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دراسة السياسة القومية للتنمية الحضرية

NATIONAL URBAN POLICY STUDY

## URBAN MANAGEMENT HANDBOOK



ADVISORY COMMITTEE FOR RECONSTRUCTION

MINISTRY OF DEVELOPMENT

ARAB REPUBLIC OF EGYPT

U.S.A.I.D. GRANT NO. 263-0042

*Planned*

THE NATIONAL URBAN POLICY STUDY

APPENDICES

USAID Grant No. 263 -0042

Prepared for the  
ADVISORY COMMITTEE FOR RECONSTRUCTION  
MINISTRY OF DEVELOPMENT  
ARAB REPUBLIC OF EGYPT

PADCO INC.  
with  
ENGINEERING CONSULTANTS GROUP  
and  
SHERIF EL-HAKIM AND ASSOCIATES

JULY 31, 1982

**Best Available Document**

دراسة السياسة القومية للتنمية الحضرية  
NATIONAL URBAN POLICY STUDY

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ص . ب ١١٦٧ القاهرة تلكس ٩٣٨٧٣

Engineer Soliman Abdel Hai  
Chairman  
Advisory Committee for Reconstruction  
Ministry of Development  
Cairo, A.R.E.

July 20, 1982

Dear Engineer Soliman Abdel Hai:

The National Urban Policy Team is pleased to submit copies of the final draft of the Urban Management Handbook. This handbook is the companion volume to the National Urban Policy Study Final Report. As such, it seeks to interpret national urban policy recommendations to various levels of government who will ultimately be responsible for implementing urban policy.

The Urban Management Handbook is structured so that Chapter I provides a review of the policy recommendations made in the NUPS Final Report. Chapter II describes the NUPS recommendations for administrative procedures necessary for implementing urban policy. It also provides an overview of sectoral recommendations made by NUPS. Recommendations for development of programs and policies which support national urban policy proposals are presented in Chapter III.

The NUPS team is grateful to have had the opportunity to have worked on this study. We feel that the National Urban Policy Study Final Report, the Urban Management Handbook and the NUPS Urban Growth and Urban Data Report provide a firm basis for the Government of Egypt to implement national urban policy. We are greatly indebted to yourself, the members of the Steering Committee the ACR in-house consultants, and the large number of Egyptian government officials who have worked with us throughout the study and through their cooperation have made the study possible.

Sincerely,

*Harvey A. Garn*

Harvey A. Garn  
Principle in Charge

PADCO INC  
In Association with  
ECG ENGINEERING CONSULTANTS GROUP  
&  
SHERIF EL-HAKIM & ASSOCIATES

بادكو انك  
بالاشتراك مع  
جماعة المهندسين الاستشاريين  
&  
شريف الحكيم ومشاركوه

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## FOREWORD

The Urban Management Handbook is a companion work to the National Urban Policy Study's (NUPS) Final Report. The Final Report presents the NUPS recommended strategy for urban development over the next two decades. This report is intended to interpret the implications of following the recommended strategy for various levels of government -- urban, governorate and national levels -- with an emphasis on sub-national levels. The recommended strategy deals with policy and program issues primarily. Consequently, this is not a handbook in the traditional sense of a step-by-step manual for implementing a project or types of projects. Rather, it aims at highlighting major spatial and sectoral issues and indicates where major responsibilities for action might be located and provides guidelines for implementing a planning and programming process for implementation.

The Urban Management Handbook is divided into the following parts:

Chapter I presents the background of the National Urban Policy Study and its key principles. In addition, a summary of key policy issues and recommendations is presented. This includes the proposed distribution of urban population for the NUPS planning horizon (1985-2000) as well as projected levels of investment in urban employment, housing and infrastructure needed to support the NUPS distribution of urban population.

Chapter II provides a summary of key sectoral findings and urban policy recommendations for administrative, economic, and physical development. The section on administrative development includes specific recommendations regarding urban policy implementation and monitoring at the national and local levels. Special attention was given to the organizational and functional responsibilities of government at each level, special needs for development control, and specific tools the government can use to carry out its objectives.

The section on economic development is concerned specifically with the role of manufacturing industries in employment generation and policy guidelines regarding the choice of industrial types and location to support the objectives of National Urban Policy. Criteria for selection of types and locations of industry are presented for each settlement zone and special emphasis cities.

The section on housing and physical development provides overall policy guidelines in addition to approximate standards and costs for physical development.

Chapter III consists of two parts. The first a summary of integrated urban policy guidelines for administrative, economic, and physical development by NUPS settlement zone. These guidelines are meant to orient planning and programming decisions as well as monitoring and evaluation of ongoing or planned programs.

The second part is concerned with the planning and programming process and where possible specific urban policy concerns have been built in.

Appendix A consists of a series of forms or data sets to assist in both monitoring and evaluating ongoing programs as well as to assist in program development. The forms are indicative of types of sectoral information or data which should be kept at the local level by planners and programmers.

Appendix B is concerned with the identification of urban target groups. Target group identification is a further refinement in the programming and planning of urban projects. It is designed to more specifically orient urban programs and to measure their effectiveness.

Appendix C. is concerned with a methodology for formulating appropriate physical standards and costs for urban development.

## CHAPTER ONE

### INTRODUCTION

#### A. BACKGROUND OF THE NATIONAL URBAN POLICY STUDY AND THE URBAN MANAGEMENT HANDBOOK

The Ministry of Development commissioned the National Urban Policy Study (NUPS) to prepare an urban policy for Egypt in July 1980, with financial assistance from the U.S. Agency for International Development. The Government of Egypt (GOE) desired a means of integrating spatial and sectoral plans and programs so that national development objectives would be best realized. The GOE recognized that such an integrative effort could play an important role in making the best use of recent development experience represented by a large number of sectoral and spatial plans and programs prepared during the 1970's.

The outcome of this effort, the NUPS Preferred or Recommended Strategy, is presented to the Government of Egypt in the NUPS Final Report. The Urban Management Handbook is the companion work to the NUPS Final Report. It seeks to illustrate the central ideas of the Preferred Strategy by relating them to various levels of government where the strategy will be ultimately implemented. Thus, the Urban Management Handbook is not a handbook in a traditional sense (e.g., a set of guidelines or directives for operating a project). Rather, it provides a framework for translating the NUPS Preferred Strategy into action-oriented programs and projects and makes suggestions about which levels of government should have or retain existing responsibilities for these actions. In some cases, the Handbook makes specific recommendations about programs and projects, but more generally, it provides the framework for their design by various levels of government. In some ways, the Handbook is premature since the debate on the NUPS Preferred Strategy is just beginning. However, the concepts presented in the Handbook provide a means for making the national urban policy operational once it is approved and would be generally applicable even if some variations to the recommended strategy were adopted.

The NUPS Final Report provides a set of interlinked spatial and sectoral recommendations, i.e., the NUPS Preferred Strategy, which in the judgment of the NUPS Team, has the greatest chance of achieving high and balanced performance levels of all of the broad development objectives which the Government of Egypt has established. The government objectives briefly are:

- Sustaining a high rate of economic growth.
- Improving the standard of living of all Egyptians through:
  - Creation of productive employment for the rapidly growing population.
  - Generating sustainable increases in real per capita income.

- Insuring that employment, income and public service gains are equitably shared by Egyptians at all income levels.
- Achieving certain special purpose objectives:
  - Encouraging the deconcentration of Cairo.
  - Protection of arable land from urbanization.

The performance levels of benefits which can be attained by the Preferred Strategy are summarized in Figure 1-1. Specifically, the adoption of the following major benefits at supportable costs to the entire year 2000 projected urban population of 37 million:

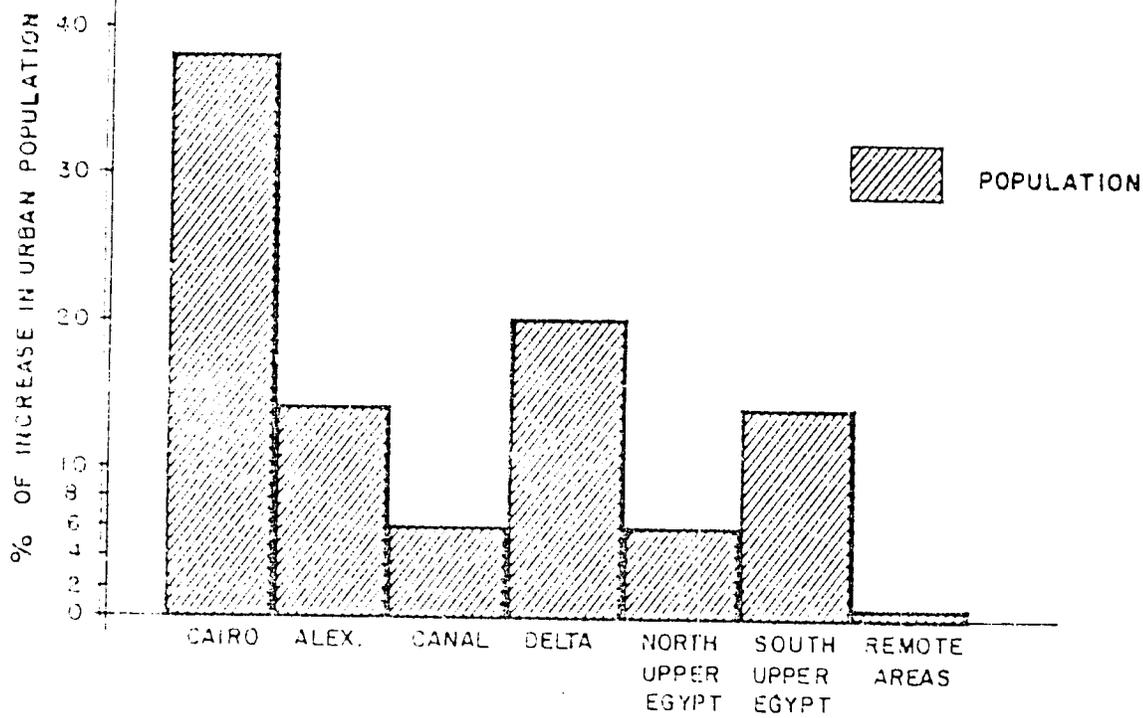
- Economic growth and real per capita income increases at nearly maximum achievable rates.
- Creation of greater social equity through targeted assistance at more affordable levels to lower income groups.
- Protection of arable land through providing migration options for Delta population and settling over a million of the expected urban population increase on desert land and an additional 6.8 million in low density locations largely already served by infrastructure.
- An implementable and feasible level of decentralization of urban growth away from Cairo.

The NUPS Preferred Strategy was the result of a systematic review of virtually all current major spatial and sectoral plans. During the course of the study, a methodology was developed which permitted assessment of regional variations in economic potential as well as infrastructure standards to determine the aggregate technical requirements of different settlement strategies. When the analysis which lead to the Preferred Strategy is applied to the sum of all the plans and projects proposed for cities and regions in Egypt, the following inescapable conclusions result which must be addressed by government decision makers:

- Even under an optimistic forecast of real growth in the economy (7 percent real growth in Gross Domestic Product), there will not be sufficient economic resources to finance all of the urban projects and plans already prepared or contemplated at their present targets and standards. Choices will have to be made among desirable activities to select the most important to the nation.
- The more decentralization of the population across the national space which is attempted, the higher the investment costs per capita and the higher the risk of a slowdown in economic growth.
- The higher the standards adopted for infrastructure, the more likely it becomes that substantial segments of the population will receive little or no benefit from the total economic resources available to the nation and the less likely that the government can recover enough of its investment to replenish the investment pool in later years.

SHARES BY SETTLEMENT ZONE OF INCREASE IN URBAN POPULATION BETWEEN 1985-2000

( FOR SETTLEMENT GREATER THAN 50,000 POPULATION )



SHARES BY SETTLEMENT ZONE OF DIRECT ( INDUSTRIAL ) AND INTRA URBAN INFRASTRUCTURE INVESTMENT

( 1986 - 2000 )

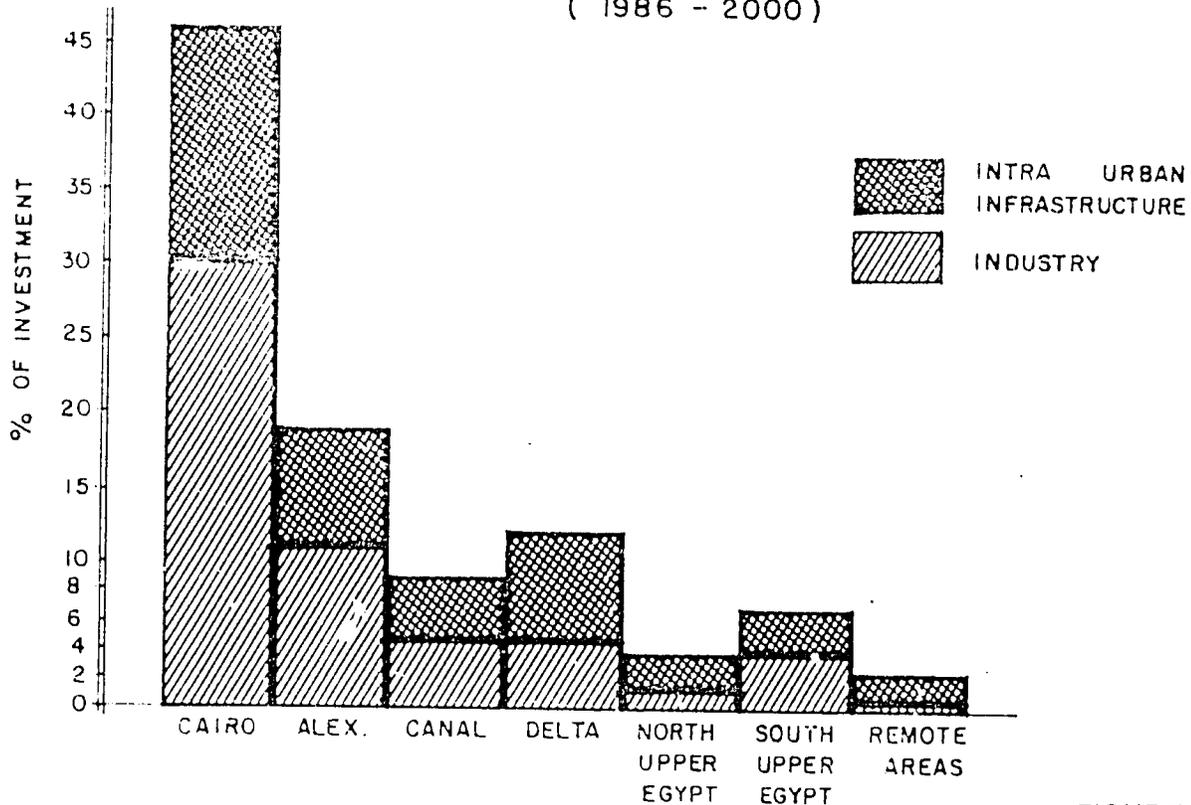


FIGURE I-1

The three conclusions underline the need to carefully evaluate the risks involved in different ways of programming urban investment in pursuit of the achievement of government objectives. The NUPS Preferred Strategy as outlined in the NUPS Final Report makes a substantial contribution to each of government's objectives, but at an acceptable risk. Further, like the development of a successful agricultural venture, the Preferred Strategy, if carefully nurtured over the 20-year planning period, will not only yield these benefits but will provide the solid base from which further future economic development can be achieved and ongoing, accelerated decentralization accomplished beyond the planning period.

As it is conceived, the NUPS Preferred Strategy does not conflict with or postpone realization of any of the government's objectives. Further, it does not categorically say that any of the major programs or projects now being contemplated by the government for achievement of those objectives should not be implemented. What it does suggest, however, is that choices must be made among desirable activities to find a mix of plans and projects which have the highest chance of meeting government objectives at costs affordable to the nation as a whole.

Thus, in the NUPS Final Report, a broad policy structure is presented for achievement of the government's objectives and for evaluating and integrating proposed programs and projects within the policy structure. Its companion volume, the Urban Management Handbook, takes that broad policy structure and interprets it into a process for conceiving and evaluating programs and projects for implementing that policy structure.

#### B. SUMMARY OF THE NATIONAL URBAN POLICY AND PREFERRED STRATEGY RECOMMENDATIONS

The National Urban Policy Study (NUPS) Final Report has recommended that the Government of Egypt adopt a national urban policy to integrate spatial and sectoral policies, build on the strengths of Egypt's economy, and lead to improvement in income and quality of life for all Egyptians. In developing the NUPS Preferred Strategy, the following guidelines were employed which we recommend be employed for review of all levels of urban programs and projects:

- Locational efficiency criteria should guide economic investments in order to achieve high rates of economic growth and job creation.
- Public investment resources should be conserved and interpersonal equity enhanced by selecting physical standards for housing, infrastructure and provisions of social facilities so that all segments of the population receive benefits from the investments.
- Investment choices should generally favor projects and project scales which achieve early payoff in benefits to users, thus, reducing the amount of unused or underutilized assets.
- The private sector should be utilized as fully as possible to generate investment in jobs and housing to reduce the demand on public resources and, thereby, allow the public sector to contribute more effectively to those things which the private sector cannot effectively provide.

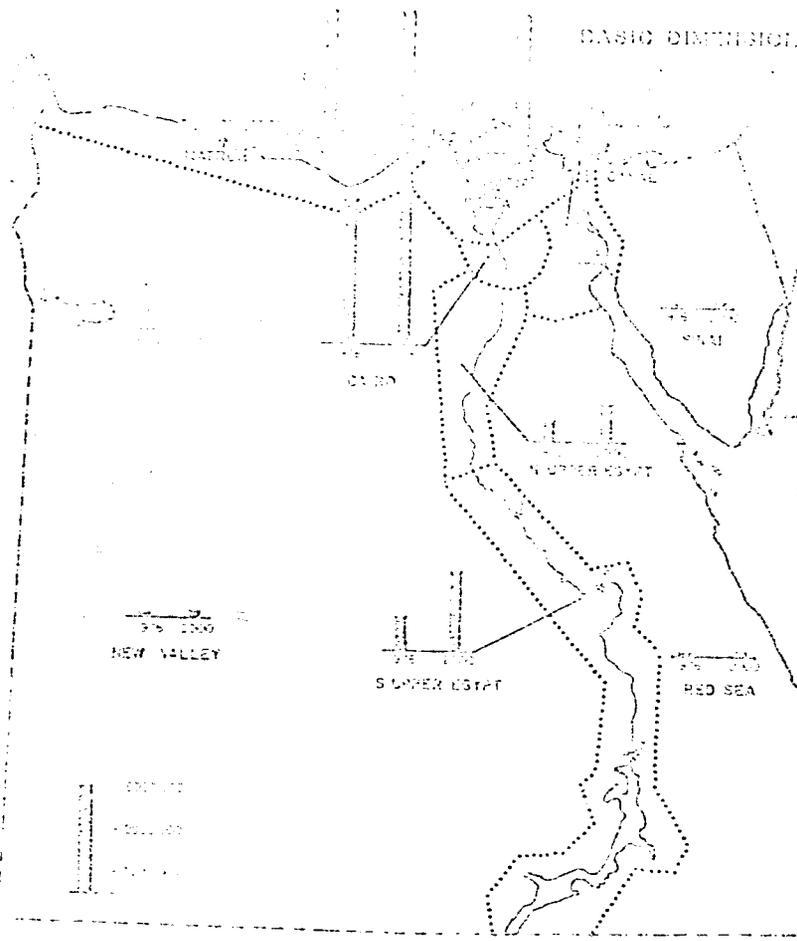
- Priority should be given in deconcentration efforts in the metropolitan regions of Cairo and Alexandria to relatively close-in settlement areas on non-arable land selected to take advantage of economics associated with the size and diversified base of the existing settlement area.
- Priority settlements for decentralization away from the Cairo Region should be carefully chosen to have relatively high economic growth potential in order to ensure that enough investment can be amassed to realize their potential.

The basic regional and sectoral dimensions of the NUPS Preferred Strategy are these:

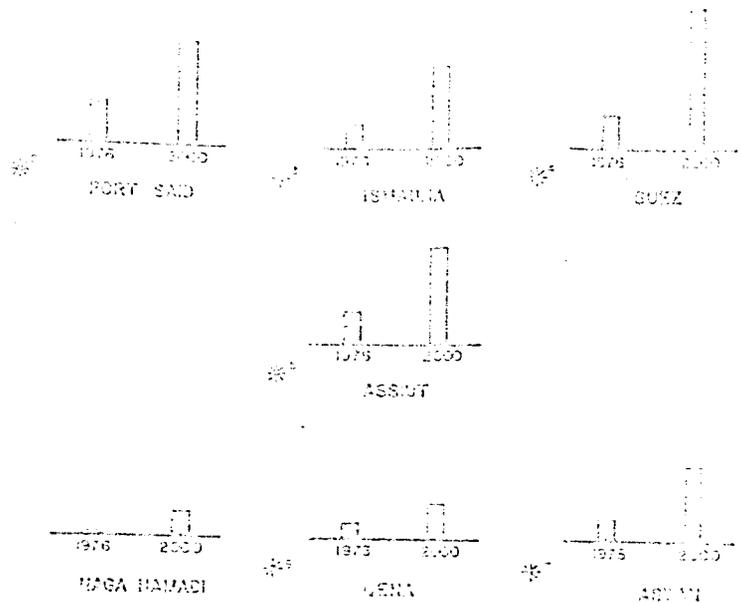
- The exploitation of strong economic advantages of the Cairo and Alexandria Metropolitan Regions to absorb a major portion of the expected growth in urban population while reducing concentration in core areas (plans for Cairo year 2000 population of 16 to 16.5 million and for Alexandria year 2000 population of 5 to 5.5 million including 10th of Ramadan, Sadat City, New Ameriyah and closer-in satellites).
- A concentrated effort to support growth possibilities of the Suez Canal Zone with a focus on Suez City (year 2000 population targets of 750,000 to 850,000 in Suez, 400,000 to 500,000 in Ismailia and 550,000 to 650,000 in Port Said).
- A strategy of managing the expected spontaneous growth in Delta cities which aims at limiting unnecessary intrusions on arable land while providing additional urban employment (special emphasis on Tanta and Mansoura with year 2000 population targets of 525,000 to 575,000 and 500,000 to 550,000, respectively).
- An effort to induce additional growth in an initially limited number of Upper Egypt cities to develop both an economic basis and a knowledge base for more decentralization in later time periods than the planning horizon of this study (special emphasis on Assiut, Qena/Naga Hamadi and Aswan with year 2000 population targets of 550,000 to 600,000, 325,000 to 400,000 and 400,000 to 450,000, respectively).
- A project-by-project approach to the settlement problems of the Remote Areas to find ways to utilize emerging technologies and establish implementing institutions to increase the attraction of these areas for human settlement. Major urban population increases are not anticipated; year 2000 population targets for existing main settlements of approximately 400 thousand are projected.
- The choice of standards for housing and infrastructure service levels that are affordable by a wider range of the population and mechanism that will increase the proportion of public cost recovery.
- Increased emphasis on the industrial sector in economic planning, encouragement of private investment to conserve public funds, and integration of spatial and sectoral planning through selective use of direct industrial investment, tax and non-tax location instruments.

The settlement zones recommended for special emphasis as part of the national strategy and their targeted year 2000 populations are shown in Figure 1-2. The urban hierarchy aimed for in Lower Egypt is shown in Figure 1-3 while that of Upper Egypt is shown in Figure 1-4. A summary of most of the major considerations which have lead to these recommendations and the suggested development strategy are shown in Figures 1-5 and 1-6.

BASIC DIMENSIONS OF URBAN DEVELOPMENT



POPULATION PROJECTIONS FOR URBAN SETTLEMENTS



\* SPECIAL EMPHASIS CITIES FOR GROWTH MANAGEMENT



SPECIAL EMPHASIS CITIES (POPULATION 1975-2000)

SETTLEMENT ZONE	URBAN POP. 1975	URBAN POP. 2000	CHANGE 1975-2000
SPECIAL EMPHASIS FOR GROWTH MANAGEMENT (EMPHASIS MARK 1)			
PORT SAID	200,000	500,000	307,000
IGHANIA	147,000	500,000	353,000
SUEZ	100,000	300,000	200,000
ASSIUT	213,000	500,000	287,000
MARGA HAMADI	19,000	175,000	156,000
DENA	33,000	220,000	187,000
ASSIUT	114,000	100,000	(14,000)
SPECIAL EMPHASIS FOR GROWTH MANAGEMENT			
TANTA	285,000	575,000	290,000
MANSOURA	253,000	500,000	247,000

SETTLEMENT ZONE	TOTAL URBAN 1975	TOTAL URBAN 2000	URBAN CHANGE 1975-2000
CAIRO	2,313,000	16,500,000	14,187,000
ALEXANDRIA	2,319,000	5,500,000	3,181,000
CANAL	430,000	2,000,000	1,570,000
DELTA	3,553,000	6,352,000	2,799,000
NORTHERN UPPER EGYPT	933,000	1,241,000	308,000
SOUTHERN UPPER EGYPT	1,483,000	3,113,000	1,630,000
REMOTE AREAS			
RED SEA	56,400	110,000	53,600
NEW VALLEY	34,400	100,000	65,600
SIWAH	10,000	100,000	90,000
MATRUH	51,000	90,000	39,000
REMOTE AREAS TOTAL	151,800	400,000	248,200
TOTAL URBAN	15,088,000	37,010,000	21,922,000

Population Projections

81





NUPS PREFERRED STRATEGY:  
 LOCATION OF NEW URBAN POPULATION  
 ON DESERT AND NON-DESERT SITES

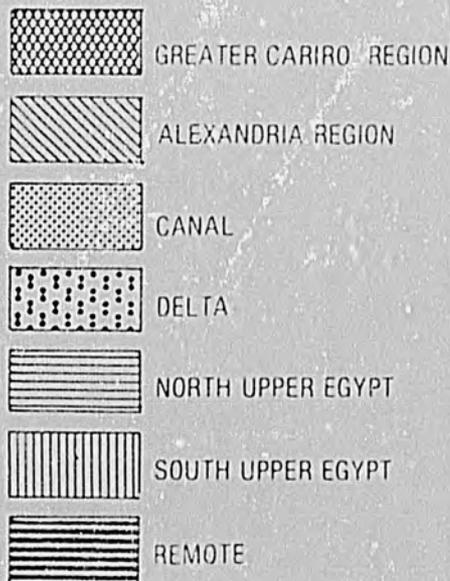
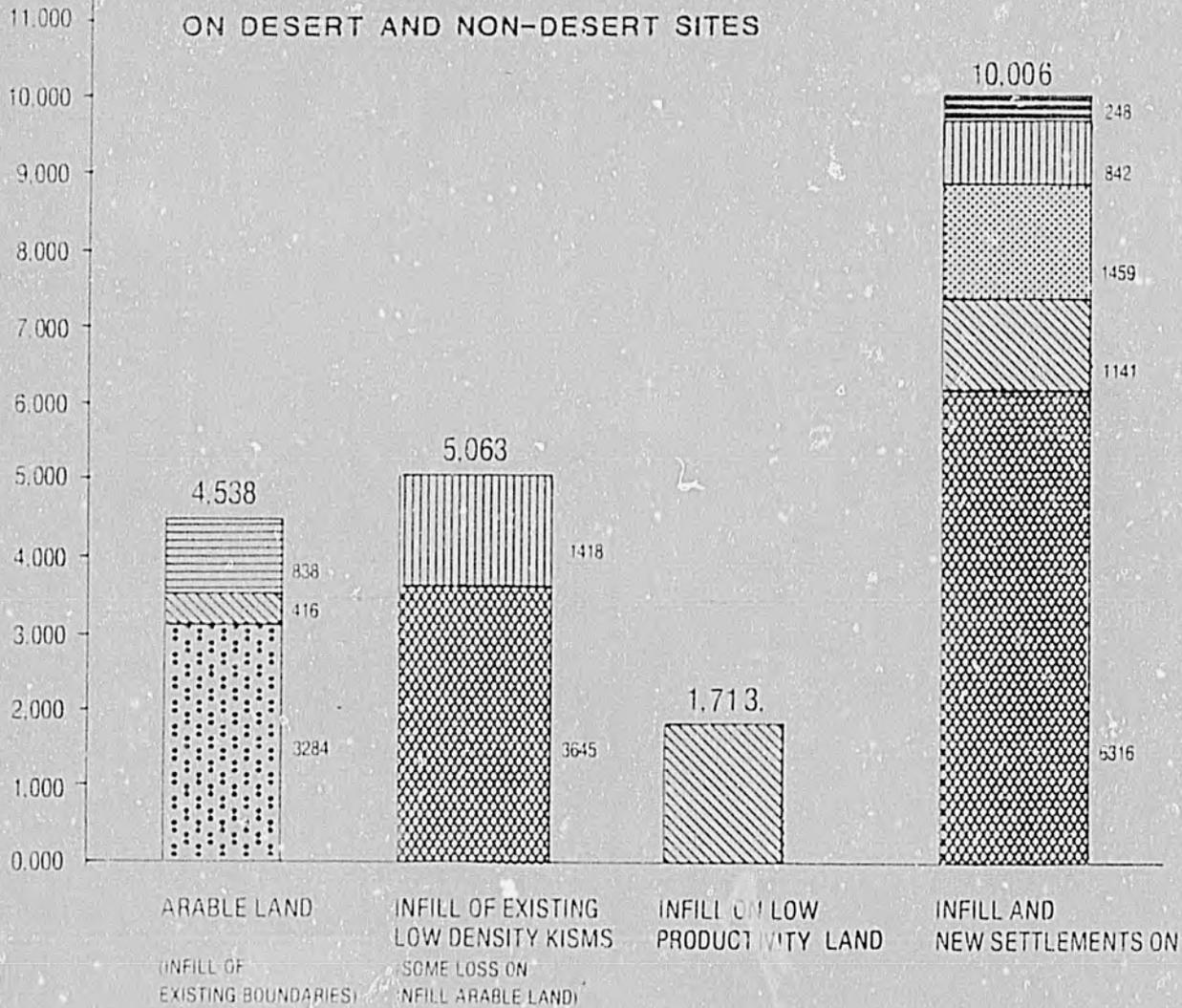


FIGURE I-5

**ELEMENTS OF NATIONAL URBAN POLICY FOR EGYPT**  
FOR EGYPT  
DEVELOPMENT CONSTRAINTS

**POPULATION :**

- High Rate of Growth
- Decreasing External Demand for Labor

**ECONOMY :**

- Difficulty in Sustaining High Growth Rate
- Insufficient Domestic Saving

**SETTLEMENT DISTRIBUTION :**

- Rapid Urban Growth
- Increased Migration
  - Rural to Urban
  - Small to Larger City

**INDUSTRY :**

- Weakness in Domestic Economy
- Low Productivity Public Sector
- Non-Selective Use of Incentives
  - Sectoral
  - Location

**INFRASTRUCTURE / SERVICES :**

- Large Current Deficits
- Large Future Needs

**POTENTIAL RESOURCE SHORTFALLS :**

- Domestic Investment Finance
- Agricultural Lands
- Water

**POLICY ADMINISTRATION :**

- Overlapping and Dispersed Authority Nationally
- Uncertain Relationship National to Local

**EMPLOYMENT :**

- Over-expansion of Service Employment relative to Industrial Employment
- Slow Growth in Farm Employment

DEVELOPMENT PRINCIPLES

- Efficiency Orientation in Settlement System

- Conservation of Public Investment Funds

**MAJOR METROPOLITAN GROWTH :**

- Cairo Region (Including, New Satellites and New Towns)
- Alexandria Region (Including, New Satellites and New Towns)
- Suez

**METROPOLITAN GROWTH MANAGEMENT :**

- Core Deconcentration
- Increased Density-Peripheria Risks
- Fringe Sites and Close-in Satellites

**DELTA GROWTH MANAGEMENT :**

- Migration inducement to non-arable land sites in Major Metropolitan Regions
- Sectoral/Location Control Industry
- Focus Expansion Service Centers

**INDUSTRY and REGIONAL INFRASTRUCTURE :**

- Emphasize Industrial Sector in Investment
- Integrate Sectoral and Location Policies with Spatial Strategy
- Infrastructure support for Spatial Strategy

**DECENTRALIZATION :**

- No More than Three Upper Egypt Sites
- Finance only High Pay-off Projects in other Areas

**URBAN INFRASTRUCTURE and SERVICES :**

- Affordable Service Standards
- Improved Cost Recovery
- Standards/Recovery Related to Spatial Targets

DEVELOPMENT STRATEGY

## CHAPTER TWO

### KEY SECTORAL POLICY PROPOSALS

#### I. ADMINISTRATION ASPECTS OF NUPS IMPLEMENTATION

##### A. INTRODUCTION

The recommendations summarized above and detailed in the National Urban Policy Study Final Report were based upon a comprehensive review of sectoral plans and programs as well as plans for the location of the rapidly expanding urban population. The study reached the conclusion that important new policy choices for achieving government's objectives must be made and existing plans and programs significantly modified if the most beneficial urban development policy is to be adopted and objectives met through its implementation at feasible cost and an acceptable level of risk to the government. In particular, the study recommends modifications in:

- Location priorities for spatial emphasis and industrial investment.
- Standards of development for housing, urban physical and social infrastructure and regional infrastructure systems.
- Service costs and cost recovery from users of urban and regional systems.
- The management of urban development efforts at national and local levels.

The suggested modifications all have the policy purpose of improving efficiency in the allocation and use of investment and conserving public resources. The central administrative issue is the development of a structure and process within which the national government ministries and local governments can work together effectively in making needed modifications in existing plans, as well as structuring future development choices to achieve policy purposes.

At the national level, the minimum requirement is that industrial investments support spatial emphasis (otherwise, spatial targets for population distribution will be unattainable) and that spatial emphases are set which permit industrial investment to be directed to places where the necessity for subsidies to sustain production and jobs can be kept at a relatively low level (otherwise economic growth and personal income targets will be unattainable). Of equal importance are plans and programs for housing, urban services (water, sewer, local transportation, education, health), and regional services (transportation, power, bulk water, and telecommunications) which need to be responsive to both the level and location of industrial and household demand for services and at standards which are acceptable and affordable.

This implies an administrative structure and process which is designed to improve the compatibility of plans and programs across ministries and ensures that sufficient overall control is maintained on total investment requirements so that

the resources to finance the investments can be made available on a timely basis and in sufficient amounts.

Requirements for productive employment, housing and publicly provided services exist (or are expected to change) in specific urban areas uniformly over the national territory. The administrative implication of this is that local government units (governorate, markaz, and city) must have a well-defined role in the generation and implementation of plans and programs in order to ensure that requirements are met within the framework of urban policy guidelines.

From an organizational point of view, a more effective alternative to a general call for improved coordination among national ministries and between national and local government is needed. Sufficient responsibility, authority, staff and financial support is needed to ensure that ministerial plans, programs and implementation practices are consistent with policy choices and are, in total, complementary where necessary and affordable. Similarly, organizational links to the responsible national authority must be established with ministers and governors for policy discussion, information sharing, and transmission of policy decisions.

## B. NATIONAL GOVERNMENT STRUCTURE RECOMMENDATIONS

### I. Assignment of Overall Development Policy Responsibility

At the time the NUPS Draft Final Report was being prepared, the Deputy Prime Minister for Economic and Financial Affairs was also Minister of Economy, Finance and Planning. While ministerial portfolios have changed organizationally, such a structure provided a good location for assigning the responsibility for overall urban development policy guidance since it was at a high enough level to oversee the actions of other ministries responsible for either sectoral or physical development and could control resource allocation. Further, it contained the major elements of urban policy development and implementation (i.e., national planning, economic policy development and monitoring, and national financial policy planning and implementation). Although it may not be feasible or even desirable to combine all of these ministries under a single ministerial portfolio, an Office of Urban Policy Affairs should be established under the Prime Minister or a Deputy Prime Minister for Economic and Financial Affairs which would have responsibility for urban policy development monitoring. Further, to carry out this responsibility such an office should combine responsibility for overall economic policy, public resources generation and planning, either directly as in the previous arrangement or through establishment of a coordinating committee chaired by the Deputy Prime Minister and consisting of the Ministers of Economy, Finance, and Planning. This office would coordinate closely with the Ministerial Committee for Economic Affairs as is described below. (Such an office might be charged with broader development policy affairs, but for the purpose of this Handbook we have suggested only urban policy affairs.)

As is indicated in Figure II-1, the Office for Urban Policy Affairs under the Deputy Prime Minister would monitor on a regular basis, perhaps quarterly, the development activities of various ministries to determine the rate of implementation of urban policy directives. When there is a shortfall in the implementation schedules, the office would work with the appropriate governorate

**SCHEMATIC ORGANIZATIONAL STRUCTURE  
CENTRAL AND LOCAL GOVERNMENT AND URBAN POLICY MONITORING FUNCTIONS**

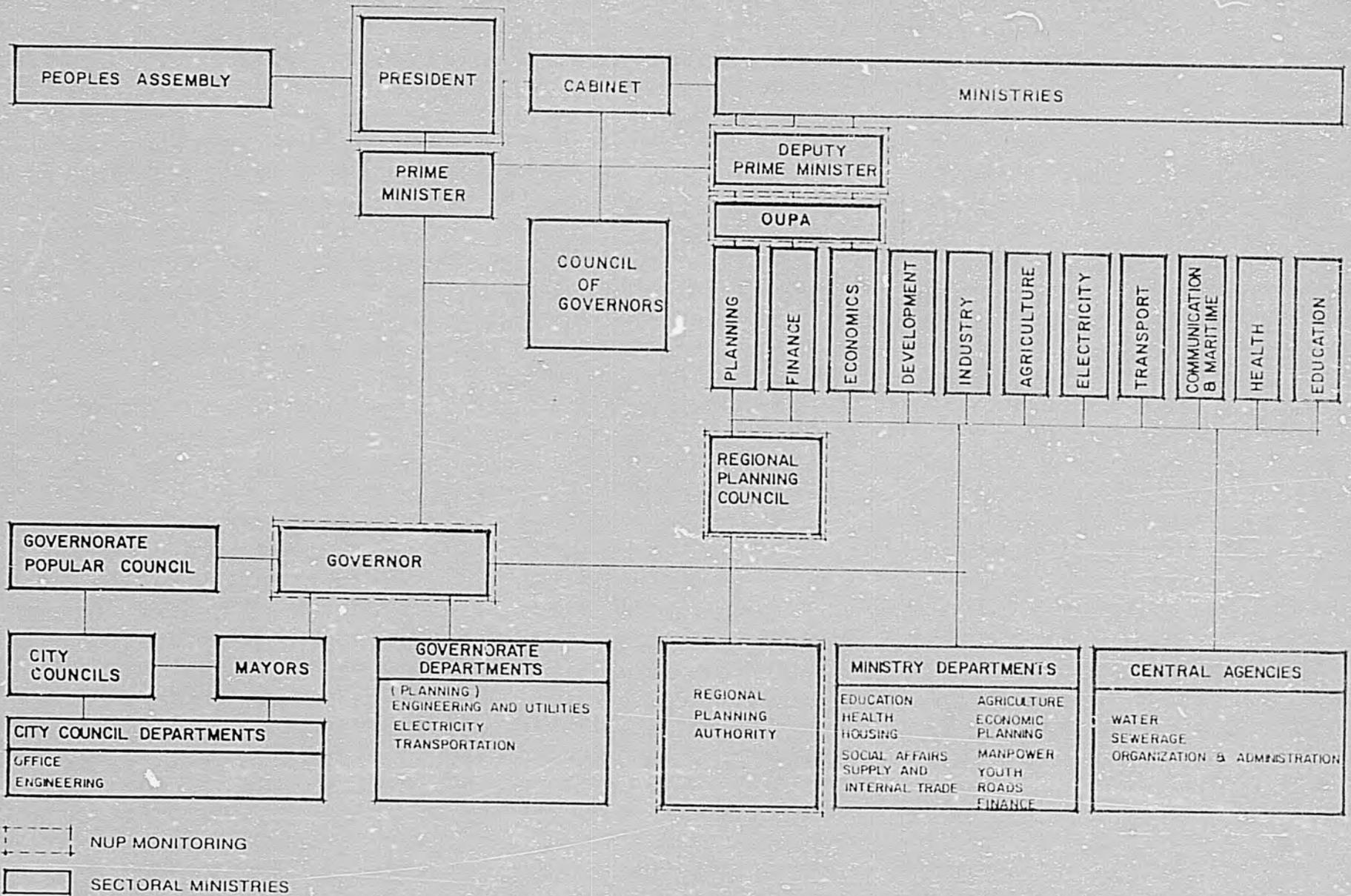


FIGURE II-1

or ministry to determine why programs or projects are behind schedule and what measures are required to speed them up.

Through its direct link with the Ministry of Planning, the Office for Urban Policy Affairs would have direct links to regional planning authorities. In addition to their current role of assisting local councils, the regional planning authorities are in a position to monitor both governorate and ministry programming and implementation functions at the local level. These regional planning authorities are in a good position to work with governorate level ministerial departments to ensure that there is a timely flow of current information to the Deputy Prime Minister's Office to assist in policy preparation, evaluation and implementation.

The Office of Urban Policy Affairs in the Deputy Prime Minister's Office must work closely with the new National Investment Bank<sup>1</sup> which is responsible for the financing of projects in the State General Plan for Economic and Social Development and is formally attached to the Ministry of Planning. In effect, the office would perform implementation and monitoring functions for the Bank.

## 2. Closer Coordination Among Ministries Most Directly Involved In or Affected By Urban Development Activities

An effective urban policy will require that, at a minimum, the Minister of Development sit upon the Ministerial Committee for Economic Affairs (which would then be charged to concern itself with urban policy), charged by the Deputy Prime Minister having oversight of the Office of Urban Policy Affairs. A better approach would be to appoint a Ministerial Committee for Services and Economic Affairs which would be specifically concerned with urban policy and which would have as members the Ministers of Interior, Development, Industry, Education, Health, Agriculture, Transport, and Electricity, the Governor of the Central Bank and be chaired by the Deputy Prime Minister.

## C. FUNCTIONAL STRUCTURE FOR URBAN POLICY ADMINISTRATION

A functional structure for national urban policy administration is outlined in Figure II-2 which shows broad policy formulation and coordination responsibilities flowing from the President and Prime Minister to Deputy Prime Minister in charge of the proposed Office of Urban Affairs. As shown, this office is closely coordinated with other ministries through the Cabinet. Policy directives would flow from the Deputy Prime Minister's office through the Cabinet for review and approval to sectoral ministries and governorates (under Law 43 of 1979, governors have ministerial status and are members of the Cabinet).

Policy directives would also flow from the Deputy Prime Minister's office to the National Investment Bank and the regional planning authorities by virtue of the office's direct link with the Ministries of Planning, Finance, and Economy. This would, in turn, flow from the regional planning authorities to governorate departments and ministerial departments at the governorate level. Municipalities (local councils) are ultimately included in the process through the relationships which exist, or should exist, between the governors and mayors for administrative affairs and between the operational links which exist between governorate departments and their counterparts in municipal departments.

# URBAN POLICY ADMINISTRATION : FUNCTIONAL STRUCTURE

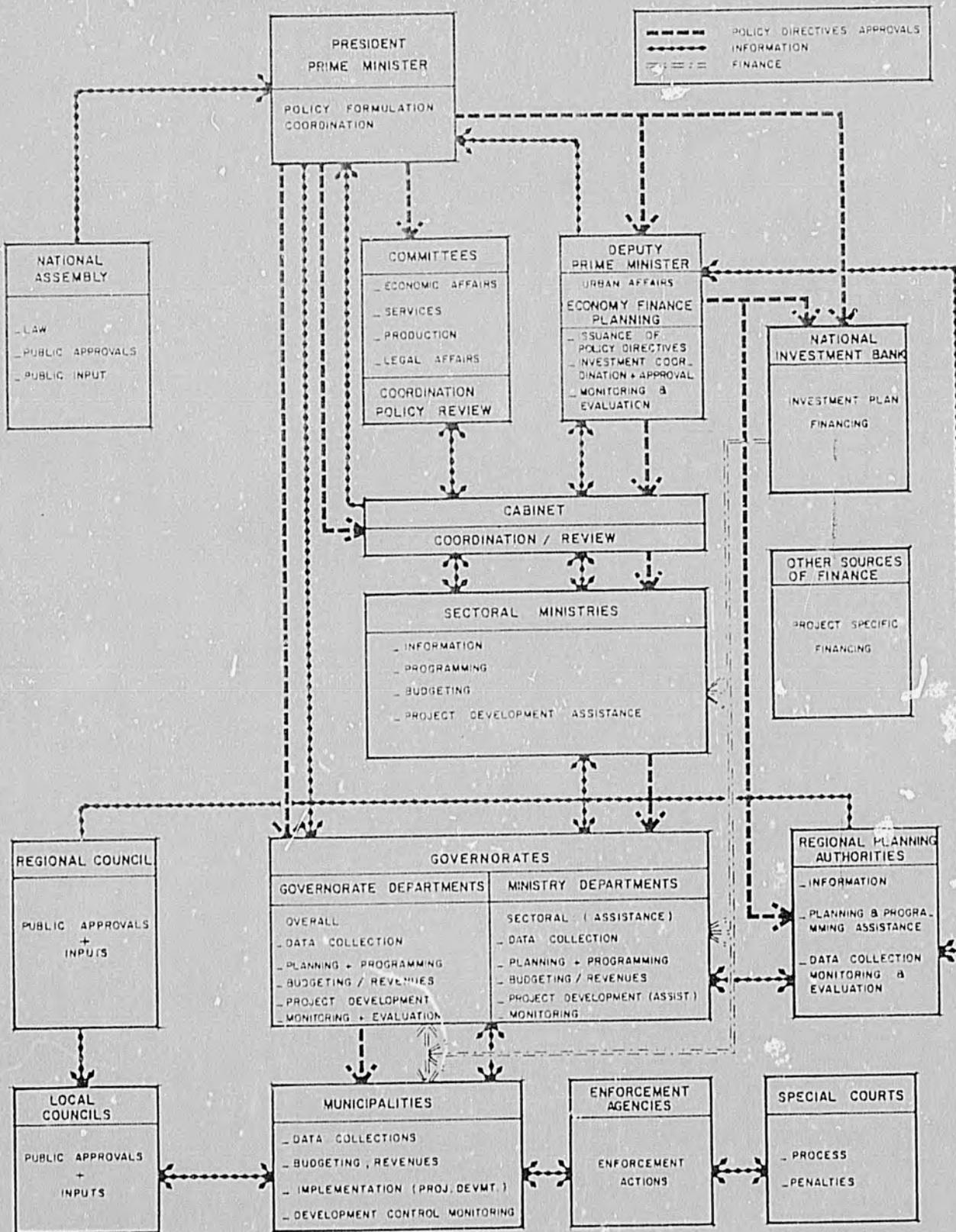


FIGURE II-2

Throughout the process shown in Figure II-2, the public has formal access to the policy directive flow through the National Assembly at the national level, and regional, governorate councils and local councils at the local level. At each level, the chief executive officer of government, e.g., the Prime Minister at the national level, the governor at the governorate level, and the mayor at the local council level, chair each of the various levels of councils and, thus, have direct inputs into formal government structure. Ultimately, within their jurisdiction under current law, these assemblies have the authority to approve steps within the process.

Information flows necessary for policy formulation are, in many cases, in reverse of policy flows. They emanate from the municipal levels to governorates to regional planning authorities to the Deputy Prime Minister's Office or from the governorates to the sectoral ministries and Cabinet. Further, due to the direct links which governors have with the President, information flows from the governorates can bypass these other steps and go directly to the Presidency.

Since financing development is the ultimate responsibility of the Ministries of Economy (economic policy), Finance (fiscal policy) and Planning (planning and programming), all of which would have direct links with the Deputy Prime Minister's Office of Urban Policy Affairs, policy directives for financing development would flow from that office to the National Investment Bank (established by Law 118 of 1980 as the mechanism for channeling development finance to programs and projects). From there, financing for program and project implementation would flow to sectoral ministries, the governorates and finally to the municipalities. (Note: Current financing of operations and maintenance expenses including salaries is not shown here, but would remain under the control of existing authority to ensure the timeliness of the flow).

Enforcement of urban policy is only partially illustrated by Figure II-2. However, it would occur along channels already partially developed. Upon receiving policy directives, the Regional Planning Authorities in conjunction with the governorates and municipalities or local councils, have the authority to implement them and to determine where violations have occurred. Ultimately, through the authority which the governor has under both the 1981 Physical Planning Law and the Local Government Laws of 1979 and 1980, enforcement procedures can be applied. A second means of indirect enforcement flows from the Prime Minister's Office when the development resources are channeled to programs and projects which support urban policy and away from those which do not. The final means of enforcement of urban policy takes a route directly from the President through the Prime Minister's Office to the Ministries of Interior and Justice, which through enforcement agencies, can take police actions to ensure that urban policy directives are carried out.

More detailed descriptions of the types of responsibilities which are necessary for implementation of the national urban policy are shown in Figure II-3 for each major level of government. As shown, broad policy formulation and monitoring responsibilities would rest at the national level. The Deputy Prime Minister's Office would be charged with overall urban policy integration and monitoring while the various development ministries would be charged with development of sectoral policies. Additional programming and project preparation responsibilities would be delegated to the governorates (primarily to the Offices of

# MAJOR FUNCTIONAL RESPONSIBILITIES OF GOVERNMENT CONCERNED WITH NATIONAL URBAN POLICY AT THE LOCAL LEVEL

		PLANNING, BUDGETING AND TAXATION		PHYSICAL DEVELOPMENT & INFRASTRUCTURE		DEVELOPMENT CONTROL		MANPOWER AND TRAINING	
		EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
		NATIONAL LEVEL		GOVERNORATE LEVEL		MUNICIPAL LEVEL			
NATIONAL LEVEL	DEPUTY PRIME MINISTER MINISTRIES OF PLANNING, FINANCE & ECONOMY	Integration of national plans into national plan Allocation of investment to Ministries and Local Government Review of draft final budgets and preparation of guidelines Implementation of taxation policy	Expanded role - Urban Policy Monitoring and Evaluation Previous functions		Directives for physical and functional development in accordance with policy Overall monitoring and evaluation				Issuance of policy directives High level civil servants training via Local Authority Provision for increased national A.S. qualifications to meet specific needs Special committee and equipped management assignments at Local level A.S. in Ministries
	OTHER MINISTRIES	Final drafts of national budgets for all localities	Previous functions in consultation with above and Governorate	Sectional activities Planning and design of major infrastructure works Oversee of urban physical planning (U.P.P.) Physical standards determination Regulation of public sector operations in major industrial location districts in industry	Implementation of policy directives (with recommendations for change) Monitoring of physical planning (U.P.P.) Planning and design of major infrastructure works (in consultation with Governorate Ministry of Industry and Government)	Policy directives for use of agricultural land (Ministry of Agriculture) Building codes and regulations (Ministry of Development)	Previous functions with support of D.P.M. and Governorate Previous function with new planning law and flexibility for revised standards and specified provisions	Application of civil servants training job classification organization and reclassification (Planning, Administration and Management) (S.A.A.) Recruitment and placement of graduates & references Development of vocational training program (Ministry of Manpower & Training 1971)	Integration of S.A.A. and U.P.P. with previous functions Greater emphasis on vocational training to meet specific local needs in consultation with above and Governorate
	MINISTRY DEPARTMENTS AT GOVERNORATES	Drafts of feature budgets for specific localities	Previous functions in consultation with Governorate and Regional Planning	Coordination with Ministries and Governorates Supervision of major infrastructure works Oversee of public sector operations in major industrial location districts in industry	Sectional assistance to Governorates (U.P.P. Planning Dept.) Expanded coordination Governorate/Ministries (U.P.P. Planning Directorate) Regional Planning Directorate of Urban Policy Directives Previous functions	Approve subdivision permits of whole land (Ministry of Agriculture Department) Building permit approvals for areas greater than 500m <sup>2</sup> or 100-15000 (Ministry of Development)	Previous functions, but no issue of building permits or approval for whole Ministry of Agriculture approval Issue of all permits at local level (Ministry of Development or Planning Law Implementation)	Administration of progress and policies Oversee local recruitment and placement Operation of vocational training program	Previous functions but in consultation with Governorate
GOVERNORATE LEVEL	ADMINISTRATION & FINANCE	Preparation of year plan & sectoral investment budgets Review and approval of year plan & budgets for Governorate and Local Government Oversee accounting for all local government units Collection of local taxes and the central government	Expanded role - Urban Policy Implementation 1. Implementation of plans and programs 2. Budget drafts 3. Previous functions		Implementation and overall monitoring of policy directives			Administer several government policies and programs Oversee local recruitment and placement	With local government staff and other staff recruitment and emergency and recruitment Previous functions
	PLANNING & PROGRAMMING		Approval of policy directives and implementation Regional listing and reporting	Physical planning of urban planning and design of some public facilities housing, water infrastructure	Urban and town planning with U.P.P. assistance Programming of integrated sectoral programs Monitoring of programs and projects at regional level Formulation of physical standards in accordance with local requirements		Development guidelines & land use (physical) strategy and administration of local restricted and development zones		Determination of specific vocational training needs
	OPERATIONS IMPLEMENTATION DEVELOPMENT CONTROL			Supervision of urban infrastructure and public facilities implementation Operation of new public facilities	Previous functions with increased responsibilities	Enforcement of law No. 55 (restriction of agricultural land) Review of building and subdivision requests and use of 100-1500 Oversee of building permits at local level	Previous functions but control of all subdivision permits on private land and all greater than 500-1000 (un-sited use) Use of monitoring of restricted and development zones	Administer vocational training programs	Previous functions with greater emphasis on training program contents to meet local needs
MUNICIPAL LEVEL	ADMINISTRATION & FINANCE	Final budgets for local authority, Governorate and National Government	Final budgets for local authority & Governorate		Overall monitoring of project implementation in accordance with policy directives				Recommendations for increased staffing and salaries
	PROJECT DEVELOPMENT		Construction planning and reporting	Site selection for public facilities and water supply (Ministry of Industry and Government)	Local planning in conjunction with Governorate and U.P.P. Specific project development		Previous functions with site specific identification for public and major projects		
	OPERATIONS IMPLEMENTATION DEVELOPMENT CONTROL			Operation and maintenance of water and sewerage works Maintenance of government buildings, parks, etc.	Previous functions with increased implementation, operation and maintenance capacities	Issue of all building permits with necessary assistance Special requirements (e.g. approval) for form of development Enforcement of building code Identification of public violations	Previous functions with Governorate and Regional Planning support Monitoring urban development zones		

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FIGURE II-3

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Finance, Economic Planning, and Utilities and, where they exist, physical planning departments along with the governorate level Ministry of Development departments). At the municipal level, which in many cases may be at the market level, additional responsibilities for project preparation and implementation would be given to local council finance, utilities and physical planning offices.

