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UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT  
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**FINAL REPORT**

**TUNISIA**  
**URBAN IMPLICATIONS OF EXPORT-ORIENTED**  
**ECONOMIC DEVELOPMENT**

Prepared by  
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Washington, DC 20001

May 1990

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## **PREFACE**

This report was prepared by Duane Kissick and John Dalton with inputs from Jaques Carol, Mahmoud Ben Romdhane, Jellal Abdelkafi, and other PADCO support.

PADCO would like to thank the many central and local Government parties who devoted their time and cooperation to the study team. Finally, PADCO would like to thank the RHUDO and AID/Tunisia for their support and direction.

## LIST OF ACRONYMS

<b>AFH</b>	Agence Foncière d'Habitation
<b>AFI</b>	Agence Foncière de l'Industrie
<b>AFT</b>	Agence Foncière de Tourisme
<b>API</b>	Agence pour la Promotion de l'Industrie
<b>ARRU</b>	Agence de Réhabilitation et de Rénovation Urbaine
<b>BDET</b>	Banque de Développement Economique de Tunisie
<b>CPSCL</b>	Caisse des Prêts et de Soutien des Collectivités Locales
<b>DAT</b>	Direction de l'Aménagement du Territoire
<b>DGCPL</b>	Direction Générale des Collectivités Publiques Locales
<b>DGRHE</b>	Direction Générale des Ressources Humaines et de l'Emploi
<b>FCCL</b>	Fonds Communs des Collectivités Locales
<b>FONAPRA</b>	Fonds National de Promotion de l'Artisanat et des Petits Métiers
<b>FOPRODI</b>	Fonds de Promotion et de Décentralisation Industrielles
<b>GOT</b>	Government of Tunisia
<b>GWH</b>	Gigawatt Hours
<b>HG</b>	Housing Guaranty Program
<b>IMF</b>	International Monetary Fund
<b>INS</b>	Institut National de Statistique
<b>MDB</b>	Municipal Development Bank
<b>MEH</b>	Ministère de l'Equipeement et de l'Habitat
<b>NENA</b>	Near East/North Africa
<b>ONAS</b>	Office National d'Assainissement
<b>ONTT</b>	Office National de Tourisme Tunisien
<b>OPAT</b>	Office des Ports Aériens Tunisiens
<b>OPNT</b>	Office des Ports Nationaux Tunisiens
<b>PAD</b>	Plan d'Aménagement de Détail
<b>PAU</b>	Plan d'Aménagement Urbain
<b>RC</b>	Regional Council
<b>RHUDO</b>	Regional Housing and Urban Development Office
<b>SNCFT</b>	Société Nationale des Chemins de Fer Tunisiens
<b>SNT</b>	Société Nationale des Transports
<b>SONEDE</b>	Société Nationale d'Exploitation et de Distribution des Eaux
<b>STEG</b>	Société Tunisienne d'Electricité et de Gaz
<b>STM</b>	Société de Transport des Marchandises
<b>TD</b>	Tunisian Dinars
<b>USAID</b>	United States Agency for International Development
<b>UTICA</b>	Union Tunisienne de l'Industrie et du Commerce et de l'Artisanat
<b>WASH</b>	Water and Sanitation for Health
<b>UIS</b>	Urban Implications of Export-Oriented Economic Development (shortened version: Urban Implications Study)

## **EXECUTIVE SUMMARY**

### **A. BACKGROUND**

#### **Key Economic and Social Policies**

It has long been Tunisia's policy to promote industrial, economic, and social development programs in the interior of the country. While such policies are desirable, and have resulted in improved access to services and facilities in the interior, they have met with mixed economic success and have had little effect on population distribution trends.

The current economic context and policies argue for investment efficiency in response to economic opportunity. It must be accepted that export-oriented enterprises will have a natural attraction to the key coastal cities because of locational and other advantages they afford.

#### **Population Growth**

As rural areas have reached their carrying capacity and provide limited job opportunities, greater numbers of Tunisians are migrating towards the cities. As a result, cities throughout Tunisia are growing rapidly. By the year 2000, 60 percent of the national population may live in urban places.

The greatest absolute increases in urban population and concentration are occurring along the East coast where, in 1989, 86 percent of the population of Tunisia's 34 largest cities resided. This trend is expected to continue.

#### **Employment**

The Tunisian economy is having difficulty meeting employment requirements. Employment in rural areas has actually declined and shows little scope for improvement. On the other hand, urban places have demonstrated a strong capacity over the past 25 years to generate jobs. Nevertheless, there is an increasing gap between the demand and supply of national jobs, accompanied by increasing unemployment. A problem that is a critical and growing concern, particularly among the young.

#### **Export-oriented Industry**

An export-oriented development strategy alone will not address the serious employment problems that confront the country. Nevertheless, there are indications of a shift in manufacturing toward export markets and greater job creation in this sector. The number of approved export-oriented projects increased seven fold between 1984 and 1988. Not surprisingly, nearly all proposed export-oriented projects were located along the East coast. Thus, it can be expected that an urban-based export promotion program will further reinforce urban population concentration in this area.

## **Executive Summary, 2**

The Industrial Investment Code and the FONAPRA and FOPRODI programs are tools for economic development and employment generation. However, at present, they are not concerned with export promotion, nor are they likely to strongly influence export-related investment decisions.

### **Transport and Communications**

Tunisia has an extensive road network which serves all of the key settlements in the country. Rail, sea and airport systems primarily serve a corridor along the East coast where inter-regional infrastructure, economic development and urbanization have been mutually reinforcing. These trends will likely be reinforced by a future export-oriented economy and related infrastructure.

Good telecommunications are essential to the development of modern enterprises- particularly those that are export-oriented. For example, in 1986, roughly two-thirds of telex communications took place with the exterior. While an attempt is being made to equitably improve communications throughout the country, service levels remain a problem and supply is lagging behind demand even in the best served cities. Thus, any export promotion strategy must take improved access to telecommunications into account.

### **Urban Service Provision**

Tunisia has done a commendable job in improving urban service delivery while accommodating an ever-increasing urban population. Thus, in broad terms, urban services (water, power, sanitation, roads, and solid waste collection) do not serve as an impediment to general urban expansion or export promotion. However, urban service provision is primarily "deficit driven" and rigidly planned at the central level. As a consequence, infrastructure programming is not very responsive to specific economic opportunities as they present themselves.

### **Industrial Zones**

Demand for serviced industrial sites in many of the largest urban centers has not been met, while supply in some places in the interior has not been accompanied by demand. Currently, the greatest demand is in Tunis and Sfax, and an increasing number of requests are for export-oriented enterprises.

### **Shelter and land management**

Recent trends suggest that private sector formal and informal sectors have played an important role in meeting annual housing production needs, and that housing quality has been improved and overcrowding has been reduced. However, scattered and uncontrolled residential growth continues to be a serious obstacle to efficient urban development and management. Thus, productive activities are being pushed to more distant sites that may be unable to attract and sustain private investment. A sound public land policy is needed to help make serviced urban land available in a timely fashion for this purpose.

### **Environmental concerns**

The observed presence of severe environmental problems in many Tunisian cities must be factored into any effort to create employment through private sector, export-oriented development. Many of the export industries for which Tunisia would have a comparative advantage internationally (e.g., leather, food processing, chemicals) have a high risk of pollution. In addition, growing public concern about environmental problems will inhibit needed investment in places with excellent potential for further economic and export growth.

In some cities, the tourist industry is at odds with other forms of industry, which cause incompatible environmental problems. Further problems are caused by inadequate sewage treatment and solid waste management. Finally, competition over land in some locations has caused severe growth management problems. Thus, any future urban economic strategy must address environmental issues.

### **Institutional Capacity**

Municipalities are not equipped presently to take an independent leadership role in promoting and managing an urban export promotion. They lack a statutory mandate for this purpose and are constrained by strict central government control over their scope and finances. Furthermore, past erosion of municipal responsibility has reduced the cities' capacities to plan and implement development programs and recruit quality staff.

Municipalities should work in concert with the Governorates and Regional Councils to execute a private sector-oriented urban export promotion program. Governorates wield considerable influence over central inputs in their regions and the newly created Regional Development Councils are designed to help improve coordination between national and local development plans and can include representatives from both the public and private sectors.

## **B. PROGRAMMATIC GUIDELINES**

On-going economic adjustment programs and related policy initiatives in Tunisia are creating a positive environment for an urban economic development program supporting export promotion and related employment generation. Furthermore, very strong interest exists at the local government level for such a program.

### **The Framework for Public-Private Collaboration**

A private sector-led export orientation to Tunisia's economy will have significant implications for urban economies and local governments. However, responding to these challenges appears to be beyond the institutional and financial capacities of even the most capable municipalities in Tunisia at the present time. Nevertheless, we believe that selected municipalities in a collaborative arrangement with Governorates, Regional Councils, and central agencies will be able to plan and implement a program which would attract and mobilize private investment for export promotion. Each of the three local government institutions will bring to this association the specific powers and duties

## **Executive Summary, 4**

assigned to them under the law. However, the structure will require institutional support since the arrangement has no real precedent and the Regional Councils have only recently been created.

### **The Public-Private Partnership**

The exact nature of the proposed "partnerships" between local government and private entrepreneurs should be left flexible and defined on the basis of expected inputs and outputs of both parties. For example, the local government may agree to provide serviced sites and facilities under lease in exchange for private investment in plant, equipment, and job creation. This concept is already being practiced in Monastir, for example, and is being considered in Bizerte and Kairouan as well. Thus, local government retains an indirect equity position and derives revenues from the lease. It can use the infrastructure investment as a tool for guiding urban growth and satisfying shelter needs.

Local government could provide supporting infrastructure (roads, drainage, lighting, telephone/telex) in response to an entrepreneur(s) request for support in exchange for the private economic investment, implementation of environmental protection measures, and cost recovery. Meanwhile, the local government capitalizes on the infrastructure investment to help guide urban growth and respond to shelter needs.

### **Program Streams**

Two parallel and complementary streams of a single program should be considered. The first component would focus on packaging a public-private joint venture within a given area to build a "platform" or foundation for economic growth, export promotion, growth management and shelter. The public sector would provide the supporting infrastructure while the private sector would provide investment and create jobs and exports. The total "budget" for each of these high priority areas could be \$2-10 million, with approximately 75 percent coming from external sources.

The second component of the program would allow a larger number of cities to compete for program resources than would be possible under Component 1. This component would be opportunity driven. It would finance specific smaller scale projects involving supporting infrastructure for export-oriented economic activities. As in Component 1 infrastructure segments would be strategically used to guide growth and support surrounding shelter development. Such projects would be evaluated on their economic merits. Well-defined and positively appraised projects might range from \$250,000 to \$750,000.

In both cases, the broad project design should provide for centrally provided technical assistance in the development of proposals as well as necessary feasibility studies. Where possible local consulting services should be used for this purpose.

### **Financial Framework**

The existing planning and budgeting process is not responsive enough to respond to private sector needs. This situation suggests the need for a flexible, non-cyclical project

funding process (i.e., not directly linked to the annual budget) such as a line of credit to finance necessary infrastructure. The Housing Guaranty (HG) program could be used as a funding source, to capitalize such a resource pool.

A commercial bank or the proposed municipal bank could manage the funds and appraise the proposed projects for financing according to agreed-upon criteria. Cost sharing and recovery arrangements would be determined as part of the public-private agreements. Improvement districts and betterment levies could be utilized in such a program. The legal and institutional basis for these arrangements are discussed in a previous report prepared for the RHUDO dealing with mechanisms for cost recovery of municipal (trunk) infrastructure.

### **Infrastructure Support**

Based on the general situation in the cities visited, the types of possible infrastructure programs might include: 1) Infrastructure upgrading in existing industrial/economic agglomerations with room for expansion and service deficits; 2) Use of infrastructure in peripheral areas to accommodate economic activities; 3) Use of infrastructure in areas that piggy-back on existing or planned investment which could serve as a catalyst for urban and economic growth; 4) Use of infrastructure in places that would permit existing or proposed enterprises to become operational. In each case, secondary and tertiary infrastructure would be introduced in adjacent areas to promote shelter development, upgrading, and growth management.

### **Developmental Resources Support**

The program guidelines discussed above primarily relate to the use of infrastructure to leverage private investment in economic activities and shelter. However, other developmental resources are available that should be tapped to support the program. For example, credit and training are needed for enterprise development. Tunisian enterprises need assistance in penetrating export markets. They lack linkages, know-how, quality control standards, and other skills needed to compete internationally.

### **Spatial Implications for Programming**

To identify potential places for the proposed economic development program, a broad assessment of those Governorates having settlements greater than 30,000 population was conducted as was a municipal capacity assessment in the ten sample cities. This examination, coupled with our knowledge of Tunisia and field visits, enabled us to make a provisional professional judgment as to which places have the most potential for participation in the program.

<b>Exhibit ES.1</b>		
<b>RANKING OF GOVERNORATES/SAMPLE MUNICIPALITIES</b>		
<b>RANK</b>	<b>GOVERNORATE</b>	<b>TOTAL SCORE</b>
1	Sfax*	Good
2	Tunis*	Good
3	Sousse*	Good
	Monastir	Good
	Nabeul	Good
4	Bizerte*	Above Average
	Ben Arous	Above Average
5	Ariana	Above Average
6	Mahdia	Average
	Médenine	Average
7	Gabès*	Average
8	Béja	Below Average
9	Kairouan*	Below Average
10	Le Kef	Below Average
11	Jendouba* Tabarka*	Poor
	Kasserine*	Poor
12	Gafsa*	Poor
13	Tataouine	Poor

\* Municipal Sample

1

## CHAPTER I

### THE URBAN SETTING IN TUNISIA

This introductory chapter briefly discusses characteristics of urbanization and the issues they raise for urban-oriented economic development programs.

#### A. URBAN PLACES

Tunisia consists of 246 incorporated municipalities. Once established as a municipality by national decree, a community is considered "urban". Based on 1989 statistics, 120 of them had populations below 5,000 persons; and 189 had populations below 15,000. Many of these small cities have an extremely limited resource base and low urban service levels. These places have annual budgets below 500,000 dinars (1988 - US\$582,900) and depend upon national or regional financial support and technical assistance for basic service provision. None of these small cities are likely candidates for an urban export promotion program.

Therefore, for the purpose of the Urban Implications Study (UIS), PADCO has limited its review to municipalities (and related Governorates) with populations over 30,000. These are places where the tensions of urban growth, land management, urban resource availability, infrastructure needs, and unemployment manifest themselves most profoundly.

#### B. URBAN PLACES AND THE NATIONAL SPATIAL PLAN FOR REGIONAL DEVELOPMENT

A National Spatial Plan for Regional Development ("Schéma National d'Aménagement du Territoire") was established in 1984 to formally respond to what the government felt was a growing population and employment disequilibrium between the East Coast ("littoral") and the West and South (interior) of the country. This disequilibrium was reinforced during Tunisia's strong economic growth in the 1970s.

The key objectives established by the Directorate of Regional Planning (DAT/Ministère de l'Équipement et de l'Habitat) for the "Schéma" are as follows:

- integration of national space
- preservation of natural resources
- spatial orientation of economic investment

Two alternatives were evaluated: one based on existing trends with concentration of economic activities (and population) on the East Coast and a second which would help bring about decentralized growth in the interior.

The Plan endorsed the progressive development of a secondary infrastructure and settlement system (outside the coastal areas) in order to promote growth in the interior. The Plan recommended two parallel north/south road systems (one from Bizerte to Libya and one from Tabarka to Gafsa) and three east/west systems (Algeria-Tunis [via Jendouba], Algeria-Sousse [via Kasserine and Kairouan], and Algeria-Gabès [via Gafsa and Tozeur]).

Other aims included the "optimization" of agricultural production, and the creation of nine principal "growth poles" or urban industrial centers (Tunis, Bizerte, Sousse, Kairouan, Sfax, Gabès, Gafsa, Kasserine, and Jendouba).

Map 1 identifies key settlements, regional and Governorate boundaries and the distribution of population by Development Region. Map 2 represents the Plan's proposed settlement system and roles, and its recommended inter-regional transport proposals. For the most part, the latter would involve upgrading the existing network.

### **C. URBAN PLACES AND THE NATIONAL TRANSPORTATION NETWORK**

The development and operation of Tunisia's transport network has been primarily concentrated in the eastern coastal area where urbanization, economic development, and population growth have been mutually reinforcing. A future export-oriented economy will reinforce these trends. The general characteristics of the ports, airports, road, and rail networks in Tunisia are described below:

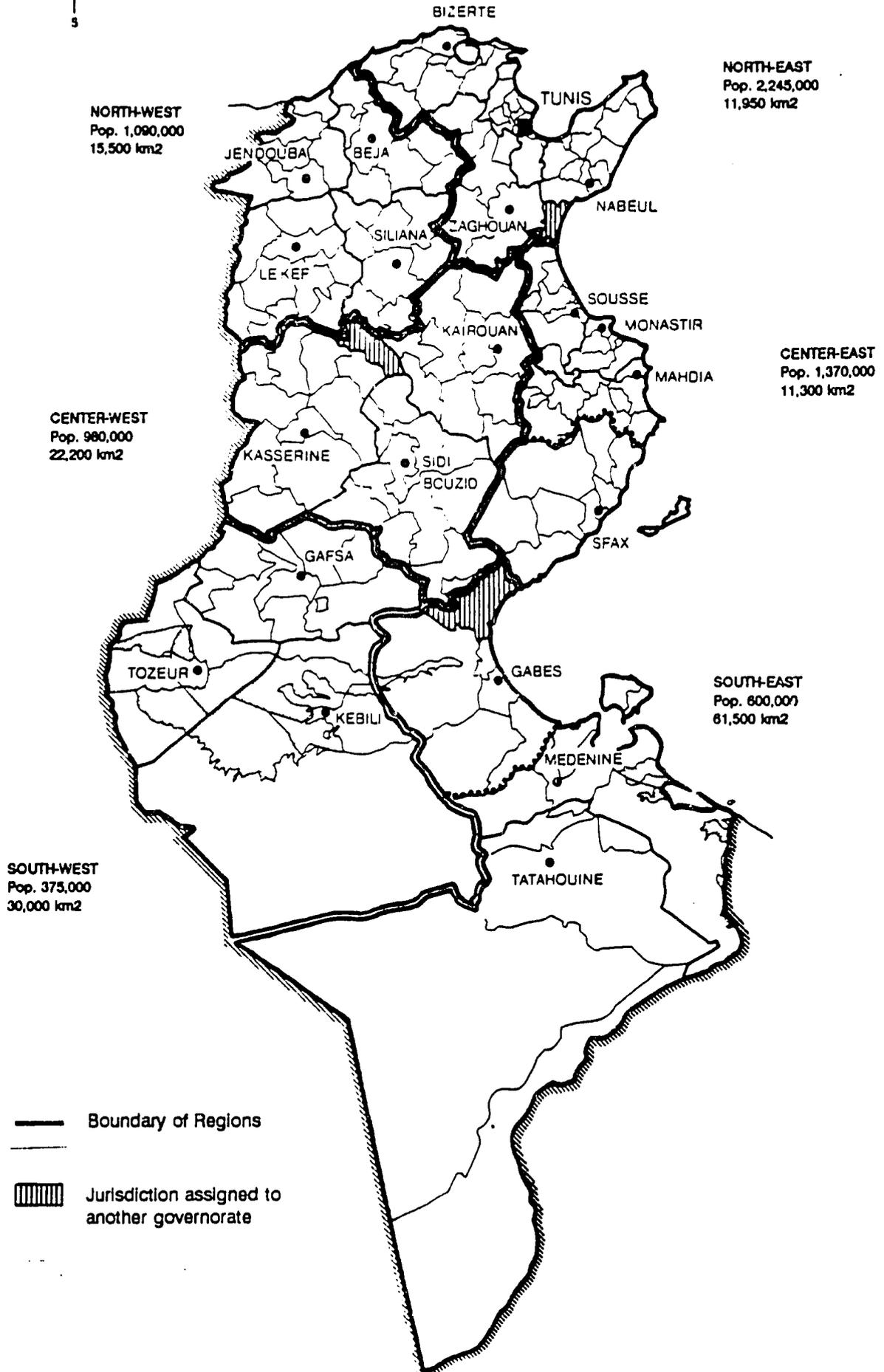
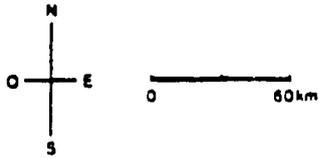
#### **1. Ports**

Tunisia had four ports at the time of independence (Tunis-Goulette, Bizerte, Sfax, and Sousse). Since then, all four ports have been expanded; three new ports have been built. A petroleum port was built at Skhira in 1960, and a port was established at Gabès in 1974. The third new port is being built in Zarzis, primarily to support a Japanese-constructed fish processing facility located there.

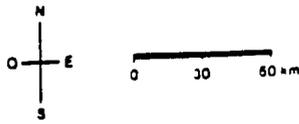
While local authorities in Sfax, Sousse, and Bizerte are disturbed by the perceived dominance of the Tunis/La Goulette port, during the 26-year period 1959-1985, Tunis-Goulette's share of maritime traffic actually decreased from 48 percent to 22 percent. Increasing industrial development in the South, and the use of ports in Sfax and Gabès for chemical exports, is the primary cause of deconcentration, although Bizerte has experienced some increases as well. Presently, the major bottleneck in port management is that many goods are left on the docks for long periods of time.

The National Office of Tunisian Ports (OPNT) is the autonomous agency that operates and develops the ports. While the OPNT operates all ports, the port of Gabès is operated under a concession arrangement which stipulates that any surplus is transferred to the Treasury.

# MAP 1 REGIONS



# MAP 2 NATIONAL SPATIAL PLAN FOR REGIONAL DEVELOPMENT



**NORTH-EAST**  
1981 2,245,000  
2001 3,540,000  
2025 5,250,000

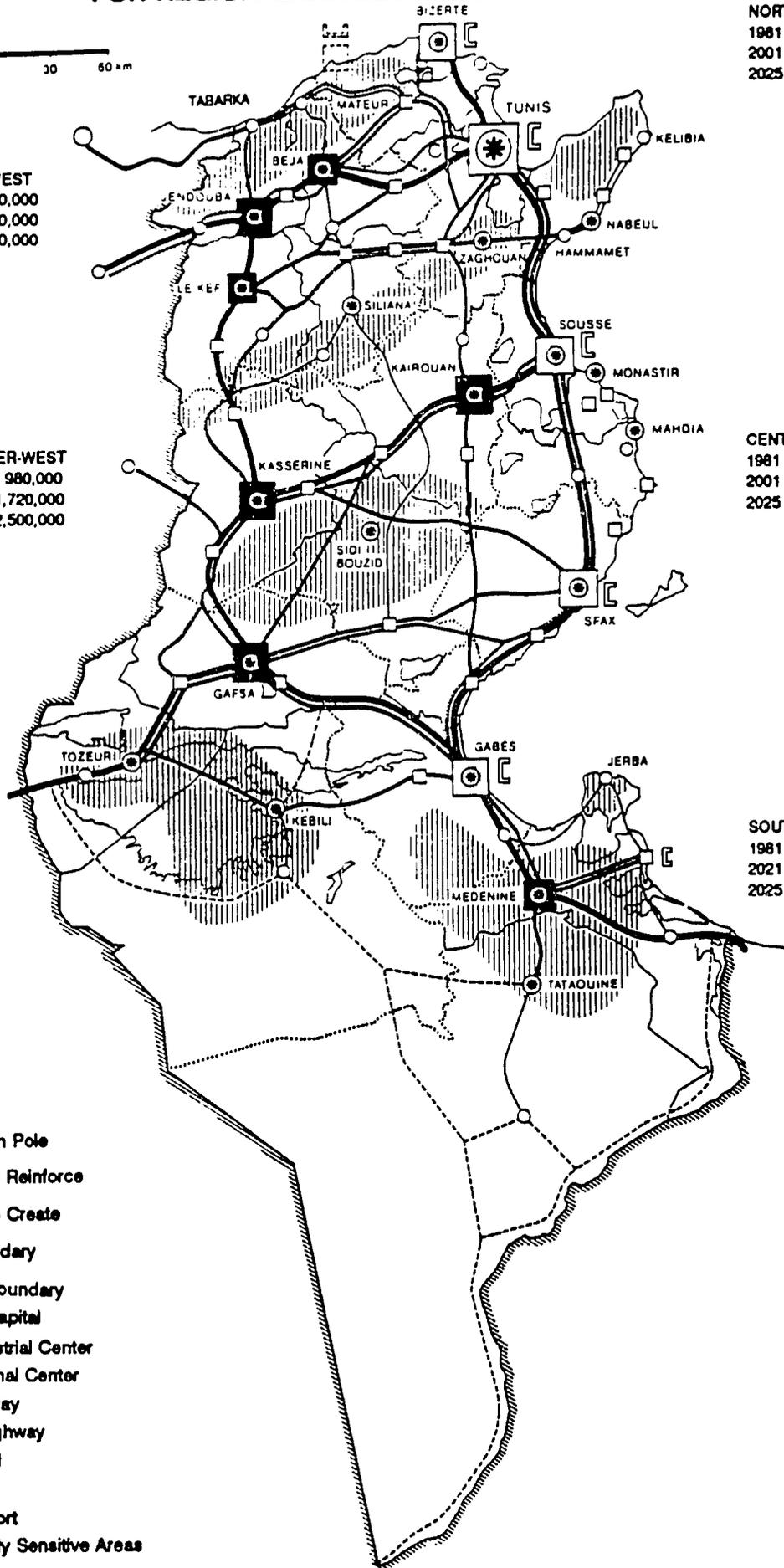
**NORTH-WEST**  
1981 1,090,000  
2001 1,720,000  
2025 2,500,000

**CENTER-WEST**  
1981 980,000  
2001 1,720,000  
2025 2,500,000

**CENTER-EAST**  
1981 1,370,000  
2001 2,220,000  
2025 3,290,000

**SOUTH-WEST**  
1981 375,000  
2001 730,000  
2025 930,000

**SOUTH-EAST**  
1981 600,000  
2021 1,070,000  
2025 1,570,000



**LEGEND**

- Existing Growth Pole
- Growth Pole to Reinforce
- Growth Pole to Create
- Regional Boundary
- Governorate Boundary
- Governorate Capital
- Regional Industrial Center
- Tertiary Regional Center
- Primary Highway
- Secondary Highway
- Regional Road
- Railroad
- Commercial Port
- Environmentally Sensitive Areas

## **2. Airports**

In addition to Tunis/Carthage, Tunisia has four regional airports located in Skanes-Monastir, Jerba, Sfax, and Tozeur-Nefta. There is a fifth airport being built in Tabarka. Like the ports, the airports have facilitated the economic expansion of the central and southern sections of the country, and their subsequent urbanization.

Airports are operated and developed by the Office of Tunisian Airports (OPAT), an autonomous public enterprise. There are two airlines, Tunis Air and Tunisavia. Both passenger and freight service are available and there is regular international service between Skanes-Monastir and, to a limited extent, Sfax. Local authorities in Sfax, strongly believe that lack of central support for improvements in facilities and domestic and international routes are acting as major constraints on the city's economic development.

## **3. Roads**

The inter-regional road network in Tunisia comprises more than 10,800 kilometers of primary and secondary routes. The country is generally well served by this network and roads are in relatively good condition.

Bus traffic is shared by the National Transport Company (SNT) and numerous local transport companies. Freight transport is dominated by the Commodities Transport Company (STM) which has about 50 percent of the commodity transport market. The remaining 50 percent is distributed among local companies.

Planning and execution of road infrastructure falls under the responsibility of the Ministry of Public Works. Thus, all major road network planning is administered separately from the rest of the transport sector, which is under the Ministry of Transport. Various mechanisms of policy coordination exist, including the designation of the Governorate Secretary General as the officer responsible for area-wide transportation coordination. There are inter-ministerial working groups that must resolve transport issues in the preparation and execution of National Economic and Social Development Plans.

## **4. Railroads**

The National Railroad Company of Tunisia (SNCFT) is one of the largest employers in Tunisia (employing some 10,000 people). The railroad network using diesel traction comprises some 1,900 km and, although converging on Tunis, covers the country rather well. The only international connection is with Algeria. This 400 km section is normal gauge (1,435 mm) while the remainder of the system is meter gauge; thus, goods brought in from Algeria must be off-loaded in Tunis to travel the rest of the system.

Passenger service and freight transport along the Tunis-Sfax corridor has been a factor in contributing to urbanization along its route. The recent extension of rail service from Sousse to Mahdia and Nabeul is likely to have similar effects.

#### **D. URBAN POPULATION**

There were 34 cities with populations greater than 30,000 in January 1989, according to preliminary population estimates of the National Institute of Statistics (INS). Municipalities range in size from Tunis (689,400) to Médenine (30,700) and are distributed throughout the country as shown in Table I.1.

The combined population of these 34 cities in 1989 is approximately 2,640,000 and represents roughly one-third of the total national population estimate. The total "urban" population estimate is 4,615,800, including all 246 municipalities.

From 1984, the date of the last national census, to 1989, population increased more quickly than expected in several major cities. Figures for those cities included in the scope of the Urban Implications Study are listed below. Urban population growth is expressed in absolute and percentage terms.

Table I.1 illustrates the settlements with populations of over 30,000 by Development Region and Governorate. Of the total 2.6 million inhabitants in these settlements, about 46 percent are in the District of Tunis while 21 percent are located in the Central East Region. The North West, Central West, and South West regions, each represent only about 5 percent of the total population. Furthermore, about 86 percent of the population in these settlements is found in proximity to the eastern coast.

Table I.2 shows the percent of population change between 1984 and 1989 for the sample cities. For the most part the settlements had an absolute population increase on the order of 15 percent. Jendouba had the highest increase over the period (55 percent), but it had a relatively small population base. Gafsa had an increase of only 4.4 percent. Tunis City, by far, had the highest absolute increase in population (about 93,000), even excluding its suburbs. Tunis City absorbed 46 percent of the total population increase of the sample cities over the 1984-1989 period.

These rates of increase noted above, especially in cities with current central city densities of 1,000 or more, have largely resulted in an outward and uncontrolled expansion of the urban perimeter and resultant service delivery problems. In such cities, growth management problems, and their implications, are increasingly experienced. By 2001, Tunisia's population is expected to exceed 10 million and could be as high as 12 million. Accommodating this growth will require renewed public commitment to facilitate job generation, provide infrastructure, and adopt appropriate programs for growth management and environmental improvement.

The *Tunisia, Country Environmental Study* report prepared by the World Bank in 1989 indicated that 77 percent of the urban population is concentrated along the East Coast. This area, the "littoral", includes 28 of the 34 cities over 30,000 in population. The projected rate of urbanization (67-71 percent by 2001) and urban concentration along the coast from Bizerte to Sfax will pose severe growth management problems, further strain public resources and services, and add to job generation requirements.

**Table I.1. Tunisia - City Population Estimates  
(Cities over 30,000 Population)**

REGION (% urban pop.)	GOVERNORATE	CITIES OVER 30,000	POPULATION AS OF 1/1/89	SIZE RANK
DISTRICT OF TUNIS  (46%)	Tunis	Tunis	889,400	1
		La Bardo	73,500	9
		La Goulette	64,300	10
		La Marsa	44,200	21
	Ariana	Ariana	113,600	3
		Cite Ettadhamen	91,700	5
	Ben Arous	Ben Arous	60,600	11
		Hammam Lij	54,200	15
		Rades	34,800	30
SUBTOTAL			1,220,300	
NORTH EAST (NE)  (8%)	Bizerte	Bizerte	86,400	6
		Menzel Bourguiba	47,200	19
	Nabeul	Nabeul	45,500	20
		Hammamet	35,100	28
SUBTOTAL			214,200	
NORTH WEST (NW)  (5%)	Béja	Béja	53,800	16
	Le Kef	Le Kef	39,800	23
	Jendouba	Jendouba	36,000	27
SUBTOTAL			129,600	
CENTRAL EAST (CE)  (21%)	Sfax	Sfax	226,000	2
		Sakiet Ezzit	31,400	33
	Sousse	Sousse	96,100	4
		M'saken	48,400	18
		Kalla Kebira	36,200	26
	Monastir	Monastir	41,400	22
		Moknine	37,200	25
	Mahdia	Mahdia	38,500	24
SUBTOTAL			555,200	
CENTRAL WEST (CW)  (5%)	Kairouan	Kairouan	83,200	7
	Kasserine	Kasserine	54,900	14
SUBTOTAL			138,100	
SOUTH EAST (SE)  (11%)	Gabès	Gabès	81,500	8
		Zarzis	56,500	13
	Médenine	Hourmt Souk	50,000	17
		Medoun	34,500	32
		Médenine	30,700	34
	Tataouine	Tataouine	35,000	29
SUBTOTAL			288,200	
SOUTH WEST (SW)  (4%)	Gafsa	Gafsa	53,300	12
		Metlaoui	34,500	31
SUBTOTAL			92,800	
TOTAL			2,644,400	

Source: Institut National de Statistique (INS), January 1989

<b>Table I.2. Tunisia - Percent Change in Population Between 1984-1989</b>				
<b>City</b>	<b>1984</b>	<b>1989</b>	<b>Change</b>	<b>Percent Change (1984-89)</b>
1. Tunis	595,654	689,400	92,746	+ 15.5
2. Bizerte	75,063	86,400	11,337	+ 15.1
3. Jendouba	23,249	36,000	12,751	+ 54.8
4. Tabarka	9,810	11,200	1,390	+ 14.1
5. Sfax	196,334	226,000	29,666	+ 15.1
6. Sousse	83,509	96,100	12,591	+ 15.0
7. Kairouan	72,254	83,200	10,946	+ 15.1
8. Kasserine	47,606	54,900	7,294	+ 15.3
9. Gabès	70,806	81,500	10,644	+ 15.1
10. Gafsa	60,970	58,300	17,330	+ 4.4
<b>Source: Recensement Général de la Population et de l'Habitat (1984), Institut National de Statistique</b>				

On the other hand, expected population growth and needed jobs can be accommodated only in urban places, and those cities with the most potential to do so are in the eastern coastal area. Existing trends suggest that the resource base and "carrying capacity" of interior Governorates and settlements are much more limited. The concentration of urban settlements and population along the East Coast has occurred despite Tunisia's economic and spatial deconcentration policies, and substantial public investment to induce development in the South and West. Given the challenges confronting them, policy makers must make astute judgements so that scarce resources are effectively employed to support economic opportunities and address basic needs.

## **E. HOUSING AND LAND**

### **1. Housing Conditions and Land**

Shelter is a basic requirement for rapidly expanding urban populations. Tunisia's recent efforts in producing urban housing have been relatively successful: annual production targets have been met or exceeded, overcrowding has been reduced and the overall quality of the existing urban housing stock has been considerably improved. These achievements primarily are due to greater effort and success by the private sector in providing adequate housing to urban households across a wide range of incomes.

During the VIth Plan period (1982-1986), the private sector produced some 188,120 units compared to 91,030 produced by the public sector. About 65,000 units, or roughly one-third of these private sector units were built "informally" or without official approval. Such "informal" units included a variety of housing types and amenities, from villas to very rudimentary housing units. It should be pointed out that very few informal units were of substandard construction.

Tables I.3 and I.4 have been taken from the World Bank's *Tunisia, Country Environmental Study (1989)* and provide a brief summary of the most important changes in housing quality between 1975 and 1984. Clear improvement is shown for nearly all housing condition indicators presented in Table I.3. These improvements no doubt reflect the attention given to housing by both the private and public sectors, the results of sustained assistance by international donor agencies, and improved economic conditions over part of this period. While a greater percentage of families were living in 1-2 rooms in Tunis in 1984 than was the case in 1975, Table I.4 shows an "upward mobility" for all urban areas toward dwelling units with more rooms. The number and proportion of one room units in the total urban housing stock declined. Between 1975 and 1984, more than 6,500 one room units were expanded to two or more rooms or replaced by larger units. It is interesting to note that while the proportion of two room units in the total housing stock remained relatively the same at 32 percent, the proportion of three and four room units increased from roughly 29 percent to 40 percent. About 60 percent of the new units built between 1985 and 1984 had three or four habitable rooms.

While this "averaged" data reflects very substantial improvements in urban housing conditions, particularly in light of the rapid growth of low income urban populations, it also masks continuing disparities between housing conditions for very low income residents and more economically mobile households. Apparently, many poorer families and more recent rural-urban migrants have been forced to live as renters in deteriorating city centers or medinas. At the same time, access to serviced land and housing affordable to low-income families has become more problematic and now constitutes a growing obstacle to realizing the full benefits of development. Furthermore, without general improvements in the economy, it will be difficult to sustain quality of life improvements in Tunisia's cities.

## **2. Land for Economic Activities**

Uncontrolled urban sprawl, industrial location policies, and lack of planned sites for productive activities have pushed economic activities such as export industries towards distant sites without sufficient urban services to attract, support or sustain private investment. Attempts to develop industrial parks have met with only mixed success--particularly in the interior. In several cases, sites have been selected where there was no effective demand, while in places of intense demand (such as in Sfax and Tunis) an insufficient number of serviced sites have been developed.

Productive activities need to be located near sources of labor, infrastructure (especially transport and communications), supporting services, and markets. RHUDO/NENA has

<b>Table I.3. Change In Housing Conditions, 1975-84</b>		
<b>INDICATORS</b>	<b>1975</b>	<b>1984</b>
People/Dwelling	6.30	5.2
Average Dwelling Size (No. of Rooms)	2.70	2.8
People/Room	2.30	1.9
Families In 1-2 Room Dwellings	46%	51%
Rudimentary Dwellings	11%	5%
Families with Kitchen	78%	87%
Families with Water Closet	87%	95%
Families with Bathroom	18%	32%
Families with Electricity	80%	94%
Families with Piped Water	70%	89%
Families with Sewerage	65%	70%

Sources: INS, Recensements 1975 and 1984; and TD, Etude Sectorielle Habitat, RHUDO, 1988

<b>Table I.4. Tunisia - Changes In Urban House Sizes</b>						
<b>Habitable Rooms/ Housing Unit</b>	<b>1975</b>		<b>1984</b>		<b>Change (1975-84)</b>	
	<b>Number of Units</b>	<b>% Housing Stock</b>	<b>Number of Units</b>	<b>% Housing Stock</b>	<b>Number of Units</b>	<b>% of Units (1975-84)</b>
1	159,670	35.0	153,143	21.1	-6,527	-2.4
2	146,896	32.2	238,062	32.8	91,166	33.8
Subtotal	306,566	67.2	391,205	53.9	84,639	31.4
3-4	130,017	28.5	293,223	40.4	163,206	60.5
5+	19,617	4.3	41,372	5.7	21,755	8.1
Subtotal	149,634	32.8	334,595	46.1	184,961	68.6
<b>TOTAL</b>	<b>456,200</b>	<b>100.0</b>	<b>725,800</b>	<b>100.0</b>	<b>269,600</b>	<b>100.0</b>

Source: PADCO Estimates based on the 1984 Census.  
Note: Habitable rooms do not include kitchens, baths, wc, storerooms, etc.

already taken some initiatives in helping Tunisia address urban land use issues through its HG-004c program. It is clear however, that more flexible land use planning and zoning, as well as more strategic use of decreasing land resources is needed.

