7. Improving current rail systems to double railway tracks to achieve a speed of 250 km per hour.
8. Constructing a railway between Bagdad and Kirkuk with branches to Arbil and Sulaymaniyah.
9. Constructing circular railway around Bagdad.
- 10.Improving public transport in cities to lower road congestion.
- 11.Constructing underground metro system.
- 12.Building airports in several areas in Iraq according to the results of technical and economic feasibility studies.

Fifth objective: Urban renewal of city centers and reassessment of urban land usage by:

1. Implementing studies on urban renewal areas in Iraqi cities, especially large cities.
2. Activating investments in urban renewal and rehabilitation areas according to the basic town plan and urban renewal studies, by using various investment methods ,including selling properties to investment companies or establishing partnerships between property owners and development companies.
3. Transferring unnecessary usages in towns (such as industrial or storage uses) to suitable areas within or without cities and in compounds designed specifically for theses uses.
4. Municipalities must comply with valid use and planning criteria, and not allow a change in use or subdividing the property below the stipulated planning criteria.
5. Preserving the historical and architectural heritage of buildings through encouraging their owners to maintain them and exploit them economically.
6. Converting some commercial and congested streets in city centers to pedestrian areas, served by mass transportation systems such as tramways and subways.

Sixth objective: Strengthening partnership and decentralization development management by:

1. Continuing in assisting regional provincial development programs through increasing allocations in investments budget of the state, and under the supervision of governorates, to implement educational, health, municipal services, water, sewage and other local projects.
2. Increasing the role of local government in decisions of federal ministries concerning projects that serve the governorate.
3. Activating planning and development councils in the governorates for coordination between federal ministries and local governments.
4. Capacity building of local staff to enable them to perform their duties well in planning, execution, supervision and monitoring.
5. Enhancing coordination and integration between planning department in the ministry of planning and concerned parties in other ministries and local governments, and preparing plans for the governorates in partnership.
6. The governorates must ensure equity and transparency in distributing the fruits of development to all administrative units within the governorate concerned, in proportion with needs and its population, and in coordination with district and sub districts local councils.

Seventh objective: Dealing with the problems of slums construction through:

1. Setting comprehensive plan to determine the size of the problem and its spread.
2. Choosing the proper methods of confronting the problem through:
 - a) Reorganizing these areas if it is possible to reach the minimum of planning and environmental conditions and requirements, and to include them in all basic services.
 - b) Locating sites to re-house abusers in cases where it is not possible to reorganize their areas. The state must bear the requirements of re-housing or provide long term low interest loans.
 - c) Provide suitable jobs opportunities in the relocated housing areas.