#### D. PROCEDURAL CHANGES NEEDED FOR URBAN POLICY ADMINISTRATION

The need to integrate the development budget (BAB 3 since 1980 is under the jurisdiction of the National Investment Bank) with the other operations budgets (BAB 1 - salaries, and BAB 2 - operations) was stressed in Chapter VII of the NUPS Final Report. If a system of efficient urban policy administration is to be established, particularly one that aims at conserving public resources, then the capital investment budget must be integrated with the other two main budgets so that projects are considered as a whole and fitted into the national plan. What is required is a budgeting system which sets priorities for the allocation of monies for investment while taking into account requirements of location, especially the siting of infrastructure and the location of housing and industrial projects.

The Ministries of Planning (national level allocation of funds), Finance (resource generation), and Economy (economic evaluation of programs) would continue to have the major responsibilities for integration of the national budgets. However, the Deputy Prime Minister's Office would maintain oversight of preparation of annual budgets and longer term program budgets to ensure that national urban policy objectives are met. Further, as is shown in Figure II-3, the Economic Planning and Finance Offices at the governorate levels are expected to have broader roles in integration of governorate and municipal level budgets to ensure that both local level requirements are met and that such budgets can be implemented. This latter role is particularly important as governorates are expected to have much broader responsibilities in program and project preparation and implementation than they do now.

The second major procedural change which must occur if urban policy is to be administered is reform of personnel policies of the government bureaucracy. Improved training programs are needed for public servants. The Sadat Academy of Administrative Science, being tied to the Prime Minister's Office, was established to train high level civil servants. As shown in Figure II-3, it would implement policy directives requiring new training approaches. Furthermore, greater integration of the programs of the Central Agency for Organization Administration and the Ministry of Manpower and Training is required to give focus on vocational programs and developing technical and administrative skills designed to meet the special requirements of urban administration in local areas, such as developing institutions suitable to managing urban areas in the Remote Areas. They should also focus on generally improving urban management skills, particularly those skills needed to manage rapidly growing areas such as Suez City, or very large urban areas such as the major metropolitan areas.

## E. LOCAL GOVERNMENT STRUCTURE IN EGYPT

### I. Strengthening Local Government

The recommendations made above regarding national government structure would also affect local government in Egypt, especially those regarding personnel and the planning, programming and budgeting process. However, there are five specific areas in which local governments should be strengthened if they are to carry out their roles of planning, execution and enforcement with regard to land development controls and sectoral development projects:

- a. Strengthening the power of the governor and strengthening governorate physical planning capacity.
- b. Increasing participation by the Local Popular Councils.
- c. Increasing financial resources at each level of local government through local government block grants.
- d. Creating a significant local role in the budgeting process.
- e. Increasing the attractiveness of government service at the local government level.

#### • Strengthening the Power of the Governor

Law 43 of 1979 provides a sufficient legal basis for strengthening the powers of the governor, providing ministerial status and recognizing the governor as the representative of the President within his jurisdiction. It is still necessary to clarify that the governor should have the primary responsibility for such urban development functions as preservation of arable land, industrial location within the governorate, preparation of master plans and other urban development plans, provision of basic infrastructure, and subdivision approval and disposal of state-owned land. To carry out these responsibilities, staffing at the governorate level needs enhancement, particularly with regard to financial and physical planning.

#### • Increased Financial Resources at Each Level of Local Government: Local Government Block Grants

Decentralization of authority cannot become a reality without decentralization of budgeting and of authority to make expenditures. Most monies continue to be provided in the form of grants-in-aid from the central government. In addition, most of the major sources of revenue at the governorate level are joint revenues, shared with the national government. In the near future, a form of non-attached block grant subsidy to the governorate should be considered and perhaps to lower levels of government as well, while possible changes in tax laws are being studied. This subsidy could be based upon population, but also upon other available sources of income (i.e., the add-on taxes) and level of income of the population. Such a subsidy should be a specified percentage of the total revenue allocated to the

governorate or local budget. It could be increased if local revenue increases so that local governments have an incentive to improve their revenue collection.

A portion of this block grant might be required to be used for building up a strong planning and finance staff at the local level, with early emphasis on improved revenue collections. The real estate tax (of which only 50 percent now goes to the governorate) could be used to significantly increase local revenues. (Governorates already have the authority to generate revenues through land sales.) However, the amount of such taxes collected will not become significant until either rent control is alleviated or a real estate tax based upon market value and shared between the owner and the tenant is implemented.

- The Need for a Significant Local Role in the Budgeting Process

The budgetary process in Egypt, as noted previously, is in a state of transition toward greater decentralization and it is hoped that the increased authority of the governor under Law No. 50 of 1981 will provide more local control over budgets. What is required for a successful decentralization strategy in the long run is a more autonomous budget and financing structure in which increasing efficiency of government expenditures at the local level will provide more revenues for local use and in which more effective exploitation of local revenue sources will provide more monies for local projects. The present system of financing and budgeting does not encourage such efficiency, since it is not tied effectively to goal accomplishment.

- Increasing the Attractiveness of Government Service at the Governorate Level

Public administrators in Egypt are reluctant to live in small towns and villages. They perceive such an assignment as a sacrifice of amenities and opportunities.

What is required is an emphasis upon minimum training for all local government officials and special salary and retirement benefits to attract the best person to leadership positions. There must also be greater strides toward real decentralization -- the power over personnel hiring, advancement and job classification must be moved to the governorate and local council level. Law No. 124 of 1960 stated that most national government personnel would be moved to the regions within five years. It is now 20 years later. Real efforts in this direction must begin if decentralization is to become a major force in Egypt and if the national urban policy described above is to be effectively carried out.

Metropolitan areas and settlements designated by NUPS for special emphasis require special administrative attention. In these settlements, incentives must be given to attract skilled staff, promotions need to be related to merit, and a more flexible structure established which will allow local administrators to change staffing patterns to meet the demands of rapidly growing populations. For these reasons, in Figure II-3, governorates are given broader responsibilities in determining staffing needs. Over the course of the NUPS planning period, major

development of personnel assessment and training is not envisioned at the municipal level. This is because all of the NUPS special emphasis settlements with the exception of Naja Hamadi are governorate capitals. Thus, strengthening the governorate capacity can also be effectively used to assist in administering the cities themselves.

## F. PLANNING AND LAND DEVELOPMENT CONTROLS

### I. The New Planning Law

The Physical Planning Law establishes the necessary planning framework for development by providing for the mandatory preparation of master plans for cities and villages. All subdivision master building permit approvals in cities and urban parts of villages would have to be consistent with master plans, once developed.<sup>2</sup>

Detailed plans would be prepared by the local unit (city/village) following the approval of the master plan. The development of the master plan would be done with the assistance of the General Organization for Physical Planning (GOPP) and the governorates' departments of housing and development.

Additional features of the 1981 Physical Planning Law (which is discussed thoroughly in Chapter VII of the NUPS Final Report) include:

- Elimination of some specific subdivision standards and provisions for granting exemptions to these standards for specific areas and buildings which increase development affordability (Articles 65, 66).
- A broader range of control measures and tightening of existing measures regarding:
  - Subdivision advertisement.
  - Inclusion of subdivision approval in contracts of sale or rent.
  - Conditions in subdivision approval must be included in transfer of property to inheritors.
  - Extent of subdivision may be set by the local popular council and include lands expropriated if owners do not voluntarily participate.
  - The Ministry of Development is given authority, after consultation with the governor and approval of the local popular council, to modify previously approved subdivision conditions.
- Restrictions may be placed upon subdivision approvals by the governor, with city/village approval for up to two years and with a maximum extension for another two years. The governor may exclude parts of the towns and villages from subdivision due to capacity limitations of public utilities or to control stages of development according to an approved plan.

- Penalties for violations have been strengthened by providing for imprisonment for five to ten years and a fine of no less than L.E. 10,000 (and a minimum fine of L.E. 50,000 if the violation is intentional). Fines may be collected through administrative procedures rather than requiring a court order.

## 2. NUPS Suggested Improvements in Physical Planning Law

The usefulness of the 1981 Physical Planning Law would be enhanced, in the judgment of NUPS, by the following changes or additions (which are discussed more fully in Chapter VII of the NUPS Final Report):

- An express statement that new urban communities come under the provisions of the Physical Planning Law.
- A requirement that building occurs (within i.e., three years) after subdivision approval.
- Elimination of the requirement that all drawings for a subdivision must be approved by a certified architect.
- Provision of an escalator clause for the fines stated as penalties so that the amount remains a significant deterrent after a five or ten year period.
- Enforcement.

The proposed Planning Law, however, will not be effective unless enforcement of the provisions of such a law is emphasized and coordinated with the enforcement of the conditions regarding the use of arable land and the law regarding building permissions. It will be especially important that decisions regarding industrial location and investment, in which the Ministry of Industry plays a large role, are coordinated with the overall plan for development of an area. It will also be required that planning for the Cairo and Alexandria metropolitan areas be integrated with the planning of new towns and satellite cities.

The basic principle involved in the effective enforcement of planning and development controls should be that selective enforcement in priority areas, making maximum effective use of a limited number of staff is more likely to be successful than efforts at blanket enforcement. At present, incentives for development and restrictions against development are not area-specific but cover too many locations to be effectively enforced. Thus, the value of the incentives is negated and the ability to enforce the restrictions is diluted. Steps must be taken to set priority areas for enforcement of both incentives and restrictions, based upon planning, as well as priorities set for economic investments, and provision of critical infrastructure (especially of water, sewerage, electricity and public roads).

## G. GUIDELINES FOR VERTICAL DEVELOPMENT IN RENEWAL AND REHABILITATION AREAS

The problem of renewal and rehabilitation of existing settlements will be particularly acute in the Delta and Nile Valley settlements where no opportunity exists for expansion on desert land.

It is critical that these settlements achieve higher densities if arable land loss is to be reduced. Yet, as the NUPS Tanta Illustrative Development Project relates, renewal and rehabilitation is severely hampered by landlord/tenant difficulties which must first be resolved. In addition, within any given settlement the variety of housing suggests different approaches to vertical development and densification.

Thus, the following program was developed to illustrate how vertical development and densification might occur in different sections of a settlement. The program suggests general guidelines for establishment of four basic types of zones where vertical redevelopment of existing built-areas or where built-area expansion could occur at densities which conserve land. These four zones where different types of construction would be permitted are shown in Figure II-4. Under the program, a fifth zone would also be established within settlement boundaries to protect arable land. The following describes in more detail the establishment and concepts of these zones.

Once official mapping of the urban areas is complete, special zones should be created in which specific types of building activity would be encouraged through a combination of financial incentives and development controls to discourage non-complying urban uses. However, unlike traditional zoning laws which are linked to strict land use classifications, the general concept behind these zones is to encourage vertical redevelopment of existing built-areas and efficient vertical, high density rather than horizontal development of new expansion areas. Thus, multi-use urban areas could be created in each zone as long as the different uses are compatible with each other and the general objectives of the zone. (We have not attempted to list all types of uses which might be compatible with each other, as individual settlements would have different requirements.) The five major zones which have been identified are:

- Redevelopment Area: Zone I
- Vertical Expansion: Zone II
- Stabilized Population: Zone III
- Built-Area Expansion: Zone IV
- Protected Arable Land Areas: Zone V.

In the first four zones, integrated programs combining financial incentives and development controls should be developed to link together public sector financial assistance with private sector development. In the fifth zone, where the objective is to protect arable land, strict enforcement of development controls is

necessary. A description of the type of actions which should occur to implement the objectives of the four zones where development is desirable is shown in Figure II-4.

Initially, the built-area can be classified into these zones through aerial photo interpretation in which different building types can be identified both according to their general structural condition and storey height. Once this classification is performed, limited field surveys may also be necessary to identify special conditions or clarify uses which cannot be determined from aerial photos. Field surveys may also be necessary to identify structures within an area for which no action is necessary, such as structures in good physical condition which already have adequate net residential densities. They will also be necessary to determine if a building is structurally sound enough to permit the addition of one or two more floors. As is indicated by Figure II-4, these classifications are not viewed as fixed classifications of urban areas. As a zone improves, its classification changes. For example, once expansion has occurred in Zone II, structures in the zone would be reclassified according to the Zone III classification, and only routine maintenance on structures and infrastructure would be necessary.

These sets of development controls are recommended to ensure that new urban expansion complies with objectives set for each zone. The first, which would apply to already built-areas, would impose high building taxes on buildings which do not comply with density targets and/or are in substandard condition. These taxes which would apply to the Zones I and II, would only be imposed after a grace period of three years had elapsed during which owners could comply with density/building condition targets set for the area. If after that period, no desirable action occurred, the taxes would be imposed and the property could be subject to expropriation under the conditions established by the 1981 Physical Planning Law.

The second set of development controls would apply only to vacant areas and areas designated for new urban expansion. In these areas, high vacant land taxes would be imposed at rates which reflect the highest urban land prices in the settlement. However, in lieu of payment of these taxes, vertical development rights could be granted to the governorate. Upon receipt of these rights, the governorate planning office would permit new development which corresponds to density and use criteria of the area. Through judicious control of when development permits are granted, the phasing of extensions to the built-area could be linked to planning extensions of infrastructure into these areas. In areas where vacant land is already served with infrastructure, acquisition of vertical development rights would probably not be as important. However, if development complying to density and other desirable use criteria does not occur, the vacant land taxes should be imposed at maximum rates and such property, if still not developed, should be subject to expropriation.

The third set of development controls is similar in nature to those proposed for built-area expansion, except that these controls would be imposed to protect agricultural land within the urban boundaries. Within these areas, no building activity would be permitted except for construction of farm buildings. If other types of new building occurs, punitive building taxes would be imposed at maximum rates reflecting the value of the highest priced urban land and the building would be subject to demolition upon orders of the governor, using authority granted under the 1981 Physical Planning Law.

FIGURE II-4

PROPOSED ZONING FOR VERTICAL EXPANSION OF DELTA SETTLEMENTS

Type	Zone I: Vertical Redevelopment of Redevelopment Zones	Zone II: Vertical Development of Expansion Zones	Zone III: Stabilized Population Zones	Zone IV: Built Area Expansion Zones
Description	Existing area where structures are deteriorated or do not conform to appropriate urban uses, encouraged.	Existing area where structures are in good condition, but have only one or two floors and floor/area ratios are low.	Area where floor height and/or floor area ratio adequate, or infrastructure not adequate for higher densities.	Vacant areas, urban infill areas or urban expansion areas within boundaries designated for urbanization.
Major Action Taken	Existing structures to be removed and area redeveloped at higher densities, multiple uses.	Building owners encouraged to add one or two additional floors where foundations and infrastructure are adequate.	Maintenance of existing structures encouraged, or structure capacity increased.	Owners of vacant land encouraged to develop at urban gross densities 300 to 400 persons/hectare in planned developments.
Program Components	<ol style="list-style-type: none"> <li>1. Compensation to be paid to existing tenants:               <ol style="list-style-type: none"> <li>a. Representing 1 year's rent at current rates, or</li> <li>b. Present value of accommodation, and</li> <li>c. Tenants receive priority for similar or even wider form or near to existing location.</li> </ol> </li> <li>2. Compensation paid to local government from central government. Loans repay through increased land tax value.</li> <li>3. Private owners are encouraged to redevelop at higher densities of 400 persons/hectare:               <ol style="list-style-type: none"> <li>a. If new town is taken after three years, vertical redevelopment tax imposed representing revenue loss due to low densities of existing density is 10%, but are allowed for 40% tax would be a times rental value.</li> <li>b. For owners redeveloping, partial rent control exemption granted if density targets are met:                   <ul style="list-style-type: none"> <li>- Rent control granted to existing tenants.</li> <li>- Rent control not imposed on new additional units.</li> </ul> </li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Private owners encouraged to add floors:               <ol style="list-style-type: none"> <li>a. By imposing building tax rate which progressively decreases as building height or floor area ratio are reached. (Owners given a one period of three years to comply).</li> </ol> </li> <li>2. Owners provided low interest loans to cover the building tax amount to add floors:               <ol style="list-style-type: none"> <li>a. In case building tax used to compensate local government for grant tax.</li> <li>b. Low interest loans provided on grant basis primarily used to increase revenues in later periods.</li> <li>c. Existing tax rates increased in later periods to increase revenues.</li> <li>d. If low interest loans granted, rent control tied at rate above.</li> </ol> </li> <li>3. If market rate loans are granted or developer uses own resources:               <ol style="list-style-type: none"> <li>a. Rent control not imposed on desirable vertical expansion, but building tax rates would be imposed at high enough levels to recover infrastructure capital costs.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. Existing planning and rent control legislation enforced to ensure maintenance of buildings occurs. (See item 1 of Zone IV for possible modifications in rent control provisions).</li> <li>2. Vertical expansion generally discouraged, except where infrastructure plan is:               <ol style="list-style-type: none"> <li>a. Good infrastructure available to provide</li> <li>b. Land use plan is possible.</li> </ol> </li> <li>3. If rent control is not imposed in these areas, then future building taxes should be allocated between tenants and owners according to the level established for maintenance under the 1981 grant or 1981 Law (See Article 16 of Law 14/1981).</li> </ol>	<ol style="list-style-type: none"> <li>1. High vacant land tax rates imposed on vacant/infill or urban expansion land at rates equal to highest urban land values, or</li> <li>2. In lieu of payment of tax, vertical development rights are granted to local government.</li> <li>3. Once vertical development rights are granted, land would be developed according to programs established by the master plan:               <ol style="list-style-type: none"> <li>a. All new subdivisions to be developed at gross urban densities of 400 to 450 persons per hectare.</li> <li>b. Land comprising densification zones taxed at rates equal to highest urban land value tax.</li> <li>c. All foundations designed to carry five floors except where development plans show gross urban density targets can be reached.</li> <li>d. Cooperatives or public sector housing framework can be granted for reorganizing development:                   <ul style="list-style-type: none"> <li>- If low interest loans are granted, portions of site area must be allocated to low income housing, but real estate taxes could be imposed at progressively higher rates in later years to finance interest rate subsidies.</li> <li>- If rent control is imposed on non-benefiting tenants, interest loans or credits in that year can be permitted at rate equal to increase in real estate taxes, or provisions of them could be imposed.</li> </ul> </li> </ol> </li> </ol>

FIGURE II-4 (Continued)

Type	Zone I: Vertical Redevelopment of Redevelopment Zones	Zone II: Vertical Development of Expansion Zones	Zone III: Stabilized Population Zones	Zone IV: Built Area Expansion Zones
	<p>c. Loans are granted to owners:</p> <ul style="list-style-type: none"> <li>- At subsidized rates for construction of replacement flat aimed at housing existing tenants or tenant businesses.</li> <li>- At market rates for non-rent controlled flats.</li> </ul> <p>d. Owners would be encouraged to provide space for commercial and small-scale industry uses on upper floors:</p> <ul style="list-style-type: none"> <li>- If subsidized, loans are used to finance development, rent control may be imposed.</li> <li>- If market rate loans are used, no rent control would be imposed:</li> </ul> <p>4. If for social reasons rent control is determined necessary, then the provisions of the 1981 Control Law should be imposed, but rent increases should be permitted at rates above central bank lending rates at the time the loan is granted. These rental increases would have to be included in writing in owner-tenant contracts. Further, if rent control is imposed, future building taxes should be allocated between tenants and owners according to the basis established for maintenance under the 1981 Rent Control Law. (See Article 9 of Law 136/1981.)</p> <p>5. If non-compliance continues, existing provisions for expropriation can be imposed. (See Planning Law of 1981.)</p>	<p>4. In both cases, if new vertical development occurs, moratorium on building taxes granted for three to five years then building taxed at lower rate.</p> <p>5. In cases where rent control is imposed, building taxes should be allocated between tenants and owners according to the basis established for maintenance under the 1981 Rent Control Law (Article 9 of Law 136/1981).</p> <p>6. Buildings which are in good condition and already have adequate floor heights would be exempted from provisions of this zone and classified according to Zone III classifications.</p>		<p>e. If market rate loans or non-public sources of finance are used to finance development:</p> <ul style="list-style-type: none"> <li>- Rent control would not be imposed (if, for social reasons, rent control is deemed necessary, then the provisions of the 1981 law should be imposed except that increases in rent would be permitted at rates at which loans were granted. (See item 4 of Zone I provisions.)</li> <li>- Building tax rates would be imposed to recover infrastructure capital costs.</li> </ul> <p>4. Only subdivisions conforming to development controls would be guaranteed access to infrastructure. Other non-conforming developments may be given infrastructure but only after building tax rates imposed at highest rate are paid.</p> <p>5. On land not designed for urban expansion, maximum building tax rates imposed at the highest rate are paid.</p> <p>5. On land not designed for urban expansion, maximum building tax rates would be equivalent to the highest urban rate and would represent the highest land value of urban land. Buildings in these areas could also be subject to demolition.</p> <p>6. In all cases, changes in status of development (such as additions of new structures) would be determined through a combination of landsat and aerial photo analysis performed on at least a biannual basis.</p> <p>7. If rent control is imposed, future building taxes should be allocated between tenants and owners according to the basis established for maintenance under the 1981 Rent Control Law (See Article 9 of Law 136/1981).</p>

The purpose of imposing very high punitive taxes and acquisition of vertical development rights is to more nearly equalize the effective price facing a developer on urban land and lower priced agricultural land. Recently, price differentials between urban and agricultural land led developers, both private and public, to seek lower priced agricultural land outside urban boundaries for new urbanization rather than developed close-in fringe sites or more highly priced urban land.

Thus, by equalizing price differentials, urban land which is now being held off the market could be made more attractive to private developers.

A second purpose for acquisition of development rights over land which has been declared suitable for urbanization is to improve access to these areas by low income groups who traditionally have not been able to afford the high prices of closer-in urban land. After acquisition of the development rights, owners would be allowed to subdivide and sell land for urban purposes, but the governorate's planning department would have the capacity to ensure that portions of new sites are developed at standards affordable to low income groups. It could also impose betterment taxes (which already exist under Law 222 of 1955) on increased land use resulting from declaration of an area suitable for urban expansion. These revenues could then be used to subsidize land purchases for lower income groups or other desirable urban projects. A second alternative could be to provide future developers with sites in areas which are suitable for development in lieu of developing areas which are designated agricultural. This procedure could also be used to ensure that sites are available to low income groups. In such a case, a developer wishing to build in an area designated for lower income groups might be offered alternative sites.

As mentioned above, in order to be effective, these area development controls should be combined with financial incentives to developers to comply with them. Two types of incentives are suggested: the first would be in the form of loans to developers for complying with development controls, while the second would be partial exemption from portions of rent control restrictions. The loan would generally be made available to developers through existing banking institutions, but would be guaranteed by the governorate with Central Bank backing. This guarantee would be granted on the assumption that the revenue base of the area would be improved once development occurred, due both to higher value construction and an increase in the number of dwelling units on the site; thus, potentially increasing the number of taxable properties. Although loans could be granted to any development which complies with development restrictions, priority could be granted to development targeted to low and middle income groups. The rent control exemptions would generally restrict applications of rent control provisions to specific target groups and would seek to provide developers with a rate of return reflecting that which they could achieve in other types of investments. These rent control provisions are detailed on Figure II-4.

Although the new Physical Planning Law of 1981 provides a good basis for Delta growth management, some of the flexibility built into the law needs to be exercised in the implementation of executive regulations. For example, only the upper density standard of the law is suitable for future urban expansion in Delta settlements. The lower limit shown in Article 7 of 80 persons per feddan (190

persons per hectare) would permit continued urban sprawl which would consume arable land at rates equal to those which have been indicated by LANDSAT analysis of Delta settlements between 1972-1978. Furthermore, the provision for reserves of up to 50 percent of the site area for public uses, apparently excluding circulation, needs further classification in executive regulations. As Article 13 seems to indicate, up to 70 percent of a site could be devoted to public uses (the 50 percent maximum reserve for non-circulation public uses and 20 percent for circulation). If such a restriction could be imposed, net residential densities of 1,166 persons per hectare would be necessary if the minimum gross urban density standards proposed by NUPS for Delta settlements are to be achieved. Net densities of this level would be extremely hard to achieve if the final provisions of Article 13 were also imposed i.e., 50 percent of plot is reserved for private open space resulting from plot setbacks.

In the NUPS proposed standards for Delta settlements, we have proposed that roughly 35 percent of the settlement area would be devoted to public uses (such as recreation, education, etc.). This would result in roughly 4.3 square meters of non-circulation public space per capita at gross urban densities of 350 persons per hectare. Such a provision would encourage new public facilities to be designed on vertical rather than horizontal planning concepts. It should be pointed out that these general guidelines for public land uses exclude provisions for major new region-serving facilities such as expansion of universities, new governorate buildings, and development of major health facilities. These need to be designed on a project-by-project basis. These provisions also exclude public "economic" uses such as commercial facilities, expansion of public sector industries, etc., which would be in either commercial or industrial areas. The provisions in the Planning Law regarding private open space should also be further detailed in the executive regulations. The amount of plot coverage should be based on floor area ratios and/or building height and plot sizes. For very small plots (say less than 90 square meters, such as is the average plot size in Greater Cairo's new private sector development), imposing a 50 percent limitation on plot coverage would make density targets difficult to achieve. For these plots, private open space restrictions should not exceed 40-45 percent of the plot area.

Generally, the program suggested in Figure II-4 could be implemented within the framework of existing legislation. However, modifications in the 1981 Physical Planning Law and the 1980 Rent Control Law would be needed to permit the establishment of the five zones proposed and to allow building owners partial exemption from rent control. The 1980 Rent Control Law established the basis for sharing real estate taxes between owners and tenants (Article 9 permits sharing of responsibility for building maintenance). However, an amendment to the law would probably be necessary to permit sharing of real estate taxes. Existing tax legislation already establishes a basis for taxing real estate at market value, however, buildings are not reassessed frequently enough to make such provisions effective. Governorate physical planning units (either existing utilities and engineering offices or newly created physical planning units) and financial offices would work closely together to see that the enforcement provisions of the program are implemented.

The constitutional basis for acquisition of development rights by government exists in a fairly large body of law, i.e., Law No. 59 of 1973 as amended by Law No.

59 of 1978 prohibits construction of buildings on agricultural land without Ministry of Agriculture permission; the 1981 Physical Planning Law empowers local councils (with the advice of the GOPP), to establish various types of zones within master plan areas and further empowers the Ministry of Development with the authority to develop executive regulations for uses within these zones; Law No. 43 of 1979 and Law No. 28 of 1949 empower governorates with the authority to establish industrial zones. However, it would probably be necessary to amend the 1981 Physical Planning Law to empower the governor to acquire development rights over areas within settlement boundaries which have been designated agricultural by master plans.

## H. PRESERVATION OF PRIME AGRICULTURAL LAND

### I. Definition of Priority Agricultural Land

The critical point that emerges from a review of legislation pertaining to the preservation of agricultural land and its implementation (see Chapter VII of the NUPS Final Report for details) is that such a prohibition cannot be effectively enforced on all arable land outside of urban areas. A definition of "priority agricultural land" is required. This definition must relate to the setting of priority areas for industrial location and for housing location and the ability of local officials to enforce restrictions on building in specific locations. Not all fertile agricultural land can be protected. Its protection depends upon its location and upon the strength of the competing land uses. Thus, some agricultural land located in the path of urban development probably cannot be protected under any situation. It is more important that such land be well planned for future urban development than that vain efforts be made to protect its agricultural use. At the same time, every attempt should be made to protect Class I and II agricultural land, wherever possible, and to direct urban development toward less valuable agricultural land when it cannot be placed completely upon desert land.

In Figure II-5, the "loopholes" in the development control process are illustrated. As the figure shows, there is little evidence of integration among the various actors responsible for development control and enforcement: development may be entirely or partially illegal. To use the example of Tanta, during the period 1976 to 1980, no formal subdivision permits were granted to individuals to construct housing on agricultural land. During the same period, however, the Tanta City Council Engineering Department issued 1,662 building permits. Though NUPS was unable to determine the location of these permits, there is clearly a lack of integration among the departments.

As Figure II-5 shows, the process for legal building construction can be short circuited in many ways. For example, a land owner can sell a plot of land which had been legally registered by the Ministry of Justice without first obtaining subdivision approvals from the Ministry of Agriculture. The new owners may either legally register their new property with the Ministry of Justice, or they may start construction without registering their plots with the Ministry of Justice (Step 4 on Figure II-5). Even if the new owners register their plots with the Ministry of Justice, they are still illegal because they are not in subdivisions approved by the Ministry of Justice. After Ministry of Justice registration of the newly subdivided plots, the process is not complete as owners are required by law to get building

THE DEVELOPMENT OF ARABLE LAND LOOPHOLES  
IN THE CONTROL PROCESS

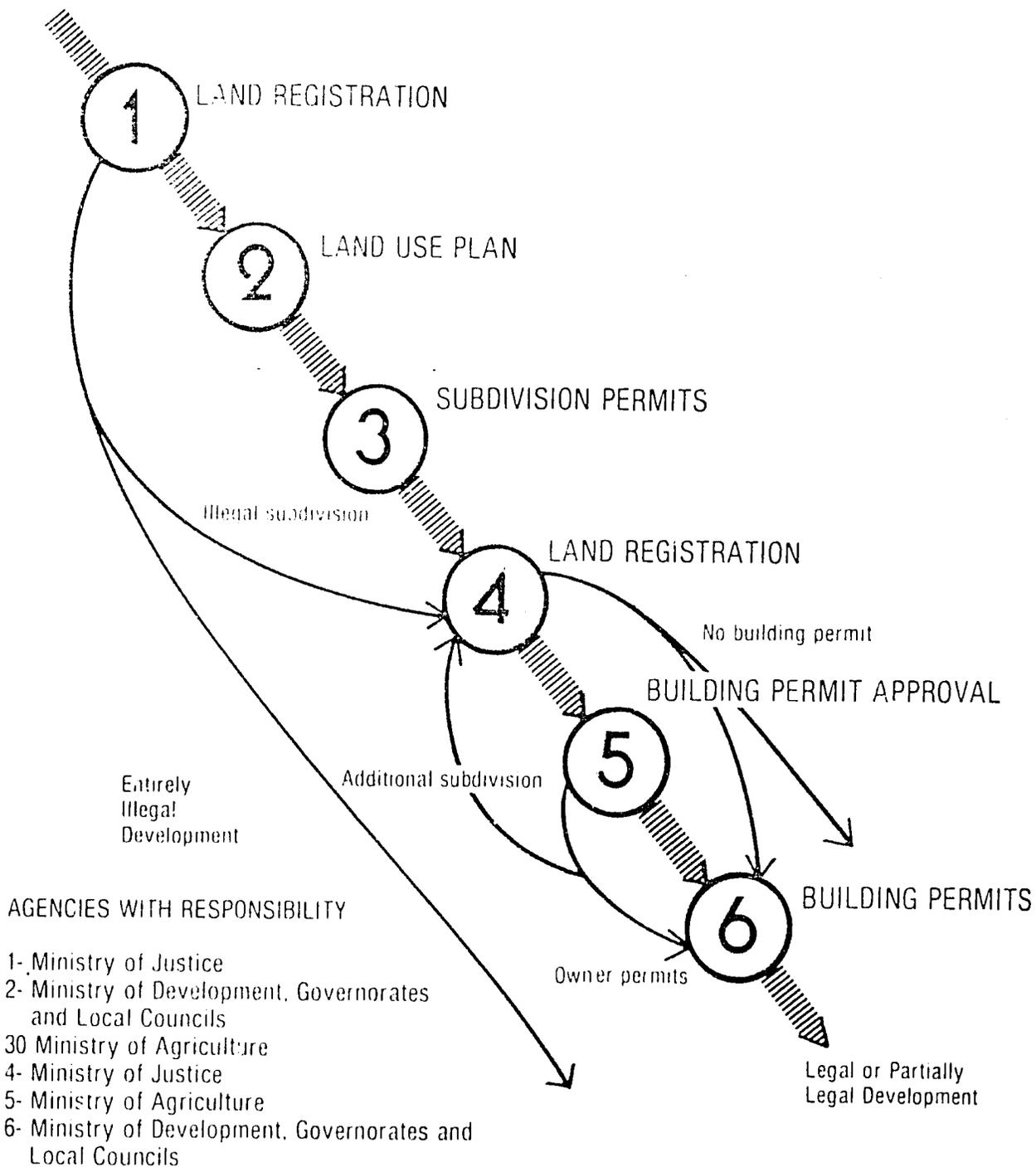


FIGURE II-5

permits issued by either the local council or the governorate Utilities and Engineer Office, depending on the size of the project. Some owners proceed with this step even if they are without fully registered land and some do not.

In Figure II-6, a schematic representation of how the development control process might be improved is presented. In addition to better integration among the control and enforcement functions (and heavy penalties for violators), NUPS strongly favors the introduction of alternative serviced sites where development can be channeled, identification of priority areas where development can be strictly monitored, the use of "restrictive" land uses, and possibly the purchase of development rights by government to protect priority areas.

## 2. Boundary Change Procedure to Enhance Control

It is clear that not all arable land in Egypt can be protected from urban encroachment. At the same time, control of development densities, patterns of development, and orderly provision of services is enhanced by inclusion of land used within urban boundaries. It is often the case that the alternative to boundary change is uncontrolled informal development which becomes more costly to serve with infrastructure later and has resulted in much arable land loss. Even though it may seem paradoxical, the best way to conserve arable land in such circumstances would be to recognize that some arable land needs to be incorporated within city boundaries and its development controlled.

## 3. Strengthening of Enforcement Procedures

Even selective enforcement of the provisions prohibiting building upon agricultural land would require the strengthening of present enforcement procedures. The following changes would assist in the effort:

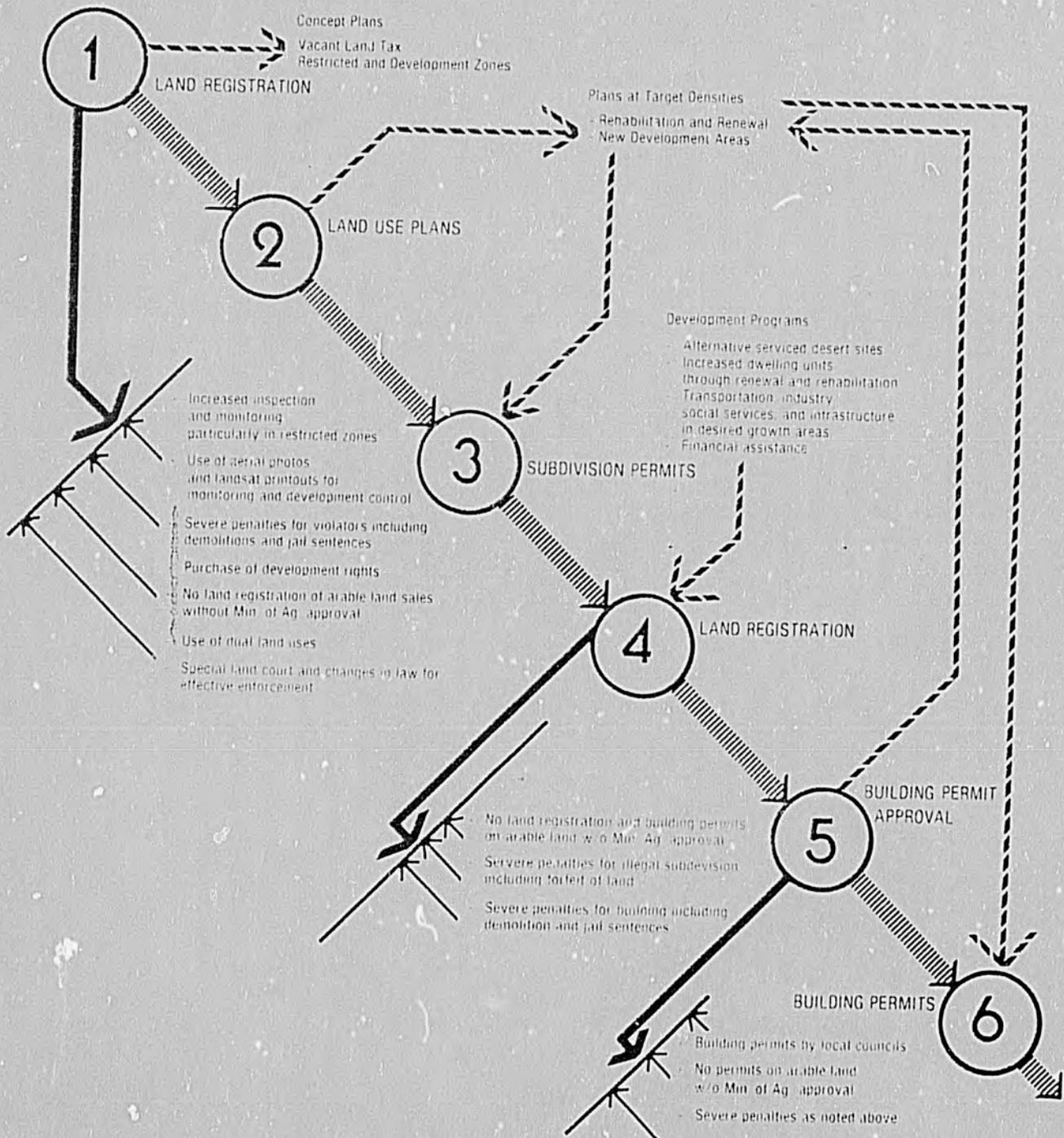
- Place enforcement responsibility at the governorate level but with planning and approval responsibility in the hands of a joint national-governorate committee.
- Establishment of special land courts and a special administrative process to handle cases for the prohibition against conversion of arable land.
- Amendment of Law No. 59 of 1973 to specifically define a "building" so as to include a foundation.
- Emphasis on demolition of the building and short jail sentences as penalties are likely to have a greater deterrent effect than fines and provision of bulldozers and other equipment at the town and district level for the enforcement of the present legal restrictions and the decisions of the special land court, if established.

## I. INDUSTRIAL LOCATION

The policy of the establishment of priority areas should be followed with regard to controlling the location of industry as well as agriculture. At present, industry is expected to be located in industrial zones designated by the

# PROPOSED MEASURES FOR DEVELOPMENT CONTROL

MEASURES TO INDUCE DESIRED DEVELOPMENT



**AGENCIES WITH RESPONSIBILITY**

- 1- MINISTRY OF JUSTICE REGISTRATION  
MIN. OF DEVELOPMENT (GOPP) CONCEPT PLANS  
MIN. OF AGRICULTURE CONCEPT PLAN CONCURRENCE
- 2- MINISTRY OF DEVELOPMENT GOVERNORATES LOCAL COUNCILS
- 3- MINISTRY OF AGRICULTURE  
(IN CONJUNCTION WITH MINISTRY OF DEVELOPMENT AND GOVERNORATES)
- 4- MINISTRY OF JUSTICE
- 5- MINISTRY OF DEVELOPMENT GOVERNORATES NON ARABLE LAND  
MIN. OF AGRICULTURE IN DESIGNATED AREAS ONLY
- 6- MINISTRY OF DEVELOPMENT GOVERNORATES LOCAL COUNCILS

**MEASURES TO CONTROL UNDESIRABLE DEVELOPMENT**

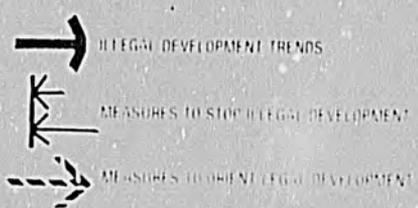


FIGURE II-6

governorates under Article 110-112 of Local Government Law No. 43 of 1979 and Law 28 of 1949. The governorate has the responsibility for selecting locations of new factories inside its boundaries, provided that the necessary approvals have been granted by the Ministry of Industry and that all required public utilities already have been established. It determines the boundaries of the industrial zones and forms the industrial services committees that are to operate within these zones. In towns where such zones are designated, it is prohibited to issue a permit for an industrial establishment or to set up such an establishment outside of the designated zones. A second type of designated industrial location is the free zones and the new urban communities which are granted incentives to lure investors under Law No. 43 of 1974 and Law No 59 of 1979, respectively.

However, despite this restrictive legislation, it is apparent that many industrial permits are approved for other locations when the investment monies are available and ready to be spent. The need of the governorates to provide income and employment within their boundaries, the lack of an adequate physical planning framework to provide guidance to the location of different types of industries and to coordinate the actions of the Ministry of Industry with other ministries and local governorates, and the lack of personnel and authority for enforcement at the governorate level and below all contribute to the present state of affairs. Similarly, Law No. 53 of 1978 prohibiting the location of industry other than agro-industry on agricultural land has not been successfully enforced.

J. FUTURE POLICY SHOULD BE BASED UPON THE FOLLOWING PROCEDURES AND PRINCIPLES:

- Designation of preferred industrial locations by type of industry.
- Designation of industrial zones within urban areas based upon an industrial development plan.
- Greater enforcement capability and stronger penalties for violations of controls.

K. HOUSING LOCATION POLICY

I. Present Situation

The third important component of an effective system of land development controls and the ordering of future urban development is an effective housing location policy. Most of the housing being constructed is constructed without a building permit on land that has not been granted subdivision approval and without conforming to any type of master plan for development. The costs of obtaining building permits are very high and have discouraged their objectives.<sup>3</sup> The standards for building required are also high.

Almost no subdivision approvals have been granted over the last 20 years in most of the cities of Egypt.<sup>4</sup> These provisions have been ignored because of the lack of planning which would allow a city official to quickly make a judgment about the location of a specific development. The absence of such planning has meant that few efforts have been made to control new subdivisions, either those of formal

development or those constructed for housing cooperatives. (See Figures II-7 and II-8) What little controlled development has been done has largely been in the Cairo and Alexandria areas through the public sector housing and development companies. The following summarizes the major recommendations for improving control of housing location; they are further detailed in Chapter VI of the NUPS Final Report.

## 2. Summary Recommendations for Improved Control

- Housing location should be according to a master plan.
- The provision of serviced urban land for housing should be allocated by a land development agency.
- Control of housing location and land speculation should be maintained through taxation by adding a stronger system of real property taxation based upon market value assessment.
- Housing location should be controlled through the use of betterment taxes.

## II. ECONOMIC ASPECTS OF NUPS IMPLEMENTATION

### A. INTRODUCTION

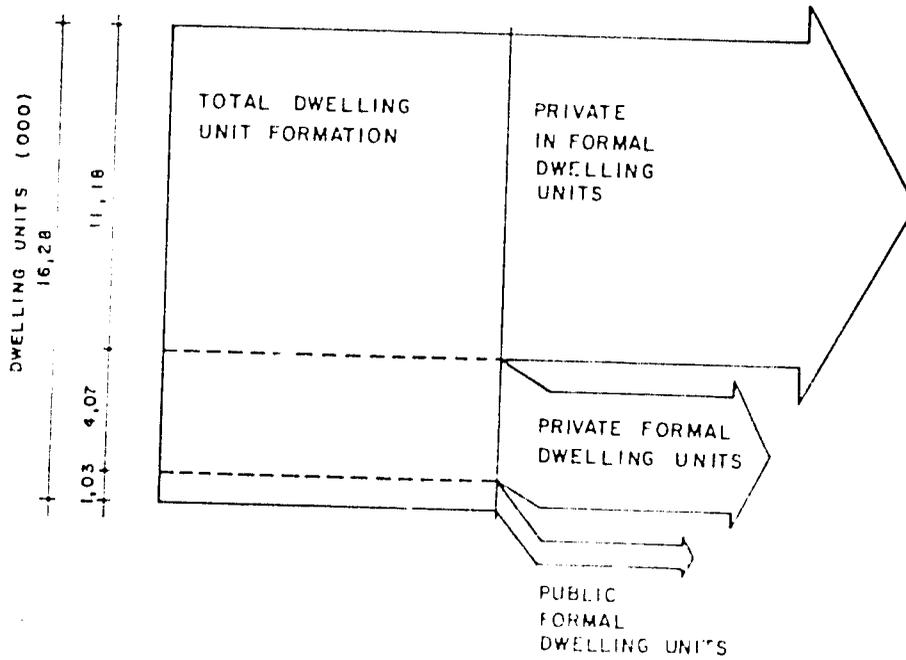
Neither national population redistribution strategies nor local population growth targets can be achieved without integrating industrial growth and location policies with spatial policies.

The location of new employment is the direct link between industrial policy and settlement policy. Cities and regions favored with new industrial investments can support larger populations and are more likely to hold on to their population. Concentrations of investments induce migration flows when the demand for labor exceeds the local supply. Once established, these migration patterns tend to perpetuate themselves, especially when "push" factors are present in other locations.

The existing industrial base imposes limitations on industrial policy and through it on the settlement policy. Major and dramatic shifts away from the existing base -- either in type of goods produced or location -- increase the possibilities of error and waste. Firms, public or private, can economize on their resources by locating near existing input and output markets. They can move into new product areas, but not without regard to the current availability of raw materials and intermediate products. New industrial areas and products should and can emerge. However, the costs of altering the structural and locational characteristics of the industrial base quickly may be so high as to endanger the overall development program.

The following sections have been summarized from Chapter V of the NUPS Final Report to provide industrial planners, primarily in the Ministry of Industry and

TANTA: INFORMAL AND FORMAL DWELLING UNIT CONSTRUCTION  
 1975-1981  
 (LEGAL CONTROL)



\* BASED ON NUPS PROJECTIONS AND BUILDING PERMIT DATA

FIGURE II-7

TANTA: DEVELOPMENT AND CONTROL OF AGRICULTURAL LAND  
 1972-1978

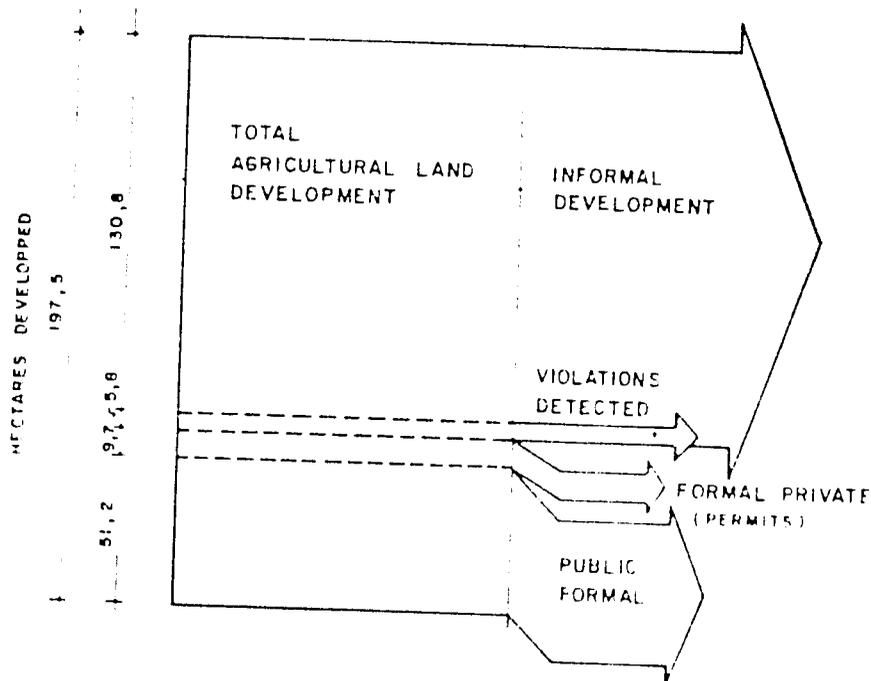


FIGURE II-8

Regional Planning Authorities (although governorate economic planning authorities may also find the material useful), with a strategy for industrial location which is consistent with NUPS spatial strategies. The material does not provide detailed industrial development plans, but it does indicate a distribution of industries suitable for each NUPS settlement zone.

## B. PROJECTED INDUSTRIAL GROWTH TO YEAR 2000

In the analysis and reports prepared by the NUPS Team, the time period 1986-2000 has been the principle time focus. Integrating the settlement policy and the industrial policy requires an awareness of the form that future industrial growth will take after the current five-year plan. The NUPS Team's characterization of industrial growth, presented in this section is based on discussions with and documents of the Ministry of Industry and experiences of other countries that are at comparable levels of economic development. (The historical basis of our projections are shown in Chapter V of the NUPS Final Report.)

Broad sectoral shares of Gross Domestic Product as estimated by NUPS are shown in Figure II-9. The NUPS projection of the service sector growth rate is about 6 percent per year between 1985 and 2000. In the judgment of the NUPS Team, there are unlikely to be sufficient investment resources to generate an industrial growth rate of 10.5 percent, as projected by Ministry of Industry industrial planners. A lower growth rate for services increases the relative share of percent in the year 2000 compared to the Ministry of Industry projection of 29.4 percent.

Because of its large and growing population, it is expected that much of Egypt's additional industrial output will be sold in domestic markets. This means that domestic demand takes on more importance in the determination of the composition of output than is the case with small countries that specialize in one or two products and sell their output primarily in foreign markets.

The main points to be drawn from the NUPS industrial projections are that the traditional industries of food and textiles will generate over one-third of the increase in manufacturing value-added, even though their shares are declining. There will be a large expansion in metal products, especially if the plans to increase steel output to 15 million tons annually by year 2000 are achieved. Chemicals and construction material (non-metallic minerals), both important sectors in 1977, will contribute 16 percent of the projected increase.

## C. THE SPECIAL ROLE OF AGRICULTURALLY RELATED INDUSTRY

Although the NUPS projections anticipate a declining share for traditional agricultural processing industries, a large absolute increase is expected. Furthermore, it is expected that agricultural activities will provide substantial demand for industrial output in other sectors, particularly since recent developments in agricultural policy indicate the government is developing a new approach towards agriculture which could lead to improved revenue potential for financing. The general approach being contemplated includes:

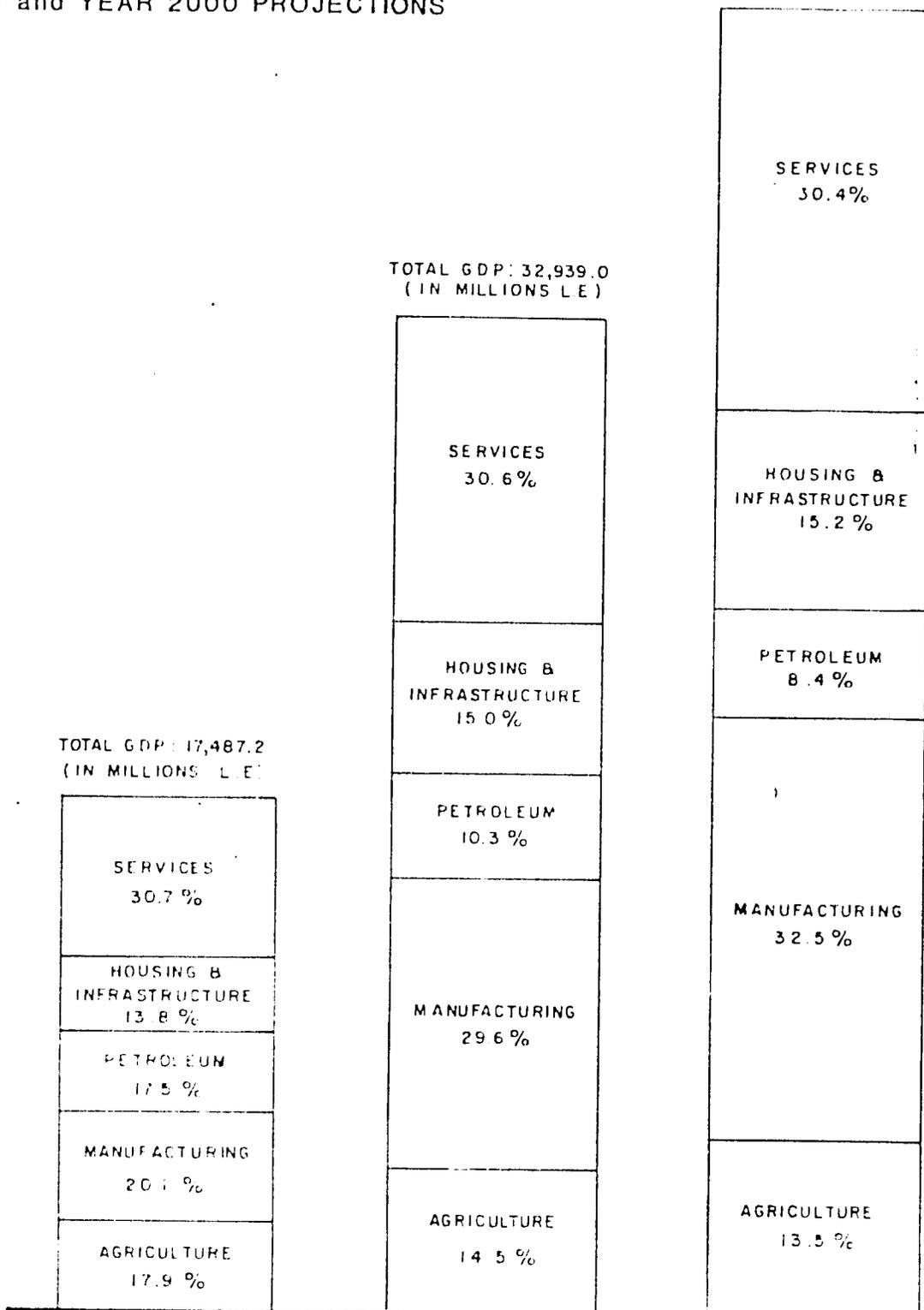
- Allowing farm output prices to rise relative to agriculture output.

**SECTOR SHARES OF GROSS DOMESTIC PRODUCT  
1985 and YEAR 2000 PROJECTIONS**

TOTAL GDP 43,427.5  
(IN MILLIONS L.E.)

TOTAL GDP: 32,939.0  
(IN MILLIONS L.E.)