### **3. The Need for Growth Management**

The extension of the urban boundary of Tunis relative to population growth is one measure of the magnitude of urban sprawl. In 1975 for example, the total urban surface of Tunis was 9,500 hectares. By 1984, rapid urbanization had increased this area by 65 percent to 15,700 hectares, even though the population increased by less than 40 percent. Because of urban sprawl, substantial areas of agricultural land were encroached upon or were not productively utilized. Part of the problem is due to the inability of urban plans to effectively guide or control development. Sanctions against irregular development have not been applied. Policy and planning instruments, in general, must be used to guide, encourage, support, and sustain economic growth. At the present time, urban planning largely ignores urban economic considerations and is too inflexible to respond to current growth management problems.

Previous studies have identified the major causes of uncontrolled land development:

- the current shortage of affordable land suitable for urbanization;
- the limited capacity of the existing land development mechanisms to increase the supply of serviced sites for economic development and shelter;
- the limited financial and human resource capacity of municipalities to play an active role in guiding development through the provision of serviced land and trunk infrastructure;
- their inability to enforce compliance with development standards, and to monitor and address prevailing environmental problems; and
- the existence of unrealistic and rigid standards for land development and building construction which encourage informal housing to avoid circuitous legal requirements.

To date, proposed solutions to the problems of urban land availability have focused mainly on meeting the needs of residential development. More recent efforts have been made to ensure that urban land areas for green space, recreation and collective activities are provided. There continues to be inadequate attention placed on planning for productive activities or on developing ways to successfully integrate these activities into residential areas.

Given the competition for the use of urban land by residential and non-residential activities and the current inability of municipalities to fully control urban development, the ways in which public policies deal with urban land use and availability in the near future will affect, to a large extent, whether the private sector will have sufficient opportunity to adequately contribute to Tunisia's economic transformation, notably towards greater export promotion.

Land use and development choices must recognize and assess the economic impacts and benefits of alternative land uses in specific locations so that human and capital resources from national, regional and municipal sources are effectively utilized. Such an efficiency based approach will be especially difficult to implement at the local level where virtually no capacity exists to undertake economic analysis. Furthermore, there may be a strong political bias towards satisfying strongly expressed equity-oriented programs.

The 34 largest urban areas in Tunisia are growing quickly, some in a very haphazard and spontaneous manner. Population growth in urban areas along the East Coast will exacerbate an already difficult-to-manage situation. Demand for vacant land will be intense; acquisition costs will be high. Land owned by local governments (cities and Governorates) will need to be used very strategically.

The appropriate urban planning strategy for urban areas should not be simply "static master planning" or large scale development sponsored by the public sector (as has been the case in Tunis). Rather, the emphasis should be on growth management: "guided" land development in urban peripheries, urban consolidation where appropriate, and continued emphasis on upgrading. Such an approach will require collaboration between public and private parties (particularly landowners) and community participation. It will require more local leadership and effort, more flexible structure planning, more effective use of infrastructure, flexible funding to guide growth, and more concentrated control and enforcement in environmentally sensitive areas. As noted above, growth management must also be closely tied to opportunities for local economic growth and job opportunities.

## **F. ENVIRONMENT**

The World Bank recently completed a major study of the environment in Tunisia. This, and our field visits to the sample cities, were key sources of information on this subject. Consistent with the UIS terms of reference, PADCO focused primarily on issues of solid waste management and industrial pollution. Issues related to the provision of water, sanitation, power, roads, and other services are discussed in Chapter III of this report.

Municipalities are responsible for two distinct solid waste management operations: 1) collection services and 2) disposal at the designated sites. In the District of Tunis, two private contractors collect most of the industrial waste, or about 30 percent of the total waste generated. Responsibility for management of the two controlled disposal sites has been delegated to ONAS.

Large cities perform very well in solid waste collection services. For example, the majority of residential areas in large cities are serviced on a daily basis. However, Tunis, Sfax, and Sousse seem to be having difficulty coping with solid waste disposal due to urban expansion and population growth. Solid waste collection problems for many cities are particularly acute in peripheral areas. Some city centers also reflect a low level of maintenance. For example, Kasserine's rapid, low-density urban growth has obviously strained the city's solid waste management capacity. Moderately growing places like Kairouan and Bizerte,

on the other hand, appear to be very well maintained. Table I.5, Solid Waste Collection and Disposal Conditions in Selected Tunisian Cities, presents selected information on solid waste collection and disposal sites.

While the collection of solid waste in large urban areas is adequate, the World Bank report has identified the management of disposal sites as the major problem. Commonly-found deficiencies at these sites include:

- lack of fencing and control gates
- lack of weighing stations and guard houses
- lack of sufficient equipment
- lack of drainage ditch and pumping facilities
- lack of planting in buffer zone
- lack of training of operating staff on proper methods of land filling

Less critical problems relate to the collection of solid waste in certain municipalities. These include: inadequate municipal personnel and/or machinery, an insufficient number of transfer points or containers, and the lack of container maintenance.

The World Bank concluded that any substantial improvement in the disposal of ordinary solid wastes would require:

- adoption of clear and specific government policies and regulations;
- designation of a government agency to regulate and monitor the situation;
- strengthening institutional capacity at the municipal level; and
- increasing fiscal and financial resources made available to municipalities.

In light of national and local economic conditions, these steps will probably not be taken unless some critical problems (e.g., groundwater pollution from leachate) focus greater public attention on this issue.

Opportunities for private sector involvement in the collection and disposal of solid waste in urban areas are probably limited to the largest cities. Private firms could collect and dispose of waste emanating from business establishments, hotels, and industries under contract with the Municipality. This is now being done in Tunis.

Tunisia's most critical solid waste management problem is the handling and disposal of industrial waste and the treatment of special wastes of a hazardous nature (e.g., flammable, toxic, radioactive, or septic). The current improper handling of these wastes results primarily from:

- the absence of any clearly defined procedures concerning the management of hazardous wastes;
- the lack of clear and detailed government policies or regulations governing their disposal; and
- the often very complex and specialized treatment that they require.

**Table I.5. Solid Waste Collection and Disposal Conditions  
In Selected Tunisian Cities**

City	Collection Frequency	Quantity of Solid Waste			Disposal Sites
		Total Tons/Year*		Domestic KG/Pers/Day	
		1988	1990 (est)		
Tunis	Daily collection of residential solid wastes; weekly collection of trash	336,000	407,000	0.50	2 controlled sites; adequate until 1995
Sfax	Daily collection of residential solid wastes in most areas; collection six times per week in outlying areas	110,000	130,000	1.00	1 semi-controlled site; 1 limited scope for expansion
Sousse	Twice daily collection in the medina; daily collection in the city center; collection every two days in outer areas	66,000	74,000	0.70	1 uncontrolled site
Gabès	Daily collection of residential solid wastes	25,000	32,000	0.75	1 old site and 1 new site; both uncontrolled

\* Including industrial wastes (approximately 30 percent of the total)

Source: Tunisia Country Environmental Study, Supporting Report No. 8, The Environmental Implications of Urbanization, IBRD, September 1988.

Most hazardous wastes in Tunisia are produced by urban industries, although small amounts also come from hospitals, commercial establishments, and other services. At present, hazardous wastes from industries and hospitals are not treated separately from domestic wastes. No proper measures are taken to a) protect the soil around the disposal site or the aquifer under it, or b) protect the health and safety of workers, scavengers, or animals that inadvertently enter the site. While the problem of hazardous wastes is more acute in Tunis, Sfax, Sousse, Gabès, Bizerte, and Gafsa, no industrial city is entirely exempt from this problem.

Environmental legislation is not specific enough in defining the waste disposal obligations of private industries. Nor are regulations or standards promulgated to guide treatment for different types of hazardous waste by municipalities. The management and disposal of hazardous waste is an area in which the United States has a great deal of experience. Access to this information and expertise could be of immense help to Tunisia, possibly through the World Bank's Municipal Development Project.

Exhibit I.1 presents a brief overview of the types and levels of industrial pollution in selected cities. As indicated, industrial pollution primarily affects coastal and marine areas and irrigated agricultural lands. The most serious industrial pollution is near Gabès and Sfax.

The pollution of coastal waters near these cities results directly from the uncontrolled dumping of phosphate residues into the sea. This not only destroys marine ecosystems and potential fishing harvests, but also deposits a dangerous amount of heavy metals that make shellfish unsafe for human consumption. Discharges from the steel mill in Menzel Bourguiba (and raw sewage from nearby settlements) is also a major environmental problem in the lakes near Bizerte (Ischaël, Bizerte and Porto Farina).

In the long run, tourism in Tunisia will also be adversely affected by pollution. Severe conflicts between industry and tourism are very evident in the metropolitan area of Sousse, particularly to the south and in the direction of Monastir. Given the importance of tourism between Nabeul/Hammamet and Sousse/Monastir, these conflicts should be resolved as a high priority. Most likely, polluting industries should be barred from this area.

Great care must be taken to assure that development is sensitive to the entire range of environmental concerns, including any additive effect on marine pollution. The use of the ocean for disposal of concentrated wastewater, particularly industrial discharge, is jeopardizing tourism, one of the most vital economic sectors and a major source of hard currency.

In Kasserine, chemicals and fibers discharged from the cellulose factory are reported to be polluting the water table as far away as Sidi Bouzid and adversely affecting crop production. In Sfax, air pollution from industrial concentrations in both the north and south of the city has created "dead zones" without vegetation.

**Exhibit I.1.**  
**Principal Concentrations of Industrial Pollution in Urban Areas**

City	Environment Affected	Nature of Pollution	Source
Tunis	Atmospheric; liquid waste	Dust from cement factory and quarries; liquid waste pollution from soap, paint and battery factories, agro-industries	<ul style="list-style-type: none"> <li>● Industrial Zone Ben Arous-Megrine-Jebel Jelloud</li> </ul>
Menzel Bourguiba	Atmospheric; liquid waste	Acids; process chemicals	<ul style="list-style-type: none"> <li>● Steel plant</li> </ul>
Sfax	Marine and coastal areas; atmosphere	Untreated phosphogypsum dumped into sea; SO <sub>2</sub> emissions, chromium sulfate	<ul style="list-style-type: none"> <li>● SIAPE</li> <li>● NPK</li> <li>● Tanneries</li> </ul>
Kasserine	Water table	Mercury pollution	<ul style="list-style-type: none"> <li>● Cellulose factory</li> </ul>
Gabès	Marine and coastal areas; atmosphere	Untreated phosphogypsum dumped into sea; SO <sub>2</sub> emissions; dust from the cement factory	<ul style="list-style-type: none"> <li>● Industries Chimiques Maghrébines (ICM)</li> <li>● Société Arabe d'Engrais Phosphates et Azotes (SAEPA)</li> <li>● Industrie Chimique du Flour (ICF)</li> <li>● Engrais de Gabès (EG)</li> <li>● El Kimia</li> </ul>
Gafsa	Atmosphere	Phosphate	<ul style="list-style-type: none"> <li>● Mining operations</li> </ul>

Source: Tunisia Country Environmental Study, Supporting Report No. 6, The Environmental Implications of Urbanization, IBRD, September 1988

Solutions to industrial air pollution problems are compounded by the relatively indifferent attitude shown by the industrial sector. This is partly due to the current inadequacy of laws and regulations to protect the environment as well as to the absence of any previous government policies, regulations and incentives aimed at motivating industries to pre-treat emissions. Private industries believe that they alone cannot bear the costs of correcting these problems since it will have negative repercussions on their ability to compete in the international and domestic markets. Environmental clean-up and protection costs will be painful and difficult to administer. To initiate them, the government will have to take a leading role in protecting the environment, guiding and supporting industrial participation in the clean-up; and educating Tunisians regarding the importance of environment protection.

## G. CHAPTER I SUMMARY

Tunisia has a total of 246 incorporated municipalities. Most of these cities however, have populations less than 20,000 inhabitants, possess very limited resources and are poor candidates for export promotion programs. The current study therefore has focused on 34 municipalities having 1989 populations of 30,000 or more. These cities range in size from Tunis (689,400) to Médénine (30,700) and include a total of some 2.6 million inhabitants. This amounts to roughly one third of Tunisia's total population and more than half its urban population.

Settlement patterns in Tunisia traditionally have been dominated by coastal cities. The development of modern transport networks and tourism have further reinforced this situation. All four ports at the time of independence (Tunis/La Goulette, Bizerte, Sfax and Sousse) have been expanded, while two more ports were added at Skhira and Gabès and another port is currently under construction at Zarzis. Four regional airports have been developed in addition to the international airport at Tunis/Carthage with three of these airports on the coast and only one in the interior. The national railroad includes 1900 kilometers of rails converging on Tunis, serves the country relatively well, and includes an international connection with Algeria. Nevertheless, its most important line is along the coast and there are plans to extend service to Nabeul and Mahdia. The national road network serves virtually the entire country and is generally in good condition.

Due to GOT concerns about what it perceives to be a growing population and employment disequilibrium between the eastern coastline and interior parts of the country, the National Spatial Plan for Regional Development called for the progressive development of a secondary infrastructure and settlement system. The main components of this Plan included: 1) a major road system of two parallel north-south routes and three east-west routes, 2) optimization of agricultural development, and 3) the establishment of nine principal growth poles/industrial centers, five of which are located on the coast and four in the interior.

In spite of this official policy of economic and spatial deconcentration, as well as substantial public investment to urban development in the South and West, urban settlements along the eastern coastline continued to outgrow those in other areas primarily because they were best able to absorb population growth and generate necessary jobs. Existing trends suggest that the resource base and carrying capacity of interior cities are limited. Emphasizing export-oriented industries will most likely reinforce existing trends in favor of coastal cities.

The static master planning approach of the past has failed to have much impact on the fast growing peripheries of Tunisia's urban settlements. As a result, inadequate provision has been made for the location of economic or productive activities. Future planning approaches should focus on more timely and flexible management of this rapid growth through incremental "guided land development", urban consolidation where appropriate, and continued area upgrading.

A positive development over recent years has been a general improvement in urban housing conditions. This situation may be difficult to maintain however, given the current economic slowdown.

Urban environmental conditions have been deteriorating. Whereas solid waste collection generally has been adequate except on the outskirts of large cities, most disposal practices have been uncontrolled and unsafe. This is particularly true for industrial wastes. Environmental pollution, particularly of coastal waters, is becoming increasingly serious and even now threatens the tourism and fishing industries.

## CHAPTER II

### EMPLOYMENT AND RELATED POLICIES

#### A. EMPLOYMENT: BACKGROUND AND CURRENT TRENDS

##### 1. Introduction

One of the data deficiencies encountered by PADCO was the absence of city-specific employment statistics. Statistical data on population and employment at the national and governorate levels is available in the censuses of 1975 and 1984 and in the population employment studies of 1980, 1983, and 1986. These data provide useful information for a given year, but some caution is required since the data may not always be comparable. For example, in one case the active population is recorded by place of residence, while in other instances it is recorded by enterprise and location. Unfortunately, the very useful industrial data base assembled in 1981 has not been maintained. Therefore, it is not possible to evaluate trends according to sector, employment, or locational preference.

Use of the Governorate data as a proxy for urban data must be recognized as less than ideal. Only Metropolitan Tunis (which combines the Governorates of Ariana, Tunis, and Ben Arous), and Sfax which is mainly urban, represents a close approximation of urban data. In other Governorates, since "urban" is an administrative definition, it is possible that a) urban concentrations may be located outside city boundaries, and b) rural or semi-rural populations are located within city boundaries. Furthermore, there are obviously many settlements within a given Governorate.

Given this early stage of strategy definition, these limitations should not be viewed as critical, nor do they represent an insurmountable impediment to valuable analysis. However, prior to actual selection of target cities for any export promotion strategy, additional city-specific research should be undertaken.

##### 2. National Trends in the Supply and Demand for Jobs

Between 1962 and 1988, the national demand for jobs and the number of jobs created evolved as follows in Table II.1:

<b>Table II.1. National Job Generation - Demand and Supply (1962-88)</b>			
<b>Period</b>	<b>Job Demand</b>	<b>Jobs Created</b>	<b>% Demand Met</b>
1962-71	360,000	132,500	37
1972-81	470,000	395,500	84
1982-88	465,000	276,700	60
<b>Source: Institut National de Statistique, 1988</b>			

These figures suggest that there is an increasing gap between the demand and supply of national jobs accompanied by increasing unemployment. Fortunately, in most years, the lack of employment in Tunisia was offset by out-migration. In the 1960s there was a net out-migration of 160,000 and in the 1970s a net out-migration of 141,000, of which about 97,000 were workers. The cumulative effect of these trends was an unemployment rate of approximately 15 percent in 1970 and an unemployment rate of 10 percent in 1980.

Since 1980, the employment situation has worsened with a stagnation in the number of new jobs created (40,000 per year) and a rapid average annual growth in the active population estimated at 66,500 per year. An additional factor contributing to employment was the decline in foreign employment opportunities; in fact, between 1982 and 1986 about 13,000 more workers returned than went abroad.

Since 1982, only about 60 percent of the additional demand for jobs has been satisfied. As a result, the unemployment rate climbed to an estimated 16 percent in 1988. However, unemployment rate calculations vary markedly. At various places in this report, different unemployment rates appear. For the most part, PADCO has used the official 1984 unemployment rate (16.4 percent) and then made separate calculations as needed for subsequent years. When other than 1984 unemployment rates are used, the year for that calculation is provided.

### **3. Employment Trends at the National Level**

#### **a. The Active Population**

The definition of active population used for census purposes includes persons (15 years of age and older) who declared themselves to belong to one of the following categories:

- persons who carry out a given activity and are without work in that field;
- persons who do not carry out any non-compensated activity (housewives, retired persons, etc.) and do not carry out a subsidiary activity; and
- heads of rural households (with a primarily rural vocation) where the remaining members of the household declare themselves inactive or unemployed. In this case, the head of household was declared as active with an agricultural vocation.

#### **b. Unemployment**

##### **(1) The Situation at the End of the VIIth Plan**

The VIIth Economic and Social Development Plan (1987-1991) calculated the amount of unemployment at about 264,000 in 1986 or an unemployment rate of 13.8 percent. These figures are lower than those which came out of the census of 1984 (350,000 persons or an unemployment rate of 14.5 percent--considering only the age group of 18-59 year olds). Most likely this difference is because of a change in definition or method of evaluation. The unemployment evaluated in 1986 by the Plan was based on three principal categories:

- unemployment (*d'insertion*) in 1986, estimated at 65,000 requests for employment or one fourth of the total;
- occasional unemployment (*discontinuité*) notably in the construction sector (65,000 jobs) and seasonal agriculture (consisting of 28,000 jobs) caused by the recession and drought; and
- long-term unemployment, which involves about 100,000 persons who have been looking for work for over one year.

## (2) Characteristics of Unemployment

The comparison between the employed active population, and the active population as a whole provides a gauge for measuring unemployment. Annex Tables A-1 and A-2 present the following:

- the unemployment rate in percent by age group, gender, and urban/rural location
- the unemployment rate in urban/rural areas by Governorate and gender (as a percentage of the labor force)

In general, the unemployment rate for Tunisia is on the order of 14.5 percent for the 18 - 59 age group and 16.7 percent for the 15 - 64 age group. This is perhaps underestimated, given the definition of the active population and employed population which is used in Tunisia.

Chronic, structural unemployment exceeds 40 percent of the total unemployed workforce typically among workers from the agriculture, public works, and manufacturing sub-sectors. Each year, between 70,000 and 85,000 new workers enter the labor pool. These young workers are largely uneducated: only about 70 percent have completed primary school and 20 percent are illiterate. Unfortunately, this group is not a likely beneficiary of a private sector-oriented urban economic development strategy, particularly one geared to foreign markets with high-quality control standards.

Unemployment among the youth is troubling. Of the total active population, 61 percent is in the age group 15-34 years old. Nearly 20 percent are between 20 and 24 years of age. The number of unemployed persons for the five youngest statistic categories is shown in Table II.2.

Unemployment by age, location, and gender reveals that most unemployed females are in the 15-17 age group. Female unemployment drops off sharply in the 18-19 and 20-24 age groups for both rural and urban areas. In contrast, male unemployment rates are higher than female unemployment rates for certain age groups. For example, for the age group 18-19, the female unemployment rate in urban areas was 27.1 percent versus 38.2 percent for males. This pattern of higher male than female unemployment rates holds true for both rural and urban areas through ages 20-24. After this cohort, the unemployment rate gap by gender begins to close for both rural and urban areas.

<b>Age Group</b>	<b>Active Population</b>	<b>Employed</b>	<b>Percent Employed</b>	<b>Unemployed</b>	<b>Percent Unemployed</b>
15-17	147,970	79,180	53.5	68,790	46.5
18-19	172,530	114,710	66.5	57,820	33.5
20-24	401,850	304,050	75.7	97,800	24.3
25-29	334,760	291,671	87.1	43,089	12.9
30-34	250,500	229,880	91.8	20,620	8.2
<b>TOTAL</b>	<b>1,307,610</b>	<b>1,019,491</b>	<b>78.0</b>	<b>288,119</b>	<b>22.0</b>

Source: Rapports Annuels de la BCT, Institut d'Economie Quantitative

Overall, the rate of female rural unemployment was 12 percent; male rural unemployment was 18.6 percent. For urban areas, the female rate of unemployment was 16.8 percent, male 14.5 percent. Thus it appears that female unemployment is not considerably higher than male unemployment and is actually lower in rural areas.

The magnitude of unemployment among the youth--288,119 unemployed in 1988--should have major policy and program implications for employment generation efforts. The relatively large numbers of active workers and unemployed between 20 and 24 also suggest that secondary school, vocational school, and college graduates entering the work force at this time are experiencing an unemployment rate close to 25 percent. This group should be one of the primary targets for an urban employment program, given the probability that with proper training they have potential to contribute to export-oriented enterprises.

The unemployment rate for both male and female urban workers between 30 and 60 years of age is relatively low--approximately 6.5 percent. Consequently, the limited availability of experienced and skilled workers may be an inhibiting factor for future export oriented industries. On the other hand, it is unclear as to how much job mobility there is among workers.

Statistically, there currently is little difference between urban and rural unemployment. Urban employment is growing much more quickly than rural employment most likely since rural employment has reached its carrying capacity and is declining somewhat. As a result, more migrants are searching for jobs in urban places. Unemployment rates, while slightly less in urban as opposed to rural places, are in any case quite high. The age group of both genders with the highest level of unemployment is in the 15-24 age group

in both urban and rural places (this age group alone accounts for about 31 percent of all unemployed). This is particularly problematic from both a social and economic point of view.

Annex Tables A-3, A-4, and A-5 provide data on employment by Governorate, age group, gender, and urban/rural location. Annex Table A-3 also identifies the total available labor pool. For the most part, the rates of employed active population are higher in the more urbanized Governorates and those in the North of the country (for example: Tunis, 52.5 percent; Ariana, 52.4 percent, Ben Arous, 52.7 percent; Nabeul, 53.6 percent; Zaghouan, 54.1 percent; Béja, 52.9 percent; Jendouba, 52 percent; and Mahdia, 52 percent). On the other hand, the lowest levels of employed active population are in the South and in the more rural Governorates (for example: Médenine, 44 percent; Tataouine, 44.7 percent; Kébili, 44.7 percent; Gafsa, 45.5 percent; Tozeur, 46 percent; and Gabès, 47.2 percent). These areas also reflect a very small active female population.

Overall, females are not very active in the labor force in Tunisia. However, urban areas have more economically active females than rural areas. Overall, there were 264,640 economically active females in urban areas and 190,910 in rural areas. This comprises 22.8 percent of the urban female population and 20.7 percent of the total rural female population.

Economically active females are concentrated in certain governorates. Seventy-four percent of the urban economically active females were concentrated in Tunis, Ariana, Ben Arous, Nabeul, Bizerte, Sousse, Monastir, and Sfax, while 66 percent of the economically active rural females were concentrated in Ariana, Nabeul, Béja, Jendouba, Kairouan, Kasserine, Sidi Bouzid, Mahdia, and Sfax. Governorates with both high rural and urban female economically active population are Ariana, Nabeul, and Sfax.

The bulk of the women in the labor force are in the 18-39 year age group in both urban and rural areas; 78 percent of the rural female labor force; and 87 percent of the urban female labor force.

Analyzing female unemployment rates by governorate, in the governorates of Tunis, Ben Arous, Bizerte, Monastir, and Sfax, the female unemployment rate exceeds the male rate by over 4 percent. It is interesting to note that in Kasserine, the urban female unemployment rate is more than 10 percent lower than the male rate, while the rural female unemployment rate for Kasserine is over 10 percent higher.

According to these data, the employed active population between 20 and 39 years of age represents about 60 percent of the active population in urban locations and about 50 percent in rural locations. In addition, about 35 percent of the engaged active population in urban areas is located in metropolitan Tunis. Furthermore, an additional 35 percent of the engaged active urban population is located in five other coastal Governorates: Sfax, Nabeul, Monastir, Sousse, and Bizerte. This further confirms the coastal stress of urbanization.

### c. The Distribution of Active Population

Table II.3 shows a decrease in primary employment and significant increase in secondary and tertiary services jobs.

Sector	1975		1984		Change 1975-1984	
	Number	% of Total	Number	% of Total	Number	% of Total
Primary	509.0	39.03	475.4	28.11	-33.6	-6.60
Secondary	390.3	29.93	620.6	36.69	230.3	59.01
Tertiary	404.8	31.04	595.3	35.20	190.5	47.06
<b>TOTAL</b>	<b>1,304.1</b>	<b>100.00</b>	<b>1,691.3</b>	<b>100.00</b>	<b>387.2</b>	<b>29.69</b>

**Note:** The Primary Sector includes agriculture, fishing, hunting, and forestry. The Secondary Sector consists of mines, energy, public works and construction, and industry (textiles, leather, ceramics, manufacturing, etc.). The Tertiary Sector comprises transportation and communication, commerce, insurance, banking, and services.

**Source:** *Recensement Général de la Pcpulation et de l'Habitat, 1984*

Active population data in Annex Tables A-6, A-7, and A-8 contain the following information:

- employment by age group, gender, and urban/rural location
- employment by Governorate, gender, and urban/rural location
- distribution of employed population by Governorate and branch of activity

The distribution of active population by sector is briefly described below:

#### (1) Primary Sector Employment

While there has been no employment growth in agriculture, it still employs the largest segment of the active population. More individuals are employed in agriculture than the combined total of manufacturing and non-manufacturing industries. Many of those employed in agriculture, however, are seasonal workers. Only 60 percent of the active population in rural areas work more than half a year. Annex Table A-9 illustrates the active population by Governorate according to sector of activity.

The primary sector represents more than 30 percent of the employment in 13 of 23 Governorates versus an average of 26.6 percent for the nation as a whole. The highest rates of employment for this sector are in Sidi Bouzid, Kasserine, Kairouan, Siliana, and Mahdia.

## **(2) Secondary Sector Employment**

Annex Table A-10 permits a closer analysis of the percentage of secondary sector employment by Governorate.

There is a high degree of variability of employment in manufacturing industries among the Governorates, ranging from 7.1 percent in Sidi Bouzid to 33.5 percent in Monastir. The highest concentrations are in Monastir, Sfax, Metropolitan Tunis, Sousse, Zaghuan, Gabès, and Bizerte. The degree of variability of secondary sector employment, as a whole, is somewhat less pronounced because of the importance of the construction sector (building and public works) and mining. The highest concentrations of secondary employment are in Gafsa, Monastir, Sousse, Gabès, Médenine, Zaghuan, and Metropolitan Tunis.

In general, it is clear that the industrial sector in Tunisia is not very diversified. Textiles and leather represent about 32.9 percent of employment in the secondary sector and 59 percent of employment in manufacturing industries. In addition, about 38.3 percent of total employment in the secondary sector is in building and public works. Concentration of industrial and construction employment notably occurs in Tunis and especially Ben Arous. The District of Tunis clearly has the most diversified industrial base in the country, followed by the Governorates of Sfax and Sousse.

Concentrations of jobs by activity is made on a percentage basis in each Governorate. Jobs by industry type are relatively concentrated in Tunis: 42 percent of jobs in the food and tobacco industries; 40 percent of mechanical and electrical industries; 33 percent of general manufacturing jobs, etc.

Employment in chemical industries is limited to only about 11,000 jobs. Outside of the District of Tunis (particularly Ben Arous), the highest relative percentages of jobs in this field are largely found in Sfax, Zaghuan, and Gabès, the latter of which has the highest percentage of jobs in this field.

Outside of Tunis, other concentrations of jobs in the food and tobacco industries are found in Sfax, Béja, Gabès, Nabeul, Sousse, and Médenine. In addition, besides Tunis the percentage of jobs in industries concerned with construction materials, ceramics, and glass are concentrated in Nabeul, Zaghuan, Gabès, Monastir, and Sousse.

Concentrations of employment in mechanical and electrical industries are found in the District of Tunis, Bizerte, Sousse, Sfax, and Gabès. Higher percentages of employment in mines and energy are mainly found in Sfax, Gafsa, and Le Kef.

## **(3) Employment in the Tertiary Sector**

Employment by branch in the tertiary sector is presented in Annex Table A-11. The table shows:

- the relative weaknesses and strengths of productive services shown as a percentage of total employment in some Governorates, notably: Sidi Bouzid (8.2 percent);

- Kasserine (9.3 percent) Siliana (9.3 percent); Le Kef (10.3 percent); Zaghouan (10.3 percent); and Kairouan (10.5 percent) in comparison to concentrations of productive services in: Tunis (32.6 percent); Ben Arous (26.2 percent); Médenine (22.3 percent); Tataouine (22.8 percent); Sousse (21.4 percent), and Sfax (21.4 percent);
- the very high percentage of employment in social services and administration (45.6 percent of total) followed by commerce (19.9 percent) and transport and Communications (14.5 percent);
  - the small amount of employment in banking and insurance, particularly outside the District of Tunis;
  - the relative importance of jobs in hotels and restaurants in the Governorates of Nabeul, Médenine, Sousse, Tozeur, and Monastir, which are all places where the tourism industry is active;
  - a fair distribution of the percentage of commercial activity by place (in the range of 20 percent of service employment) with higher levels in Tataouine, Médenine, Mahdia, and Kasserine, which must play an important role as commercial service places;
  - a fairly equal distribution of jobs in transport and communications (about 14.5 percent of jobs by Governorate) with higher concentrations in Sfax, Gafsa, and Gabès, probably because of rail transport of phosphate among these Governorates;
  - the lack of definition of the area of business services/consulting, which appears to be concentrated in principal industrial, service, agricultural, and tourism centers; and
  - the disaggregation of female employment by sector which reveals that the majority of females work in administration (mostly public sector) and services, particularly education and health. Given the recent decline in employment in administration, the rate of female employment in this sector may fall in the future.

#### **(4) Employment In the Informal Sector**

Informal employment occupies an important position in the secondary and tertiary sectors. According to the Tunisian Institute of Quantitative Economics, the informal sector in Tunisia is defined as those secondary sector enterprises with less than ten employees and those tertiary activities with less than three employees. By its nature this sector is difficult to fully measure; however, it has been suggested that the informal component of the secondary sector represents about 92 percent of the number of secondary enterprises and 38 percent of secondary employment. Furthermore, the same source suggests that the informal component of the tertiary sector represents about 80 percent of the enterprises and about 43 percent of the jobs.

The relative importance of the informal sector (even if it is overestimated) is a reflection of the limited industrialization of Tunisia. It is also clear that too much is still unknown about the sector to help it better serve as a vehicle for employment generation and an overall contributor to the economy. One factor that the data may not adequately address is the motivation for small-scale "livelihood" projects and family-owned businesses with very limited growth potential.

#### **d. Employment Evolution Between 1987 and 1989**

On the basis of studies undertaken by the National Institute of Statistics (INS), the additional demand for employment has been estimated at 70,000 jobs per year since 1987. This must be taken with caution as it could be underestimated, particularly if the demand for female employment has increased over previous years.

Employment creation projected by the VIIIth Plan was on the order of 40,000 jobs in 1987 (58 percent of the expected demand); 43,000 jobs in 1988 (62 percent of the expected demand); and 45,000 jobs in 1989 (65 percent of the expected demand.)

According to estimates by the General Department of Human Resources and Employment (DGRHE), 35,000 jobs were expected to be created in 1987, 42,000 in 1988, and 44,000 in 1989. Thus, these estimates are not far off from those of the INS. These two sources suggest that there has been a deficit in job creation on the order of 90,000 jobs for these three years. The number of jobs generated in 1987 was similar to that of the period 1982 - 1985 but much lower than that of 1975 (46,600) and 1981 (47,600).

#### **e. Job Creation by Type**

According to the DGRHE, job creation by type varied as shown in Annex Table A-12. The table shows:

- the increasing importance of the productive service sector (transport and telecommunications, tourism, commerce, and other services) in the generation of jobs between 1979 and 1989. The percentage of jobs in this sector rose from 21 percent in 1979 to 55 percent in 1987, but dropped to 50 percent in 1988 and further to 40 percent in 1989;
- the general decline since 1981 in absolute and relative terms of jobs generated in manufacturing industries. A low of only 11,000 jobs created (or 31 percent of the total) occurred in 1987;
- an abrupt fall-off in 1986 of the number of jobs created in administration with respect to the high number created between 1982 and 1985;
- the decline in jobs created in non-manufacturing industries between 1985 and 1988 due mainly to a decrease in employment in the mining sector in 1986 and 1987. This was further accompanied by a decrease in the number of jobs in construction, a trend which has started to correct itself in 1989. The result has been a small positive increase in employment in this sector in the last year; and
- the small number of jobs created in agriculture and fishing, the latter of which was responsible for all increases. According to the Ministry of Planning, agriculture has not made a substantive increase in employment since 1972.

Thus, despite some improvement in job generation since 1988 it appears that the number of jobs created in manufacturing industries is well below the demand for employment which must be satisfied (estimated at 70,000 jobs per year). The shortage in job

generation has been partly offset by job creation in commerce and services, administration, and the informal sector.

#### 4. Urban Employment Trends

Given the lack of employment data by city, the only way to assess current employment generation trends in urban areas is to examine the growth of non-agricultural employment in each Governorate. This is an imperfect approach, but it does provide some indication of broad trends since almost all non-agricultural jobs are created in urban places.

Annual job generation in non-agricultural jobs over the past three decades has been as follows:

- 1962-1971 : 13,250 jobs
- 1972-1981 : 39,550 jobs
- 1982-1988 : 38,520 jobs

A breakdown of these data by economic branch for these periods is provided in Table II.4.

<b>Table II.4</b>						
<b>Average Annual Number of Jobs Created by Period</b>						
<b>BRANCH</b>	<b>1962-71</b>		<b>1972-81</b>		<b>1982-88</b>	
Mining and Energy	700	5.3%	800	2.0%	10	--
Manufacturing Industries	3,800	28.7%	15,560	39.3%	13,460	34.9%
Construction and Public Works	1,000	7.5%	6,430	16.3%	500	1.2%
Productive Services	3,550	26.8%	8,940	22.6%	15,070	39.1%
Administration	4,200	31.7%	7,820	19.8%	9,480	24.6%
<b>TOTAL</b>	<b>13,250</b>	<b>100.0%</b>	<b>39,550</b>	<b>100.0%</b>	<b>38,520</b>	<b>100.0%</b>
<b>Source: Human Resources and Employment Department, Ministry of Planning</b>						

It should be noted that the number of jobs created per year over the past period is not much greater than those generated per year over the previous period. No job growth occurred in mining and energy; job growth in manufacturing remained relatively constant; jobs in construction and public works declined; and jobs in productive services increased dramatically, as did those in administration. Non-agricultural job creation is reflected in the following table for the 1982-88 period (Table II.5).

Year	Mines and Energy	Manufacturing Industries	Construction and Public Works	Non Administrative Services	Administration	TOTAL
1982	1,170	14,000	2,000	8,750	13,250	39,170
1983	1,050	15,200	1,500	9,150	15,600	42,500
1984	440	13,000	3,000	14,400	11,000	41,840
1985	-550	15,000	--	16,850	12,000	43,300
1986	-1,050	12,000	-2,000	15,900	3,000	27,850
1987	-450	11,000	-1,000	19,450	4,500	33,500
1988	-500	14,000	--	21,000	7,000	41,500
Total	110	94,200	3,500	105,500	66,350	269,660
		34.9%	1.3%	39.1%	24.6%	100.0%

Source: Human Resources and Employment Department, Ministry of Planning

The data in this table support the previous observations: mines/energy and building/construction are losing jobs; jobs in manufacturing may be pulling out of the slump of 1986-1987, jobs in non-administrative services have been progressively increasing; jobs in administration increased significantly between 1982-1985 but have since declined dramatically. Unfortunately, overall annual job creation for these sectors have not improved over the period.

Using Governorate data as a proxy, both secondary and tertiary economic sectors grew substantially between 1975 and 1984; the percent of total employment for the secondary sector increased by 23 percent, while that for the tertiary sector showed a gain of 13 percent. Leather/textiles and construction/public works experienced the most growth among manufacturing sub-sectors. Both of these industries typically have had adverse effects on water and air quality, but public concern about these problems has only recently surfaced.

Employment in the services sector have been even more impressive than those in manufacturing. The overall growth rate for the tertiary sector was 47 percent, with individual sub-sector increases for the past decade as follows: Transport/Communication: 55 percent; Commerce/Banking/Insurance: 36 percent; Repairs: 31 percent; and Administration: 54 percent.

Some very significant employment shifts were noted since 1983. In 1984, for the first time, job growth in the productive service sector (i.e., excluding administration) exceeded job growth in manufacturing. For the six subsequent years, productive services outstripped manufacturing in job creation. This is a very significant shift in economic activity and one which must be considered in the design of any program aimed at private sector employment generation.

On a Governorate basis, there are large differences in unemployment, particularly in urban areas and by gender. The lowest rates of urban unemployment are in Sfax (8.9 percent); Nabeul (10.1 percent); Médenine (10.2 percent); Tozeur (12.5 percent); and Mahdia (12.7 percent).

Those Governorates with the highest levels of urban unemployment include: Le Kef (24.6 percent); Jendouba (23.9 percent); Kasserine (21.3 percent); Gafsa (21.2 percent); Béja (20.6 percent); and Bizerte (19 percent). The differentials of unemployment levels is a matter of concern, particularly the generally high levels in the West of Tunisia and the likelihood that an export orientation strongly favors urban areas along the East Coast.

The unemployment rates in both the District of Tunis and Sousse Governorate are slightly below the national average. Lower unemployment rates in the metropolitan areas of Tunis, Sousse, and Sfax explain both the capacity of these places to generate jobs and their attractiveness to migrants.

## **5. Job Generation by Sector**

In comparison with the 1960s when the private sector created about 60.5 percent of the jobs, about 66.2 percent of jobs were created by the private sector in 1987-89, of which about 60 percent was created in the informal sector.

### **a. Manufacturing Industries**

#### **(1) Past Trends**

It appears that while manufacturing is still not well diversified, it has improved somewhat since 1979. For example, employment growth in the leading industries of textiles, clothing, and leather has been less dominant, falling from 55 percent of the sector's jobs in 1979 to 49 percent in 1989. While about 36 percent of all new manufacturing jobs were created in these industries over the ten-year period, other manufacturing (19.5 percent), agro-industries (15.2 percent), and mechanical and electrical industries (15.4 percent) were also major contributors to the job pool. In addition, the annual growth of the latter three types was well above that of textiles, clothing, and leather over the ten-year period.

#### **(2) Recent Trends (and Export Industries)**

Over the period 1984-1988, manufacturing industries created 34.6 percent of non-agricultural jobs created or 65,000 jobs as follows:

1984 (13,000); 1985 (15,000); 1986 (12,000); 1987 (11,000); and 1988 (14,000)

Unfortunately, there are no data on manufacturing industries (or export-oriented industries) at the Governorate or city level. The only data available concerns industrial projects put forward to the Industrial Promotion Agency (API) for approval. These data only provide an indication of anticipated projects, investments and employment opportunities since not all projects are implemented. (See Table II.6 and Chart II.1)

The total annual number of approved projects declined steadily between 1984 and 1987 to only about 995 in 1987, reflecting the general trend in the national economy. However, in 1988 the number of approved projects and expected employment more than doubled, hopefully marking a turn-around in the sector.

According to Table II.6, of the 7,741 projects approved by API between 1984 and 1988, only about 14 percent of the industries were export-oriented. However, these projects were expected to result in about 20 percent of the overall investment in the sector and create about 36 percent of the expected jobs. It should be pointed out that in 1988, the anticipated number of jobs to be created by API approved, export-oriented projects exceeded that of projects for industries geared towards local markets even though the number of export-oriented projects was only a quarter of those locally oriented.

Comparing data in Table II.6 for the years 1984 and 1988 shows, for export-oriented industries, more than a sevenfold increase in the number of projects, a 10% increase in investments and more than a fourfold increase in the number of jobs to be created. The growing focus on exports appears to favor coastal locations for these projects. The table also shows that while export industries, on average, require greater level of investment, they also provide considerably more jobs per project and investment than industries geared to local markets.

While manufacturing industries as a whole have tended to create less employment in recent years (until 1988), export-oriented industries have grown considerably since 1986. While this sector has not been monitored regularly, the following provides a synopsis of trends since 1980.

<b>Period Ending</b>	<b>Export Industries in Operation</b>	<b>Jobs Created</b>
December 1980	276	27,521
December 1986	419	39,962
May 1988	505	50,529
May 1989	597	58,785

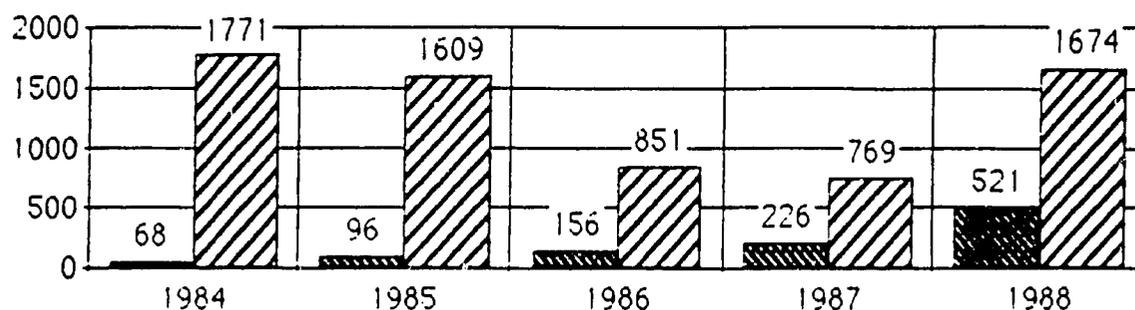
**Source:** API, *Enquête des Industries d'Exportation*, 1989

**Table II.6. Evolution of Approved API Projects, Investments, and Jobs Created**

	1984	1985	1986	1987	1988	TOTAL
<b>NUMBER OF API APPROVED PROJECTS</b>						
● Exporting industries	68	96	156	226	521	1067
● Industries geared toward local markets	1,771	1,609	851	769	1,674	6,674
<b>SUBTOTAL</b>	1,839	1,705	1,007	995	2,195	7,741
<b>INVESTMENTS IN API APPROVED PROJECTS (in millions of Dinars)</b>						
● Exporting industries	108.3	39.1	147.5	58.3	119.3	472.5
● Industries geared toward local markets	475.1	465	260.9	311.8	340.2	1,853
<b>SUBTOTAL</b>	583.4	504.1	408.4	370.1	459.5	2,325.5
<b>Average Investment per Project</b>						
● Exporting Industries	1.59	0.41	0.95	0.26	0.23	0.44
● Industries geared toward local markets	0.27	0.29	0.31	0.41	0.20	0.28
<b>SUBTOTAL</b>	0.32	0.30	0.41	0.37	0.21	0.30
<b>Jobs Created by API Approved Projects</b>						
● Exporting Industries	5,070	4,434	8,805	9,270	23,736	51,315
● Industries geared toward local markets	24,911	22,902	12,635	11,632	20,935	93,015
<b>SUBTOTAL</b>	29,981	27,336	21,440	20,902	44,671	144,330
<b>Average Number of Jobs per Project</b>						
● Exporting industries	75	46	56	41	46	48
● Industries geared toward local markets	14	14	15	15	13	14
<b>TOTAL</b>	16	16	21	21	20	19
<b>Source: Agence de Promotion d'Industrie</b>						

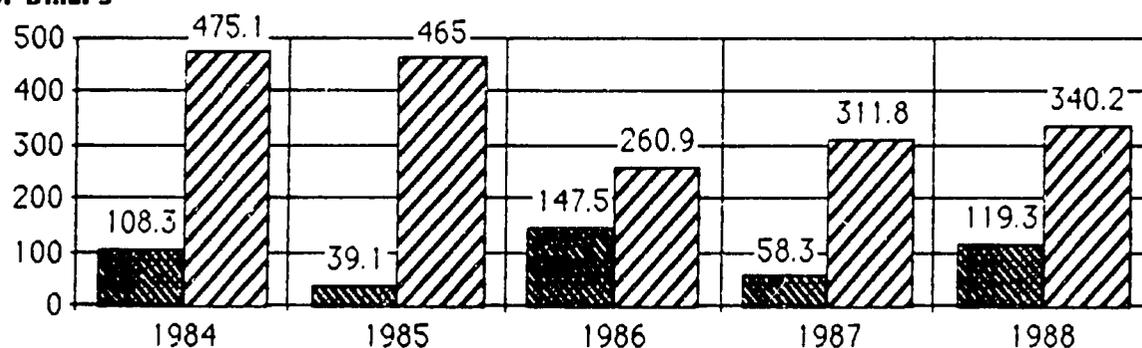
**Chart II.1**  
**Evolution of Approved API Projects,**  
**Investments, and Jobs Created**  
**1984-88**

**Number of Projects Approved by API**



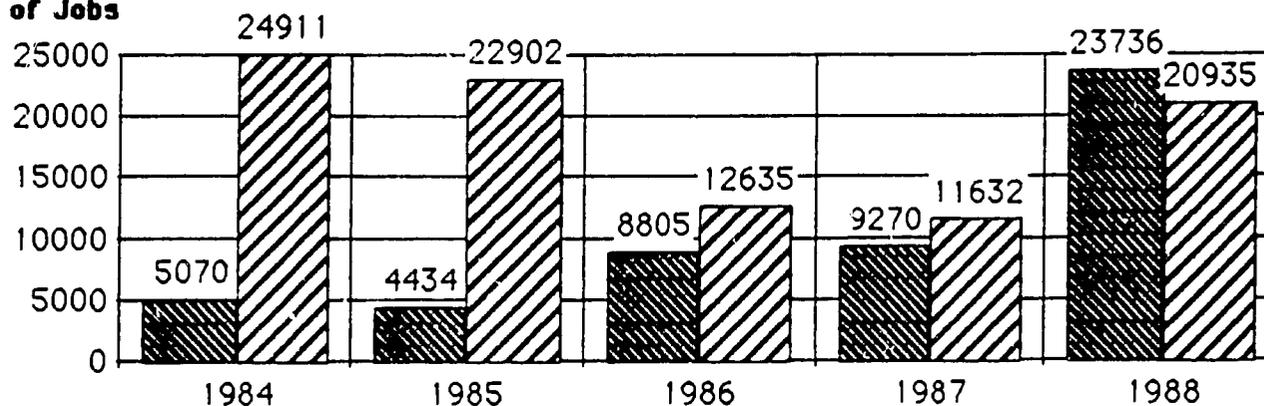
**Millions  
of Dinars**

**Level of Investments in API Approved Projects**



**Number  
of Jobs**

**Employment Generated by API Approved Projects**



■ Exporting Industry Projects    ▨ Local Market Projects

As the above table shows, between the end of 1986 and May 1989 an average of 7,800 jobs per year were created, compared to an average of only 2,100 jobs per year between 1980 and 1986. It is interesting to note that although the anticipated number of jobs created per export industry has averaged around 50, about 100 jobs have actually been created. The creation of export-oriented industries has benefitted from: devaluation of the dinar, salary freezes, diverse measures taken in favor of exports, and the saturation of Tunisian market opportunities in some industries.

#### **b. Administrative Jobs in Government**

According to the DGRHE, 92,050 government jobs were created during 1980 - 1989. The number of administrative jobs created per year has diminished during the last half of the period.

The total number of administrative jobs is estimated at between 278,000 and 300,000 (Ministry of Planning and INS). According to the latter, job growth in the past five years has been primarily in the areas Education, Health, and Interior. Apparently, a slightly higher number of female jobs has been created recently, with the percentage of female workers rising from 25 percent in 1984 to 31 percent in 1989.

The reduction of direct government intervention in job generation since the Structural Adjustment Plan of 1986 has had the effect of reducing the number of jobs created in administration. Over the past three years the number of administrative jobs created has been less than 5,000 jobs per year or a little more than 14 percent of total jobs. (Note that in the 1960s, 20 percent of all jobs were created in the government sector and 31 percent between 1982 and 1985.) The reduction in public sector jobs may result in "white collar" unemployment, but there is some potential that former administrative employees to be absorbed into private service functions. Non-administrative services, for example, have been rising rapidly and represent about 55 percent of all new jobs created since 1986. Local government may also be able to absorb staff. Municipalities throughout the country have staffing levels well below their quotas and lack personnel of diverse qualifications. This subject requires a special study.

### **6. Commercial Development**

PADCO had some difficulty obtaining city and Governorate-specific data on commercial establishments. Consequently, data concerning approved wholesale and retail establishments were obtained from the Ministry of Planning and used as a proxy over the period 1984-1988. These data cover establishments created for the sale of foodstuffs, textiles, tires, books and papers, etc., and are presented in Annex Table A-13.

The data indicate that there has been little significant change in the growth rate of commercial establishments, with the exception of a major increase in 1985. For all regions, however, the absolute number of approvals for 1988 is higher than that of 1984. The number of these establishments is relatively well distributed within regions by population. The highest concentrations of approved commercial establishments are in the northeast (30 percent) and Center West (34 percent). Sfax had the highest increase in

proposed commercial establishments, followed by Tunis, Monastir, Kairouan, and Sousse. Some of the most rapid growth in proposed establishments were in Ben Arous and Nabeul. Table II.8 shows the total number of persons per establishment between 1984-1988. The data indicate that Ariana, Le Kef, Jendouba, Sidi Bouzid, Médenine, and Bizerte are less well served in terms of commercial establishments, relative to population, than other places. The best-served places are in the Center East. Sfax and Tunis represent about 22 percent of retail establishments and 29 percent of all wholesale establishments created between 1984 and 1988.

## **B. EMPLOYMENT AND DEVELOPMENT POLICIES**

### **1. The National Plan, Regional Development, and Industrial Policy**

#### **a. The National and Regional Plan**

A national and regional development policy and plan was established in 1984 to formally respond to what the government felt was a growing population and employment disequilibrium between the East Coast and the interior of the country. As noted in Chapter I, the scenario adopted is aimed at structuring national space through the "optimization" of agricultural production, and the creation of nine principal urban "Growth Poles"/industrial centers (Tunis, Bizerte, Sousse, Kairouan, Sfax, Gabès, Gafsa, Kasserine, and Jendouba).

A major preoccupation of the National Spatial Plan for Regional Development is the need to ensure close coordination between the national and regional development policy, the economic planning process, and sectoral policies and plans. The Plan is also very concerned with the evaluation of large projects and with strategic water resource allocation, land use, and land management.

Governorate--or district--level plans are being prepared as a follow-up effort to the national and regional spatial development plans. However, since its completion in 1984, the National Spatial Plan for Regional Development has gone unimplemented, for all practical purposes, both because of economic and financial constraints and because of very difficult developmental and financial issues. Furthermore, sectoral policies and plans are not dovetailed with the Plan; for instance, the Investment Code of 1986 had somewhat different objectives and offered contradictory incentives. In Tunisia and elsewhere, there is often a vast difference between the national ideal in development spatial planning and the practical economic and financial reality of investment decisions.

#### **b. Employment and Industrial Policy**

As noted above, industrial policy in Tunisia has been concerned with measures to help bring about the decentralization of industry and employment, including:

- an incentive system to encourage new industries to concentrate in the proposed industrial development areas in order to have some advantages from economies of scale and to avoid economic dispersion;

<b>Table II.8</b>			
<b>Number of Inhabitants per Commercial Establishment</b>			
<b>Governorate</b>	<b>Estimated Population as of 7/1/86</b>	<b>Approved Commercial Establishments 1984-83</b>	<b>Number of Inhabitants per Approved Establishment</b>
<b>NORTHEAST</b>	2,531,700	4,936	513
Tunis	815,600	1,470	555
Ariana	415,800	360	1,155
Ben Arous	271,600	982	277
Nabeul	489,600	899	545
Bizerte	412,700	681	606
Zaghuan	126,400	484	261
<b>NORTHWEST</b>	1,154,500	1,528	756
Béja	286,000	535	535
Le Kef	256,000	186	1,376
Jendouba	379,800	289	1,314
Siliana	232,700	518	449
<b>CENTER EAST</b>	1,561,100	5,583	280
Sfax	627,000	2,242	280
Sousse	346,000	1,140	304
Monastir	297,700	1,302	229
Mahdia	290,400	899	323
<b>CENTER WEST</b>	1,088,200	2,025	537
Kairouan	451,000	1,166	387
Kasserine	322,700	590	547
Sidi Bouzid	314,500	269	1,169
<b>SOUTH</b>	1,129,400	2,202	513
Gabès	264,000	531	497
Médenine	324,400	339	957
Tataouine	109,600	291	377
Gafsa	253,300	527	481
Kébili	104,200	348	299
Tozeur	73,900	166	445
<b>TOTAL</b>	<b>7,464,900</b>	<b>16,274</b>	<b>459</b>

Source: Ministère de l'Economie Nationale: Agréments Commerciaux

- decentralization measures to preserve the environment and avoid over-saturation of specific industrial sites;
- better coordination between the approval process for industrial activities and serviced sites; and
- selection of industrial types to encourage investment in each locality after a detailed analysis of opportunities for agglomeration and integration.

Until recently, industrial policy in Tunisia had the following objectives:

- public financing and management of major units of heavy industrial production;
- distribution of grants and loans under favorable conditions to entrepreneurs of small and medium-sized enterprises through specialized funds such as FOPRODI and FONAPRA (since 1982) managed by the banking system; and
- provision of fiscal and other incentives as outlined in the "Code des Investissements".

In the wake of the Structural Adjustment Plan, the government has refrained from getting directly involved in the creation of industries. The Directorate of Industry is currently working on a new policy orientation, but as yet, well-defined policy objectives which aim at integration and linkages in Tunisia's existing industrial base have not been articulated, nor is there an orientation towards high-performance, technologically advanced industries which can be competitive in the international market.

Tunisian industries have been protected from outside competition and have not been stimulated to modernize, retool, and integrate their activities. Virtually all parties contacted by PADCO during the UIS suggested that a free market orientation will help correct these deficiencies but that sufficient time is needed for this transition to take place. In the meantime, it is perceived that the government should take some action to provide an incentive to encourage backward and forward linkages between small, medium, and large industrial enterprises.

## **2. Employment and Tourism Development Policy**

Successful tourism development efforts over the 1960s and 1970s have led the government to strongly intervene in this sector via the National Office of Tourism Development (ONTT). The ONTT's policy over this period consisted of:

- establishment of tourism development plans in areas with special potential;
- delegation to the Tourism Land Development Agency (AFT) of the development and sale of specific sites,
- complete or partial financing of hotels, including the establishment of a national hotel chain;
- tourism promotion in specific target countries; and
- regulatory control over service professions related to tourism.

Since the 1970s, the government has played an increasingly less direct role in tourism because of increasing private (local and foreign) investment in the sector. Foreign exchange earnings in tourism were instrumental in helping Tunisia avoid major balance of payments problems in the mid 1980s. Because of the successful record of tourism over the past two decades, the government recently launched an ambitious program to double the hotel capacity and length of stay between 1988 and 2000. Broad goals include 200,000 beds and 40 million nights in the year 2000 (see Annex Table A-14).

This growth is to be encouraged by the 1986 Tourism Investment Code which is to provide incentives for the extension and densification of existing facilities as well as development areas for new units. About 30,000 - 35,000 beds are to be created through extensions and 65,000 - 75,000 beds through new development zones. According to the ONTT, the targeted areas include:

- 20,000 beds south of Hammamet between the existing zone and Enfida and eventually to Hergla
- 8,000 beds in Tabarka
- 8,000 beds in Ghar el Melh (between Tunis and Bizerte)
- 8,000 beds in Jerba East
- 3,000 beds in Kelibia
- 8,000 beds in Skanes/Monastir
- 5,000 beds in Kerkennah
- 6,000 beds in Korbous

Apparently, the extension of other potential zones in Mahdia, Gabès, and Zarzis is constrained by a lack of land. In addition to these efforts to increase capacity, the authorities are keenly aware of the need to increase frequency and duration of tourist stays. Among the objectives are:

- quality control and pricing
- greater diversity in such areas as marinas, water sports and diving, thermal baths, cultural activities, golf clubs, hunting, excursions into the Sahara, etc.

### **C. EMPLOYMENT AND TOOLS FOR JOB GENERATION**

Among the key tools which have been created by the government to support employment creation in urban places include: The Industrial Investment Code, FONAPRA (Small Enterprise Development Fund), and FOPRODI (Industrial Development Fund). Of most interest to an export promotion strategy are the Industrial Investment Code and FOPRODI. A description of these tools follows:

## 1. The Industrial Investment Code

The current Investment Code was produced in the context of the Structural Adjustment Plan. This Code treats all projected industries the same whether they are export-oriented or not. The key elements include:

- liberalization of approvals for private investments;
- concentration of incentives for Governorate capitals in the West and South and particular support for integrated industries and industries with a strong technological orientation; and
- elimination of job creation incentives (TD 1,000 was paid in the past for every job created).

Given the current conditions, it is unlikely that the Investment Code will be able to promote a significant increase in the levels of private investment in under-developed areas. Current investment trends that favor "littoral" as opposed to the interior will continue for several reasons.

During the period of the former Investment Code, about 15-20 percent of proposed industrial growth was planned in the interior. Since 1988-89, however, the interior has been targeted for less than 10 percent of new investments, equivalent to roughly 5 percent of new jobs.

In light of Tunisia's general economic situation and its high levels of unemployment, there is also a need to exploit opportunities that provide high economic returns. Maximum economic advantage should be sought from the favorable investment conditions that exist in the littoral and from investor initiatives. The Agency for Industrial Promotion (API) has only very limited influence on the projects submitted to it and is simply notified of an industrial project once an agreement between the entrepreneur and the financier has been reached. Based on investor decision, there has been a continual increase in the number of export-oriented projects over the last few years, most of which are located in the littoral.

Under the new Investment Code, the Government's role is limited to deciding which projects qualify for specific incentives and to supporting entrepreneurs in carrying out their projects. In addition, the Central Government pays 100 percent of primary and secondary infrastructure to Governorate capitals, and 50 percent of infrastructure costs to district capitals (delegations). Given the "needs-driven" basis for the provision of infrastructure in Tunisia, coastal areas will continue to receive a high level of infrastructure due to their large populations.

Another factor that will negatively impact on investment in the interior is that commonplace industries ("industries banales") will no longer be given any special incentives for decentralization. There is a long list of such industries, which can be found in Law No. 87-51, August 2, 1987. Greater emphasis will now be placed on industries fostering integration and high technology which will further enhance coastal development trends.

## **2. FONAPRA (Small Enterprise Development Fund)**

Until 1981, small-scale or cottage industries, which represented about 40 percent of private sector employment in urban areas, received little government support or encouragement. This situation was rectified by the Law No. 81-76 of August 9, 1981 which created FONAPRA. It was created as an instrument to facilitate the financing of small enterprises of 10 employees or less through loans of TD 20,000 or less.

In 1986 and 1987, several additional advantages were provided to FONAPRA. In accordance with the "Loi de Finances de 1986", FONAPRA beneficiaries were provided with tax exemptions for the first five years. In July 1987, new professional categories were made potential FONAPRA beneficiaries: doctors, pharmacists, architects, engineers, accountants, etc. To accommodate these groups the ceiling on FONAPRA loans was also raised to 25,000 dinars.

FONAPRA resources are managed by the banking network. Before FONAPRA funds can be made available, however, proposed programs must be approved by the sponsoring bank. Most previous loans have not been monitored and evaluated. As a result, neither the banks nor FONAPRA can provide information on the real impact of the program loans and incentives. There is evidence that some of these funds have been misused, resulting in a high default rate of about 30 percent.

In this context, the recent tendency has been for banks to become more conservative in their lending. This has often meant giving preference to the professionals (doctors, pharmacists, etc.) rather than to workers. In fact, according to FONAPRA data, professional groups have benefitted from roughly one-half of all loans made in the past two years. Furthermore, for the most part these loans have been made for office extension rather than establishment of new employment. Thus, the amount of jobs created is probably minimal.

Another problem which PADCO documented is the lengthy and bureaucratic procedures which must be followed for obtaining a loan. In the majority of cases, the applicant must wait for at least a year before receiving a loan which usually covers only part of their financial requirements. Annex Table A-15 presents data on the FONAPRA projects.

## **3. FOPRODI (the Industrial Decentralization Fund)**

FOPRODI was created in 1973 and became operational in 1975. Its purpose is to promote entrepreneurship, jobs, and the decentralization of small and medium sized industries. Industries set forth in the decree of 23 June 1981, and public works and construction are eligible to benefit from financing under the program. An evaluation of FOPRODI was carried out by the World Bank in 1987 (Bilan de Dix Ans de FOPRODI - 1976-1986). Data was obtained from the Central Bank and API. The materials presented in this section are derived from this report. It is possible that the program has been modified since then.

According to the World Bank Study, the Fund makes loans of up to TD 500,000 (about US\$ 535,000) including operating costs, for no more than 70 percent of capital costs. The general terms for the subsidized program are as follows:

- 70 percent of capital to be reimbursed for projects up to TD 250,000 (including operating funds). Participation required of up to 10 percent of the capital.
- 45 percent of capital to be reimbursed for projects between TD 250,000-500,000 (including operating funds) to enterprises with a participation of 20 percent.
- Loans are granted over a 12 year period with a 5 year grace period. Interest rates were set at 3 percent.

For medium- and long-term loans of less than TD 75,000, the interest is 4 percent per annum with a repayment period of ten years and a grace period of three years. This component also provides up to 70 percent of capital. Loans of this nature are available for enterprise "extensions" of up to TD 45,000 for a seven-year period without a grace period.

The loan program was also supported by an infrastructure investment program. While about TD 16.4 million in loans were provided over the ten-year period, about TD 21.5 million was provided in supporting infrastructure. Of this, TD 3.45 million was to be recovered through the program.

Chart II.2 illustrates the actual investment (loans) and jobs created under the program over the decade. It is clear from the chart that an effort was made to distribute the loans throughout the Governorates. Nevertheless, some places received a larger share of investment, notably: Sfax, Sousse, Nabeul, Zaghouan, Ariana, and Ben Arous. These were places where the efficiency of investment (job costs) was also good. On the other hand, some places like Siliana and Mahdia had a relatively high cost per job. Obviously, the nature of the enterprise would partly account for job cost differences.

Of a total of 1,114 approved projects, 968 were actually implemented. However, expectations for employment generation were less than anticipated: of an expected 25,188 jobs only about 16,601 were actually created. Furthermore, of those realized about one-third were experiencing difficulty and about 50 went bankrupt. Only about one half were considered successful enterprises. Furthermore, only about 5.9 percent of the approved projects were in the domain of manufacturing industries.

While the FOPRODI program requires improvement, it could very well be an instrument for providing loans to export-oriented enterprises.

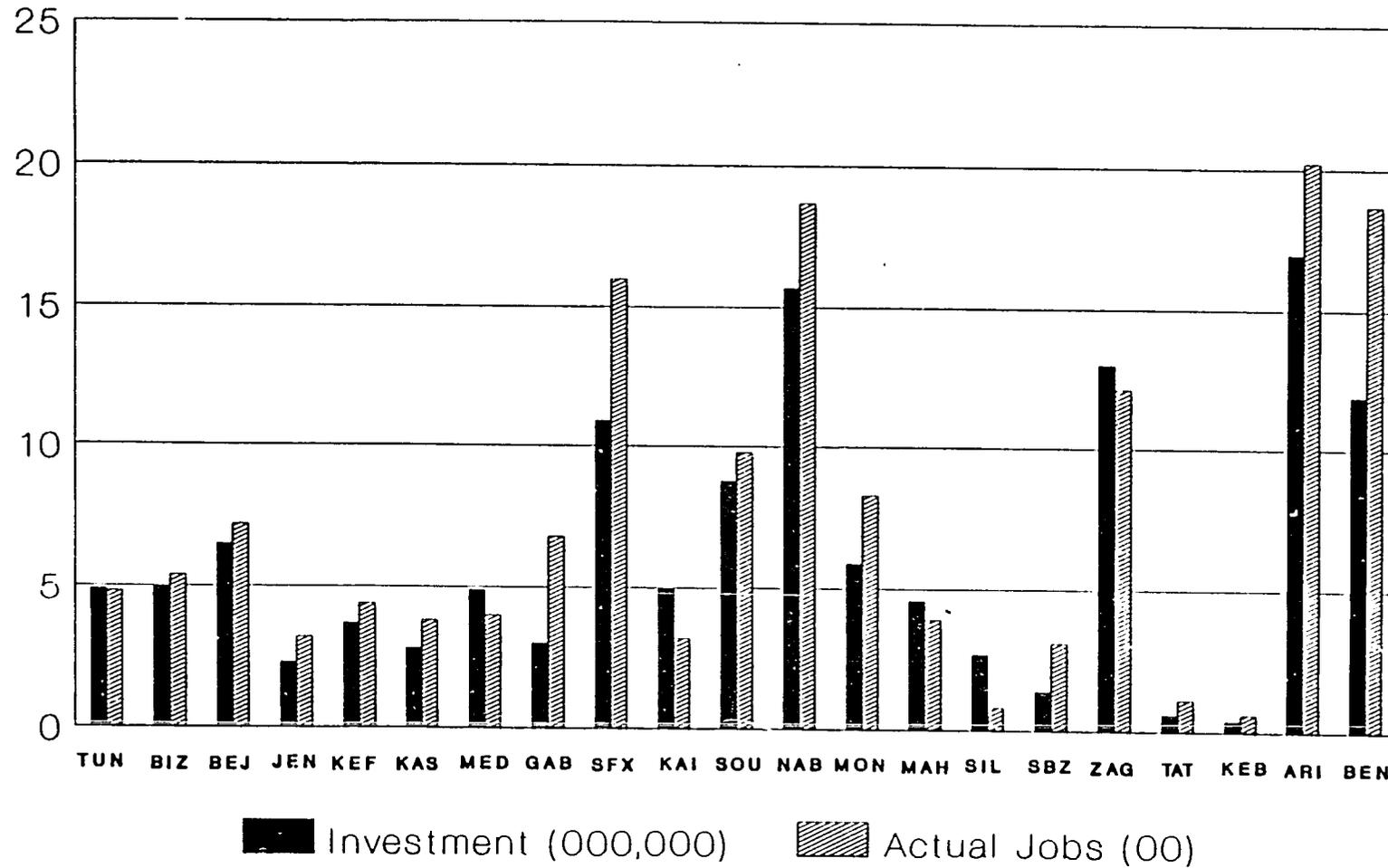
#### **4. Commercial Banks**

The study team collected information on the distribution of Branch Banks throughout the cities of Tunisia. As the number of branch banks are so extensive, they have not been provided in this report. Nevertheless, it does not appear that the lack of branch banks will be a constraint on any future USAID strategy to support private export-oriented activities. However, analysis is required of the commercial banking apparatus to determine to what extent it could support a USAID initiative in this regard.

Chart II.2

# FOPRODI Program by Governorate

## Actual Investment and Jobs



## D. CHAPTER II SUMMARY

Even though there have been important shifts in employment towards the productive services sector, there has been little change in the overall number of jobs created over the last two decades. This compares to an additional demand for jobs estimated to be around 70,000 per year and suggests an increasing gap between the demand and supply of jobs at the national level. As a result, unemployment levels have been increasing and are now for the most important part between 15 and 17 percent of the active population.

Recent urban employment trends include the increasing importance of the productive service sector; general decline since 1981 in absolute and relative terms of jobs generated in manufacturing industries; an abrupt fall off in the number of jobs in administration between 1982 and 1985; a decline in non-manufacturing industries between 1985 and 1988; and only a small number of jobs created in agriculture and fishing.

Unemployment among youth is a particularly troubling characteristic of the current job situation. Roughly 60 percent of the active population is between 15 and 34 years of age with total 1988 unemployment in this group at about 300,000. This suggests that graduates of secondary schools, vocational schools, and college are experiencing high unemployment upon entering the work force. The unemployment rate for the active population between 30 and 60 years of age is only around 6.5 percent.

Female labor participation rates are low in both rural and urban areas of Tunisia. However, more females, both in absolute number and as a percent of female population by area, work in urban areas. Urban female workers are concentrated in administrative and social service jobs. Most female workers fall into the 18-39 age group. Overall, female unemployment rates were slightly higher than those for males.

There are significant differences in unemployment levels between cities along the coast and those in the interior. For coastal cities, unemployment levels are around 10 percent, while those for interior cities are close to 20 percent.

The industrial sector in Tunisia is not very diversified and has been dominated by textiles/leather and building/public works. Some diversification of manufacturing away from textiles, clothing and leather recently has taken place to other manufacturing, agro-industries, and mechanical and electrical industries. Informal enterprises and employment in secondary and tertiary sectors are quite high, which reflects the limited amount of industrialization in the country.

The Government has not been directly involved in the creation of industries since the start of structural adjustment. Nevertheless, it has established three key tools to support employment creation in urban places. These include: the Industrial Investment Code, FONAPRA, and FOPRODI. It is unlikely that the Investment Code will have a significant impact on investment decisions in underdeveloped areas given the need for adequate economic returns on investments. Once again, investments will most likely occur in coastal areas. While FONAPRA was created as an instrument to facilitate financing to small enterprises, the impact of this program has not been monitored and high default rates have forced it to become much more conservative in its lending practices. Its assistance to the creation of new enterprises will be limited. FOPRODI was created to promote entrepreneurship, jobs and decentralization of small and medium-sized industries. It could be improved and expanded to become an instrument for providing loans to export-oriented enterprises.

## CHAPTER III

### INFRASTRUCTURE SERVICES

#### A. INTRODUCTION

PADCO reviewed the following infrastructure sectors because of their close relationship to urban economic development. More detailed data concerning infrastructure services are also provided in the statistical annexes of this report. The sectors of concern in this section are:

- water
- sanitation
- energy
- telecommunications

These services are provided by national agencies. Central agencies, usually in conformance with the country's Five Year Plans, determine investment priorities and identify specific projects which will advance the national development agenda. For example, investments in the South West and North West regions are designed to promote economic self-sufficiency and compensate for the natural inclination of resources to concentrate along the coast. The utility investment programs are mainly "deficit driven". Thus, they are not usually responsive to specific economic opportunities.

These services can be provided to commercial and industrial consumers on a "fee-for-service" basis. However, private enterprises usually avoid the high costs of primary and secondary infrastructure. Cost-sharing occasionally does take place but there is no vehicle in place at the present time to bring this about. For example, in Sfax, the Municipality, the Governorate, ONAS and other parties jointly financed a major drainage facility near a principal industrial zone. The Investment Code specifies that the State will absorb the cost of infrastructure for industrial zones, but these investments are often not made. Therefore, although certain nationally-managed infrastructure can be made available, it is often an expensive and untimely solution.

Primary data was collected from national utility companies to obtain the most up-to-date status of key infrastructure. Data were obtained for water (SONEDE), sewerage (ONAS), and electricity (STEG), and the Directorate of Telecommunications. There is no geographic consistency among the utilities. The individual idiosyncrasies make it difficult to compare regions, Governorates, or cities. The following characterizes urban service levels according to the 1984 census (see also Annex Table B-1):

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Urban Households served by STEG	91.3%
Urban Households served by potable water:	
SONEDE	81.7%
Standpipe/cistern	8.7%
Urban Households with sanitary facilities:	
ONAS	51.5%
Septic tank	28.7%
Urban telephones per 100 persons (1986)	6.5

The next three sections summarize the overall situation with respect to water, sewerage, and energy. Individual Statistical Annexes for these subject areas are included at the end of this report.

## 1. Water Supply

### a. Bulk Water Supply

One of the items which PADCO considered was whether the competition for water resources between urban and rural uses (potable versus irrigation) will be a major problem if cities aggressively pursue export-oriented development. PADCO collected data on bulk water resources and potable water distribution but was unable to fully document rural resource needs. The latter obviously depend on planned investment in irrigation. Our field visits suggest that in the future there could be a much greater demand for irrigation in the vicinity of Kairouan and in the North West (the source of most surface water) than there is today. The area where competition for urban and rural water resources will probably be most acute is the area between Mahdia and Sousse. This is also an area where the urban and rural land uses are being contested.

According to SONEDE's statistics, roughly one half of all bulk water resources are used for potable water (in both urban and rural areas) and one half for irrigation. According to SONEDE's planning office, competition between uses has only been an issue during severe drought when the Ministry of Agriculture has set quotas for water consumption. All cities in the sample, except Sfax, are currently assured of adequate supply to meet projected needs until the year 2010. Sfax, on the other hand, has only enough water to meet needs over a ten-year period. As a result, plans are underway to extend supplies from northern water resources to Sfax.

Bulk water is provided either from surface water (55 percent) or dams and subterranean wells (45 percent). The South (e.g., Gabès, Gafsa, Médenine, etc.) is entirely dependent on subterranean sources. The quality of this water is very poor due to salinity. Kasserine is also supplied by deep wells but it has a much higher quality water. In fact, bottled water is produced in Kasserine (and Le Kef).

Dams are located mainly in the North West and West Central areas. These (and their percentage of total surface water supply) include:

- **Beni Metir** near Ain Draham (19 percent). Water is treated before distribution and supplied primarily to Tunis and Cap Bon.
- **Kasseb** near Béja (22 percent). It supplies mainly Tunis and Cap Bon.
- **Oued Kebir** (0.5 percent), serving Tunis and Cap Bon
- **Oued Chair** (no longer a viable source)
- **Lake Chedir El Goulla and Mornagula** (4 percent), serving Bizerte, Menzel Bourguiba, and Mateur
- **Joumine** (8 percent), primarily serving Tunis and Cap Bon
- **Nebhana** (no longer a viable source)
- **Sidi Salem** (46 percent), serving Tunis, Cap Bon, Sousse, Monastir, Mahdia, and eventually Sfax. It is managed by a separate public corporation which sells water for both irrigation and potable use.

The key subterranean sources and their percent of underground supplies include:

- **Kairouan** field (15 percent)
- **Sbeitla** field (9 percent)
- **Jelma** field (14 percent)
- **Zeuss and Koutine** fields (9 percent)
- Individual fields (52 percent)

As mentioned above, fields in the South, in particular, produce a relatively poor quality water, but there are no viable options at present to improve on sources or quality of this resource.

#### **b. Urban Water Supply**

Normally, water supply data is not published by city, but PADCO was very fortunate to have obtained a copy of the only data source on this subject. The tables provided in Annex C provide a wealth of data which can be used for comparative purposes. The tables provide data not only on household connections and service levels but also water consumption by type of industry, hotels, commerce, etc. PADCO has not fully analyzed these data, but has provided them for future use.<sup>1</sup>

Annex Table C-3 presents the average annual growth rates for increases in the number of SONEDE subscribers over three periods: 1975-1980, 1980-1985, 1985-89. The rate of subscribers for the majority of cities was more than 10 percent for most cities for the first two periods, but the rates fell off in the last period. As a rule, there is a clear effort on SONEDE's part to respond to need on a fairly equitable basis. The table shows that the Governorates of Bizerte, Jendouba, and Kairouan have had higher annual subscription

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<sup>1</sup>Annex Tables C-1 and C-2 present data on the number of connections and the level of consumption at the city and Governorate levels using the SONEDE classification scheme of users for the year 1987.

Table C-1 presents the number of connections by type for selected major cities. Table C-2 provides data on water consumption by user type for selected major cities. Where city level data was not available, Governorate data was used.

rates for the period 1985-1988 than the national average of 3.7 percent for the same period. This most likely represents an effort to correct deficiencies in these areas.

Annex Table C-4 presents the average number of new connections per year established by SONEDE. As in Table C-3, though the number of connections may vary somewhat by place and period, there is a clear effort to respond equitably to needs--although priorities may shift from one period to another. For example, compared to the period 1980-85, the period 1985-88 had average annual increases in the number of connections in Bizerte and Gafsa. Correspondingly, declines in the average annual new connections have occurred in Sfax, while the remainder of the selected Governorates have increased at about the same annual rate.

Annex Table C-5 shows the annual average increase in the extension of SONEDE's networks in the selected Governorates. Compared to 1980-85, the period 1985-88 saw average annual increases in extensions to the SONEDE networks in Jendouba, Kairouan, Gafsa, and Kasserine. As shown above, this apparently represents an effort to address needs in these places.

Annex Table C-6 exhibits the average annual increases in water consumption in the selected Governorates for the periods 1975-80, 1980-85 and 1985-88. Governorates shown to have larger annual increases in water consumption than the national average for the period 1985-88 include Jendouba, Sousse, and Gafsa. Those well below the average percent increase in consumption include Bizerte, Kasserine, Sfax and Tunis.

### **c. Industrial Water Supply**

The provision of water to industry is a supporting indicator for urban economic development. Annex Table C-7 provides a view of the industrial sector's water consumption in the selected Governorates between 1987 and 1988. A comparison is made between the increase in the volume of water consumed and the increase in the number of industries (industrial subscribers). The table shows a decrease in water consumption in Bizerte even though the number of subscribers has increased somewhat. The table shows that in Sousse, Kairouan, and Gafsa, water consumption has greatly increased, while the number of subscribers has increased only slightly. Compared with the national averages, the data suggest that several large water-consuming industries have been established in these locations.