TOTAL GDP: 17,487.2  
(IN MILLIONS L.E.)



**1985**

**55% GROWTH RATE**

**70% GROWTH RATE**

**YEAR 2000 PROJECTIONS**

SOURCE: NIPS, ELABORATION

**FIGURE II-9**

- Decontrolling agriculture and reducing the role of government in certain areas.
- Increasing levels of investment in agriculture.

All aspects of the new agricultural policy would have positive impacts on urban industrial development because of linkages between agriculture investments and needed or useful industrial outputs which can and should be produced in urban areas.

#### D. SMALL-SCALE INDUSTRY

A program to encourage the private sector in Egypt will need to focus considerable attention on small-scale industry. In 1966-1967, over 99 percent of all private sector manufacturing establishments employing over 87 percent of private employees were in the size of class of 1-49 employees. The great majority of these were in firms employing 1-9 persons.

The provision of assistance to small-scale firms is notoriously difficult but the value of small-scale industry in Egypt (because of relatively low capital intensity, ability to employ relatively low skilled workers, and utilize local available raw materials) is indisputable. Some progress could be made if current practices which tend to discriminate against small-scale firms were addressed. These include:

##### 1. Fractionalized Responsibility for Small Enterprises Among Numerous Ministries

If a particular industry is suitable for a particular site (Figure II-10), meets certain size criteria (for example, less than 50 workers), and its demand for inputs can generally be met by existing suppliers whether domestic or foreign, responsibility for granting industrial permits should be granted to governorate economic and physical planning offices. Firms which do not meet these criteria or have special requirements should be referred to the Ministry of Industry or other appropriate authorities for industrial permits.

##### 2. Taxation and Duties on Imports of Capital Goods

The Ministry of Industry, in conjunction with the Ministry of Economy and Finance, should study means of granting partial or full exemptions for importation of capital goods for industries which meet the above classifications.

##### 3. A 10 percent Price Margin in Favor of the Public Sector in Government Purchases

With regard to small-scale industry, a careful study of the effects of maintaining price differentials favoring the public over the private sector needs to be conducted. It is likely that certain classes of industry could be included in these preferential price structures or that the price structure could be abandoned for all industry.

## NATIONAL URBAN POLICY RECOMMENDED INDUSTRIAL LOCATION STRATEGY

SETTLEMENT ZONE	GUIDELINES FOR INDUSTRIAL LOCATION	TYPE OF INDUSTRY RECOMMENDED														POSSIBLE SETTLEMENT LOCATIONS	
		FOOD	BEVERAGE	TOBACCO	SPINNING & WEAVING	CLOTHING & FOOTWEAR	WOOD & WOOD PRODUCTS	PAPER & P. PRODUCTS	PRINTING & PUBLISHING	CHEMICALS	RUBBER & PLASTICS	BUILDING MATERIALS	IRON STEEL	METAL PRODUCTS	REFINING		ELECTRICAL & ELECTRONICS
<b>GREATER CAIRO</b>	<ul style="list-style-type: none"> <li>- require large skilled labor force</li> <li>- central location on major transport network</li> <li>- require established industrial base</li> <li>- access to commerce and banking</li> </ul>					X			XX	X	X			XX			<ul style="list-style-type: none"> <li>- emphasis private sector investment</li> <li>- deconcentrated investment for printing, publishing, metal products, rubber and plastics to desirable locations</li> <li>- clothing to northeast- chemicals to south ( Helwan)</li> </ul>
<b>ALEXANDRIA</b>	<ul style="list-style-type: none"> <li>- similar to Greater Cairo but requires access to major ports</li> </ul>					X	XX	XX		X	X			XX	XX		<ul style="list-style-type: none"> <li>- emphasis private sector investment deconcentrated to desired growth areas supported by public investment</li> <li>- Paper and products ( Idku) Clothing, Chemicals ( Ameria)</li> </ul>
<b>CANAL</b>	<ul style="list-style-type: none"> <li>- requires linkages to existing industrial base</li> <li>- serves foreign markets</li> </ul>					X	X	X		XX	X	XX	XX	XX	XX		<ul style="list-style-type: none"> <li>- chemicals, rubber, plastic, large scale building materials, iron and steel, metal products, paper, refining, export clothing in Suez; clothing, wood products, foods, building materials, metals ( Port Said and Ismailia)</li> </ul>
<b>DELTA</b>	<ul style="list-style-type: none"> <li>- requires immediate access to agricultural inputs</li> <li>- improves productivity of existing agricultural or industrial base</li> </ul>	X	X		X	X											<ul style="list-style-type: none"> <li>- all new industrial and investment limited to expansion of existing plant. No new locations unless demonstrated infeasible in other zones.</li> </ul>
<b>NORTH UPPER EGYPT</b>	<ul style="list-style-type: none"> <li>- requires immediate access to agricultural inputs</li> <li>- see South Upper Egypt</li> </ul>	X												X			<ul style="list-style-type: none"> <li>- potential for agro-based industries and textiles Minia, Beni Suef, and Fayoum (former two only)</li> <li>- light small scale avial fabrication possible in above cities ( agricultural linkages preferred)</li> </ul>
<b>SOUTH UPPER EGYPT</b>	<ul style="list-style-type: none"> <li>- satisfies local demand</li> <li>- has low import content</li> <li>- has low requirement for highly skilled workers</li> <li>- multiple linkages with other industries</li> <li>- high expected employment growth</li> <li>- labor intensive</li> </ul>	XX	XX							X		XX		X			<ul style="list-style-type: none"> <li>- Emphasis domestic import substitution; support to small scale industries</li> <li>- Assiut sugar related, building materials, textiles, clothing, metal products, animal feeds, mining, equipment</li> <li>- Qena Naga Hammadi same Assiut also Aluminum products</li> <li>- Aswan same as Assiut also fishing related industries mining</li> </ul>
<b>REMOTE AREAS</b>	<ul style="list-style-type: none"> <li>- requires immediate access to raw materials, i.e. mining inputs</li> <li>- requires access to agricultural or fishery inputs, i.e. fisheries in Red Sea</li> </ul>	X															<ul style="list-style-type: none"> <li>- Some potential for food processing in Red Sea ( fish processing ) and in Sinai ( El Arish ) and Western Desert ( meat preparation)</li> <li>- some potential for building materials ( especially cement products) in all zones</li> <li>- chemical production in Red Sea or Matruh perhaps possible</li> </ul>

FIGURE II-10



PROHIBITION OF INDUSTRY



SOME POTENTIAL FOR INDUSTRIAL LOCATION



STRONG POTENTIAL FOR INDUSTRIAL LOCATION

#### 4. Lock of Sites Suitable for Small-Scale Firms.

Sites for small-scale industries should be identified in settlement concept plans and serviced with infrastructure. These sites, when serviced, should be sold or leased to small-scale firms at market values.

#### E. GUIDELINES FOR INDUSTRIAL CHOICES

A growth scenario for Egyptian industry is suggested in Table II-1. How the industrial growth might be distributed over the national space, consistent with the national urban policy, is the theme of this section. Consistency with the Preferred Strategy entails meeting four objectives:

- The limited, traditional industrial base of Upper Egypt cities should expand especially in Assiut, Qena/Naga Hamadi, and Aswan.
- A major industrial center should be established in Suez to support a population of at least 850,000.
- Arable land in the Delta should be preserved for agricultural uses except in cases where there is a compelling economic reason to convert land use to industry.
- Industrial growth should be permitted in the Greater Cairo and Alexandria regions in designated locations to take advantage of the economic efficiency of these two major metropolitan regions.

What characteristics of an industry lead to success or failure in a particular place is a complex matter which often depends on specific project design. Despite this, there is some value in developing general guidelines for industrial location that take into account the characteristics of each industry. Although feasibility studies need to be conducted to evaluate individual industrial proposals, Table II-2 provides a summary of the broad indicators of the suitability of a particular industry in the Egyptian context. The guidelines shown on the table should be used by industrial planners, both in the Ministry of Industry and in planning authorities and governorate economic, planning and finance offices, to determine if an industrial proposal merits additional feasibility study.

These industry characteristics are combined with NUPS spatial strategies to provide rough guidelines for industries which are most suitable by zone. (See Figure II-10.) The development of more specific industrial investment plans by place is an essential part of local planning since the characteristics of individual projects vary considerably within the broad industry categories described above.

#### F. PUBLIC POLICY TOWARD INDUSTRY

Throughout the work of the National Urban Policy Study, the importance of employment as the prime determinant of population location has been emphasized. Further, it is clear that among employment sectors it is the industrial sector which much provide the basis for employment in other sectors. Our basic recommendations for public policy toward industry flow from these propositions. They are:

TABLE II-1  
 SHARES OF SECTORAL CONTRIBUTIONSTO OUTPUT  
 AND ABSOLUTE INCSEASE IN MANUFACTURING

	<u>1977</u>	<u>2000</u>	<u>ABSOLUTE INCREASE<sup>1</sup></u>
Food, Beverage, Tobacco	25.1	15.3	1,411
Textiles	25.2	20.1	1,891
Clothing, Footware, Leather	1.1	7.6	810
Wood Products	1.1	4.8	508
Paper & Paper Products	2.0	2.8	277
Printing & Publishing	2.1	5.2	540
Chemicals, Coal & Petroleum	15.1	10.5	928
Rubber & Plastic	1.8	2.8	280
Non-Metallic Minerals	6.4	6.0	57
Basic Metals	4.6	8.1	786
Metal Products	14.5	16.1	1,522
<b>TOTAL</b>			<u>9,523</u>

<sup>1</sup> L.E. Million, 1979 prices.

SOURCE: NUPS Projections

TABLE II-2  
SECTORIAL CHARACTERISTICS OF MANUFACTURING INDUSTRY

SECTOR	(1) CONTRIBUTION TO OUTPUT GROWTH	(2) EMPLOY- MENT GROWTH	(3) FOREIGN COMPONENT OF INPUTS	(4) COMPONENT OF OUTPUTS	(5) RATIO OF PRODUCTION WORKERS TO TOTAL EMPLOY- MENT	(6) RATIO OF WAGE TO INDUS- TRIAL AVERAGE	(7) LAND REQUIREMENT PER WORKER	(8) DOMESTIC RESOURCE COST	(9) EFFECTIVE RATE OF PROTECTION	(10) LABOR INTENSITY	(11) AVERAGE FIRM SIZE	(12) BACKWARD LINKAGES	(13) FORWARD LINKAGES	
	(%)	(%)	(%)	(%)	(%)	(%)								
Food	15	9	11	9	84	.82	Low	Highly Competi- titive	Discouraged	Low	Low	Very High	Very High	
Beverage	Included in Food								Marginally Competitive	Protected	Very Low	Medium	High	Low
Tobacco									Marginally Competitive	Protected	Medium	Medium	Low	Low
Spinning & Weaving	20	29	5	31	88	.93	Low	Marginally Competitive	Discouraged	Very High	Medium	Very High	Very High	
Clothing & Footwear	8	11	2	16	76	.87	Low	Marginally Competitive	Protected	High	Low	High	Low	
Wood, Corch, Furniture	5	9	41	5	86	1.00	Medium	Highly Incompetitive	Highly Protected	Very High	Low	Medium	Low	
Paper & Paper Products	3	3			86	.92	High	Marginally Competitive	Protected	Very Low	Medium	Medium	High	
Printing & Publishing	6	5	45	3	68	1.59	Low	1	1	1	Medium	1	1	
Chemicals	10	6	30	4	80	1.20	Medium	Marginally Competitive	Protected	Medium	Medium	Very High	High	
Rubber & Plastic	3	2	60	0	85	.96	Low	Not Competitive	Protected	Low	Medium	Medium	Low	
Building Materials	6	5	28	12	87	1.20	High	Highly Competitive	Discouraged	Low	Low	Medium	Medium	
Iron & Steel	8	8	31	2	81	1.21	Medium	Highly Incompetitive	Protected	Medium	Medium	High	Very High	
Metal Products	16	13	40	4	82	1.07	Medium	Highly Competitive	Protected	Low	High	High	Medium	

1 Not included in study due to lack of data.

SOURCE: Col. 1 & 2 NUPS projections.  
3,4,12,13 Ministry of Planning, MIT Cairo University, 1972 Input/Output Table.  
5, CAPMAS Annual Industrial Census, 1971-72.  
6,11, CAPMAS Industrial Census, 1977.  
7. Suez Canal Regional Plan, working Paper No. 151-ECO, Appendix 2.  
8-10, Boston University Consultants, "Comparative Advantage in Egyptian Manufacturing," August, 1981.

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## NOTES

### TABLE II-2

Columns	Description
1,2	<i>The contributions to output and employment growth are derived from the industrial output scenario presented above. They indicate the relative importance of each sector in the growth process.</i>
3,4	<i>The ratio of imported inputs to total inputs and the ratio of exported output to total output, measures the importance of foreign trade in a sector and the need to have access to port facilities or international airports.</i>
5,6	<i>Ratio of production workers to total employment and rates of wages to industrial average; these two ratios indicate the required skill level and mix in an industry. Low ratios for the former suggest the industry employs a relatively larger technical and administrative staff. Higher ratios for the latter suggest that the jobs demand a higher level of skill than otherwise.</i>
7	<i>Land requirement per worker is an important characteristic in those areas where arable land may be converted to non-agricultural uses.</i>
8	<i>Domestic Resource Cost measures how efficiently, in terms of domestic resources, an industry earns or saves foreign exchange.</i>
9	<i>Effective rate of protection indicates whether the prevailing tariff structure favors or discourages an industry.</i>  <i>These two statistics suggest how well an industry can compete in international markets and how the tariff structure affects domestic resource allocation.</i>
10	<i>Labor intensity measures the relative use of labor as against capital inputs.</i>
11	<i>Average firm size suggests the efficient scale of operation of firms in an industry and is an indication of the relative prevalence of small scale firms in the industry.</i>
12,13	<i>Backward and forward linkages are the market exchanges an industry has, both direct and indirect, with other industries. It measures the extent to which an industry is "tied into" the overall industrial sector.</i>

- Investment should be channeled toward increasing the relative share of manufacturing in Gross Domestic Product and employment.
- Inducement, incentives and taxes should be structured to support spatial and sectoral objectives of national urban policy. This entails making discriminating use of tax abatements, subsidies and taxes. Discrimination should be exercised with respect to both the number of places where positive inducements are offered and the sectoral activities which are eligible.
- Non-tax incentives should be used also in support of spatial objectives. Three such incentives are site, labor and credit:

#### Sites

Areas into which the government wants to direct investment can be made attractive by having serviced sites and a local organization responsible for each industrial estate.

These industrial estates will need to accommodate both large and small-scale firms. The specific site requirements of firms differ, so an estate will need to offer a variety of specific site characteristics such as rail access, outdoor storage areas, etc. The time-phasing of estate availability must strike a balance between the desire to have a variety of sites ready to offer investors and the danger of building far ahead of demand and tying up too much capital.

#### Labor

Vocational training centers willing to tailor their programs to an employers' needs should be established to signify the public commitment to potential investors. Firms can be deterred by the fear that the local labor market will not have sufficient workers with the appropriate skills. Where labor requirements are peculiar, as in the operation of equipment not available in technical institutes, subsidies for company training programs offer an alternative approach. Job Information Centers, located in selected Delta cities, should be created with the number of places where positive inducements are offered and the sectoral activities which are eligible.

#### Credit

Access to credit is often the binding constraint to small firms since banks and other leading institutions prefer to avoid the administrative burden of handling a large volume of relatively small loans. Therefore, credit facilities for these firms should be locally available.

For the tax and non-tax incentives alike, it is crucial that they not be over-extended geographically. By restricting them to designated cities and applying them differently, they will more likely produce the desired results while a non-restricted approach will eliminate the locational effects and unnecessarily drain the public budget.

- Private investment in industry should continue to be encouraged. One extremely important element in the encouragement of private investment, in addition to the sectoral policies discussed above, is the type of settlement strategy adopted. The NUPS recommended strategy recommends substantial growth in Cairo, Alexandria, and Suez regions which already have demonstrated that they are attractive to private investors.
- Efforts should continue to be made to enhance the productivity of public enterprise. This subject has been extensively studied and many recommendations have been made including:
  - Reduction of numbers of employees.
  - Raised wages and salaries for the reduced work force with tie-ins to demonstrated productivity improvements.
  - Economic pricing of input and outputs so that performance can be judged on profitability.
  - Improved project evaluation for proposed new public enterprise investments.
  - Better quality control to improve export potential and consumer willingness to purchase domestic goods.
  - Training for industrial managers and the ability to dismiss unproductive employees. Current policy is moving in the direction of these changes and this should be continued.
- Continuation of agricultural policy changes cited above should be encouraged which could lead to economic enhancement of the agricultural sector and could provide both additional agriculture input to agro-industry and expansion of domestic industries to supply agricultural needs as well as market and distribute agricultural products.
- Consideration should be given at the national level to developing a tax on new industrial activities within the core area of Cairo and possibly Alexandria, in order to encourage location in more desirable sites within the metropolitan region (e.g., fringe areas or new satellite communities), or other cities and to compensate for at least part of the net additions to service and disamenity costs caused by the core location of firms which find it economically attractive to locate there in spite of the tax. More detailed study of such a tax is needed than NUPS could provide before a decision to adopt it could be made. The major problem with such a tax is to set the rate at a level which does not result in a substantial net loss of investment and output. If the rate is high enough to be major factor in location, it may be too high to discourage the activity altogether.

### III. PHYSICAL ASPECTS OF NUPS IMPLEMENTATION

#### A. INTRODUCTION

It is important for the government to determine where in the spectrum of housing and infrastructure policies public sector intervention is not only necessary but can achieve the greatest impact. As is illustrated in the National Housing Plan this can be done by identifying target groups whose housing and infrastructure needs should be provided by government and other target groups whose needs can be best met by facilitating private sector action (private sector in this case using a very broad definition to include actions now occurring in the informal sector). Once target groups have been identified, packages of urban services (housing, and infrastructure) can be developed to meet the specific affordability<sup>6</sup> or other socioeconomic criteria of the target group, or to achieve other specific objectives of government, such as specific spatial objectives. (Appendix B provides a discussion of target group identification and selection.) These two income and spatial criteria can be combined in a single set of housing policy actions.

In line with the overall principles articulated by the national urban policy, it is recommended that specific housing policies follow these broad policy guidelines:

- That the public sector's role in the direct construction of housing be limited to two specific objectives:
  - achieving greater inter-personal equity across population groups through meeting the housing needs of disadvantaged groups,
  - achieving the spatial objective of national urban policy through investments directed to urban places where private sector housing investments are not now occurring or are not occurring in a manner consistent with national urban policy.
- The government's role in all other housing should be to facilitate and encourage the private sector to fulfill the bulk of the housing requirements remaining.

These major housing policy principles suggest major target groups for which housing standards should be developed to guide government action:

- Economically disadvantaged groups.
- Spatial target groups receiving special priority as components of national spatial objectives.
- Private sector target groups.

Although these major target groups are presented as distinct groups, there is considerable overlap among them. However, as pointed out, while the first two target groups require direct investment by government, and if public sector resources are to be conserved, private sector target groups will also have to play an

increasingly larger role in providing housing which serves disadvantaged groups and spatial target groups. Economically disadvantaged and private sector target groups are discussed in detail in Chapter V of the National Urban Policy Study Final Report. Therefore, we limit our discussion here to spatial target groups.

## B. DESCRIPTION OF SPATIAL TARGET GROUPS

Spatial target groups consist of packages of housing and intra-urban infrastructure investments which are necessary for government to make in particular urban places to encourage changes in settlement patterns which are desirable objectives of the national urban policy. Besides being spatially located investments, standards designed for spatial target groups have the added function of encouraging particular types of growth patterns. For example, standards developed for Delta cities aim at conserving urban land through vertical rather than horizontal development. These spatial target groups are as follows:

- Metropolitan Areas  
(Greater Cairo and Alexandria Zones)
  - New Settlement Areas
  - Infill or Extension Areas
  - Existing Built Areas
- High Growth Areas  
(Suez and other Canal Cities)
- Urban Areas Selected for Special Emphasis  
(Assiut, Gena/Harta Hamadi, and Aswan)
- Delta Settlements  
(Delta Zone)
  - Regional Service Centers (Tanta and Mansoura)
  - High Density Settlements
  - Other Delta Settlements
- Non-Special Emphasis Nile Valley Settlements  
(North and South Upper Egypt Zone)
  - Governorate Capitals
  - Non-Governorate Capitals
- Remote Area Settlements  
(Matrouh, Red Sea Governorate, New Valley and Sinai)

The spatial target groups are more fully described in Chapter V, Section II of the NUPS Final Report.

### C. PHYSICAL STANDARDS FOR SPATIAL TARGET GROUPS

The national urban policy identified specific policy objectives for each of these settlement types which should be achieved to ensure the overall success of the national urban policy. Although these objectives vary from one type to another, they were developed as part of the national urban policy to be implemented. Many of these objectives can be met through investments aimed at specific components of housing and intra-urban infrastructure. For example, increasing the share of private sector investment in infrastructure has been identified as an important objective of the national urban policy. This can be achieved through setting housing standards and, thus, costs at levels which are affordable to households. Therefore, Figure II-11 shows the major spatial target groups, the settlements within each group, specific settlement objectives for each group and the infrastructure components which could be used to meet these objectives.

The data shown in Figure II-11 and in the subsequent Figures II-12 through II-25 are aimed primarily at planners of future physical development: planners and consultants to the Ministry of Development, especially the GOPP, planners within the governorate's Engineering and Utilities Offices and their consultants, and officials responsible for developing technical assistance programs. The actual standards themselves were developed to illustrate the major points of the National Urban Policy Study: that standards should be directed to specific spatial target groups; that standards of housing, in particular, should be affordable to private sector groups to reduce public sector costs; and that physical standards can be used to create more equity among regions and among persons, but that these improvements in inter-regional equity should be affordable to the national economy as a whole.

The standards shown in the figures should be used as guidelines for future development, not fixed targets for all time. More importantly, when a particular component of infrastructure is being designed, its costs should be measured against the total costs of providing other types of infrastructure. Finally, the ability of users (in the case of Figures II-12 through II-25, the users are households) to afford that infrastructure should also be considered in the design of infrastructure standards. The format used in Figures II-12 through II-25 suggests a methodology which could be used by planners to evaluate individual proposals, while Figure II-11 gives a broad overall perspective of how infrastructure standards can be selected for individual settlements according to national urban policy objectives. In this chapter, we only provide the overall framework for selection of standards and standard targets for individual settlements. Appendix C gives more information about the processes used and the actual standards used for NUPS estimates.

### D. DENSITY STANDARDS FOR URBAN DEVELOPMENT

The development of density standards needs to recognize the use to which these standards will be put. For example, most NUPS density standards have been based on "gross densities" which were calculated by using the 1976 official boundaries of settlements and 1976 Census populations. These densities were used because most settlements lack more detailed information about the actual built areas within settlement boundaries.

However, when developing urban extension projects or when redeveloping portions of existing built areas, the use of gross densities for planning standards can be misleading since by definition these standards would include protected agricultural land and other open space within urban boundaries. Therefore, NUPS has developed three other density definitions, all based on settlement gross densities but providing planners with further refinement in definitions. These density definitions are:

- Gross Urban Densities which include all urban uses within urban boundaries but excluding protected agricultural land. This density should be used to calculate the average densities of the built-areas and planned urban expansion areas of settlements. It is most useful in determining if there is a potential for additional population absorption within urban boundaries or if new urban expansion areas should be planned. Note this density should also exclude major open spaces which are not directly connected to the built-area and would not be provided with infrastructure. NUPS recommends that gross urban density for non-Delta settlements be in the range of 300 persons per hectare and for Delta settlements in the range of 350 persons per hectare.
- Gross Residential Densities which include all urban uses but exclude agricultural, industrial, core area commercial, and region serving administrative and public uses. This density should be used to calculate the average densities of new housing projects and of redevelopment projects having major residential components. It can also be used to determine if specific neighborhoods or *kisms* have additional population absorption capacities. However, if *kism* boundaries are used, agricultural land areas should be subtracted out of the total *kism* area as should the other uses mentioned above. NUPS recommends for non-Delta settlements that gross residential densities should be in the range of 375 persons per hectare. For Delta settlements, where greater land efficiency is necessary to protect arable land, gross residential densities should be in the range of 438 persons per hectare.
- Net Residential Densities include only residential uses and exclude all other uses. This density should be used to calculate the densities of housing projects where circulation and non-residential uses have been subtracted out of total land use. This density can be used to calculate the densities of on-plot development and can be used to determine if plots have additional population absorption capacities. As such, it should also be compared with floor area ratios (the ratio of the total floor area of buildings with the total area of the plots on which the building is located). NUPS recommends that net residential densities in non-Delta settlements should be in the range of 685 to 750 persons per hectare. In Delta settlements, net residential densities should be in the range of 800 to 880 persons per hectare.

These densities can be calculated by first subtracting protected agricultural land uses out of the total area within the settlement boundaries since this land will not be available for urbanization. This results in the gross urban density targets shown above for non-Delta settlements of 300 persons per hectare and 350 persons per hectare for Delta settlements. Actually, the 300 persons per hectare gross urban density target should only be used for settlements having expansion

possibilities onto non-arable land. All others should use the target for Delta settlements to increase land use efficiency.

Next, gross residential densities can be found by subtracting industrial, core area commercial, and region serving administrative and public land uses from the settlement area used to calculate gross urban densities. Based on NUPS experience in the Tanta Illustrative Development project and analysis of other recent settlement projects in Egypt, NUPS would recommend that a total of 20 percent of the land use be allocated to the uses listed above. Incidentally, major region-serving and urban transportation land uses should not be included in the area used to calculate gross residential densities.

Net residential densities can be found by subtracting circulation (estimated by NUPS to be 20 percent of settlement land use) and community public facilities (NUPS estimates are 15 percent of settlement land use) from the area used to calculate gross residential densities. As mentioned above, net residential densities should also be compared to floor area ratios (FAR) since FAR's give a better picture of the actual amount of development on a plot. However, since FAR data was not available to the NUPS Team, no recommendations for FAR were made. Such standards can be developed by local planning officials (probably in proposed governorate physical planning units or the Utilities and Engineering Office in conjunction with the Ministry of Development's governorate department) by measuring building areas and plot areas from aerial photos. Then building areas should be multiplied times the number of floors in the building and divided by plot areas to determine FAR's. Then based on overall density targets, FAR standards can be developed to either maintain existing densities, if these are adequate or encourage additional residential development as was proposed earlier in the Delta Settlement Redevelopment Scheme.

**FIGURE II-11**  
**NATIONAL URBAN POLICY HOUSING AND**  
**INTRA-URBAN INFRASTRUCTURE SELECTION CRITERIA**

Spatial Target Groups	Settlement Within Spatial Target Group	National Urban Policy Housing and Infrastructure Related Settlement Objectives	Housing and Intra-Urban Infrastructure Components Used to Serve Settlement Objectives
I. Major Metropolitan Areas	Greater Cairo Alexandria	<ul style="list-style-type: none"> <li>- Provide efficient locations for major industrial growth.</li> <li>- Absorb large populations efficiently.</li> <li>- Serve major international, national and regional functions.</li> <li>- Develop surplus financial resources for redistribution to other regions.</li> <li>- Achieve inter-personal equity.</li> <li>- Maximize private investment and greater cost recovery.</li> </ul>	<ul style="list-style-type: none"> <li>- Water, sewerage, circulation, electricity at high standards (Master Plan Standards).</li> <li>- Gross densities of 300 persons/hectare to minimize network related infrastructure, housing at affordable levels.</li> <li>- Physical infrastructure at high standards, social and administrative infrastructure at high standards.</li> <li>- Housing and most infrastructure at affordable levels.</li> <li>- Public transport at high standards, health and education maintained at high standards.</li> </ul>
II. High Growth Areas	Suez Ismailia Port Said	<ul style="list-style-type: none"> <li>- Develop major industrial center in Suez as a counter-attraction to Greater Cairo and Alexandria.</li> <li>- Sustain high population growth rates in all three settlements.</li> <li>- Serve regional and national functions (especially Suez).</li> <li>- Increase inter-regional equity.</li> <li>- Maximize private sector involvement (where it does not conflict with other standards).</li> </ul>	<ul style="list-style-type: none"> <li>- Housing and physical infrastructure at levels which are affordable to households.</li> <li>- Physical and social infrastructure maintained at high standards.</li> <li>- Physical and social infrastructure at high standards -- higher subsidies than major metropolitan areas probably necessary.</li> <li>- High standards of social and administrative infrastructure.</li> <li>- Provide selectively higher standards, thus subsidies to promote rapid growth.</li> <li>- Housing at affordable levels, other infrastructure at costs which become affordable in later periods.</li> </ul>
III. Special Emphasis Settlements (Upper Egypt)	Assiut, Qena, Ismailia, Assua	<ul style="list-style-type: none"> <li>- Induce population growth at rates higher than recent times.</li> <li>- Attract greater industrial investment than past times.</li> <li>- Serve regional functions (in addition to regional economic functions) and improve inter-regional equity.</li> <li>- Increase private sector involvement.</li> </ul>	<ul style="list-style-type: none"> <li>- Provide physical and social infrastructure at levels which are higher than present conditions and higher than non-special emphasis settlements -- develop new settlement areas.</li> <li>- Water, sewerage and electricity at higher standards than non-special emphasis settlements.</li> <li>- Social infrastructure at higher standards than non-special emphasis settlements.</li> </ul>
IV. Regional Service	Tanta, Mansoura (possibly Zagazig at later stages)	<ul style="list-style-type: none"> <li>- Rationalize regional service functions in Delta.</li> <li>- Absorb Delta population.</li> <li>- Conserve prime land through vertical re-development.</li> <li>- Attract specific types of industries to provide employment.</li> <li>- Maximize private sector participation.</li> </ul>	<ul style="list-style-type: none"> <li>- Set standards of housing and intra-urban infrastructure at affordable levels.</li> <li>- Protect social infrastructure at high levels, especially education, health and administration.</li> <li>- Provide other services at high densities within urban boundaries.</li> <li>- Provide assistance to core area residents to redevelop fringe areas at higher densities.</li> <li>- Provide high levels of water, sanitation, electricity and circulation.</li> <li>- Set housing at levels affordable to households -- other infrastructure at levels which become increasingly affordable.</li> </ul>

FIGURE II-11 (Continued)

Spatial Target Groups	Settlement Within Spatial Target Group	National Urban Policy Housing and Infrastructure-Related Settlement Objectives	Housing and Intra-Urban Infrastructure Components Used to Serve Settlement Objectives
V. High Density Settlements	Kafr El Dawar, Damanhour, Zagazig, Mahalla	<ul style="list-style-type: none"> <li>- Limit population growth through reduced industrial development</li> <li>- Conserve arable land</li> <li>- Improve inter-regional equity</li> <li>- Maximize private sector participation</li> </ul>	<ul style="list-style-type: none"> <li>- Provide physical infrastructure at standards, aimed at serving high density settlements:                             <ul style="list-style-type: none"> <li>o Water and sewerage at medium levels</li> <li>o Public transport aimed at providing small vehicles and encouraging pedestrian activity.</li> </ul> </li> <li>- Encourage vertical redevelopment through providing assistance to rebuild housing in core areas. All new development permitted at high densities only (gross urban densities of at least 350 persons/hectare).</li> <li>- Provide medium levels of social infrastructure</li> <li>- Set housing standards at affordable levels</li> </ul>
VI. Non-Special Emphasis Settlements - Governorate Capitals	Shebin El Kam, Benha, Kafr El Sheikh, Damietta, Beni Suef, Fayoum, Minia, Sohag	<ul style="list-style-type: none"> <li>- Serve governorate service functions</li> <li>- Improve inter-regional equity</li> <li>- Maximize private investment</li> </ul>	<ul style="list-style-type: none"> <li>- Provide higher standards of health, education and other social and administrative infrastructure</li> <li>- Improve standards of physical infrastructure, improve standards of health and education</li> <li>- Set housing at affordable levels/encourage greater private low income housing</li> </ul>
VII. Non-Special Emphasis Settlements - Other Settlements	Mahalla, Mit Ghamr, Belbeis, Galyub, Idku, Mataria, Dessouk, Menouf, Abu Kebir, Zefta, Belkas, Mallawi, Ekhnim, Gerga, Luxor	<ul style="list-style-type: none"> <li>- Improve inter-regional equity</li> <li>- Maximize private sector involvement</li> </ul>	<ul style="list-style-type: none"> <li>- Provide basic levels of physical infrastructure which improve existing conditions, but at standards lower than special emphasis settlements, provide education at improved levels. Standards of health have been improved over existing situation.</li> <li>- Housing standards have been lowered to levels likely to be affordable by households with lower incomes.</li> </ul>
VIII. Remote Areas	Kharga - New Valley, Hurgada, Safaga, Quseir - Red Sea, Matruh - Matruh, El Arish - Sinai	<ul style="list-style-type: none"> <li>- Achieve population growth greater than recent historical trends</li> <li>- Improve inter-regional equality</li> <li>- Promote urban experience in living in difficult conditions</li> </ul>	<ul style="list-style-type: none"> <li>- Provide basic levels of infrastructure which improve existing conditions</li> <li>- Due to likely higher costs provide higher levels of subsidies on a per capita basis than other parts of the country, since it may be difficult to attract large private investment, provide higher levels of public investment in housing.</li> <li>- Experiment with alternative technologies in water supply, sanitation, electricity generation and indigenous building materials</li> </ul>
IX. Non-Special Emphasis Settlements with 1976 Populations Less than 50,000	Settlements in the Delta, North and South Upper Egypt, and the Canal	<ul style="list-style-type: none"> <li>- Improve inter-regional equity</li> <li>- Maximize private sector participation</li> </ul>	<ul style="list-style-type: none"> <li>- Provide basic levels of water supply, education, and health</li> <li>- Provide lower standards of housing to meet affordability of households likely to have lower incomes</li> </ul>



FIGURE II-13

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARDS AND CAPITAL COST PACKAGES: MAJOR METROPOLITAN AREAS  
 EXAMPLE SETTLEMENT: ALEXANDRIA

I.	GROSS DENSITIES 187 PERSON/HECTARES		POPULATION	EXISTING (1985)	3,042,000	
				INCREASE (1986-1990)	678,000	
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS		PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL REHABILITATION OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1/		
	PRIVATE	65%				
	--RESIDENTIAL	(45%)				
	--NON RESIDENTIAL	(20%)				
	PUBLIC	35%				
	TOTAL	100%				
III.	HOUSING					
	AVERAGE AREA/UNIT 36 M2	AVERAGE UNIT COST: L.E. 2,006	INDICATIVE PER CAPITA COST 2/ L.E. 418		L.E. 93.3	
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.			
	WATER	385 l/c/d	73.0		L.E. 33.7	
	SANITATION	322.4l/c/d	91.9		L.E. 53.0	
	ELECTRICITY	DISTRIBUTION ONLY	69.9		L.E. 14.6	
	CIRCULATION	20% or 10.7m <sup>2</sup> /CAPITA	95.4		L.E. 18.2	
	TELECOMMUNICATIONS 3/		INCLUDED IN INTER-URBAN INFRASTRUCTURE		--	
	TRANSPORTATION	BUSES/10,000 4.0	45.6		L.E. 8.0	
	OTHERS	PROVISIONAL ESTIMATE	10		L.E. 2.6	
	TOTAL: PHYSICAL INFRASTRUCTURE				L.E. 157.2	
V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.			
	EDUCATION	MODIFIED ALEXANDRIA STANDARD "UNIVERSITY"	81		L.E. 37.9	
	HEALTH 4/	4.5 BEDS/1,000 See Table V-A.13	258		L.E. 68.1	
	SOCIAL AFFAIRS, AND ADMINISTRATION/OTHERS	30% OF SADAT CITY MASTER PLAN, Table V-A.14	128		L.E. 24.4	
TOTAL: SOCIAL INFRASTRUCTURE				L.E. 130.4		
VI.	TOTAL HOUSING AND INFRASTRUCTURE CAPITAL COSTS PER CAPITA		BASE COSTS	L.E. 353.6		
			ADJUSTED TOTAL COSTS 5/	L.E. 478.7		
			PERCENT REHABILITATION	27.5%		
VII.	AFFORDABILITY AND COST RECOVERY 6/	NEW AREAS 7/	TOTAL PER CAPITA COSTS	TOTAL COSTS	L.E. 1,982.0	
		EXISTING AREAS 8/	PORTION NOT AFFORDABLE	PERCENTAGE	44.9%	
			TOTAL PER CAPITA COSTS	TOTAL COSTS	L.E. 143.6	
		ANNUAL LAND PAYMENT/M2 WHICH RECOVERS NON-SUBSIDIZED POR- TIONS OF CAPITAL COST NET OF HOUSING COSTS 9/	NEW AREAS	TOTAL COSTS	L.E. 2.29	M2
			EXISTING AREAS	TOTAL COSTS	L.E. 0.49	M2
		TOTAL PER CAPITAL COST SUBSIDY: NEW AREAS ONLY				L.E. 888.9

Totals may not add due to rounding.

- 1/ All prices in 1979 L.E. Assumptions about rehabilitation and its phasing are shown in Tables V.A.23 & 24.
- 2/ New infrastructure costs only.
- 3/ Except for comparison with total costs of other alternatives shown in Master Plan Standards Packages Telecommunications have been included in inter-urban infrastructure costs. See Chapter V, Section III.
- 4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.
- 5/ Base costs multiplied times regional construction cost factors. See Table V.A.22 in Appendix V.A.
- 6/ Based on median per capita household incomes and savings (see affordability analysis in Chapter V, Section III) and an opportunity cost of capital of 12 percent, and a recovery period of 30 years.
- 7/ Infill areas or new settlement areas.
- 8/ Costs of upgrading or capital rehabilitation of existing infrastructure.
- 9/ Annual level payment per square meter for saleable land which recovers the non-subsidized portion capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 30 year recovery period.

FIGURE II-14

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARD AND CAPITAL COST PACKAGES: HIGH GROWTH AREAS  
 EXAMPLE SETTLEMENT: SUEZ

I.	GROSS DENSITIES	300 PERSON/HECTARES	POPULATION	EXISTING (1985)	312,000
				INCREASE (1986-1990)	126,000
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS		PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL REHABILITATION OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1/	
	PRIVATE	65%			
	--RESIDENTIAL	(45%)			
	--NON RESIDENTIAL	(20%)			
	PUBLIC	35%			
	TOTAL	100%			
III.	HOUSING				
	AVERAGE AREA/UNIT	AVERAGE UNIT COST:	INDICATIVE PER CAPITA COST 2/		
	36 M2	L.E. 2,008	L.E. 418	L.E.	135.1
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/		
			L.E.		
	WATER	353 l/c/d	89	L.E.	53.9
	SANITATION	282 l/c/d	78	L.E.	47.3
	ELECTRICITY	DISTRIBUTION ONLY	131.8	L.E.	45.3
	CIRCULATION	20% or 6.7 m <sup>2</sup> /CAPITA	68.4	L.E.	20.1
	TELECOMMUNICATIONS 3/		INCLUDED IN INTER-URBAN INFRASTRUCTURE		--
	TRANSPORTATION	BUSES 10,000 2.0	22.8	L.E.	6.1
	OTHERS	PROVISIONAL ESTIMATE	10		3.6
	TOTAL: PHYSICAL INFRASTRUCTURE			L.E.	176.3
V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/		
			L.E.		
	EDUCATION	DOUBLE ALEXANDRIA STANDARD Table V-A.11	82	L.E.	44.1
	HEALTH 4/	4.5 BEDS/1,000 See Table V-A.13	258	L.E.	92.7
	SOCIAL AFFAIRS, AND ADMINISTRATION/OTHERS	AT SUEZ MASTER PLAN STANDARDS Table V-A.16	112	L.E.	33.0
	TOTAL: SOCIAL INFRASTRUCTURE			L.E.	169.6
VI.	TOTAL HOUSING AND INFRASTRUCTURE CAPITAL COSTS PER CAPITA		BASE COSTS	L.E.	481.1
			ADJUSTED TOTAL COSTS 5/	L.E.	659.3
			PERCENT REHABILITATION		24.4%
VII.	AFFORDABILITY AND COST RECOVERY 6/	NEW AREAS 7/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS	L.E. 1,733.5
		EXISTING AREAS 8/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	PERCENTAGE	36.7
			TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS	L.E. 225.5
			TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	PERCENTAGE	0.0%
		ANNUAL LAND PAYMENT/M2 WHICH RECOVERS NON-SUBSIDIZED PORTIONS OF CAPITAL COST NET OF HOUSING COSTS 9/	NEW AREAS	TOTAL COSTS	L.E. 2.61 /M2
			EXISTING AREAS	TOTAL COSTS	L.E. 1.24 /M2
		TOTAL PER CAPITAL COST SUBSIDY: NEW AREAS ONLY		L.E.	636.0

Totals may not add due to rounding.

- 1/ All prices in 1979 L.E. Assumptions about rehabilitation and its phasing are shown in Tables V-A.23 & 24.
- 2/ New infrastructure costs only.
- 3/ Except for comparison with total costs of other alternatives shown in Master Plan Standards Packages Telecommunications have been included in inter-urban infrastructure costs. See Chapter V, Section III.
- 4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.
- 5/ Base costs multiplied times regional construction cost factors. See Table V-A.22 in Appendix V-A.
- 6/ Based on median per capita household incomes and savings. (See affordability analysis in Chapter V, Section III) and on opportunity cost of capital of 12 percent and a recovery period of 30 years.
- 7/ Infill areas or new settlement areas.
- 8/ Costs of upgrading or capital rehabilitation of existing infrastructure.
- 9/ Annual level payment per square meter for saleable land which recovers the non-subsidized portion capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 30 year recovery period.

FIGURE II-15

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARDS AND CAPITAL COST PACKAGES: SPECIAL EMPHASIS SETTLEMENTS  
 EXAMPLE SETTLEMENT: ASSIUT

I.	GROSS DENSITIES	300 PERSON/HECTARES	POPULATION	EXISTING (1985)	295,000
				INCREASE (1986-1990)	80,000
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS	PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL REHABILITATION OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1/		
	PRIVATE	65%			
	--RESIDENTIAL	(45%)			
	--NON RESIDENTIAL	(20%)			
	PUBLIC	35%			
	TOTAL	100%			
III.	HOUSING				
	AVERAGE AREA/UNIT	AVERAGE UNIT COST:	INDICATIVE PER CAPITA COST 2/	L.E.	
	36 M2	L.E. 2,006	L.E. 418		L.E. 105.6
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/		
			L.E.		
	WATER	300 l/c/d	66	L.E.	37.1
	SANITATION	180 l/c/d	61	L.E.	34.3
	ELECTRICITY	DISTRIBUTION ONLY	139	L.E.	39.5
	CIRCULATION	20% or 6.7m <sup>2</sup> /CAPITA	68	L.E.	15.1
	TELECOMMUNICATIONS 3/		INCLUDED IN INTER-URBAN INFRASTRUCTURE		--
	TRANSPORTATION	BUSES/10,000	13	L.E.	2.5
		1.2			
	OTHERS	PROVISIONAL ESTIMATE	5	L.E.	1.5
	TOTAL: PHYSICAL INFRASTRUCTURE			L.E.	130.0
V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/		
			L.E.		
	EDUCATION	MODIFIED ALEXANDRIA STANDARD "UNIVERSITY"	81	L.E.	39.6
	HEALTH 4/	4.5 BEDS/1,000 Table V-A.13	258	L.E.	75.3
	SOCIAL AFFAIRS, AND ADMINISTRATION/OTHERS	10% OF SADAT CITY MASTER PLAN, Table V-A.15	43	L.E.	9.5
	TOTAL: SOCIAL INFRASTRUCTURE			L.E.	124.4
VI.	TOTAL HOUSING AND INFRASTRUCTURE CAPITAL COSTS PER CAPITA		BASE COSTS	L.E.	360.0
			ADJUSTED TOTAL COSTS 5/	L.E.	475.7
			PERCENT REHABILITATION		32.0%
VII.	AFFORDABILITY AND COST RECOVERY 6/	NEW AREAS 7/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS PERCENTAGE	L.E. 1,517.4
		EXISTING AREAS 8/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS PERCENTAGE	L.E. 193.2
					0.0%
		ANNUAL LAND PAYMENT/M2 WHICH RECOVERS NON-SUBSIDIZED PORTIONS OF CAPITAL COST NET OF HOUSING COSTS 9/	NEW AREAS	TOTAL COSTS	L.E. 1.90 /M2
			EXISTING AREAS	TOTAL COSTS	L.E. 1.07 /M2
		TOTAL PER CAPITAL COST SUBSIDY: NEW AREAS ONLY		L.E.	502.7

Totals may not add due to rounding.

1/ All prices in 1979 L.E. Assumptions about rehabilitation and its phasing are shown in Tables V.A.23 & 24.

2/ New infrastructure costs only.

3/ Except for comparison with total costs of other alternatives shown in Master Plan Standards Packages Telecommunications have been included in inter-urban infrastructure costs. See Chapter V, Section III.

4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.

5/ Base costs multiplied times regional construction cost factors. See Table V.A.22 in Appendix V.A.

6/ Based on median per capita household incomes and savings (see affordability analysis in Chapter V, Section II) and on opportunity cost of capital of 12 percent, and a recovery period of 30 years.

7/ Infill areas or new settlement areas.

8/ Costs of upgrading or capital rehabilitation of existing infrastructure.

9/ Annual level payment per square meter for saleable land which recovers the non-subsidized portion capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 30 year recovery period.

FIGURE II-16

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARDS AND CAPITAL COST PACKAGES: SPECIAL EMPHASIS SETTLEMENTS  
EXAMPLE SETTLEMENT: OENA

I.	GROSS DENSITIES 80 PERSON HECTARES		POPULATION	EXISTING (1985)	128,000
				INCREASE (1986-1990)	28,000
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS	PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL REHABILITATION OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1/		
	PRIVATE	65%			
	--RESIDENTIAL	(45%)			
	--NON RESIDENTIAL	(20%)			
	PUBLIC	35%			
	TOTAL	100%			
III.	HOUSING				
	AVERAGE AREA UNIT 36 M2	AVERAGE UNIT COST: L.E. 2,006	INDICATIVE PER CAPITA COST 2/ L.E. 418	L.E.	92.17
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.		
	WATER	300 l/c/d	92.4	L.E.	50.3
	SANITATION	180 l/c/d	94.1	L.E.	49.8
	ELECTRICITY	DISTRIBUTION ONLY	147.6	L.E.	38.2
	CIRCULATION	20% or 25.0m <sup>2</sup> CAPITA	174.0	L.E.	32.7
	TELECOMMUNICATIONS 3/		INCLUDED IN INTER-URBAN INFRASTRUCTURE		--
	TRANSPORTATION	RUE 10,000 0.5	5.7	L.E.	1.1
	OTHERS	PROVISIONAL ESTIMATE	5	L.E.	1.0
	TOTAL: PHYSICAL INFRASTRUCTURE			L.E.	173.1
V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.		
	EDUCATION	ALEXANDRIA STANDARD	41	L.E.	10.1
	HEALTH 4/	4.5 BEDS/1,000 Table V-A.13	258	L.E.	67.5
	SOCIAL AFFAIRS, AND ADMINISTRATION OTHERS	10% of SADAT CITY MASTER PLAN Table V-A.15	43	L.E.	8.1
	TOTAL: SOCIAL INFRASTRUCTURE			L.E.	94.7
VI.	TOTAL HOUSING AND INFRASTRUCTURE CAPITAL COSTS PER CAPITA		BASE COSTS	L.E.	359.8
			ADJUSTED TOTAL COSTS 5/	L.E.	432.3
			PERCENT REHABILITATION		27.1%
VII.	AFFORDABILITY AND COST RECOVERY 6/	NEW AREAS 7/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS PER UNIT	L.E. 1,763.15
		EXISTING AREAS 7/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS PERCENTAGE	42.5%
					123.59
					0.0%
		ANNUAL LAND PAYMENT M2 WHICH RECOVERS NON-SUBSIDIZED PORTIONS OF CAPITAL COST NET OF HOUSING COSTS 8/	NEW AREAS	TOTAL COSTS	L.E. 0.86 M2
			EXISTING AREAS	TOTAL COSTS	L.E. 0.21 M2
		TOTAL PER CAPITAL COST SUBSIDY: NEW AREAS ONLY		L.E.	748.53

Totals may not add due to rounding.

- 1/ All prices in 1979 L.E. Assumptions about rehabilitation and its phasing are shown in Tables V-A.23 & 24.
  - 2/ New infrastructure costs only.
  - 3/ Exceed for comparison with total costs of other alternatives shown in Master Plan Standards Packages Telecommunications have been included in inter-urban infrastructure costs. See Chapter V, Section III.
  - 4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.
  - 5/ Base costs multiplied times regional construction cost factors. See Table V-A.22 in Appendix V-A.
  - 6/ Based on median per capita household incomes and savings (see affordability analysis in Chapter V, Section III) and an opportunity cost of capital of 12 percent, and a recovery period of 30 years.
  - 7/ Infill areas or new settlement areas.
  - 8/ Costs of upgrading or capital rehabilitation of existing infrastructure.
- Annual level payment per square meter for saleable land which recovers the non-subsidized portion capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 30 year recovery period.

FIGURE II-17

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARDS AND CAPITAL COST PACKAGES: SPECIAL EMPHASIS  
 EXAMPLE SETTLEMENT: NAGA HAMADI

I.	GROSS DENSITIES	300 PERSON/HECTARES	POPULATION	EXISTING (1985)	95,000
				INCREASE (1986-1990)	22,000
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS		PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL REHABILITATION OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1/	
	PRIVATE	65%			
	--RESIDENTIAL	(45%)			
	--NON RESIDENTIAL	(20%)			
	PUBLIC	35%			
	TOTAL	100%			
III.	HOUSING				
	AVERAGE AREA/UNIT	AVERAGE UNIT COST:	INDICATIVE PER CAPITA COST 2/		
	36 M2	L.E. 2,006	L.E. 418	L.E.	95.6
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/		
			L.E.		
	WATER	300 l/c/d	66.0	L.E.	36.2
	SANITATION	180 l/c/d	60.9	L.E.	41.4
	ELECTRICITY	DISTRIBUTION ONLY	148.6	L.E.	39.7
	CIRCULATION	20% or 6.7 m <sup>2</sup> /CAPITA	41.2	L.E.	13.4
	TELECOMMUNICATIONS 3/		INCLUDED IN INTER-URBAN INFRASTRUCTURE		--
	TRANSPORTATION	BUSES/10,000		L.E.	
		0.5	5.7	L.E.	1.1
	OTHERS	PROVISIONAL ESTIMATE	5.0	L.E.	1.0
	TOTAL: PHYSICAL INFRASTRUCTURE			L.E.	132.5
V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/		
			L.E.		
	EDUCATION	ALEXANDRIA STANDARD	41	L.E.	19.4
	HEALTH 4/	4.5 BEDS/1,000	258	L.E.	69.5
	SOCIAL AFFAIRS, AND ADMINISTRATION/OTHERS	10% OF SADAT CITY MASTER PLAN ESTIMATES Table V-A.14	43	L.E.	8.4
	TOTAL: SOCIAL INFRASTRUCTURE			L.E.	97.3
VI.	TOTAL HOUSING AND INFRASTRUCTURE CAPITAL COSTS PER CAPITA		BASE COSTS	L.E.	325.4
			ADJUSTED TOTAL COSTS 5/	L.E.	381.0
			PERCENT REHABILITATION		26.5%
VII.	AFFORDABILITY AND COST RECOVERY 6/	NEW AREAS 7/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS PERCENTAGE	L.E. 1,488.6
		EXISTING AREAS 8/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS PERCENTAGE	31.8
					L.E. 124.5
					0.0%
		ANNUAL LAND PAYMENT/M2 WHICH RECOVERS NON-SUBSIDIZED PORTIONS OF CAPITAL COST NET OF HOUSING COSTS 9/	NEW AREAS	TOTAL COSTS	L.E. 1.93 /M2
			EXISTING AREAS	TOTAL COSTS	L.E. 0.68 /M2
		TOTAL PER CAPITAL COST SUBSIDY: NEW AREAS ONLY			L.E. 474.0

Totals may not add due to rounding.

- 1/ All prices in 1979 L.E. Assumptions about rehabilitation and its phasing are shown in Tables V.A.23 & 24.
- 2/ New infrastructure costs only.
- 3/ Except for comparison with total costs of other alternatives shown in Master Plan Standards Packages Telecommunications have been included in inter-urban infrastructure costs. See Chapter V, Section III.
- 4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.
- 5/ Base costs multiplied times regional construction cost factors. See Table V.A.22 in Appendix V.A.
- 6/ Based on median per capita household incomes and savings (see affordability analysis in Chapter V, Section III) and on opportunity cost of capital of 12 percent, and a recovery period of 30 years.
- 7/ Infill areas or new settlement areas.
- 8/ Costs of upgrading or capital rehabilitation of existing infrastructure.
- 9/ Annual level payment per square meter for saleable land which recovers the non-subsidized portion capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 30 year recovery period.