Annex Table C-8 presents water consumption data within the District of Tunis and other cities. The table is useful as an indicator of the importance of economic and service activities, particularly since city specific data is not available for other sectors. For example, in Tunis, consumption is fairly well distributed among water supply districts, but there are noteworthy concentrations for food, hotels, and government (District 14); mechanical, textiles, and construction materials (District 16); chemicals (Districts 14 and 26). The data is also useful for comparisons within Regions. For example in the North East, there are noteworthy concentrations of consumption include food (Nabeul);

mechanical (Menzel Bourguiba); textiles (Bizerte); construction materials (Bizerte and Nabeul); chemicals (Bizerte and Menzel Bourguiba) etc.

It is not surprising that water consumption by activity type reflects the roles of specific settlements. For example, excluding government, a rapid assessment of dominant consumption patterns in cities, by Region, outside of Tunis reveals the following striking water consumption patterns:

**North West:**

Béja (food industries, education); Tabarka (construction materials, education)

**North East:**

Menzel Bourguiba (very high chemicals and mechanical); Bizerte (relatively high chemicals; very high defense); Hammamet (high hotel and commerce)

**Center West:**

Kasserine (food--presumably alfa--paper products, medical, education); Kairouan (mainly government service related)

**Center East:**

Moknine (textiles); Mahdia (chemicals, medical); Ksar Hellal (very high textiles); Monastir (extremely high textiles and hotel, education); Sousse (mechanical, chemicals, high hotel, high commerce, education); Hammam Sousse (high hotel); Sfax (diversified, high commerce, medical, education and other services, chemicals)

**South East:**

Gabès (exceedingly high chemicals, construction materials, education); Médenine (food, high hotel, education)

**South West:**

Tozeur (relatively high hotel); no data on mines-Gafsa

Using data from Annex Table C-1, the number of water connections by industrial category can be used as a proxy for concentrations of specific types of industrial activity. This data is shown in graphic form in the following charts.

To sum up the observations of the water supply analysis, it does not appear that water supply is a constraint to economic development in the places visited. It is also clear that Government's objectives to improve service levels in the interior are being implemented. In all the cities visited by the study team, potable water supply was not perceived as a major problem. However, irrigation was mentioned as a concern in Jendouba, Kairouan, Sfax, and Sousse.

Effective June 1, 1989, The GOT initiated a new tariff structure for water. The policy involves raising tariffs in order to reduce consumption. New tariff schedules are being designed to shift the bulk of the tariff increase to large quantity consumers. Tourist establishments are singled out for the most substantial increases. SONEDE will be providing assistance to large consumers to increase conservation efforts. It is hoped that these measures will bring about a 20 million m<sup>3</sup> reduction in water consumption.

Chart III.1.

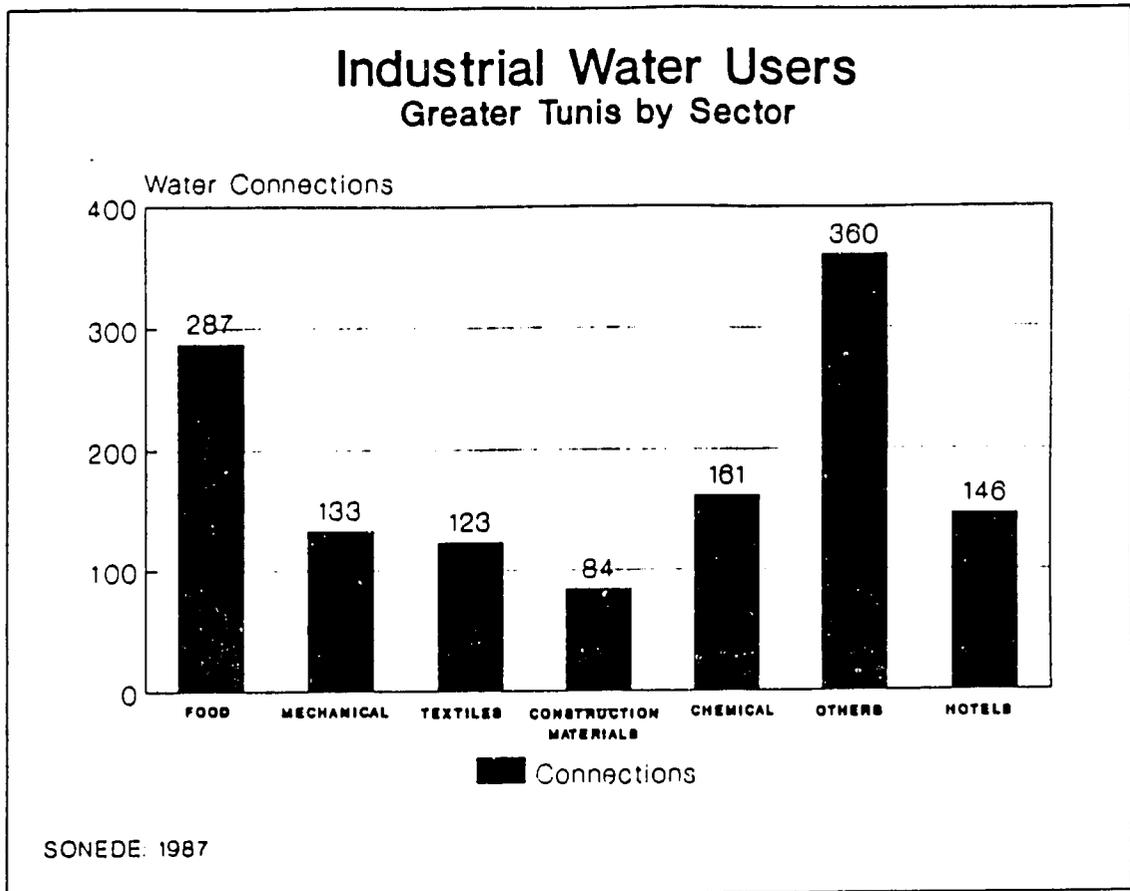


Chart III.2

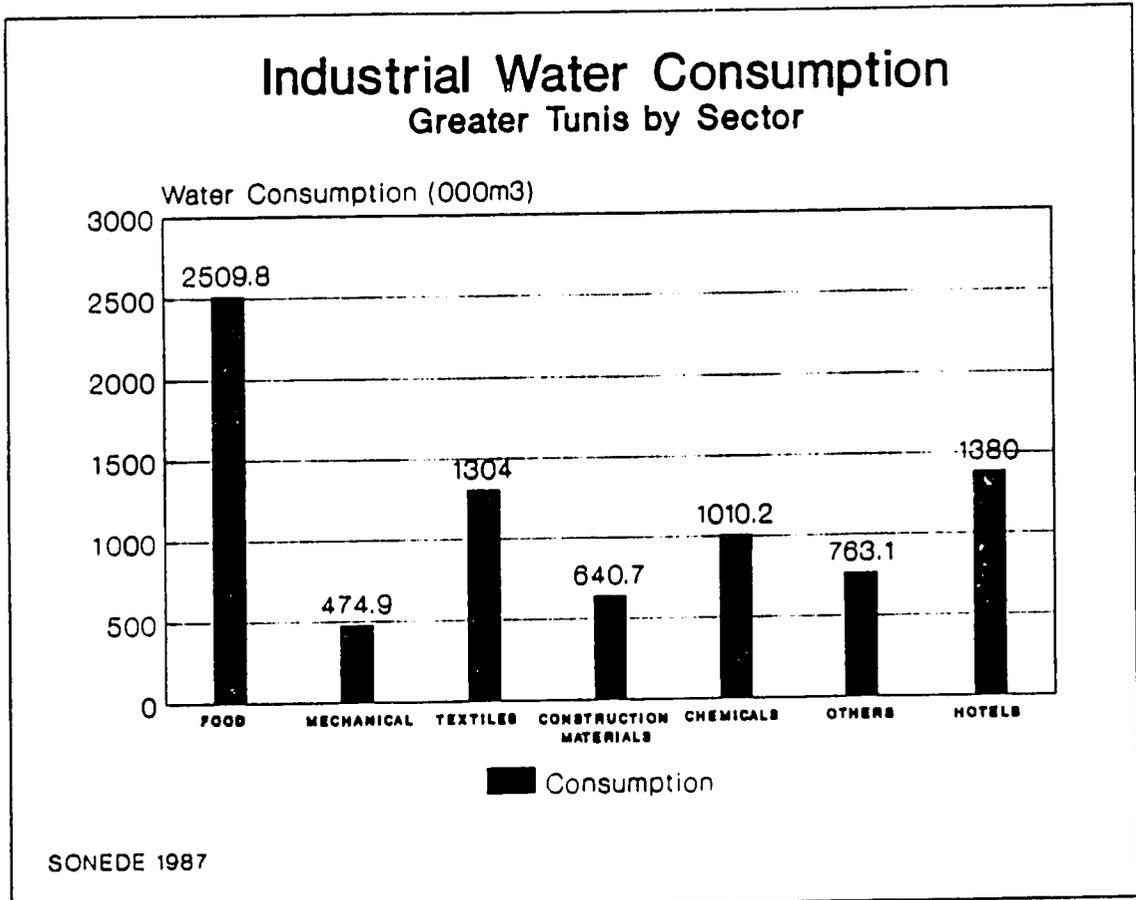
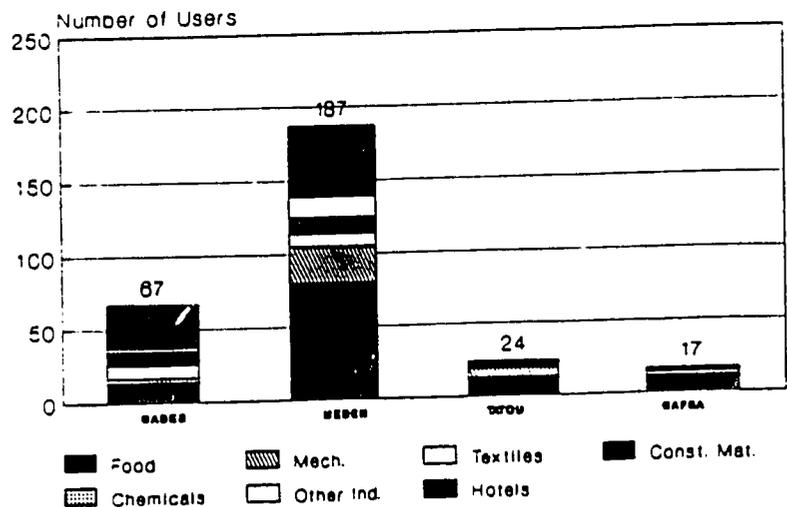
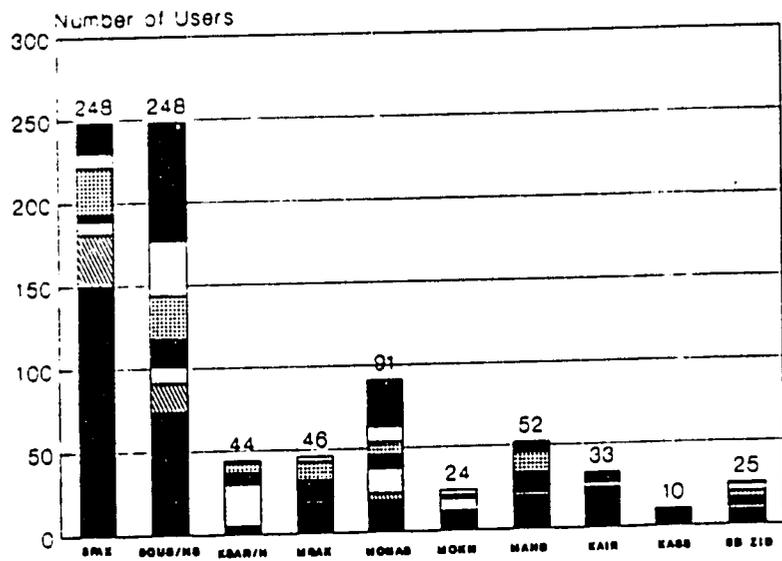
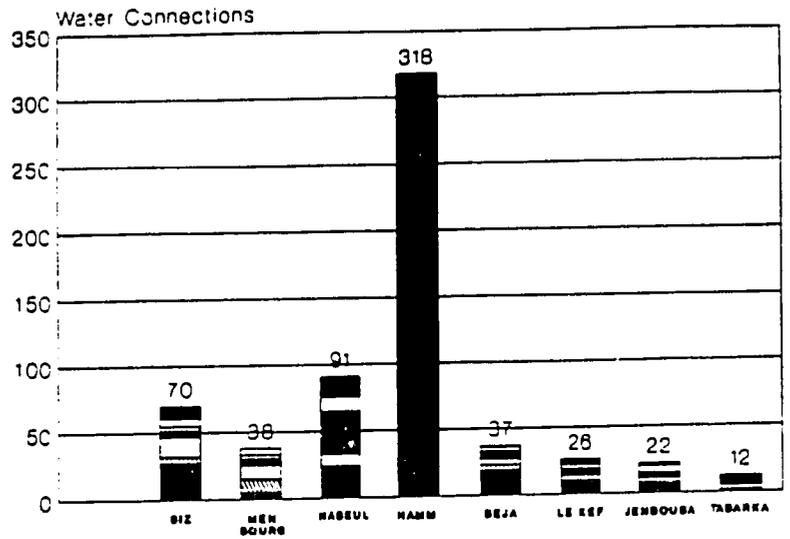
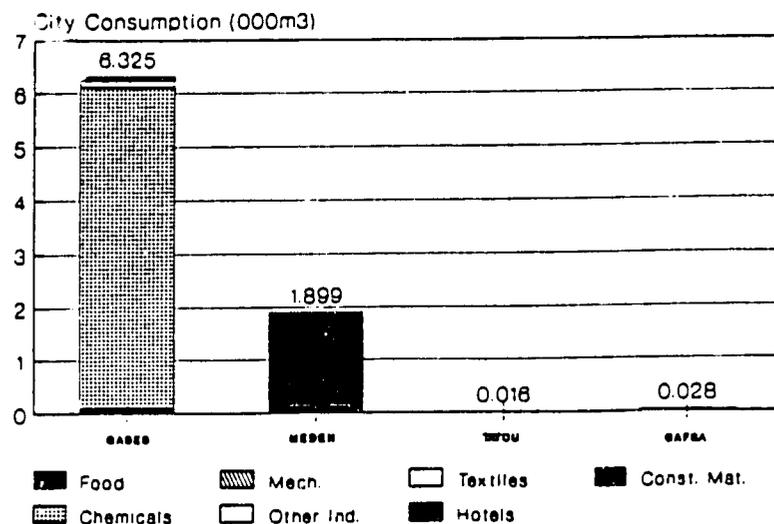
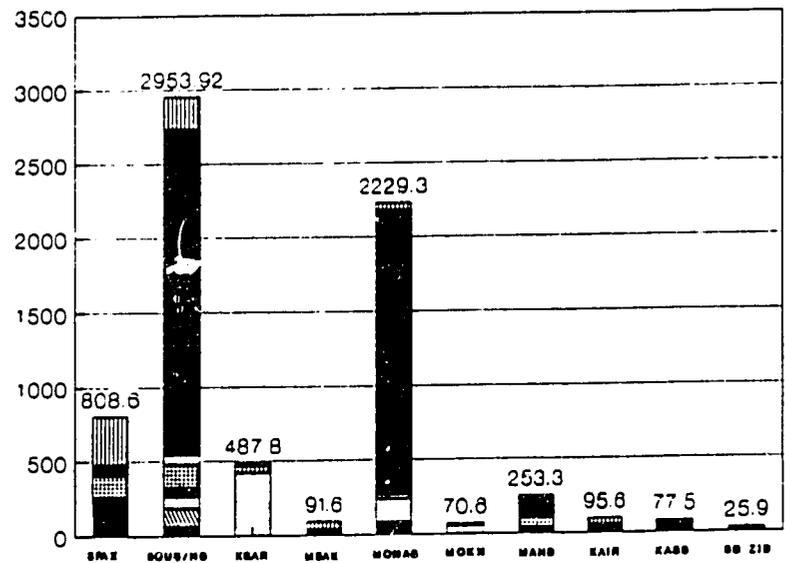
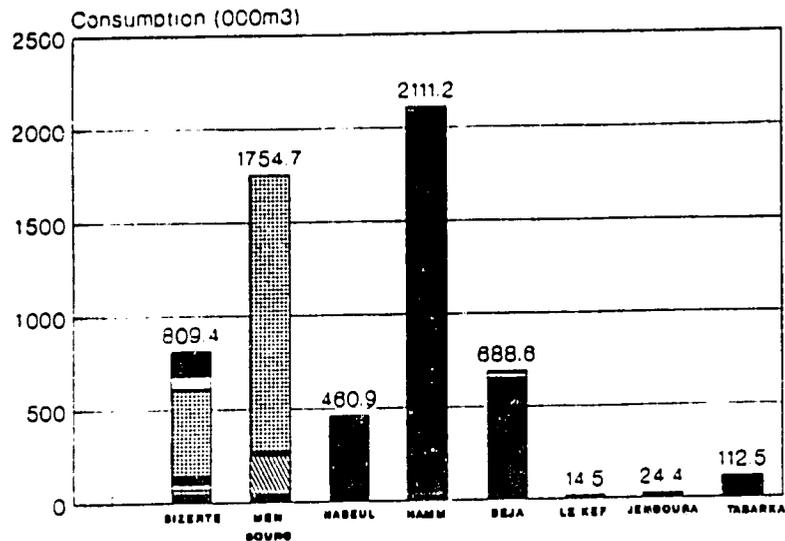


Chart III.3.  
Industrial Water  
Users by City



- Food
- ▨ Mech.
- Textiles
- Const. Mat.
- ▤ Chemicals
- Other Ind.
- Hotels

Chart III.4.  
Industrial Water  
City Consumption by Sector



## **2. Sanitation**

The National Office of Sanitation (ONAS) is now active in 49 municipalities in the provision of sanitary sewers and drainage. It receives many requests from other municipalities to take over provision of these services but apparently is unable to do so. The key issue which the study team was asked to address is what measures regarding sanitation should be taken for smaller cities not benefitting or programmed to benefit from ONAS support. ONAS has informally noted that taking on many smaller cities would overtax its capacity and that sewer systems are not cost-effective in these places.

RHUDO has been providing support to ONAS through the WASH project to develop a national sewer strategy and to assist ONAS in identifying appropriate technologies for sanitation and drainage for non-ONAS cities. The strategy is in its early stages of development and is not yet advanced enough to make an evaluation and analysis of its proposals.

It is clear that ONAS is at a managerial and financial bottleneck regarding the potential commitment and services it can provide to additional cities. Since ONAS is unable to fully recover the costs of its investments and operations and maintenance, ONAS is presently very dependent on central government financial assistance.

In those places where ONAS does not provide services, the municipalities themselves look after the development and maintenance of this system. The quality of this system apparently varies a great deal between municipalities. For the most part, services consist of a few kilometers of pipe and sometimes a pumping station. The number of connections to the system are usually limited.

According to ONAS, the difficulties associated with the development and maintenance of these municipal systems are: a) lack of qualified personnel and basic equipment, and b) lack of adequate financial resources to develop and maintain the systems.

It is not likely that ONAS will be able to take on many more additional cities. However, ONAS could be used as a vehicle to assist the towns in developing capability through training and technical assistance. This idea has been explored informally with ONAS and it appears that something could be worked out.

For the most part, the Municipalities not provided with ONAS support need one or two teams for maintenance. These teams should consist of a job foreman and three semi-skilled laborers. Generally, ONAS estimates that they require about 20 laborers for every 100 kilometers of pipeline.

This will not generally be the case in most cities. For example, a well serviced small municipality with a population of 10,000 might have about 4-5 kilometers of pipeline that needs to be maintained. In any case, a minimum of one maintenance team would be required. A city with a population of 25,000 to 30,000 would probably need two maintenance teams. According to ONAS, equipment costs would range between TD 20 -

100 thousand (US\$ 21,300 - 106,700) depending on the number of teams and equipment procured.

In addition to the maintenance teams, ONAS recommends that the towns try to recruit young civil engineers to look after public works in the cities. ONAS believes that many of the towns have sufficient revenues to hire engineers but try to get by with less qualified staff. It might be useful to sensitize the municipalities to their civil engineering requirements and establish a special program to enlist young engineers in municipal jobs. ONAS had indicated that it could offer basic technical training to the engineers.

### 3. ONAS Services in the Case Study Cities

With the exception of Jendouba (and Tabarka), the cities identified for specific study by the UIS are already benefiting from ONAS assistance. Of the ONAS-served cities, the percentage of households with sewer connections is as follows:

District of Tunis	82%
Sfax	62%
Bizerte	90%
Sousse	76%
Kairouan	86%
Gabès	58%
Kasserine	41%

See Annex Table D-1 for more information on the population served by ONAS connections by year and city for the period 1984-88.

It should be noted, however, that the ultimate objective of ONAS is not to provide sewer connections to all households. Rather, it is to eliminate health and environmental hazards associated with the elimination of sewage. Thus, while there is still an unfulfilled demand for sanitary sewer facilities, not every place in every city needs the same type of service. For example, less dense areas with certain soil conditions may be well suited to pit latrines, cess pools, or septic tanks.

Cities without treatment facilities include Bizerte, Gabès, Kasserine, and Jendouba. However, the latter three are programmed for facilities in the near future. While Tunis, Sfax, and Sousse have treatment plants, field visits suggest that unserved communities still pose serious environmental problems, including raw sewage outfall in coastal waters.

Increases in the number of connections and the length of new network were reviewed for the nine cities in question (see Annex Table D-2). Overall, there appears to have been a fairly equitable effort made to improve sanitary services in each of the cities. Sousse clearly received the greatest investment but did have a shortfall in overall connections with respect to Tunis and Bizerte. Sfax and the southern cities have also lagged behind in the number of sewer connections; however, this may in part be due to the appropriateness of alternative waste disposal systems.

For the period 1984-1988, the following table presents the average annual percentage increase in connections and the average annual percentage increase in network length.

City	Percent Increase In Connections	Percent Increase In Network Length
Metropolitan Tunis	9%	12.1%
Sfax	10%	12.8%
Bizerte	9%	6.25%
Sousse	17%	17.5%
Kairouan	17%	5.5%
Gabès	10%	9.3%
Gafsa	< 1%	9.3%
Kasserine	4%	21.0%
<b>Source: ONAS</b>		

A quick analysis was done of: a) the per capita total investments carried out by the end of 1988 (using 1988 municipal population estimates from the INS) and b) the estimates of 1989 investment per capita by city (using 1988 population as a base). The numbers are shown in Table III.2 (total investment through 1988 per capita and planned 1989 investment per capita in TD per capita, respectively).

In summary, this analysis underscores the high level of investment that has been made in Sousse. Investment in Bizerte is rather low given its size and importance, but PADCO believes this is attributable to the sanitary system which was already in place in this city. Sfax appears to have benefitted from a substantial per capita investment but is still lagging in terms of overall service levels. It would appear in the case of Sfax that there has been an effort to catch up on service provision in recent years.

As per the Terms of Reference, the study team was asked to estimate the investment costs required to remove service deficits in the selected cities.

According to ONAS, using 1987 data, about 52 percent of the urban (communal) population nationwide was served by sewage networks, and about 30 percent of the urban population was served by a treatment facility.

<b>Table III.2. Sanitation: Total Investment Through 1988 and Planned Investment Per Capita</b>		
<b>City</b>	<b>Total Investment Per Capita Through 1988</b>	<b>Planned Investment Per Capita 1989</b>
Metropolitan Tunis	62.6	6.5
Sfax	79.8	5.9
Bizerte	10.47	0.0
Sousse	93.24	18.75
Kairouan	39.6	0.0
Gabès	44.57	0.97
Gafsa	43.9	3.0
Kasserine	33.6	0.0
Jendouba	5.7	1.1
<b>Source: ONAS</b>		

According to overall capital investment experience, ONAS estimates (in 1987 dinars) that network investment costs about 275 dinars per capita and an additional 75 dinars per capita for investments in treatment plants. If an inflation rate of 25 percent for the past two years (12.5 percent/year) is estimated, this would indicate, in 1989 costs, a needed network investment of TD 344 (US\$ 367) per capita and TD 94 (US\$ 100) per capita for treatment plant construction.

ONAS also estimates that the annual costs for maintenance of networks and treatment plants (including finance costs) was on the order of TD 26 per capita. Allowing for an annual inflation rate of 12.5 percent, the 1989 per capita maintenance cost would be about TD 33 (US\$ 35) per capita per year.

According to the above, as well as data obtained from ONAS regarding the population not yet served, Table III.3 represents a rough estimate of needed investment and maintenance costs (for new construction) in the sample cities in order to meet existing deficits.

As these costs are prohibitive, it would be necessary to develop a priority improvement study on a case-by-case basis and to promote the use of alternative technologies in those areas where sanitary sewers are an unnecessary expense.

The study team sees little chance of involving the private sector in the development and management of sewer systems, given the high costs and poor cost recovery involved.

**Table III.3.  
Sanitary Sewers - Estimated Costs to Service Deficits in the Sample Cities,  
1987**

<b>City</b>	<b>Population Unserviced</b>	<b>Investment Cost (TD 000s)</b>	<b>Added Maintenance Cost/Year (TD 000s)</b>
Greater Tunis	264,600	115,895	8,732
Bizerte City	10,840	4,748	358
Jendouba/Tabarka	(Unknown)		
Sfax City	79,540	34,839	2,625
Sousse City	22,400	9,811	739
Kairouan	11,200	4,906	397
Kasserine	28,100	12,308	927
Gabès	42,700	18,703	1,409

(Conversion: approximately TD .937 = US\$ 1.00)  
Source: ONAS

The private sector can however continue to operate and expand systems to remove waste from pit latrines and septic facilities and possibly get involved in the use of treated waste.

#### **4. Energy**

As with water, energy data at the Governorate level is also provided as an economic indicator proxy, as well as to show service levels. According to STEG (The Tunisian Electricity and Gas Company), total 1988 electricity consumption in Tunisia reached 3,743.5 GWH and covered roughly 87 percent of all needs. This was a 5.7 percent increase over consumption in 1987, although the growth rate between 1986 and 1987 was higher at 8.1 percent. The slowdown in growth was due primarily to reduced consumption of medium-voltage electricity for chemical, steel and mining industries. The consumption of medium-voltage electricity in 1988 accounted for 2505.5 GWH, or roughly 67 percent of STEG's output.

The greatest increases in electricity consumption were found in the Tunis, North, and Central regions. Together these regions accounted for 95 percent of consumption and 66 percent of users/subscribers in high- and medium-voltage electricity and 61 percent of consumption and 55 percent of users of low-voltage electricity.

Chart III.5 presents the distribution of high- and medium-voltage power users by sector and district in 1988. Chart III.6 presents the amount of high- and medium-voltage electricity consumed by industry and district in 1988. See also Annex Tables E-1 and E-2.

Several districts have a single consumer which is dominant in its sector; for example, Tunis consumes around 40 percent of the total energy supplied to the transportation sector--the second largest amount is consumed by Sfax and reaches only 8.45 percent of the total. Chemical industries in Gabès consume roughly 39 percent of the energy supplied to that sector; Sfax and Tunis are the next largest areas of consumption with roughly 18 percent and 10 percent, respectively. Extraction industries in Gafsa consume around 66 percent of the energy supplied to the mining sector, while Bizerte metalworks consume about 77 percent of the energy for that sector, and Kasserine consumes about 59 percent of energy supplied to paper industries.

The urban areas of Tunis and Sousse consumed the largest amounts of medium-voltage electricity in 1988, even though their shares of total consumption were only slightly more than 11 percent each. Consumption of energy in the industrial sector in Sousse was almost as great as that of Tunis, the other major sectors being tourism, construction materials, and small-scale industries. Slightly more than half the energy consumed for food services was in Tunis, Sfax, and Sousse. The most important consumption of energy for textile industries occurred in Sfax and Sousse. Kairouan and Jendouba were only relatively minor consumers of high-and medium-voltage energy, with around 1.5 percent of the total for each city.

Since 1979, STEG has invested about 78 million dinars for electricity in urban areas, which accounted for roughly 36 percent of its total investments. Since 1979, actual urban investments have exceeded planned investments by about 15 percent. Investments for electricity to industries and tertiary sector enterprises have been around 22 million dinars or close to 9 percent more than planned. During the last three years, however, actual investments have fallen short of their targets.

Existing data does not provide a very clear indication of any constraints on access to power for specific cities or to increased development of small and medium-sized industries. Given the dispersed nature of major industrial power consumers and the considerable infrastructure already in place, it would appear that the supply of industrial power would not be a constraint to future development. Since 1981, overall electricity consumption, as well as that of medium-voltage electricity, has grown at rates that will double consumption in roughly 12 years.

Comparing STEG figures for medium-voltage consumption in 1980 and 1988 by district, the total increase in consumption was about 119 percent of the amount consumed in 1980. The area with the greatest increase in industrial consumption was Bizerte (roughly 231,022,000 kwh), with the smallest increase in the district of Kairouan (an increase of only 10,006,000 kwh). Of the nine sample cities, Tunis ranked fourth with an increase between 1980 and 1988 of 70,979,000 kwh. In terms of the numbers of users/subscribers

Chart III.5.

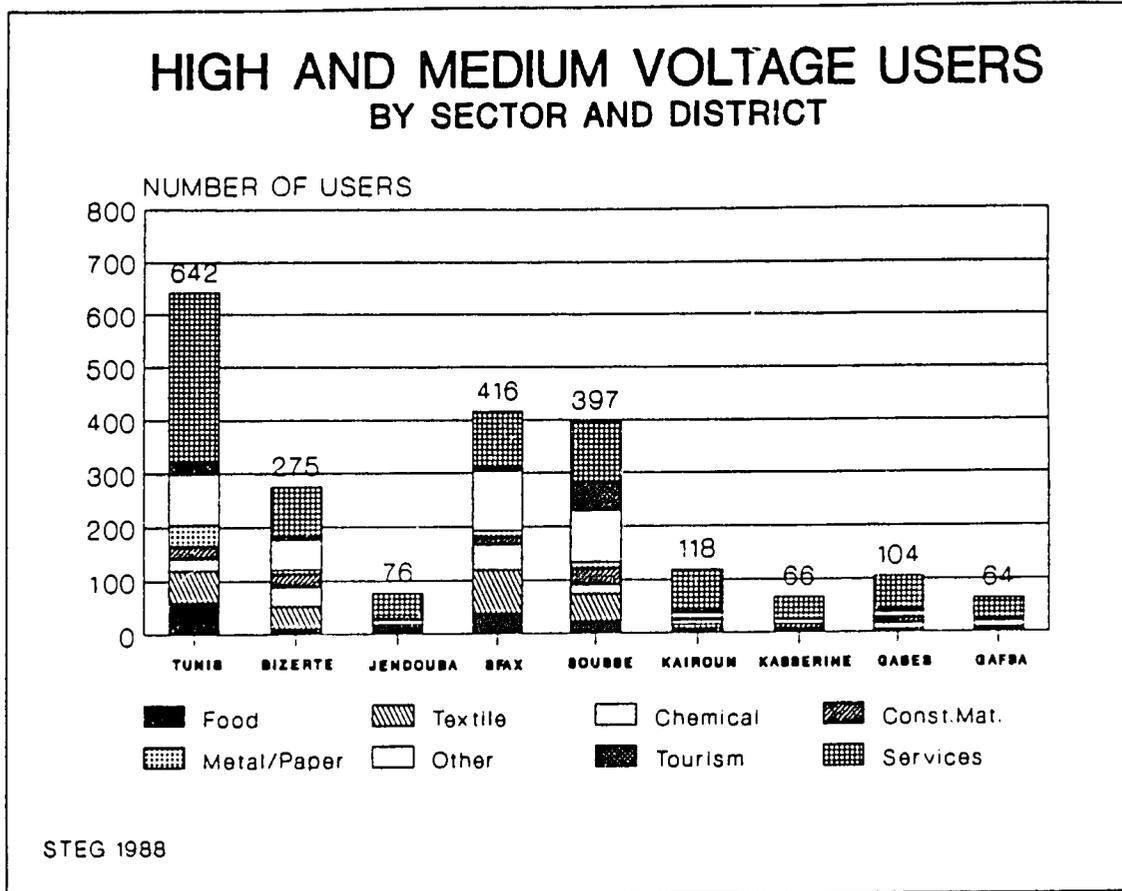
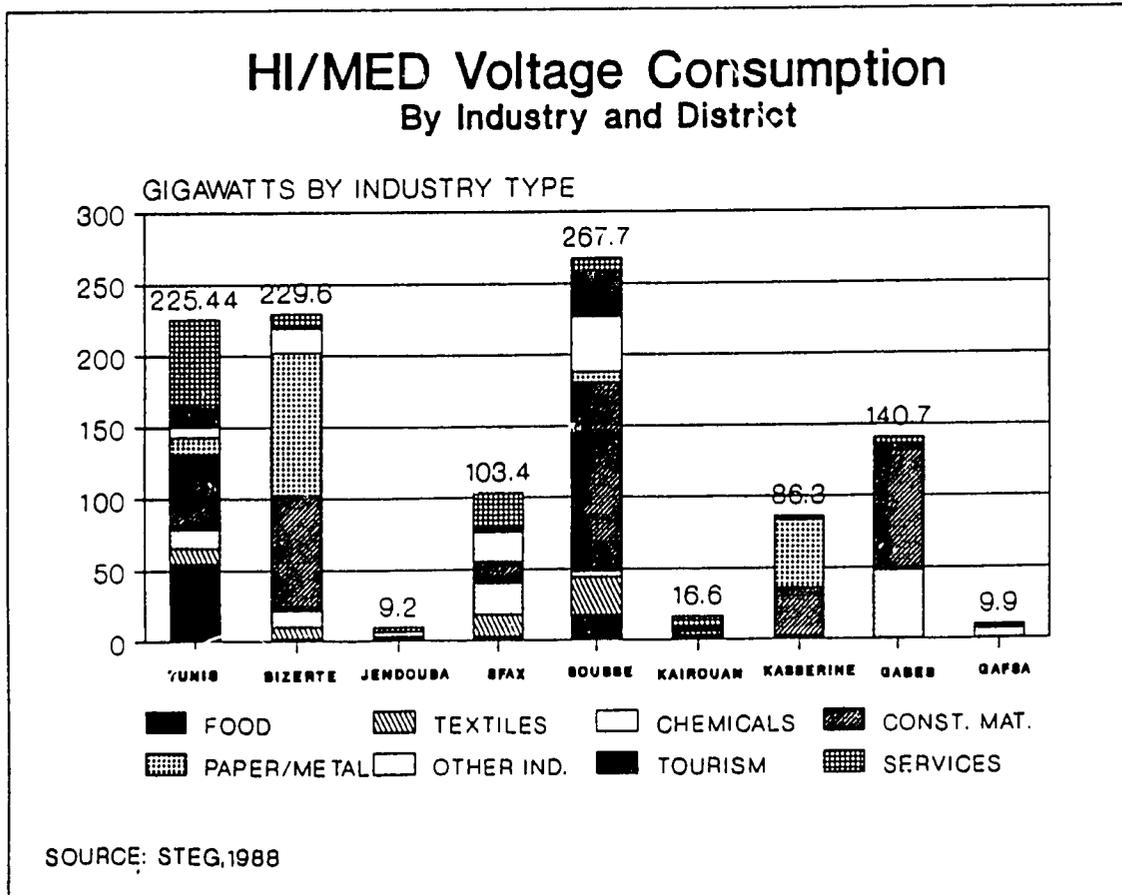


Chart III.6.



the largest increase occurred in Sfax, with Bizerte second, Sousse third, and Tunis once again fourth. In fact, at 28 percent, Tunis had the smallest percentage increase, whereas the number of users in Bizerte increased by 169 percent. The total number of users increased by 69 percent between 1980 and 1988.

The following comments briefly summarize the data for each city:

**a. Tunis**

Between 1980 and 1988, Tunis saw a significant increase in consumption in the service sector and, to a lesser extent, transportation. Other industrial sectors changed very little or not at all. In terms of the number of users/subscribers, there was a significant increase of users in the transportation sector and very little change in the others.

**b. Bizerte**

Energy consumption in Bizerte is dominated by metal works and construction materials industries, although neither of these sectors experienced a considerable increase or decrease between 1980 and 1988. The most significant increases occurred in other industries and chemical industries. The total number of users increased from 152 to 409, with the most important increases in services, agriculture, other industries and chemical industries. Most of these were relatively small-scale users with only a modest impact on consumption.

**c. Jendouba**

Compared to the other target cities, Jendouba experienced the lowest level of electricity consumption. The pumping and health sector had the greatest increase while declines in consumption occurred in the agricultural, construction materials and mining sectors. There was only a modest increase in the services sector, although this sector experienced the second largest increase in the number of users. The greatest increase in the number of users occurred in the "pompage-service sanitaires"<sup>2</sup> sector.

**d. Sfax**

In Sfax, significant increases in consumption between 1980 and 1988 occurred primarily in chemical industries, agriculture, "other industries", and, to a lesser extent, textile industries. Food industries consumed roughly the same amount in 1980 and 1988, while consumption by mining industries decreased. The total number of industrial users in Sfax increased by 287, or 102 percent. Increases occurred in all sectors, although primarily in services, agriculture, other industries, and textile industries. The smallest increases occurred in transportation and metalworks.

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<sup>2</sup>STEG definition presumably refers to energy required for pumping water for sanitary purposes.

**e. Sousse**

For Sousse, the largest increase in consumption between 1980 and 1988 occurred in the construction materials sector, which was more than four times greater than the second largest increase in other industries. The consumption of electricity for tourism more than doubled but remained relatively modest. Other sectors consumed relatively small amounts of electricity with little change between 1980 and 1988. The number of users in service industries, other industries, and textile industries more than doubled between 1980 and 1988; other sectors experienced modest change, while the number of users in metalworks declined slightly.

**f. Kairouan**

Kairouan is characterized by a low level of electricity consumption for industrial uses. There is currently no dominating industry in Kairouan that consumes a great deal of energy, although the opening of the GM plant will increase consumption in 1990. The greatest increase in consumption between 1980 and 1988 occurred in the "pompage services sanitaires" sector, as defined. Consumption declined in the agriculture, services, and construction materials sectors. The greatest increase in the number of users also occurred in the pumping/sanitary services sector, with a large increase in the service sector as well. The number of users in tourism, agriculture, and chemical industries actually declined.

**g. Kasserine**

The major increase in electricity consumption in Kasserine occurred in the construction materials industry, with transportation, agriculture, and food industries showing increases as well. The most important increases in the number of users occurred in services, transportation, and agriculture although these were all small consumers.

**h. Gabès**

Power consumption in Gabès was dominated by the construction material industry, with chemical industries in second place. In comparison, all other sectors were only minor consumers. The greatest increase in consumption occurred in chemical industries, while consumption in the tourism sector declined. The largest increase in the number of users, however, occurred in the service and agricultural industrial sectors. The number of users in food processing and tourism both declined.

**i. Gafsa**

Electricity consumption in Gafsa is overwhelmingly dominated by mining industries, which are also very large consumers. Between 1980 and 1988, consumption in this sector increased 550 percent. The greatest increase in the number of users occurred in the pumping/health sector with a large decline in users in the agricultural sector. All of these were small-scale users.

## **5. Telecommunications**

As noted by several local officials and entrepreneurs, good telecommunications are clearly essential to the development of modern enterprises and particularly those that are export oriented. Roughly two thirds of recent telex communications, for example, took place between Tunisia and other countries. Table III.4 presents data from the Ministry of Telecommunications' 1986 Annual Report concerning the demand and provision of telephone and telex connections. This data is presented according to nine regions defined and used by the Ministry. Overall, the total number of telephone lines increased by 9.4 percent between 1985 and 1986 to a total of 207,190. The number of telex connections increased by 5.1 percent to a total of 2,807. Data from the Annual Report also showed that there were fewer breakdowns and improved repair service during 1986, with very little change in the level of international calls compared to 1985.

On a regional basis, substantial improvement occurred in the provision of telephones in the Tunis II region which essentially forms an outer ring around Tunis from Nabeul to Bizerte. Although the demand for new connections in this region was virtually the same in both 1985 and 1986, there was a 71 percent increase in the provision of connections that resulted in a 21 percent drop in the total number of pending demands. The region of Kairouan (including Kasserine) has the lowest pending demand for new phone connections. The regions of Sfax, Médenine, and Sousse appear to be those where new phone connections are hardest to obtain and have backlogs of between 450 and 700 percent compared to the number of connections made in 1986.

Table III.4 also shows that demand for telex connections is considerably less. Very little total pending demand exists outside the Tunis, Sfax, and Sousse regions. Only in Tunis did pending demand increase between 1985 and 1986. It is unfortunate that demand in Sfax for new telephone and telex connections is not being adequately addressed since the city has clear commercial and industrial ties that could benefit from these services. To a lesser extent, this applies to Sousse as well. The importance of good telecommunications for export-oriented activities is demonstrated by the fact that two thirds of telex communications take place between Tunisia and other countries.

## **B. OTHER URBAN SERVICES**

The following urban services are primarily provided by Municipalities throughout Tunisia. Data and analysis from this section are also pertinent to capacity and resource management concerns raised in Chapter IV. While municipal infrastructure appears to be in reasonable condition, to an observer who has visited Tunisia over nearly a 20-year period, the quality of municipal roads and space have declined over this period, especially in Tunis, Sfax, Sousse, (and Gabès).

### **1. Roads**

By observation, the local road network in the sample cities visited is acceptable. In the city center, sidewalks exist and appear to be well constructed and reasonably well maintained. Roads are patched and with relatively few breaks or potholes. Outside this

**Table III.4.**  
**Availability of Connections to Telephone and Telex**

Telephone Lines/Connections										
Regions	Demand			Connections			Total Pending Demand			Pending Demand as % of 1986 Connections
	1985	1986	% Change 85-86	1985	1986	% Change 85-86	1985	1986	% Change 85-86	
Tunis I	19,026	15,909	-16.4	14,439	11,130	-22.9	40,921	42,291	3.3	380.0
Tunis II	5,219	5,207	-0.2	2,723	4,645	70.6	11,949	9,483	-20.6	204.2
Sousse	5,361	5,276	-1.6	2,580	2,988	15.8	13,278	13,430	1.1	449.5
Sfax	6,241	5,004	-19.8	2,719	2,724	0.2	18,384	18,778	2.1	689.4
Gabès	1,956	1,825	-6.7	1,743	1,584	-9.1	3,282	3,274	-0.2	206.7
Médenine	2,612	1,926	-26.3	1,080	941	-12.9	5,312	5,111	-3.8	543.1
Gafsa	1,876	1,238	-34.0	1,310	849	-35.2	2,263	3,096	36.8	364.7
Kairouan	1,415	1,333	-5.8	1,336	866	-35.2	1,277	1,539	20.5	177.7
Le Kef	3,068	2,308	-24.8	1,391	1,081	-22.3	3,590	3,657	1.9	338.3
<b>TOTAL</b>	<b>46,774</b>	<b>40,026</b>	<b>-14.4</b>	<b>29,321</b>	<b>26,808</b>	<b>-8.6</b>	<b>100,256</b>	<b>100,659</b>	<b>0.4</b>	<b>375.5</b>

Note: The total number of telephone lines increased by 9.4 percent from 189,337 lines in 1985 to 207,190 lines in 1986.

Telex Connections										
Regions	Demand			Connections			Total Unmet Demand			Unmet Demand as % of 1986 Connections
	1985	1986	% Change 85-86	1985	1986	% Change 85-86	1985	1986	% Change 85-86	
Tunis I	448	349	-22.1	228	243	6.6	396	446	12.6	183.5
Tunis II	70	40	-42.9	32	26	-18.8	52	33	-36.5	126.9
Sousse	113	94	-16.8	1	16	1,500.0	52	37	-28.8	231.3
Sfax	75	49	-34.7	31	15	-51.6	62	48	-22.6	320.0
Gabès	17	3	-82.4	23	13	-43.5	2	2	0.0	15.4
Médenine	23	12	-47.8	15	10	-33.3	8	7	-12.5	70.0
Gafsa	5	7	40.0	5	1	-80.0	0	8	--	800.0
Kairouan	7	7	0.0	5	10	100.0	4	1	-75.0	10.0
Le Kef	19	20	5.3	3	12	300.0	3	12	300.0	100.0
<b>TOTAL</b>	<b>777</b>	<b>581</b>	<b>-25.2</b>	<b>343</b>	<b>346</b>	<b>0.9</b>	<b>579</b>	<b>594</b>	<b>2.6</b>	<b>171.7</b>

Note: The total number of telex connections increased by 5.1 percent from 2,622 connections in 1985 to 2,807 in 1986. Tunis I region primarily includes Tunis and its immediate region. Tunis II includes among its major cities: Nabeul, Bizerte, and Zaghouan. Sousse Region includes among its major cities: Sousse, Monastir, Mknine, and Mahdia. Sfax Region primarily includes Sfax and its immediate region. Gabès Region includes among its major cities: Gabès and Ezzouhour. Médenine Region includes among its major cities: Médenine, H. Souk, Tataouine, and Zarzis. Gafsa Region includes among its major cities: Gafsa, Tozeur, and Nefta. Kairouan Region includes among its major cities: Kairouan, Kasserine, and Feriana. Le Kef Region includes among its major cities: Le Kef, Tabarka, Jendouba, and Testour.

Source: Rapport Annuel, Ministère des Communications, 1986

perimeter the road network is spotty, but still superior to many other developing countries. In fact, inter-municipal roads, with broken road edges and unfinished "shoulders," are in worse condition than the local road networks in many of the sample cities. The extent of the road network for the sample cities is listed in meters and meters per capita in Table III.5.

Local Government	Population	Road Length (m)	Meters Per Capita
Tunis	596,654	1,000,000	1.67
Sfax	231,911	350,000	1.51
Sousse	120,000	120,000	1.00
Kairouan	110,000	200,000	.82
Bizerte	88,842	42,000	.47
Gabès	86,500	20,000	.23
Kasserine	60,000	4,000	.06
Gafsa	57,100	41,200	.72
Jendouba	33,000	46,000	1.39
Tabarka	9,810	11,000	1.12

Source: Ministère de l'Intérieur, Enquête (DGCPL), 1987.

Note that these figures are for road length, not road surface, and only cover maintained roads. The total road network, including unpaved roads, covers a much larger area. PADCO was unable to obtain any data which classified local roads. This would have permitted an assessment of unmet road construction needs.

Nevertheless, the available figures suggest the following:

- a. Cities with road length per capita ratios greater than 1 meter may serve as regional market centers or have very active commercial centers. This is particularly true of Sousse, Tunis, Sfax, and Jendouba. From a development viewpoint this should provide these cities with the flexibility to promote economic activity on the urban periphery.
- b. Cities with very low road length per capita ratios either have a highly concentrated city center, such as Kairouan or Bizerte, or extensive unmet needs. This would limit their capacity to leverage private investment into sites with adequate access. Generally, cities with high central city concentrations may be better

positioned to promote expansion of existing industries and/or development of services rather than other development options.

If the road length per capita ratio for Tabarka is correct, the national government's investment strategy may be facilitated by a road network that could accommodate population increases associated with development.

## 2. Investment Balance - Roads, Lighting, Buildings

Direct investments by local governments indicate the relative importance which a municipality places on various types of infrastructure and buildings. PADCO collected investment data from the 1987 and 1988 final accounts of the selected sample of cities. The major categories are displayed as percentages of total direct investment for each of the two budget years in Table III.6.

	% Roads		% Lighting		% Buildings	
	1987	1988	1987	1988	1987	1988
1. Tunis	47	26	12	22	9	11
2. Sfax	40	40	2	3	40	32
3. Sousse	21	13	17	7	32	61
4. Kairouan	8	14	2	10	78	58
5. Bizerte	75	34	--	--	12	57
6. Gabès	8	21	13	3	63	64
7. Kasserine	23	7	10	6	11	22
8. Gafsa	3	22	7	7	47	52
9. Jendouba	31	22	16	10	13	15
10. Tabarka	32	23	20	43	4	9

Source: Ministère de l'Intérieur, Enquête (DGCPL), 1987

Balanced investment programs allocate a significant portion of funding to roads as well as to municipal buildings. On that basis, Tunis, Sfax, Bizerte, Kasserine, and Jendouba appear to have a consistent approach to direct investment. Since markets, schools, slaughterhouses, and a variety of other structures are included in the "buildings" category, it is possible that direct investments in these facilities serve an economic as well as an administrative purpose. More detailed analysis of the purpose of each investment at the local level would need to be undertaken to arrive at a conclusion. Nevertheless, the concentration of investment resources in municipal buildings, rather than maintenance and roads, by Sousse, Kairouan, Bizerte, Gabès, and Gafsa is an issue which USAID/

RHUDO should investigate further. Very likely these constitute revenue generating or "show case" facilities. However, excessive "building" investment may undermine municipal service delivery which could affect the city's attractiveness for private investors.

### 3. Refuse Collection

PADCO discussed environmental problems associated with solid waste management and industrial pollution in Chapter I of this report. For the purpose of this section, we collected data related to refuse collection in the sample cities as indicators of performance and quality of service.

Data on refuse collected was obtained through surveys undertaken by the General Directorate of Local Government (DGCPL: Ministry of Interior) in June 1987. This data is presented in Table III.7.

<b>Table III.7. Annual Refuse Collection (tons per year and kg per capita per year)</b>			
<b>Local Government</b>	<b>Population</b>	<b>Tons/Year</b>	<b>KG/Per Capita</b>
1. Tunis	596,654	182,500	310
2. Sfax	231,911	80,000	340
3. Sousse	120,000	33,600	280
4. Kairouan	110,000	43,800	400
5. Bizerte	88,842	35,000	390
6. Gabès	86,500	30,000	350
7. Kasserine	60,000	13,700	230
8. Gafsa	57,100	30,000	530
9. Jendouba	33,000	11,000	330
10. Tabarka	9,810	365	40
<b>Source: 1987 DGCPL survey</b>			

The data seems to be relatively coherent, although Sousse's collection seems to be underestimated given the volume of refuse the City must collect for the Hotel Industry. Gafsa refuse may include debris from mining operations. In the case of Kairouan, it would appear that the high amount collected may represent a higher quality of service. Tabarka, on the other hand, seems to represent a relatively poor level of service.

Our field visits revealed a noticeable absence of control of disposal sites in several of the sample cities; but, as the World Bank's environmental study pointed out, this is a common problem in the cities.

Opportunities exist for the privatization of refuse collection particularly in the larger cities. Manufacturing and hotel industries would be likely targets for introducing private fee-paid service. However, the cities have lost a lot of control over urban services in the past two decades and may be reluctant to give up control. At the very least, industries and hotels should pay a special refuse fee for the added burden they place on the cities. While some industries are hauling their refuse to dump sites, this causes environmental concerns about the disposal of hazardous wastes and other waste management problems.

#### 4. Parks and Open Space

Properly maintained parks or other green space within an urban environment represent a community resource. These areas demonstrate a local government's commitment to maintain a balance between development and recreational/leisure needs.

Each of the sample cities has set aside some of its urban land as open space. Green areas or parks outside of Tunis and Kairouan are quite limited as shown below:

<b>Table III.8. Green Space Per Capita (1989) for Sample Cities</b>	
<b>Local Government</b>	<b>Green Space Per Capita (m<sup>2</sup>)</b>
1. Tunis	7.70
2. Sfax	0.97
3. Sousse	0.62
4. Kairouan	3.61
5. Bizerte	0.69
6. Gabès	0.49
7. Kasserine	0.18
8. Gafsa	1.72
9. Jendouba	0.14
10. Tabarka	n.a.
<b>Source: 1987 DGCPL Survey</b>	

### C. CHAPTER III SUMMARY

Investment programs for water supply, sanitation, electrical power, and telecommunications are primarily "deficit driven" and focused on equitable distribution. Investments in the South West and North West regions, for example, have been made to promote economic self-sufficiency and to compensate for the natural inclination of resources to concentrate along the coast. There is no coordination or geographic consistency for planning purposes in the provision of these various utilities. As of 1984, however, 91.3 percent of urban households were served by electricity, 81.7 percent by SONEDE water connections, 8.7 percent by stand-pipes and cisterns, 51.5 percent were connected to sewers, while 28.7 percent had individual septic tanks. There were roughly 6.5 telephones per 100 urban residents.

In terms of bulk water supply, there is roughly an equal split between urban and rural water uses. Competition for this water has rarely been an issue; only in Sfax is there concern that the current water supply will not be adequate to meet urban needs beyond the next 10 years. Large scale increases in industrial water use recently have occurred in Sousse, Kairouan and Gafsa without significant disruption to the water supply. The southern part of Tunisia is entirely dependent on subterranean sources which are high in salinity and considered to be of poor quality. In providing new networks and connections, SONEDE's policy is to respond to need on an equitable basis that will correct deficiencies in specific areas. At this time, water supply does not appear to be a significant constraint to increased urban economic development.

ONAS currently provides sewers and drainage for 49 municipalities and is not eager to overtax its capacity in order to service a greater number of smaller cities. To date, the agency has been unable to fully recover the costs of its investments and activities and remains dependent on central government financial assistance. Of the cities covered in this study, only Jendouba and Tabarka do not already benefit from ONAS assistance. Cities without treatment plants include Bizerte, Gabès, Kasserine and Jendouba. Unserviced communities in Tunis, Sfax and Sousse continue to pose environmental problems by running raw sewage into the sea.

Energy consumption is characterized by a few widely spread large consumers and a number of smaller consumers fairly well distributed among major cities. Several districts have a major power consumer that is dominant in its sector. Existing data does not indicate any constraints in access to power for specific cities or to moderate increases in economic activity. Only Kairouan and Jendouba have low levels of industrial power consumption.

Good telecommunication facilities appear to be a problem for several cities. In attempting to respond equitably to countrywide demand, key cities such as Tunis, Sfax and Sousse have not been adequately served. Between 1985 and 1986 however, there appears to be a general decrease in demand for both telephone and telex connections throughout the country. Nevertheless, unmet demand in Sfax remains almost seven times the number of connections made in 1986; while, for Sousse, it is 4.5 times and for the city of Tunis itself, 3.8 times. The demand and backlog for telex connections are considerably less, with Sfax once again having the greatest deficit.

## CHAPTER IV

### LOCAL GOVERNMENT ROLES AND RESPONSIBILITIES

This chapter assesses the capacity and potential of local governments to initiate and sustain programs which contribute to both local and national economic growth. Local governments operate within a very broad and complex institutional framework. Numerous national government agencies, public enterprises and development financing entities motivate, regulate, and control the day-to-day and year-to-year activities of the 23 Governorates and the 246 municipalities in Tunisia.

This chapter looks at the two major forms of local government in Tunisia--Governorates and municipalities--as well as a new entity, Regional Councils, created in 1989 to improve coordination between national and local development plans as well as between rural and urban investments. At the outset, however, we describe some of the major policy reforms and economic adjustments which regulate the environment within which local governments now operate. This orientation is a very useful introduction to the specific discussion that follows.

#### A. CONTEXT FOR THE ASSESSMENT

This section describes some key features of the overall context within which local governments now exist, and estimates how on-going or anticipated policies and programs could, perhaps, improve the ability of cities to attract private investment and manage their own resources more effectively. These four key features are discussed below:

- Local government supervision - the concept of "tutelle" and the "délégués";
- Public enterprises and the reduction of municipal service delivery responsibility;
- Decentralization policy initiatives; and
- Urban management implications of economic adjustment programs.

##### 1. Local Government Supervision - The Concept of "Tutelle" and the "Délégués"

Local governments, key government functions, and their implementing officers are subject to the supervision of one or more national agencies. This concept of supervision is referred to as "tutelle" (guardianship) in the Tunisian system of intergovernmental relations. All local government institutions and their high-ranking administrative personnel are subject to the overall supervision of the Ministry of Interior. In addition, the following functional "tutelle" also applies:

	<b>Functions</b>	<b>Supervision</b>
a)	Administrative . . . . .	Ministry of Interior
b)	Technical . . . . .	Ministry of Public Works
c)	Financial . . . . .	Ministry of Finance
d)	Planning . . . . .	Ministry of Planning <u>and</u> Ministry of Interior

This systematic control over local government plans, finances, infrastructure, and investments seems to have retarded rather than facilitated local service delivery, and has made it extremely difficult and time-consuming to initiate and implement development projects.

The Governor, under authority of law or by delegation of powers from national agencies, exercises "tutelle" over smaller municipalities (Categories 3 and 4). In addition, Governors have been granted a great deal of authority for municipal supervision under the provisions of Decree 89-457, issued in March 1989. This delegation of powers to a decentralized level of government could help to clarify the respective roles of Governors, Delegates and Regional Office Directors of line Ministries, concerning the administration of local affairs. It is important to note, however, that both the Governor and the Secretary General actually represent central government authority at the regional level and are themselves under the administrative supervision of the Ministry of Interior.

To appreciate how one level of government administration influences and monitors activity at another level of government administration, it is also necessary to be familiar with the principle of delegation. In Tunisia the Ministry of Interior appoints functional "délégués" for each Governorate. This First Delegate ("premier délégué") is essentially the Deputy Governor and is charged with responsibility for political, social, and cultural affairs, as well as the following:

- liaison with the other délégués
- civil protection
- liaison with the security service
- liaison with national organizations

The Ministry of Interior also appoints two other functional delegates who typically are assigned: a) one to the First Delegate for advice on social affairs; and, b) one to the Secretary General for advice on economic affairs.

Governorates are subdivided into "délégations", **territorial** units which usually correspond to settlement areas, but do not necessarily have the same boundaries as a municipality. For each delegation the Governor appoints a "Délégué" who assists the Governor to carry out administrative functions within their respective territories. The delegates motivate, coordinate, and control those local services associated with civil administration. The territory of each delegation is further subdivided into "secteurs", each of which has a sectoral chief appointed by the Governor and supervised by the territorial délégué.

At the Governorate level, a Délégué and a Service Chief may both be responsible for the same function; at the municipal level a Délégué and the President of the Municipal Council may both be responsible for the same territory. Many things at the local government level can only be accomplished by coordination among several institutions and individuals.

**2. Public Enterprises and the Reduction of Municipal Service Delivery Responsibility**

Municipalities have very few functions which they administer directly. Most of the "typical" municipal functions carried out by local government in other parts of the world are exercised in Tunisia by the following national agencies:

- water supply and distribution . . . . . SONEDE
- sewerage construction . . . . . ONAS
- urban renewal . . . . . ARRU
- industrial site location . . . . . AFI
- housing development . . . . . AFH
- land development for tourism . . . . . AFT
- road construction . . . . . MEH/DGRHE

Except for tertiary road works, sewerage maintenance, refuse collection and street lighting, cities are dependent on one or more of the above-named entities for the provision of "municipal" services. This erosion of municipal responsibility for service delivery has reduced the capacity of cities to plan and implement a local development program and has weakened them in other ways as well, most notably in terms of the quality of staff which can be recruited for municipal employment, given its limited scope and the poor prospects for career advancement.

Many of the identified services are essential to private development. New investments in production will not be made by private entrepreneurs without assurances that public utilities and public services will be available at a specific time, place, and cost. At the present time local government officials cannot make those assurances to those private entrepreneurs who may be interested in developing or expanding economic opportunities in cities.

**3. Decentralization Initiatives**

Like many other countries with declining resources, Tunisia has adopted a policy of decentralization. From 1985, when the Local Government Code was amended and the general policy of strengthening local government was articulated, very little actual decentralization progress occurred until 1989. In that year, the creation of Regional Councils and the delegation of authority to Governors provided positive indication that the National Government intended to follow through on its commitment to decentralize decision-making and expand the responsibilities of local governments.

The momentum of these decisions can, perhaps, be capitalized upon through the Municipal Development Project as well as through a USAID/RHUDO initiative, so that even greater decentralized control over plans, funds, and investments will be extended to local governments.

#### **4. Urban Management Implications of Economic Adjustment Programs**

Tunisia's economic adjustment program will be the principal catalyst for the investment of private capital in cities. The structural adjustment program's emphasis on private sector-led, export-oriented development suggests that cities will play a key role in the realization of national economic policy. Not only are urban areas the location of most of the major infrastructure and transport facilities upon which the private sector will depend, but the support services for economic growth (e.g. telecommunications, banking, labor) are also concentrated in the nation's cities.

Recent USAID and World Bank initiatives in: a) housing, b) agricultural modernization, c) capital markets development, d) trade policy, and e) local government resource mobilization and institutional reform are changing the overall policy framework within which local governments will operate throughout the next decade.

This is a very positive occurrence. If effectively managed by public entities, the infusion of new resources into urban areas could provide much needed employment for urban residents and, perhaps, enable a city to improve its current service levels. But there are also possible negative effects on urban areas as a consequence of the specific measures that are being taken at the macro-economic level. These must be carefully monitored, particularly any increase in unemployment due to rural-urban migration caused by agricultural adjustment policies.

We have identified and analyzed five programs which will have significant implications for urban areas. Exhibit IV.1, following, identifies each of these programs, its principal features and the possible implications--positive and negative--of each.

The following four sections of this chapter discuss local governments (i.e. Regional Councils, Governorates, Municipalities) and the numerous development institutions which local governments must call upon to assist in implementing any development program.

We focused on economic development planning, finance and management in order to assess whether local governments, and these other institutions, individually or collectively, possessed the authority and resources needed to directly assist private sector development of export-oriented businesses. The description of local structures, staff, systems and services is provided in each of the following sections, when appropriate:

- B. Regional Councils
- C. Governorates
- D. Municipalities

The next chapter of this report deals comprehensively with the subject of municipal finance. Consequently, this important topic is not covered under Section D.

## Exhibit IV.1. Economic Programs and their Urban Implications

Major Programs	Principal Features	Urban Implications
<p><b>1. IBRD - Fifth Urban Project</b>  <b>1A. USAID/RHUDO Housing Guaranty</b></p> <p><b>\$58 million loan (1)</b>  <b>\$15 million loan (1A)</b></p>	<ol style="list-style-type: none"> <li>1. Establish a Housing Bank (Banque de l'Habitat)</li> <li>2. Reinforce a new national housing policy (July '88) oriented to private sector involvement in financing (e.g., banking and insurance sector) and development of urban housing</li> <li>3. Computerized land use inventory and land information management system</li> <li>4. Restructuring SNIT and AFH</li> </ol>	<p><b>POSITIVE:</b></p> <ol style="list-style-type: none"> <li>1. Private sector involvement in housing could attract other private investors to urban areas.</li> <li>2. Program/service delivery linkages could be developed.</li> <li>3. Infrastructure investments could be coordinated.</li> </ol> <p><b>NEGATIVE:</b></p> <ol style="list-style-type: none"> <li>1. Competition for limited local resources.</li> </ol>
<p><b>2. IBRD - Agriculture Structural Adjustment Loan (ASAL) II</b></p> <p><b>\$84 million loan</b>  <b>NOTE: ASAL I = \$150 million loan</b></p>	<ol style="list-style-type: none"> <li>1. Reorienting the public investment and expenditure program in agriculture</li> <li>2. Privatizing commercially viable, state-owned organizations</li> <li>3. Improving natural resource management</li> <li>4. Elimination of credit subsidies; reliance on economic principles</li> <li>5. Agricultural mechanization</li> </ol>	<p><b>POSITIVE:</b></p> <ol style="list-style-type: none"> <li>1. Increased production could create opportunities for investment in agro-processing near cities.</li> <li>2. Port cities should see increased activity and therefore employment opportunities.</li> </ol> <p><b>NEGATIVE:</b></p> <ol style="list-style-type: none"> <li>1. Competition for vacant land zoned agro but more suited for industry.</li> <li>2. Mechanized farms could generate more rural-urban migration.</li> </ol>
<p><b>3. IBRD Industrial and Trade Policy Adjustment Loan (ITPAL)</b></p> <p><b>\$150 million (estimate)</b></p>	<ol style="list-style-type: none"> <li>1. Investment liberalization through promulgation of a new investment Code</li> <li>2. Reduction of import quantity restrictions and tariffs</li> <li>3. Elimination of producer price controls; new opportunities for industrial expansion</li> <li>4. Improved system of exchange rate guarantees to facilitate exports</li> </ol>	<p><b>POSITIVE:</b></p> <ol style="list-style-type: none"> <li>1. Investment code liberalization and tax deferrals will promote urban economic growth.</li> <li>2. Further reduction of import duties should help urban industries like textiles and light manufacturing.</li> </ol> <p><b>NEGATIVE:</b></p> <ol style="list-style-type: none"> <li>1. Preference to industrial zones outside city proper; higher marginal cost for infrastructure.</li> </ol>
<p><b>4. USAID-Technology Transfer Project</b></p> <p><b>USAID-Private Sector Strategy</b></p>	<ol style="list-style-type: none"> <li>1. Funding scholarships in technical areas such as engineering, computer sciences, industrial engineering</li> <li>2. Capital markets analysis to establish greater flexibility in raising funds for private economic growth</li> <li>3. Support for privatization of specific government functions</li> </ol>	<p><b>POSITIVE:</b></p> <ol style="list-style-type: none"> <li>1. Pool of skilled urban workers familiar with exterior markets.</li> <li>2. Development of capital markets which assist private sector development.</li> <li>3. Privatization/trade liberalization dialogue will create the atmosphere for public sector investment and exports in urban areas.</li> </ol>
<p><b>5. IBRD Municipal Development Project</b></p> <p><b>\$20-25 million (estimate)</b></p>	<ol style="list-style-type: none"> <li>1. Promote local government financial self-sufficiency through improved tax collections and administration</li> <li>2. Train local officials.</li> <li>3. Strengthen financial intermediary - 'CPSCCL' - and increase interest rates to conform to market conditions</li> <li>4. Improve maintenance of local infrastructure</li> <li>5. Expand municipal responsibilities</li> </ol>	<p><b>POSITIVE:</b></p> <ol style="list-style-type: none"> <li>1. Local revenues will increase and be directed toward investments.</li> <li>2. Trained staff and improved planning and budgeting will maximize impact of limited resources.</li> </ol> <p><b>NEGATIVE:</b></p> <ol style="list-style-type: none"> <li>1. Access to concessional loans may slow rate of infrastructure investment in urban areas.</li> </ol>

## **B. REGIONAL COUNCILS**

Regional Councils (RC) were created in February 1989 to:

- develop regional plans consistent with the national social and economic development plans;
- prepare land use plans for areas outside municipalities and review the urban master plan for the Governorate;
- offer advice on specific programs or projects which are being implemented in the Governorate by national agencies or public enterprises, as well as provide general advice, when requested, on issues concerning the Governorate;
- draw up various regional development programs and oversee their accomplishment;
- oversee the implementation of regional projects that have been prepared by various Ministries on advice of the RC;
- promote coordination between relevant national programs and those of the region, as well as with municipal programs; and
- foster intergovernmental cooperation among municipalities and oversee joint actions between them.

The RC is presided over by the Governor (Regional Councils have the same boundaries as their respective Governorates) and staffed by the Governorate's Secretary General who is designated the Secretary of the Council. The Council membership includes elected deputies, municipal mayors, heads of rural councils, regional office heads of national agencies and up to ten (10) other individuals whose experience in economic, social, cultural or educational affairs warrants their participation. The involvement of outside experts has excellent potential to engage the private sector at the planning stage and thereby promote closer cooperation between them and the public sector. The Governor of Sfax, for example, includes the head of UTICA as well as representatives from the Chamber of Commerce of the South among the ten specialists at RC meetings.

The RC must hold regular sessions at least four times a year with no more than three months elapsing between these sessions. During the interim period, in the event of an emergency, the RC President may act unilaterally, subject to later confirmation by the full Council.

The actual operation and administration of the Regional Councils is still evolving. Currently the RCs have no budget nor any permanent staff, although the Minister of Interior is authorized to assign personnel to assist the RC in its endeavors. Nevertheless, there is a great deal of potential for these regional bodies to serve as the linchpin between national and local investment planning and implementation.

## C. GOVERNORATES

There are 23 Governorates in Tunisia. All of the sovereign territory of the country is within one of these administrative subdivisions. Each Governorate is administered by a Governor, appointed by the Ministry of the Interior, who is "the trustee of State authority and the representative of government in his Governorate". Governorates and Governors are the deconcentrated authority of the national government. In the 25 years since their establishment, however, their authority has been eroded by the creation of regional offices of national Ministries who are more closely tied to their own bureaucracies than to the Governorate. This has occurred despite the following specific language in the Local Government Code:

The Governor, insofar as representing the government, has authority over the personnel of the national services that exist in the Governorate. For this purpose he:

- oversees the execution of laws, regulations and governmental decisions;
- enables, coordinates and controls, through the authority of the competent Ministers, the regionalized services of civil administration of the State; and,
- exercises "tutelle" and administrative control over municipalities.

In addition to this administrative coordination function, the Governor plays a far more important role in the area of development coordination. Article 9 of the Local Government Code assigns to the Governor the responsibility to implement the national development policy at the regional level. In this regard, the Governor determines the specific needs of the Governorate and may then propose programs and the means of financing them to the national government.

### 1. Organization and Staffing

Governorates are organized into seven divisions which correspond to the primary functions granted to them under the Local Government Code. The seven divisions are assigned to either the First Delegate or the Secretary General as follows:

#### First Delegate:

1. Political Affairs
2. Social Affairs
3. Cultural and Educational Affairs

#### Secretary General:

4. Administration and Finance
5. Economic Affairs
6. Rural/Regional Development
7. Municipal Supervision

Each of these seven divisions could have an impact on the design and development of programs to encourage private investment. They are briefly summarized below.

1. **Political Affairs:** concerns political matters, security, elections, information, civil protection, territorial divisions, and related issues;
2. **Social Affairs:** concerns matters related to professional training and employment as well as to health, family planning and general social promotion;
3. **Cultural and Educational Affairs:** concerns all matters related to culture, youth, and sports as well as teaching and educational establishments;
4. **Administration and Finance:** personnel and financial administration, including the management of credits delegated to the Governorate by national agencies;
5. **Economic Affairs:** responsible for issues associated with agricultural, commercial, industrial or touristic affairs, as well as for those matters related to transport and communication;
6. **Rural/Regional Development:** undertake studies related to rural revitalization and assist in initiating and supervising the execution of regular or special projects; and
7. **Municipal Supervision:** exercise "tutelle" over municipal administration consistent with the delegation of authority granted to Governorates and, generally, oversight over the management of the Governorate Council.

In addition, several Governorates have established a Data Processing Division to handle the computerization of administrative functions.

Each Governorate is assigned a corps of functionaries, personnel in the general cadre of the Ministry of Interior. These staff are supervised by the Secretary General, the most senior administrative representative of the Ministry of Interior at the Governorate level.

Staff costs for Governorates are less, as a percentage of current expenses, than those of municipalities. In 1987, the total outlay for salaries and other remuneration was approximately 2.5 million dinars (\$3 million), representing less than 30 percent of the total expense of all Governorates. The average staff complement for a Governorate is approximately fifty, with the majority of the workforce concentrated in the labor category. Table IV.1 identifies the staffing pattern for all Governorates other than Tunis, whose staff complement is significantly higher, reflecting its special status. The data suggests that there is a significant lack of technical staff at the Governorate level. There are only 22 full-time engineers for the 23 Governorates. Eight Governorates have no technical personnel. On the other hand, many Governorates have a full complement of administrative personnel. Sousse, Monastir, Gabès, Mahdia and Bizerte have the highest percentage of filled positions in this category.

## 2. Systems and Procedures for Development Coordination

In addition to the regular internal systems used for administration, Governorates also are responsible for managing certain public resources. The systems and procedures by which these responsibilities are carried out are described below:

**Table IV.1.**  
**Personnel by Council of Governorate (1986), Other than Tunis**

	Administrative		Technical	Laborers	Total Filled	Urban Pop./ Employee
	Authorized	Filled	Filled	Filled		
Zaghouan	48	29	1	20	50	748
Ariana	8	1	0	11	12	27,550
Ben Arous	12	4	0	15	19	13,337
Bizerte	14	12	2	27	41	6,180
Nabeul	26	14	0	59	73	4,530
Béja	2	1	1	42	44	2,370
Le Kef	16	10	1	83	94	1,275
Jendouba	26	10	2	42	54	1,587
Sfax	43	21	3	40	64	6,264
Sousse	25	25	1	6	32	8,638
Monastir	30	24	2	16	42	7,650
Mahdia	14	13	1	43	57	2,391
Kairouan	22	3	1	21	25	4,968
Kasserine	28	19	0	40	69	1,630
Gabès	21	20	2	20	42	3,960
Médenine	36	17	2	38	57	3,630
Tataouine	9	5	0	19	24	2,471
Gafsa	40	25	0	45	70	2,514
Kebili	18	12	0	27	39	1,451
Tozeur	4	3	0	10	13	4,354
Sidi Bouzid	16	9	2	37	48	1,070
Siliana	66	45	1	36	82	784
<b>TOTAL</b>	<b>524</b>	<b>322</b>	<b>22</b>	<b>697</b>	<b>1,051</b>	<b>3,580</b>

Source: Ministry of Interior, 1986

1. **Plan review and coordination** authorizes the Governor to review the National Spatial Plan for Regional Development and to identify and prepare for the implementation of projects which will strengthen the Governorate. In addition the Governor is responsible for reviewing the Municipal Development Plans ("Plans du Développement Municipal") which municipalities now prepare, theoretically, to forge a link between national plans and local requirements.
2. **Budget oversight** is the means by which the Governor exercises control over the financial affairs of municipalities. All municipalities whose previous year's total budget for combined capital and current receipts is less than TD 2 million are subject to the oversight of the Governor. Those very few municipalities with budgeted receipts in excess of TD 2 million are under the "tutelle" of the Ministries of Interior and Finance. Approval of the budget by the Governor is required by October 31 for the succeeding fiscal year. Any municipality whose previous year's financial results reflected a deficit or whose current year's budget does not provide sufficient funds to cover planned expenditures is subject to national agency review and approval. Governors are authorized to reject or reduce expenses contained in the municipal budget and may actually increase expense estimates to cover obligatory expenditures (see Chapter V).
3. **Investment review** provides Governors with the authority to review and approve all real estate transfers, purchases or exchanges as well as the responsibility to review and approve all leases greater than nine years duration. National review is required for all local efforts to support, either through the provision of services or by direct investment, industrial or commercial enterprises in a region.

#### D. MUNICIPALITIES

There are 246 municipalities in Tunisia, including the District of Tunis. These local governments are classified into four "categories", as follows.

CATEGORY	NUMBER	BUDGET
1	3	>TD 4 million
2	59	350,000 - TD 4 million
3	121	75,000 - 349,999
4	62	<74,999
Source: Ministry of Finance, 1989		

The UIS sample included all municipalities in the first category, six from category 2 and one municipality, Tabarka, from the third category.

Municipalities are established by decree and may be abolished in the same manner. This fundamental dependency on the State for its existence, contrasts with the rights of local government in many other countries where the local voters have the constitutional or statutory authority to determine their own longevity once established by law.

The principal function of a municipality is explained in the Local Government Code, as follows:

... the municipality has a civil character and financial autonomy and is responsible for managing the community's affairs. It participates in the framework of the National Spatial Plan for Regional Development for the economic, social and cultural promotion of the community.

All other powers, duties and responsibilities flow from this over-arching grant of authority. Other powers are assigned to the Municipal Council and to its President, the Mayor, who is the municipality's chief executive. The specific attributions assigned to the legislative and executive branches of the local government confirm its administrative role in the over-all scheme of intergovernmental relations in Tunisia.

## 1. Organization and Staffing

Figure IV.1 is a model organization structure for cities in the 20-50,000 population range. The various services within each of the three divisions not only identify municipal priorities, but also correlate to the staffing pattern authorized by the Ministry of Interior for municipalities in this class. Larger municipalities may establish a somewhat different structure, with more areas of specialization.