FIGURE II-18

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARDS AND CAPITAL COST PACKAGES: SPECIAL EMPHASIS  
EXAMPLE SETTLEMENT: ASWAN

I.	GROSS DENSITIES	210 PERSON/HECTARES	POPULATION	EXISTING (1985)	275,000
				INCREASE (1986-1990)	51,000
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS		PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL REHABILITATION OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1/	
	PRIVATE	65%			
	--RESIDENTIAL	(25%)			
	--NON RESIDENTIAL	(20%)			
	PUBLIC	35%			
	TOTAL	100%			
III.	HOUSING				
	AVERAGE AREA/UNIT	AVERAGE UNIT COST:	INDICATIVE PER CAPITA COST 2/		
	36 M2	L.E. 2,006	L.E. 418	L.E.	83.02
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/		
	WATER	300 L/c/d	76	L.E.	40.8
	SANITATION	180 L/c/d	66	L.E.	35.2
	ELECTRICITY	DISTRIBUTION ONLY	143	L.E.	39.0
	CIRCULATION	20% or 4.5 m <sup>2</sup> CAPITA	88	L.E.	14.5
	TELECOMMUNICATIONS 3/		INCLUDED IN INTER-URBAN INFRASTRUCTURE		--
	TRANSPORTATION	RUSTE TO UNIT 1-2	13	L.E.	2.2
	OTHERS	PROVISIONAL ESTIMATE	5	L.E.	0.8
	TOTAL: PHYSICAL INFRASTRUCTURE			L.E.	127.6
V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/		
	EDUCATION	ALEXANDRIA STANDARDS	41	L.E.	18.5
	HEALTH 2/	4.5 BEDS/1,000 Table V-A.13	258	L.E.	62.1
	SOCIAL AFFAIRS, AND ADMINISTRATION OTHERS	10% OF SADAT CITY MASTER PLAN ESTIMATES Table V-A.15	43	L.E.	7.1
	TOTAL: SOCIAL INFRASTRUCTURE			L.E.	87.7
VI.	TOTAL HOUSING AND INFRASTRUCTURE CAPITAL COSTS PER CAPITA		BASE COSTS	L.E.	298.3
			ADJUSTED TOTAL COSTS 5/	L.E.	361.9
			PERCENT REHABILITATION		39.7%
VII.	AFFORDABILITY AND COST RECOVERY 6/	NEW AREAS 2	TOTAL PER CAPITA COSTS	TOTAL COSTS	L.E. 1,395.9
			PORTION NOT AFFORDABLE	PERCENTAGE	27.3%
		EXISTING AREAS 2	TOTAL PER CAPITA COSTS	TOTAL COSTS	L.E. 170.2
			PORTION NOT AFFORDABLE	PERCENTAGE	0.0%
		ANNUAL LAND PAYMENT 22 WHICH RECOVERS NON-UTILIZED PORTIONS OF CAPITAL COST NET OF HOUSING COSTS 9/	NEW AREAS	TOTAL COSTS	L.E. 1.06 M2
			EXISTING AREAS	TOTAL COSTS	L.E. 0.67 M2
			TOTAL PER CAPITAL COST RECOVERY: NEW AREAS ONLY	L.E.	381.3

Totals may not add due to rounding.

- 1/ All prices in 1979 L.E. Assumptions about rehabilitation and its phasing are shown in Tables V-A.23 & 24.
- 2/ New infrastructure costs only.
- 3/ Except for comparison with total costs of other alternatives shown in Master Plan standards packages telecommunications have been included in inter-urban infrastructure costs. See Chapter V, Section III.
- 4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.
- 5/ Base costs multiplied times regional construction cost factors. See Table V-A.22 in Appendix V.A.
- 6/ Based on median per capita household incomes and savings. (See affordability analysis in Chapter V, Section III) and on opportunity cost of capital of 12 percent, and a recovery period of 30 years.
- 7/ Infill areas or new settlement areas.
- 8/ Costs of upgrading or capital rehabilitation of existing infrastructure.
- 9/ Annual level payment per square meter for salable land which recovers the non-subsitized portion capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 30 year recovery period.

FIGURE II-19

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARDS AND CAPITAL COST PACKAGES:				DELTA REGIONAL SERVICE	
EXAMPLE SETTLEMENT:				CENTERS	TANTA
I.	GROSS DENSITIES	179 PERSON/HECTARES	POPULATION	EXISTING (1985)	375,000
				INCREASE (1986-1990)	59,000
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS	PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL REHABILITATION OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1/		
	PRIVATE	65%			
	--RESIDENTIAL	(45%)			
	--NON RESIDENTIAL	(20%)			
	PUBLIC	35%			
	TOTAL	100%			
III.	HOUSING				
	AVERAGE AREA/UNIT 36 M2	AVERAGE UNIT COST: L.E. 2,256	INDICATIVE PER CAPITA COST 2/ L.E. 468		L.E. 83.84
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.		
	WATER	351 l/c/d	103		L.E. 53.5
	SANITATION	189 l/c/d	69		L.E. 36.2
	ELECTRICITY	DISTRIBUTION ONLY	142		L.E. 31.0
	CIRCULATION	20% or 9.7 m <sup>2</sup> /CAPITA	98		L.E. 142.2
	TELECOMMUNICATIONS 3/		INCLUDED IN INTER-URBAN INFRASTRUCTURE		--
	TRANSPORTATION	BUSES/10,000 3	34		L.E. 5.0
	OTHERS	PROVISIONAL ESTIMATE	10		L.E. 1.4
		TOTAL: PHYSICAL INFRASTRUCTURE			L.E. 141.3
	V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.	
EDUCATION		MODIFIED ALEXANDRIA	81		L.E. 35.5
HEALTH 4/		5.79 BEDS/1,000 (Existing Standard Table V-A.13)	322		L.E. 71.6
SOCIAL AFFAIRS, AND ADMINISTRATION/OTHERS		30% of SADAT CITY MASTER PLAN COSTS Table V-A.14	128		L.E. 18.5
		TOTAL: SOCIAL INFRASTRUCTURE			L.E. 125.6
VI.	TOTAL HOUSING AND INFRASTRUCTURE CAPITAL COSTS PER CAPITA	BASE COSTS		L.E. 350.7	
		ADJUSTED TOTAL COSTS 5/		L.E. 588.0	
		PERCENT REHABILITATION		43.7	
VII.	AFFORDABILITY AND COST RECOVERY 6/	NEW AREAS 7/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS PERCENTAGE	L.E. 2,436.4 55.0%
		EXISTING AREAS 8/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS PERCENTAGE	L.E. 297.2 0.0%
	ANNUAL LAND PAYMENT/M2 WHICH RECOVERS NON-SUBSIDIZED PORTIONS OF CAPITAL COST NET OF HOUSING COSTS 9/	NEW AREAS	TOTAL COSTS	L.E. 3.19 /M2	
		EXISTING AREAS	TOTAL COSTS	L.E. 1.00 /M2	
		TOTAL PER CAPITAL COST SUBSIDY: NEW AREAS ONLY		L.E. 1,339.0	

Totals may not add due to rounding.

All prices in 1979 L.E. Assumptions about rehabilitation and its phasing are shown in Tables V.A.23 & 24. New infrastructure costs only.

- 1/ Except for comparison with total costs of other alternatives shown in Master Plan Standards Packages Telecommunications have been included in inter-urban infrastructure costs. See Chapter V, Section III.
- 4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.
- 5/ Base costs multiplied times regional construction cost factors. See Table V.A.22 in Appendix V.A.
- 6/ Based on median per capita household incomes and savings (see affordability analysis in Chapter V, Section III) and on opportunity cost of capital of 12 percent, and a recovery period of 30 years.
- 7/ Infill areas or new settlement areas.
- 8/ Costs of upgrading or capital rehabilitation of existing infrastructure.
- 9/ Annual level payment per square meter for saleable land which recovers the non-subsidized portion capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 30 year recovery period.

FIGURE II-20

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARDS AND CAPITAL COST PACKAGES: HIGH DENSITY SETTLEMENT  
 EXAMPLE SETTLEMENT: DAMANIOUR  
 (SHOWS COSTS IF NOT HORIZONTAL EXPANSION OCCURS)  
 (SEE ALSO Table V-7)

I.	GROSS DENSITIES 611 PERSON HECTARES		POPULATION	EXISTING (1987)	271,000
				INCREASE (1986-1990)	23,000
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS	PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL REHABILITATION OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1/		
	PRIVATE	65%			
	--RESIDENTIAL	(25%)			
	--NON RESIDENTIAL	(20%)			
	PUBLIC	35%			
	TOTAL	100%			
III.	HOUSING				
	AVERAGE AREA/UNIT 36 M2	AVERAGE UNIT COST: L.E. 2,256	INDICATIVE PER CAPITA COST 2/ L.E. 468		L.E. 58.2
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.		
	WATER	300 l/c/d	28.7	L.E.	14.0
	SANITATION	165 l/c/d	39.7	L.E.	19.9
	ELECTRICITY	DISTRIBUTION ONLY	148.9	L.E.	25.1
	CIRCULATION	20% or 6.7 m <sup>2</sup> CAPITA	32.9	L.E.	2.8
	TELECOMMUNICATIONS 3/		INCLUDED IN INTER-URBAN INFRASTRUCTURE		--
	TRANSPORTATION	BUSES 10,000 0.5	5.7	L.E.	0.5
	OTHERS	PROVISIONAL ESTIMATE	5.0	L.E.	0.4
	TOTAL: PHYSICAL INFRASTRUCTURE			L.E.	62.2
V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.		
	EDUCATION	ALEXANDRIA STANDARD	41	L.E.	16.4
	HEALTH 4/	2.0 BEDS/1,000 Table V-A.13	228	L.E.	38.9
	SOCIAL AFFAIRS, AND ADMINISTRATION OTHERS	CAIRO GOVERNORATE STANDARDS Table V-A.17	13	L.E.	1.1
	TOTAL: SOCIAL INFRASTRUCTURE			L.E.	56.4
VI.	TOTAL PHYSICAL AND INFRASTRUCTURE CAPITAL COSTS PER CAPITA		BASE COSTS	L.E.	176.8
			ADJUSTED TOTAL COSTS 5/	L.E.	388.9
			PERCENT REHABILITATION		55.2%
VII.	AFFORDABILITY AND COST RECOVERY 6/	NEW AREAS 7/	TOTAL PER CAPITA COSTS	TOTAL COSTS	L.E. 2,218.6
		EXISTING AREAS 8/	PORTION NOT AFFORDABLE	PERCENTAGE	50.5%
			TOTAL PER CAPITA COSTS	TOTAL COSTS	L.E. 233.6
			PORTION NOT AFFORDABLE	PERCENTAGE	0.0%
		ANNUAL LAND PAYMENT/M2 WHICH RECEIVERS NON-SUBSIDIZED PORTIONS OF CAPITAL COST NET OF HOUSING COSTS 9/	NEW AREAS	TOTAL COSTS	L.E. 7.18 M2
			EXISTING AREAS	TOTAL COSTS	L.E. 2.68 M2
		TOTAL PER CAPITAL COST SPOKELY: NEW AREAS ONLY		L.E.	2,212

Totals may not add due to rounding.

- 1/ All prices in 1979 L.E. Assumptions about rehabilitation and LRS phasing are shown in Tables V-A.23 & 24.
- 2/ New infrastructure costs only.
- 3/ Except for comparison with total costs of other alternatives shown in Master Plan Standards Packages Telecommunications have been included in inter-urban infrastructure costs. See Chapter V, Section III.
- 4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.
- 5/ Base costs multiplied times regional construction cost factors. See Table V-A.22 in Appendix V-A.
- 6/ Based on median per capita household incomes and savings. (See affordability analysis in Chapter V, Section III) and an opportunity cost of capital of 12 percent, and a recovery period of 30 years.
- 7/ Infill areas or new settlement areas.
- 8/ Costs of upgrading or capital rehabilitation of existing infrastructure.
- 9/ Annual level payment per square meter for saleable land which recovers the non-subsidized portion capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 30 year recovery period.

FIGURE II-21

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARDS AND CAPITAL COST PACKAGES: NON-SPECIAL EMPHASIS  
 EXAMPLE SETTLEMENT: GOVERNORATE CAPITAL - BENT SUËF

I.	GROSS DENSITIES 168.3 PERSON/HECTARES		POPULATION	EXISTING (1985)	153,000
				INCREASE (1986-1990)	21,000
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS	PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL REHABILITATION OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1/		
	PRIVATE	65%			
	--RESIDENTIAL	(45%)			
	--NON RESIDENTIAL	(20%)			
	PUBLIC	35%			
	TOTAL	100%			
III.	HOUSING				
	AVERAGE AREA/UNIT 36 M2	AVERAGE UNIT COST: L.E. 2,006	INDICATIVE PER CAPITA COST 2/ L.E. 418		L.E. 68.83
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.		
	WATER	237 l/c/d	54.09		L.E. 27.65
	SANITATION	142 l/c/d	62.38		L.E. 31.88
	ELECTRICITY	DISTRIBUTION ONLY	148.75		L.E. 30.81
	CIRCULATION	20% or 11.9m <sup>2</sup> /CAPITA	102.45		L.E. 13.27
	TELECOMMUNICATIONS 3/		INCLUDED IN INTER-URBAN INFRASTRUCTURE		--
	TRANSPORTATION	BUSES/10,000 0.2	2.3		L.E. 0.56
	OTHERS	PROVISIONAL ESTIMATE	2.0		
	TOTAL: PHYSICAL INFRASTRUCTURE				L.E. 104.16
V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.		
	EDUCATION	ALEXANDRIA STANDARD Table V-A.11	41		L.E. 17.57
	HEALTH 4/	4.0 BEDS/1,000 Table V-A.13	228		L.E. 47.57
	SOCIAL AFFAIRS, AND ADMINISTRATION/OTHERS	CAIRO GOVERNORATE STANDARDS Table V-A.18	7		L.E. 0.91
	TOTAL: SOCIAL INFRASTRUCTURE				L.E. 66.04
VI.	TOTAL HOUSING AND INFRASTRUCTURE CAPITAL COSTS PER CAPITA		BASE COSTS		L.E. 239.03
			ADJUSTED TOTAL COSTS 5/		L.E. 654.49
			PERCENT REHABILITATION		46.2 %
VII.	AFFORDABILITY AND COST RECOVERY 6/	NEW AREAS 2/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS PERCENTAGE	L.E. 2,915.91 65.2 %
		EXISTING AREAS 3/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS PERCENTAGE	L.E. 342.10 0.0 %
		ANNUAL LAND PAYMENT /M2 WHICH RECOVERS NON-SUBSIDIZED POR- TIONS OF CAPITAL COST NET OF HOUSING COSTS 9/	NEW AREAS	TOTAL COSTS	L.E. 3.85 /M2
			EXISTING AREAS	TOTAL COSTS	L.E. 1.08 /M2
	TOTAL PER CAPITAL COST SUBSIDY: NEW AREAS ONLY				L.E. 1,900.7

Totals may not add due to rounding.

- 1/ All prices in 1979 L.E. Assumptions about rehabilitation and its phasing are shown in Tables V.A.23 & 24.
- 2/ New infrastructure costs only.
- 3/ except for comparison with total costs of other alternatives shown in Master Plan Standards Packages Telecommunications have been included in inter-urban infrastructure costs. See Chapter V, Section III.
- 4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.
- 5/ Base costs multiplied times regional construction cost factors. See Table V.A.22 in Appendix V.A.
- 6/ Based on median per capita household incomes and savings (see affordability analysis in Chapter V, Section II) and an opportunity cost of capital of 12 percent, and a recovery period of 30 years.
- 7/ Infill areas or new settlement areas.
- 8/ Costs of upgrading or capital rehabilitation of existing infrastructure.
- 9/ Annual level payment per square meter for saleable land which recovers the non-subsidized portion capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 30 year recovery period.

FIGURE II-22

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARDS AND CAPITAL COST PACKAGES: NON-SPECIAL EMPHASIS  
 EXAMPLE SETTLEMENT: "OTHERS" - BELBEIS

I.	GROSS DENSITIES 208.0 PERSON HECTARES		POPULATION	EXISTING (1981)	100,000
				INCREASE (1981-1990)	7,000
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS	PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL REHABILITATION OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1/		
	PRIVATE	65%			
	--RESIDENTIAL	(45%)			
	--NON RESIDENTIAL	(20%)			
	PUBLIC	35%			
	TOTAL	100%			
III.	HOUSING				
	AVERAGE AREA UNIT 35 M <sup>2</sup>	AVERAGE UNIT COST: I.E. 1,750	INDICATIVE PER CAPITA COST 2/ I.E. 390	I.E.	33.75
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ I.E.		
	WATER	167 l/c/d	18.5	I.E.	8.6
	SANITATION	100 l/c/d	52.8	I.E.	32.5
	ELECTRICITY	DISTRIBUTION ONLY	151.7	I.E.	20.4
	CIRCULATION	20% or 9.6 m <sup>2</sup> CAPITA	88.6	I.E.	4.3
	TELECOMMUNICATIONS 3/		INCLUDED IN INTER-URBAN INFRASTRUCTURE		--
	TRANSPORTATION	0.1	1.1	I.E.	0.1
	OTHERS	PROVISIONAL ESTIMATE	1		
	TOTAL: PHYSICAL INFRASTRUCTURE		I.E.	65.9	
V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ I.E.		
	EDUCATION	ALEXANDRIA STANDARD	41	I.E.	15.4
	HEALTH 4/	2.5 BEDS/1,000 Table V-A.13	149	I.E.	20.1
	SOCIAL AFFAIRS, AND ADMINISTRATION OTHERS	SMALL NON-SPECIAL EMPHASIS SETTLEMENTS TABLE V-A.19	3	I.E.	0.1
	TOTAL: SOCIAL INFRASTRUCTURE		I.E.	35.6	
VI.	TOTAL PHYSICAL AND INFRASTRUCTURE CAPITAL COSTS PER CAPITA		BASE COSTS	I.E.	135.2
			ADJUSTED TOTAL COSTS 5/	I.E.	255.0
			PERCENT REHABILITATION		51.9 %
VII.	AFFORDABILITY AND COST RECOVERY 6/		TOTAL PER CAPITA COSTS	TOTAL COSTS	I.E. 3,185.7
			PORTION NOT AFFORDABLE	PERCENTAGE	65.6 %
			TOTAL PER CAPITA COSTS	TOTAL COSTS	I.E. 137.8
			PORTION NOT AFFORDABLE	PERCENTAGE	0.0 %
			ANNUAL LAND PAYMENT/M <sup>2</sup> WHICH RECOVERS NON-SUBSIDIZED PORTIONS OF CAPITAL COST NET OF HOUSING COSTS 9/	NEW AREAS	TOTAL COSTS
			EXISTING AREAS	TOTAL COSTS	I.E. 0.54 M <sup>2</sup>
		TOTAL PER CAPITAL COST SPENDING: NEW AREAS ONLY		I.E.	2,088.2

Totals may not add due to rounding.

1/ All prices in 1979 I.E. Assumptions about rehabilitation and its phasing are shown in Tables V-A.23 & 24.  
 2/ New infrastructure costs only.  
 3/ Except for comparison with total costs of other alternatives shown in Master Plan Standards Packages Telecommunications have been included in inter-urban infrastructure costs. See Chapter V, Section III.  
 4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.  
 5/ Base costs multiplied times regional construction cost factors. See Table V-A.22 in Appendix V-A.  
 6/ Based on median per capita household incomes and savings (see affordability analyses in Chapter V, Section III) and an opportunity cost of capital of 12 percent, and a recovery period of 40 years.  
 7/ Infill areas or new settlement areas.  
 8/ Costs of upgrading or capital rehabilitation of existing infrastructure.  
 9/ Annual level payment per square meter for suitable land which recovers the non-subsidized portion capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 40 year recovery period.

FIGURE II-23

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARDS AND CAPITAL COST PACKAGES: REMOTE AREAS  
 EXAMPLE SETTLEMENT: RED SEA  
 (SAFAGA, HUGADA, COSEIR & RAS GHARIB)

I.	GROSS DENSITIES	PERSON/HECTARES	POPULATION	EXISTING (1985)	84,000
				INCREASE (1986-1990)	9,000
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS		PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL REHABILITATION OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1/	
	PRIVATE	65%			
	--RESIDENTIAL	(45%)			
	--NON RESIDENTIAL	(20%)			
	PUBLIC	35%			
	TOTAL	100%			
III.	HOUSING				
	AVERAGE AREA/UNIT 36 M2	AVERAGE UNIT COST: L.E. 2,006	INDICATIVE PER CAPITA COST 2/ L.E. 418	L.E.	59.33
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.		
	WATER	167 l/c/d	41.45	L.E.	20.66
	SANITATION	100 l/c/d	64.32	L.E.	41.10
	ELECTRICITY	DISTRIBUTION ONLY	150.82	L.E.	28.13
	CIRCULATION	20%	645.67	L.E.	69.80
	TELECOMMUNICATIONS 3/		INCLUDED IN INTER-URBAN INFRASTRUCTURE		--
	TRANSPORTATION	BUSES/10,000 0.3	3.4	L.E.	0.89
	OTHERS	PROVISIONAL ESTIMATE	5		
	TOTAL: PHYSICAL INFRASTRUCTURE			L.E.	160.58
V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.		
	EDUCATION	Table V-A.12	41	L.E.	16.93
	HEALTH 4/	4.0 BEDS/1,000 Table V-A.13	228	L.E.	42.66
	SOCIAL AFFAIRS, AND ADMINISTRATION/OTHERS	MODIFIED CAIRO GOVERNORATE Table V-A.17	13	L.E.	1.38
	TOTAL: SOCIAL INFRASTRUCTURE			L.E.	60.96
VI.	TOTAL HOUSING AND INFRASTRUCTURE CAPITAL COSTS PER CAPITA		BASE COSTS	L.E.	280.97
			ADJUSTED TOTAL COSTS 5/	L.E.	1,877.88
			PERCENT REHABILITATION		31.6 %
VII.	AFFORDABILITY AND COST RECOVERY 6/	NEW AREAS 7/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS PERCENTAGE	L.E.13,269.3 92.3 %
		EXISTING AREAS 8/	TOTAL PER CAPITA COSTS PORTION NOT AFFORDABLE	TOTAL COSTS PERCENTAGE	L.E. 657.37 28.8 %
		ANNUAL LAND PAYMENT/M2 WHICH RECOVERS NON-SUBSIDIZED PORTIONS OF CAPITAL COST NET OF HOUSING COSTS 9/	NEW AREAS	TOTAL COSTS	L.E. 3.33 M2
			EXISTING AREAS	TOTAL COSTS	L.E. 0.06 M2
		TOTAL PER CAPITAL COST SUBSIDY: NEW AREAS ONLY		L.E.	12,254

Totals may not add due to rounding.

- 1/ All prices in 1979 L.E. Assumptions about rehabilitation and its phasing are shown in Tables V.A.23 & 24.
- 2/ New infrastructure costs only.
- 3/ Except for comparison with total costs of other alternatives shown in Master Plan Standards Packages Telecommunications have been included in inter-urban infrastructure costs. See Chapter V, Section III.
- 4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.
- 5/ Base costs multiplied times regional construction cost factors. See Table V.A.22 in Appendix V.A.
- 6/ Based on median per capita household incomes and savings (see affordability analysis in Chapter V, Section II) and an opportunity cost of capital of 12 percent, and a recovery period of 30 years.
- 7/ Infill areas or new settlement areas.
- 8/ Costs of upgrading or capital rehabilitation of existing infrastructure.
- 9/ Annual level payment per square meter for saleable land which recovers the non-subsidized portion capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 30 year recovery period.

FIGURE II-24

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARDS AND CAPITAL COST PACKAGES: CANAL CITY  
EXAMPLE SETTLEMENT: ISMAI'IA

I.	GROSS DENSITIES	PERSONS PER ACRE	POPULATION	EXISTING 1980	291,000	
			IN PLAN 1980-1990		59,000	
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS			PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL FUNDING OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1	
	PRIVATE	65%				
	--RESIDENTIAL	125%				
	--NON-RESIDENTIAL	120%				
	PUBLIC	35%				
TOTAL	100%					
III.	HOUSING					
	AVERAGE AREA UNIT 36 M <sup>2</sup>	AVERAGE UNIT COST E.G. 2,000	INDICATIVE PER CAPITA COST 2	E.G. 418	E.G. 87.8	
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARDS	INDICATIVE PER CAPITA COST 2			
	WATER	381 L/c/d	108.3	E.G.	58.2	
	SEWAGE	275 L/c/d	80.4	E.G.	43.2	
	ELECTRICITY	DISTRIBUTION ONLY	142.4	E.G.	35.1	
	TELEPHONE	20% OF B.C. PER CAPITA	79.1	E.G.	14.0	
	TELECOMMUNICATIONS	INDICATIVE PER CAPITA COST OF PHYSICAL INFRASTRUCTURE		E.G.	--	
	TRANSPORTATION	2.0	22.8	E.G.	4.0	
	TOTAL	PHYSICAL INFRASTRUCTURE	10	E.G.	1.8	
TOTAL	PHYSICAL INFRASTRUCTURE		E.G.	156.3		
V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARDS	INDICATIVE PER CAPITA COST 2			
	EDUCATION	MODIFIED ALEXANDRIA	81	E.G.	37.2	
	HEALTH CARE	2.5 BEDS/1,000 Table V-A-13	256	E.G.	64.9	
	SOCIAL SERVICES AND AMENITIES, OTHER	10% ISMAI'IA CITY MASTER PLAN ESTIMATES	43	E.G.	7.6	
TOTAL	SOCIAL INFRASTRUCTURE		E.G.	109.6		
VI.	ESTIMATED NEW INFRASTRUCTURE COSTS PER UNIT					
			ESTIMATED COSTS	E.G.	353.9	
			ESTIMATED COSTS	E.G.	963.6	
					409.8	
VII.	ESTIMATED ANNUAL COSTS FOR NEW AREAS					
			TOTAL PER CAPITA COSTS	E.G.	3,373.7	
			PER CAPITA COSTS	E.G.	67.7	
			PER CAPITA COSTS	E.G.	272.1	
			PER CAPITA COSTS	E.G.	69.8	
		ANNUAL LAND PAYMENT TO BE MADE BY NEW AREA DEVELOPERS TO COVER COSTS OF INFRASTRUCTURE		TOTAL COSTS	E.G.	7.26 M
		PERCENTAGE OF CAPITAL COSTS TO BE COVERED BY DEVELOPERS	10% (ESTIMATED)	TOTAL COSTS	E.G.	2.18 M
	TOTAL PER CAPITA COSTS FOR NEW AREAS ONLY		E.G.	2,276.2		

Totals may not add due to rounding.

1/ All prices in 1979 U.S. dollars unless otherwise stated and all prices are shown in Table V-A-13 & 14.  
 2/ New infrastructure costs only.  
 3/ Except for comparison with total costs of other alternatives shown in Master Plan Standards Package, telecommunications have been included in other urban infrastructure costs in this report (see section III).  
 4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.  
 5/ Best cost multiple times (e.g. 2) construction cost factors (see Table V-A-27 in Appendix V-A).  
 6/ based on median per capita household incomes and savings (see affordability analysis in Chapter IV, Section III) and an opportunity cost of capital of 12 percent and a recovery period of 10 years.  
 7/ Infill areas of new settlement areas.  
 8/ Costs of upgrading or capital rehabilitation of existing infrastructure.  
 9/ Annual level payment per square meter for available land which covers the non-subsistence per capita capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 10 year recovery period.

FIGURE II-25

INTRA-URBAN INFRASTRUCTURE INDICATIVE SPATIAL TARGET GROUP STANDARDS /ND CAPITAL COST PACKAGES:  
EXAMPLE SETTLEMENT:

CANAL CITY  
PORT SAID

I.	GROSS DENSITIES	70* PERSON HECTARES	POPULATION	EXISTING (1985)	438,000
				INCREASE (1986-1990)	46,000
II.	LAND REQUIREMENTS	PHYSICAL STANDARDS		PER CAPITA COSTS OF NEW DEVELOPMENT AND CAPITAL REHABILITATION OF EXISTING INFRASTRUCTURE OF SETTLEMENT 1/	
	PRIVATE	65%			
	--RESIDENTIAL	(45%)			
	--NON RESIDENTIAL	(20%)			
	PUBLIC	35%			
TOTAL	100%				
III.	HOUSING				
	AVERAGE AREA/UNIT 36 M2	AVERAGE UNIT COST: L.E. 2,006	INDICATIVE PER CAPITA COST 2/ L.E. 418	L.E.	71.5
IV.	PHYSICAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.		
	WATER	353 l/c/d	116.9	L.E.	60.2
	SANITATION	282 l/c/d	92.1	L.E.	47.4
	ELECTRICITY	DISTRIBUTION ONLY	141.6	L.E.	29.7
	CIRCULATION	20% or 28.6 m <sup>2</sup> /CAPITA	192.6	L.E.	26.4
	TELECOMMUNICATIONS 3/		INCLUDED IN INTER-URBAN INFRASTRUCTURE	L.E.	
	TRANSPORTATION	BUSES/10,000 2.0	22.8	L.E.	3.5
	OTHERS	PROVISIONAL ESTIMATE	10		1.0
	TOTAL: PHYSICAL INFRASTRUCTURE			L.E.	168.2
V.	SOCIAL INFRASTRUCTURE	PHYSICAL STANDARD	INDICATIVE PER CAPITA COST 2/ L.E.		
	EDUCATION	ALEXANDRIA STANDARD	41	L.E.	17.7
	HEALTH 4/	4.5 BEDS/1,000	258	L.E.	55.4
	SOCIAL AFFAIRS, AND ADMINISTRATION/OTHERS	10% SADAT CITY MASTER PLAN ESTIMATES Table V-A.19	43	L.E.	5.9
	TOTAL: SOCIAL INFRASTRUCTURE			L.E.	79.0
VI.	TOTAL HOUSING AND INFRASTRUCTURE CAPITAL COSTS PER CAPITA	BASE COSTS	L.E.	318.8	
		ADJUSTED TOTAL COSTS 5/	L.E.	778.5	
		PERCENT REHABILITATION		46.6	
VII.	AFFORDABILITY AND COST RECOVERY 6/	NEW AREAS 7/	TOTAL PER CAPITA COSTS	TOTAL COSTS	L.E. 3,258.0
		EXISTING AREAS 8/	PORTION NOT AFFORDABLE	PERCENTAGE	L.E. 66.3 %
		TOTAL PER CAPITA COSTS	TOTAL COSTS	L.E. 416.3	
		PORTION NOT AFFORDABLE	PERCENTAGE	L.E. 0.0 %	
		ANNUAL LAND PAYMENT/M2 WHICH RECOVERS NON-SUBSIDIZED PORTIONS OF CAPITAL COST NET OF HOUSING COSTS 9/	NEW AREAS	TOTAL COSTS	L.E. 2.16 /M2
			EXISTING AREAS	TOTAL COSTS	L.E. 0.55 /M2
		TOTAL PER CAPITAL COST SUBSIDY: NEW AREAS ONLY		L.E.	2,160.5

Totals may not add due to rounding.

- 1/ All prices in 1979 L.E. Assumptions about rehabilitation and its phasing are shown in Tables V.A.23 & 24.
- 2/ New infrastructure costs only.
- 3/ Except for comparison with total costs of other alternatives shown in Master Plan Standards Packages Telecommunications have been included in inter-urban infrastructure costs. See Chapter V, Section III.
- 4/ Standards and capital costs shown include provisions for urban primary health care facilities in addition to secondary health care facilities.
- 5/ Base costs multiplied times regional construction cost factors. See Table V.A.22 in Appendix V.A.
- 6/ Based on median per capita household incomes and savings (see affordability analysis in Chapter V, Section III) and on opportunity cost of capital of 12 percent, and a recovery period of 30 years.
- 7/ Infill areas or new settlement areas.
- 8/ Costs of upgrading or capital rehabilitation of existing infrastructure.
- 9/ Annual level payment per square meter for saleable land which recovers the non-subsidized portion capital costs net of housing cost at an opportunity cost of capital of 12 percent over a 30 year recovery period.

## NOTES

### KEY SECTORAL POLICY PROPOSALS

1 Law No. 119 of 1980.

2 See Samuel A. Sherer, Legislative Means of Regulating Urban Development in the Arab Republic of Egypt: Current Situation, Recommendations for Change and Comparison with Other Countries (NUPS, May 1981); Samuel A. Sherer, Industry: Controls and Incentives for Development in the Context of a National Urban Policy (NUPS, April 1981); Wesley Weidemann, The Agricultural Land: A Legal and Administrative Discussion (NUPS, March 1981).

3 However, it should be noted that the most recent Landlord/Tenant Law took a step in the right direction by repealing Part I of Law No. 106 of 1976 which required committee approval for all buildings costing of L.E. 5,000. The requirement for repairs for luxurious buildings only, Law No. 13 of 1981, Article 12.

4 See Tanta and Qena Illustrative Development Project and ABT Associates, Informal Housing in Egypt (USAID, November 1981).

5 A more detailed discussion of the possibilities for a land development agency is found in S. Sherer, Legislative Means of Regulating Urban Development in the Arab Republic of Egypt: Current Situation, Recommendations of Usage and Comparison with Other Countries (NUPS, May 1981), pp. 46-52.

6 Affordability is defined throughout this section as the amounts of shelter and intra-urban infrastructure costs, both initial capital investment costs and long run marginal costs (usually operations and maintenance, but the concept can include other types of costs such as depreciation) which a household can afford a true opportunity cost for capital. This definition of affordability does not fix standards of housing and intra-urban infrastructure at a particular level since different mixes of standards can be used to achieve the same objective, e.g., meeting household affordability. The concept does, however, aim at reaching a mix of standards and, thus, costs which households can and are willing to pay for, either directly or through other cost recovery mechanisms. When the costs of housing and intra-urban infrastructure (since intra-urban infrastructure serves groups greater than just the household sector, costs generally need to be apportioned according to end users in some fashion) exceed household affordability, some form of long term or short term assistance (subsidies) is required to make up the difference. These subsidies can be used to meet a variety of social and economic objectives as are discussed in this section.

## CHAPTER THREE

### GUIDELINES FOR PROGRAMMING, PLANNING AND MONITORING OF THE NATIONAL URBAN POLICY

#### I. INTRODUCTION

The aim of this chapter is two-fold. First, to provide guidelines for urban programming, orientation, monitoring and evaluation of the recommended national urban policy by settlement zone and, second, to provide guidelines for the planning and programming process.

In each case, the guidelines are presented with as little narrative as possible so that they may serve as a point of reference or working tool. In addition to the guidelines presented in this chapter, forms for data collection which will assist in program development, monitoring and evaluation are presented in Appendix A; a programming process is presented in Appendix B; and finally, for assistance in the determination of appropriate physical development standards, a special section has been prepared in Appendix C.

An important element which has not been dealt with specifically in the Urban Management Handbook is an assessment of functional capacity among specific governorates and local councils. During the course of the National Urban Policy Study, a wide range of administrative capacities has been noted among local government bodies. In this regard, an overall assessment of local administrative capacity and efficiency is needed, particularly among governorates and local councils in settlements designated by NUPS for special emphasis.

It is proposed that a special committee under the authority of the Deputy Prime Minister's Office for Urban Policy Affairs review findings prepared by an independent management assessment of governorates and key local councils. It may be found that many of the local government units are prepared to undertake significantly more responsibility if greater autonomy is encouraged. However, in other cases, reliance on central government initiatives and assistance will be needed.

In preparing the Illustrative Development Projects for Tanta and Qena/Naga Hamadi, NUPS found that local government's planning and programming capabilities differed significantly among the governorates and local councils -- yet they needed to be strengthened in each case. It was suggested, for example, that the planning department in Tanta/Gharbia had a sound foundation for increased capacity while in Qena (and Naga Hamadi) more reliance initially on central government support would be required.

In each of the special emphasis cities (Tanta, Mansoura, Port Said, Ismailia, Suez, Assiut, Qena/Naga Hamadi, and Aswan) as well as the Major Metropolitan Regions of Cairo and Alexandria, administrative assessments and support programs are needed. These specialized support programs should be tailored to meet the special roles of each of the settlements in implementing the national urban policy.

## II. PROGRAM ORIENTATION, MONITORING AND EVALUATION

In order to facilitate programming, monitoring and evaluation of the national urban policy by settlement zone (and special emphasis city), recommended objectives and guidelines as set forth in NUPS are presented in Table III-1. These are structured by three broad categories: physical, economic and administrative considerations. In keeping with the nature of the report, the guidelines are predominantly orientated towards policy implementation. However, they do imply a wide range of programs and projects. Not included in the guidelines are parameters for investment and standards. These are dealt with in other parts of the report: investment by settlement zone in Chapter I, industrial types in Chapter II-B, and physical standards in Chapter II-C and Appendix C.

## III. GUIDELINES FOR THE PROGRAMMING AND PLANNING PROCESS

### A. OBJECTIVES

In the following section guidelines are presented which are concerned with the planning and programming process. The guidelines are aimed primarily at planning and programming departments in those governorates (and local councils) with staff who lack specialized technical training in these fields. However, where possible, pertinent considerations relevant to implementation of the national urban policy have been built into the guidelines. They should be useful to those professionals with planning backgrounds as well.

### B. PREREQUISITES FOR PLANNING AND PROGRAMMING

It is essential that planning departments be equipped with the necessary tools to carry out their work and to effectively carry out planning and programming. This includes up-to-date maps, aerial photographs, and equipment such as plani-meters, stereo-scopes, blueprint machines, drafting supplies and materials, etc. The basic elements were found by NUPS to be sorely lacking in most governorates.

It is recommended that aerial photography be undertaken for all major urban settlements. A contract should be arranged for the production of contact prints preferably at a scale of 1:4,000 (but necessarily between 1:2,000 and 1:10,000) in addition to a second set at a scale of 1:20,000. For the purpose of working out physical development plans it would be useful to have photogrammetric maps prepared at a scale of 1:5,000 under the same contract. Other maps for the purpose of regional planning should be at scales of 1:50,000 and 1:100,000, respectively. When these maps are prepared, they should be prepared in a standardized format to ease printing costs and to make them more readily usable. The photogrammetric maps, in particular, should be sold in convenient locations throughout the country. They should also be sold in a readily reproducible form to allow them to be used more easily in future planning projects.

Detailed survey maps are appropriate at similar scales but would be more costly than the photogrammetric maps. It is likely that the latter will provide enough detail for doing basic concept plans, land use plans, etc. Detailed survey plans could then be undertaken for site specific, project related planning rather than at the urban level.

Aerial photographs and photogrammetric maps should be undertaken on a regular basis. For the fast growing settlements, coverage should be done every two years while others will require coverage every five years. In addition to assisting the planning process, they can be used for governing development control. The photos and maps provide a good benchmark for determining where illegal development is occurring, and in fact, can be tied to legal decrees for enforcement.

LANDSAT satellite imagery, such as that undertaken for the National Urban Policy Study, is another useful tool for measuring urban expansion, loss of arable land, noting directions of urban growth, etc. LANDSAT printouts for major urban settlements should be made available annually or bi-annually for the purpose of detecting change and measuring progress against goals. As was done for NUPS, the LANDSAT imagery can also be provided at governorate levels for the same general purposes. (See the NUPS Urban Growth and Urban Data Report for further details and LANDSAT maps for individual settlements.)

When the contracts for LANDSAT imagery are being prepared, sufficient provisions should be made for ground proofing so that identification of different types of uses is done more accurately. Furthermore, care should be taken to select LANDSAT tapes which were taken during periods when agricultural areas are under cultivation to eliminate confusion between fallow land and urban land. The uses of LANDSAT imagery to aid in urban planning are further discussed in the NUPS Urban Growth and Urban Data Report regarding the best times for selecting tapes for different parts of Egypt, changes in agricultural and urban land use for major settlements in Egypt between 1972 and 1978, and methodology for use of LANDSAT in urban and regional planning.

### C. PLANNING AND PROGRAMMING STEPS

A schematic diagram of the planning and programming process in the context of national urban policy zonal and sectoral directives and policy monitoring and evaluation criteria (such as those proposed in Table III-1), is presented in Figure III-1. The planning and programming process is presented in general form in order to illustrate the interrelations among local and national inputs, and physical, economic and administrative components in the process. As the figure illustrates, the process is interrelated. The development of urban policy relies on policy monitoring and evaluation to determine its effectiveness and to make necessary adjustments in policy when objectives are not being met. Similarly, policy monitoring cannot occur without policy inputs. Finally, local inputs are necessary for policy and program development of all types. The chart is followed by Tables III-2 which presents a more detailed checklist of steps in the planning and programming process.

This list provides guidelines as to the types of analysis needed for the broad policy categories shown in Figure III-1. It also gives indications of which level of

government should perform these data collection analysis tasks and the frequency of it.

Finally, for several key steps in the planning process, such as determination of land use plans, utility plans, opportunities for physical expansion, etc., the process has been presented in flow chart form.

In effect, the planning and programming process should take two forms:

- Concept or illustrative planning to determine the basic issues which must be addressed for each settlement, to orient physical expansion (see NUPS Cairo and Alexandria Concept Plans and Illustrative Development Projects).
- A more detailed and sustained effort which could lead to specific plans and projects.

It is suggested that concept plans be undertaken for all key settlements to provide a basis for the longer term ongoing process. It is anticipated that the GOPP will take an active role with governorates in this process. About 4-6 person/month of effort will be required for each settlement under the direction of experienced planners.

The longer term sustained effort, on the other hand, will require enhancement of the local planning and programming capacity, support from the central government, and close collaboration among ministry departments at the local level.

#### IV. THE BUDGET AS A PROGRAMMING AND PLANNING TOOL

Annual national, sectoral, governorate and settlement budgets can be important planning and programming tools for all levels of government. However, to do so they must serve a broader role than the one of accountability of expenditures as they do now. The basic idea of a budget as a planning and programming tool is that proposed expenditures are judged by their performance in achieving objectives rather than as inputs. Such an approach leads naturally to the assessment of how good alternative means of accomplishing the objectives are and the identification of better (more cost effective) approaches. Urban policies, to be effective, must take these national objectives and spell them out into specific spatial and sectoral programs and projects to be implemented at various levels of government with an idea of what they will contribute to national objectives. Once these programs and projects have developed, and sectors identified to implement them (e.g., public or private), development of annual budgets can become a powerful tool for implementation.

At the national level, broad sectoral and spatial priorities should be identified. Budgets comprised of the total capital or investment requirements and recurrent expenditures should then be developed which reflect the projected life of the proposed programs. Once these project or program budgets have been developed, they should be integrated with other program and project budgets to

determine their joint impact on the nation's objectives and the nation's ability to sustain adequate levels of funding over the program or project life. It is at this point that the NUPS proposed Deputy Prime Minister's Office for Urban Policy Affairs would play a crucial role in balancing what are likely to be competing fiscal requirements, and ultimately determining which programs and projects should receive priority. This is unlike the current budgetary process where programs and projects are developed more-or-less independently of each other and without a long term view of national resources. Here, the key Ministries of Economy, Finance and Planning working with the coordinating role of the Deputy Prime Minister's Office, would work with sectoral ministries and with governorates to ensure that programs and projects are mutually supportive and adequate levels of funding can be made available over the program and project life. The process outlined in Figure III-1 and in Table III-2 will play an important role in identifying the success of past policies and programs and identifying areas where improvements are needed.

Once programs and projects are weighed against past performance or expected future performance, then the task of targetting likely available annual fiscal resources to desired programs and projects becomes important. At this stage, the Office of Urban Policy Affairs is expected to work closely with the Ministry of Planning in allocating available funds sectorally and spatially. However, to be effective, this allocation process should be closely integrated with past budget experiences of the Ministries of Finance and Economy to ensure that funds for these programs will actually be available and can be allocated.

This procedure differs from the current budgeting procedure in that currently, the Ministry of Finance issues to ministries and government directives on the amount of finance likely to be available over the next fiscal year. Then various local councils and governorates prepare draft budgets which are submitted to the Ministries of Planning and Finance. While these are prepared at the local level, ministries prepare their own budgets separately from governorate and local level budgets.

As is proposed in Figures II-2, II-3 and III-1 broad national sectoral and spatial policies meeting national objectives would be articulated by Deputy Prime Minister's Office for Urban Policy Affairs in close collaboration with both ministries and local governments. These then would be interpreted into policy directives for different regions. At the sectoral and regional level (the latter usually at the governorate level), these policy directives would be developed into programs and projects. Where sectoral and spatial programs and projects are not mutually supportive, they are referred first to regional levels of government and ultimately to the national level to resolve the conflicts. Once resolved, these programs and projects would then be referred back to either the sectoral or spatial levels of government for further refinement and development of annual budget requirements. While local councils are expected to play a much broader role in developing recurrent budgets (salaries and current expenditures, BAB 1 and 2), the governorates will play the crucial role of integrating recurrent budget requirements with investment requirements to meet national policy directives.

Under the proposed arrangement, the governorates would have a much more important role in the budgetary process than they now have. Currently, they prepare what might be called a shopping list of local council programs and projects

(BAB 3) as well as recurrent budgets for salaries and current expenses (BAB 1 and 2). While they would still be responsible for amalgamating local council and governorate BAB 1 and 2 budgets, governorates would have the broader role of interpreting national urban policy directives into programs and projects and developing both annual and life-time budgets for them. They would also have the key role of ensuring that locally developed programs and projects are included in national programs. Governorate planning offices would do this by first ensuring that the locally developed programs and projects comply with the zonal guidelines shown in Table III-1a through III-1g. If the proposed programs or projects do not comply but still have merit, their feasibility should be studied further. If they prove feasible, the programs or projects could be submitted to the Urban Policy Affairs Office for integration into the national programs and inclusion into budgets. These locally developed programs and projects could also be financed under the non-attached block grants to governorates proposed in Chapter II. Since these monies would have already been subjected to both fiscal and economic policy evaluation, projects developed under these block grants are supportable, at least at the national level. It would be the responsibility of governorates (and local councils in later years of the planning period) to ensure that projects financed through such funds were feasible and could be sustained, either through those funds or locally generated revenues.

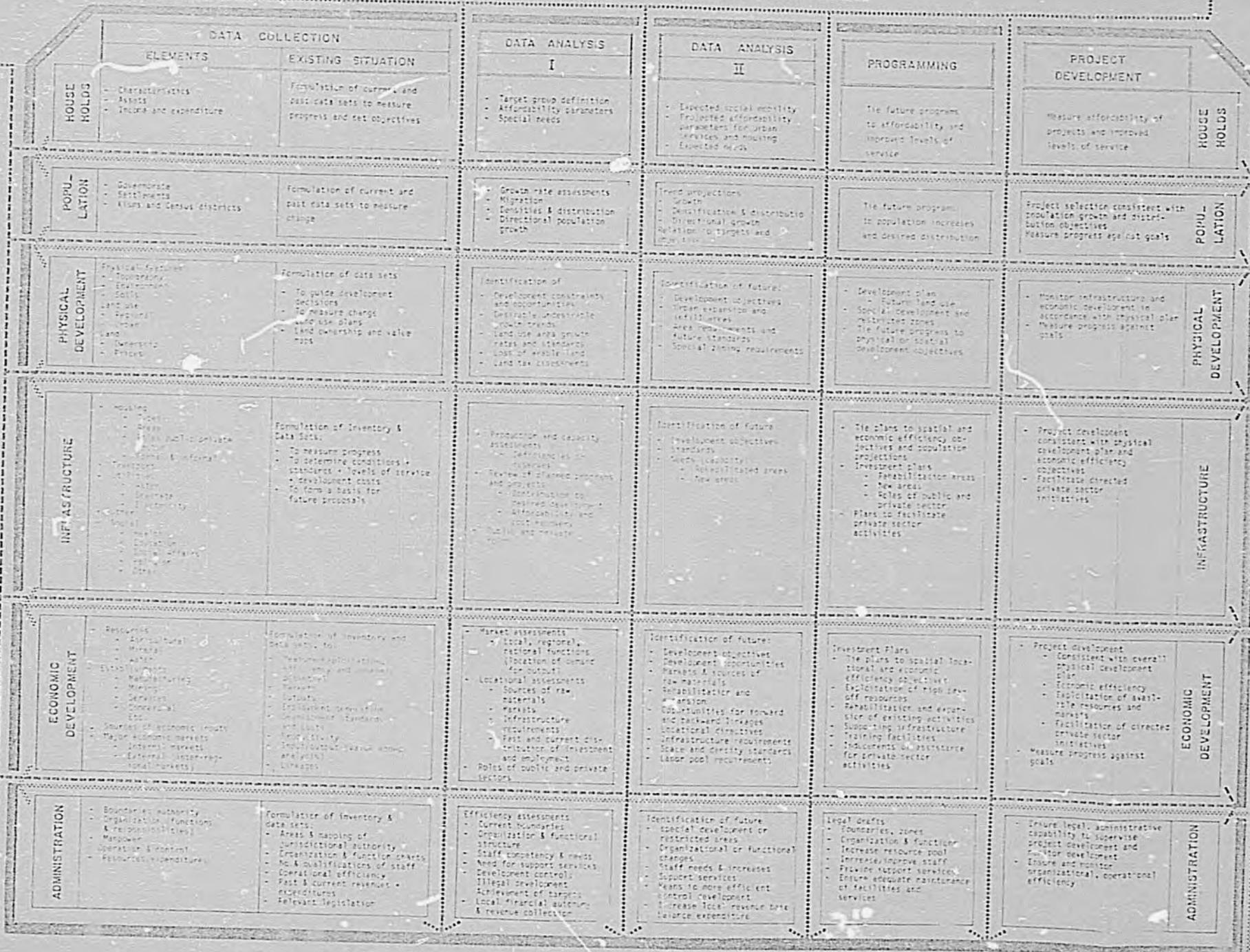
The budgets themselves should show more than just proposed expenditures for standardized budgetary items. Each sectoral budget should show broad targets for which expenditures are being allocated. For example, health budgets might show the number of health units to be constructed in each governorate. Further, these sectoral budgets should show the spatial location of expenditures and be integrated into local government budgets. Currently, neither national ministries nor local governments have a clear idea of the level of expenditures being made by either level of government at the local level. The governorate level ministerial departments should have the responsibility of integrating national level sectoral budgets into at least governorate budgets.

Although the broad functioning of the budgets as a planning and programming tool is outlined here, further study of the Egyptian budgeting system is required to actually make the budget function as outlined. This study should be conducted under the direction of the Deputy Prime Minister's Office of Urban Policy Affairs proposed by NUPS. However, the study should be closely coordinated with the Ministries of Finance and Planning. It should also directly involve the Secretariat for Local Government, Ministry of Manpower and Planning and the Central Agency for Administration and Organization. Once the study has produced detailed recommendations for budget reform and these have been approved, then the study should train budget officers in ministries and in governorates in preparation of revised budgets. Approval of budget reforms may require Cabinet approval at the very least; it may also need new legislation. If it does, a component of the budget reform study should include drafting suitable legislation.