The organizational structure of municipalities is fairly standardized, reflecting the three primary municipal functions:

- administration and finance
- technical services
- land management and control

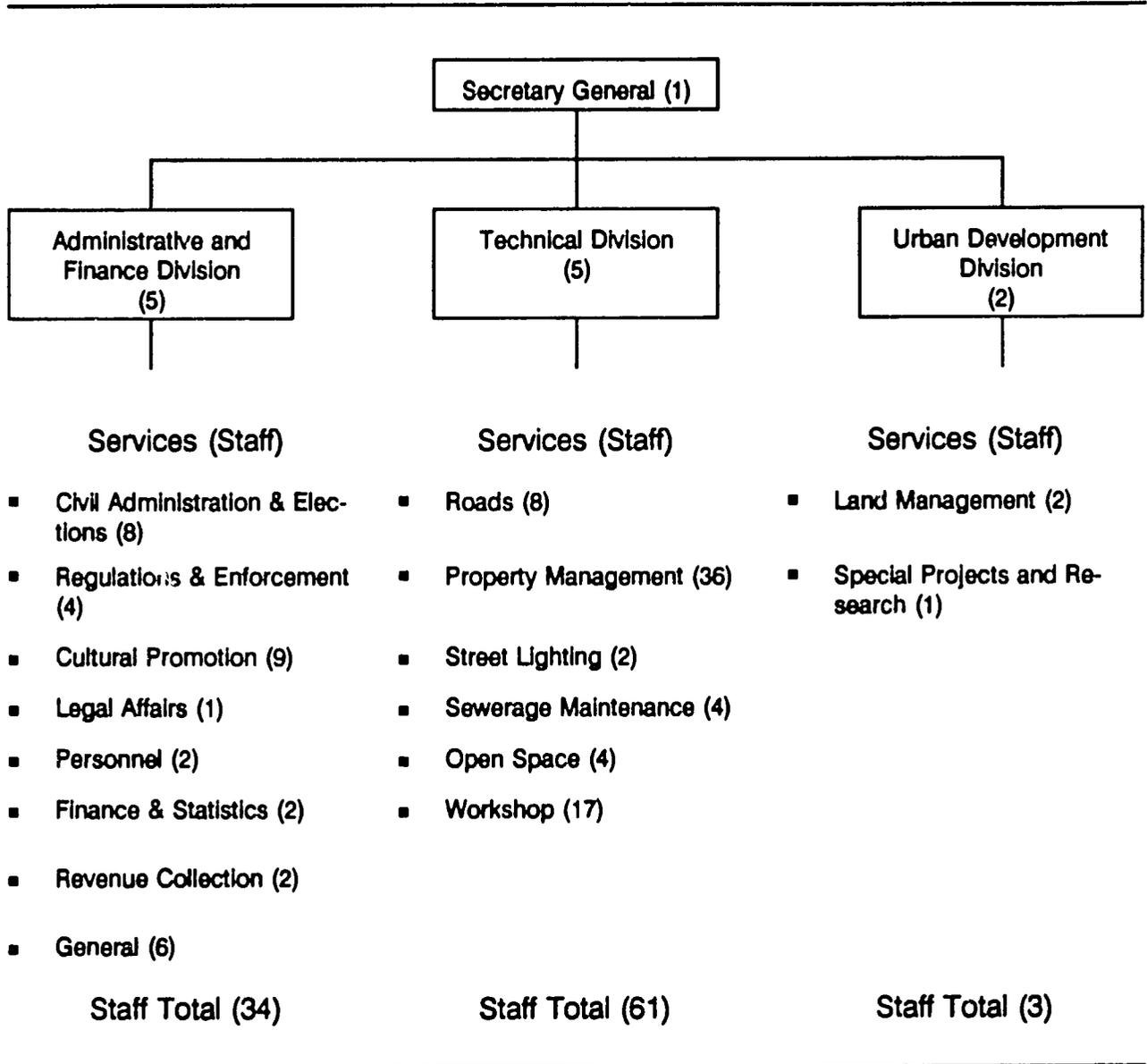
The following five aspects of the municipal organization are discussed below: 1) municipal council, 2) council president, 3) municipal bureau, 4) secretary general, and 5) staff:

### a. Municipal Council

The Municipal Council is the elected legislative body of the municipality. Article 36 of the Local Government Code sets out the primary duties of the Council as follows:

- review and approve the local budget;
- establish, within the limits of available resources, the capital investment program;
- define, within the context of the national development plan, the local actions which should be taken to advance the plan's objectives;

**Figure IV.1.  
Municipal Organization and Staffing Levels\*  
(Population Range 20-50,000)**



\* Numbers in parentheses indicate staffing levels.  
 Source: *Municipal Development Project Report, Vol. 1*

- provide advice on cultural, social and economic matters especially when required by law or when requested to do so by higher authorities; and
- be advised in advance of all projects proposed for implementation within the municipality.

Most of these powers are constrained by "tutelle" exercised by either the Governor or national authorities. Day-to-day responsibility for these and other duties of the Council are assigned to the Council President.

#### **b. Council President**

The Council President (i.e., Mayor) is chosen from among the elected councillors. Deputy mayors, "adjoints", may also be chosen in the same manner although the number is not specified in the Code, Municipalities with "arrondissements" may elect a Vice President for each of these territorial subdivisions.

The duties of the Council President are elaborated in Sections 60-78 of the Local Government Code. Many of these apply to the administration of the Council, but several are substantive, bearing directly on the implementation of development programs. The most important of these are identified below:

- manage revenues, control expenses and oversee the general accountability of the community's finances;
- oversee the proper functioning of municipal services;
- supervise municipal personnel in the discharge of their duties;
- take all necessary steps to protect the rights and benefits arising from municipal land; and
- prepare the municipal budget in consultation with the municipal bureau.

Most of these duties are under the "tutelle" of the Governor or higher authorities.

#### **c. Municipal Bureau**

The municipal bureau is essentially a committee of senior municipal officials who, acting jointly, represent the community's interest, particularly on matters related to services and their financing. The members of the municipal bureau are the President, Vice-President, Deputy Mayors, Secretary General and the heads of various local committees. The bureau meets once a month (according to Article 86) and is authorized to take up any general matters pertaining to local administration. Its actual role is not clearly defined in the statutes, although it could play a useful advisory role if the committees were involved in areas related to development.

#### **d. Secretary General**

The Secretary General is the chief administrative officer of the municipality, responsible for the efficient administration of the "commun", under the delegated authority of the mayor. Many smaller municipalities do not have a Secretary General.

The 1985 amendments to the Local Government Code (Article 67) established the Secretary General as the legal officer for the Council and assigned the following specific authority to the Secretary General:

- direct the municipal personnel and coordinate activities among administrative, financial, economic and social affairs;
- follow up on decisions made by the mayor concerning local roads; and
- see to the creation of proper roles and measures relative to the recovery of duties, taxes and service charges.

**e. Staff**

Municipal staff are classified into four major categories, consisting in 1987 of the following numbers of personnel:

Administrative	1,080
Technical	499
Labor	15,559
Specialists	1,038
<b>TOTAL</b>	<b>18,176</b>

The total expenditure for personnel for all municipalities was more than TD 48 million (\$57.6 million), of which TD 35.5 was for laborers.

The range of personnel costs varies widely among municipalities. The number of staff actually retained by municipalities is frequently less than the number authorized by the Ministry of Interior and seems to reflect the local chief executive's view of the skills required for local service delivery.

For example, a comparison between the authorized administrative and technical categories of personnel and the number actually provided by each of the cities in the sample is provided in Table IV.2

The figures presented in Table IV.2 suggest that while personnel costs may appear to be high as a percentage of current expenditures, in absolute numbers, the staff complements do not approach the number authorized by the national government.

Two aspects of the distribution of personnel should be noted. First, except for Tunis (whose membership in the District of Tunis may account for relatively low administrative costs) and Gabès, the number of administrators in the sample exceeds the number of technicians by a considerable margin. Second, the number of technical staff in Tabarka, Gafsa, Kasserine, Jendouba, and Kairouan suggests the need for assistance from either the Governorate, national agencies, or the private sector. In addition, Kasserine, Jendouba, and Tabarka are only authorized relatively low-level technical staff who may be unable to appreciate the sophisticated policy and programmatic issues involved in a public-private development partnership.

**Table IV.2. Authorized and Actual Staff Levels by City (1986)**

	Administrators		Technical Staff	
	Authorized	Provided	Authorized	Provided
1. Tunis	407	30	275	107
2. Bizerte	52	36	16	11
3. Jendouba	19	11	5	4
4. Tabarka	10	3	3	1
5. Sfax	126	120	66	62
6. Sousse	75	49	39	29
7. Kairouan	30	20	7	5
8. Kasserine	12	6	7	3
9. Gabès	48	15	20	15
10. Gafsa	7	6	2	1

**Source: Ministry of Interior (1986)**

## 2. Systems for Planning and Finance

Municipalities administer several systems which are directly related to economic development. The two which are most important to local participation in efforts to support the national policy are planning and budgeting.

### a. Planning

This section distinguishes between development planning and investment planning activities at the local level. The former controls development by setting out the basic spatial policies for urban land. The 1979 Code on Urbanism provided the rationale for development planning, although the Local Government Code itself requires all municipalities to prepare a "plan d'aménagement". The primary text for municipal planning is the overall Master Plan for the entire municipality. The Master Plan ("Plan Directeur d'Urbanisme") encompasses both land use and general development issues.

Within this framework, municipalities prepare a PAU ("plan d'aménagement urbain") which estimates the population change and economic growth of the municipality, the public facilities needed to accommodate this evolution and the means of financing them. The PAU includes maps for local zoning and land use controls and spells out the regulatory framework for plan administration. The PAU is the basis for granting private building permits as well as for the layout of public ways, waterworks, and other investments.

For any designated area in the community a more detailed plan may be prepared. These plans are for specific zones with a defined boundary. A PAD ("plan d'aménagement de détail") is a short-term, location-specific document which is a part of the community-wide PAU.

Although the PAU is an essential management tool, many municipalities have failed to update these plans as a means of guiding growth. Statistics from the 1987 survey conducted by the Ministry of Interior indicates that only 57 municipalities have a current plan.

Since 1977, a medium-term (i.e., five years) Municipal Development Plan has been required by the Ministry of Interior. The objective for this plan was to identify local investment needs and to link local plans to the national five-year development plan. Neither the process of investment planning nor the plan documents themselves have achieved their purpose. The plan is essentially a list of those projects which cannot be funded from local sources. Cost estimates are based on past experience with no provision for price escalation due to inflation or other factors. The PDM ("plan de développement municipal") has a great deal of potential, however, and could become the framework for discussions with the private sector concerning investments needed to establish a platform for export-oriented businesses.

#### **b. Budgeting**

Municipal budgeting is an annual exercise in Tunisia. There are no multi-year capital budgets which identify local capital requirements and identify the means of financing them. Each section and article of the budget must be individually justified by the Mayor and approved by the Municipal Council. All municipal budgets are subject to the "tutelle" of some higher authority, either the Governor--for all budgets less than TD 4 million--or the Ministries of Interior and Finance for those over that level.

The budget preparation process starts in May of the current budget year, and concludes in October with the approval of the Governor or by January 1 for national agency reviews. Budgets not approved by January 1 are carried forward on a continuing resolution basis, using the prior year's receipts and disbursements as the guideline.

In most of the larger, better-managed municipalities, budget preparation is a consultative process involving the President of the Council, Secretary General, Municipal Bureau (including the "adjoints", if appropriate), the Commission on Finances (if one has been named) and key staff. Responding to national guidelines sent from the Ministry of Finance and/or the Ministry of Interior, the local officials actually plan the budget. In other municipalities the budget is not regarded as a management tool and, accordingly, the process may be less strategic.

## E. CHAPTER IV SUMMARY

Local governments in Tunisia operate within a very broad and complex institutional framework. In addition to general supervision by the Ministry of Interior, they are subject to more direct supervision by one or more national agency under the concept of "tutelle". This extensive control over local government plans, finances, infrastructure and investments appears to have retarded rather than facilitated local service delivery by making it extremely difficult and time consuming to initiate and implement development projects.

GOT steps towards decentralization and the development of an institutional framework that would give more responsibility to local authorities only began in earnest in 1989. In February 1989, Regional Councils were created with the express purpose of improving coordination between national and local development plans, and between rural and urban investments. At present, these Regional Councils have not been attributed any staff or financing. Because they have considerable planning and oversight authority, and because they can include representatives from both the public and private sectors however, these Councils have the potential to act as linchpins for planning and implementing both national and local investments.

Most local services are provided by national agencies. This leaves very few functions for municipalities to carry out themselves. The resulting erosion of municipal responsibility for service delivery has reduced the capacity of cities to plan and implement local development programs and has weakened their ability to recruit quality staff. The lack of qualified technical staff at both the governorate and municipal levels is seen as a serious constraint to development planning and implementation. Because services are provided by others, local government authorities also cannot make assurances to private sector entrepreneurs or investors that public utilities and services will be available at a specific time, place, and cost.

In March 1989, Governors, who have legal responsibility for the implementing national development policy at the regional level, were granted more specific authority over municipalities which could help clarify roles in the administration of local affairs. As it is, the division of responsibility within governorates, being made on a spatial basis, there is considerable overlap both functionally and spatially between officials and agencies at different levels. Better coordination is imperative.

Current planning procedures at the municipal level are imbedded in the master plan approach which does not lend itself easily to the needs of a more dynamic planning of investments. Since 1977 however, a medium term (i.e. five years) Municipal Development Plan has been required by the Ministry of Interior which should help identify local investment needs and link local plans to the national five year develop Plan. Although neither the process of investment planning nor the plan documents themselves thus far have achieved their purpose, such an approach could provide the framework for discussions with the private sector concerning investments needed to establish a platform for export-oriented businesses.

Municipal budgeting in Tunisia is an annual exercise which involves virtually nine months of the year. There are no multi-year capital budgets which identify local capital requirements or the means of financing them. Each section and article on the budget must be individually justified by the Mayor and approved by the Municipal Council. All municipal budgets are subject to a tutelle of some higher authority.

## CHAPTER V

### MUNICIPAL FINANCE

Municipal finance is governed by national laws and regulations and administered under strict supervision ("tutelle") of the Ministry of Interior and/or the Ministry of Finance. As a general principle, the financial affairs of Municipalities in the First and Second Categories are directly supervised by these two national agencies. Municipalities in the Third and Fourth categories, on the other hand, are supervised by the concerned Governor, who has been delegated responsibility for supervision of municipal finance, including approval of their annual budget and investment program.

Municipal financial records are organized into a standard accounting structure as follows:

	Title I	Title II
Revenues	Current Revenues	Development Revenues
Expenditures	Current Operating Expenses	Investments

This classification system is the basis for the organization of the annual municipal budget, local accounting records and annual financial reports. This classification is also the foundation for these principles of local government finance in Tunisia:

- Budgets must be balanced overall and within each Title.
- Any excess of Current Revenues in the Title I budget, after Current Operating Expenses have been provided for, is contributed to Title II Development Revenue and used to finance the investment program.
- Unexpended Title II Revenues are classified as Reserves and may be carried forward within Title II to the next fiscal year. Reserve funds may accumulate up to a maximum level of the average of the prior two years of capital investment.

The fiscal year of municipalities is January 1 - December 31. Budgets are prepared for this period and financial reports are submitted to the Ministry of Finance on this basis. The fiscal year also leads to another key principle of municipal finance, as follows:

- Budget authority must be renewed each year for each item in the budget. Only contract obligations are carried forward from year to year.

This principle links the municipal budget to the cash-basis accounting system, which also operates on an annual cycle. The principle of the annual budget may be an effective control but it may also limit plans and programs to short-term objectives.

Budgets must include all revenues and expenses. This principle of universality is often termed "gross" budgeting or comprehensive budgeting among local governments in the

United States. Unexpected or emergency costs may be covered as a miscellaneous expense. This suggests that:

- Approved budgets constitute a fixed program of resources and expenses which can only be changed significantly by following the same procedure which was required for its initial approval.

These principles of municipal finance seem to have a major effect on the way that national and local officials approach development. Municipal finance is closely supervised and controlled. Every expenditure must be carefully justified and monitored. As an apparent consequence, many municipalities are often unable to spend even the limited funds which they have available for development purposes.

This overview of the structure and principles of municipal finance in Tunisia provides a framework for the following sections of this chapter:

- A. Revenues
- B. Expenditures
- C. Reserves
- D. Possible Capital Investment Options

These three major aspects of local capacity to undertake a private sector export promotion program are described below:

## **A. REVENUES**

Tunisian local governments derive the majority of their revenues from these five sources:

- 1. Local Taxes**
  - a) property tax (taxe locative)
  - b) business tax (taxe sur les établissements)
  - c) hotel tax (taxe hôtelière)
  - d) tax on undeveloped land (contribution foncière sur les propriétés non bâties)
- 2. Fees & Service Charges**
  - a) slaughterhouse, markets (taxe d'abattage; taxe sur les marchés)
  - b) land transactions, building & rental (vente des immeubles; location des immeubles)
  - c) fee for services rendered (redevances)
  - d) miscellaneous
- 3. National Aid - General**
  - a) Formula Share [Fonds Communs des Collectivités Locales (Local Govt. Fund contribution)]

b) Reserve Fund<sup>3</sup> [Fonds Communs des Collectivités Locales - Réserve (FCCL)]

**4. National Aid - Project Specific (crédits délégués)**

- a) Ministry of Youth & Sports
- b) Ministry of Public Works
- c) Ministry of Cultural Affairs

**5. Loans & Grants**

- a) Caisse des Prêts et de Soutien aux Collectivités Locales (CPSCL - Local Government Support and Loan Fund)
- b) Specific grants (subventions d'équipement)

These revenues are classified into current revenues or development revenues. Current revenues include taxes, service charges and national aid (FCCL). Development revenues include loans (emprunts), grants (subventions) and delegated funds (crédits délégués) from national Ministries. National aid to the capital city of each Governorate is a special revenue category restricted to development expenditures.

PADCO analyzed the revenue sources for all local governments and then, specifically, the performance of the UIS sample in three major categories:

- Local Taxes, Fees & Charges
- National Aid (Fonds Communs des Collectivités Locales)
- Development Loans (Caisse des Prêts et de Soutien aux Collectivités Locales)

Statistics for 1987 and 1988 were collected at both the Ministry of Interior and the Ministry of Finance; data for 1986 is derived from local government responses to a special survey administered by the Ministry of Interior.

**1. Local Taxes, Fees & Charges**

For fiscal year 1987, aggregate municipal Current Receipts from taxes, fees, charges and other sources amounted to 55.5 million Tunisian dinars (\$66.5 million)<sup>4</sup>, approximately 56 percent of the total Title I receipts of approximately 100 million dinars.

One tax source has clearly failed to produce the anticipated level of revenue: the vacant land tax ("contribution foncière sur les propriétés non bâties"). Poor assessment practices are suggested as one of the causes for poor yields (TD 369,856), and the tax basis itself--10 percent of forgone revenue--assures a relatively low level of collection.

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<sup>3</sup>Only for capital cities of Governorates: see Section 2, following.

<sup>4</sup>Currency conversion rates are based on IMF end-of-year financial protocols.

The principal sources of local receipts are listed below:

Rank	Source	Amount	% of Total
1.	Market Levies	15,887,600	29
2.	Property Tax	12,725,556	23
3.	Business Tax	9,286,981	17
4.	Rentals	4,565,755	8
5.	Hotel Tax	2,674,083	5
6.	Property Sales	2,251,905	4
7.	Road Levies	1,141,005	2
8.	Electricity Surcharge	1,068,723	2
9.	Agent Fees	1,067,364	2
10.	Slaughterhouse Fees	1,021,646	2
<b>TOTAL</b>		<b>51,690,618</b>	<b>94</b>
<b>Source: Ministry of Finance</b>			

#### **a. Property Tax**

Property tax (on rental value) collection performance for the ten UIS cities was analyzed by PADCO. Our objective was to determine how much of the actual property tax levy had been collected. Municipal budgets include an estimate of the property tax which local officials consider collectible. This is usually much less than the actual tax levy. Because actual collections frequently exceed the budget estimate, many municipalities achieve tax collection performance levels greater than 100 percent.

In 1987, for the fiscal year ended December 31, 1986, municipalities reported the actual tax levy to the Ministry of Interior. PADCO used this data to calculate property tax collection performance, reflected in Table V.2.

#### **b. Business Tax**

The business tax is assessed on gross receipts/turnover ("chiffre d'affaires") from establishments (including individuals) with an industrial, professional or commercial character. The maximum tax rate was set at 2 percent with a further restriction that the

**Table V.2.**  
**Property Tax Collection Performance by City, 1986**

<b>Local Government</b>	<b>Property Tax Levy</b>	<b>Collections</b>	<b>% Collected</b>
1. Tunis	6,200,346	3,567,324	57.5
2. Sfax	1,112,557	767,248	68.9
3. Sousse	743,997	386,647	51.9
4. Kairouan	151,043	955,647	63.3
5. Bizerte	509,739	159,721	31.3
6. Gabès	286,000	220,000	77.0
7. Kasserine	209,950	26,044	12.4
8. Gafsa	33,781	22,304	66.0
9. Jendouba	55,938	11,617	20.7
10. Tabarka	33,432	20,133	60.2

**Source:** Ministry of Interior

maximum tax could be fixed by decree. A ceiling of 20,000 dinars has existed since 1975. In addition, the tax may be waived in its entirety by special legislative act, to promote investment.

Based on municipal financial statistics collected from the annual financial reports to the Ministry of Finance by UIS cities, a performance rating was prepared (see Table V.3).

Since the amount due is an estimate of the collectible, it is possible for actual collections to exceed 100 percent (e.g., Kasserine, Gafsa). Consequently PADCO analyzed the business tax collections per capita as a proxy measure of economic activity. On that basis, for example, Kasserine rates very low.

Data assembled by the Ministry of Interior to support the World Bank's Municipal Development Project indicates a decline in aggregate local government (municipalities and Governorates) business tax collections between 1987 and 1988. In this same period many other sources of current receipts increased substantially, most notably the electricity surcharge, hotel tax, market levy and property tax.

**Table V.3.  
Business Tax Collection Performance By City, 1988**

Local Govt.	Population	Due	Collected	% Collected	Revenue/ Capita (in dinars)
1. Tunis	596,654	4,000,000	3,590,239	90	6.02
2. Bizerte	88,842	210,000	202,185	96	2.28
3. Jendouba	33,000	50,000	30,975	61	.94
4. Tabarka	9,810	11,500	11,225	97	4.30
5. Sfax	231,911	1,070,000	843,021	78	3.64
6. Sousse	120,000	300,000	246,297	82	2.23
7. Kairouan	110,000	135,000	108,314	30	.98
8. Kasserine	60,000	20,000	40,148	201	.67
9. Gabès	86,500	170,000	97,285	57	1.12
10. Gafsa	57,100	57,000	62,320	109	1.09

Source: Ministry of Finance

The decline in business tax receipts at the municipal level is consistent with the dramatic decline in business tax collections at the national level, where the amounts recovered were 20 percent below 1987 collection levels.

### c. Hotel Tax

This is a potentially rich revenue resource which may not have been fully exploited by those municipalities which are major tourist centers. Enacted in 1975 the hotel tax ("taxe hôtelière") is assessed on the gross receipts from operations. The tax may be passed through to the hotel guests.

Establishments that pay a hotel tax are exempt from business taxes. In addition, the hotel tax replaced the tax on maintenance which had been previously assessed ("taxe unique d'entretien et d'assainissement général"). PADCO reviewed the annual reports of the UIS cities to determine collections of hotel tax receipts. The data from 1987 and 1988 is provided in Table V.4.

In addition to the sample, cities with relatively high hotel tax collections in 1988 include Hammamet (TD 737,239), Monastir (TD 483,219), Djerba Midoun in Médenine Governorate (TD 404,330), and Nabeul (TD 121,617).

**Table V.4.  
Hotel Tax Collection Performance by City, 1987-88**

Municipality	1987		1988	
	Collections	Rank	Collections	Rank
Tunis	240,254	2	360,372	2
Sfax	30,061	4	38,302	4
Sousse	396,476	1	514,981	1
Kairouan	2,251	7	15,616	6
Bizerte	35,585	3	44,164	3
Gabès	15,262	5	18,552	5
Kasserine	--	10	553	10
Gafsa	1,481	9	1,313	9
Jendouba	1,745	8	1,776	8
Tabarka	11,528	6	9,495	7

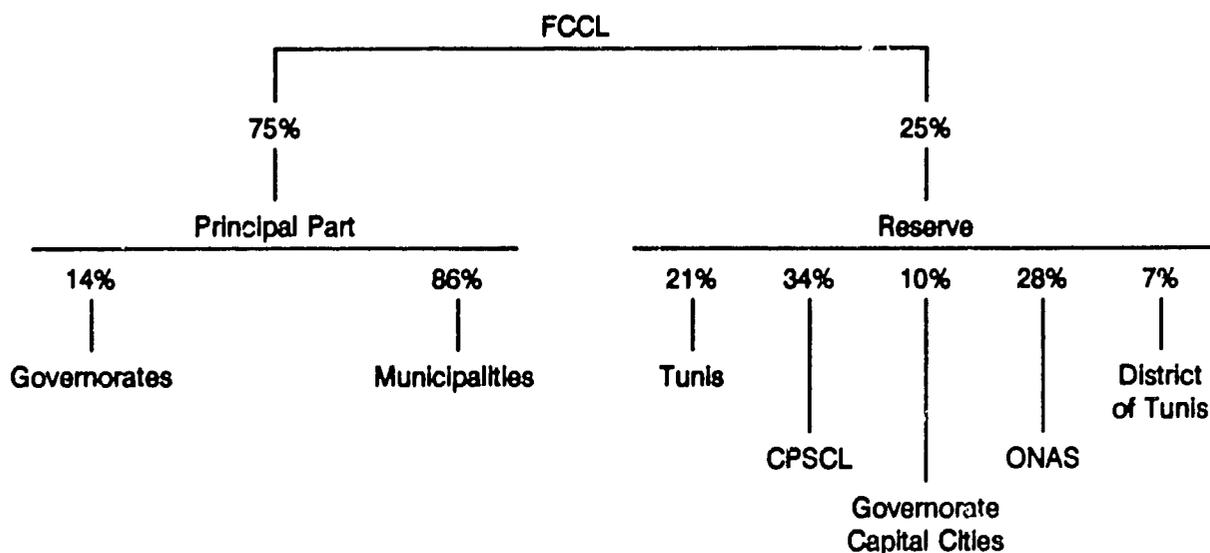
Source: Ministry of Finance

## 2. National Aid - Fonds Communs des Collectivités Locales (FCCL - Local Government Common Fund)

The FCCL, established in 1975, is the source of general national aid to local governments. It is not the only source of national aid, however. Function-specific grants are also provided by line Ministries for capital expenditures in education, sports facilities and other infrastructure. The combination of general and special assistance ("crédits délégués") constitutes the total local government budgetary support from the national government.

The FCCL represents approximately 80 percent of budgetary support to local government. In 1989 FCCL was approximately 79 million dinars (\$94.8 million). The FCCL is divided into two components, each of which is then apportioned to designated recipients according to a specified distribution formula. The following chart indicates the apportionment of FCCL funds:

**Figure V.1.  
Distribution of FCCL Funds**



Each of these major divisions is discussed below.

**a. FCCL Principal Part**

Seventy-five percent of the total fund is earmarked for local government. Governorates receive 14 percent of the earmarked funds; municipalities receive 86 percent.

Each Governorate receives a share of the earmarked funds based on a distribution formula consisting of two factors:

- Lump sum allocation - 15 percent
- Population - 85 percent

The Governorate portion of the FCCL Principal Part (TD 7.4 million) was distributed to twenty-two Governorates (i.e., all Governorates except Tunis). The per capita distribution averaged approximately 2.7 dinars. Non-urban Governorates receive more funds than urban Governorates.

Each Municipality receives a share of its earmarked funds according to a three factor formula, based on:

- Lump sum allocation - 10 percent
- Population - 45 percent
- Tax collections - 45 percent

These funds are used to pay current expenses of local government. The 1989 FCCL distribution to municipalities amounted to 45.5 million dinars (\$53 million). The smallest municipalities receive more funding, on a per capita basis, than the medium-size municipalities and an amount equal to that of the larger cities. On average, the municipal portion of the Principal Part of the FCCL amounted to 10 dinars per capita in 1989. The per capita distribution has remained static since 1986.

#### **b. FCCL Reserve**

The twenty-five percent of the FCCL (TD 19.6 million/\$22.7 million) which is not earmarked for local government distribution is subdivided among five beneficiaries. Funds in the reserve are only used for capital expenditures. The reserve is distributed as follows:

- 34 percent - CPSCL - to finance loans to local governments
- 28 percent - ONAS - to finance sewerage investments
- 21 percent - Tunis - to finance municipal capital investments
- 10 percent - Capital Cities - to finance general capital investments
- 7 percent - District of Tunis - to finance regional capital investments

The separate allocation for Tunis, District of Tunis, and capital cities of Governorates allows the reconstruction and repair of infrastructure in places disproportionately affected by the administration of the State's civil affairs.

#### **c. Assessment**

Although the FCCL represents less than 5 percent of the total national budget, it accounts for nearly 45 percent of the ordinary receipts of municipalities. FCCL resources are the lifeblood of municipal operations.

The World Bank's proposed Municipal Development Project is expected to assist local governments to mobilize more local resources and, thereby help them to assume a greater share of the costs of municipal administration and service delivery. This will allow the national government to either reduce FCCL levels or modify its distribution formula. Governorates with a very weak tax base may not be able to mobilize enough new tax resources to compensate for any declines in the FCCL.

#### **d. FCCL and the UIS City Sample**

Because FCCL resources represent such a significant portion of the current receipts of local governments, PADCO collected and analyzed financial data submitted by the UIS cities to the Ministry of Finance for the 1987 and 1988 fiscal years. Our objective was to determine the percentage of FCCL resources in relation to total local government receipts. The "ratio of dependency" helps to identify places which would be most affected by any reduction in FCCL funding. Local governments with high dependency ratios would need to improve collections, increase taxes, raise fees or, perhaps, cut back on investment if FCCL resources decline.

The results of the data analysis are shown below in Table V.5. The 1988 ratios of dependency range from 57 percent (Kasserine) to 24 percent (Sousse). Sousse's very low ratio appears to be the result of a significant increase in own-source revenues. More than 1 million dinars additional local revenue was generated in Sousse between 1987 and 1988. Tunis also had increased collections in excess of 1.5 million dinars over the same period. Three cities--Jendouba, Kasserine and Gafsa--had declining local receipts. Their ratios of dependency on national aid, FCCL, thus increased.

Local Government	1987			1988		
	Receipts	FCCL	Ratio	Receipts	FCCL	Ratio
1. Tunis	22,678,664	10,886,299	48%	24,563,369	11,246,636	46%
2. Bizerte	1,523,059	656,005	43%	1,740,461	684,461	39%
3. Jendouba	680,782	104,633	15%	758,625	216,898	29%
4. Tabarka	219,564	101,487	46%	288,513	124,618	43%
5. Sfax	7,321,422	2,489,736	34%	7,702,603	2,471,439	32%
6. Sousse	3,940,112	1,131,635	29%	5,036,510	1,188,490	24%
7. Kairouan	1,540,281	501,185	33%	1,683,553	557,909	34%
8. Kasserine	609,513	296,099	49%	620,809	355,783	57%
9. Gabès	2,015,913	832,160	41%	2,098,205	862,750	41%
10. Gafsa	744,180	304,373	41%	706,246	318,592	45%

Source: Ministry of Finance, Annual Municipal Reports

### **3. Development Loans - Caisse des Prêts et de Soutien aux Collectivités Locales (Local Government Support and Loan Fund - CPSCCL)**

The CPSCCL is a specialized investment financing facility created in 1975 for the following types of local government projects:

- **Infrastructure** (social, economic or administrative) - 20-year loans @ 2 percent interest
- **Income-generating projects** - 10-year loans @ 4 percent interest
- **Equipment purchase** - 5-year loans @ 4 percent interest

In addition, outright grants are made available to depressed local governments and/or for emergency and high priority investments. The determination of project eligibility and

the circumstances for allocating grants are made jointly by the Ministries of Interior and Finance. Two of the authorized uses of CPSCl grants have been:

- payment of the local cost of approved investment projects included in the national economic development plan; and
- interest subsidies for local government loans obtained from lending institutions other than the CPSCl.

The philosophy and approach of the CPSCl has not encouraged local governments to improve the collection of local taxes or to adopt effective cost recovery strategies for local services.

#### a. Eligibility

To qualify for a CPSCl loan a local government is expected to demonstrate:

- project feasibility (economic and social)
- debt carrying capacity
- repayment of previous loans
- self-financing equal to ten percent of total cost
- clear title to the site proposed for development

One of the critical weaknesses of the CPSCl is its inability to properly appraise a project's feasibility or to offer technical guidance on cost-effective implementation. Consequently, some CPSCl-approved projects have failed to meet their economic objectives, but no follow-up mechanism exists to provide corrective advice.

#### b. Purpose of CPSCl Loans

There have been 949 CPSCl loans to local governments, valued at TD 49.9 million (\$60 million). The purposes of these loans are listed below in Table V.6.

Many of the projects financed by the CPSCl may have contributed to local economic development, but it would be very difficult to identify any specific quantitative benefits from them, such as number of jobs generated or increased revenues produced.

Both the number and aggregate amount of CPSCl lending has declined considerably over the past five years. Table V.6 reflects this trend:

Year	1984	1985	1986	1987	1988
No. of Loans	88	29	16	19	9
Total Value	7,709,000	2,611,000	1,296,000	634,100	250,000

*Source: Municipal Development Project Report, Volume 2*

Purpose	Number	Amount
1. Roads	283	23,125,473
2. Street Lighting	94	2,841,160
3. Sports Facilities	33	2,618,700
4. Cultural Facilities	2	56,000
5. Economic Facilities	207	10,209,474
6. Sewerage	21	1,127,500
7. Equipment Purchase	265	8,317,485
8. Drinking Water	17	580,500
9. Administration Buildings	17	641,800
10. Others	10	332,081
<b>TOTAL</b>	<b>949</b>	<b>49,850,173</b>
<i>Source: Municipal Development Project Report, Volume 2</i>		

It has been recommended that the CPSCS be replaced by a Municipal Development Bank (MDB) which would finance local revenue-earning projects evaluated and approved on economic principles and financed at real interest rates. Specialized banks for local government lending have been or are in process of being established by many developing countries (e.g. Sri Lanka, Jordan, Kenya, Nepal, Indonesia).

The MDB would establish project eligibility criteria; determine acceptable loan provisions; and institute project appraisal, monitoring and follow-up procedures. Cost recovery standards would be developed so that project beneficiaries (including, for example, export-oriented industries) pay their fair share of the costs.

### **c. CPSCS Loan Repayment Obligations of UIS City Sample**

Many of the cities in the UIS sample have availed themselves of loan resources from CPSCS and, previously, from the Municipal Development Fund. The following table indicates the total outstanding debt of the ten cities, according to financial data collected from the Economic Development Bank of Tunisia (BDET).

**Table V.8**  
**Outstanding Debt to the National Government:**  
**Selected Cities (as of December 31, 1988)**

Local Government	CPSCCL Debt Limit*	Due to CPSCCL TD (000)	Due to MDF** TD (000)	Years to Retire Debt
Tunis	10.0%	2,986	1,456	1.5
Sfax	15.2%	5,380	--	7.1
Sousse	13.0%	2,310	828	8.1
Kairouan	14.1%	1,326	1,003	24.5
Bizerte	8.0%	1,145	--	7.1
Gabès	10.3%	1,556	596	9.8
Kasserine	14.7%	333	786	43.0
Gafsa	14.7%	833	360	54.2
Jendouba	17.4%	397	569	87.8
Tabarka	8.5%	233	--	11.7

\* Differs from local government code provision of 15 percent of current receipts.  
\*\*Municipal Development Fund  
Source: Economic Development Bank of Tunisia (BDET)

PADCO analyzed the effect of municipal debt on a city's ability to qualify for additional long-term loan financing to support private sector initiatives. A crude ratio was adopted to calculate the debt burden of these cities. PADCO used total debt compared to annual property tax collections. The objective was to highlight the fact that debt is an obligatory expense for municipalities which must be paid before other expenditures are made.

The result of this calculation is reflected above. It indicates the five cities with the greatest flexibility to incur new debt are Tunis, Sfax, Bizerte, Sousse and Gabès. The highest relative debt burden exists in Jendouba.

## **B. EXPENDITURES**

Expenditures are classified under two major headings: Title I covers the current operating expenses; Title II includes capital expenditures associated with the municipality's investment program. The treatment of each of these expenses, for budgeting and accounting purposes, is described below.

## 1. Current Operating Expenses

Expenditures under this category are governed by both the Public Accounting Code and the Local Government Budget Law. All expenditure estimates and actual expense payments are strictly regulated. For budgetary purposes, there are two types of current operating expenses: 1) obligatory expenses, which municipalities are required to include in the budget; and 2) optional expenses that may be incurred if funds permit.

Obligatory expenses include the following:

- debt service on outstanding loans
- compensation of personnel and other remuneration
- rents, taxes and expenses for water, lights & telephones
- maintenance of a meeting place for the government
- maintenance and repair of municipal buildings
- maintenance, alignment and rehabilitation of roads, watercourses, canals, reservoirs, excavation canals, drainage or stormwater facilities
- expenses necessary to carry out civil acts and provide documents, under the law
- other activities required by law

These expenses constitute the bulk of costs for municipal administration. In 1987, Title I expenses (not including the contribution to Title II) amounted to approximately TD 80.7 million (\$96.8 million), with the major portions spent in the following "divisions" of municipal expenditures:

	<u>Dinars</u>
Division 2 - Debt Retirement	1,893,373
Division 3 - Salaries & Wages	44,187,366
Division 4 - Administrative Supplies	24,763,298
Division 7 - Social & Cultural Expenses	9,089,348

Source: Ministry of Finance, 1987 Annual Report

Based on actual expenditures, municipal personnel expenses represent approximately 55 percent of current expenditures for local administration. However, expenses for laborers accounted for TD 33.5 million, 76 percent of the total personnel costs. Since many municipalities undertake development projects by force account, the development budget receives a non-cash contribution over and above the cash contribution of Title I to Title II. In addition, a Current Account (current revenues less current expenses) surplus of more than TD 7 million was generated in 1987. The surplus was added to the growing Reserve of municipal funds, discussed in a succeeding section.

## 2. Capital Expenditures

In 1987, capital expenditures for all municipalities totaled TD 41 million (\$49.2 million), of which TD 34.3 million was for direct investment. The difference is due to debt amortization (TD 4.3 million) and expenditure of delegated funds (TD 1.9 million). The

1987 level of direct investment was approximately 8 percent higher than the previous year's capital investment total.

Direct investments in 1987 represent approximately 30 percent of the total fund outlay of municipalities, as shown in Table V.9. However, capital expenditures are much higher, as a percentage of total municipal costs, for smaller municipalities.

<b>Category</b>	<b>Outlays</b>	<b>Direct Investment</b>	<b>Percent Direct</b>
1	33,422,662	5,223,355	16
2	52,072,685	16,657,117	32
3	24,630,213	9,694,850	40
4	4,841,226	2,740,372	57
<b>TOTAL</b>	<b>114,966,786</b>	<b>34,315,694</b>	<b>29.8</b>

Source: Ministry of Finance

The total of direct investments included the following major categories: municipal building (35 percent), roads (26 percent), street lighting (7 percent), and facility/vehicle purchase (12 percent).

PADCO analyzed the 1987 direct investment expenses for the UIS sample. Table V.10, following, reflects the total direct investment and the three highest categories of expense.

Direct investments by the sample was consistent with the national distribution. For comparison, we analyzed 1988 investments to identify any major deviations. Investment levels for Tunis, Sfax, Sousse and Bizerte were significantly higher in 1988, but no major change occurred in the overall ranking of priority investments.

### **C. RESERVES**

Municipal funds which are unexpended at the end of a fiscal year are transferred to an open account ("compte ouvert") and used as a Reserve Fund for the development of municipal facilities and/or to cover future deficits. Municipal reserves have grown steadily. At the end of 1986 the available Reserve amounted to TD 26.2 million (\$31.4 million). The following overview (Table V.11) indicates how 1987 financial activity affected this total.