LOCAL GOVERNMENT PLANNING AND PROGRAMMING PROCESS WITHIN THE NATIONAL URBAN POLICY

LOCAL INPUTS EVALUATION AND MONITORING

NATIONAL URBAN POLICY FRAMEWORK  
SPECIFIC ZONAL AND SECTORAL DIRECTIVES



SPECIFIC ZONAL AND SECTORAL CRITERIA  
POLICY MONITORING & EVALUATION  
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FIGURE III-1

TABLE III-1.a  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
<p>Ref: Cairo Concept Plan, 1st Round Alternatives, Vol. 11, May 1981 NUPS Draft Final Report Chapter III.I.B</p>	<p><b>Physical:</b></p> <ul style="list-style-type: none"> <li>- Elaboration of growth accommodation strategy.</li> <li>- Achievement of optimum land use efficiency within the built-up area               <ul style="list-style-type: none"> <li>• development of vacant land</li> <li>• achievement of density targets by kism</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Strategy completed</li> <li>- Increased or decreased densities by kism and subzones               <ul style="list-style-type: none"> <li>• lower densities in northern kisms</li> <li>• increased densities in north-east and east</li> <li>• infill in Misr Gadema/Helwan corridor</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Review and approval by all concerned parties</li> <li>- Use of up-to-date aerial photographs: special census (i.e., every five years or field surveys in key areas)</li> </ul>
<p><b>Spatial Strategy:</b> Deconcentration of major metropolitan population growth</p>	<ul style="list-style-type: none"> <li>• reduction of congestion in the core area</li> <li>• displacement of non-conforming uses to outer desert areas and subcenters</li> </ul>	<ul style="list-style-type: none"> <li>- Decreased trip time, reduction in number of non-conforming core area establishments, increased parking places in core area</li> </ul>	<ul style="list-style-type: none"> <li>- Traffic counts, vehicle surveys, public transport surveys, tax records</li> </ul>
<p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Accommodation of major population growth</li> <li>- Deconcentration of core to desert sites</li> <li>- Major rehabilitation of deteriorated built-up areas</li> <li>- Reduction of arable land loss</li> <li>- Realigning of growth axes to desert areas</li> <li>- Major employment growth to accommodate future expected population</li> <li>- Economic surpluses for investment in other regions</li> <li>- Achievement of greater inter-personal equity</li> <li>- Investment strategy to reinforce physical, economic and social objectives</li> <li>- Administrative capacity to carry out all objectives</li> </ul>	<ul style="list-style-type: none"> <li>• development of secondary and tertiary subcenters to assist core deconcentration</li> <li>• ongoing rehabilitation and maintenance of housing and infrastructure</li> <li>• application of improved but affordable development standards (See Figure 18 and Appendix C for examples)</li> <li>- Desert locations favored for all urban expansion and deconcentration programs               <ul style="list-style-type: none"> <li>• support to modified new communities program emphasizing close-in satellite cities at reduced standards</li> <li>• support for desert fringe expansion of built-up area in desired locations</li> </ul> </li> <li>- Access of all income groups for desert serviced land; priority to low income groups in proximity to employment opportunities               <ul style="list-style-type: none"> <li>o prohibition of development on "restricted" arable land subject to inevitable urbanization (i.e., Maadi/Helwan east bank corridor)</li> </ul> </li> <li>• application of improved but affordable infrastructure and special services standards for new development areas (See Figure 18 for example)</li> <li>• guidance of private sector initiatives in housing, particularly the informal sector</li> <li>• reduction of environmental disturbance and pollution (i.e., air, water, noise, loss of arable land, loss of recreation land, damage to historic and culturally important monuments, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>- Greater than trend growth in establishments in subcenters</li> <li>- Increased household connections to public utilities</li> <li>- Improved level of public services</li> <li>- Reduction in shortages due to excess peak demands and system failures</li> <li>- Modified new communities program               <ul style="list-style-type: none"> <li>• incremental development of close-in satellites, revised standards and densities, improved cost recovery</li> </ul> </li> <li>- Modified population targets for new communities are met               <ul style="list-style-type: none"> <li>• emphasis 15 May, 2nd residential city, El Obour, 6th of October</li> </ul> </li> <li>- Targets for desirable desert fringe development are met               <ul style="list-style-type: none"> <li>• Nasr City extension</li> <li>• Southwest (beyond Pyramids Plateau)</li> </ul> </li> <li>- Targets for low income settlement areas are met and equitable beneficiary selection established</li> <li>- Reduction in arable land losses               <ul style="list-style-type: none"> <li>• Giza</li> <li>• Qalyubia</li> </ul> </li> <li>- Increased development control               <ul style="list-style-type: none"> <li>• number of violations</li> <li>• number of building permits</li> </ul> </li> <li>- Comparison to existing standards</li> <li>- Progress in meeting sector targets</li> <li>- Increased serviced desert sites               <ul style="list-style-type: none"> <li>• credit given to low income groups</li> <li>• building permits</li> <li>• decreased illegal housing</li> </ul> </li> <li>- Reduced levels of pollution-air, water, lower incidence of disease, etc.</li> <li>- Increased investment in targetted industries, i.e., printing, publishing, clothing, chemicals, rubber, plastics</li> </ul>	<ul style="list-style-type: none"> <li>- Utility and urban services performance data, health data, finance data, field surveys</li> <li>- New communities performance data, field checks</li> <li>- Governorate performance data, field checks, use of aerial photos, financial data, checking on beneficiary selection procedures and surveys</li> <li>- Landsat data, field surveys, aerial photo interpretation</li> <li>- Comparison field survey special census data and development control records</li> <li>- Utility and services performance data</li> <li>- Governorate, finance, performance data, landsat and aerial photos</li> <li>- Atmospheric and hydrological tests, agricultural production field checks, etc.</li> <li>- Determination percentage of investment by targetted industry</li> <li>- Field surveys, records, financial data</li> </ul>

**TABLE III-1.a (Continued)**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
	<p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>- Investment emphasis on industries requiring skilled workforce and specialized services and large local markets for outputs</li> <li>- Additional emphasis on industries with export potential</li> <li>- Support to non-government services sector</li> <li>- Assistance to small and medium-scale activities</li> <li>- Human resource development: particularly professional, managerial, technical and skilled workers</li> <li>- Growth public and private savings to provide surpluses for other regions</li> <li>- Investment efficiency in public supported industrial investments</li> <li>- High cost recovery or return on public investment</li> <li>- Attraction private sector investment</li> <li>- Investment to reinforce desired growth strategy (transportation, infrastructure, housing, public facilities, industry, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>- Increased diversification of non-government services, small and medium-sized industries: access to credit, greater employment</li> <li>- Increased employment by type, increased trainees, increased job placement</li> <li>- Reduced per capita development costs, increased savings deposits</li> <li>- Greater investment outputs               <ul style="list-style-type: none"> <li>• production</li> <li>• employment</li> <li>• population served</li> </ul> </li> <li>- Reduced subsidy requirements</li> <li>- Locational assessment of planned and realized sectoral investment by subzone</li> </ul>	<ul style="list-style-type: none"> <li>- Employment surveys, survey training programs for performance</li> <li>- Development cost monitoring from governorate</li> <li>- Domestic savings data (financial institutions)</li> <li>- Ministry and governorate revenues and expenditures</li> <li>- Mapping of investment by specific location, measuring development attraction (population and establishments)</li> </ul>
	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>- Improvement in inter-personal equity               <ul style="list-style-type: none"> <li>• social services, especially education, health, neighborhood and community social services to different groups (children, mothers, aged, etc.) provided at higher standards (See Appendix C for examples)</li> <li>• levels of infrastructure service for low income households provided at higher standards</li> <li>• access to serviced desert sites in proximity to employment opportunities provided for all groups.</li> <li>• improved employment opportunities, job skills</li> <li>• improved distribution of income</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Comparison with existing standards or levels of services               <ul style="list-style-type: none"> <li>• utility connections</li> <li>• education and health standards</li> <li>• serviced sites/beneficiary selection</li> </ul> </li> <li>• Households in lowest quartile of income distribution receive larger proportion of total income.</li> </ul>	<ul style="list-style-type: none"> <li>- Household surveys: income and expenditure</li> <li>- Utilities performance data</li> <li>- Health and education performance data</li> <li>- Household budget surveys</li> </ul>
	<p><u>Administrative/Institutional:</u></p> <ul style="list-style-type: none"> <li>- Integrated physical, economic, social and administrative programs for the zone</li> <li>- More efficient urban management               <ul style="list-style-type: none"> <li>• integrated management of zones &amp; subzones</li> </ul> </li> <li>- Increased local autonomy               <ul style="list-style-type: none"> <li>• planning, programming, budgeting</li> <li>• development control and monitoring</li> <li>• financial resources</li> </ul> </li> <li>- Increased management capacity               <ul style="list-style-type: none"> <li>• manpower</li> <li>• managerial and technical skills</li> <li>• support facilities and equipment</li> </ul> </li> <li>- Streamlined organizational and functional structure</li> <li>- Streamlined administrative procedures</li> <li>- Efficient apparatus for servicing land, equitable beneficiary selection, provision of credit, technical assistance, guidance for informal housing</li> </ul>	<ul style="list-style-type: none"> <li>- Progress review to ensure coordination</li> <li>- Review of modified management structure</li> <li>- Review of local government management and outputs               <ul style="list-style-type: none"> <li>• success in development control (loss of arable land)</li> <li>• budgeting review (local revenues increase as a proportion of total expenditures)</li> <li>• government expenditures</li> <li>• staffing and recruitment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Review and approvals by all concerned parties</li> <li>- Special committees</li> <li>- Overall monitoring</li> <li>- Independent management assessment</li> </ul>

**TABLE III-1.b**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
<p><u>Ref:</u>  Special Report: Alexandria Concept Plan, 1981  Draft Final Report Chapter III.I.C</p>	<p><u>Physical:</u></p> <ul style="list-style-type: none"> <li>- Elaboration of a physical development strategy stressing deconcentration</li> <li>- Achievement of optimum land use efficiency within existing built-up area</li> </ul>	<ul style="list-style-type: none"> <li>- Strategy completed</li> <li>- Increased gross density within built-up area</li> <li>- Increased or decreased densities <ul style="list-style-type: none"> <li>• lower densities in central kisms (Gomrok, Kairmouz, Manshia, Labban)</li> <li>• increased densities in eastern kisms (Sidi Gaber, Ramleh, Montazah)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Strategy reviewed and approved by all parties</li> <li>- Special census &amp; revised mapping at least every five years</li> <li>- Field surveys, aerial photo interpretation</li> </ul>
<p><u>Spatial Strategy:</u>  Inducement of major population growth (Alternative destination to Cairo for urban migrants, particularly from the Delta)</p>	<ul style="list-style-type: none"> <li>• achievement of density targets by kism <ul style="list-style-type: none"> <li>- reduction in central kisms</li> <li>- increase in southern and eastern kisms</li> </ul> </li> <li>• reduction of core congestion</li> <li>• increased access to port and outer growth areas</li> <li>• resolution of functional conflicts among land uses</li> <li>• displacement of non-conforming uses to outer areas and subcenters</li> <li>• development of sub-centers to assist core deconcentration</li> <li>• ongoing rehabilitation and maintenance of existing infrastructure and housing</li> <li>• application of improved but affordable standards (See Figure 19 and Appendix C for examples)</li> </ul>	<ul style="list-style-type: none"> <li>- Decreased trip times, reduce conflicting uses in core area and increased core area parking</li> <li>- Increase in service and commercial establishments in sub-centers, reduction in trips per capita</li> <li>- Comparison with existing standards, increased household connections to utilities, visual improvement</li> <li>- Decrease in room occupancy rates, number of rooms per household increases, condition of structures improves</li> </ul>	<ul style="list-style-type: none"> <li>- Field surveys, traffic counts</li> <li>- public transport surveys, tax records</li> <li>- Tax records, public transport surveys, traffic counts</li> </ul>
<p><u>Objectives:</u></p> <ul style="list-style-type: none"> <li>- Deconcentration of core to desert sites and low productivity arable land</li> <li>- Reduction of prime arable land loss</li> <li>- Realignment of growth axes to desert sites and low productivity arable areas</li> <li>- Major employment growth to induce population growth</li> <li>- Accommodation of major population increase: <ul style="list-style-type: none"> <li>o employment opportunities</li> <li>o housing and infrastructure</li> </ul> </li> <li>- Rehabilitation of existing infrastructure</li> <li>- Economic surpluses for investment in other regions</li> <li>- Investment strategy to reinforce physical and economic objectives</li> <li>- Achievement of greater inter-personal equity</li> </ul>	<ul style="list-style-type: none"> <li>- Desert locations or less fertile arable areas favored for urban expansion and deconcentration (i.e., Moharram Bey, Ameriyah, Dakahlia, New Ameriyah City, Edku) <ul style="list-style-type: none"> <li>• support to modified new communities program emphasizing satellite cities at affordable standards</li> </ul> </li> <li>• prohibition of development on "restricted" fertile arable lands</li> <li>• introduction of "restrictive" land uses, restricted fertile arable lands and development rights in areas requiring special development control</li> <li>• restriction of access and capacity on roads creating undesirable development attraction</li> </ul>	<ul style="list-style-type: none"> <li>- Development targets are met <ul style="list-style-type: none"> <li>• hectares serviced</li> <li>• population target groups served</li> </ul> </li> <li>- Modified new communities program: <ul style="list-style-type: none"> <li>• incremental development of close-in satellite cities with revised standards, densities and increased cost recovery</li> </ul> </li> <li>- Review identified restricted areas <ul style="list-style-type: none"> <li>• measure loss of arable land</li> <li>• incidence "restrictive land uses"</li> </ul> </li> <li>• action taken to restrict access and alternatives developed</li> </ul>	<ul style="list-style-type: none"> <li>- Household surveys, health, education, and housing performance data</li> <li>- Housing surveys</li> <li>- Serviced land sales, (beneficiary data, building permit data)</li> <li>- Sales data of New Communities Authorities, tax records, connections to utilities</li> <li>- LANDSAT analysis, aerial photo interpretation &amp; field checks</li> <li>- Traffic surveys</li> </ul>
<p><u>Economic:</u></p>	<ul style="list-style-type: none"> <li>- Emphasis on port-related industries, i.e., wood processing and paper industries using imports and those requiring large local markets</li> <li>- Promotion of urban and regional port linkages</li> <li>- Support for non-governmental services, small and medium-sized industries</li> <li>- Attraction of private sector investment</li> <li>- High cost of public and private investment</li> <li>- Growth of public and private savings to generate surpluses for the region</li> </ul>	<ul style="list-style-type: none"> <li>- Increased levels of investment and employment in key industries, especially port related industries</li> <li>- Increased diversification of non-government services, support for small &amp; medium-sized industries, access to credit among small business increases</li> <li>- Reduced per capita development costs</li> <li>- Commercial bank deposits increase, public deficit decrease</li> </ul>	<ul style="list-style-type: none"> <li>- Review industrial plans &amp; employment, financial data, industrial permits, tax records, marketing studies (flow of commodities and trade)</li> <li>- Tax records of service sector business, commercial bank statistics</li> <li>- Construction cost monitoring</li> <li>- Central Bank statistics</li> </ul>

TABLE III-1.b (Continued)

URBAN MANAGEMENT HANDBOOK  
GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
	<ul style="list-style-type: none"> <li>- Support to Matruh Region development (particularly tourism)</li> <li>- Reassess net benefit of seasonal tourism, promotion of secondary uses for tourism facilities</li> <li>- Absorption of economic functions inappropriate to western Delta locations to support Delta growth management strategy</li> </ul>	<ul style="list-style-type: none"> <li>- Increase tourism establishments in Matruh</li> <li>- Number of jobs, economic benefits, assessment of cost recovery for public investment &amp; services</li> <li>- Proportional decrease in non-conforming Delta establishments, investment for new projects outside zone</li> </ul>	<ul style="list-style-type: none"> <li>- Tourism surveys</li> <li>- Cost/benefit analysis</li> <li>- Monitoring of establishments and industrial permit data</li> </ul>
	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>- Greater inter-personal equity:               <ul style="list-style-type: none"> <li>● improved levels of infrastructure &amp; social services: emphasis on low income groups</li> <li>● access to close-in serviced desert sites with employment opportunities &amp; public services</li> <li>● improved job opportunities, skills, earned income</li> <li>● improved standards for health &amp; education</li> <li>● improved income distribution</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Comparison to existing standards or levels of service               <ul style="list-style-type: none"> <li>● utility connections &amp; consumption</li> <li>● education &amp; health standards                   <ul style="list-style-type: none"> <li>- higher literacy level</li> <li>- greater proportion of enrollment</li> <li>- reduction incidence of disease</li> </ul> </li> </ul> </li> <li>● households in lowest quartile of income distribution receive larger proportion of income</li> </ul>	<ul style="list-style-type: none"> <li>- Household surveys: budgets &amp; expenditure               <ul style="list-style-type: none"> <li>● utility &amp; service performance data</li> <li>● cost of living surveys</li> </ul> </li> <li>- Household budget surveys</li> </ul>
	<p><u>Administration:</u></p> <ul style="list-style-type: none"> <li>- More efficient urban management</li> <li>- Integrated physical, economic, social &amp; administrative development plans for the administrative entire zone and subzones</li> <li>- Increased local autonomy               <ul style="list-style-type: none"> <li>● planning, programming &amp; budgeting</li> <li>● financial resources</li> <li>● development control &amp; monitoring</li> </ul> </li> <li>- Increased management capacity               <ul style="list-style-type: none"> <li>● manpower</li> <li>● support facilities &amp; equipment</li> </ul> </li> <li>- Streamlined organizational functional structure &amp; administrative procedures</li> </ul>	<ul style="list-style-type: none"> <li>- Overall performance monitoring</li> <li>- Review of local government management &amp; outputs               <ul style="list-style-type: none"> <li>● success in development control &amp; targets</li> <li>● budget &amp; expenditures review</li> <li>● staffing &amp; recruitment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Review and approvals by all concerned parties</li> <li>- Special committees</li> <li>- Overall monitoring</li> <li>- Independent management assessment</li> </ul>

TABLE III-1.c

**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
<p>Ref: NUPS Draft Final Report Chap. III.III.B Tanta Illustrative Development Project</p> <p><u>Spatial Strategy:</u> Growth Management</p> <p><u>Objectives:</u></p> <ul style="list-style-type: none"> <li>- Encouragement of out-migration (to reduce loss of arable land)</li> <li>- Preservation of prime arable land</li> <li>- Containment of urban growth within urban boundaries</li> <li>- Concentration of high level regional service functions in two or three settlements (e.g., Tanta, Mansoura)</li> <li>- Achievement of greater inter-personal equity</li> <li>- Administrative capacity adequate for growth management</li> </ul>	<p><u>Physical:</u> Physical development strategies for all main settlements</p> <ul style="list-style-type: none"> <li>- Achievement of optimum land use efficiency within built-up area               <ul style="list-style-type: none"> <li>• gross urban density targets (i.e., 350-400 persons/ha. or minimum gross residential targets at 438 persons/ha) in built-up area</li> <li>• vertical development and renewal</li> </ul> </li> <li>• vacant land development</li> <li>• land efficient public service (emphasis on vertical expansion)</li> <li>• displacement outside zone of land consumptive functions which are not labor intensive are linked to zone</li> <li>• special planning support               <ul style="list-style-type: none"> <li>- small-scale industries and non-government services</li> <li>- small estates in proximity to required infrastructure</li> <li>- temporary dwelling units for households affected by re-development</li> </ul> </li> <li>- Planned and controlled new development areas               <ul style="list-style-type: none"> <li>• direction in least fertile or inevitable growth areas</li> <li>• achievement of land use and density efficiency</li> </ul> </li> <li>• development of functional assessments and techniques which promote land use efficiency and vertical development</li> <li>• support for constrained high density strategy with appropriate infrastructure, transport and housing packages</li> <li>- Integration of physical and economic development plans as to limit:               <ul style="list-style-type: none"> <li>• new inter-urban transport facilities</li> <li>• land use requirements</li> <li>• infrastructure service requirements</li> <li>• horizontal expansion</li> </ul> </li> <li>- Restricted access on inter-urban highways and restricted capacity when alternative routes developed</li> <li>- Environmental disturbance minimized (especially reduced ground and surface water pollution, air pollution, arable land loss minimized, urban recreational areas maintained and general urban environment improved).</li> </ul>	<ul style="list-style-type: none"> <li>- Development strategies are achieved in timely fashion</li> <li>- Density targets are met</li> <li>- Number of storeys and floor area ratios increase at improved standards</li> <li>- Vacant land is developed within 2-3 years</li> <li>- Non-conforming uses are placed outside zone</li> <li>- Small serviced estates established; area, establishments, employment increase, access to credit</li> <li>- Number of temporary dwelling units keep pace with redevelopment requirements</li> <li>- New development achieves optimum saleable level               <ul style="list-style-type: none"> <li>• loss of least fertile land areas only</li> <li>• density targets and vertical development met</li> <li>• orderly growth occurs only in planned areas</li> </ul> </li> <li>- Review effectiveness of financial aid development instruments used to achieve objectives</li> <li>- Review specific sectional plans vis-a-vis vertical development strategy               <ul style="list-style-type: none"> <li>• likely impacts</li> <li>• consistency with objectives</li> </ul> </li> <li>- Integrated plan at governorate level developed and approved</li> <li>- Actions taken to limit development attraction</li> <li>- Reduced levels of pollution result</li> </ul>	<ul style="list-style-type: none"> <li>- Strategy approval by all parties</li> <li>- Specialized surveys &amp; monitoring of population growth</li> <li>- Building (height &amp; area) surveys, aerial photo interpretation</li> <li>- Vacant land surveys</li> <li>- Vacant land surveys or by aerial photo interpretation</li> <li>- Tax records, industrial permit data</li> <li>- Small-scale activities surveys               <ul style="list-style-type: none"> <li>• areas served</li> <li>• finance: applications/loans</li> <li>• employment</li> </ul> </li> <li>- Housing surveys</li> <li>- Specialized monitoring               <ul style="list-style-type: none"> <li>• population served</li> <li>• land use and area</li> <li>• development standards</li> <li>• building height &amp; densities</li> <li>• loss of arable land</li> </ul> </li> <li>- Utilities &amp; services performance</li> <li>- Landsat analysis and aerial photo interpretation</li> <li>- Suitability of legal instruments to meet needs</li> <li>- Impact assessments</li> <li>- Inter-regional and intra-regional infrastructure plans and performance data</li> <li>- Traffic surveys</li> <li>- Environmental impact assessment, atmospheric and hydrological tests, agricultural production, field checks</li> </ul>

TABLE III-1.c (Continued)

MAJOR OBJECTIVES

PROGRAM ORIENTATION GUIDELINES

PROGRAM EVALUATION GUIDELINES

MONITORING TECHNIQUES AND DATA SOURCES

URBAN MANAGEMENT HANDBOOK  
GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING

Economic:

- |  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li>- De-emphasis of industrial growth (diversion to desired growth areas)</li> <li>- Restricted investment to promote land-efficient non-pollutant economic development which cannot be efficiently located outside zone:             <ul style="list-style-type: none"> <li>• labor intensive</li> <li>• agro-related (not appropriate to special emphasis areas, i.e., Alexandria, Ismailia)</li> <li>• high export/low import content</li> </ul> </li> <li>- Promotion of private sector investment along physical and economic guidelines</li> <li>- High cost recovery on public investment</li> <li>- Promotion of two to three regional service centers rather than dispersed duplicating services</li> </ul> | <ul style="list-style-type: none"> <li>- Selective investment by type of economic activity; textiles, food processing, clothing</li> <li>- Prohibition of new firms in other industries             <ul style="list-style-type: none"> <li>• no approvals</li> <li>• no provisions of utilities</li> <li>• demolitions</li> <li>• penalties</li> </ul> </li> <li>- Public outlays decrease, subsidies decrease, private investment increases</li> <li>- Regional services (government, financial, distributory, etc.) concentrate in Tanta and Mansoura</li> </ul> | <ul style="list-style-type: none"> <li>- Past and planned mapping of investment by industry</li> <li>- Industrial surveys</li> <li>- Review of permit applications</li> <li>- Land use data             <ul style="list-style-type: none"> <li>• urban</li> <li>• areas of establishment</li> </ul> </li> <li>- Flow of commodities, trade &amp; marketing</li> <li>- Monitoring of private &amp; public investment, review of public expenditure data</li> <li>- Surveys of establishments, tax records, central bank statistics, service sector surveys</li> </ul> |
|--|--|--|

Social:

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>- Selective location of major social services to:             <ul style="list-style-type: none"> <li>• regional service centers (Tanta, Mansoura)</li> <li>• outside region i.e., Sadat City &amp; Ismailia (university)</li> </ul> </li> <li>- Greater inter-personal equity             <ul style="list-style-type: none"> <li>• basic services to non-special emphasis cities</li> <li>• access to regional service functions</li> <li>• selective urban employment opportunities with emphasis on regional centers</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>- Regional services concentrated in selected centers: expansion of health, education &amp; social facilities, financial &amp; commercial establishments</li> <li>- Number of major regional service functions reduced in other settlements</li> <li>- Standards of living improve             <ul style="list-style-type: none"> <li>• per capita &amp; household incomes</li> <li>• health standards</li> <li>• education standards &amp; literacy improve</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>- Specialized surveys             <ul style="list-style-type: none"> <li>• housing                 <ul style="list-style-type: none"> <li>- conditions</li> <li>- densities</li> </ul> </li> <li>• education                 <ul style="list-style-type: none"> <li>- enrollment</li> <li>- students/teachers/classrooms</li> <li>- literacy</li> </ul> </li> <li>• health                 <ul style="list-style-type: none"> <li>- nutrition</li> <li>- incidence of disease</li> </ul> </li> <li>• utilities                 <ul style="list-style-type: none"> <li>- connections</li> <li>- levels of service</li> </ul> </li> <li>• employment</li> <li>• establishments (also tax records)</li> </ul> </li> </ul> |
|--|---|---|

Administration/Institutional:

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>- Efficient urban management             <ul style="list-style-type: none"> <li>• integrated physical &amp; economic development plans</li> <li>• full coordination among government sectors</li> <li>• identification of priority arable areas to restrict development</li> <li>• emphasis on development control techniques &amp; enforcement                 <ul style="list-style-type: none"> <li>- special status for "restricted" &amp; "development" areas</li> <li>- introduction of dual land uses</li> <li>- purchase of development rights</li> <li>- demolition &amp; severe penalties for violators</li> <li>- special building restrictions (i.e., capacity to support additional storeys)</li> </ul> </li> </ul> </li> <li>- Improved management capacity             <ul style="list-style-type: none"> <li>• manpower (emphasis management, technical, supervisory skills)</li> <li>• support facilities and equipment</li> </ul> </li> <li>- Land use rationalized through establishment of zones shown in Figure 33.</li> </ul> | <ul style="list-style-type: none"> <li>- Integrated plans prepared at governorate level &amp; approved by all parties</li> <li>- Overall performance monitoring</li> <li>- Review local government management and outputs             <ul style="list-style-type: none"> <li>• success in development control &amp; in achieving targets</li> <li>• budget &amp; expenditures</li> <li>• staffing &amp; recruitment</li> <li>• processes (timing)</li> </ul> </li> <li>- Special legal status for restricted development zones</li> <li>- Average densities in new areas at minimum standards (350 persons/ha), central areas redevelop through increase in storey height and development of new buildings</li> </ul> | <ul style="list-style-type: none"> <li>- Independent management assessment</li> <li>- Tax records, aerial photos, building permit applications</li> </ul> |
|--|---|---|

**TABLE III-1.d**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
<p>Ref: NUPS Draft Final Report Chapters III.I.E III.II.B Appendices III,A,B,C,D,E,F</p>	<p><u>General:</u></p> <ul style="list-style-type: none"> <li>- Full support to regional development plan within economic guidelines</li> <li>- Assessment of water resource availability to meet urban expansion needs</li> <li>- Promotion of reclamation and small urban settlements in economically feasible locations to support regional service functions of Ismailia</li> <li>- Absorption of population overspill from Delta</li> <li>- Adequate regional communications</li> <li>- Stage set for incremental development of the Sinai and Red Sea Governorate</li> </ul>	<ul style="list-style-type: none"> <li>- Overall monitoring of sectoral investment</li> <li>- Monitoring of ongoing use and planned consumption from Ismailia and Abassa Canals</li> <li>- Reclamation efforts are successful</li> <li>- Decreased urban growth rate eastern Delta in particular, increased growth rates Canal cities and zone</li> <li>- Completion of infrastructure networks</li> <li>- Emphasis transport &amp; telecommunications</li> <li>- Achieve population &amp; employment targets</li> <li>- Improved opportunities for development of Red Sea &amp; Sinai</li> </ul>	<ul style="list-style-type: none"> <li>- Review and approvals by all parties</li> <li>- Ministry of Irrigation data and special field surveys</li> <li>- Crop production, financial statements of firms, population statistics</li> </ul>
<p><u>Spatial Strategy:</u> Growth Emphasis</p>	<p><u>Focus: Suez</u></p>		<ul style="list-style-type: none"> <li>- Census data</li> </ul>
<p><u>Objectives:</u></p> <ul style="list-style-type: none"> <li>- Major population growth in-migration from the Delta</li> <li>- Development of Suez as major metropolitan competitor to Cairo and Alexandria</li> <li>- Development of Port Said and Ismailia at near master plan population targets</li> <li>- Complementary regional functions among settlements</li> <li>- Major employment growth investment strategy to support population and economic targets</li> <li>- Achievement of enhanced inter-personal equity</li> </ul>	<p><u>Physical:</u></p> <ul style="list-style-type: none"> <li>- Full support to master plan concepts with some modifications</li> <li>- Growth axes to west and north desert areas</li> <li>- Land-use efficiency in new and existing areas               <ul style="list-style-type: none"> <li>• gross density increase (300 p/ha or gross residential densities at 438 persons/ha)</li> <li>• revised job density</li> <li>• increased areas of industrial zones</li> </ul> </li> <li>- Reorientation of industrial land use to permit long term western growth</li> <li>- Emphasis on existing CBD redevelopment and enhancement (including old port area)</li> <li>- Creation of secondary CBD at proposed CBD site</li> <li>- Physical and social infrastructure to meet population and economic growth targets</li> <li>- Emphasis on servicing desert sites for full spectrum of income groups               <ul style="list-style-type: none"> <li>• low income settlement areas in proximity to employment opportunities</li> </ul> </li> <li>- Greater emphasis on directing private housing initiatives to meet housing needs</li> </ul>	<ul style="list-style-type: none"> <li>- Master plan modified and formally approved</li> <li>- New development occurs in planned areas</li> <li>- Gross density increase</li> <li>- Revised targets for existing settlement &amp; new development areas               <ul style="list-style-type: none"> <li>o population</li> <li>o land use budgets</li> </ul> </li> <li>- Rehabilitation &amp; renewal in old city occurs and non-conforming uses relocated to new industrial area</li> <li>- New structures build in existing CBD, firms move into secondary CBD</li> <li>- Increased household connections to utilities and service facilities increase. (Increases at faster rate than population to make up deficits)</li> <li>- Targets achieved for serviced sites               <ul style="list-style-type: none"> <li>• hectares/no. of units</li> <li>• beneficiaries (by income group)</li> <li>o progress on waiting lists</li> </ul> </li> <li>- Achievement in development control (building permits) and alternative serviced sites</li> </ul>	<ul style="list-style-type: none"> <li>- Review &amp; approvals by all parties</li> <li>- Governorate land sales data, tax records, special field surveys</li> <li>- Special census on population surveys</li> <li>- Updated aerial photographs &amp; maps</li> <li>- Ongoing monitoring of development standards</li> <li>- Special surveys               <ul style="list-style-type: none"> <li>• housing conditions</li> <li>• economic establishments, (permit data &amp; surveys)</li> <li>• non-conforming uses</li> <li>• finance</li> <li>• costs of living (price index)</li> </ul> </li> <li>- Utility and services performance data</li> <li>- Land sales, building permit, beneficiary data</li> <li>- Landsat &amp; aerial photo interpretation, field surveys</li> </ul>
	<p><u>Economic:</u></p>	<ul style="list-style-type: none"> <li>- Growth in chemicals, iron &amp; steel, metal products, rubber &amp; plastics, clothing, paper &amp; wood products</li> <li>- Port related activities expand as do related financial services</li> <li>- Specialized non-government service develop (no. establishments)</li> <li>- Employment targets are met</li> <li>- Increased private investment</li> <li>- Budget deficits are reduced, capital expansion programs continue</li> <li>- Greater correlation of labor demand and supply</li> <li>- Private sector firms provide adequate employment to maintain population growth</li> </ul>	<ul style="list-style-type: none"> <li>- Industrial &amp; employment surveys; permit data and tax records</li> <li>- Surveys of establishments, tax records</li> <li>- Specialized surveys               <ul style="list-style-type: none"> <li>• services &amp; small scale activities</li> <li>• finance</li> <li>• ports</li> <li>• revenues and expenditures</li> <li>• job training</li> </ul> </li> <li>- Employment surveys, surveys of establishments</li> <li>- Employment surveys</li> </ul>

**TABLE III-1.d (Continued)**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>- Improvement of inter-regional equity               <ul style="list-style-type: none"> <li>• service standards similar to major metropolitan regions</li> <li>• financial incentives to attract skilled workers</li> <li>• access to serviced desert areas and housing development support</li> <li>• enhanced social service standards</li> <li>• special support to low and middle income households                   <ul style="list-style-type: none"> <li>- job training</li> <li>- housing (i.e., close to employment opportunities)</li> </ul> </li> <li>- small industries and services support</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Overall standards of living increase:               <ul style="list-style-type: none"> <li>• social service &amp; infrastructure increase more rapidly than population growth to make up for deficits</li> <li>• improved housing conditions (number of rooms/household, condition of structures, etc.)</li> <li>• increased employment training, serviced sites</li> <li>• access to credit improved for small and medium-scale businesses</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Household budget and expenditure surveys</li> <li>- Cost of living surveys (price indices)</li> <li>- Utility and service performance data</li> <li>- Employment data</li> </ul>
See Canal Zone, above	<p><u>Focus: Port Said</u></p> <p><u>Physical:</u></p> <ul style="list-style-type: none"> <li>- Review of current master plan (particularly urban land use provisions)</li> <li>- Review of urban demonstration projects, particularly cost-effective urban land reclamation</li> <li>- Achievement of efficient land use in existing and planned areas               <ul style="list-style-type: none"> <li>• high density targets (gross residential 438 persons/hectare)                   <ul style="list-style-type: none"> <li>- residential</li> <li>- industrial</li> <li>- other</li> </ul> </li> <li>• avoidance of land consumptive activities</li> <li>• encouragement of vertical development by private sector</li> <li>• vacant land development</li> <li>• rehabilitation of existing housing stock and infrastructure</li> </ul> </li> <li>- Carefully controlled new development               <ul style="list-style-type: none"> <li>• in line with master plan directives</li> <li>• achievement of land use and density efficiency (to reduce need for land use reclamation)</li> </ul> </li> <li>- Special planning for small and medium industries               <ul style="list-style-type: none"> <li>• land use efficient estates</li> <li>• infrastructure support</li> <li>• tourism development in coastal areas</li> </ul> </li> </ul> <p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>- Emphasize port-related and free zone light industry               <ul style="list-style-type: none"> <li>• attraction of private and foreign investment</li> <li>• adequate inducements</li> </ul> </li> <li>- Regional services for north-east Delta</li> </ul>	<ul style="list-style-type: none"> <li>- Achievement of efficient land use, saleable land on order of 60-70%</li> <li>- Achievement of cost-effective urban land reclamation and development: i.e., affordable by majority of households</li> <li>- Density targets are met</li> <li>- Space standards for open space &amp; circulation are adequate but moderate</li> <li>- Number of floors and floor ratios higher than national norm</li> <li>- Vacant sites developed within 2-3 years</li> <li>- Service levels and facilities increase at faster than population growth</li> <li>- New development keeps pace with new household formation</li> <li>- Services sites &amp; development according to master plan location</li> <li>- Small serviced estates provided:               <ul style="list-style-type: none"> <li>• number of establishments</li> <li>• infrastructure connections</li> </ul> </li> <li>- Increase domestic &amp; some foreign tourism               <ul style="list-style-type: none"> <li>• seasonal</li> <li>• short-term</li> <li>• number of beds</li> <li>• number of establishments</li> </ul> </li> <li>- Number of light industries increase</li> <li>- Port completed on schedule</li> <li>- Private investment increases, public requirements decrease</li> </ul>	<ul style="list-style-type: none"> <li>- Modified master plan (if appropriate)</li> <li>- Land sales &amp; beneficiary data</li> <li>- Development cost monitoring (tender documents)</li> <li>- Special census or survey data</li> <li>- Landsat &amp; aerial photographic interpretation, updated maps &amp; project specific plans</li> <li>- Building &amp; housing permits</li> <li>- Vacant land surveys</li> <li>- Utilities &amp; services performance data</li> <li>- Land sales &amp; beneficiary data</li> <li>- Dwelling unit construction data               <ul style="list-style-type: none"> <li>• finance</li> <li>• building permits</li> </ul> </li> <li>- Population &amp; land use data</li> <li>- Specialized performance monitoring</li> <li>- Employment and industrial surveys, permit data</li> <li>- Specialized performance:               <ul style="list-style-type: none"> <li>• finance data, public &amp; private</li> <li>• local/foreign investments</li> </ul> </li> </ul>

**TABLE III-1.d (Continued)**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
<p>Ref:  NUPS Draft Final Report  Chapter III.II  Appendices III.H</p> <p>See Canal Zone  Objectives</p>	<ul style="list-style-type: none"> <li>- Support to non-government services, small and medium-sized industries</li> <li>- Support for local "urban" beach tourism</li>   <li>- Human resources development to fit job skill requirements <ul style="list-style-type: none"> <li>• emphasis on managerial and skilled workers</li> <li>• emphasis on financial and service sector skills</li> </ul> </li> <li>- Investment to meet urban land reclamation, population, physical and social development objectives</li> <li>- Increasing cost recovery for public investments</li> </ul>	<ul style="list-style-type: none"> <li>- Increase in service establishments, linkages with northeast Delta</li> <li>- Tourism related facilities develop (hotels, restaurants, tourist shops)</li>   <li>- Match between jobs &amp; local skills improve, number of training programs &amp; trainees increase</li>   <li>- Investment growth exceeds pace of household formation in desired locations</li> <li>- Reduction over time of public subsidies</li> </ul>	<ul style="list-style-type: none"> <li>• regional service functions</li> <li>• establishments, employment, markets, areas serviced</li> <li>- Number of hotel beds, surveys of establishments</li>   <li>- Employment surveys, surveys of firms to determine employment needs</li>   <li>- Mapping locations of investments</li> <li>- Performance data on utilities &amp; services</li> <li>- Budget &amp; expenditures data</li> </ul>
	<p>Focus: Ismailia  Physical:</p>		
	<ul style="list-style-type: none"> <li>- Review of current master plan (particularly urban land use provisions)</li> <li>- Review of urban demonstration project results: determine applicability for an expanded program</li>   <li>- Review of projects for the development of Ismailia's hinterland: i.e., land reclamation</li>   <li>- Achievement of land use efficiency in the existing built-up area <ul style="list-style-type: none"> <li>• urban gross residential density targets of 438 persons/ha</li> <li>• needs for regional service, light industry and small and medium-sized industries</li> </ul> </li>   <li>- Physical and social infrastructure to meet population, economic and social development targets</li>   <li>- Government emphasis on servicing non-arable sites for full spectrum of income groups, special attention low income groups in proximity to employment opportunities</li> <li>- Direction &amp; support of private formal and informal housing sectors to meet future needs</li>   <li>- Inter-regional infrastructure &amp; services to support Ismailia's function as regional services center</li>   <li>- Avoidance of environmental pollution (especially air, and water pollution; the latter in both surface and ground water and in salt lakes). Also general environment of surrounding agricultural areas maintained</li> </ul>	<ul style="list-style-type: none"> <li>- Achievement of overall guidelines</li>   <li>- Measure demand for plots &amp; housing units, i.e., number of applications</li>   <li>- Success in economic reclamation <ul style="list-style-type: none"> <li>• number of hectares</li> <li>• number of permanent jobs created</li> <li>• services provided</li> </ul> </li> <li>- Density targets are met</li>   <li>- Services increase at faster than population growth rate <ul style="list-style-type: none"> <li>• number of connections</li> <li>• number of facilities</li> </ul> </li>   <li>- Amount of serviced desert sites &amp; dwelling units constructed</li>   <li>- Number of building permits coincide with growth of housing stock</li> <li>- Serviced sites are adequate and affordable</li> <li>- Regional infrastructure plans are met particularly transport, telecommunications</li>   <li>- Levels of pollution reduced and lakes can be used for recreational purposes <ul style="list-style-type: none"> <li>• food production is maintained at current levels or intensified</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Review &amp; approval of modified master plan by all parties</li>   <li>- Plot and dwelling units sales and applications data (note: should used to test market-ability)</li>   <li>- Ministry of Reclamation data <ul style="list-style-type: none"> <li>• income, yield per hectare</li> <li>• employment surveys</li> <li>• infrastructure performance data</li> </ul> </li>   <li>- Special census or surveys with aerial photo interpretation <ul style="list-style-type: none"> <li>• population</li> <li>• small-scale activities</li> <li>• building permit data (industrial, commercial, etc.)</li> </ul> </li>   <li>- Land sales data, beneficiary data</li> <li>- Utility &amp; services performance data</li>   <li>- Number of building, industrial, commercial &amp; other permits, number of low income housing units</li>   <li>- Landsat &amp; aerial photo interpretation</li> <li>- Building permit data, housing surveys</li>   <li>- Regional infrastructure performance data</li> <li>- Special survey regional services functions &amp; establishments</li> <li>- Environmental impacts assessments, air, water quality tests <ul style="list-style-type: none"> <li>• crop surveys</li> </ul> </li> </ul>

**TABLE III-1.d (Continued)**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
	<u>Economic:</u>		
	<ul style="list-style-type: none"> <li>- Emphasis regional service functions, light industry (linkages with other Canal cities and Eastern Delta)</li> <li>- Support to non-government service functions</li>   <li>- Attraction of private sector investment</li>   <li>- Increasing cost recovery for public investment over planning period</li> <li>- Adequate inducements to ensure economic growth</li> <li>- Human resource development to fit job skill</li> <li>- Investment to meet population, physical and social development objectives</li> <li>- Promotion of local specialized tourism</li> </ul>	<ul style="list-style-type: none"> <li>- Increase in agro-related industries, service functions</li>   <li>- Increased specialization and diversification</li>   <li>- Private sector firms establish in industrial zones and in commercial areas</li>   <li>- Reduced subsidy levels over planning period</li>   <li>- Growth in public &amp; private job creation</li> <li>- Supply of skills meets job demand</li> <li>- Investment matches development requirements</li>   <li>- Number of establishments, employment in tourism increased</li> </ul>	<ul style="list-style-type: none"> <li>- Employment &amp; industrial surveys &amp; permit data</li>   <li>- Specialized monitoring of regional service functions               <ul style="list-style-type: none"> <li>• small-scale activities</li> <li>• finance &amp; credit</li> </ul> </li>   <li>- Tax records, land sale data, surveys of establishments</li>   <li>- Public revenue &amp; expenditure data</li>   <li>- Employment surveys</li>   <li>- Training programs, job placement data, employment surveys</li>   <li>- Tourism surveys               <ul style="list-style-type: none"> <li>• no. of hotel beds</li> <li>• no of tourist related service facilities</li> <li>• receipts at public beaches</li> </ul> </li> </ul>
	<u>Administration: (General)</u>		
	<ul style="list-style-type: none"> <li>- Increased urban management efficiency               <ul style="list-style-type: none"> <li>• streamlined organizational and functional structure and procedures to attract private and foreign investment</li> <li>• integrated physical, economic social development plans</li> <li>• coordination among sector</li> </ul> </li> <li>- Increased local autonomy at governorate level               <ul style="list-style-type: none"> <li>• planning, programming and budgeting</li> <li>• development control and monitoring</li> <li>• financial resources</li> </ul> </li> <li>- Increases management capacity               <ul style="list-style-type: none"> <li>• manpower</li> <li>• managerial and technical skills</li> <li>• support facilities and equipment</li> <li>• specialized training</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Review of plans to ensure integrated programs &amp; timely implementation</li> <li>- Review of performance organizational &amp; functional structure</li> <li>- Review management achievements               <ul style="list-style-type: none"> <li>• serviced sites</li> <li>• services &amp; facilities</li> <li>• private &amp; public sector investment</li> <li>• budgeting &amp; expenditures</li> <li>• staffing &amp; recruitment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Overall monitoring               <ul style="list-style-type: none"> <li>• special committee (for urban management review)</li> </ul> </li> <li>- Independent management performance assessment</li> </ul>

**TABLE III-1.e**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
<p>Ref: NUPS Draft Final Report</p> <p>Spatial Strategy: Stabilized Urban Population</p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>- Integrated rural and urban development               <ul style="list-style-type: none"> <li>• urban services to support rural population</li> </ul> </li> <li>- Upgrading &amp; maintenance of existing infrastructure; expansion to meet targets               <ul style="list-style-type: none"> <li>• enhanced inter-regional equity through basic urban services</li> </ul> </li> <li>- Reduction of arable land loss</li> <li>- Growth management &amp; development control</li> </ul> <p>Economic investment tied to high pay-off opportunities</p>	<p><u>Physical:</u></p> <ul style="list-style-type: none"> <li>- Physical development strategies for main settlements &amp; guidelines to support others</li> <li>- Achievement of optimum land use efficiency in existing built-up areas               <ul style="list-style-type: none"> <li>• density targets (gross residential densities of 438 persons/ha)</li> <li>• vertical development support</li> <li>• vacant land development</li> <li>• support for redevelopment</li> <li>• land efficient public use</li> </ul> </li> <li>- Upgrading/rehabilitation of deteriorated built-up areas               <ul style="list-style-type: none"> <li>• redevelopment support (i.e., finance, transit housing, etc.)</li> </ul> </li> <li>- Managed urban extension               <ul style="list-style-type: none"> <li>• desert or least fertile arable land development</li> <li>• achievement of high density standards in arable areas</li> </ul> </li> <li>- Special planning support to small and medium-sized industries (governorate capitals only)</li> <li>- Provision of new infrastructure at improved standards (See Figure 27 for governorate capitals and Figure 28 for non-governorate capitals)</li> <li>- Prohibition of development on restricted arable areas</li> <li>- Housing opportunities for all income groups               <ul style="list-style-type: none"> <li>• special assistance to low income groups to achieve high development densities</li> </ul> </li> <li>- Avoidance of environmental distribution (especially water and air, emphasis on preservation of arable land)</li> </ul> <p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>- Emphasis on agro-related industries and high pay-off opportunities</li> <li>- Support to non-government services sector small and medium-sized industries</li> <li>- Facilitate private sector investment, particularly housing</li> <li>- Investment strategy to support physical and economic objectives</li> </ul>	<ul style="list-style-type: none"> <li>- Number of completed development plans &amp; strategies</li> <li>- Increased gross densities               <ul style="list-style-type: none"> <li>• number of storeys increase</li> <li>• vacant land is developed within 2-3 years</li> <li>• non-conforming uses decrease</li> <li>• desert sites (where possible) for urban expansion identified and developed</li> </ul> </li> <li>- Small serviced estates established               <ul style="list-style-type: none"> <li>• number of hectares</li> <li>• number of establishments</li> <li>• number in employment</li> </ul> </li> <li>- Service levels increase of physical infrastructure               <ul style="list-style-type: none"> <li>• number of connections</li> <li>• households served</li> </ul> </li> <li>- Room occupancy rates decrease, rooms/household increase</li> <li>- Number of dwelling units increase at rates equal to household formation rates</li> <li>- Restricted arable lands identified               <ul style="list-style-type: none"> <li>• losses decrease</li> </ul> </li> <li>- Serviced sites (preferably in desert areas) keep pace with household formation               <ul style="list-style-type: none"> <li>• building permits increase</li> <li>• increased credit &amp; technical support</li> <li>• beneficiaries reflect income distribution</li> </ul> </li> <li>- Air and water quality maintained at existing standards on improved if existing standards are inadequate</li> <li>- Some industrial growth (establishments, employment, output) and expanded service sector</li> <li>- Private investment increase to keep pace with household formation, public investment leads to expanded services and facilities</li> <li>- Locational aspects of investment monitored</li> </ul>	<ul style="list-style-type: none"> <li>- Review and approvals by all parties</li> <li>- Specialized monitoring:               <ul style="list-style-type: none"> <li>• land use data</li> <li>• housing and building (surveys), heights, condition, ownership use)</li> <li>• vacant land used within 3-5 years (aerial photos &amp; landsat used to measure rate of use)</li> <li>• land sales data</li> </ul> </li> <li>- Tax records, employment surveys</li> <li>- Provision of serviced sites</li> <li>- Utility &amp; services performance data</li> <li>- Performance data public &amp; private development               <ul style="list-style-type: none"> <li>• building permits</li> <li>• finance (loans vs. requests)</li> </ul> </li> <li>- Loss of arable land               <ul style="list-style-type: none"> <li>• landsat, aerial photos &amp; maps</li> </ul> </li> <li>- Land sales data               <ul style="list-style-type: none"> <li>• building permits</li> <li>• land use data &amp; standards</li> </ul> </li> <li>- Population data</li> <li>- Environmental assessments, crop yields</li> <li>- Industrial &amp; employment surveys</li> <li>- Finance data public &amp; private (local &amp; foreign) investment</li> <li>- Utilities &amp; service performance data, housing surveys</li> <li>- Investment mapping by location</li> </ul>

**TABLE III-1.e (Continued)**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>- Improved inter-regional equity               <ul style="list-style-type: none"> <li>• improved urban social service &amp; physical infrastructure standards particularly health &amp; education</li> <li>• integrated rural &amp; urban development programs to benefit low income urban &amp; rural households</li> <li>• job opportunities to stabilize population with emphasis on low income households</li> </ul> </li> </ul> <p><u>Administrative/Institutional:</u></p> <ul style="list-style-type: none"> <li>- Emphasis integrated urban &amp; rural physical, economic, social &amp; administrative development plans</li> <li>- Local autonomy               <ul style="list-style-type: none"> <li>• planning, programming, budgeting</li> <li>• close coordination among government, town &amp; village councils</li> </ul> </li> <li>- Management capacity               <ul style="list-style-type: none"> <li>• emphasis on regional development &amp; growth management skills</li> <li>• support facilities &amp; equipment to achieve objectives</li> <li>• streamlined administrative, functional, administration, functions &amp; procedures</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Improved standards of living, services keep pace with household formation               <ul style="list-style-type: none"> <li>• number of connections</li> <li>• number of dwelling units</li> <li>• increased employment</li> <li>• per capita &amp; household income increase</li> <li>• out-migration decreases</li> </ul> </li> <li>- Integrated plans prepared at governorate level with approvals by concerned parties</li> <li>- Budget deficits begin to reduce in later periods</li> <li>- Success in development control, rehabilitation &amp; development</li> <li>- Revenues &amp; expenditures (more equal fit in later periods)</li> <li>- Timing approval processes decrease</li> </ul>	<ul style="list-style-type: none"> <li>- Socio-economic surveys on               <ul style="list-style-type: none"> <li>• housing                   <ul style="list-style-type: none"> <li>- conditions</li> <li>- densities</li> </ul> </li> <li>• education                   <ul style="list-style-type: none"> <li>- enrollment</li> <li>- literacy</li> </ul> </li> <li>• health                   <ul style="list-style-type: none"> <li>- nutrition</li> <li>- disease</li> <li>- infant mortality</li> </ul> </li> <li>• household budget &amp; expenditure</li> <li>• Census data</li> </ul> </li> <li>- Plans reviewed &amp; approved by all parties</li> <li>- Special committee</li> <li>- Overall performance monitoring</li> <li>- Independent management assessment</li> </ul>

**TABLE III-1.f**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
<p>Ref: NUPS Draft Final Report Chapter III.II.C Appendix III.I.J Qena/Naga Hamadi Illustrative Development Project</p> <p>Spatial Strategy: Selective decentralization to special emphasis cities for growth inducement</p>	<p>General: Assiut, Qena, Naga Hamadi and Aswan</p> <ul style="list-style-type: none"> <li>- Inter-regional communications improved</li> <li>- Complementary regional development</li> <li>- Reduction of arable land loss</li> <li>- Urban expansion into desert areas</li> <li>- Domestic import substitution, emphasis on agro-related industries and minerals</li> </ul>	<ul style="list-style-type: none"> <li>- Planned inter-urban or regional infrastructure targets are met</li> <li>- Intra-urban and inter-regional linkages are enhanced</li> <li>- Decreased import of goods &amp; services, greater balance of imports and exports</li> <li>- Employment and population targets are met</li> </ul>	<ul style="list-style-type: none"> <li>- Intra-urban and regional infrastructure and economic performance data               <ul style="list-style-type: none"> <li>• flow of commodities</li> <li>• marketing and trade data</li> <li>• employment and industrial surveys</li> <li>• surveys of housing and infrastructure services</li> </ul> </li> </ul>
<p>Objectives:</p> <p>Greater than trend population growth</p> <ul style="list-style-type: none"> <li>- Growth encouragement in special emphasis cities to meet population targets</li> <li>- Emphasis on integrated urban and regional development</li> <li>- Base for further decentralization to Upper Egypt and Remote Areas</li> <li>- Employment growth to meet population targets</li> <li>- Employment strategy to reinforce population, physical and economic strategies</li> </ul> <p>Urban management capacity to meet development objectives</p> <p>Greater inter-regional equity</p> <p>See South Upper Egypt Objectives</p>	<p>Focus: Assiut</p> <p>Physical</p> <ul style="list-style-type: none"> <li>- Achievement of optimum land use efficiency within built-up areas               <ul style="list-style-type: none"> <li>• target gross residential densities at 438 persons/ha</li> <li>• emphasis on vertical employment</li> <li>• prohibition of development on priority arable areas to reduce arable land loss</li> </ul> </li> <li>- Upgrading and rehabilitation of existing housing stock and infrastructure</li> <li>- Desert areas favored for urban expansion               <ul style="list-style-type: none"> <li>• access of all income groups to serviced sites</li> <li>• priority given to low income groups for locations close to employment opportunities</li> <li>• industrial location on desert sites</li> </ul> </li> <li>• housing and infrastructure additions meet population growth</li> <li>• gross densities at 300 persons per ha (excluding agricultural land)</li> <li>- Environmental disturbance avoided</li> <li>- Areas for regional service facilities created               <ul style="list-style-type: none"> <li>• emphasis desert locations</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Settlement densities reach target standards               <ul style="list-style-type: none"> <li>• building heights increase</li> <li>• arable land loss decreases</li> <li>• informal building activity reduces</li> </ul> </li> <li>- Existing settlement standards improve               <ul style="list-style-type: none"> <li>• room occupancy rates decrease</li> <li>• service standards of utilities improve</li> <li>• number of households connected to utilities increases</li> <li>• enhanced settlement aesthetics</li> </ul> </li> <li>- Proposed El Shams City population targets met               <ul style="list-style-type: none"> <li>• distribution of beneficiaries follows income distribution</li> <li>• industrial estates develop efficiently, e.g., average land use per worker targets are met</li> </ul> </li> <li>• infrastructure services keep pace with population growth</li> <li>• planned densities are met</li> <li>- Air, water and noise quality standards are maintained</li> <li>- Arable land losses reduced</li> <li>- Increase in region serving establishments               <ul style="list-style-type: none"> <li>• reduced space standards in built-up areas</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Housing, utilities and services performance data               <ul style="list-style-type: none"> <li>• land use &amp; population data</li> <li>• field surveys</li> <li>• housing surveys</li> </ul> </li> <li>- Growth monitoring techniques               <ul style="list-style-type: none"> <li>• land sales data (plot sizes, building permits, number of units per plot, etc.)</li> <li>• employment surveys (number of workers per firm, land use per firm)</li> </ul> </li> <li>• housing and socio-economic surveys</li> <li>• review of master plans, (no. of persons)</li> <li>- Environmental assessments</li> <li>- Special monitoring of regional service functions</li> </ul>
<p>Economic:</p> <ul style="list-style-type: none"> <li>- Major employment growth &amp; investment to support industrial growth               <ul style="list-style-type: none"> <li>• emphasis on domestic import substitution agro-related industries, support to non-government service sector, small &amp; medium-sized industries</li> <li>• expansion and rehabilitation of existing industry</li> </ul> </li> <li>- Attraction of private investment, particularly for housing</li> <li>- Human resource development, particularly professional, managerial, technical &amp; skilled workers</li> <li>- Increasing growth of private savings</li> <li>- Increasing cost recovery on public investments</li> </ul>	<ul style="list-style-type: none"> <li>- Rate of employment increase exceeds population growth</li> <li>- Decrease imported goods through local production</li> <li>- Exports exceed imports</li> <li>- Growth in number of establishments, employment &amp; output               <ul style="list-style-type: none"> <li>• sugar based</li> <li>• building materials</li> <li>• textiles &amp; clothing</li> <li>• metal products</li> <li>• animal feeds</li> <li>• mining</li> <li>• equipment (agricultural)</li> </ul> </li> <li>- Increased small scale industries aimed at local market</li> <li>- Savings deposits increase</li> <li>- Reduced subsidies in later periods</li> </ul>	<ul style="list-style-type: none"> <li>- Employment &amp; industrial surveys</li> <li>- Marketing &amp; trades</li> <li>- Tax records, building permit data</li> <li>- Banking statistics, budget deficits reduce, statistics of public utilities</li> </ul>	

**TABLE III-1.f (Continued)**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>- Greater inter-regional equity               <ul style="list-style-type: none"> <li>• increased social services, levels of infrastructure service, housing opportunities &amp; improvement</li> <li>• increased regional service functions</li> <li>• access to serviced desert sites with low income households close to employment opportunities</li> <li>• improved employment and job skills</li> <li>• selective use of subsidies to benefit low income groups</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Standards of living increase               <ul style="list-style-type: none"> <li>• physical &amp; social infrastructure, housing</li> <li>• per capita &amp; household income increase</li> <li>• job &amp; skills targets met</li> </ul> </li> <li>• all income groups have access to infrastructure and housing, but overall level of subsidies reduce</li> </ul>	<ul style="list-style-type: none"> <li>- Special monitoring               <ul style="list-style-type: none"> <li>• housing: condition/density</li> <li>• household budget &amp; expenditures</li> <li>• training</li> <li>• job placement</li> </ul> </li> <li>• average per capita subsidies, socio-economic surveys</li> </ul>
	<p><u>Focus: Qena/Khaga Hamadi</u></p>		
	<p><u>Physical:</u></p>		
	<ul style="list-style-type: none"> <li>- Physical development strategy for region</li> <li>- Ongoing rehabilitation and maintenance of existing infrastructure and housing</li> <li>- Achievement of land use efficiency within built-up area, particularly Khaga Hamadi               <ul style="list-style-type: none"> <li>• gross residential density targets of 438 persons/ha</li> </ul> </li> <li>- Prohibition of development in priority arable areas</li> <li>- Desert locations favored for new urban expansion (gross density targets of 300 persons/ha)               <ul style="list-style-type: none"> <li>• Qena (eastern desert extension)</li> <li>• Khaga Hamadi (desert plateau development near Aluminum Plant)</li> <li>• access of all income groups to desert settlement areas with low income groups in proximity to employment opportunities</li> <li>• Expansion of urban services to meet target population and employment targets</li> </ul> </li> <li>- Application of improved but affordable development standards</li> <li>- Avoidance of environmental disturbance and pollution (especially air and water pollution in Qena surface runoff channels must be provided)               <ul style="list-style-type: none"> <li>o arable land protected</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Development strategies completed</li> <li>- Rehabilitation and renewal at density targets is implemented               <ul style="list-style-type: none"> <li>• number of units, buildings</li> </ul> </li> <li>- Improved standard of living               <ul style="list-style-type: none"> <li>• utility services (connections &amp; services)</li> <li>• social facilities increase</li> <li>• room occupancy decreases</li> <li>• rooms/household increase</li> </ul> </li> <li>- Land use budgets in arable land reflect efficiency</li> <li>- Restricted arable areas identified               <ul style="list-style-type: none"> <li>• loss of arable land decreases</li> <li>• pollution levels decrease</li> </ul> </li> <li>- Desert areas serviced for urban expansion meet household formation growth</li> <li>- Balanced development for all income groups               <ul style="list-style-type: none"> <li>• sites &amp; units reflect proportional size of income groups</li> <li>• beneficiaries coincide with planned objectives and fit affordability criteria (See Appendix C)</li> </ul> </li> <li>- Environmental standards improve, especially water quality               <ul style="list-style-type: none"> <li>o rates of arable land loss reduce</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Strategy reviewed and approved, ongoing monitoring:</li> <li>- Land sales (demand/supply) applications vs. sales building permits</li> <li>- Building               <ul style="list-style-type: none"> <li>• conditions improved</li> <li>• use</li> <li>• ownership</li> <li>• height</li> </ul> </li> <li>- Landsat use data</li> <li>- Landsat analysis</li> <li>- Aerial photos &amp; maps</li> <li>- Beneficiary data, e.g., income and population distribution</li> <li>- Utility and services performance data</li> <li>- Beneficiary data, e.g., socio-economic surveys</li> <li>- Environmental assessments               <ul style="list-style-type: none"> <li>• air and water quality tests</li> <li>• crop yields</li> </ul> </li> </ul>

**TABLE III-1.f (Continued)**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
	<p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>- Integrated regional and urban development plans</li> <li>- Major employment growth to meet population targets               <ul style="list-style-type: none"> <li>• emphasis on industrial investments with strong backward and forward linkages to existing and future industries, particularly in Naga Hamadi</li> <li>• domestic import substitution to reduce regional imports</li> <li>• support to non-government services, small and medium-sized industries</li> </ul> </li> <li>- Human resource development particularly training of skilled workers</li> <li>- Increased regional service functions in Gena</li> <li>- Increasing cost recovery for public investment</li> <li>- Increasing growth in private savings to finance housing and some infrastructure, especially in later periods</li> <li>- Investment strategy which reinforces spatial economic and social objectives</li> </ul>	<ul style="list-style-type: none"> <li>- Sectoral plans &amp; programs meet urban &amp; regional objectives</li> <li>- Employment targets are met</li> <li>- Growth occurs in sugar-based industries, building materials, textiles and clothing, metal products, animal feeds, mining based industries (inputs from Red Sea used where possible) agricultural equipment, small scale industries aimed at local markets</li> <li>- Imports reduced, exports enhanced</li> <li>- Job and skills match training programs and trainees increase</li> <li>- Number of regional service establishments increase</li> <li>- Reduced subsidies required especially in latter periods</li> <li>- Real job creation costs reduced over time</li> <li>- Investments result in desired results</li> </ul>	<ul style="list-style-type: none"> <li>- Review and approvals by all parties</li> <li>- Employment and industrial surveys</li> <li>- Trade &amp; marketing data</li> <li>- Flows of commodities</li> <li>- Job training &amp; placement data</li> <li>- Regional service function data</li> <li>- Budget and expenditure data, banking statistics</li> <li>- Mapping of investments, employment, population data</li> </ul>
	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>- Greater inter-regional equity               <ul style="list-style-type: none"> <li>• selective use of subsidies to benefit low income households</li> <li>• improved social services, particularly health and education and levels of infrastructure</li> <li>• access to serviced desert sites for all households with preference for low income households in proximity to employment opportunities</li> </ul> </li> <li>- Employment growth to meet population targets               <ul style="list-style-type: none"> <li>• job skill training</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Per capita &amp; household incomes increase relative to levels as major metropolitan areas</li> <li>- Household savings increase</li> <li>- Urban service standards improve</li> <li>- Out-migration decreases</li> <li>- Employment &amp; skills increase</li> </ul>	<ul style="list-style-type: none"> <li>- Household budget &amp; expenditures</li> <li>- Specialized monitoring               <ul style="list-style-type: none"> <li>• housing conditions &amp; standards</li> <li>• general urban services performance</li> <li>• education                   <ul style="list-style-type: none"> <li>- enrollment</li> <li>- literacy</li> </ul> </li> <li>• health                   <ul style="list-style-type: none"> <li>- incidence of disease</li> <li>- nutrition</li> <li>- infant mortality</li> </ul> </li> </ul> </li> <li>• Census data, employment surveys</li> </ul>
	<p><u>Focus: Aswan (City)</u>  <u>Physical:</u></p> <ul style="list-style-type: none"> <li>- Development strategy for city and main settlements in Governorate</li> <li>- West bank (desert) favored for future urban expansion (proximity High Dam and Airport)</li> <li>- Ongoing rehabilitation &amp; maintenance of existing housing stock, infrastructure &amp; social services</li> <li>- Expansion of urban services to meet population and employment targets</li> <li>- Avoidance of environmental disturbance and pollution (especially air and water)</li> <li>- Prohibition of development on arable land (to north of existing city)</li> </ul>	<ul style="list-style-type: none"> <li>- Development strategy completed</li> <li>- Serviced desert sites (predominantly on west bank) meet household formation requirements</li> <li>- Comparison with existing standards               <ul style="list-style-type: none"> <li>• urban services &amp; facilities increase</li> <li>• room occupancy rates decrease</li> <li>• rooms/household increase</li> <li>• visual improvement</li> <li>• condition of structures improves</li> </ul> </li> <li>- Risks of environmental pollution decrease</li> <li>- Loss of arable land to north decreases</li> </ul>	<ul style="list-style-type: none"> <li>- Strategy review &amp; approvals by all parties</li> <li>- Land sales and beneficiary data</li> <li>- Building permits</li> <li>- Loan data</li> <li>- Land use &amp; standards</li> <li>- Urban utilities &amp; services performance data               <ul style="list-style-type: none"> <li>• housing</li> <li>• education</li> <li>• health</li> <li>• utilities</li> <li>• finance</li> </ul> </li> <li>- Environmental assessments               <ul style="list-style-type: none"> <li>• Air and water quality tests</li> </ul> </li> <li>- Landsat aerial photo interpretation</li> </ul>

**TABLE III-1.f (Continued)**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
	<p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>- Investment emphasis on rehabilitating existing industries and efficient utilization of regional inputs               <ul style="list-style-type: none"> <li>• exploitation of mineral resources</li> <li>• backward and forward linkages with existing industry</li> <li>• import substitution</li> </ul> </li> <li>- Employment growth to meet population targets</li> <li>- Human resource development; particularly the training of skilled workers</li> <li>- Increased regional service functions for Aswan</li> <li>- Increasing cost recovery for public investment, increasing private savings</li> <li>- Investment strategy which reinforces physical and economic development plans</li> </ul>	<ul style="list-style-type: none"> <li>- Growth in agro-based, building materials &amp; mining industries, small &amp; medium-sized industries (with linkages to existing &amp; future industries)</li> <li>- Growth in fishery-related industries</li> <li>- Employment &amp; investment targets are met</li> <li>- Supply of skills meets demands</li> <li>- Public subsidies are reduced over time, job creation costs reduced over time</li> <li>- Investments tied to location and designated types</li> </ul>	<ul style="list-style-type: none"> <li>- Employment and industrial surveys</li> <li>- Special studies</li> <li>- Comparison with existing data               <ul style="list-style-type: none"> <li>• agricultural &amp; fishing yields</li> <li>• human resource development</li> </ul> </li> <li>- Employment surveys, job placement data</li> <li>- Budget revenue &amp; expenditure data, banking statistics</li> <li>- Monitoring of timing of industrial and infrastructure investments, population and employment growth rates</li> </ul>
	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>- Greater inter-regional equity               <ul style="list-style-type: none"> <li>• improved urban services, regional services serving hinterland populations develop</li> <li>• selective use of subsidies to benefit the urban poor</li> <li>• access of all households to serviced sites for housing development with priority for low income households close to job opportunities</li> <li>• increased employment opportunities</li> <li>• vocational training</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Per capita &amp; household incomes rise to reduce regional income disparities</li> <li>- All households, particularly those with low income benefit from:               <ul style="list-style-type: none"> <li>• improved physical infrastructure</li> <li>• improved urban services</li> <li>• reduced housing occupancy rates</li> <li>• greater housing opportunity (dwelling units in serviced sites)</li> <li>• increased job skills</li> <li>• other indications: i.e., literacy, nutrition, etc., improve</li> <li>• net out-migration decreases</li> </ul> </li> <li>- Integrated plans prepared by governorates with approvals of all concerned parties               <ul style="list-style-type: none"> <li>• legal status granted                   <ul style="list-style-type: none"> <li>- physical development strategy</li> <li>- restricted &amp; development zones</li> </ul> </li> <li>• enforcement actions taken</li> </ul> </li> <li>- Management capacity improves               <ul style="list-style-type: none"> <li>• bureaucratic delays reduced</li> <li>• more programming and project level decisions taken at local level</li> <li>• financial autonomy increases (revenues increase as a proportion of expenditures)</li> <li>• operations and maintenance of urban services (social and physical infrastructure improves)</li> <li>• specialized services are developed to promote industrial growth and assist future investors</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Specialized monitoring               <ul style="list-style-type: none"> <li>• household budgets &amp; expenditures</li> <li>• utilities                   <ul style="list-style-type: none"> <li>- consumption</li> <li>- connections</li> </ul> </li> </ul> </li> <li>- Health               <ul style="list-style-type: none"> <li>• facilities</li> <li>• beds, doctors, nurses                   <ul style="list-style-type: none"> <li>- incidence of disease</li> <li>- infant mortality</li> </ul> </li> </ul> </li> <li>- Education               <ul style="list-style-type: none"> <li>• enrollment</li> <li>• literacy</li> <li>• classrooms</li> <li>• student/teacher ratios</li> </ul> </li> <li>- Employment &amp; training data               <ul style="list-style-type: none"> <li>• job placement</li> </ul> </li> <li>- Census data               <ul style="list-style-type: none"> <li>• housing conditions</li> <li>• population statistics (comparison of different census periods)</li> <li>• age statistics</li> </ul> </li> <li>- Overall monitoring of performance               <ul style="list-style-type: none"> <li>• success in development targets and control</li> <li>• revenues &amp; expenditures (budget deficits decline)</li> <li>• timing or approval processes improves</li> <li>• staffing &amp; recruitment</li> <li>• manpower efficiency increases</li> <li>• equipment &amp; support requirements</li> <li>• governorate revenue and expenditure data</li> <li>• performance reviews of infrastructure</li> <li>• surveys of existing and future investors</li> </ul> </li> </ul>
	<p><u>Focus: Assiut, Naga Hamadi, Administration:</u></p> <ul style="list-style-type: none"> <li>- Increased local autonomy in planning, programming, budgeting, finance (increased local revenues and control)               <ul style="list-style-type: none"> <li>• streamlined organization, function and procedures</li> </ul> </li> <li>- Emphasis on improving management capacity by:               <ul style="list-style-type: none"> <li>• manpower requirements identified with emphasis on managerial, technical and supervisory skills for development control</li> <li>• support facilities and equipment identified</li> <li>• specialized training developed                   <ul style="list-style-type: none"> <li>- departmental development (especially planning and programming and development control)</li> <li>- skill development emphasis technical, managerial and skilled workers</li> </ul> </li> <li>• special legal status established                   <ul style="list-style-type: none"> <li>- physical development strategy</li> <li>- restricted or development zones</li> </ul> </li> </ul> </li> </ul>		

**TABLE III-1.f (Continued)**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
<p>Ref: NIPS Draft Final Report</p> <p>Spatial Strategy: Stabilized Urban Population</p> <p>Objectives:</p> <ul style="list-style-type: none"> <li>- Integrated rural and urban development               <ul style="list-style-type: none"> <li>• urban services to support rural population</li> </ul> </li> <li>- Upgrading &amp; maintenance of existing infrastructure; expansion to meet targets               <ul style="list-style-type: none"> <li>• enhanced inter-regional equity through basic urban services</li> </ul> </li> <li>- Reduction of arable land loss</li> <li>- Growth management &amp; development control</li> <li>- Economic investment tied to high pay-off opportunities</li> </ul>	<ul style="list-style-type: none"> <li>- Introduction of priority arable areas for development control &amp; development zones for different types of urban activity</li> <li>- Swift enforcement action for development control               <ul style="list-style-type: none"> <li>• demolitions and severe penalties (i.e., jail sentences)</li> </ul> </li> </ul> <p>Physical:</p> <ul style="list-style-type: none"> <li>- Physical development strategies for main settlements &amp; guidelines to support others</li> <li>- Achievement of optimum land use efficiency in existing built-up areas               <ul style="list-style-type: none"> <li>• density targets (gross residential densities of 438 persons/ha)</li> <li>• vertical development support</li> <li>• vacant land development</li> <li>• support for redevelopment</li> <li>• land efficient public use</li> </ul> </li> <li>- Upgrading/rehabilitation of deteriorated built-up areas               <ul style="list-style-type: none"> <li>• redevelopment support (i.e., finance, transit, housing, etc.)</li> </ul> </li> <li>- Managed urban extension               <ul style="list-style-type: none"> <li>• desert or least fertile arable land development</li> <li>• achievement of high density standards in arable areas</li> <li>• provisions of development areas in Luxor and other settlements with "Antiquities" zones which protect "Antiquities" zones</li> </ul> </li> <li>- Provision of new infrastructure at improved standards (see Figure 28 for non-governorate capitals and Figure 27 for governorate capitals and Luxor)</li> <li>- Prohibition of development on restricted arable areas</li> <li>- Housing opportunities for all income groups               <ul style="list-style-type: none"> <li>• special assistance to low income groups to achieve high development densities</li> </ul> </li> <li>- Avoidance of environmental distribution (especially water and air, emphasis on preservation of arable land)</li> <li>- Establishment of "Antiquities" Zones to prevent development in or near historic and tourism zones</li> </ul>	<ul style="list-style-type: none"> <li>- Number of completed development plans &amp; strategies</li> <li>- Increased gross densities               <ul style="list-style-type: none"> <li>• number of storeys increase</li> <li>• vacant land is developed within 2-3 years</li> <li>• non-conforming uses decrease</li> <li>• desert sites (where possible) for urban expansion identified and developed</li> </ul> </li> <li>- New development in planned areas only               <ul style="list-style-type: none"> <li>• extensions of built area onto arable land stops or is in planned areas only</li> <li>• future urban development does not interfere with "Antiquities" zones.</li> </ul> </li> <li>- Service levels increase of physical infrastructures               <ul style="list-style-type: none"> <li>• number of connections</li> <li>• household served</li> </ul> </li> <li>- Room occupancy rates decrease, rooms/household increase</li> <li>- Number of dwelling units increase at rates equal to household formation rates</li> <li>- Restricted arable lands identified               <ul style="list-style-type: none"> <li>• losses decrease</li> </ul> </li> <li>- Serviced sites (preferably in desert areas) keep pace with household formation               <ul style="list-style-type: none"> <li>• Building permits increase</li> <li>• increased credit &amp; technical support</li> <li>• beneficiaries reflect income distribution</li> </ul> </li> <li>- Air and water quality maintained at existing standards or improved if existing standards are inadequate</li> <li>- Encroachment on antiquities zone stops</li> </ul>	<ul style="list-style-type: none"> <li>- Review and approvals by all parties</li> <li>- Specialized monitoring:               <ul style="list-style-type: none"> <li>• land use data</li> <li>• housing and building (surveys), heights, condition, ownership use</li> <li>• vacant land used within 3-5 years (aerial photos &amp; landsat used to measure rate of use)</li> <li>• land sales data</li> </ul> </li> <li>- Aerial photo interpretation, field surveys, building permit data</li> <li>- Provision of serviced sites</li> <li>- Utility &amp; services performance data</li> <li>- Performance data public &amp; private development               <ul style="list-style-type: none"> <li>• building permits</li> <li>• finance (loans vs. requests)</li> </ul> </li> <li>- Loss of arable land               <ul style="list-style-type: none"> <li>• landsat, aerial photos &amp; maps</li> </ul> </li> <li>- Land sales data               <ul style="list-style-type: none"> <li>• building permits</li> <li>• land use data &amp; standards</li> </ul> </li> <li>- Population data</li> <li>- Environmental assessments</li> <li>- Aerial photos, field surveys and measurements of condition of monuments</li> </ul>

**TABLE II-1.f (Continued)**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
	<p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>- Emphasis on agro-related industries and high pay-off opportunities</li> <li>- Support to non-governmental services sector small and medium-sized industries</li> <li>- Facilitate private sector investment, particularly housing</li> <li>- Investment strategy to support physical and economic objectives</li> </ul>	<ul style="list-style-type: none"> <li>- Some industrial growth (establishments, employment, output) and expanded service sector</li> <li>- Private investment increase to keep pace with household formation</li> <li>- Public investment leads to expanded services and facilities</li> <li>- Locational aspects of investment monitored</li> </ul>	<ul style="list-style-type: none"> <li>- Industrial &amp; employment surveys</li> <li>- Finance data public &amp; private (local &amp; foreign) investment</li> <li>- Utilities &amp; service performance data, housing surveys</li> <li>- Investment mapping by location</li> </ul>
	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>- Improved inter-regional equity               <ul style="list-style-type: none"> <li>• improved urban social service &amp; physical infrastructure standards, particularly health &amp; education</li> <li>• integrated rural &amp; urban development programs to benefit low income urban &amp; rural households in particular</li> <li>• job opportunities to stabilize population with emphasis on low income households</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Improved standards of living, services keep pace with household formation               <ul style="list-style-type: none"> <li>• number of connections</li> <li>• number of dwelling units</li> <li>• increased employment</li> <li>• per capita &amp; household income increase</li> <li>• urban/rural marketing &amp; service function</li> <li>• out-migration decreases</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Socio-economic surveys on               <ul style="list-style-type: none"> <li>• housing                   <ul style="list-style-type: none"> <li>- conditions</li> <li>- densities</li> </ul> </li> <li>• education                   <ul style="list-style-type: none"> <li>- enrollment</li> <li>- literacy</li> </ul> </li> <li>• health                   <ul style="list-style-type: none"> <li>- nutrition</li> <li>- disease</li> <li>- infant mortality</li> </ul> </li> <li>• household budget &amp; expenditure</li> <li>• census data</li> </ul> </li> </ul>
	<p><u>Administrative/Institutional:</u></p> <ul style="list-style-type: none"> <li>- Emphasis integrated urban &amp; rural physical, economic, social &amp; administrative development plans</li> <li>- Local autonomy               <ul style="list-style-type: none"> <li>• planning, programming, budgeting</li> <li>• close coordination among government, town &amp; village councils</li> </ul> </li> <li>- Management capacity               <ul style="list-style-type: none"> <li>• manpower</li> <li>• emphasis on regional development &amp; growth management skills</li> <li>• support facilities &amp; equipment to achieve objectives</li> <li>• streamlined administrative, functions &amp; procedures</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Integrated plans prepared at governorate level with approvals by concerned parties</li> <li>- Budget deficits begin to reduce in later periods</li> <li>- Success in development control, rehabilitation &amp; development</li> <li>- Revenues &amp; expenditures (more equal fit in later periods)</li> <li>- Timing approval processes decrease</li> </ul>	<ul style="list-style-type: none"> <li>- Plans reviewed &amp; approved by all parties</li> <li>- Special committee</li> <li>- Overall performance monitoring</li> <li>- Independent management assessment</li> </ul>

**TABLE III-1.g**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
<p><u>Ref:</u> NUPS Draft Final Report Chapter III.IV</p>	<p><u>Physical:</u></p> <ul style="list-style-type: none"> <li>- Physical development strategies for main urban settlements</li> <li>- Development of environmentally adapted urban settlements               <ul style="list-style-type: none"> <li>• local building materials</li> <li>• efficient utilization of urban services (power, water, transport facilities, etc.)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Number of physical development strategies completed</li> </ul>	<ul style="list-style-type: none"> <li>- Review &amp; approval by all parties</li> </ul>
<p><u>Spatial Strategy:</u> Incremental urbanization proportional to demonstrated permanent job creation</p>	<ul style="list-style-type: none"> <li>- Utilization of new technologies to overcome development constraints inherent to the regions:               <ul style="list-style-type: none"> <li>• communications (i.e., microwave relays and portable units)</li> <li>• energy (i.e., harnessing solar energy, wind &amp; waves)</li> <li>• agriculture (i.e., hydroponics, drip irrigation)</li> <li>• potable water (desalination)</li> <li>• ground water (investigation and development)</li> </ul> </li> <li>- Provision of urban services and infrastructure at improved standards to meet population targets with emphasis on health and education</li> <li>- Provision of regional infrastructure to support economic development</li> </ul>	<ul style="list-style-type: none"> <li>- Achievement of specialized projects               <ul style="list-style-type: none"> <li>• decrease in costs of building &amp; provision of energy, water, transport, etc.</li> <li>• improvement in communications with other regions</li> <li>• greater portions of power requirements met by renewable sources</li> <li>• regional autonomy increases</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Specialized monitoring of:               <ul style="list-style-type: none"> <li>• project &amp; program performance; particularly cost effectiveness and efficiency</li> <li>• regional imports of energy reduce</li> </ul> </li> </ul>
<p><u>Objective :</u></p> <ul style="list-style-type: none"> <li>- Investment in high pay-off economic projects</li> <li>- Utilization of innovations development techniques which may prove applicable to the rest of Egypt               <ul style="list-style-type: none"> <li>• new technology</li> <li>• conservation of scarce resources</li> <li>• improved urban management to conserve resources</li> </ul> </li> <li>- Development of highly efficient urban centers to support regional economic growth</li> </ul>	<p><u>Economic:</u></p> <ul style="list-style-type: none"> <li>- Investment emphasis on high pay-off projects to justify higher regional costs</li> <li>- Longer term cost recovery on public investments</li> </ul>	<ul style="list-style-type: none"> <li>- Improvement in efficiency of utilities and services</li> <li>- Regional infrastructure supported by high pay-off investments</li> <li>- Economic investments justify higher costs</li> <li>- Sectoral investments result in economic gains, i.e., increased employment &amp; opportunity for further population growth</li> </ul>	<ul style="list-style-type: none"> <li>• inter-urban and intra-urban infrastructure performance data</li> <li>- Specialized monitoring of programs &amp; projects               <ul style="list-style-type: none"> <li>• development costs</li> <li>• yields (high rates of return)</li> <li>• long-term employment growth</li> <li>• permanent population growth</li> </ul> </li> </ul>
	<p><u>Focus: Red Sea</u></p> <ul style="list-style-type: none"> <li>- Emphasis on high pay-off investments               <ul style="list-style-type: none"> <li>• mineral resources &amp; petroleum</li> <li>• fishing &amp; fish processing</li> <li>• tourism</li> <li>• port-related activities connected with South Upper Egypt markets</li> </ul> </li> <li>- Some domestic import substitution</li> <li>- Environmentally controlled agriculture to increase yields over those produced by traditional methods</li> </ul>	<ul style="list-style-type: none"> <li>- Economic performance of investments yield net gains to economy               <ul style="list-style-type: none"> <li>• dependence on other regions reduce, subsidies reduce</li> </ul> </li> <li>- Domestic imports decrease</li> <li>- Higher yields result</li> </ul>	<ul style="list-style-type: none"> <li>- Cost/benefit analysis, monitoring of output of investments</li> <li>- Crop data, project accounting</li> </ul>
	<p><u>Focus: Western Desert</u></p> <ul style="list-style-type: none"> <li>- Investment emphasis on supporting on-going or already planned activities               <ul style="list-style-type: none"> <li>• efficient production and export of agricultural products</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Specialized employment leads to greater service sector employment &amp; small &amp; medium-scale industries develop Economic performance of investment yield net gains to economy               <ul style="list-style-type: none"> <li>• Dependence on other regions reduces</li> <li>• subsidies reduce</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Employment &amp; industrial surveys</li> <li>- Cost/benefit analysis</li> <li>- Ongoing monitoring of project &amp; program expenditures and yields</li> </ul>

**TABLE III-1.g (Continued)**  
**URBAN MANAGEMENT HANDBOOK**  
**GUIDELINES FOR PROGRAM ORIENTATION EVALUATION AND MONITORING**

MAJOR OBJECTIVES	PROGRAM ORIENTATION GUIDELINES	PROGRAM EVALUATION GUIDELINES	MONITORING TECHNIQUES AND DATA SOURCES
	<p><u>Focus: Sinai</u></p> <ul style="list-style-type: none"> <li>- Emphasis on high pay-off investment               <ul style="list-style-type: none"> <li>• mineral resources, petroleum (and exploration)</li> <li>• fishing and agriculture</li> <li>• tourism</li> </ul> </li> <li>- Some domestic import substitution</li> <li>- Environmentally controlled agricultural production</li> <li>- Service sector employment to support economic activities</li> </ul>	<ul style="list-style-type: none"> <li>- Returns on investment justifies higher costs and lead to more urban employment, small/medium sized industries &amp; service sector growth</li> <li>- Reduced reliance over time on domestic imports</li> <li>- Both domestic &amp; international tourism increases</li> <li>- Economic performance results in net gains to regional economy               <ul style="list-style-type: none"> <li>• dependence on other regions reduces</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Specialized monitoring of projects &amp; programs               <ul style="list-style-type: none"> <li>• cost effectiveness</li> <li>• cost/benefit analysis</li> </ul> </li> <li>- monitoring of hotel occupancy</li> <li>- ongoing monitoring of program and project inputs and outputs</li> </ul>
	<p><u>Focus: Matruh</u></p> <ul style="list-style-type: none"> <li>- Emphasis on high pay-off investments               <ul style="list-style-type: none"> <li>• building materials</li> <li>• mineral exploration</li> <li>• tourism (emphasis local)</li> <li>• fishing and agriculture</li> </ul> </li> <li>- Some domestic import substitution</li> <li>- Environmentally controlled agriculture</li> <li>- Service sector employment to support economic activities</li> </ul>	<ul style="list-style-type: none"> <li>- Returns on investment justifies higher costs and lead to more urban employment, small/medium-sized industries &amp; services sector growth</li> <li>- Tourism increases               <ul style="list-style-type: none"> <li>• seasonal population</li> <li>• number of beds</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Industrial surveys               <ul style="list-style-type: none"> <li>• establishments</li> <li>• jobs</li> <li>• training &amp; placement programs</li> </ul> </li> <li>- Tourism surveys (hotel occupancy surveys)</li> </ul>
	<p><u>Social:</u></p> <ul style="list-style-type: none"> <li>- Provision of improved inter-regional equity               <ul style="list-style-type: none"> <li>• initial subsidies to support high pay-off projects and employment incentives</li> <li>• improved urban services particularly health &amp; education</li> <li>• increased employment opportunities</li> <li>• job training with emphasis on using specialized technologies</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Per capita &amp; household incomes rise</li> <li>- Compensation exceeds that in major metropolitan areas</li> <li>- Urban services improve</li> <li>- Skilled workers trained and attracted to regions</li> </ul>	<ul style="list-style-type: none"> <li>- Household budget &amp; expenditures surveys</li> <li>- Utilities and services performance data</li> <li>- Land sales &amp; beneficiary data</li> <li>- Employment surveys</li> </ul>
	<p><u>Administration:</u></p> <ul style="list-style-type: none"> <li>- Efficient urban and regional management</li> <li>- Integrated urban and regional physical &amp; economic development plans</li> <li>- Development of specific management skills               <ul style="list-style-type: none"> <li>• conservation of resources (i.e., water management)</li> <li>• deployment of new technologies</li> <li>• improving operation &amp; maintenance</li> </ul> </li> <li>- Increased local autonomy               <ul style="list-style-type: none"> <li>• planning, programming and budgeting (with central government support)</li> <li>• increased management capacity                   <ul style="list-style-type: none"> <li>- manpower</li> <li>- emphasis on technical skills</li> <li>- support facilities and equipment</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Plans prepared by governorates with sectoral assistance</li> <li>- Specialized programs &amp; projects are developed</li> <li>- Skilled manpower attracted or trained</li> <li>- Programs have widespread applicability in remote areas and other parts of Egypt               <ul style="list-style-type: none"> <li>• overall success may not be measured until after 2000</li> </ul> </li> <li>- Local revenue base for financing urban services develops</li> <li>- More decisions for program and project taken at local level               <ul style="list-style-type: none"> <li>• proportion of project financed at local level increases</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Plans reviewed and approved by all parties</li> <li>- Overall performance monitoring of:               <ul style="list-style-type: none"> <li>• development targets &amp; control</li> <li>• revenues &amp; expenditures</li> <li>• provision of equipment &amp; support</li> <li>• timing for processing approvals</li> <li>• enforcement procedures</li> </ul> </li> <li>- Budget and revenue and expenditure data</li> <li>- Performance monitoring</li> </ul>

**TABLE III-2.a**  
**LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES**

PART I.

Source	<u>INPUTS</u> Data Collection	<u>ANALYSIS</u>	<u>OUTPUTS</u> Implications for Planning and Programming
<ul style="list-style-type: none"> <li>- CAPMAS Data</li> <li>- LANDSAT Data</li> <li>- Aerial photos and maps from two or more previous years</li> </ul>	<p style="text-align: center;"><u>Regional Land Use</u> (types and areas)</p> <ul style="list-style-type: none"> <li>- Urban</li> <li>- Agriculture</li> <li>- Barren (vacant)</li> <li>- Water</li> </ul>	<p style="text-align: center;"><u>Change</u></p> <ul style="list-style-type: none"> <li>- Increase/decrease: growth rates by type</li> <li>Directional growth</li> </ul> <p style="text-align: center;"><u>Existing</u></p> <ul style="list-style-type: none"> <li>- Physical (based on area increase over previous years)</li> <li>- Demographic (based on population data over previous years)</li> </ul> <p style="text-align: center;"><u>Future Trend</u></p> <ul style="list-style-type: none"> <li>- Physical (based on area projections)</li> <li>- Demographic (based on population forecasts)</li> </ul>	<p style="text-align: center;"><u>Major Land Use Map</u></p> <ul style="list-style-type: none"> <li>- Trend Projections</li> <li>- Identify factors contributing to loss of arable land</li> </ul> <p style="text-align: center;"><u>Directional area and population growth diagrams</u></p> <ul style="list-style-type: none"> <li>- Existing</li> <li>- Trend</li> <li>- Compare to desirable growth directions</li> </ul>
Census, CAPMAS	<p style="text-align: center;"><u>Population and Demographic Data</u></p> <ul style="list-style-type: none"> <li>- Urban population for current and previous years</li> <li>- Kism population for current and previous years</li> <li>- Census enumeration data (sub Kism)</li> <li>- Average urban growth rate due to natural increase</li> </ul>	<p style="text-align: center;"><u>Determination of past annual growth rates</u></p> <ul style="list-style-type: none"> <li>- Urban</li> <li>- Kism</li> <li>- Census zone (sub kism) if available</li> </ul> <p style="text-align: center;"><u>Determination of net in or out migration</u></p>	<p style="text-align: center;"><u>Urban population forecasts based on trends:</u></p> <ul style="list-style-type: none"> <li>- Urban</li> <li>- Kism</li> <li>- (target group, if possible)</li> </ul> <p style="text-align: center;"><u>Comparison to NUPS target projections</u></p>
Census Data Socio-Economic Surveys: Tax Data Residential Type Classification	<p style="text-align: center;"><u>Household Data<sup>2</sup></u> (socio-economic characteristics)</p> <ul style="list-style-type: none"> <li>- Size</li> <li>- Age structure</li> <li>- Literacy level</li> <li>- Education level</li> <li>- Income/expenditure</li> <li>- Assets (physical)                             <ul style="list-style-type: none"> <li>• Dwelling unit ownership</li> <li>• Vehicles</li> <li>• Other (i.e., appliances)</li> </ul> </li> <li>- Consumption characteristics                             <ul style="list-style-type: none"> <li>• Services (water, electricity, share paved roads, etc.)</li> <li>• Calories, meat</li> <li>• Residential land</li> </ul> </li> <li>- Assets (financial)                             <ul style="list-style-type: none"> <li>• Savings formal banking</li> <li>• Accounts</li> <li>• Other types of savings</li> <li>• Access to credit</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- On the basis of disaggregated data determine groups and relate to residential types</li> <li>- Determine level of public service by target group and standards of housing</li> <li>- Determine household affordability for housing and public services</li> <li>- Determine locational characteristics of target groups</li> <li>- Relate population projections to target group growth -- (i.e., Groups may grow at different rates)</li> </ul>	<p style="text-align: center;"><u>Program Development</u></p> <ul style="list-style-type: none"> <li>- On the basis of target group standards and current levels of service formulate appropriate programs suited to specific target group need and affordability</li> <li>- Location map of target groups</li> <li>- Determine implications of target group growth on urban expansion and infill</li> </ul>
<ul style="list-style-type: none"> <li>- Map Data (Previous Years) (Measurements and Field Checks)</li> <li>- Aerial Photos</li> </ul>	<p style="text-align: center;"><u>Physical Data</u></p> <p style="text-align: center;">Urban land use (types and areas)</p> <ul style="list-style-type: none"> <li>- Residential* (by type)</li> <li>- Industrial (large, small)</li> <li>- Commercial (large, small)</li> <li>- Services</li> <li>- Institutional</li> <li>- Open Space</li> <li>- Circulation</li> <li>- Military</li> <li>- Vacant</li> <li>- Others</li> </ul>	<p style="text-align: center;"><u>Existing Standards</u></p> <ul style="list-style-type: none"> <li>- Gross and residential densities, by type</li> <li>- Job densities</li> <li>- Percent area by type</li> </ul> <p style="text-align: center;"><u>Change</u></p> <p style="text-align: center;">Increase/decrease: growth rates</p>	<p style="text-align: center;"><u>Land use map</u></p> <p style="text-align: center;">Density use map</p> <p style="text-align: center;">Existing land budget standards</p> <p style="text-align: center;">Recommended changes</p>

<sup>1</sup> See Appendix B

<sup>2</sup> Two levels of household data and analysis is possible: urban-wide averages and more specific target group analysis. The latter is viewed as a more accurate means of measuring the impact of development programs but may not be possible except in large urban centers. (See Appendix B)

TABLE III-2.a (Continued)

LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES

Level of Government Responsible	Frequency of Analysis	Remarks
National (CAPMAS data)	10 years	Data will be collected by CAPMAS (national level), but analysis should be done at regional level
Regional/Governorate (Landsat Data)	5 years	Data will be collected at national level, but analysis will be done regionally or at governorate level. In fast growing settlements annual data collection may be necessary to determine growth trends
Regional (Aerial Photos)	past data	Used to map growth trends, if not available for previous period, recent aerial photos should be used to compare with other map sources.  See Data Forms A.2 for suggested data format.
National (Census/CAPMAS)	10 year periods	Census should be conducted on five year basis in fast growing settlements. See Data Form A.1 for data collection format.
National (Census/CAPMAS)	10 year periods	Census should be conducted on 5 year basis in fast growing settlements/regions.
National/Regional/Governorate (Socio-economic Surveys)	5 year periods	In fast growing settlements, surveys should be conducted on bi-annual basis. Surveys may be conducted by national level agency (CAPMAS or others), but survey results should be analyzed at regional and governorate levels for program development.
Governorate/Settlement (Tax Data: Residential type classification)	Ongoing	Data based on tax maps should be reviewed on a five year basis, but it should be updated annually.
Governorate/Settlement (Mapping)	Ongoing	Most settlements require new base maps, once these are complete, they should be updated periodically, at least on an annual basis if not more frequently. In very fast growing settlements updating should be quarterly or at least every 6 months.
Governorate (Aerial Photo)	5 year	Actual aerial photography will probably be done by national agency, but governorate should do detailed analysis. Annual photos of very rapidly growing kisms may be necessary to control development See Data Forms A.3 & 4 for data format.

**TABLE III-2.b**  
**LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES**  
**PART I**

Source	<u>INPUTS</u> Data Collection	<u>ANALYSIS</u>	<u>OUTPUTS</u> Implications for Planning and Programming
TOPO Maps TOPO Surveys Photo Grammetric Maps Maps Soil Tests Building Experience	<u>Physical Features</u> - Topography - Soil conditions	Gradients or slopes 5, 10, 15, 20% 20% <u>Technical Studies:</u> - Bearing capacity - Water table level - Permeability	<u>Gradient and Physical Features Map</u> - Barriers to physical expansion - Areas of possible expansion - Areas subject to flooding <u>Soil Conditions Map</u> - Suitability for construction - Opportunities for alternative sewage disposal
1954 FAO Soil Class Maps, Crops Production Data, LANDSAT Data	Soil fertility	Soil classification o Most/least fertile land o Income (yield) per area Reclamation potential - Urban or agricultural use - Probable development costs	<u>Soil Fertility Map</u> - Arable land to be protected in order of fertility - Barren land most suitable for reclamation o Agriculture o Urban
Meteorological Data, Pollution Tests	<u>Environmental factors</u> - Climate - Rainfall - Windfall - Ecology - Pollution air, water, soil, noise, visual, etc.	<u>Environmental Assessments</u> - Assess environmental impacts on building and site planning disturbance of environment (past and future) - Areas of flooding, areas most affected by sandstorms, ongoing and probable forms of pollution, effects on wildlife habitat and food supply	- Location specific zoning (i.e., industry) - Measures to reduce pollution - Appropriate site planning and building guidelines
Land Registration Office, Property Tax Records	<u>Land Ownership</u> <u>Public</u> - National - Governorate - Waqf - Other <u>Private</u> - Disputed - Not disputed - By owner - Size of holding <u>Vacant and Built-up (Areas by type)</u>	<u>Identification of Sites for Infill</u> - Determine most appropriate public or private vacant sites of urbanization or other use - Order sites for priority development by use See Figure 36 for a description of process	<u>Phased Development Plan</u> - Develop public land as needed - Induce development of private vacant land - Ensure development control
Realtors, Land Owners, Public Records	<u>Land Values</u> - Market prices - Public land sales prices	<u>Survey of Current Land Prices</u> - Survey market land prices within and adjacent to urban boundaries and possible extension areas - Correlate land values to land use, infrastructure networks, public services, site conditions - Compare past public and market land prices	<u>Land Value Maps</u> - Determine future probable value of planned extensions - Use land value data for taxation purposes - Equate public land prices to private prices to increase revenues from sales

**TABLE III-2.b (Continued)**  
**LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES**

PART II

Level of Government Responsible	Frequency of Analysis	Remarks
Governorate/Settlement (Topo surveys and maps, photogrammetric maps, soil tests, building experience)	10 year period	Base maps may be prepared by national level agency (especially topo surveys and maps and photogrammetric maps) but analysis will be done by governorate (Utilities and Engineering Office or proposed Physical Planning Offices). Once base maps are prepared, site specific tests should be conducted as needed.
National/Regional (Soil Classification)  National/Regional/Governorate (Crop Production Data) (LANDSAT Data)	Annual (See Remarks)	Soil classification done on a 10-year basis. Site specific classification done as necessary. Done on an annual basis to determine changes in agricultural output. Data generated for other purposes, but used on 5-year basis or as needed to determine changes in cropping patterns and soil fertility.
National (Meteorological Data, Pollution Tests)	See Remarks	Data collected by national agencies on daily basis (meteorological), analysis may be done as required.
Governorate (Land Registration Office, Property Tax Records)	Annual (See Remarks)	New base maps should be prepared on a 5-year basis, but updated annually. Work to be done by National level departments at governorate level (Ministry of Justice and Ministry of Finance governorate departments). Work should be coordinated with governorate Utilities and Engineering Offices and proposed governorate Physical Planning Offices
Governorate/settlement (Realtors, land owners, public records)	Annual (See Remarks)	Work should be done by governorate and local council Utilities and Engineering Offices and/or NUPPS proposed Governorate Physical Planning Offices and Governorate Finance Offices. Basic tax maps should be prepared on a 5-year basis, but updated annually. Surveys of market values should be done to verify land values shown on tax maps.

TABLE III-2.c

## LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES

## PART I

Source	INPUTS	ANALYSIS	OUTPUTS
	Data Collection		Implications for Planning and Programming
Maps, Utility Companies, Contractors Specifications	<u>Physical Infrastructure</u> Networks: <ul style="list-style-type: none"> <li>- Water</li> <li>- Sewerage</li> <li>- Electricity</li> <li>- Roads</li> <li>- Transport</li> <li>- Telecommunications</li> <li>- Solid waste removal</li> </ul>	<ul style="list-style-type: none"> <li>- Determine existing capacities and standards</li> <li>- Locate plants, primary, secondary networks, areas served by tertiary networks</li> <li>- Assess levels of service or standards at urban, district and target group levels and by residential, commercial, industrial and other use.</li> <li>- Assess operational efficiency (losses, excess capacity, etc.)</li> <li>- Estimate future requirements on basis of population increase economic development requirements, improved level of service</li> <li>- See Figure 38 for analysis description</li> </ul>	<ul style="list-style-type: none"> <li>- Formulate program to ensure rehabilitation and maintenance of existing system and expansion of system at five year increments to meet future needs of population and economic development</li> <li>- Integrate levels of service with opportunity to cost recovery and reduced subsidy</li> </ul>
Contractors, Tender Documents	<u>Costs</u> <ul style="list-style-type: none"> <li>- Capital               <ul style="list-style-type: none"> <li>• New areas</li> <li>• Rehabilitation</li> </ul> </li> <li>- Operations and maintenance<sup>1</sup></li> </ul>	<u>Existing Costs</u> <ul style="list-style-type: none"> <li>- Update cost records to include unit items, cost/km of networks, per capita costs</li> </ul> <u>Operations and Maintenance<sup>1</sup></u> <ul style="list-style-type: none"> <li>- Estimate annual costs per unit of distribution, production &amp; per capita served, estimate shortfall &amp; increased expenditure needed</li> </ul>	<u>Cost Accounting</u> <ul style="list-style-type: none"> <li>- Reduce reliance on central government funds</li> <li>- Use of cost data for programming purposes</li> </ul>
Utility Companies, National and Governorate Budgets, Banks, and Cooperative Societies (Housing)	<u>Cost Recovery</u> <ul style="list-style-type: none"> <li>- Utilities               <ul style="list-style-type: none"> <li>• Revenues</li> <li>• Expenditures</li> <li>• Deficit</li> </ul> </li> <li>- Housing               <ul style="list-style-type: none"> <li>• Revenue (annual payments)</li> <li>• Loan amounts</li> <li>• Interest rates</li> </ul> </li> </ul>	<u>Cost Recovery Assessment</u> <ul style="list-style-type: none"> <li>- For regional and local items equate expenditures to cost recovery through tariffs and taxes.</li> <li>- Identify shortfalls, assess implications of full cost recovery on tariffs and taxes, levels of services and needed expansion, maintenance of systems</li> </ul>	<ul style="list-style-type: none"> <li>- Increase cost recovery for public investments built into programs</li> </ul>
Field Surveys Manpower Data, Performance Data	<u>Social Infrastructure</u> <ul style="list-style-type: none"> <li>- Inventory Services:               <ul style="list-style-type: none"> <li>• Health</li> <li>• Education</li> <li>• Social Services                   <ul style="list-style-type: none"> <li>- Number of establishments</li> <li>- Population served</li> <li>- Personnel</li> </ul> </li> </ul> </li> </ul>	<u>Existing Standards</u> <ul style="list-style-type: none"> <li>- Determine standards of services, i.e., beds/per capita; students/classroom</li> <li>- Determine space standards               <ul style="list-style-type: none"> <li>• Area</li> <li>• Building</li> </ul> </li> <li>- Compare standards with national, governorate and other urban standards</li> </ul> <u>Future Standards</u> <ul style="list-style-type: none"> <li>- Project improvement in standards and future requirements at 5-year intervals</li> </ul>	<u>Programming</u> <ul style="list-style-type: none"> <li>- Formulate development program aimed at maintaining or improving existing standards</li> </ul>
Tender Documents Budget Data, Ministries Health, Education, Other	<u>Costs</u> <ul style="list-style-type: none"> <li>- Capital costs</li> <li>- Operations and maintenance<sup>1</sup></li> </ul>	<u>Cost Assessments</u> <ul style="list-style-type: none"> <li>- Maintain costs records on provision of social infrastructure facilities per unit and per capita served</li> <li>- Estimate share of social infrastructure costs in overall new development costs</li> </ul>	<u>Cost Accounting and Recovery</u> <ul style="list-style-type: none"> <li>- Use costs for future programming</li> <li>- Keep overall subsidies as low as possible, yet ensure adequate funds for maintenance and operations</li> </ul>

<sup>1</sup>Including salaries, operations and maintenance and depreciation and debt servicing where appropriate.

**TABLE III-2.c (Continued)**  
**LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES**  
 PART II

Level of Government Responsible	Frequency of Analysis	Remarks
National/Regional/Governorate (Settlement maps, utility companies contractors specifications)	As needed (See Remarks)	Assessment of service standards should be done by national/regional level agencies on at least a 5-year basis. National level assessment should be done to ensure that policy objectives are met. Regional assessment should be done to monitor implementation programs. See Data forms A. 12, 14, 15, 16, 17, 18.
Governorate (Contractors, tender documents)	Annual	Changes in cost data should be collected on an annual basis by governorate Utilities and Engineering Offices and supplied to regional and national levels. Note data on national projects (sponsored directly by national authorities) should be collected and analyzed at national level (ministries and Deputy Prime Ministers Office for Urban Policy Affairs).
National/Regional/Governorate (Utilities companies, national and governorate budgets, banks, and cooperative societies)	Annual	Cost recovery assessment should be done at national level to ensure that policy objectives are being met. However, regional, governorate and/or settlement level agencies should assess their operations on an annual basis to ensure financially sound operating basis is maintained. See Data Forms A.13, 14, 15, 19.
National/Governorate/Settlement (Field surveys, manpower data, performance data)	Annually (See Remarks)	National level assessments of major sectors (health and education) should be done on annual basis to ensure that national objectives are met. Governorate and settlement level assessment should be done to ensure that services are adequate and to project future requirements. See Data Forms A. 24-29.
National/Governorate (Tender documents, budget data Ministries of Health and Education)	Annual (See Remarks)	Capital costs data should be monitored by national level agencies annually. Operating and maintenance data should be monitored at governorate level and at facility level to ensure financial soundness of facilities and to project future requirements.

**TABLE III-2.d**  
**LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES**  
**PART I**

Source	<u>INPUTS</u> Data Collection	<u>ANALYSIS</u>	<u>OUTPUTS</u> Implications for Planning and Programming
Census, Enumeration District Data	<u>Housing</u> <ul style="list-style-type: none"> <li>- Building data:               <ul style="list-style-type: none"> <li>● Number of buildings</li> <li>● Number of dwelling units</li> <li>● Number of rooms</li> <li>● Number of floors</li> </ul> </li> </ul>	<u>Existing Situation</u> <ul style="list-style-type: none"> <li>- Growth rate:               <ul style="list-style-type: none"> <li>● Past growth of housing stock</li> <li>● Comparison with growth of population (surplus or deficit)</li> </ul> </li> </ul>	<u>Programming</u> <ul style="list-style-type: none"> <li>- Formulate housing programs to upgrade or rehabilitate the existing housing stock and for new housing requirements               <ul style="list-style-type: none"> <li>● Achieve density targets</li> <li>● Maintain or improve existing standards</li> <li>● Equate housing costs with household affordability</li> </ul> </li> </ul>
Census, Enumeration	<ul style="list-style-type: none"> <li>- Densities:               <ul style="list-style-type: none"> <li>● Persons/building</li> <li>● Persons/dwelling unit</li> <li>● Persons/room</li> <li>● Rooms/household</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Existing Standards               <ul style="list-style-type: none"> <li>● Room densities</li> <li>● Rooms per household</li> <li>● Dwelling unit size</li> <li>● Gross and residential densities</li> <li>● Building conditions (see below)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Provide financial and technical assistance to support renewal, rehabilitation and new housing efforts</li> <li>● With the above provide public serviced desert sites (where possible) to guide private housing development</li> <li>● Develop equitable beneficiary selection procedures to benefit all income groups in proportion to their size</li> <li>● For renewal and rehabilitation, resolve tenant/owner conflict:</li> </ul>
Census, Building Surveys	<ul style="list-style-type: none"> <li>- Construction:               <ul style="list-style-type: none"> <li>● Materials</li> <li>● Types</li> <li>● Condition</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Construction classifications:               <ul style="list-style-type: none"> <li>● Materials</li> <li>● Structural soundness</li> <li>● Use of top soil for bricks</li> <li>● Effectiveness of public supplied materials</li> </ul> </li> </ul>	
Census, Tax Records	<ul style="list-style-type: none"> <li>- Ownership:               <ul style="list-style-type: none"> <li>● Public (by type)</li> <li>● Private</li> <li>● Cooperative</li> <li>● Other</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Ownership Classifications:               <ul style="list-style-type: none"> <li>● Data by type and area</li> <li>● Degree of household dwelling ownership and renting</li> </ul> </li> </ul>	
Census, Survey	<ul style="list-style-type: none"> <li>- Use: (Buildings and Housing)               <ul style="list-style-type: none"> <li>● Residential</li> <li>● Work</li> <li>● Combined</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Data by type and area</li> <li>● Relate to land use data</li> <li>● Implications for zoning (feasible or not)</li> </ul>	<u>Other Outputs</u> <ul style="list-style-type: none"> <li>- Density maps (by kism or sub-kism or residential type)</li> <li>- Average floor area ratio maps (if possible)</li> <li>- Building material and condition maps</li> <li>- Building use maps</li> </ul>
Building Permits Records, Interviews With Contractors, Field Surveys	<ul style="list-style-type: none"> <li>- Costs:               <ul style="list-style-type: none"> <li>● Formal</li> <li>● Informal</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Cost Assessments:               <ul style="list-style-type: none"> <li>● Update records of construction costs by type</li> <li>● Impact of public materials supply on costs</li> <li>● Means employed for housing finance; assessment of past public subsidies</li> </ul> </li> <li>- Future Proposals:               <ul style="list-style-type: none"> <li>● Using density targets and household affordability parameters formulate moderately improved housing standards as a guide for primarily private initiative</li> <li>● Test proposals by calculating costs and comparing them with household income levels</li> </ul> </li> </ul>	
UGUDR <sup>1</sup> , Geological Surveys	<u>Economic Data Source</u> <ul style="list-style-type: none"> <li>- Mineral Resources (Region)               <ul style="list-style-type: none"> <li>● Quantify exploitable</li> </ul> </li> </ul>	<u>Development Potential</u> <ul style="list-style-type: none"> <li>- Identify potential constraints mineral exploitation</li> <li>- Determine economic feasibility of exploitation</li> </ul>	<u>Programming</u> <ul style="list-style-type: none"> <li>- Develop program for economic exploitation, necessary infrastructure, etc.</li> </ul>
Ministry of Tourism	<ul style="list-style-type: none"> <li>- Tourism (amenities)               <ul style="list-style-type: none"> <li>● Quantify attractions</li> <li>● Number of visitor/beds</li> <li>● Room occupancy rates</li> <li>● Local tourism revenues</li> <li>● Local tourism employment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Identify growth potential and constraints</li> <li>- Determine economic feasibility of promotion</li> <li>- Assess existing and probable net benefit to local area</li> </ul>	<ul style="list-style-type: none"> <li>- Develop program to encourage (or discourage) tourism, needed services, infrastructure Ensure that cost recovery and revenues benefit local area</li> </ul>

<sup>1</sup>Refers to NUP'S Urban Growth and Urban Data Report which compiles recent urban data.

TABLE III-2.d (Continued)

LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES

PART II

Level of Government Responsible	Frequency of Analysis	Remarks
National (Census, Enumeration District Data)	10-year periods	Data collection and analysis done by national agencies. Governorate should have capacities to analyze data for program and project preparation.  In fast growing settlements, analysis should be done on 5-year basis. See Data Forms A, 20 - 23 for collection format.
National/Governorate (Census, Building surveys)	10-year periods	Data collection and analysis should be done by national level agency. Governorate should review structural soundness of buildings as necessary to ensure safety of housing stock.
National/Governorate	10-year periods	National level surveys should be conducted by national level agencies. Governorate should collect tax records on annual basis. These should be mapped on 5-year basis, but updated annually. See Data Form A, 23 for collection format.
National (Census)	10-year periods	Work should be done by national level agency (CAPMAS).
National/Governorate/Settlement (Building permit records, interviews with contractors, field surveys)	Annual	Costs should be collected on annual basis by governorate and settlement Utilities and Engineering Office and supplied to national level.
National (Geological Surveys)	As needed	See Data Form A, 8 for collection format.
National (Ministry of Tourism)	Annual	Data on international tourism should be collected by national agencies. Governorate Economic Planning and Finance Offices and/or Physical Planning Offices should collect data on hotel occupancy.