<b>Table V.10</b> <b>Direct Investment by City, 1987</b>				
<b>Municipality</b>	<b>Investment (000)</b>	<b>First Object</b>	<b>Second Object</b>	<b>Third Object</b>
Tunis	4,031	Roads	Lighting	Buildings
Sfax	1,192	Buildings	Roads	Vehicles
Sousse	818	Buildings	Roads	Lighting
Kairouan	702	Buildings	Roads	Housing
Gafsa	503	Buildings	Vehicles	Lighting
Bizerte	83	Roads	Buildings	Equipment
Gabès	1,159	Buildings	Lighting	Vehicles
Kasserine	254	Vehicles	Roads	Lighting
Jendouba	336	Roads	Lighting	Health
Tabarka	50	Roads	Vehicles	Lighting
<b>Source: Ministry of Finance</b>				

<b>Table V.11</b> <b>Municipal Financial Operations, 1987</b>		
	<b>Title I</b>	<b>Title II</b>
<b>Revenues</b>	<u>Current Revenues</u> 100,305,550 of which FCCL: 44,779,250	<u>Development Revenues</u> 65,834,897 of which Reserve: 26,221,283
<b>Expenditures</b>	<u>Operating Expenses</u> 92,915,857 of which Contribution: 12,264,765	<u>Investments</u> 40,847,843 of which Direct: 34,315,694
<b>Balance</b>	7,309,785	24,987,054

These figures indicate that actual municipal operating expenses were much lower than budgeted, resulting in a Title I surplus of over TD 7 million. In Title II, investment expenditures absorbed approximately 1.25 million dinars of the available Reserve, but the significant unexpended balance in Title I led to an end-of-year total surplus for all municipi-

palties of more than TD 32 million (\$38.4 million) an increase in the Reserve of more than 28 percent.

The distribution of the Reserve among the four categories of municipalities, as shown below, provides a clear indication of the category of municipality accumulating funds that could be used for capital investment.

<b>Category</b>	<b>Municipalities</b>	<b>Reserve</b>	<b>% of Total</b>	<b>Average</b>
1	2	2,551,050	7.9	1,275,525
2	37	19,362,591	59.8	523,313
3	99	8,199,929	25.3	82,827
4	107	2,263,177	7.0	21,151
<b>TOTAL</b>		<b>32,376,747</b>	<b>100.0</b>	

**Source: Ministry of Interior, 1986**

In 1988, many municipalities moved into higher categories. Consequently, it is not possible to compare 1988 Reserves to 1987 Reserves. Sousse, for example, is now in Category 1, while the number of Category 2 municipalities has increased significantly--from 37 to 59. It can be assumed that the percentage of total Reserves now held by Categories 1 and 2 combined is greater than in 1987, therefore:

PADCO analyzed the Reserve amounts for the UIS sample as of December 31, 1986. Those figures are listed below in Table V.13.

These ten cities have combined reserves of TD 5.42 million. As the ten percent local share of capital investment costs required under CPSCCL, for example, these funds could generate more than TD 50 million in capital investments targeted for urban economic development and private investment.

#### **D. POSSIBLE CAPITAL INVESTMENT OPTIONS**

Local governments in developed countries utilize a number of devices to reduce the long-term private sector cost of capital. For example, credit on concessional terms has been provided to small- and medium-size enterprises by local development corporations capitalized from both public and private sources. Some local governments are authorized to guaranty loans; others provide tax concessions.

<b>Table V.13</b>	
<b>Reserve Funds by City, 1986</b>	
<b>Local Government</b>	<b>Reserve Funds (12/31/86)</b>
Tunis	1,169,000
Sfax	344,000
Sousse	1,652,752
Kairouan	213,525
Gafsa	32,282
Bizerte	370,280
Gabès	868,447
Kasserine	259,913
Jendouba	223,463
Tabarka	290,715
<b>Source: Ministry of Finance</b>	

Some of these tools are not currently available to Tunisian local governments, but an awareness of their existence and potential may facilitate the process of local government development and provide a reference for those policy options which may be needed under a publicly-supported, private sector-led, export-oriented economic development strategy.

The six potential investment options are listed below and then described in the following narrative:

- **Loans** to private entrepreneurs, typically on concessional terms;
- **Development Bonds** issued by the national government on behalf of a local government, which then agrees to service the debt;
- **Loan Guarantees** whereby the local government pledges to assume the debt obligation of a developer/entrepreneur in the event of default;
- **Equity** investment in which the local government is a development partner with private interests;
- **Credit**, usually available on a stand-by basis for specific, established companies, in which the local government finances the short-term borrowing needed for expansion; and
- **Tax Concessions**, usually waivers of property tax payments.

Each of these capital investment mechanisms can be used to promote urban economic development. Cities in developed countries frequently engage in more speculative economic promotion activities. Therefore, they utilize more fully the six options described. In Tunisia, as in many other developing countries, local governments operate within a more conservative intergovernmental legal framework which reserves for the national government the authority to finance private economic development. Policy analysts in developing countries assert that centralization of decision-making disperses the risk of financial loss and the effect of financial gain over a larger economic base. Accordingly, many of the capital investment options are only possible under a public/public partnership arrangement in which a national government shares its authority to raise capital with individual states, provinces or municipalities. In the long term this form of partnership between the national government and local governments might be possible in Tunisia.

### **1. Loans**

Under existing Tunisian statutes, the purposes, amount, and term of loans which local governments may obtain are strictly limited. Cities borrow funds from CPSCL only for public purposes at long-term concessional rates which are, effectively, interest free. Funds are available for twenty years at two per-cent interest for basic infrastructure and for ten years at four per-cent interest for above-ground construction of physical structures which are economically viable (e.g. markets, commercial centers, kindergartens, or recreation sites). No authority exists for local governments to borrow on behalf of private interest; to "on-lend" to private sector companies, or to borrow for ventures which involve risk of financial loss. Tunisian local governments are not unlike their counterparts in other developing countries in terms of these limitations.

Loans to small- and medium-size enterprises are provided by specialized credit facilities created by the national government (e.g., FONAPRA and FOPRODI); larger enterprises have access to Tunisia's numerous development banks and development financing agencies. With respect to the former, local governments participate in the loan application review and approval process; in the case of larger transactions local governments are involved in the consultation process but do not have the same degree of approval authority. In neither case is local government capital involved in these loans to private sector entrepreneurs.

Local governments' statutory debt limits also restrict their borrowing capacity to a maximum of 15 percent of current revenues for the previous fiscal year. If the World Bank's Municipal Development Project succeeds in raising the level of local collections and increasing national aid, municipal debt ceilings could be raised.

### **2. Development Bonds**

Many governments in developed countries sell bonds to finance development activity.

Only the national government in Tunisia would have the legal authority or financial stability to issue bonds. Presently, the absence of a market to buy and sell bonds restricts the use

of this financing mechanism. However, USAID's promotion of functioning capital markets may help the GOT develop a broader and deeper market, including some government-backed bonds, especially industrial revenue bonds (IRB). Revenue bond financing mechanisms to support private development may require the GOT to expand the taxing and revenue-raising authority of local governments to enable them to collect the revenues needed to repay bonded debt.

In the United States, access to government-backed revenue bonds is restricted to the most worthy projects, especially those which serve a clear public purpose. The low interest rate and the tax-free status of the bond proceeds represents a "tax expenditure" to the national government in that it: a) requires the government to make interest payments, on the outstanding capital, and b) reduces the taxes which investors pay on unearned income.

### **3. Loan Guarantees**

One of the major impediments to development appears to be the limited access to credit for Tunisian entrepreneurs and developers. Not only do banks require very steep guarantees (often equal to 100 percent of the amount borrowed), but the short-term nature of most commercial lending seems to make it difficult for many new ventures to attain the critical "break even" point when cash flow can satisfy both debt retirement and business growth objectives. Entrepreneurs report that they exist to service their debt, not to succeed and expand.

Loan guarantees could be considered as a development tool to promote private investment. A loan guarantee fund could be established and capitalized by external resources if it were determined that lack of long-term credit on reasonable terms is the major impediment to increased private investment in cities.

Loan guarantees to private entrepreneurs should be collateralized by assets which the city can actually utilize in the event of business failure. Loan guarantees represent a significant risk and should only be implemented under strict controls and by competent and experienced investment specialists.

### **4. Equity**

Local economic development is often encouraged through a form of public/private partnership in which the local government provides a cash grant or a donated asset (typically land) in exchange for an equity position in a development project. The expected appreciation of the developed real estate is presumed to provide a return on the city's investment higher than other conventional investments. This arrangement has worked quite well for many American cities.

The experience in Tunisia with equity participation by the public sector has not been as satisfactory. The national government owns a percentage of numerous "quasi-public" corporations, many of which are unprofitable. Not only has this created the need for continued national budget subsidies, increasing the national debt burden, but it has also

restricted the planning and financing options available to company management. The GOT's privatization program is aimed at severing many of these unproductive national public/private partnerships. Consequently, promoting local public/private partnerships based on direct public equity may not be seen as an appropriate development strategy.

Local governments do, however, have significant capital reserves which could be used to promote a joint venture arrangement in which the public (city) and private (entrepreneur) interests are very distinct and separate, but coordinated toward a common objective. Tapping this pool of investment capital and making it available for private investment in urban economic development could be a very effective way to promote export-oriented businesses.

## **5. Credit**

One of the mechanisms that local governments often employ to respond to development opportunities is a revolving loan fund, capitalized initially by either bond or appropriation, and sustained by the periodic repayment of private sector borrowers. In many cases the loan takes the form of a line of credit, made available to a respected company to finance growth. The line of credit is typically offered on concessional terms. Either the interest rate will be reduced or the loan term extended to enable the borrower to more effectively manage cash-flow. The line of credit may be active for 24 months and can be drawn against by the qualified borrower on an "as needed" basis.

In Tunisia, the local government budget law and other financial regulations do not seem to permit any multi-year appropriations nor authorize the establishment of a special fund that could operate on a revolving basis. Funding for contractual commitments can be carried forward from year to year until liquidated, but any other project budget must be re-authorized each year.

Regional Councils might be authorized to establish and maintain special accounts to finance line of credit arrangements. Since Regional Councils are new organizations, it may be possible to extend to them unique financial authority to manage a revolving loan fund.

## **6. Tax Concessions**

The National Investment Code does provide substantial concessions to private entrepreneurs, covering:

- tariffs
- export duties
- property taxes
- repatriation of profits

This type of tax concession encourages exports, but also may limit the property tax growth which municipalities rely upon to finance public services.

Tax concessions may send the wrong message to current residents and businesses. Existing operations not provided with any tax advantage may consider it unfair to offer tax breaks to other industries. Since tax collections are already very low this strategy may not be too useful. Once the Municipal Development Project has assisted local governments to: a) prepare an up-to-date cadastre, b) improve land registration procedures, and c) strengthen municipal tax collection procedures, then the overall system of taxation could be reviewed and appropriate concessions identified.

## E. CHAPTER V SUMMARY

Municipal finance is governed by national laws and regulations and administered under strict supervision ("tutelle") of the Ministry of Interior and the Ministry of Finance. Smaller municipalities are supervised by the Governor.

Municipal financial records are organized into a standard accounting structure that includes current revenues and current operating expenses (under Title I), and development revenues and investments (under Title II). Annual budgets constitute a fixed program of resources and expenses which can only be changed significantly by following the same procedure required for initial approval. Key principles involved in the budgeting process are that:

- budgets must be balanced overall and within each Title.
- budget authority must be renewed each year for each item in the budget.

This effectively links municipal budgets to a cash-basis accounting system operating on an annual cycle. While this approach may be an effective means of control, in effect, it prevents many municipalities from spending even the limited amount of development funds that they have.

Local governments in Tunisia obtain the majority of their revenues from five basic sources. Current revenues are obtained from:

- local taxes that include property tax, business tax, hotel tax and tax on undeveloped land; and
- fees and service charges for slaughterhouse and markets, land transactions, building, rentals, services rendered, and miscellaneous.

Development revenues are obtained from:

- national aid that includes formula share and reserve funds
- project specific national aid from the Ministry of Youth and Sports, Ministry of Public Works, Ministry of Cultural Affairs; and
- loans and grants from CPSC, and other specific grants.

Expenditures are classified under current operating expenses and capital expenditures associated with a municipality's investment program. Operating expenses make up the bulk of costs for municipal administration. Labor costs account for more than half the current expenditures. Buildings and roads comprise the majority of direct capital investments.

Municipal funds that are unexpended at the end of a fiscal year are transferred to an open account and used as a Reserve Fund for the development of municipal facilities and/or to cover future deficits. These reserves have grown steadily and potentially could be used, for example, as the ten percent local share of capital investment costs required under CPSC. For the UIS sample alone, this could generate over TD 50 million in capital investments targeted for urban economic development and private investment.

Six potential investment options that have been used successfully in the United States could be modified for application in Tunisia, and merit further investigation. They include: loans to private entrepreneurs, development bonds issued by the national government on behalf of the local government, loan guarantees whereby the local government pledges to assume the debt obligation of the developer/entrepreneur in case of default, equity investment in which the local government is a development partner with private interests, credit available on a stand-by basis for specific, established companies, and tax concessions.

## CHAPTER VI

### URBAN IMPLICATIONS OF AN EXPORT PROMOTION STRATEGY AND RECOMMENDED PROGRAM GUIDELINES

#### A. SUMMARY IMPLICATIONS OF AN URBAN EXPORT PROMOTION STRATEGY

This section draws from the previous chapters to broadly define the key implications of a private sector-oriented export promotion program in urban areas. For simplicity, the implications have been treated by subject matter.

##### 1. National Spatial Plan and Related Policies

The 1984 National Spatial Plan for Regional Development was developed in response to what the government felt was a growing population and employment disequilibrium between the East Coast "Littoral" and West and South. It has long been Tunisia's policy to promote industrial, economic, and social development programs in the interior of the country. While such policies are desirable, and have resulted in improved access to services and facilities in the interior, they have met with mixed economic success and have had little effect on population distribution trends.

The current economic context argues for investment efficiency in response to economic opportunity. It must be accepted that export-oriented enterprises will have a natural attraction to the key coastal cities because of locational and other advantages they afford. In fact, of the export-oriented projects approved by API between 1984-1988, only 2 percent were in interior locations.

##### 2. Population Growth

As rural areas have reached their carrying capacity and provide limited job opportunities, greater numbers of Tunisians are migrating towards the cities. As a result, cities throughout Tunisia are growing rapidly. By the year 2000, 60 percent of the national population may live in urban places.

The greatest absolute increases in urban population and concentration are occurring along the East coast. In January 1989, 86 percent of the population of Tunisia's 34 largest cities resided in Eastern coastal settlements and 46 percent resided in the District of Tunis alone. The study team expects this trend to continue and to be reinforced by the growing export orientation of the economy. This will have implications for future urban policy concerned with employment generation, urban management, and service provision in the affected cities. It also suggests that means must be found to support genuine economic opportunities that present themselves in the interior cities.

##### 3. Employment

The Tunisian economy is having difficulty meeting employment requirements. Employment in rural areas has actually declined and shows little scope for improvement while migrants increasingly seek out employment opportunities in urban places. While

data is not available at the city level in Tunisia, it is clear that urban places have demonstrated a strong capacity over the past 25 years to generate jobs. Nevertheless, there is an increasing gap between the demand and supply of national jobs, accompanied by increasing unemployment; a problem that is a critical and growing concern particularly among the young.

Each year, approximately 75,000-80,000 new workers enter the labor pool. Of these, about 70 percent have completed only primary school and 20 percent are illiterate workers unlikely to be appropriate for export-oriented enterprises. Of the unemployed, about 51 percent is in the 15-34 age group. Apparently, those in the 20-24 year age group are made up mainly of graduates from secondary school, vocational training schools, and colleges--a group which might be partially absorbed by export activities.

#### **4. Export-Oriented Industry**

An export-oriented development strategy alone will not address the serious employment problems that confront the country. Nevertheless, there are indications of a shift in manufacturing toward export markets and greater job creation in this sector. As was noted in Chapter II, over the period 1984-88, about 14 percent of API approved industrial projects were export-oriented. These were expected to result in about 20 percent of investment and 36 percent of the expected jobs in the sector. Furthermore, the number of approved export-oriented projects increased seven-fold between 1984 and 1988 and the number of planned jobs increased nearly five-fold. As was discussed, virtually all of the API approved export-oriented projects were to be located in the "Littoral". Thus, it can be expected that an urban-based export promotion program will further reinforce urban population concentration in this area.

The Industrial Investment Code, and the FONAPRA and FOPRODI programs, are tools for economic development and employment generation. However, they are not specifically concerned with export promotion, nor are they likely to strongly influence export-related investment decisions. The latter two programs are administered by an extensive network of branch banks throughout the country.

#### **5. Transport and Communications**

Tunisia has an extensive transport network throughout the country. Primary and secondary roads serve all of the key settlements in the country. This network is supplemented by a railroad network that serves the Eastern coastline and provides a Western link to Algeria and Morocco. Other lines serve commercial/mining interests in the South. The highway and rail run along the Eastern Coast and have served as a corridor for urban development where inter-regional infrastructure, economic development and urbanization have been mutually reinforcing.

These trends will likely be reinforced by a future export-oriented economy and related infrastructure.

The key seaports are located at Tunis-La Goulette, Bizerte, Sfax and Sousse. Newer ports are located at Gabès, Skhira, and Zarzis. International and regional airports exist at Tunis/Carthage, Sfax, Skanes/Monastir, Jërba, and Tozeur-Nefta, with a fifth airport now being built at Tabarka. The latter airports primarily serve tourist-related purposes.

Good telecommunications are essential to the development of modern enterprises--particularly those that are export-oriented. For example, roughly two-thirds of telex communications in the country take place with the exterior in 1986. Tunis has by far the best access to communications facilities and it represents most of the demand. While an attempt is being made to equitably improve communications throughout the country, it appears that demand in Sfax and Sousse is underserved, places where there is good potential for export promotion. On the basis of discussions with local authorities and entrepreneurs, any export promotion strategy must take access to telecommunications into account.

## **6. Urban Service Provision**

Tunisia has done a commendable job in improving urban service delivery on an equitable basis while accommodating an ever increasing urban population. Thus, in broad terms, urban services (water, power, sanitation, roads, and solid waste collection) do not serve as an impediment to general urban expansion or export promotion.

On the other hand, the study noted that, from a programmatic point of view, urban service provision is primarily "deficit driven" and rigidly planned at the central level. As a consequence, infrastructure programming is not responsive to specific economic opportunities as they present themselves. Such services can be provided on a fee-for-service basis, but such solutions are usually too expensive and untimely for private entrepreneurs. As there is no mechanism in place to respond to these needs on a systematic basis, opportunities are either forgone or responded to in a very *ad hoc* fashion.

AFI and local authorities have been developing industrial zones as reception areas for industry in accordance with national policy. The program has met with mixed success. Demand for serviced sites in many of the largest urban centers has not been met, while supply in some places in the interior have not been accompanied by demand. In other cases, sites have not been adequately serviced. Industrial zones in Tunis, Sfax, and Sousse are surcharged and plans now exist to create new zones in the former two cities. Obviously, to the extent that AFI responds to legitimate requests, the more successful the program will be. While AFI would not provide the study team with data, they noted that the greatest demand was in Tunis and Sfax, and that an increasing number of requests are for export-oriented enterprises.

## **7. Shelter and land management**

Recent trends suggest that simply sheltering the growing urban population has not been a major problem. Since 1982, the private sector, formal and informal, have played an important role in increasing both the number and quality of housing units produced in Tunisia. As a result, annual housing production targets generally have been

met, overcrowding has been reduced, and the overall quality of the existing housing stock has improved.

Despite growth of the housing stock, scattered and uncontrolled residential growth continues to be a serious obstacle to efficient urban development and management. Not only does unplanned land development encroach on agricultural land, it also makes it difficult to reserve land for public services and economic activities.

Current problems involved in irregular land development include the shortage of affordable land suitable for urbanization, the inadequacy of existing land development mechanisms to increase the supply of land to satisfy demand at all levels, the uneven role municipalities play in the provision of serviced land, poor compliance and monitoring, inappropriate, rigid development standards, etc.

Of critical concern is that productive activities have been, and continue to be, pushed away from serviced land that is in close proximity to export-dependent urban resources to more distant sites that may be unable to attract and sustain private investment.

The implementation of sound public land policies that can make serviced urban land available in a timely fashion will provide greater opportunities for the private sector to participate in Tunisia's economic transformation and to develop an urban based, export-oriented economy upon which long term economic stability depends.

## **8. Environmental concerns**

While the IBRD's recent study sheds much needed light on environmental problems, there is a need for much more quantitative measures of pollution from industrial and domestic sources in urban areas and concrete programs to address them. The observed presence of severe environmental problems in many Tunisian cities such as Tunis, Sfax, Sousse, Gabès, Bizerte, and Gafsa must be factored into any effort to create employment through private sector, export-oriented development.

Many of the export industries for which Tunisia would have a comparative advantage internationally (e.g., leather, food processing, chemicals) either have a high risk of pollution or require large amounts of water. In addition, growing public concern about environmental problems will inhibit needed investment in places with excellent potential for further economic and export growth such as Tunis, Sousse, and Sfax. Furthermore, in Eastern coastal areas (e.g., Sousse, Monastir) the tourist industry is at odds with other forms of industry that cause incompatible environmental problems. Additional conflicts are caused by inadequate sewage treatment and solid waste management. Thus, any future economic strategy for export promotion must include a component to help address environmental problems.

The 34 large urban areas in Tunisia are growing quickly, some in a very haphazard and spontaneous manner. This has created conflicts regarding land use for urban and rural purposes, particularly along the Eastern coast. Such problems will become increasingly

severe and a growth management plan should be introduced as quickly as possible. Future development will have to be sensitive to a wide range of environmental concerns. For example, the "sea as sewer" approach to waste treatment will continue to jeopardize tourism, one of Tunisia's most vital economic sectors and a major source of hard currency.

### **9. Institutional Capacity**

A key issue is whether local governments (cities and Governorates) have the capacity to serve as "partners" in a public-private economic development program with a special aim towards export promotion. The study found that presently municipalities are not equipped to take an independent leadership role in promoting and managing such a program. They lack a statutory mandate for this purpose and are constrained by strict central government control over their scope and finances.

Most local services are now provided by national agencies. The resulting erosion of municipal responsibility has reduced the cities' capacities to plan and implement development programs and recruit qualified staff. In addition, current planning procedures at the municipal level are static and do not lend themselves to the needs of more dynamic planning of investment. Municipal budgeting procedures are extremely cumbersome and without a long-term view. However, municipalities are now required to submit a five year Municipal Development Program, which could provide the framework for discussion with the private sector concerning necessary supporting investments.

Budget balancing and authority is such that it links municipal budgets to a cash-basis accounting system operating on an annual cycle. This is an effective means of control but it prevents many municipalities from spending even the limited amount of development funds they have. Those funds unexpended at the end of a fiscal year are transferred to an open account and used as a reserve fund. These reserves have grown steadily and could be used to leverage capital investments targeted for urban economic development (i.e. used as the 10 percent share of capital investment costs required under the CPSCL).

There exists overlap between municipal and Governorate roles within some jurisdictions and Governors have recently been granted more specific authority over municipalities. While somewhat confusing, this authority could be used to clarify complementary roles in an urban economic, export-promotion strategy. Regional Development Councils have also been created recently to help improve coordination between national and local development plans, but they have no specific staff or financing. Nevertheless, the councils do have considerable planning and oversight authority and could include representatives from both the public and private sectors. Thus, the study concluded that Municipalities could work in concert with the Governorates and Regional Councils to execute a private sector-oriented urban export promotion program.

## **B. PROGRAMMATIC GUIDELINES**

### **1. Key Observations**

We believe that the policy initiatives of the Government of Tunisia and the on-going economic adjustment programs are creating a positive environment for a new USAID/RHUDO program to support urban economic development. The World Bank's Municipal Development Project and USAID's existing Private Sector Support Project should be supporting elements of a strategic approach.

Our assessment of local government "readiness" to undertake a private business development support project included field visits to the sample cities for interviews with public and private leaders--both in the field and in Tunis--and analysis of Governorate and city level data as presented in this report. This overview has led us to the following broad programmatic conclusions:

- a) **National economic policies, structural adjustment programs in agriculture and trade, as well as capital market deregulation, will have significant implications for urban economic development. However, only a relatively small number of urban places have the economic foundation, institutional capacity, or human resources necessary to fully and positively respond to these new policies and programs. In these places, however, only through a combined and coordinated effort between Municipalities, Regional Councils and Governorates does adequate authority and capital exist to implement a private sector oriented economic development strategy in urban areas.**
- b) **Local governments, even acting in combination, lack the discretionary funds and access to credit needed for a private sector-oriented economic support project. Therefore, both private sector financial participation and external financial support will be necessary to enable them to implement such an approach.**
- c) **The potentially valuable resources that Tunisia's development planning and finance institutions could contribute to local economic development may not be known to private entrepreneurs or fully understood by local officials. Thus, there is a need for a very explicit definition and better coordination of public sector resources which could be harnessed to support such a program.**
- d) **The magnitude of urban unemployment is extensive and will continue to grow regardless of any USAID/RHUDO initiative. Thus, such a program should focus on the economic value and potential of the investment, appraised on financial, economic, and technical terms, and treat employment generation as a secondary but important objective.**
- e) **The "export" orientation of national economic policy will be difficult to achieve, due to both internal and external factors. National policies in trade and finance must be closely integrated, and foreign investment must be encouraged. Tun-**

**lian exporters must develop a market niche for more diversified products and establish commercial linkages in the international marketplace. This will require orientation and training for both private and public sector development managers.**

## **2. The Framework for Public-Private Collaboration**

### **a. Local Government Cooperation**

A private sector-led export orientation to Tunisia's economy will have significant implications for urban economies and local governments. However, responding to these challenges at the present time appears to be beyond the institutional and financial capacities of even the most capable municipalities in Tunisia. Nevertheless, we believe that selected municipalities, in a collaborative arrangement with Governorates, Regional Councils, and central agencies will be able to plan and implement a program that would attract and mobilize private investment for export promotion.

The collaboration of municipalities, Governorates, and Regional Councils will help assure that land, capital, and infrastructure--three of the most critical public sector development resources--would be available under such a decision-making structure. However, a "public-public" partnership such as this has no real formal precedent in Tunisia and the Regional Councils have been formulated only recently. As a result, USAID/RHUDO should be prepared to lend institutional support to such an arrangement as part of any future program.

Each of the three local government institutions will bring to this association the specific powers and duties assigned to them under the law. However, the partnership will need to remain focused on its primary mission--the coordination of public and private resources for economic development. The partnership should not duplicate the work of any other entities. Furthermore, the partnership relationship should involve equality among the three entities in decision-making on the most appropriate use of resources.<sup>5</sup>

The following activities are suggested as basic elements in the "charter" of this group. This will need to be refined in an overall program design.

1. Create and sustain a proactive development climate;
2. Identify regional needs, opportunities, and development priorities;
3. Concentrate on long-term strategic plans--and the means of implementing them--through specific capital investments which promote private sector economic growth;
4. Serve as a clearinghouse of information concerning national government economic policies, programs, and technical resources;

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<sup>5</sup>The existing system of "tutelle" and the strict adherence to centralized control over local decisions should ideally be re-evaluated by the Ministry of Interior in light of broader national objectives.

5. Motivate local actions to spur economic development and create a variety of employment opportunities serving many segments and levels of the population;
6. Represent the interests of those economic sectors and private companies which support the regional economy; and
7. Develop and encourage communication among all levels of government and between them and the private sector.

This preliminary framework can be modified as the three entities develop a working relationship. It will be important to build this relationship quickly, however, before the Regional Councils establish themselves in a manner that might make coordination difficult to achieve.

#### **b. The Public-Private Partnership**

The exact nature of the proposed joint ventures or "partnerships" between local government and private entrepreneurs should be left flexible and defined on the basis of expected inputs and outputs of both parties. There is no standardized model for these relationships. In the United States, these types of partnerships have been promoted under a variety of Federal and State programs such as:

- Urban Development Action Grants
- Community Development Block Grants
- Housing Partnership Programs
- Economic Development Corporations
- Enterprise Zones

In addition, numerous loan programs have been set up by cities, States, and a variety of public corporations in the United States whose boards of directors may represent both private and public interests. Other examples of public-private partnerships include industrial revenue bonds, specialized credit facilities, franchises for the use of public resources, export processing zones, and business promotion funds (similar to those of FOPRODI and FONAPRA). In only a few instances have cities in developing countries taken a leadership position in industrial promotion or private business development. That role is usually reserved to the national government. Precisely because local governments are neither consulted nor involved in such initiatives, many of these centrally designed and implemented efforts have failed to produce the desired results, often because needed infrastructure is not provided.

While potential public-private arrangements in Tunisia need more thought at the project design stage, some examples of partnerships might include:

1. Provision of a long-term (e.g., 25-99 years) irrevocable lease on a publicly-owned site to a private developer on condition that the developer finance the supporting infrastructure and develop the site in compliance with terms

set up by the local government. By conferring development rights rather than land title, the municipality retains an equity interest in the overall project.

2. The local government may agree to provide serviced sites and facilities under lease in exchange for private investment in plant, equipment, and job creation. This concept is already being practiced in Monastir, for example, and is being considered in Bizerte and Kairouan, as well. Thus, local government retains an indirect equity position and derives revenues from the lease. It can use the infrastructure investment as a tool for guiding urban growth and to help satisfy shelter needs.
3. Entrepreneur(s) might be authorized to develop a preferred site in exchange for investment in a needed public service function or low-income housing scheme. These are termed "linkage" strategies in some cities.
4. Local government could provide supporting infrastructure (roads, drainage, lighting, telephone/telex) in response to an entrepreneur(s) request for support in exchange for the private economic investment, implementation of environmental protection measures, and deferred cost recovery. Meanwhile, the local government capitalizes on the infrastructure investment to help guide urban growth and help respond to shelter needs.

### **C. PROGRAM STREAMS**

Two parallel and complementary streams of a single program should be considered. The two components are needed to differentiate between urban areas which can design and sustain a broad urban economic, export promotion program and those places where specific project opportunities may present themselves.

#### **Component 1**

The first component would focus on three or four local government partnerships (i.e., Regional Councils, Governorates and Municipalities, acting together) which have been selected on the basis of their potential for economic growth, private investment, and their capacity to design, implement and help finance such a program. Those municipalities and Governorates viewed as having the most potential for an economic/urban development program for private export promotion would constitute the "pool" from which these local government partnerships would be selected. This component would focus on packaging a public-private joint venture within a given area to build a "platform" or foundation for economic growth and export promotion. Through the provision of infrastructure (and possibly superstructure), local governments would support private sector investment while laying the foundation for public-sponsored urban development initiatives, including growth management and shelter. The public sector would provide services (but recover costs), and the private sector would provide investment and create jobs and exports. The total "budget" for each of these

high priority areas could be \$2-10 million, with approximately 75 percent coming from external sources.

## **Component 2**

The second component of the program would allow a larger number of cities to compete for program resources than would be possible under Component 1. This component would be opportunity driven. It would finance specific smaller-scale projects involving supporting infrastructure for export-oriented economic activities. As in Component 1, infrastructure segments would be strategically used to guide growth and support surrounding shelter development, but it would not have the same impact as the initiatives undertaken in Component 1. Public-private proposals from many settlements throughout Tunisia would be eligible for review. Such projects would be evaluated on their economic merits. Well-defined and positively appraised projects might range from \$250,000 to \$750,000.

In both cases, the broad project design should provide for centrally provided technical assistance in the development of proposals, as well as necessary feasibility studies. Where possible, local consulting services should be used for this purpose.

## **D. FINANCIAL FRAMEWORK**

An economic development support program, which utilizes public resources (e.g., infrastructure and credit) as a means of leveraging private investment, appears viable in a number of urban places; and, there is strong public and private interest in the sample cities visited. However, many localities will lack the potential and capacity to undertake Component 1 of the program; but they may be eligible for participation in Component 2.

The existing planning and budgeting process is not responsive enough to meet private sector needs. This situation suggests the need for a flexible, non-cyclical project-funding process (i.e., not directly linked to the annual budget) such as a line of credit. Continuous access to a pool of resources is needed so that local government decision-makers can commit to project implementation for a specified and guaranteed timeframe. Under such an arrangement, we believe that local governments could play a key role in advancing the policy objectives of the structural adjustment program.

The Housing Guaranty (HG) program could be used as a funding source to capitalize such a resource pool. The pool would lend to local governments to finance infrastructure (coupled with other public support) in direct support of private sector economic activities while also addressing shelter, growth management, environmental and other shelter-related objectives. In such a scenario, private sector beneficiaries would be expected to contribute a significant share of the total project cost or fulfill its end of the public-private agreement, as was discussed above.

The following financial/programmatic guidelines are recommended to promote private-public partnerships and enable local government to play a more dynamic role in economic/urban development:

- "Open window" development funding: the open window concept refers to a project-funding approach which is not controlled by a specific funding deadline, but responds to private sector development proposals as they are determined to be ready for financing and implementation.
- Co-financing by public, private and external sources, with specific project-level financing negotiated on a case-by-case basis: loan repayment and cost recovery requirements must be clearly identified.
- Pre-designated lines of credit to local government in urban places with high potential for success in an a private sector-led, export promotion program. Funding would be assured for a three- to five-year period to enable public officials and private entrepreneurs, acting jointly, to conceive development strategies and negotiate specific financing (and repayment) plans.
- Project-specific financing (as contrasted to pre-designated lines of credit) for opportunity-driven, public-private export initiatives with emphasis on urban places in the interior: this approach would spread the beneficial effects of the program to more urban places and counter, to some extent, the concentration of development activity along the coast.
- Contractual commitments defining the specific inputs and outputs negotiated between local governments and private investors.

Such guidelines would support an urban economic and physical development strategy. This development support strategy would be flexible, long-term, and responsive to well-conceived development ideas.<sup>6</sup>

A commercial bank or the proposed municipal bank could manage the funds and appraise the proposed projects for financing according to agreed-upon criteria. While export promotion would be a principal economic objective, it may be useful to consider export industries in very broad terms to allow investments in transport, packaging, and warehousing to qualify under the definition. This approach will encourage a more comprehensive investment strategy and area improvement programs which provide more opportunity for local governments to integrate shelter-related investments within their development plans.

Cost sharing and recovery arrangements would be determined as part of the public-private joint venture. Improvement districts and betterment levies could be utilized in such a program. The legal and institutional basis for these arrangements are discussed in a previous report conducted by the RHUDO dealing with mechanisms for cost recovery of municipal (trunk) infrastructure.

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<sup>6</sup>It may be premature, at this time, to limit a USAID/RHUDO urban economic development support program to one which: a) supports only "export-oriented businesses", or b) concentrates on employment generation to the exclusion of other worthwhile objectives. However, in keeping with the conceptual framework set forth by the terms of reference and the objectives of the Structural Adjustment Program, we have maintained this focus.

### **E. INFRASTRUCTURE SUPPORT**

Based on the general situation in the cities visited, the types of possible infrastructure programs might include the following:

- Infrastructure upgrading in existing industrial/economic agglomerations (including city centers) with service deficits. Ideally, these places would have room for expansion of existing economic activities.
- Introduction of infrastructure in low-density places on the urban periphery that could accommodate the installation of small- and medium-sized economic activities. Infrastructure provision would be strategically used as part of a growth management and shelter package.
- Infrastructure programs that piggy-back on existing or proposed infrastructure/economic activities that would serve as a catalyst for growth and economic development.
- Introduction of primary or secondary infrastructure (extension of trunk infrastructure) which would permit existing or proposed enterprises to become operational. This may include water, sanitation, power, roads, and telecommunications. It may include the construction of "butler" type buildings that would be leased to private parties. The trunk infrastructure could serve as a growth management tool for both economic activities and shelter.

In each of the cases noted above, secondary and tertiary infrastructure would be introduced in adjacent areas to promote shelter development, upgrading, and growth management. An environmental assessment should be part of this effort.

### **F. DEVELOPMENTAL RESOURCES SUPPORT AND EXPORT PROMOTION**

The program guidelines discussed above primarily relate to the use of infrastructure to leverage private investment in economic activities and shelter. However, other developmental resources are available that can be tapped to support the program. Currently, there are more than 20 national agencies that constitute the financial and regulatory framework for export-oriented industrial promotion. More are likely to be created as the national government searches for a proper mix of incentives and other tools which will produce the best economic return.

While some of the resources are understood by local government officials and entrepreneurs (e.g., FONAPRA, FOPRODI, Chambers of Commerce), others are not. In many cases, the relationship between these individual programs, or how they could be packaged to maximize their economic impact, has not been considered. For local public sector development planners, and especially for private entrepreneurs, the battery of national development and financing agencies may be confusing. To help them play a more active role in urban job generation, they will need to know the agencies and tools that are available, and how they could be used to support the overall program.

At this time, there is no readily available, easy-to-comprehend, reference document to explain to potential private investors exactly what resources may be available to help them implement their plans. The proposed program should help produce such a document and

work to ensure that all potential development resources are tapped to support the overall program.

Tunisian enterprises will need assistance penetrating export markets. They lack marketing linkages and know-how, quality control standards, and other skills needed to compete internationally. Thus, developmental resources need to be tapped to assist them in this area, as well. While there is broad acceptance by the public and private sectors regarding economic policies that encourage private investment and promote exports, most observers anticipate a decade-long process of conversion and economic development in the sector.

Diversifying the existing economic base to promote exports, particularly of manufactured goods, may be very difficult to accomplish without a great deal of reform and concentrated support. This may require a reorientation of development resources (e.g. FOPRODI funding criteria) for small- and medium-size enterprises and other groups, greater stress on joint ventures with foreign groups and so on. At the present time, despite very attractive foreign incentives including repatriation of funds and exclusion of earnings and income from certain taxes and duties, there has been no dramatic increase in investment.

Training, not merely orientation seminars, will be needed to develop and implement specialized strategies that promote economic development and exports, encourage private investment, and generate employment. Thus, to the extent possible, it would be useful to dovetail such a program with other USAID/donor training initiatives.

## **G. EVALUATION CRITERIA**

Urban unemployment is extremely high, particularly in interior cities and among potential workers between 15 and 35 years of age. It is unlikely that an AID/RHUDO sponsored export-oriented urban economic development program will have a significant impact on the overall unemployment problem in Tunisia. Therefore, we believe that export promotion and urban development programming should be the primary objective while export related employment generation remains an important but secondary objective of the program.

We believe that the most important criterion for evaluating the economic development support program will be the viability of investments measured in economic terms. Secondary factors would be the number of jobs created and the number of beneficiaries from associated infrastructure and shelter related improvement. As noted above, it may be useful to consider "export" industries in very broad terms to allow publicly supported private investments in transport, packaging, and warehousing to qualify as well.

If equity considerations were to be a key factor in an evaluation, places with high unemployment (i.e. in the interior) might be high on the list of local governments selected to participate in the program. However, we believe that any initiative to support the private sector must be based on strong efficiency considerations. Therefore, given the current economic context and the goals of the Structural Adjustment Program, we believe that

economic efficiency should be the overriding concern of the proposed USAID/RHUDO initiative.

## **H. SPATIAL IMPLICATIONS FOR FUTURE PROGRAMMING**

To identify potential places appropriate for the proposed economic development program, we carried out a broad assessment in those Governorates having settlements greater than 30,000 population and a municipal capacity assessment in the ten sample cities. This examination, coupled with our knowledge of Tunisia and field visits, enabled us to make a provisional professional judgment as to which places are potential beneficiaries of the program.