# TABLE III-2.6 LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES

## PART I

Source	<u>INPUTS</u> Data Collection	<u>ANALYSIS</u>	<u>OUTPUTS</u> Implications for Planning and Programming
UGUDR, Ministries of Irrigation, Electricity, Regional Distribution Companies	<ul style="list-style-type: none"> <li>- Water, power                             <ul style="list-style-type: none"> <li>• Quantify availability</li> <li>• Quantify use</li> </ul> </li> </ul>	<p style="text-align: center;"><u>Efficiency: Supply and Demand</u></p> <ul style="list-style-type: none"> <li>- Measure efficiency in use: losses, wastage</li> <li>- Compare current supply to expected needs, determine how much could be satisfied through more efficient use, and increased supply</li> <li>- See also Figure 38 for analysis format</li> </ul>	<ul style="list-style-type: none"> <li>- Establish programs to manage power and water supply efficiently                             <ul style="list-style-type: none"> <li>• Increase supply to acceptable levels at economic costs</li> <li>• Adjust water and power dependent economic and urban activities to feasible supply</li> </ul> </li> </ul>
Census, Socio-Economic Surveys	<ul style="list-style-type: none"> <li>- Human Resources                             <ul style="list-style-type: none"> <li>• Active population by sectors</li> <li>• Education levels</li> <li>• Inventory training programs and placement performance</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Identify strengths and weaknesses in skill mix</li> <li>- Relate to economic development requirements</li> </ul>	<ul style="list-style-type: none"> <li>- Identify economic activities appropriate to local skill mix</li> <li>- Institute literacy and vocational training programs which will enhance potential for economic development</li> </ul>
Census, CAPMAS Statistical Indicators Governorate Field Surveys Tax Data	<p style="text-align: center;"><u>Economic Activities (Public and Private)</u></p> <ul style="list-style-type: none"> <li>- Establishment                             <ul style="list-style-type: none"> <li>• Manufacturing industry (large, small) by type, no. employment, capital, output, value-added, employment</li> <li>• Services (large and small)</li> <li>• Other</li> </ul> </li> <li>- Employment                             <ul style="list-style-type: none"> <li>• Industry: by type</li> <li>• Services</li> <li>• Admin. finance</li> <li>• Etc.</li> </ul> </li> <li>- Investment by sector and economic activity</li> </ul>	<p style="text-align: center;"><u>Economic Assessments</u></p> <ul style="list-style-type: none"> <li>- Assess importance of public/private sectors and economic activities by type, formal/informal sectors</li> <li>- Assess national, regional and local functions of activities</li> <li>- Assess locational characteristics of economic activities</li> <li>- Relate to infrastructure, labor supply, resource requirements</li> <li>- Determine productivity industries activities</li> <li>- Assess opportunities for agglomeration, backward and forward linkages</li> </ul>	<p style="text-align: center;"><u>Programming</u></p> <p>Formulate an economic development program on the basis of:</p> <ul style="list-style-type: none"> <li>- Exploitable resources</li> <li>- Enhancement of productive economic activities</li> <li>- A hierarchy of national regional or local functions</li> <li>- High pay off opportunities</li> <li>- Rehabilitation and existing activities</li> <li>- Downgrade unproductive and costly enterprises</li> <li>- Favor labor intensive investments</li> <li>- Special assistance to small and medium sized establishments</li> </ul>
Surveys, Permit Data Development Plans	<ul style="list-style-type: none"> <li>- Investment by sector and economic activity</li> </ul>	<ul style="list-style-type: none"> <li>- Equate past investment to sectoral activity increases in employment and value-added</li> <li>- Locate investment spatially, measure impact on development trends, loss of arable land</li> </ul>	<p style="text-align: center;"><u>Other Outputs</u></p> <ul style="list-style-type: none"> <li>- Past and planned investment distribution map</li> <li>- Use investment to guide development in desirable locations</li> </ul>
Governorate Survey, Records	<p style="text-align: center;"><u>Administration</u></p> <ul style="list-style-type: none"> <li>- Organization and function                             <ul style="list-style-type: none"> <li>• National</li> <li>• Governorate (governorate and ministry departments)</li> <li>• Municipal</li> </ul> </li> <li>- Manpower                             <ul style="list-style-type: none"> <li>• Number</li> <li>• Training</li> <li>• Job classifications</li> <li>• Specific responsibilities</li> <li>• Pay scales and benefits</li> <li>• Origin of staff members</li> </ul> </li> </ul>	<p style="text-align: center;"><u>Efficiency and Need Assessments</u></p> <ul style="list-style-type: none"> <li>- Assess organizational and functional efficiency of administrative structure</li> <li>- Identify areas of overlapping responsibilities</li> <li>- Assess manpower capacity for carrying out responsibilities</li> <li>- Equate to national standards for settlement size &amp; location</li> <li>- Assess manpower aptitude and qualifications</li> </ul>	<p style="text-align: center;"><u>Reforms or Outputs:</u></p> <ul style="list-style-type: none"> <li>- Current and proposed organization and functions chart</li> <li>- Means to reward competent and motivated personnel</li> <li>- Means to recruit personnel with desired qualifications</li> <li>- Requirements for training:                             <ul style="list-style-type: none"> <li>• Institutional development</li> <li>• Skill development</li> </ul> </li> </ul>

TABLE III-2.e (Continued)

LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES

PART II

Level of Government Responsible	Frequency of Analysis	Remarks
National/Regional (Ministries of Irrigation, Electricity, Regional Distribution Companies)	Annual	National level agencies should be responsible for collection and analysis of water and electrical power data. Regional distribution companies responsible for collection of regional, governorate and settlement level data. See Data Forms A. 14 and 16 for collection format.
National (Census) Regional/Governorate (Socio-economic Surveys)	10-year period 5-year period	Data collection and analysis should be done by national level agency (CAPMAS). Regional and governorate levels should use data for program development and monitoring. See Data Forms A. 9 and 10 for collection format at governorate and settlement levels.
National (Census, Statistical Indicators) Governorate (Field Surveys and Tax Records)	Bi-annual period Annual	Data collection should be done on annual basis. Analysis may be done as needed, but not less than on a 5-year basis to monitor and update programs. See Data Forms A-6, 7, 8, 9, 10, 11, for data collection format at governorate and settlement level.
Governorate (Surveys, Permit data, Development Plans)	Annual	See Data Forms A. 6, 7, and 11 for settlement level collection format.
Governorate (Governorate Survey, Records)	Annual	Annual performance monitoring should be done to ensure administrative efficiency. National level agencies should monitor governorate performance to ensure that national policies are implemented. See Data Forms A. 30 - 32 (also A. 13, 15, 17, 19, if appropriate) for governorate level data collection format.

# TABLE III-2.f LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES

## PART I

Source	INPUTS	Data Collection	ANALYSIS	OUTPUTS Implications for Planning and Programming
<p>Governorate Planning and Housing Department City Council Agriculture Department</p>	<ul style="list-style-type: none"> <li>- Operation and control               <ul style="list-style-type: none"> <li>● Building Permits</li> <li>● Industrial permits</li> <li>● Licensing</li> <li>● Land registration</li> <li>● Subdivision permits</li> </ul> </li>   <li>- Development control violations and enforcement:               <ul style="list-style-type: none"> <li>● Building</li> <li>● Industry</li> <li>● Subdivisions</li> <li>● Licenses</li> <li>● Arable land and topsoil</li> </ul> </li> <li>- Court actions               <ul style="list-style-type: none"> <li>● Violations registered</li> <li>● Violations processed</li> <li>● Penalties imposed</li> <li>● Violations dismissed</li> </ul> </li> </ul>	<p style="text-align: center;"><u>Efficiency and Need Assessment (Continued)</u></p> <ul style="list-style-type: none"> <li>- Determine the number of permits, licenses, or transfers made annually               <ul style="list-style-type: none"> <li>● Compare to estimated growth of housing, industrial, other activities requiring permits or licenses</li> </ul> </li> <li>- Assess the average time it requires to process permits, licences or other approvals</li> <li>- Determine bottlenecks in process (i.e., bureaucratic obstacles) and acceptable "approval" time frame</li> <li>- Assess or determine average project size for permit request and approval</li> <li>- Determine amount of building, industry, land, commercial activities actually under control (and that which is not)</li> <li>- Estimate desirable and undesirable effects of past control or lack thereof</li>   <li>- Determining number of violations (i.e., in past 5 years)</li> <li>- Compare to number of violations which actually occurred (estimated on basis of census and survey data)</li> <li>- Determine general nature and impact of violations               <ul style="list-style-type: none"> <li>● Public</li> <li>● Private</li> </ul> </li> <li>- Identify reasons why violations were not detected (i.e., lack of personnel, equipment, etc.)</li> <li>- For violations determine number for which action was/was not taken for public and private offense.</li> <li>- Assess nature and effectiveness of penalties               <ul style="list-style-type: none"> <li>● Determine bottlenecks in inspection and legal framework for development control</li> <li>● Legal snags</li> </ul> </li> <li>- Determine changes needed, personnel equipment, legislation, etc.</li>   <li>- Determine share of revenues generated locally and those dependent on national contribution, foreign sources</li> <li>- Determine shares for each sector generated locally through national contribution</li> <li>- Determine potential for increasing local revenue with full development control and feasible levels of taxation               <ul style="list-style-type: none"> <li>● Permits and licenses</li> <li>● Property, consumer, income taxes, etc. (includes determining actual number of properties which should be on tax roles and those which currently are)</li> <li>● Betterment taxes, income taxes, etc.</li> <li>● Utility services, water, power, transport, etc.</li> </ul> </li> <li>- Given decentralization efforts determine which taxes could best be managed at the local level, (i.e., real estate taxes)</li> <li>- Determine which taxes could be used to guide urban development (i.e., vacant land tax and property tax)</li> <li>- Review collection efficiency, amount available, amount collected</li> </ul>	<p style="text-align: center;"><u>Output or Reform</u></p> <ul style="list-style-type: none"> <li>- Means to bring development under control through closer, stricter, monitoring of development</li> <li>- Increased inspection and tools to carry inspection               <ul style="list-style-type: none"> <li>● i.e., aerial photos, landsat, field checks (vehicules), etc.</li> </ul> </li>   <li>- In sectors where violations are known to occur, ensure that alternative sites, standards, etc. are available so that violations are not "forced" to occur</li> <li>- Publish and present to the public areas where restrictions will be applied.               <ul style="list-style-type: none"> <li>● Locations where development by type will be allowed and measured which will be applied to violators</li> </ul> </li> <li>- Use aerial photos, maps and field references as a base for monitoring development and violations</li> <li>- Formulate an enforcement program with sufficient personnel, equipment and authority to identify violators</li> <li>- Modify the legal, and approval process to ensure that violators are penalized and that these result in a desired outcome</li> <li>- Publish for public review the names of violators and penalties</li>   <li>- Develop proposals to improve the local resource base and financial autonomy including:               <ul style="list-style-type: none"> <li>● Increased levels of taxation</li> <li>● Increased collection efficiency</li> <li>● Transfer of funds now managed at central level to local government</li> <li>● Means to permit local level credit and borrowing to finance capital projects</li> </ul> </li> </ul>	
<p>Governorate Undersecretary of Finance</p>	<ul style="list-style-type: none"> <li>- Fiscal Management               <ul style="list-style-type: none"> <li>● Itemize government revenues by source and tax type</li> </ul> </li> </ul>	<p style="text-align: center;"><u>Efficiency and Need Assessment (Continued)</u></p> <ul style="list-style-type: none"> <li>- Determine share of revenues generated locally and those dependent on national contribution, foreign sources</li> <li>- Determine shares for each sector generated locally through national contribution</li> <li>- Determine potential for increasing local revenue with full development control and feasible levels of taxation               <ul style="list-style-type: none"> <li>● Permits and licenses</li> <li>● Property, consumer, income taxes, etc. (includes determining actual number of properties which should be on tax roles and those which currently are)</li> <li>● Betterment taxes, income taxes, etc.</li> <li>● Utility services, water, power, transport, etc.</li> </ul> </li> <li>- Given decentralization efforts determine which taxes could best be managed at the local level, (i.e., real estate taxes)</li> <li>- Determine which taxes could be used to guide urban development (i.e., vacant land tax and property tax)</li> <li>- Review collection efficiency, amount available, amount collected</li> </ul>	<p style="text-align: center;"><u>Output or Reform</u></p> <ul style="list-style-type: none"> <li>- Develop proposals to improve the local resource base and financial autonomy including:               <ul style="list-style-type: none"> <li>● Increased levels of taxation</li> <li>● Increased collection efficiency</li> <li>● Transfer of funds now managed at central level to local government</li> <li>● Means to permit local level credit and borrowing to finance capital projects</li> </ul> </li> </ul>	

TABLE III-2.f (Continued)

LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES

PART II

Level of Government Responsible	Frequency of Analysis	Remarks
Governorate (Planning and Housing Department) Settlement (City Council)	Ongoing	<p>Data for building permits, industrial permits licensing, etc., should be collected on an ongoing basis as these permits are issued. Analysis of data should be performed on an annual basis to compare with aerial photos (which for most settlements should be collected on a 5-year basis).</p> <p>Efficiency assessments and need assessments should be conducted on an annual basis by governorate staff for most settlements. For small settlements (less than 50,000 population) and slow growing settlements, these assessments should be conducted on a bi-annual basis or as needed.</p>
		<p>Data from development control violations and court actions should be collected as issued. Analysis of data should be performed on an annual basis. When modifications of legislation or executive regulations regarding development control measures are required, these actions should be referred by the governor to the appropriate national level agency (the Ministry of Development, Ministry of Justice, Ministry of Agriculture or as appropriate) for suitable action. The Deputy Prime Minister's Office for Urban Policy Affairs (proposed by NUPS) should also be informed of these actions.</p>
Governorate (Undersecretary of Finance)	Ongoing	<p>Data should be collected and processed on an ongoing basis. Analysis of data should be performed on a quarterly basis to monitor performance and prepare annual budgets.</p> <p>Results of analysis should be made available to Regional and National level agencies. At national level, the Deputy Prime Minister's Office for Urban Policy Affairs should receive copies of all analysis although national level action may occur in the Ministries of Finance, Planning and/or Economy, as appropriate. Changes in legislation, if necessary, should be developed at the ministry level and sent to the National Assembly for approval.</p>

**TABLE III-2.g**  
**LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES**

PART I

Source	<u>INPUTS</u>	<u>ANALYSIS</u>	<u>OUTPUTS</u>
	Data Collection		Implications for Planning and Programming
Governorate Budget and Expenditure Data, Central Government Sectoral Developments Undersecretary for Finance	<u>Fiscal Management (cont)</u> ● Expenditures: Budget and programming	<u>Efficiency and Needs Assessment</u> - With resource base, measure degree of financial and administrative autonomy at local level - Measure impact of local planning and budgeting at local level <ul style="list-style-type: none"> <li>● Compare requests to funds received and impact of project item(i.e., number of housing units planned, constructed, etc.)</li> </ul> - Assess impact of financial autonomy or lack thereof on decision-making - Compare planned to realized expenditures note differences and causes For operation and maintenance with manpower capacity and requirements estimate funding required to attract, satisfy personnel (salaries, benefits etc.) - Assess impact of financial autonomy or lack thereof on decision-making - Compare planned realized expenditures note differences and causes - For operation and maintenance (with manpower capacity and requirements) estimate funding required to attract, satisfy personnel (salaries, benefits, etc.) - Compare to amount available and identified changes needed to increase manpower and benefits - Estimate needed equipment, spare parts, supplies needed to ensure adequate support facilities and maintenance	<u>Output or Reforms</u> - Orient budget and expenditures on the basis of need and fiscal capacity - Reduce reliance on central government funds - Use budget as a tool to implement planned development program - Tie budget to locational aspects of development - On basis of available and potential local resources devise a budget for personnel operation and maintenance that would improve local management, meet special funding requirements - Overall programming and budgeting functions at governorate level should aim at measuring total costs against desired program outputs to determine efficiency of programming

Best Available Document

**TABLE III-2.g (Continued)**  
**LOCAL GOVERNMENT PLANNING AND PROGRAMMING GUIDELINES**  
**PART II**

Level of Government Responsible	Frequency of Analysis	Remarks
Governorate (Continued)	Ongoing	Data should be collected on an ongoing basis. Analysis should be performed quarterly.

## APPENDIX A

### DATA SETS

Physical Data:  
Demographic

POPULATION GROWTH

DATA FORM A-1

SETTLEMENT OR KISM	PREVIOUS YEARS POPULATIONS				CURRENT POPULATION 19-	LAST TWO YEARS		POPULATION AT TREND GROWTH RATE		NUPS PROJECTION	
	19-	19-	19-	19-		% INCREASE	ANN. GRWTH. RATE	19-	19-	POP. 19-	GROWTH RATE/ANNU
TOTAL OR AVERAGE											

A-1

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Physical Data:

## BASIC LAND USES: GOVERNORATE AND SETTLEMENT

DATA FORM A-2

GOVERNORATE OR SETTLEMENT	URBAN			AGRICULTURE			BARREN/VACANT			WATER		
	19-	19-	CHANGE	19-	19-	CHANGE	19-	19-	CHANGE	19-	19-	CHANGE

NOTE: SEE NUPS URBAN GROWTH AND URBAN DATA REPORT: SECTION

Date:

EXISTING LAND USE INVENTORY

LAND USE

DATA FORM A-3

BY SETTLEMENT, ZONE, KISM, OR CENSUS DISTRICT	RESIDENTIAL			COMMERCIAL		COMMUNITY FACILITIES				PARKS & RECREA- TION	CIRCULATION		GOVERNMENT SERVICES			INDUSTRY			CEME- TARIES	TOTAL AREA
	UNMIXED	MIXED COM- MERCIAL	MIXED WORK- SHOPS	UNMIXED	WARE- HOUSES	HEALTH	EDUCATION	UNIV.	SOCIAL AFFAIRS		PRIMARY SECOND- DARY	TERTIARY PARKING	ADMIN.	UTILI- TIES	MILI- TARY	HEAVY	LIGHT	WORK- SHOPS		
TOTAL																				
TOTAL BY USE																				



SETTLEMENT/KISM AREAS: BUILT-UP AND VACANT

Physical: Areas

DATA FORM A-5

BY SETTLEMENT OR KISM OR BOTH	CITY/AREA			BUILT-UP AREA			AGRICULTURAL			NON-AGRICULTURAL		
	PAST	ACTUAL	PLANNED	PAST	ACTUAL	PLANNED	PAST	ACTUAL	PLANNED	PAST	ACTUAL	PLANNED
	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-

ECONOMIC ACTIVITIES WITHIN THE GOVERNORATE CITIES

DATA FORM A-6

Industries within Free Zones (if applicable)

TYPE OF INDUSTRY	NO. OF FIRMS		SOURCE OF CAPITAL						EMPLOYMENT		AVERAGE WAGE RATE		VALUE OF RAW MATERIALS AND THEIR SOURCES				GROSS OUTPUT AND ITS (L.E.) DOMESTIC EXPORT		
			PRIVATE		FOREIGN		TOTAL						TOTAL		% FOREIGN TO TOTAL				
	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-

REVENUES: (if applicable)

BENEFICIARIES	BENCHMARK YEARS				CURRENT
	19_	19_	19_	19_	19_

Economic Data ;

MANUFACTURING INDUSTRIES  
(Governorate and Settlement)

DATA FORM A-7

INDUSTRY TYPE	INDUSTRY'S LOCATION	ESTIMATED DATE OF ESTABLISHMENT	EMPLOYMENT (WORKERS)	CAPITAL (L.E.)		OUTPUT (L.E.)		WAGES (L.E.)		MAJOR SOURCE OF THE MAIN RAW MATERIALS	FINAL PRODUCT'S MARKETS
				1976	1980	1976	1980	1976	1980		

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Economic Data:  
Resources

IDENTIFIED MINERAL DEPOSITS

DATA FORM A-8

TYPE	QUANTITY	PRODUCTION OR EASE OF EXTRACTION	IF APPLICABLE PRODUCTION COMPANY	EXPECTED ECONOMIC LIFE	DISTANCE TO CLOSEST URBAN SETTLEMENT	INFRASTRUCTURE REQUIREMENTS	
						ITEM	INVESTMENT
- - - - - -							

ACTIVE POPULATION (GOVERNORATE + SETTLEMENT)

LABOR FORCE (GOVERNORATE + SETTLEMENT)

ECONOMIC DATA

ACTIVE POPULATION SECTOR	PREVIOUS YEARS			CURRENT	% INCREASE LAST TWO PERIODS
	19-	19-	19-	19-	
AGRICULTURE					
MINING, QUARRYING					
MANUFACTURING					
UTILITIES					
BUILDING, CONST.					
TRADE					
FINANCE					
TRANSPORTATION AND STORAGE					
SERVICES					
ALL ELSE					

LABOR FORCE	PREVIOUS YEARS		CURRENT	% INCREASE LAST TWO PERIODS
	19-	19-	19-	
% LABOR FORCE TO TOTAL POP.				
% UNEMPLOYED TO LABOR FORCE				
% OF MALES IN LABOR FORCE				
% OF FEMALES IN LABOR FORCE				

EMPLOYMENT BY SECTOR  
(GOVERNORATE AND SETTLEMENT)

DATA FORM A-10

ECONOMIC DATA

EMPLOYMENT * SECTOR	BENCHMARK YEARS			CURRENT 19-	% OF TO- TAL EM- PLOYMENT	% INCREASE LAST TWO PERIODS	PLANNED		CURRENT SKILL MIX	
	19-	19-	19-				19-	19-	SKILLED	UNSKILLED
AGRICULTURE										
MINING										
MANUFACTURING										
CONSTRUCTION										
UTILITIES										
TRADE										
SERVICES										
TRANSPORT										
ALL ELSE										
TOTAL										

\* If possible indicate public & private employment

MANUFACTURING INDUSTRIES : EMPLOYMENT AND VALUE ADDED

DATA FORM A-11

ECONOMIC DATA : \*

INDUSTRY	PUBLIC SECTOR						PRIVATE SECTOR						TOTAL					
	EMPLOYMENT		VALUE ADDED		VALUE ADDED PER WORKER		EMPLOYMENT		VALUE ADDED		VALUE ADDED PER WORKER		EMPLOYMENT		VALUE ADDED		VALUE ADDED PER WORKER	
	000	%	LE (000)	₹	LE	₹	000	%	LE (000)	₹	LE	₹	000	%	LE (000)	₹	LE	₹
FOOD PROCESSING																		
TEXTILES																		
LEATHER																		
WOOD + FURNITURE																		
PAPER, PRINTING																		
CHEMICALS																		
OIL																		
NON METALLICS																		
METALLURGICAL																		
ENGINEERING MACHINERY																		
OTHER																		
TOTAL																		

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\* At Governorate and Settlement Levels

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PHYSICAL INFRASTRUCTURE

TRANSPORT ROAD NETWORKS

TRANSPORT ROAD	EXISTING LENGTH Km	EXISTING V.A.M.D. Km	EXISTING CONDITION			PLANNED INCREASES OR IMPROVEMENTS						
			GOOD Km	FAIR Km	POOR Km	LENGTH Km		PAVEMENT Km		INVESTMENT (L.E.—)		
						19-	19-	19-	19-	19-	19-	19-
PRIMARY												
SECONDARY												
TERTIARY												
TOTAL												

RAIL AND NETWORKS

TRANSPORT NETWORK	EXISTING LENGTH Km	EXISTING SITUATION			PLANNED IMPROVEMENTS						
		CONDITION			LENGTH			INVESTMENT (L.E.—)			
		GOOD Km	FAIR Km	POOR Km	19- Km	19- K	19- Km	19-	19-	19-	19-
RAIL:											
LIGHT											
HEAVY											
WATERWAYS											

TRANSPORT EMPLOYMENT DATA (IF APPLICABLE)

DATA FORM A-13

PHYSICAL INFRASTRUCTURE

TRANSPORT DEPARTMENT	BENCHMARK YEARS				CURRENT 19-	% INCREASE LAST TWO PERIODS	PLANNED INCREASE		
	19-	19-	19-	19-			19-	19-	19-
I									
II									
III									
ETC.									

EXPENDITURES AND REVENUES: GOVERNORATE OR MUNICIPAL (IF APPLICABLE)

TRANSPORT ITEM	BENCHMARK YEARS								CURRENT		PLANNED	
	19-		19-		19-		19-		19-		19-	19-
	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED		
BAB 1 SALARIES												
BAB 2 OPERATIONS MAINTENANCE												
BAB 3 INVESTMENT												
TOTAL												
REVENUES												
SURPLUS OR DEFICIT												

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ELECTRICITY EMPLOYMENT: ELECTRICAL UTILITY (IF APPLICABLE)

DATA FORM A-15

PHYSICAL INFRASTRUCTURE

ELECTRICITY DEPARTMENT	PREVIOUS YEARS				CURRENT	% INCREASE LAST TWO PERIODS	PLANNED INCREASES		
	19-	19-	19-	19-	19-		19-	19-	19-
1									
11									
111									
ETC.									

ELECTRICITY UTILITY EXPENDITURES AND REVENUES: GOVERNORATE AND MUNICIPAL (IF APPLICABLE)

ELECTRICITY TYPE	PREVIOUS YEARS								CURRENT		PLANNED	
	19-		19-		19-		19-		19-		19-	19-
	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED		
BAB 1 SALARIES												
BAB 2 OPERATIONS MAINTENANCE												
BAB 3 INVESTMENT												
TOTAL												
REVENUES												
SURPLUS OR DEFICIT												



WATER SUPPLY (CURRENT) EMPLOYMENT DATA

PHYSICAL INFRASTRUCTURE

WATER SUPPLY DEPARTMENT	PREVIOUS YEARS				CURRENT 19-	% INCREASE LAST TWO PERIODS	PLANNED INCREASE		
	19-	19-	19-	19-			19-	19-	19-
I									
II									
III									
ETC.									

EXPENDITURES AND REVENUES: GOVERNORATE OR MUNICIPAL

WATER SUPPLY TYPE	PREVIOUS YEARS								CURRENT		PLANNED	
	19-		19-		19-		19-		19-		19-	19-
	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED		
BAB 1 SALARIES												
BAB 2 OPERATIONS MAINTENANCE												
SUB TOTAL												
BAB 3 INVESTMENT												
TOTAL												
REVENUES												
SURPLUS OR DEFICIT												

SANITATION: NO. OF CONNECTIONS

PHYSICAL INFRASTRUCTURE

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SANITATION	NO. OF CONNECTIONS				% OF TOTAL	% INCREASE LAST TWO PERIODS	NO. OF CONNECTIONS		
	PREVIOUS YEARS			CURRENT			PLANNED		
	19-	19-	19-	19-			19-	19-	19-
HOUSEHOLD									
BUILDING									

CAPACITY FLOWS AND RESERVES

SANITATION	PREVIOUS YEARS			CURRENT	PLANNED	
ITEM	19- m <sup>3</sup> /d					
PLANT CAPACITY						
NETWORK CAPACITY						
PLANT SURPLUS OR RESERVE						

FLOWS: USE

SANITATION	PREVIOUS YEARS						CURRENT		PLANNED			
	3/d	1/c/d	m <sup>3</sup> /d	1/c/d								
RESIDENTIAL												
COMMERCIAL												
INDUSTRIAL												
OTHERS												
TOTAL												

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SANITATION EMPLOYMENT

DATA FORM A-19

PHYSICAL INFRASTRUCTURE

SANITATION DEPARTMENT	PREVIOUS YEARS				CURRENT 19-	INCREASE LAST TWO PERIODS	PLANNED INCREASE		
	19-	19-	19-	19-			19-	19-	19-
I									
II									
III									
ETC.									

EXPENDITURES AND REVENUES: GOVERNORATE OR MUNICIPAL BUDGET

SANITATION TYPE	PREVIOUS YEARS								CURRENT		PLANNED	
	19-		19-		19-		19-		19-		19-	19-
	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED		
BAB 1 SALARIES												
BAB 2 OPERATIONS MAINTENANCE												
BAB 3 INVESTMENT												
TOTAL												
REVENUES												
SURPLUS OR DEFICIT												

Physical Infrastructure: HOUSING BUILDING, DWELLING UNITS, VACANT DATA

DATA FORM A-20

BY SETTLEMENT, KISM, OR CENSUS DISTRICT	POPULATION		NO. RESIDENTIAL BUILDINGS		NO. OF FLOORS BUILDING		NO. OF DWELLING UNITS		NO. VACANT/UN- OCCUPIED UNITS	
	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-

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BUILDING OWNERSHIP AND USE

Physical Infrastructure: Housing

DATA FORM A-23

BY SETTLEMENT, KISM, OR CENSUS DISTRICT	NO. BUILDINGS	NO. DWELLING UNITS	BUILDING OWNERSHIP				TYPE OF USE			
			GOVERNMENT	PUBLIC	PRIVATE- CO-OP.	OTHER	RESIDEN- TIAL	WORK	COMBINED	OTHER

A-23

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EDUCATIONAL FACILITIES

DATA FORM A-24

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SOCIAL INFRASTRUCTURE

TYPES OF FACILITIES	NO. OF FACILITIES		NO. OF CLASSROOMS		NO. OF FACILITIES		NO. OF STUDENTS		STUDENT/CLASSROOM RATIO		STUDENT/TEACHER RATIO		% OF AGE GROUP IN SCHOOL	
	E	P	E	P	E	P	E	P	E	P	E	P	E	P
PRIMARY - PUBLIC - PRIVATE														
PREPARATORY - PUBLIC - PRIVATE														
SECONDARY - PUBLIC - PRIVATE														
SECONDARY SCHOOLS - GENERAL o PUBLIC o PRIVATE														
- COMMERCIAL o PUBLIC o PRIVATE														
- AGRICULTURAL o PUBLIC o PRIVATE														
- INDUSTRIAL o PUBLIC o PRIVATE														
TEACHER TRAINING - PUBLIC - PRIVATE														
UNIVERSITY - PUBLIC - PRIVATE														

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EDUCATION EMPLOYMENT DATA (REPEAT DATA FOR UNIVERSITIES)

DATA FORM A-25

SOCIAL INFRASTRUCTURE

EDUCATION DEPARTMENT	BENCHMARK YEARS				CURRENT		% INCREASE LAST TWO PERIODS	PLANNED INCREASE		
	19-	19-	19-	19-	19-			19-	19-	19-
I										
II										
III										
ETC										

EXPENDITURES AND REVENUES: GOVERNORATE OR MUNICIPAL

EDUCATION ITEM	BENCHMARK YEARS								CURRENT		PLANNED	
	19-		19-		19-		19-		19-		19-	19-
	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	19-	19-
BAB 1 SALARIES												
BAB 2 OPERATIONS MAINTENANCE												
BAB 3 INVESTMENT												
TOTAL												
REVENUES SURPLUS OR DEFICIT												

FACILITIES COVERED BY BAB 3	PAST INVESTMENT PLAN 19-	CURRENT INVESTMENT PLAN 19-	NEXT INVESTMENT PLAN 19-

HEALTH CARE EMPLOYMENT DATA

SOCIAL INFRASTRUCTURE

HEALTH DEPARTMENT	BENCHMARK YEARS				CURRENT		% INCREASE LAST TWO PERIODS	PLANNED INCREASE		
	19-	19-	19-	19-	19-			19-	19-	19-
I										
II										
III										
ETC										

EXPENDITURES AND REVENUES: GOVERNORATE OR MUNICIPAL

HEALTH ITEM	BENCHMARK YEARS								CURRENT		PLANNED	
	19-		19-		19-		19-		19-		19-	19-
	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	ACTUAL	PLANNED	19-	19-
BAB 1 SALARIES												
BAB 2 OPERATIONS MAINTENANCE												
BAB 3 INVESTMENT												
TOTAL												
SURPLUS OR DEFICIT												
REVENUES												

FACILITIES COVERED BY BAB 3	PAST INVESTMENT PLAN	CURRENT INVESTMENT PLAN	NEXT INVESTMENT PLAN

HEALTH CARE FACILITIES

SOCIAL INFRASTRUCTURE

HEALTH FACILITY	NO. OF FACILITIES		NO. OF BEDS		DOCTORS		NURSES		OTHER WORKERS		PATIENTS SERVED	
	E*	P*	E	P	E	P	E	P	E	P	E	P
	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-
<u>PUBLIC HOSPITALS</u>												
- General												
- Specialist												
- Fever												
- Chest												
TOTAL												
<u>CLINICS</u>												
- Mother/Child												
- Polyclinics												
- Ambulances												
- Primary												
- Others												
TOTAL												
<u>PRIVATE HOSPITALS</u>												
-												
-												
TOTAL												
<u>CLINICS</u>												
-												
-												
TOTAL												
GRAND TOTAL												

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E\* EXISTING FACILITIES

P\* PLANNED FACILITIES



TYPES OF FACILITIES	PUBLIC		PRIVATE		POPULATION SERVED				FACILITIES/POPULATION RATIO			
	NO. OF FACILITIES		NO. OF FACILITIES		PUBLIC F.		PRIVATE F.		PUBLIC F.		PRIVATE F.	
	E	P	E	P	E	P	E	P	E	P	E	P
	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-	19-
SOCIAL												
-												
-												
-												
-												
CULTURAL												
-												
-												
RECREATION												
-												
-												
CLUBS												
-												
-												
RELIGIOUS												
-												
-												
OTHERS												
-												
-												
-												

EXPENDITURES DEPARTMENTS	SALARIES & WAGES			CURRENT EXPENDITURES			INVESTMENTS			CAPITAL TRANSFERS			TOTAL		
	PAST 19-	CURRENT 19-	PLANNED 19-	PAST 19-	CURRENT 19-	PLANNED 19-	PAST 19-	CURRENT 19-	PLANNED 19-	PAST 19-	CURRENT 19-	PLANNED 19-	PAST 19-	CURRENT 19-	PLANNED 19-
- HEADQUARTERS % OF TOTAL	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
- EDUCATION % OF TOTAL	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
- HEALTH % OF TOTAL	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
- HOUSING % OF TOTAL	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
- SOCIAL AFFAIRS % OF TOTAL	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
- SUPPLY AND INTERNAL TRADE % OF TOTAL	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
- AGRICULTURE % OF TOTAL	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
- MANPOWER % OF TOTAL	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
TOTAL % OF TOTAL	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?

GOVERNORATE AND MUNICIPAL STAFFING

DATA FORM A-31

STAFFING		CATEGORY	ALLOWABLE *	ACTUAL POSITIONS		PLANNED		
DEPARTMENT				OCCUPIED	VACANT	19-	19-	19-
DEPARTMENT	I	1st 2nd 3rd						
DEPARTMENT	II	1st 2nd 3rd						
DEPARTMENT	III	1st 2nd 3rd						
DEPARTMENT	IV							

\* Reference Ministry of Local Government Guidelines

REVENUES  
GOVERNORATE AND MUNICIPAL

DATA FORM A-32

ADMINISTRATION

REVENUES SOURCE	PREVIOUS YEARS				CURRENT 19-	% INCREASE LAST TWO PERIODS	PLANNED		
	19-	19-	19-	19-			19-	19-	19-
<u>LOCAL</u>									
TAXES									
PROPERTY									
(REAL ESTATE)									
(BUILDING)									
- BETTERMENT									
- ENTERTAINMENT									
- VEHICLE									
- BENZIN									
-									
-									
-									
SALE OF LAND									
SUB TOTAL									
SPECIAL FUNDS									
- HOUSING									
- CLEANLINESS									
-									
-									
SUB TOTAL									
TOTAL LOCAL									
<u>CENTRAL GOVT.</u>									
- GRANTS									
-									
-									
- LOANS									
-									
-									
SUB TOTAL									
GRAND TOTAL									

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APPENDIX B

TARGET GROUP IDENTIFICATION

## APPENDIX B

### TARGET GROUP IDENTIFICATION

#### I. TARGET GROUPS FOR NATIONAL URBAN POLICY

##### A. INTRODUCTION

"Target Group" is a term designed to denote a specific identifiable group of population for which a particular action program can be designed by government to achieve explicit objectives. For example, "adult literacy programs" as the title implies are designed for a specific target group of population, i.e., persons beyond normal school age who are presently illiterate. It would not be expected that persons who are already literate would be interested in participating in the program, nor would the government be interested in spending program funds to provide such training. In a case-by-case situation, the identification of target groups can be quite simple, but when an integrated program or policy is being developed, the problem of target group identification becomes more complex.

A national housing policy, for instance, will consist of a bundle of discrete but related program actions (a variety of physical housing solutions, a mixture of housing finance programs, related roles for the public and private sectors, etc.), designed to cover the entire urban and sometimes rural population. There cannot be a "custom" solution for each household at any tolerable cost. Therefore, the population must be grouped into target groups and a specific program response designed for each of a limited number of target groups. If the national program does not offer a good enough mix of program actions, some percentage of the population will not be able to receive any benefit (i.e., if the cost of households, with or without subsidies, is beyond their ability to pay or if the program costs is too high to provide the program service to all of the population for whom it was intended).

It is, therefore, important for policy and program planners to consider target groups and their particular characteristics when designing projects. The failure to match the program content with the target groups will lead to a misuse of scarce capital resources and less effective programs.

A national urban policy is complex, and one target group classification will not be appropriate in all situations. Nonetheless, a broad typology can be built around the critical concepts of physical and economic mobility.

##### I. Physical Mobility

Physical mobility of households is one critical variable affecting the spatial allocation of population in Egypt. There are four types of migration which can be considered:

Rural to urban migration

- Urban to urban migration
- Intra-urban migration within an urban area
- International migration

These types of migration need to be considered in a national policy so that a desirable pattern of migration develops which contributes to the achievement of the desired spatial allocation of the population in Egypt.

## 2. Economic Mobility

The second major consideration in target group formation is the economic mobility of the population. Economic mobility is a key factor in physical mobility as opportunity for a better job is a prime motivator in the migration process.

These are four types of economic mobility to be considered:

- Target groups which are not upwardly mobile because they have already achieved a high economic position.
- Already economically mobile target groups which are in the process of improving their status.
- Potentially mobile groups which could improve their economic situation under the proper stimulus.
- Fundamentally disadvantaged groups which cannot improve their situation without major outside stimulus over a prolonged period of time.

## 3. Household Characteristics Affecting Target Group Formation

Physical and economic mobility are related to the characteristics of households in their present situations. Action programming for a target group, therefore, must relate to these characteristics in a way which stimulates the desired response from the household. There are six major household characteristics to be considered. All six interact to influence the household's potential for physical and economic mobility.

### a. Household Income

Household income is a factor of earned income from labor or from income generated from the utilization of capital assets (see below). Households enjoying a high income or expecting to achieve a satisfactory income in their present situation in relation to their other characteristics discussed below are not likely to be physically mobile.

Fundamentally, disadvantaged households which usually have extremely low incomes are typically not mobile, or if they are, of little economic value in their new location.

Therefore, it is the wide middle range of income groups which are potentially both physically and economically mobile. Their mobility is, in turn, influenced by other factors operating in the household.

b. Ownership of Capital Assets

Household capital assets include durable goods (furniture, TV's, refrigerators, automobiles, etc.) which are transportable and, therefore, less important in a physical mobility decision. Other capital assets, however, affect both economic and physical mobility of households and businesses. Households without capital assets and with other appropriate characteristics are more likely to be physically mobile than those with such assets. However, under given circumstances, the possession of capital assets need not be a deterrent to physical mobility and can even be a catalyst.

- Savings

Household savings in the form of cash or bank deposits are difficult to measure in Egypt. The foreign worker remittances are a major influencing investment in housing and business in Egypt. Households with savings to invest are likely to be economically mobile and potentially physically mobile.

- Land and Housing

Households with potential to own land are candidates for physical mobility.

Rural households owning land may become physically mobile if income from the land is unsatisfactory or potentially derived income from the sale of rural land leads to high profits.

Ownership of urban land is more likely to reduce the potential of a household's physical mobility, in part because continued increases in land value provide potential continued upward mobility. It should be noted that tenants with very low rents under rent control are also relatively immobile. Conversely, individuals and households without land or housing are potentially more physically mobile.

- Business

The ownership of a business, whether a service or an industrial enterprise, makes the household potentially economically mobile. The owners of businesses and potential owners are a critical target group because they generate economic activity and employment. All types of businesses derive consideration in a national urban policy from the very small operations to the large domestic international firms. Small household-owned and operated businesses will be influenced in terms of physical mobility in a variety of ways. If the business is already successful and growing at the owner's expectation, it is unlikely that they will move from the present location. More likely, a family member would be designated to start a similar business in a new location while maintaining the present business.

The critical interdependence of small-scale business in Egypt makes this a more difficult choice as frequently many small businesses closely related to each other must be clustered together for their own survival.

c. Job Skills and Education

The mix of job skills and education within the household is important in determining economic mobility. Education has been the key to upward social and to some extent, economic mobility; it is, therefore, a key objective to all households for their children and is a major motivating force for physical mobility.

The Army can also be considered in this sense as a part of the "educational" system for rural and lower income groups since many receive training in marketable skills which will also contribute to their potential economic and physical mobility.

Migrants tend to be better educated than non-migrants. People with readily marketable job skills are also potentially physically mobile, but many without such education or job skills also migrate.

The creation of formal sector jobs alone may not generate the kind of permanent migration needed to achieve national urban policy objectives. Industrial workers, for example, may be from households with a variety of informal sector job holders as well. Older children may be working, wives may be working, or the industrial worker himself may be holding more than one job. The creation of a better job opportunity location may not justify moving his family. He may endure a long commute to the job in order to maintain his present location or he may go but not bring along his family. To make the decision to migrate as a family, the new location would have to provide increased benefit for the family in the aggregate.

d. Age, Sex, and Kinship Ties

Young males without strong family or kinship ties are most likely to be potentially economically and physically mobile. Young women will tend to follow husbands or fathers but not be physically mobile as individuals, except to go to universities. Any program to induce physical mobility must be designed to attract the young and young married families (before children have grown to the point that they are economically active). The future location of these physically mobile persons will be strongly influenced by family, kinship or regional ties in the new location. Older persons and pensioners are less likely to be physically and economically mobile.

4. Summary of Target Group Characteristics

The general characteristics of the most potential physically mobile group for permanent settlement would include:

- Young adult males or young married couples with or without infant children.
- Persons with job skill training obtained from the army, vocational.

- Persons with some family or regional ties in the future settlement.

The general characteristics of the least potentially physically mobile group for permanent settlement would include:

- Old persons and mature families with multiple incomes.
- Households holding significant capital assets which they cannot or wish not to convert to cash savings.
- Households without kinship or family ties outside of their current place of residence.
- Upper income and upper class persons with no perceived economic gain from migration on a permanent basis.
- Lowest income persons without prerequisite characteristics.

Obviously, such a crude profile is not precise nor even mutually exclusive, but it does suggest a general policy focus if the behavior of these target groups is to be influenced by government action. Target groups and subgroups can be related to generalized types of actions to be recommended by the national urban policy.

## B. THE ASSEMBLY OF INFORMATION FOR IDENTIFYING URBAN TARGET GROUPS

### I. Data Requirements

The identification of urban target groups for designing programs and projects will be particularly useful at the local government. Unlike, the broader implications of target group identification at the national urban policy level, urban target groups will have more direct implications for specific projects and programs. The types of information required for target group identification will vary from country to country. In some cases, rental values can be used for dwelling units. However, due to rent control, this element would not prove to be useful in Egypt. Generally, the types of data required for target group identification include:

- Present and projected population size
- Present and projected population age and sex structure
- Present and projected household characteristics:
  - Household size
  - Household income and consumption characteristics (data on a household and per capita basis):
    - a. food intake (i.e., calories)

- b. potable water (liters per day, connections to system)
  - c. electricity (kwh per day, connection to system)
  - d. sanitation (liters per day, connections to system types)
  - e. dwelling unit size (m<sup>2</sup>)
  - f. residential area and plot size (m<sup>2</sup>)
  - g. fuel for cooking and transportation (liters).
- Individual Characteristics
    - Age
    - Sex
    - Special functional needs

## 2. Sources of Data for Urban Target Groups

Three types of sources for such information will be mentioned: census and special sample survey data, data derived from aerial photography and selective field investigation and data derived from field identification of target groups and selective field investigation within those target groups.

### a. Census and Special Sample Surveys Data

If census and special surveys are well designed and executed, they will be the most reliable of the three discussed here, although not necessarily the most cost effective. Even special surveys usually will require much longer to execute than either of the two other methods that will be suggested.

Census data generally will not include any of the information needed on household consumption, household assets, households' territorial orientation, or individual functional needs. These must, therefore, be obtained from special sample surveys designed specifically for the identification of target groups. In considering the use of existing regular surveys or special surveys, it should be borne in mind that survey design, data collection and data processing may take as much as six months or even a year with a city of one million and usefulness of the results depends, obviously, upon the quality of the survey design and execution. The problem encountered in using survey results are well known. It should be noted also that regular surveys of household consumption and expenditure may have sample designs such that the results are usable on a national scale but not for individual cities. Sample designs must be examined carefully to determine the usability of results in individual localities.

b. Interpretation of Aerial Photographs Supplemented by Selective Field Investigation

This procedure has been used with considerable success recently in several cities worldwide. There are many variations on this procedure. Only its basic components will be outlined here.

As a first step, aerial photographs of the area in question are prepared at a suitable scale, if recent ones do not already exist. Two sets from differing times, i.e., three to five years apart are suggested.

Second, the photographs are analyzed to identify a housing or settlement typology to provide a basis for a subsequent field investigation of household characteristics. The identification of the housing typology itself will require some field checking. In a city of 500,000 three skilled professionals should be able to identify an appropriate typology in about two weeks.

Third, selective field surveys are conducted for each of the housing categories identified in the typology in order to get limited but usable information on total population, assets and households territorial orientations. If recent census data are available, the total population estimates and household structure can be checked against these census and other household characteristics. These, too, can be compared with the results of the photographs. This third step, resulting in the identification of target groups, might take something of the order of six to eight weeks with four skilled professionals in a city of 500,000.

The information on target groups obtained in this way is likely to be cruder than that resulting from conventional sample surveys, but is likely to be adequate for project preparation purposes and it may take as little as three months to prepare, compared with the six to twelve months often required for conventional surveys.

c. Field Demarcation of a Housing Typology Supplemented By Selective Field Investigation

This third procedure is similar to the second except that the original housing or settlement typology is identified by direct field investigation and mapping if aerial photographs cannot be obtained. The time required for the preparation of the typology will depend on the degree of precision sought. To obtain precision comparable to that achievable with aerial photography in a city of 500,000, presuming that good base maps showing every street in the city are available, a team of four skilled professionals might require six to nine months, compared to the two weeks achievable with three professionals working from aerial photographs.

APPENDIX C

STANDARDS AND COSTS OF SPATIAL TARGET GROUPS  
OF THE PREFERRED STRATEGY

## APPENDIX C

### I. STANDARDS OF THE SPATIAL TARGET GROUPS

Chapter III-C presented the concept that packages of housing and intra urban infrastructure standards could be developed to implement the spatial objectives of the national urban policy. It also pointed out that these packages could also be used to achieve greater inter-regional equity: basic levels of infrastructure could be provided in every region to alleviate existing deficits.

Eight major spatial target groups (or settlement types receiving special attention) have been developed to illustrate the concept of how packages of housing and intra-urban infrastructure can be designed to implement national urban policy:

- Major metropolitan areas
- High growth areas
- Areas selected for special emphasis
- Regional service centers in the Delta
- Non Special Emphasis Settlements: governorate capitals
- Non Special Emphasis Settlements: other settlements
- Remote area settlements
- Non Special Emphasis Settlements with populations less than 50,000

Examples of each of these spatial target groups are illustrated in Figures II-12 through II-25 in the main report. For each of the spatial target groups, an example settlement was chosen to demonstrate how per capita costs were developed.

The spatial target group housing and intra-urban infrastructure packages contain the following information: settlement gross densities, population, land requirements, housing standards, physical infrastructure, social infrastructure, total housing and infrastructure costs, and an affordability analysis.

The physical standards shown on the spatial target group tables are explained in the following sections of this appendix, however, some explanation is necessary about the per capita costs shown in the spatial target group figures. The first set of per capita costs labelled "Indicative Per Capita Costs" are the per capita capital or costs of providing housing and intra-urban infrastructure to serve new populations. The second set of costs are the total capital costs for serving new

populations, plus the capital rehabilitation costs of upgrading or strengthening existing infrastructure.

Since these total costs serve the entire population of the settlement, they have been divided by the total population at the end of the period to indicate the level of total budgetary outlays necessary to finance both existing and new infrastructure at the standards shown in the spatial target group package. The adjusted total costs of the figures are the base costs multiplied times regional construction cost factors.

As a comparison of the level of investment required for both rehabilitation of existing areas and construction of new areas at the standards shown, Part VII (of Figures II-12 through II-25) shows the per capita costs of both existing and new areas. These costs were calculated as outputs of the individual housing and infrastructure components. The total capital costs of existing areas were calculated by dividing the portion of the adjusted total costs due to rehabilitation by the population existing at the beginning of the period (as shown in figures, this is the 1985 population). The remaining portion of the total adjusted capital costs divided by the change in population during the period is then the per capita costs of new areas.

The affordability analysis shown on Part VII of the figures was based on assumptions that household disposable incomes will continue to rise in real terms at a growth rate of 3.85 percent per annum. (Table C-1)

This analysis was derived from a variable payment mortgage formula. This affordability projection represents the combined effect of increasing household savings plus the present worth of annual payments made by households having rising incomes on the household sector's ability to afford increasing portions of the capital costs of intra-urban infrastructure and housing. The formula used is as follows:

$$\text{Household Affordability} = \left[ \frac{(A) (\%HSG) (RI)}{(1+i)^n (i-p)} \right] + \left[ \text{SAV} \frac{1}{\text{INV}} \right]$$

- Where:
- A = Annual household income
  - %HSG = Percent of household income which can be spent on housing and intra-urban infrastructure
  - RI = Regional Wage Index (See Chapter IV, Section II of the National Urban Policy Study, Final Report)
  - i = Opportunity cost of capital
  - n = Life of investment
  - p = Percent annual growth rate of household incomes
  - SAV = Household savings
  - INV = Investment in housing and intra-urban infrastructure

TABLE C-1

PER CAPITA HOUSEHOLD INCOME AND SAVINGS ASSUMPTIONS

	HOUSEHOLD INCOMES (L.E.)	HOUSEHOLD SAVINGS (L.E.)
1979 Base	208	45.3
1986-1990	251	54.7 <sup>1</sup>
1991-1995	303	60.2 <sup>1</sup>
1996-2000	366	62.2 <sup>1</sup>

<sup>1</sup> As is discussed in Chapter IV-II of the NUPS Final Report, household savings were projected to increase between 1979 and 1990 at an annual growth rate of 3.85 percent and, thereafter, at 1.93 percent.

The formula has three main parts. The numerator indicates the portion of annual income which is available to finance housing and infrastructure. The denominator shows the present worth of that portion of income, plus household savings by the total investment in housing and infrastructure to show the portion of costs which are affordable.

The following sections of this appendix discuss the standards used for both estimates of the housing and intra-urban infrastructure costs of the NUJPS Preferred Strategy. These standards should not be viewed as absolute standards, but as targets around which individual programs and projects can be designed. At the program and project level, there is scope for variation in these target standards. However, the target standards and their indicative per capita costs should be viewed as a means for re-evaluating the program and project level proposals.

## II. STANDARDS OF THE SPATIAL TARGET GROUPS

### A. HOUSING

The following is a sampling of average standards which are representative of a range of housing solutions. While these standards and costs represent averages targeted at median household income levels, they are intended to represent a range of housing solutions at a variety of costs.

The highest standard shown in Table C-2 is the average standard of housing provisions of the 10th of Ramadan First Stage, i.e., 74 square meter flats having average per capita costs of L.E. 1,040. These housing provisions range from core housing having built-areas of 15 square meters to luxury villas and town houses having built-areas of 135 square meters.

The next two standards shown on Table C-2 have been derived from the National Housing Plan of 1979. The standard with an indicative per capita cost of L.E. 552 was derived from the minimum standard of the plan, a flat having 45 square meters. However, to provide more flexibility in construction and design, the flat was costed at L.E. 61 per square meter rather than the suggested plan cost of L.E. 58 per square meter. The second standard shows the impact of increasing the minimum National Housing Plan standards by 25 percent so that per capita costs are L.E. 690.

The standard derived from the indicative per capita cost of L.E. 418 was that of informal housing construction in Greater Cairo during 1979. During the 1976 to 1981 period, the informal sector in Greater Cairo built an average of 68,000 dwellings per year or a total of 340,000 dwelling units. This dwelling unit construction rate represents a potential investment in housing and land of L.E. 2.2 billion in all urban areas in Egypt. As a result of informal sector building, the median dwelling unit was 3.35 rooms or roughly 36 square meters. The L.E. 418 per capita cost was used for most of the capital costs of the Preferred Strategy to trace through the impact of housing policy which aims at maximum private sector financing of intra-urban infrastructure. At this level of expenditure, NUJPS projections of household income and savings are adequate to finance all housing costs, plus portions of other intra-urban infrastructure.

TABLE C-2  
 DWELLING UNIT STANDARDS USED TO COST HOUSING REQUIREMENTS  
 OF THE PREFERRED STRATEGY

(1979 L.E. PRICES)

Indicative Per Capita Cost (L.E./Capita)	Unit Area (m <sup>2</sup> )	Unit Area (L.E./m <sup>2</sup> )	Total Unit Cost (L.E.)	REMARKS
1,042	74	70.0	5,180	Average cost of housing of 10th of Ramadan.
690	50	69.0	3,450	Minimum flat of National Housing Plan of 1979 increased by 25 percent.
552	45	61.0	2,760	Minimum flat of National Housing Plan.
418	36	55.7	2,006	Average cost of informal sector housing in Greater Cairo.
390	35	55.7	1,950	Average "value" of existing urban housing according to data from Appendix I of the Draft Final Report of Construction Industry Study.
468	36	62.7	2,256	Delta redevelopment cost based on Tanta case: includes compensation for existing dwellings.

The standards used to estimate Delta development costs were based on data developed during the Illustrative Development Project focused on Tanta. Analysis of governorate data coupled with ground surveys indicates that 16 percent of Tanta's 1980 population lives in dwelling units that are seriously deteriorated and should be replaced. In one project area, consisting of 50,850 people (roughly 10,550 dwelling units), it was assumed that compensation would have to be paid to existing owners and tenants to enable them to find temporary quarters during redevelopment and to compensate them for the disruption in their lives that might occur during redevelopment. This compensation was based on 30 percent of the value of new construction of flats of similar space standards (surveys conducted by the governorate indicate that the average built-area per family in the redevelopment area is 33 square meters). This would result in an average compensation per dwelling unit of L.E. 701. A more complete discussion of informal housing is found in Chapter IV.11 of the NUPS Final Report.

In redeveloping the area, it was assumed that the land would remain in private ownership, thus, no land purchase prices were included. The project area presently has a net density of 428 persons per hectare and consists of mainly one storey buildings. If the redevelopment averaged 2.5 floors, roughly 23,470 new units could be constructed; 12,920 units designated for new population while 10,550 would be targeted for the existing population. If this redevelopment cost were applied against Tanta's total population projected for the 1986-1990 period and the average cost of informal housing in Greater Cairo used to project other housing costs, i.e., L.E. 418 per capita, then the total cost of providing housing for Tanta's new population during the period (117,200), plus redeveloping the decayed areas (50,800 population) is L.E. 468 per capita.

## B. PHYSICAL INFRASTRUCTURE COSTS

We have attempted to predict the impact on the per capita costs of water, sewerage and circulation of different settlement densities and consumption standards by using functional relationships developed from data supplied for the Provincial Water Supplies Project and standards and costs of recent settlement projects currently being implemented in Egypt. The functional relationships which result from the analysis of the data supplied by these projects are shown in Figures C-1 through C-4. As the figures show, these indicative per capita costs vary considerably with changes in standards and gross densities. These costs themselves are presented as a means of evaluating different settlement densities and consumption patterns prior to detailed feasibility studies or detailed information about the condition of existing infrastructure networks. Section II(C) describes the methodology used to calculate these relationships.

The spatial target group intra-infrastructure packages show the costs of water and sewerage systems at standards which range from the national average consumption standards of major settlement (excluding the Canal Cities, Alexandria and Greater Cairo) to those of Greater Cairo. These standards and their sources are shown in Table C-3.

Circulation costs are based on the costs of constructing road networks at different densities and per capita land requirements shown in the NUPS "Urban Development Standards and Costs" working paper. These are summarized in Table C-4. Since relatively little data exists about actual land use in Egypt's settlements,

INDICATIVE PER CAPITA COST OF WATER SUPPLY  
AT DIFFERENT GROSS DENSITIES AND CONSUMPTION RATES

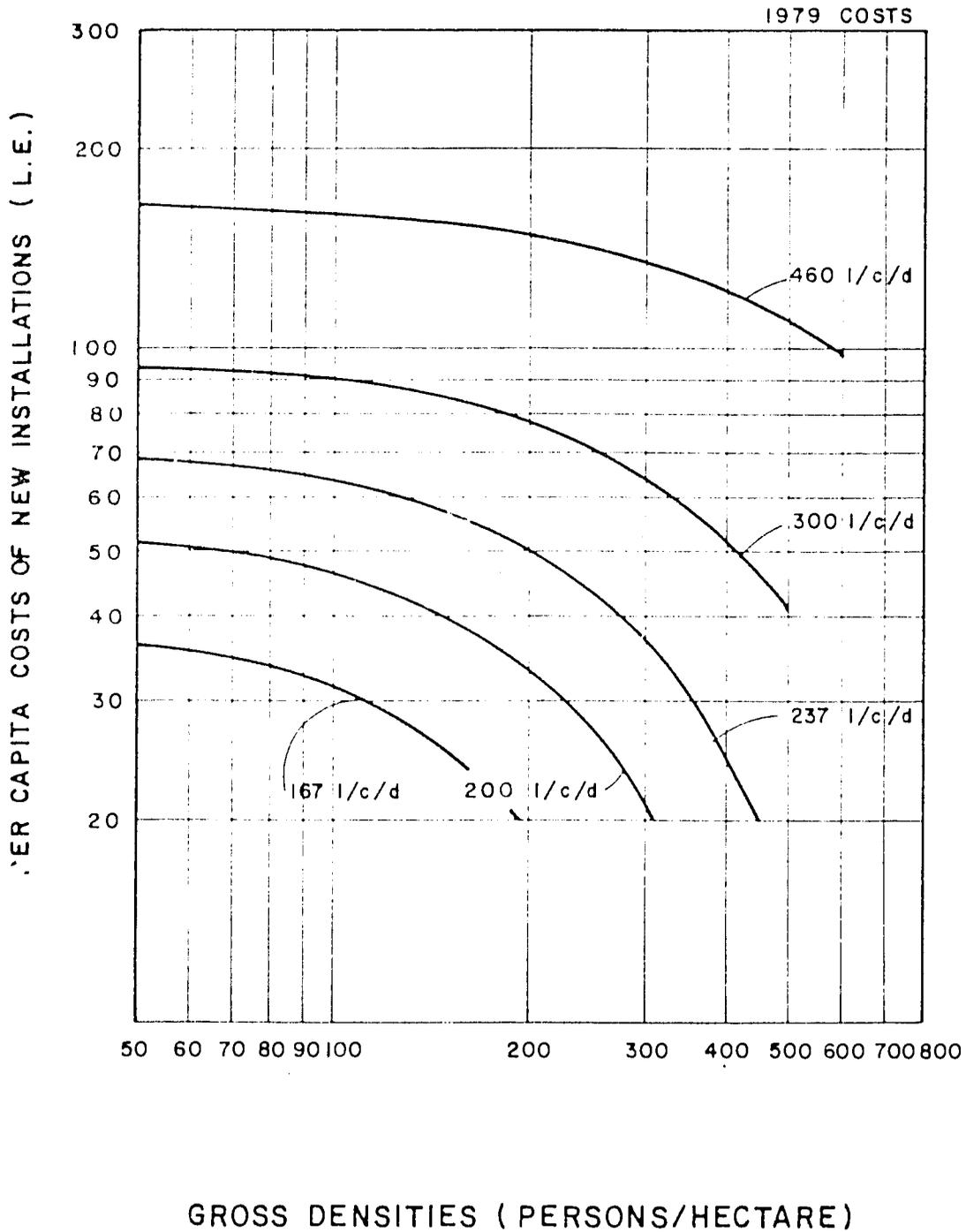


FIGURE C-1

INDICATIVE PER CAPITA COSTS SEWERAGE SYSTEMS AT  
DIFFERENT GROSS DENSITIES AND TOTAL SEWERAGE FLOWS

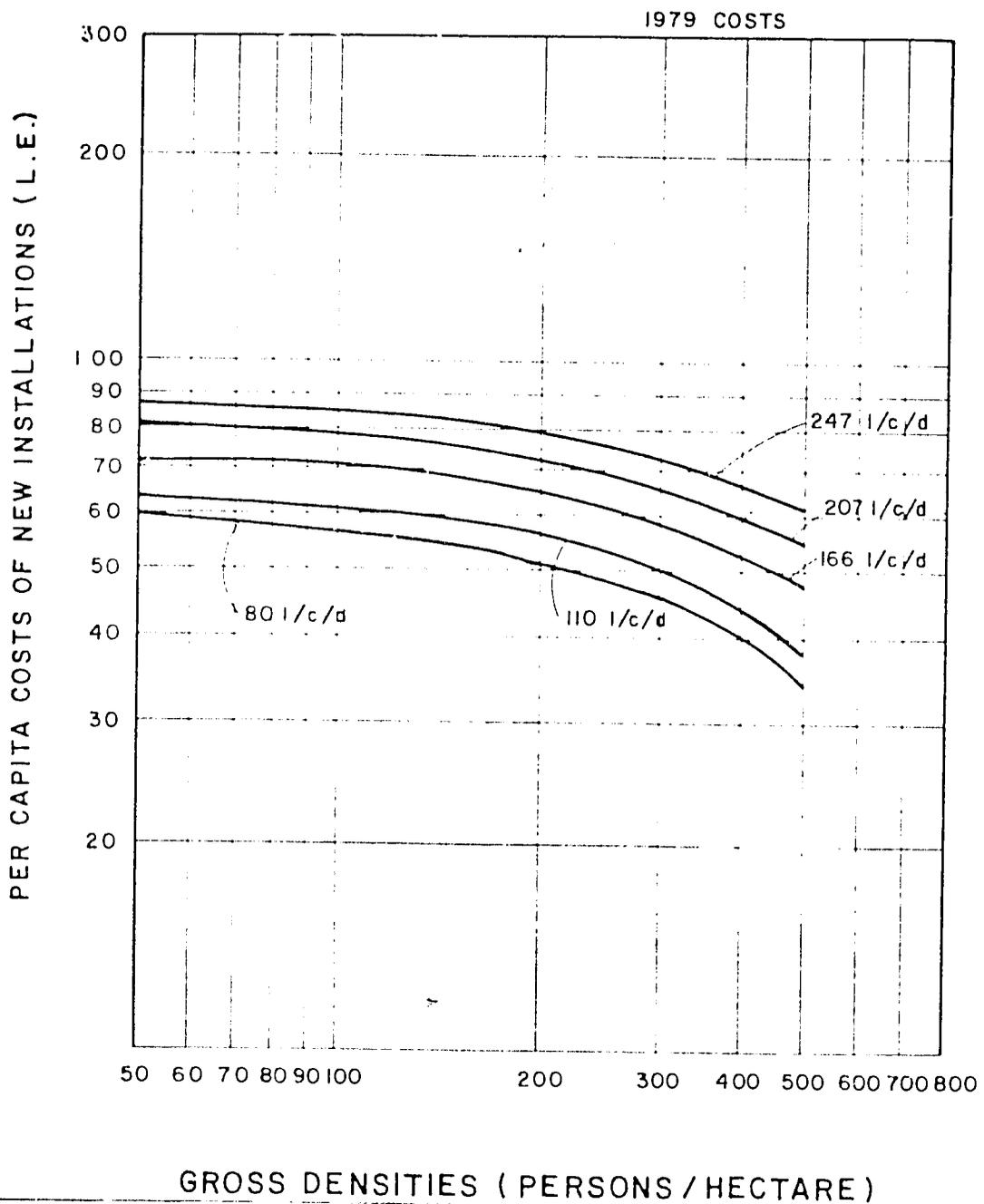


FIGURE C-2

125

INDICATIVE PER CAPITA CIRCULATION COSTS AT  
DIFFERENT GROSS DENSITIES AND LAND REQUIREMENTS

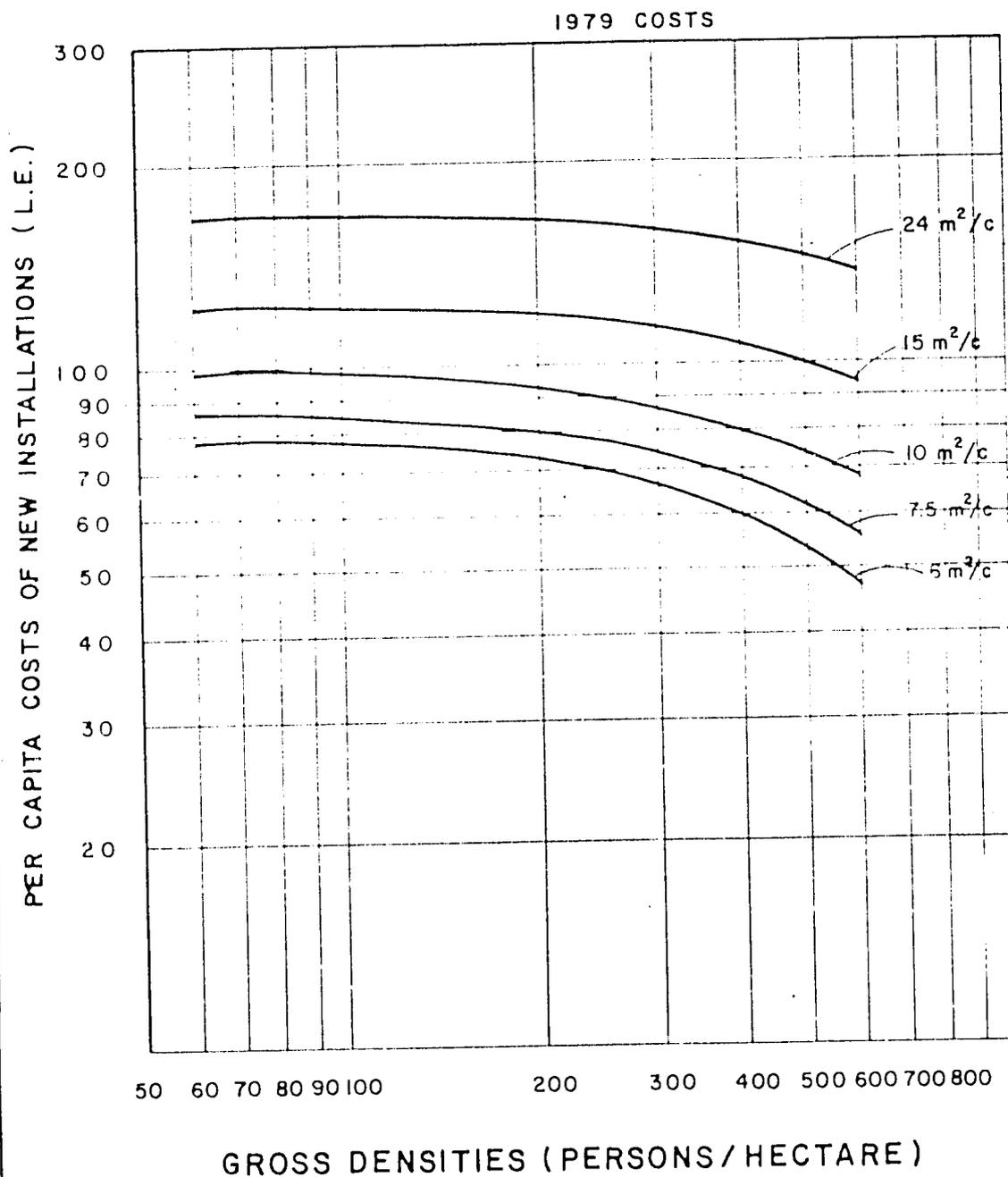


FIGURE C-3

INDICATIVE PER CAPITA COSTS OF INTRA-URBAN  
ELECTRICAL DISTRIBUTION SYSTEMS

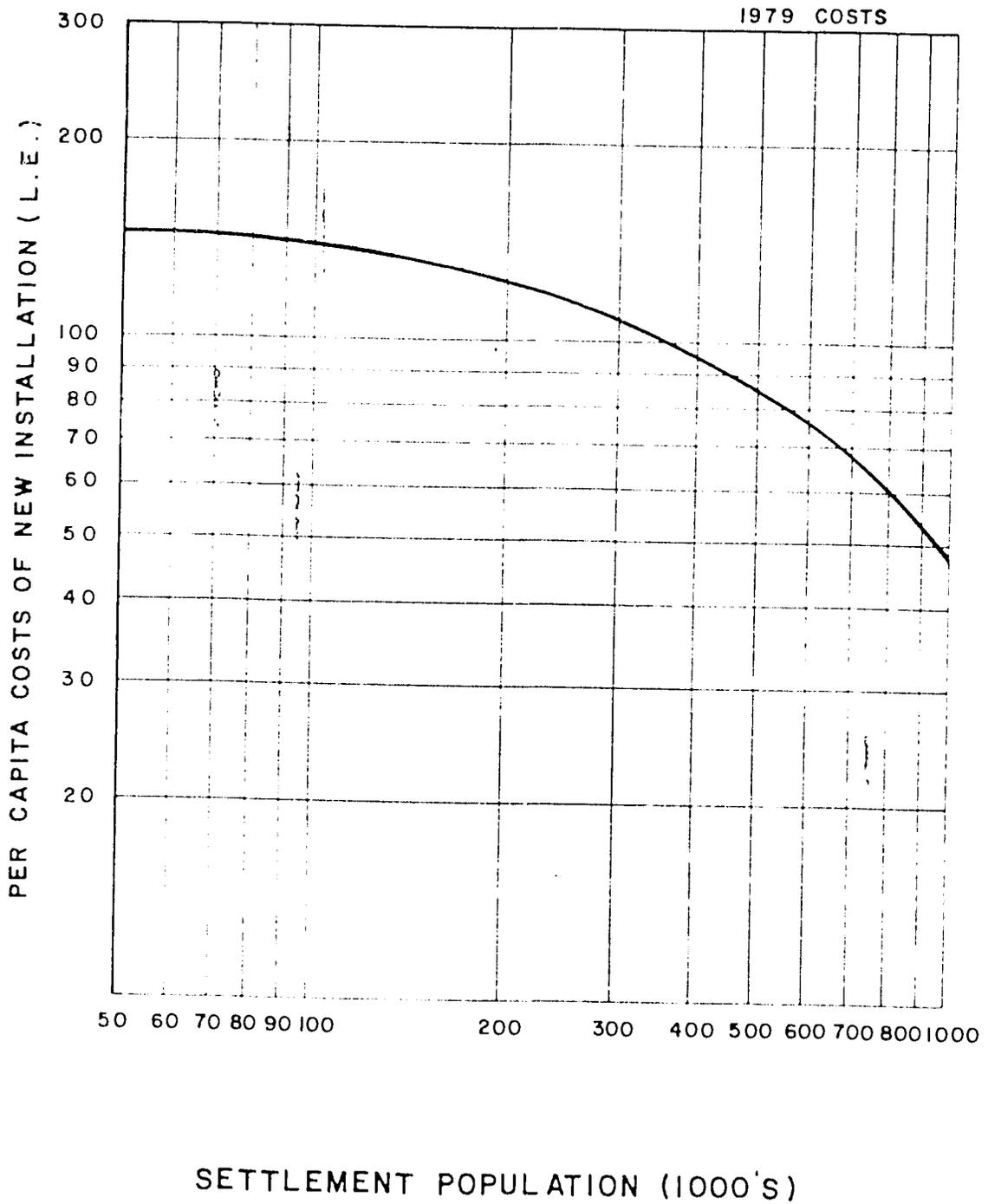


FIGURE C-4

TABLE C-3  
STANDARDS OF WATER AND SEWERAGE SYSTEMS USED TO COST THE PREFERRED STRATEGY

Spatial Target Group	Consumption Water (l/c/d)	Standard Sewerage (l/c/d)	Remarks
<u>MAJOR METROPOLITAN</u>			
- Greater Cairo	584	382	Water and sewerage standards are from Water and Wastewater Master Plan for Greater Cairo and Alexandria.
- Alexandria	385	322	
<u>SPECIAL EMPHASIS:</u>			
<u>SUEZ CANAL</u>			
- Suez	353	282	Water and sewerage standards were derived from water and wastewater master plans prepared for the Suez Canal cities.
- Ismailia	353	282	
- Port Said	381	275	
<u>DELTA REGIONAL SERVICE CENTERS</u>			
	351	189	Standards supplied by the Planning Department of the Local Council of Tanta.
<u>OTHER SPECIAL EMPHASIS</u>			
	300	80	Intermediate standard for water supply. Sewerage at 80 percent water standards net of losses and standpipe consumption.
<u>OTHERS</u>			
- Governorate Capitals	237	142	Water at standards proposed by Provincial Water Supplies project for larger provincial cities. Sewerage at 80 percent of water standard net of losses and standpipe consumption.
- Others	167	100	National average water standard excluding Greater Cairo, Alexandria and the Canal Cities. Sewerage at 80 percent of water standards net of losses and standpipes.
- Settlements Less than 50,000	129	--	Sanitation to be provided by individual households.

TABLE C-4  
CIRCULATION STANDARDS OF SETTLEMENTS RECENT PROJECTS

GROSS DENSITY (PERSONS/ HECTARE)	PER CAPITA LAND CONSUMPTION (m <sup>2</sup> /PERSON)	PERCENT CIRCULATION	PER CAPITA (1979 L.E./CAPITA)	REMARKS
76	30.5	23.0	176	10th of Ramadan (1978 estimated updated to 2,979)
72	24.7	18.0	212	6th of October Master Plan first stage
79	21.6	17.0	147	6th of October Master Plan final stage
133	12.6	17.0	128	Sadat City Master Plan: first stage contractor prices
103	12.6	13.0	135	Sadat City Master Plan: Final Report
396	6.0	20.0	48	El Hekr Demonstration Project -- Ismailia
812	1.5	24.0	23	Helwan New Community (USAID) Demonstration Project, August 1980 estimates
<u>OTHERS:</u>				
238	14.0	33.0	N.A.	GOPP standard for community of 28,000
326	6.0	19.6	N.A.	Fayoum Development and Plannification Project

the land requirements for circulation were fixed at 20 percent of the total settlement area. This percentage corresponds to estimates of Fayoum's circulation component which is roughly 6.0 meters per capita or 19.6 percent of its 1980 area (Development and Planification Project of Fayoum City University, the Development & Technology Planning Research Center, 1980). Table C-4 shows that both Sadat City and 6th of October have achieved lower percentages of circulation in their master plans. However, it is difficult for existing cities to achieve standards much lower than 20 percent. Greater Cairo, for example, has 25 percent of its area devoted to circulation.

The standards and unit costs used to cost the transport component of intra-urban infrastructure are shown in Table C-5. The costs of bus service are based on the costs of 52-seat buses having carrying capacities of roughly 80 persons including standees. The unit per capita costs shown include estimates of the costs of repair and service facilities, but not the costs of spare parts. Spare parts and tires are treated as a component of capital rehabilitation costs and are discussed later. Due to the needs to replace depreciated units, plus expand the fleet to meet new population demands, the unit cost of the buses was increased by a factor of 1.59 using assumptions which are shown in the five-year phasing of new busing additions of the Sadat City Master Plan.

The other "Physical Infrastructure" component of intra-urban physical infrastructure costs consists of a "lump-sum" estimate of site specific costs which cannot be easily estimated such as solid waste infrastructure not covered by operations and maintenance costs of intra-urban infrastructure, and other unspecified cost.

## C. PROCEDURE FOR ESTIMATING INTRA-URBAN INFRASTRUCTURE COSTS

This procedure was developed for estimating intra-urban infrastructure costs prior to preparation of developing detailed engineering designs. The procedure aims at providing order-of-magnitude estimate of different proposals for standards of intra-urban infrastructure. This procedure is useful for evaluating proposals prior to design. It aims at providing order-of-magnitude estimates of costs. If more precise estimates are required, detailed feasibility and engineering designs will be necessary. (See Table C-6 for an outline of this procedure.)

### 1. Functional Relationships Used to Project NUPS Intra-Urban Infrastructure Costs

The following functional relationships were used to generate the curves shown in Figures C-1 through C-4. These relationships were derived from data of recent construction projects showing gross density of the projects, consumption standards and per capita costs. These relationships were calculated using a multiple linear regression program using two independent variables. Since mathematically, the linear equations which result could estimate per capita costs which are zero or less, the data used to generate the relationships was used to limit projections (i.e, the x or y values). These functional relationships and their data limits are shown below:

a. Water supply (Figure C-1)

$$z = -29.99 + (-0.12)x + (0.44)y$$

Where: x = gross density  
y = water consumption standard (l/c/d)  
z = per capita costs  
Correlation Coefficient ( $R^2 = 0.90$ )

Limits: y = where x = 600

b. Sanitation (Figure C-2):

$$z = 48.34 + (-0.06)x + (0.17)y$$

Where: x = gross density  
y = sewerage flow (l/c/d)  
z = per capita costs  
Correlation Coefficient ( $R^2 = 0.87$ )

Limits: No limits where reached due to density limitations shown in Equation 1.

c. Circulation (Figure C-3):

$$z = 52.56 + (-0.06)x + (5.05)y$$

Where: x = gross density  
y = m<sup>2</sup> per capita of circulation (based on an assumed 20 percent of settlement area devoted to circulation)

z = per capita costs  
Correlation Coefficient ( $R^2 = 0.90$ )

Limits: No limits where reached due to density limitations in Equation 1.

d. Electricity Distribution (Figure C-4)

$$y = 152.39 + (-1.15 \times 10^{-3})x$$

Where: x = service population ('000s)  
y = per capita costs  
Correlation Coefficient ( $R^2 = 0.77$ )

Limits: No Limits where reached as population change did not exceed 3 million.

TABLE C-5  
PROPOSED INTRA-URBAN TRANSPORT STANDARDS OF THE PREFERRED STRATEGY

SPATIAL TARGET GROUP AND EXAMPLE SETTLEMENTS	1980 EXISTING STANDARD (BUSES/10,000)	PROPOSED STANDARD (BUSES/10,000)	PER CAPITA COST (L.E./CAPITA) <sup>1</sup>
<u>MAJOR METROPOLITAN</u>			
- Greater Cairo <sup>2</sup>	2.07	5.0	57.0
- Alexandria <sup>3</sup>	3.50	4.0	45.6
<u>SPECIAL EMPHASIS</u>			
- Suez <sup>4</sup>	1.7	2.0	22.8
- Assiut <sup>4</sup>	0.4	1.2	13.4
- Gena <sup>5</sup>	0.4	1.2	13.4
- Naga Hamadi <sup>5</sup>	0.4	1.2	13.4
- Aswan	N.A.	1.2	13.4
<u>OTHER CANAL</u>			
- Port Said <sup>4</sup>	2.0	1.2	13.4
- Ismailia <sup>4</sup>	2.0	1.2	13.4
<u>DELTA REGIONAL SERVICE CENTERS</u>			
- Tanta <sup>6</sup>	2.4	3.0	34.2
<u>HIGH DENSITY SETTLEMENTS</u>			
- Damanhour	N.A.	0.5	5.7
<u>GOVERNORATE CAPITALS</u>			
- Beni Suef	N.A.	0.2	2.3
<u>NON-SPECIAL EMPHASIS</u>			
- Belbeis	N.A.	0.1	1.1
<u>REMOTE AREAS</u>			
- Hurgada	N.A.	0.3	3.4

## EXPLANATION TO FOOTNOTES, TABLE C-5

- <sup>1</sup> Per capita costs include provisions for repair and service facilities and replacement rate for buses which equals 1.59 new units per operating unit. (Costs are based on 52-seats bus with carrying capacity of 80.0.) (SOURCE: Sadat City Master Plan. Also, Egypt National Transport Plan. Annex IV. Roads and Highway Transport. 1981.)
- <sup>2</sup> Greater Cairo's total public bus fleet was 2,347 units in 1981, but on a typical day, only 68 percent are operational. The standard shown represents the effective operational fleet or roughly 1,596 units. (The World Bank. Staff Appraisal Report, Egypt. Greater Cairo Urban Development Project. April 1981. p. 7.)
- <sup>3</sup> Alexandria's registered and public bus fleet was 1,020 units in 1979. However, the Egypt National Transportation Study (Annex IV) estimates that only 900 are operational. The standard shown represents the effective operational fleet. (Egypt National Transportation Study. Annex IV. p. 3.4. 1981.)
- <sup>4</sup> Interim Report. National Transportation Investment Program. Phase II. NEDECO prepared for the Transport Planning Authority of the Ministry of Transport. 1981. The standards shown include inter-urban and intra-urban bus fleets.
- <sup>5</sup> SOURCE: Planning Department of the Governorate of Qena. 1981.
- <sup>6</sup> SOURCE: Governorate Information Office. Governorate of Gharbia. 1981 Standard probably includes inter-urban bus fleet registered in Tanta.

**TABLE C-6**  
**PROCEDURE FOR ESTIMATING INTRA-URBAN INFRASTRUCTURE COSTS**

STEPS	DESCRIPTION	REMARKS
1.	<p>Gather data about recent infrastructure projects regarding:</p> <ul style="list-style-type: none"> <li>- Size of population served</li> <li>- Gross density</li> <li>- Consumption standards</li> <li>- Per capita costs (total project costs divided by service population)</li> </ul> <p>For each network related infrastructure, gather data regarding:</p> <ul style="list-style-type: none"> <li>- Population served</li> <li>- Relevant physical standards</li> <li>- Per capita costs (total project costs divided by service population)</li> </ul>	<p>(Of Service Population)</p> <p>Water = daily production  Sewerage = daily flows  Circulation = land consumption for circulation  Electricity = distribution networks</p>
2.	<p>Use data from these projects to calculate relationships between service populations.</p>	<p>This can be done by using multiple linear regression analysis using two or three independent variables to calculate a regression line as follows:</p> $z = a + bx + cy$ <p>Where: x = gross density  y = consumption standards  z = per capita costs</p> <p>a, b, and c are constants.</p> <p>The correlation coefficient R<sup>2</sup> should also be calculated to ensure the regression line fits the data and can be used for projections.</p> <p>If three independent variables are used, the regression line takes the form of:</p> $t = a + bx + cy + dz$ <p>Where: t = per capita costs  x = gross density  y = consumption standards  z = change in population and a, b, c, and d are constants.</p> <p>In the NUPS work, we used only the shorter form of the equation because there is very little difference between the per capita costs except at extremes, very high populations, very high or low densities or very high or low consumption standards. Since these extremes exceed the original data, the functional relationships resulting from the regression analysis was not used for calculating extreme cases. When these functional relationships are used to project costs, the independent variables used should not exceed the limits of the data used to project costs.</p>
3.	<p>Using the functional relationships calculated in Step 2, calculate the per capita costs of the proposed project using its consumption standards, proposed densities, and service populations.</p>	
4.	<p>Using the per capita costs from Step 3, calculate total base costs by multiplying per capita costs times the new populations.</p>	
5.	<p>Perform Steps 2, 3, and 4 for each component of physical infrastructure, and add them together to get total physical infrastructure costs.</p>	
6.	<p>Gather data about recent projects aimed at rehabilitation of infrastructure regarding:</p> <ul style="list-style-type: none"> <li>- Size of population served</li> <li>- Gross density</li> <li>- Consumption standards (both existing and proposed)</li> <li>- Per capita costs</li> </ul>	<p>If the projects contain components of both rehabilitation and expansion to serve new populations, the two should be separated as much as possible. Further, if the projects aim at both rehabilitating the existing system as well as increasing capacities, this change in capacities should be identified.</p>
7.	<p>Repeat Steps 2, 3, and 4 to calculate rehabilitation costs.</p>	<p>Determining requirements for rehabilitation is sometimes more difficult than determining the costs of new infrastructure since most rehabilitation projects include additions of new population to the system along with strengthening and repair of the existing system. However, some attempt should be made to separate the two, otherwise, the costs of adding new population to the system is likely to be distorted.</p>
8.	<p>Add the results from Step 7 to those of Step 5 to get the total costs of infrastructure.</p>	

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#### D. PLANNING OF REQUIREMENTS FOR SOCIAL AND ADMINISTRATIVE INFRASTRUCTURE

Different standards of social infrastructure were suggested for each of the settlement types. However, in all of them improvement of overall inter-regional equity was a major concern. Therefore, the standards of education were maintained at a uniform level, except for those settlements which already have higher level educational facilities. Furthermore, since health is an important component of social infrastructure which can be used to reduce disparities between the settlement types, higher standards of provisions of health facilities were proposed for many secondary cities than is now being provided. Provisions were also made for facilities providing social services, public services, public safety, religious services (if financed by public funds), and recreational facilities.

The "Social Infrastructure" portion of Figures II-12 through II-25 of Chapter II of the main report show indicative per capita costs of education, health, social and administrative infrastructure. They also show the total per capita amounts for both new infrastructure and rehabilitation of existing social infrastructure which should be included in five-year development budgets for all types of social infrastructure. As was shown in the "Physical Infrastructure" section, the total amounts which should be included in planning budgets can be found by multiplying these per capita costs times the total end period projected population. This amount, which equals the total base costs of capital expenditures required, should be weighted by regional construction cost factors to indicate the total expenditure required due to higher costs which might be encountered in one region over another. (See Tables C-7 to C-14).

The per capita costs for social infrastructure were derived from the standards and costs of a variety of recent settlement projects being largely constructed in the Greater Cairo zone. Thus, they represent a range of social infrastructure facilities which might be selected by a governorate or a local council planning department, depending on the priorities which might be set at the local level. For example, it might be determined that a particular settlement already has large enough provision of social service facilities, but is lacking in other types of facilities. Therefore, local level planning officials might decide to divert expenditures which might have been suggested for social service units to those more critically needed facilities. The development of the data sets shown in Appendix A would be an important tool in assisting local level authorities in making the decisions.

When preparing estimates of social infrastructure requirements, a planning department might use a procedure which is different than those shown in Tables C-7 through C-14 since it would have at its disposal information on the actual number of units already existing in a particular settlement. Therefore, the forms which contain estimates of facilities needed to serve existing populations along with estimates for new populations might be more useful. The forms should start with population service standards for different types of facilities, and from that show how estimates for facilities for existing population not now served with infrastructure can be combined with estimates for facilities for new population. In making estimates of the requirements for facilities needed to serve existing population, existing facilities which should be replaced because they are in poor

TABLE C-7

## ALEXANDRIA "MODIFIED STANDARD"

(1979 L.E. PRICES)

Facility	Service Population <sup>1</sup>	Students Per Facility <sup>1</sup>	Unit Cost (1,000's) <sup>2</sup>	Number of Facilities Required <sup>3</sup>	Regional Factor <sup>3</sup>	Cost Per Capita (L.E.) <sup>3</sup>	Cost Per Urban Student (L.E.)
Primary	4,510	994	47.0	110	1.0	10.3	95
Preparatory	13,130	499	65.2	38	1.0	5.0	131
Secondary							
- General	84,290	952	173.9	6	1.5	3.1	
- Trade and Commerce		795	260.9	4	2.0	4.2	711
- Industrial	62,000	1,028	434.8	3	5.8	9.9	1,768
- Agricultural		2,001	652.2	1	5.4	7.0	1,760
TOTAL					Say:	39.5 40.0	4,465

SOURCE: See Footnotes below.

<sup>1</sup> Unpublished Statistics from Ministry of Education. The number of students per secondary trade and commerce, industrial and agricultural secondary schools comes from data from the Technical Education Department of the Ministry of Education.

<sup>2</sup> Unit costs come from the following: primary and preparatory schools from the Governorate of Cairo consisting of 14 classroom units designed for 35 students. The costs in 1980 prices for the other facilities are:

General Secondary	200,000
Commercial Secondary	250,000
Industrial Secondary	500,000
Agricultural Secondary	750,000

<sup>3</sup> Based on a settlement population of 500,000.

TABLE C-8

## HEALTH CARE FACILITIES FOR SETTLEMENT SIZE OF 500,000

	Indicative Standard Beds/1,000)	Standard	Number of Units Required	1980 Unit Cost (L.E. '000'S)	Total Cost (L.E. Millions)	Total Cost Per Capita 1979 PRICES
I.	<u>4.59 Beds/1,000 Urban Population (National Urban Average Standard 1978)<sup>1</sup></u>					
	Primary <sup>2</sup>	1/40,000	13	228.0	2.96	
	Polyclinics <sup>2</sup>	1/250,000	2	2,850.0	5.71	
	Secondary <sup>3</sup>	4.59/1,000	2,295	60.9	140.00	
	Total				148.70	258.6
II.	<u>4.0 Beds/1,000 Urban Population (12.9 % Reduction)</u>					
	Primary <sup>2</sup>	1.129/40,000	15	228.0	3.40	
	Polyclinics <sup>2</sup>	1/250,000	2	2,850.0	5.70	
	Secondary <sup>3</sup>	4/1,000	2,000	60.9	121.8	
	Total				130.9	227.6
III.	<u>5.79 Beds/1,000 (Tanta Standard)</u>					
	Primary <sup>2</sup>	1/40,000	13	228.0	2.96	
	Polyclinics <sup>2</sup>	1/250,000	2	2,850.0	5.70	
	Secondary <sup>3</sup>	5.79/1,000	2,895	60.9	176.3	
	Total				184.9	322
IV.	<u>3.83 Beds/1,000 (20% Reduction in Urban Average Standards)</u>					
	Primary <sup>2</sup>	12/40,000	16	228.0	3.6	
	Polyclinics <sup>2</sup>	1/250,000	2	2,850.0	5.7	
	Secondary <sup>3</sup>	3.83/1,000	1,915	60.9	116.6	
	Total				125.9	219
V.	<u>2.5 Beds/1,000 (Secondary Cities Non-Governorate Capitals)</u>					
	Primary	12/40,000	13	228.0	2.9	
	Polyclinics	1/250,000	2	2,850.0	5.7	
	Secondary	2.5/1,000	1,250	60.9	76.1	
	Total				84.8	147
VI.	<u>0.51 Beds/1,000 (Health Care at Indicative Investment Levels of Ministry of Health)</u>					

<sup>1</sup> Found by dividing Egypt's total stock of hospital beds in 1978, - 80,400 beds - by the 1978 urban population. These standards were used to project future requirements by assuming that urban facilities would continue to serve both urban and rural populations.

<sup>2</sup> Complete health units providing primary health care.

<sup>3</sup> Hospital beds, costs are based on 1979 costs of full secondary health care requirements.

TABLE C-9  
 SOCIAL INFRASTRUCTURE STANDARDS I  
 MODIFIED SADAT CITY STANDARDS (SERVICE POPULATION OF 500,000)  
COSTS AT 30% OF MASTER PLAN

Item	Number of Units	1977 Total Cost (L.E. Millions)	1979 Per Capita Cost (L.E.)
<u>1. PUBLIC SERVICE:</u>			
- Telephone & Telegraph	6	0.360	
- Telex	2	0.021	
- Neighborhood Postal Center	100	0.060	
- Postal Center	6	0.108	
SUBTOTAL		0.552	1.46
<u>2. OPEN SPACE AND RECREATION:</u>			
- Neighborhood Sports Area	100	5.300	
- District Youth Centers	14	13.482	
SUBTOTAL		18.782	49.70
<u>3. SOCIAL SERVICES:</u>			
- Neighborhood Social Units	100	2.000	
- Kindergartens	100	1.000	
- District Social Unit	16	4.000	
- Major Social Units	2	2.000	
- Others (non-specified care units)		2.550	
SUBTOTAL		11.550	30.60
<u>4. RELIGIOUS SERVICES</u>			
- Small Neighborhood Mosques	67	2.680	
- Large Neighborhood Mosques	33	3.300	
- District Mosques	6	3.000	
- City Mosques	2	1.903	
- Moslem Cemetery	1	0.056	
- Small Church	2	1.100	
- Central Church	1	2.200	
- Christian Cemetery	1	0.036	
SUBTOTAL		14.275	37.80
<u>5. PUBLIC SAFETY:</u>			
- District Public Center	16	2.400	
- Sector Public Center	2	0.600	
- Traffic Control Units	3	0.135	
SUBTOTAL		3.135	8.29
<u>6. GRAND TOTAL:</u>			
		48.294	127.90

TABLE C-10  
 SOCIAL INFRASTRUCTURE STANDARDS II  
 MODIFIED SADAT CITY STANDARDS  
 (SERVICE POPULATION OF 500,000)  
COSTS AT 10% OF MASTER PLAN

Item	Number of Units	1977 Total Cost (L.E. Millions)	1979 Per Capita Costs
<u>1. PUBLIC SERVICE</u>			
(See Table C-8)		0.552	1.46
<u>2. OPEN SPACE &amp; RECREATION</u>			
- Local Sports Areas	50	2.650	7.00
<u>3. SOCIAL SERVICES</u>			
Neighborhood Units	100	1.500	
Kindergartens			
District Social Units	8	2.000	
City Social Units	1	1.000	
SUBTOTAL		4.500	11.90
<u>4. RELIGIOUS &amp; SERVICES</u>			
- Local Mosques	67	2.680	
- Major Mosques	3	1.500	
- City Mosques	1	0.950	
- Churches		1.100	
SUBTOTAL		6.230	16.50
<u>5. PUBLIC SAFETY</u>			
- District Centers	10	1.500	
- Sector Centers	2	0.600	
- Traffic Control Units	3	0.135	
SUBTOTAL		2.235	5.90
<u>6. TOTAL</u>			
		16.170	42.80

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TABLE C-11  
 SOCIAL INFRASTRUCTURE STANDARDS III MODIFIED  
 CAIRO GOVERNORATE STANDARDS BASED ON 500,000 POPULATION

Item	Standard	1977 L.E. Prices (L.E. Millions)	1979 L.E. Per Capita
1. SOCIAL UNITS	1/42,000	0.24	
Police:			
- Main Station	1/250,000	0.30	
- Substation	1/83,000	0.27	
Telegraph & Post Office	1/62,500	0.05	
Mosque	1/7,500	2.68	
Church	1/250,000	1.10	
2. SUBTOTAL <sup>1</sup>		4.64	12.2
Open Space and Parks	(L.E. 0.309/capita)	0.154	
Community Centers	1/50,000	0.24	
3. TOTAL		5.32	13.3

<sup>1</sup> Cairo Governorate, Planning Department.

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TABLE C-12  
 SOCIAL INFRASTRUCTURE STANDARDS IV  
 MODIFIED CAIRO GOVERNORATE STANDARDS  
 (NON-SPECIAL EMPHASIS SETTLEMENTS)  
SERVICE POPULATION 500,000

Item	Standard	1977 Total Costs (L.E. Millions)	1979 Cost Per Capita
Social Units	1/42,000	0.24	
Main Police Station	1/250,000	0.30	
Sub-Police Station	1/83,000	0.27	
Telegraph & Post Office	1/62,000	0.05	
Religious Facilities:			
- Mosques	1/15,000	1.34	
- Churches	1 NOS	0.55	
<b>SUBTOTAL</b>		<b>2.75</b>	<b>7.3</b>

TABLE C-13  
 SOCIAL INFRASTRUCTURE STANDARDS V  
 SMALL NON-SPECIAL EMPHASIS SETTLEMENTS  
 (SETTLEMENT SIZE 160,000)

Item	Standard	1977 Costs (L.E. Millions)	1979 Cost Per Capita
Social Units	1/60,000	0.06	
Police Stations	1/250,000	0.15	
Telegraph & Post Office	1/62,000	0.03	
Community Center	1/60,000	0.07	
SUBTOTAL		0.31	2.56
			Say 3.00

SOURCE:

TABLE C-14  
 SOCIAL INFRASTRUCTURE FOR SETTLEMENTS LESS THAN 50,000  
 (CATCHMENT POPULATION 38,000)

	Service Population	Number of Facilities Required	1979 Cost Per Capita
1. Education Facility:			
Primary	4,510	8	10.4
Preparatory	13,130	3	5.4
TOTAL EDUCATION			15.8
2. Health:			
Primary	1/40,000	1	7.0
3. Social Service & Administration:			
Social Unit	40,000	1	0.6
First Aid Center	40,000	1	1.7
Police Station	40,000	1	0.2
TOTAL			2.5

SOURCE:

condition should be subtracted from the number of existing units. Existing facilities which can continue to be used but which require rehabilitation should be included in the number of existing facilities shown on the tables, but provisions for rehabilitation should be included in budgets.

The actual budgetary provisions needed for rehabilitation of existing infrastructure should be done on a facility-by-facility basis. However, the following criteria should be included in the assessment:

1. Structural Condition

- Condition of structural supporting members (foundation, supporting walls, columns, beams, floors, etc.)
- Conditions of non-structural walls, floors, ceilings, etc.
- Building materials used

2. Space Conditions

- Design capacity of the facility
- Number of users of the facility
- Other specific criteria can be developed for each type of facility

3. Infrastructure Conditions

- Condition of water supply
- Condition of sanitation
- Condition of electricity
- Others

4. Ability to Expand the Facility

- Structural capacity of building to expand horizontally or vertically
- Ability to accommodate additional staff, equipment or users
- Ability to provide new services within facility

5. Other Specific Criteria

Once an estimate of the existing number of facilities is made, then estimates or requirements for new facilities can be made for either deficits due to the lack of sufficient capacity in existing facilities to serve the existing population, or to serve new population. If in the appraisal of existing facilities it is found that some existing facilities are under-utilized, then plans should be made to intensify

usage of those facilities rather than developing new facilities. Then, as the tables show, these requirements for facilities should be added together and multiplied times the unit costs shown on the table. This result should be weighted by regional construction cost factors to account for regional differences in construction costs.

As was previously mentioned, the unit costs for social facilities are expressed in 1979 prices and were derived from a variety of sources. In actual practice, these unit costs should be updated ever year to provide up-to-date estimates of costs. Furthermore, the regional construction cost factors should also be updated on an annual basis for the same reason.

The final results of this procedure will result in costs which are somewhat different than those shown in the spatial target group packages due to rounding errors and differences in cost projection methodology. These, however, should not differ significantly, and the overall expenditure parameters shown in the spatial target group packages should be used to evaluate total expenditure requirements.

The following three subsections discuss how NUPS estimates of education, health and other social infrastructure were prepared.

#### a. Education as Shown in Spatial Target Group Packages

Settlement level provision of various types of educational facilities are shown in table C-15. This table compares data from Alexandria, Sadat City Master Plan and other settlements to give a comparison of standards in different settlements.

Since secondary level schools are located in urban settlements, they tend to serve rural populations as well as urban populations. This is illustrated by comparing the actual enrollment figures of secondary schools with the proportion of settlement population which is actually at school age. This estimate of the region-serving function of secondary schools was made by comparing 1980 Ministry of Education enrollment rates at the governorate level for different types of secondary schools with 1980 estimated school age populations. This yields the actual proportion of the school age population going to school. For six sample governorates, this mean is 31.2 percent of the secondary school age population. When this percentage of a settlement's school age population, representing the proportion of the school age population likely to be in school, is compared with Ministry of Education actual enrollment figures for secondary schools at the settlement level the following ratios of actual enrollment to settlement school age population result:

<u>TYPE OF FACILITY</u>	<u>REGIONAL FACTOR</u>
Primary	1.00
Preparatory	1.00
General Secondary	1.50
Commercial Secondary	2.00
Industrial Secondary	3.80
Agricultural Secondary	5.40

#### b. Health Provisions: Spatial Target Group Packages

A variety of standards were reviewed to cost urban health facilities required for new urban population:

- Standards proposed by the General Organization for Physical Planning of one 300 bed hospital per 56,000 population of an indicative standards of L.E. 346 per capita.
- An estimate of the current level of health funding for new infrastructure (roughly L.E. 2<sup>9</sup> per capita).
- Intermediate standards ranging from 4.5 beds/1,000 to 2.5 beds/1,000 (shown in Table C-3). These latter standards aim at maintaining the current level of health care facilities in most major settlements which have major region-serving functions. In other smaller settlements where access to either governorate capitals or other larger urban settlements is possible, more basic levels of urban settlements is possible, more basic levels of urban health care have been suggested.
- The costs used to project these health care investment requirements were derived from updated costs of the Sadat City Master Plan and are roughly indicative of per unit investment targets of the Ministry of Health.

#### c. Social Infrastructure in Settlements with Populations Less than 50,000: Spatial Target Group Packages

Previously presented Table C-14 shows a distribution of education, health and social and administrative intra-urban infrastructure for small secondary settlements having populations less than 50,000. For these settlements, a basic level of social infrastructure has been proposed since these settlements generally have access to larger settlements where more complete urban services can be found.

#### 6. Regional Cost Modifiers

The Intra-Urban Cost Packages so far have focused on urban standards and costs irrespective of regional location. However, distance from sources of construction inputs and the difficulty in providing infrastructure due to local conditions, such as the lack of non-saline water, influence costs. Therefore, two indices have been developed to modify these average costs to account for such regional differences. (Table C-16)

The first regional cost modifier is a regional construction cost index developed from unpublished 1980 regional sectoral construction output data from the Ministry of Planning and the regional distribution of cement sales in 1980 from the Cement Sales Office of the Ministry of Development. Since for a given sector the volume of cement used to construct a unit of construction is constant, and the prices of cement are fixed, variations in the ratio of the cement value as represented by the total value of cement supplied to governorate of the value of construction output due to cement are indicators of regional variations in

construction costs. The value of construction output due to cement was determined for each governorate by sector according to constants developed for each major sector to determine national cement requirements to the year 2000. These sectorial constants are shown in the main report of the "Draft Final Report of the Construction/Contracting Industry Study, CIS, 1980," prepared by the General Organization for Housing, Building and Planning Research, October 1980.

**TABLE C-15C**  
**COMPARISON OF EDUCATION STANDARDS IN**  
**SELECTED SETTLEMENTS AND ESTIMATED REPLACEMENT VALUE**  
**OF THOSE FACILITIES: PER CAPITA AND PER STUDENT**

Standard/ Settlement	Secondary						Totals	Remarks
	Primary	Preparatory	General	Trade & Commerce	Industrial	Agricultural		
<b>SADAT CITY</b>								
Service Population	5,000	15,625	50,000	83,333	125,000	500,000		Source: Sadat City Master Plan costs have been updated by a 15 percent annual construction cost inflation factor.
Students/Facility	832	913	906	955	975	680		
Students/Classroom	35	35	30	25	32	30		
Cost/Unit <sup>1</sup>	277,800	529,000	945,217	992,000	1,289,130	5,557,000	11,449	
Cost/Student	333	579	1,043	1,314	1,322	8,172	141.7	
Regional Factor	--	--	--	--	--	--	--	
<b>ALEXANDRIA (At Governorate and Ministry of Education Standards)</b>								
Service Population	4,510	13,130	83,777	62,000	62,000	N.A.		The data for Alexandria's schools comes from two sources: number of students per classroom and enrollment in secondary, commercial, industrial and agricultural schools from publication of technical department's Ministry of Education; other data is from unpublished statistics of the Ministry. The services population includes public and private schools.
Students/Facility	494	499	952	795	1,028	2,001		
Students/Classroom	N.A.	N.A.	N.A.	26	29	48		
Cost/Unit <sup>1</sup>	26,000	43,500	86,975	104,350	217,350	104,350	625	
Cost/Student	52.6	87.0	91	131	211	52	15.7	
Cost/Capita	5.8	3.2	1.0	1.7	3.5	0.4		
Regional Factor	--	--	1.0	0.9	0.9	0.6		
<b>FAYOUM (At Existing Standards)</b>								
Service Population	5,406	13,129	45,950	91,900	91,900	183,793		Source: Planning and Development Project of the City of Fayoum, Cairo University Development and Technology Planning Center, 1980.
Students/Facility	707	778	3,115	1,926	1,270	1,667		
Students/Classroom	43	40	102	36	34	36		
Cost/Unit <sup>1</sup>	26,000	43,500	86,957	104,350	217,350	104,350	427	
Cost/Student	37	56	27	73	171	63	14.1	
Regional Factor	--	--	--	--	--	--	--	
<b>ASSIUT (Existing Standards)</b>								
Service Population	2,064	9,369	22,145	81,200	81,200	243,600		Source: Planning Department of the Governorate of Assiut.
Students/Facility	396	632	692	690	1,600	1,947		
Students/Classroom	41	40	39	26	26	38		
Cost/Unit <sup>1</sup>	26,000	43,500	86,957	104,350	217,350	104,350	601	
Cost/Student	66	69	126	151	135	54	25.5	
Cost/Capita	12.6	4.6	3.9	1.3	2.7	0.4		
Regional Factor	--	--	N.A.	1.6	11.9	9.9		
<b>SUEZ (Existing Standards)</b>								
Service Population	3,798	16,250	65,000	65,000	130,000	--		Source: Planning Department Governorate of Suez. There are no agricultural secondary schools in Suez.
Students/Facility	409	727	729	828	986	--		
Students/Classroom	39	38	37	33	34	--		
Cost/Unit <sup>1</sup>	26,600	43,500	86,957	104,350	217,400	--		
Cost/Student	53	60	120	126	220	--	579	
Total Cost/Capita	6.9	2.7	1.3	1.6	1.7	--	14.2	
Regional Factor	--	--	--	1.5	1.8	--		
<b>TANTA (Existing Standards)</b>								
Service Population	2,038	5,880	25,621	44,838	59,783	179,350		Source: Planning Department of the Local Council of Tanta.
Students/Facility	392	456	660	922	1,087	1,087		
Students/Classroom	92	41	38	37	34	35		
Cost/Unit <sup>1</sup>	26,000	43,500	86,957	104,350	217,400	104,350	842	
Cost/Student	66	95	191	158	236	95	35.3	
Cost/Capita	12.8	7.4	3.4	2.3	3.6	5.8		
Regional Factor	--	--	--	2.0	4.0	5.0		
<b>BENI SUEF (Existing Standards)</b>								
Service Population	3,040	11,882	32,350	65,350	43,567	65,350		Source: Governorate Planning Department.
Students/Facility	418	742	961	927	1,423	1,114		
Students/Classroom	39	40	8	35	35	33		
Cost/Unit <sup>1</sup>	26,000	43,500	86,957	104,350	217,400	104,350	571	
Cost/Student	62	58	90.5	113	153	94	23.2	
Cost/Capita	8.6	3.7	2.7	1.6	5.0	1.6		
Regional Factor	--	--	--	--	--	--		
<b>QENA (Existing Standards)</b>								
Service Population	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.		Source: Planning Department of Qena Governorate. Data on service populations and schools are only available at governorate, not settlement level.
Students/Facility	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.		
Students/Classroom	37	42	40	33	35	30		
Cost/Unit	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.		
Cost/Student	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.		
Cost/Capita	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.		
Regional Factor			1.2	1.6	7.9	9.8		

<sup>1</sup> Costs are from unpublished cost targets used by the Ministry of Education. The 1980 prices supplied have been adjusted to 1979 prices using a 15 percent inflation factor.

SOURCE: See "Remarks" above.

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TABLE C-16  
REGIONAL COST MODIFIERS

GOVERNORATE	REGIONAL CONSTRUCTION	REGIONAL POTABLE WATER
Greater Cairo	1.00	1.00
Giza (Outside Greater Cairo)	2.20	2.02
Alexandria	1.31	1.35
Port Said	1.92	2.44
Ismailia	2.20	2.44
Suez	1.18	2.44
Beheira	2.14	1.35
Kafr El Sheikh	3.21	1.95
Dakahlia	3.22	1.88
Damietta	2.25	2.40
Sharkia	1.78	1.93
Gharbia	1.58	1.40
Menoufia	3.52	1.44
Qalyubia	1.17	1.00
Beni Suef	2.58	1.53
El Fayoum	2.98	2.21
Minia	3.07	2.07
Assiut	1.23	1.72
Sohag	2.86	3.28
Qena	1.03	2.23
Aswan	1.01	2.47
Red Sea	4.51	7.56
New Valley*	4.51	2.77
Sinai, North*	4.51	7.51
Sinai, South*	4.51	1.88
Matruh*	4.51	5.14

\* Construction data is insufficient; therefore, the Red Sea Index was used as a proxy for all remote areas.