### **1. Governorate Assessment**

Because of limitations on city-specific data, PADCO examined Governorate data in those Governorates with settlements greater than 30,000 population. The following factors were considered:

- I. Employment**
  - (1) Number Employed (1984)
  - (2) Urban Share of Total Employment (1984)
  - (3) Urban Unemployment Rate (1984)
  - (4) Concentration in Export-Related Categories (1984)
  - (5) Concentration in Productive Services Categories (1984)
- II. Investment**
  - (6) Total Projects/FONAPRA and FOPRODI (1985-88)
  - (7) Job Generation Ratio/FONAPRA and FOPRODI(1985-88)
  - (8) New Authorized Commercial Establishments (1984-88)
- III. Business Resources**
  - (9) Banks/Bank Employment (1984)
  - (10) Hotel Beds (1987)
  - (11) Telecommunication (1988)
- IV. Export Infrastructure**
  - (12) Railroad (1989)
  - (13) Seaport (1989)
  - (14) Airport (1989)

**Employment** levels, as well as the economic sectors of the existing work force, were examined in each Governorate. Places with high levels of employment and concentrations in export-oriented or service industries were considered more likely to support private sector export-oriented businesses than Governorates without these characteristics. Similarly, a relatively high percentage of total employment in urban areas and a relatively low urban unemployment rate were considered a positive employment base upon which a development strategy could be built. Primary employment was also considered to reflect the important agricultural resource base of some Governorates.

**Investment** was the second factor examined. The total number of FONAPRA and FOPRODI projects in each Governorate was used as a proxy for this purpose, particularly the number of jobs created per project. Our objective was to identify places which had

the most positive record of converting FONAPRA and FOPRODI investments into new employment. Finally, also as a proxy measure of investment activity, "points of sale" (i.e., new business licenses) were examined in each Governorate.

**Business Resources** such as banks, telecommunication facilities, and hotel beds by Governorate were reviewed as proxies for this concern.

**Export Infrastructure**<sup>7</sup> in the Governorates including seaports, airports, and railroads were reviewed since these are likely to have a direct, positive influence on the capacity of Governorates to support an export promotion program. All Governorates are reasonably well connected to the national road network so this was not considered a major factor. In addition, each place has some locational advantage *vis-a-vis* the exterior (by port or airport), Libya the South, and Algeria the West. Thus, while inter-regional roads are important, it was not given undue emphasis in the Governorate Review. Five Governorates, without a city of more than 30,000 population, were not reviewed. On the basis of our examination data, professional judgment, and field visits, we have ranked the Governorates as is shown in Exhibit VI.1. This represents the study team's view as to which Governorates have the most potential as partners in an urban-based, export-promotion program.

PADCO believes that this summary assessment is a useful starting point for USAID/RHUDO to help identify Governorate cities that have the potential to participate in the program. Our examination was based on information at our disposal (materials generated in Chapters 1-3). Charts used in our examination are presented in Annex F.

## 2. Municipal Capacity Assessment

PADCO examined the capacity of the ten sample cities to participate in and support a national economic development strategy based upon private sector exports. We reviewed the statutory authority, services delivered, organization structure, staffing arrangements, and management systems. In doing so, the study team examined the following factors:

- I. **Financial Capacity**
  - (1) Debt Level
  - (2) Dependency on National Aid
  - (3) Reserve Funds
- II. **Institutional Capacity**
  - (4) Executive Staff Levels
  - (5) Technical Capacity
  - (6) Property Tax Collection Performance
- III. **Economic Activity**
  - (7) Building Permits
  - (8) Business Tax Levels

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<sup>7</sup>Some of the railroads are not operational and/or serve as commuter-rail service only.

<b>Exhibit VI.1. Ranking of Governorates</b>		
<b>Rank</b>	<b>Governorate</b>	<b>Total Score</b>
1	Sfax	Good
2	Tunis	Good
3	Sousse	Good
	Monastir	Good
	Nabeul	Good
4	Bizerte	Above Average
	Arous	Above Average
5	Ariana	Above Average
6	Mahdia	Average
	Médenine	Average
7	Gabès	Average
8	Béja	Below Average
9	Kairouan	Below Average
10	Le Kef	Below Average
11	Jendouba	Poor
	Kasserine	Poor
12	Gafsa	Poor
13	Tataouine	Poor

#### **IV. Infrastructure**

- (9) Water Service (Business Connections)
- (10) Power
- (11) Solid Waste

The study team used these indicators to analyze the municipalities as is shown in charts found in Annex F. The capacity assessment was based on data available to the study team.

### a. Major Factors

The **Financial Capacity** of the municipalities will largely determine whether it can support an urban export promotion program. For example, a municipality's existing level of debt to the local government loan fund (i.e., CPSCCL) is one important measure of its capacity to borrow additional resources to support private sector initiatives, as does the extent of national aid in relation to total local tax collections. A high dependency rate on national grants is a reflection of relatively poor local tax collection performance. A decline in national aid to municipalities heavily reliant on national grants would have a greater negative impact on them than upon those that finance services from their own revenues. Also, a relatively high level of cash reserves was considered positive, since it would enable local governments to leverage other resources and support private investment.

The assessment of a city's **Institutional Capacity** considered three major areas: executive staff levels, technical capacity (measured by the number and type of staff specialists), and property tax collection performance. Ideally, an inventory and assessment of equipment would have been added as an indicator, but reliable information on this topic was not available. Tax collection performance statistics are derived by comparing the actual tax collections to an amount which the local government has budgeted as "collectible".

**Economic Activity**, the third major factor, consists of two indicators: building permits and business taxes. The former is a measure of development activity; the latter indicates the level of business turnover and reflects the general economic vitality of a municipality.

**Urban Infrastructure** was also examined including: water connections to commercial and industrial users, electricity consumption, and solid waste collection. These indicators provide very useful information about a city's ability to service new sites and economic activities by building on an existing infrastructure service base.

Each of the ten sample cities were examined according to the basis of the factors noted above and ranked as shown in Exhibit VI.2.

### 3. Governorate and Municipal Profiles and Potential for Program Participation

A brief summary of the results of the above examination for the highest ranking Governorates and Municipalities is presented below. It is coupled with the study's professional judgment as to which settlements have the highest potential to participate in Component 1 of the proposed program. The recommendations are valid for Component 2, as well, but this component should allow more settlements to participate on the basis of economic opportunity as was discussed in Section B of this Chapter. There are many settlements throughout Tunisia which could benefit from such an approach.

<b>Exhibit VI.2. Ranking of Municipalities</b>		
<b>Rank</b>	<b>Municipality</b>	<b>Score</b>
1	Sfax	Good
2	Tunis	Good
3	Sousse	Good
4	Bizerte	Above Average
5	Gabès	Above Average
6	Kairouan	Average
7	Tabarka	Below Average
8	Jendouba	Below Average
9	Gafsa	Poor
10	Kasserine	Poor

#### ■ SFAX

The core of Sfax's economy is private enterprise. The Governorate of Sfax has the lowest urban unemployment rate (8.9 percent) in Tunisia, reflecting its diverse economy. Sfax has an excellent employment profile. It has two active ports (including the second largest in the country), an under-utilized airport, and both railroad and highway connections to the North, South, and West. These facilities provide the Governorate with a solid base of export-related infrastructure.

It generally appears that the Governorate has not benefitted from the same level of national infrastructure investment as have Tunis or Sousse. Thus, the study team concluded that Sfax would be an excellent candidate for an economic development program that uses infrastructure to support private investment for export promotion. Furthermore, our field visit revealed that many local enterprises in Sfax are searching for export opportunities.

Existing industrial areas are fully built-up in Sfax, but a new zone is planned to the South on the route to Gabès. In addition, about 100 requests for smaller-scale sites for economic activities have been submitted to local and national authorities. The Governorate of Sfax has been very successful in generating employment. In addition, on the basis of FONAPRA and FOPRODI data the governorate has been very successful in converting those investments into jobs.

If an export promotion program is to be undertaken in Sfax, it must give due consideration to environmental issues. Sfax suffers from severe pollution problems brought about by several key industries. A very active fishing industry (composed of more than 3,000 individual businesses) is jeopardized by water pollution. Furthermore, atmospheric pollution is killing vegetation and destroying nutrients in the soil. Both the Governorate and Municipality are very concerned about these problems and are seeking solutions and support.

The Municipal Capacity Assessment revealed that the city of Sfax has the highest overall rating among the 10 sample municipalities. It has an outstanding record of tax collections (both property and business) and strong institutional capacity. The city has a moderately high level of cash reserves and a manageable debt burden.

In addition to eager entrepreneurs, Sfax has strong leadership at both the Governorate and Municipality. Thus, Sfax seems to be ideal candidate for participation in the proposed program.

## ■ TUNIS

Metropolitan Tunis is considered by most entrepreneurs as the most attractive location in the country for export-oriented enterprises. While Tunis suffers from growth management problems, it is endowed with excellent transport and communications facilities, a very extensive base of infrastructure, a well mixed labor pool, diversified economy, and easy access to government and financial institutions.

Many requests from export-oriented enterprises are pending for industrial sites in Metropolitan Tunis. For example, AFI is planning an industrial zone on the road to Bizerte and there are demands for smaller areas, specifically designated for economic activities, throughout the metropolitan area.

Tunis dominates every important category of urban employment. It is the leading employer in 11 of 16 categories of employment examined, second in three others (mines/energy, public works, and hotels/restaurants) and third in chemicals. Only in agriculture/fishing is Tunis not among the leaders. The vast majority of banking and telecommunications services are concentrated in Tunis. Tunis grows at a great pace (3.2 percent/year-the greatest absolute increase in urban population) and has been successful in generating employment in conjunction with this growth.

Tunis was very highly rated in terms of productive services, urban employment and total employment. Many FONAPRA and FOPRODI projects were initiated in Tunis, but did not generate a commensurate level of jobs. On the other hand, Tunis has a high level of business services.

The Municipality of Tunis has the second highest rating among cities mainly due to its relatively low institutional capacity in terms of executive and technical staff. However, given the central government actors involved in Tunis, staffing data at the

municipality is not an accurate portrayal of the institutional support that could be deployed to support a local economic development program.

In financial terms, the city is very healthy, although it does have a high dependence on national aid. Tunis has a strong cash position, which will permit the city to contribute to a local development project.

Tunis has an excellent resource base for a private sector business support project, and would be in the best position to assure that shelter-related objectives were also being addressed under a private sector support project.

- **BEN AROUS**

The Governorate benefits from its proximity to Tunis, for which it serves as an important industrial center. As a result, it has a good profile in urban employment, productive services, banking, and employment generation from FOPRODI investments. No municipalities within the Governorate were examined.

- **ARIANA**

Ariana is also a beneficiary of Tunis' strong regional presence. Its characteristics in employment generation, export infrastructure, and business resources are all good. Ariana had very few FOPRODI investments and a small number of business licenses granted. This is not surprising since Ariana has largely developed as a residential community for greater Tunis.

No municipalities within the Governorate were evaluated. When more data is collected and analyzed, it may be possible to make an informed judgment about the potential of this Governorate to develop and sustain an economic development project for export promotion.

- **SOUSSE**

The Governorate of Sousse has a very diversified economy and an active private sector. The Governorate possesses excellent infrastructure including a well-developed seaport and close proximity to an international airport at Skanes. It also has excellent business related resources, though telecommunications require improvement.

Sousse's overall employment structure is strong. Its primary sector employment level is low in comparison to other Governorates with mixed economies. Investment efficiency in the FONAPRA and FOPRODI demonstrated an outstanding capacity to generate above average levels of jobs. Sousse has a strong banking sector, an outstanding tourism base and has the second best telecommunications facilities among the Governorates. Sousse is beginning to deconcentrate, thus there is potential for economic activities such as light, non-polluting industry to establish in the direction of Hergla and Enfida to the North, as well as to the South towards Sfax.

Any export promotion strategy in Sousse must take environmental issues into account. At present, tourism in Sousse is at odds with growing pollution problems caused by industrial and other urban discharges. Furthermore, in the Governorate (and adjoining governorates), there are growing conflicts for competing land uses (agriculture, industry, tourism, etc.) that need to be resolved. Thus, any urban development program should take into consideration both growth management and environmental issues.

Ideally, the conflicts noted above should be addressed in an inter-governorate strategy involving Sousse, Monastir and Mahdia and/or Sousse/Kairouan and possibly Sousse and Nabeul/Hammamet. Because of its pivotal location and the close economic linkages in the region, PADCO also considered Sousse's development potential under several multi-Governorate scenarios as described at the end of this section.

The Municipality of Sousse has the strongest financial capacity of the ten sample cities examined including fairly extensive reserves, a manageable debt burden and a very low dependency on national aid. Sousse has increased its tax collections significantly including those related to tourism. However, the city leaders indicate that revenues are still not commensurate with services provided to this sector.

Sousse, like Tunis and Sfax, would be an excellent candidate for the proposed program.

#### ■ **MONASTIR**

The Governorate of Monastir's rating reflects a solid performance in all areas examined. Thus, it appears to have excellent potential in export promotion. Monastir seems to have good capacity to attract investments and convert these projects into jobs. It appears to be under-served in terms of telecommunications despite its importance in tourism, but it does seem to have a good base of business services.

Monastir has benefitted from Tunisia's success in tourism and successful efforts in manufacturing, fishing, agriculture, and other economic activities. Like Sousse, the Governorate could suffer from a decline in tourism due to ocean pollution from uncontrolled industrial discharge and untreated domestic sewage. This is a factor that must be considered in future economic planning.

No municipal capacity assessment was undertaken in any city of the Governorate. While further examination is required at the city level, it appears that the Governorate has very good potential for participation in the proposed program.

#### ■ **NABEUL**

The Governorate has a very strong economic profile, particularly in agriculture and tourism, and it has a very low unemployment rate. Pollution is not yet a major

concern. It exports ceramics and agricultural products, has good access to both Tunis and Sousse, employs more hotel/restaurant workers than Sousse and has more hotel beds than either Sousse or Monastir.

Nabeul has a very diversified economic base, ranking among the top eight Governorates in 14 of 16 employment categories. No other Governorate approaches Nabeul in the combined total of primary industries and textile/leather, the first and fourth ranked economic sectors in Tunisia.

Cap Bon is the garden of Tunisia. Produce flows from markets within Nabeul to nearly every major urban area in the country. The touristic growth of Nabeul and Hammamet support agricultural activity by providing a ready market for locally-produced fresh fruit and vegetables. Production and transportation costs are lower and profits higher for farmers serving this nearby market. The potential for increased agricultural production and agro-processing to serve foreign markets exists in this area and Nabeul could function as a center for processing, packaging, and shipping. However, the extension of the national highway to Hammamet may result in continued shipment of produce on to Tunis for these purposes.

Nabeul has an excellent employment profile, low urban unemployment rate, and a high export orientation and level of productive services. It does not have an airport or seaport but is in relatively close proximity to Tunis and Sousse.

Nabeul Governorate would appear to be a good candidate for the proposed program. However, no sample city within Nabeul Governorate was evaluated. Assessments need to be carried out in the Municipalities of Nabeul and Hammamet to see if the positive profile at the Governorate level is matched at the city level.

#### ■ **BIZERTE**

The Governorate of Bizerte has a rich agricultural hinterland, well diversified employment base, with good access to business resources. However, like most agricultural regions in Tunisia, the Governorate has a high overall unemployment rate (19.2 percent).

Because of its location, Bizerte has not enjoyed close ties with Tunis and the rest of the North and Northwest. It is cut off by lakes from its hinterland and road connections with Tunis were unreliable until a bridge was recently constructed. As a result, Tunis has profited from linkages with the Northern and Northwestern parts of the country more than Bizerte.

Bizerte had a highly-developed infrastructure base at the time of the Protectorate. While it appears to have been relatively neglected in the past two decades, its urban and export infrastructure are still in good condition. Its specialized port facilities could be valuable for export volumes of high tonnage and other purposes.

The pollution of the natural lakes close to Bizerte City, as well as ocean and atmospheric pollution from oil refining, iron smelting, and leather tanning, is a major concern which should be taken into account in any export promotion strategy in the Governorate. The city of Bizerte has strong ties with nearby communities, such as Menzel Bourguiba, and with smaller agro-settlements in the Governorate. The area has excellent local leadership (both public and private), which contributes to its development potential.

The Municipality of Bizerte has strong financial capacity due to both fairly high reserves and a manageable debt level.

#### ■ **MAHDIA**

Mahdia has moderate unemployment and has a good cross section of employment in agriculture, fishing, industry, tourism and services. It performed well in FONAPRA and FOPRODI programs and has an average level of business resources. It has a fishing port and related industries and is linked to Sousse by light rail.

Mahdia has important agricultural potential. Vegetable production is being enhanced by "appropriate technology" using a green house effect. This technique, practiced in Cap Bon as well has apparently had great effect and is being considered as a way to produce winter vegetables for domestic and European markets. Shipping by air or sea will probably be at Skanes or Sousse although Sfax may be an alternate gateway.

Mahdia would appear to be a good candidate for the proposed program, but further analysis is required and no municipal assessment was undertaken. The Governorate's proximity to Sousse and Monastir--two other Governorates with good potential and similar problems--has suggested the potential for a regional approach involving the three Governorates.

The study team believes that the Sousse/Monastir/Mahdia triangle should be carefully studied as a related "economic unit". Assistance in strategy formulation could yield significant benefits measured in terms of private investment. Guiding development in this area so that the entire economic region benefits would be a very significant accomplishment.

#### ■ **MEDENINE**

The Governorate of Médenine has a low unemployment rate and good mix of productive services and business resources (hotel beds and banks--but less developed telecommunications) due to the presence of the tourism industry. It does not have a great number of commercial establishments nor FONAPRA and FOPRODI investment and jobs. Médenine has the advantage of a seaport and airport within its Governorate. The capacity of either of these facilities to satisfy any export demand is not known at this time. Médenine, and particularly Municipalities in the Governorate, warrant further analysis.

## ■ GABES

The Governorate of Gabès appears to have good business services and export infrastructure, but data on employment and related investment efficiency were less favorable. This profile suggests that Gabès has benefitted from national investments in hotels, telecommunications, railroads, and seaports but may not have the indigenous resources to promote and sustain employment and private investment. The strength of the Gabès city, however, may compensate for the weaknesses at the Governorate level.

One of the issues that both the Governorate and Municipality of Gabès would need to address is the preponderance of employment in non-exporting industries. In addition, chemicals dominate the local economy. Since this activity is likely to persist and contribute to further pollution, it may be difficult for Gabès to allocate resources for new investments until existing environmental problems have been solved.

There are numerous indicators that the Municipality of Gabès could assemble the resources needed to participate in a private sector, export-oriented business promotion effort. In terms of financial capacity (except for a high level of dependency on national aid), institutional capacity and economic activity, and solid waste collection services, Gabès rates very high.

Gabès has a strong financial base with high reserves and an outstanding record of property tax collection performance (77 percent). Building activity is strong and infrastructure is adequate, although only 58 percent of the population is served by water. As with other southern cities, Gabès relies on ground water resources of relatively poor quality. It has an active seaport and still benefits from some tourist activity taking place in the South East despite its growing environmental problems.

### 4. Multi-Governorate Profiles and Potential

Because of its pivotal location and the close economic linkages in the region, PADCO also assessed Sousse's development potential in association with one or several other Governorates.

The results of our appraisal of Sousse's potential role as a development coordinator in association with other Governorates is described in the following sections:

#### a. Sousse/Mahdia/Monastir

A great deal of urbanization and economic development is occurring in this area among diverse settlements such as Ksar Hellal (textiles), Monastir (tourism), Skanes (international airport, industry and tourism), and Mahdia (fishing, industry, tourism). This area is well served by roads and other transport facilities including the recent installation of a light commuter rail from Sousse to Mahdia. It has excellent potential for economic growth but must balance the competing demands for land and water resources for both urban and rural purposes.

The three Governorates and their numerous settlements would be well served by a unified economic and growth management strategy for the area. The characteristics of the three Governorates are also complementary. Tourism and industrial concerns in Sousse and Monastir can use agricultural and fishing inputs from Mahdia. Furthermore, Mahdia does not have a strong infrastructure base nor local institutional capacity while Sousse does. Thus, an inter-governmental strategy could provide the balance needed for a successful development strategy.

**b. Kairouan-Sousse**

Given the conflicts between tourism and industrial development in Sousse, it may be useful to deconcentrate some industrial development to Kairouan. Kairouan is the center of an agricultural region and could potentially serve as a prime area for agro-processing. Road linkages with Sousse (and Tunis) now provide a stable transportation resource. Kairouan has good linkages with the interior, although rail linkages with Sousse are currently not functioning.

Kairouan has talented leadership at both the Governorate and Municipal level. It has two industrial zones, which are not fully developed partly due to a lack of infrastructure. However, major investment has been made over the past several years in a vehicle assembly plant and several other industries. There is potential for a cooperative development strategy between the Governorates of Sousse and Kairouan.

Overall, Kairouan has a below average rating. Both the Governorate and the Municipality, however, could improve substantially under the new economic leadership in the Office of the Secretary General. The fairly substantial base of employment and the positive scores for new business licenses suggest that there are economic activities in Kairouan that are not being properly reflected in the data. Land availability is also a positive aspect of Kairouan's development potential, but the absence of data makes it impossible to statistically verify what was observed in the field.

A list of recommended follow-up studies for the UIS is appended to this chapter.<sup>8</sup>

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<sup>8</sup>No chapter summary is provided for Chapter VI, as the Executive Summary already serves in that capacity.

### **Recommended Follow-up to this Study**

The recommended program should be further developed. Specifically, follow-on studies should be focused on:

1. Inviting selected public officials from the national, provincial, and city levels as well as selected private sector entrepreneurs to a workshop to discuss the principles of the proposed program and to confirm its viability.
2. Identifying and elaborating an appropriate institutional and financial framework (including the financial intermediary) for the program and its proposed line of credit, project appraisal functions and criteria, cost recovery arrangements, and likely technical and management support requirements
3. Undertaking a special case study to develop a model for regional development coordination between the Regional Council, Governorate, and municipality. Special attention should be given to role definition and a possible institutional development plan for the Regional Council.
4. Making a preliminary selection of cities and governorates for Component A with needed public and private entrepreneurship to participate in the program. Program development and pre-feasibility analysis for Component A of the program should also be undertaken, including:
  - exploring opportunities for economic development and export promotion through public private collaboration and agreements; and
  - defining the nature of appropriate infrastructure schemes to support economic activities, environmental improvement, communications, growth management, and shelter.
5. Developing and refining a program for Component B of the program, including assistance in the development of model programs in selected places.
6. Analyzing development resources which could support the proposed program: API, Chambers of Commerce, FOPRODI and FONAPRA and other forms of credit for enterprise development. Other types of assistance also need to be examined, such as: marketing and commercial linkages, quality control standards, promotion of joint ventures with foreign firms, data base development, etc. Seminars, training, and technical support may be required in this regard.
7. Supporting the creation of a development resources handbook and training program to be used by local government and enterprises interested in enterprise development, export promotion, and marketing.
8. Providing expertise for the development of environmental protection and improvement programs and assessment methodologies for future programs.
9. Using the Governorates of Sousse, Monastir, and Mahdia as a regional model. A workshop would be sponsored to discuss recommendations for regional cooperation for economic development and export promotion, growth management, and environmental protection. The region might be a candidate under Component A. Other regions might be encouraged to seek sponsorship as well.
10. Finding ways to assist the active population (particularly those between 20-24 years of age) to become better groomed for participation in urban economic and export activities.
11. Assisting in the development of sound public land policies, in the context of other RHUDO initiatives, which can make serviced urban land available in a timely fashion, contribute to growth management, and support economic and shelter development.
12. Seeking means to improve local resource mobilization, management, and autonomy in those places selected for the program (in conjunction with the broader World Bank program).

**ANNEX A**

**EMPLOYMENT**

**Table A-1. Unemployment Rate in Urban/Rural Areas by Age Group and Gender, 1984 (Percent of Labor Force)**

Active Age Group	Urban			Rural			TOTAL
	Men	Women	Both	Men	Women	Both	
From 15 to 17 years old	42.3	42.9	42.5	52.5	40.8	50.2	46.5
From 18 to 19 years old	38.2	27.1	33.9	41.6	16.6	33.1	33.5
From 20 to 24 years old	26.1	20.4	24.1	28.9	13.6	24.6	24.3
From 25 to 29 years old	11.2	11.4	11.3	16.9	9.0	15.2	12.9
From 30 to 34 years old	6.3	5.7	6.2	12.5	6.0	11.3	8.2
From 35 to 39 years old	5.0	4.2	4.9	9.8	3.6	8.7	6.4
From 40 to 44 years old	4.6	4.8	4.6	9.4	3.0	8.4	6.3
From 45 to 49 years old	5.0	5.6	5.0	9.0	3.6	8.2	6.5
From 50 to 54 years old	6.5	6.4	6.5	11.1	3.5	10.1	8.2
From 55 to 59 years old	8.3	6.6	8.2	11.0	4.9	10.3	9.2
From 60 to 64 years old	14.4	3.3	13.8	10.8	1.8	10.1	11.7
From 65 to 69 years old	13.3	12.7	13.3	8.4	1.4	7.9	9.9
From 70 to 74 years old	11.9	18.9	12.3	5.9	4.0	5.0	7.1
From 75 to 79 years old	15.0	0	13.9	2.7	0	2.6	5.4
80 years old and over	16.3	14.3	16.0	4.4	0	4.1	7.7
From 15 to 64 years old	14.5	16.8	15.0	20.4	12.2	18.7	16.7
From 18 to 59 years old	12.8	14.6	13.2	17.8	9.8	16.1	14.5
<b>TOTAL</b>	<b>14.5</b>	<b>16.8</b>	<b>15.0</b>	<b>19.6</b>	<b>12.0</b>	<b>18.1</b>	<b>16.4</b>

Source: Recensement Général de la Population et de l'Habitat (1984); Volume No. 5: Caractéristiques Economiques

**Table A-2. Unemployment Rate by Governorate, Gender, and Urban/Rural Location, 1984 (Percent of Labor Force)**

Governorate	Urban			Rural			TOTAL
	Men	Women	Both	Men	Women	Both	
Tunis	14.4	18.9	15.6	—	—	—	15.6
Ariana	12.7	13.4	12.9	14.2	14.4	14.2	13.5
Ben Arous	13.2	21.5	15.1	14.2	36.2	18.0	15.5
Bizerte	18.1	22.0	19.0	21.5	8.6	20.9	19.2
Nabeul	10.3	9.5	10.1	11.7	9.3	11.2	10.6
Zaghouan	14.4	12.8	14.0	18.1	5.6	15.4	15.0
Silliana	17.8	26.2	19.9	21.5	17.7	20.7	20.6
Béja	19.4	24.2	20.6	19.4	15.6	18.6	19.2
Le Kef	25.0	23.3	24.6	24.6	11.7	22.2	23.2
Jendouba	26.0	17.2	23.9	33.1	17.7	29.9	28.8
Sfax	8.0	12.3	8.9	18.1	14.1	17.3	12.2
Sousse	13.0	12.8	13.0	16.5	23.1	17.9	14.4
Monastir	12.7	20.3	14.7	14.0	26.7	17.2	15.1
Mahdia	12.9	11.9	12.7	16.4	11.9	15.1	14.3
Kairouan	16.1	15.8	16.0	14.8	5.5	13.2	13.9
Kasserine	23.6	11.6	21.3	22.7	5.2	19.2	19.8
Sidi Bouzid	14.9	13.4	14.6	18.6	10.4	16.0	16.9
Gabès	17.7	16.1	17.4	27.0	7.8	23.2	19.7
Médenine	10.5	8.7	10.2	13.7	3.2	11.8	10.9
Tataouine	18.0	9.2	16.8	11.2	2.3	9.5	12.2
Gafsa	21.5	19.2	21.2	27.9	9.5	25.4	22.7
Tozeur	12.4	13.1	12.5	20.4	17.7	19.9	15.0
Kebili	17.9	13.5	16.8	15.1	9.7	14.1	14.9
All Tunisia	14.5	16.8	15.0	19.6	12.0	18.1	16.4

Source: Recensement Général de la Population et de l'Habitat (1984); Volume No. 5: Caractéristiques Economiques

Table A-3. Urban and Rural Labor Force by Governorate and Gender, 1984

Governorate	Urban			Rural			TOTAL
	Men	Women	Both	Men	Women	Both	
Tunis	205,970	70,980	276,950	—	—	—	276,950
Ariana	48,720	15,550	64,270	45,700	10,210	55,910	120,180
Ben Arous	56,530	17,170	73,700	8,500	1,770	10,270	83,970
Nabeul	65,740	19,560	85,300	51,720	15,070	66,790	152,090
Zaghouan	7,340	2,730	10,070	21,830	6,080	27,910	37,980
Bizerte	55,010	15,880	70,890	46,220	8,690	55,910	125,800
Béja	21,360	6,520	27,880	48,920	13,170	62,090	89,970
Jendouba	16,060	5,280	21,340	73,900	18,960	92,860	114,200
Le Kef	22,270	6,940	29,210	37,510	8,310	45,820	75,030
Siliana	9,980	3,250	13,230	42,450	9,950	52,400	65,630
Kairouan	23,610	6,650	30,200	76,460	15,890	92,350	122,610
Kasserine	18,770	4,470	23,240	47,060	11,910	58,970	82,210
Sidi Bouzid	7,930	2,020	9,950	55,880	11,440	65,320	77,270
Sousse	55,380	16,410	71,790	22,300	5,920	28,220	100,010
Monastir	55,070	18,790	73,860	10,780	3,590	14,370	88,230
Mahdia	23,090	6,470	29,560	38,660	15,410	54,070	83,630
Sfax	84,540	21,050	105,590	55,060	13,150	68,210	173,800
Gafsa	32,860	5,620	38,480	19,450	2,960	22,410	60,890
Tozeur	10,040	2,510	12,550	5,300	1,240	6,540	19,090
Kebili	5,370	1,480	6,850	13,300	3,190	16,490	23,340
Gabès	32,770	7,070	39,840	21,600	5,380	26,980	66,820
Médenine	35,680	6,930	42,610	24,580	5,580	30,100	72,770
Tataouine	7,990	1,310	9,300	12,400	3,040	15,440	24,740
All Tunisia	902,080	264,640	116,720	779,580	190,910	970,490	2,137,210

Source: Recensement Général de la Population et de l'Habitat (1984); Volume No. 1: Population;  
Volume No. 5: Caractéristiques Economiques

**Table A-4. Urban and Rural Labor Force by Age Group and Gender, 1984**

Active Age Group	Urban			Rural			TOTAL
	Men	Women	Both	Men	Women	Both	
From 15 to 17 years old	49,900	21,370	71,330	61,780	14,860	76,640	147,970
From 18 to 19 years old	54,090	33,380	87,470	56,070	29,050	85,060	172,530
From 20 to 24 years old	152,670	78,860	231,530	122,280	48,040	170,320	401,850
From 25 to 29 years old	147,590	50,960	198,550	107,350	28,860	136,210	334,760
From 30 to 34 years old	120,090	30,560	150,650	81,730	18,120	99,850	250,500
From 35 to 39 years old	82,420	18,180	100,600	57,490	11,330	68,820	169,420
From 40 to 44 years old	72,910	10,400	83,310	56,850	10,390	67,240	150,550
From 45 to 49 years old	71,660	8,680	80,340	62,100	10,140	72,240	152,580
From 50 to 54 years old	64,480	6,050	70,530	57,670	8,870	66,540	137,070
From 55 to 59 years old	43,470	3,490	46,960	42,740	5,920	48,660	95,620
From 60 to 64 years old	21,890	1,220	23,110	29,740	2,220	31,960	55,070
From 65 to 69 years old	10,870	630	11,500	18,890	1,450	20,340	31,840
From 70 to 74 years old	6,400	370	6,770	14,910	1,010	15,920	22,690
From 75 to 79 years old	1,800	140	1,940	5,460	380	5,840	7,780
80 years old and over	1,780	350	2,130	4,580	270	4,850	6,980
From 15 to 64 years old	881,230	263,150	1,144,380	735,740	187,800	923,540	2,067,920
From 18 to 59 years old	809,380	240,560	1,049,940	644,220	170,720	816,940	1,864,880
<b>TOTAL</b>	<b>902,080</b>	<b>264,640</b>	<b>1,166,720</b>	<b>779,580</b>	<b>190,910</b>	<b>970,490</b>	<b>2,137,210</b>

Source: Recensement Général de la Population et de l'Habitat (1984), Volume No. 5: Caractéristiques Economiques

**Table A-5. Percentage of Urban/Rural Population in Labor Force  
by Age Group and Gender, 1984**

Active Age Group	Urban			Rural			TOTAL
	Men	Women	Both	Men	Women	Both	
From 15 to 17 years old	38.5	17.2	28.1	55.2	14.0	35.2	31.4
From 18 to 19 years old	60.3	36.9	48.6	75.9	40.8	58.7	53.1
From 20 to 24 years old	76.8	40.9	59.2	85.4	34.2	60.1	59.6
From 25 to 29 years old	94.7	33.1	64.1	96.1	24.6	59.4	62.1
From 30 to 34 years old	97.9	26.5	63.3	97.7	19.8	57.0	60.6
From 35 to 39 years old	97.8	20.2	57.7	98.0	17.3	55.5	56.8
From 40 to 44 years old	97.5	13.5	54.8	97.5	15.9	54.3	54.6
From 45 to 49 years old	95.6	11.1	52.4	96.9	14.9	54.7	53.5
From 50 to 54 years old	92.1	8.8	50.9	93.6	14.7	54.7	52.7
From 55 to 59 years old	78.3	6.7	43.7	86.4	13.5	52.2	47.7
From 60 to 64 years old	48.7	2.9	26.8	70.4	6.1	40.7	33.4
From 65 to 69 years old	32.7	2.4	19.2	59.5	6.4	37.5	27.9
From 70 to 74 years old	24.5	1.6	13.7	53.0	5.3	33.9	23.5
From 75 to 79 years old	14.5	1.2	8.0	44.5	3.2	28.9	17.5
80 years old and over	14.7	2.6	8.3	38.1	3.3	23.9	15.2
From 15 to 64 years old	80.0	24.3	52.4	85.7	21.7	53.6	52.9
From 18 to 59 years old	87.4	26.2	56.9	91.5	21.5	54.3	55.8
<b>TOTAL</b>	<b>76.1</b>	<b>22.8</b>	<b>49.8</b>	<b>82.7</b>	<b>20.7</b>	<b>52.0</b>	<b>50.8</b>

Source: Recensement Général de la Population et de l'Habitat (1984); Volume No.1: Population;  
Volume No. 5: Caractéristiques Economiques

**Table A-6. Number of Employed Persons in Urban and Rural Areas  
by Age Group and Gender, 1984**

Age Group	Urban			Rural			TOTAL
	Men	Women	Both	Men	Women	Both	
From 15 to 17 years old	28,840	12,200	41,040	29,350	8,790	38,140	79,180
From 18 to 19 years old	33,450	24,350	57,800	32,690	24,220	56,910	114,710
From 20 to 24 years old	112,870	62,770	175,640	86,900	41,510	128,410	304,050
From 25 to 29 years old	131,030	45,150	176,180	89,240	26,250	115,490	291,670
From 30 to 34 years old	112,470	28,830	141,300	71,550	17,030	88,580	229,880
From 35 to 39 years old	78,280	17,420	95,700	51,880	10,920	62,800	158,500
From 40 to 44 years old	69,560	9,900	79,460	51,500	10,080	61,580	141,040
From 45 to 49 years old	68,110	8,190	76,300	56,510	9,780	66,290	142,590
From 50 to 54 years old	60,310	5,660	65,970	51,280	8,560	59,840	125,810
From 55 to 59 years old	39,850	3,260	43,110	38,040	5,630	43,670	86,780
From 60 to 64 years old	18,740	1,180	19,920	26,540	2,180	28,720	48,640
From 65 to 69 years old	9,420	550	9,970	17,300	1,430	18,730	28,700
From 70 to 74 years old	5,640	300	5,940	14,160	970	15,130	21,070
From 75 to 79 years old	1,530	140	1,670	5,310	380	5,690	7,360
80 years old and over	1,490	300	1,790	4,380	270	4,650	6,440
From 15 to 64 years old	753,510	218,910	972,420	585,480	164,950	750,430	1,722,850
From 18 to 59 years old	705,330	205,530	911,460	529,590	153,980	683,570	1,595,030
<b>TOTAL</b>	<b>771,530</b>	<b>220,200</b>	<b>991,790</b>	<b>626,630</b>	<b>168,000</b>	<b>794,630</b>	<b>1,786,420</b>

Source: Recensement Général de la Population et de l'Habitat (1984); Volume No. 5: Caractéristiques Economiques

**Table A-7. Number of Employed Persons in Urban and Rural Areas  
by Governorate and Gender, 1984**

Governorate	Urban			Rural			TOTAL
	Men	Women	Both	Men	Women	Both	
Tunis	176,310	57,560	233,870	--	--	--	233,870
Ariana	42,540	13,460	56,000	39,230	8,740	47,970	103,970
Ben Arous	49,060	13,480	62,540	7,290	1,130	8,420	70,960
Nabeul	58,950	17,700	76,650	45,670	13,670	59,340	135,990
Zaghouan	6,280	2,380	8,660	10,570	5,740	23,610	32,270
Bizerte	45,040	12,380	57,420	36,210	7,940	44,230	101,650
Béja	17,210	4,940	22,150	39,440	11,110	50,550	72,700
Jendouba	11,880	4,370	16,250	49,460	15,610	65,070	81,320
Le Kef	16,700	5,320	22,020	28,300	7,340	35,640	57,660
Siliana	8,200	2,400	10,600	33,340	8,190	41,530	52,130
Kairouan	19,820	5,600	25,420	65,120	15,020	80,140	105,560
Kasserine	14,340	3,950	18,290	36,360	11,290	47,650	65,940
Sidi Bouzid	6,750	1,750	8,500	45,460	10,250	55,710	64,210
Sousse	48,160	14,310	62,470	18,610	4,550	23,160	85,630
Monastir	48,050	14,980	63,030	9,270	2,630	11,900	74,930
Mahdia	20,710	5,700	25,810	32,310	13,580	45,890	71,700
Sfax	77,740	18,470	96,210	45,080	11,300	56,380	152,590
Gafsa	25,790	4,540	30,330	14,030	2,680	16,710	47,040
Tozeur	8,800	2,180	10,980	4,220	1,020	5,240	16,220
Kébili	4,420	1,280	5,700	11,290	2,880	14,170	19,870
Gabès	26,970	5,930	32,900	15,770	4,960	20,730	53,630
Médenine	31,920	6,330	38,250	21,210	5,400	26,610	64,860
Tataouine	6,550	1,190	7,740	11,010	2,970	13,980	21,720
All Tunisia	771,590	220,200	991,790	626,630	168,000	794,630	1,786,420

Source: Recensement Général de la Population et de l'Habitat (1984)

Table A-8. Distribution of Employed Population by Governorate and Branch of Activity, 1984

City	Ag & Fishing	Food & Tobacco	Constr. Maters.	Mech. Ind.	Chem. Ind.	Textiles	Manuf.	Mines, Energy	Public Works	Commer. Activity	Transp.	Hotels, Tourism	Banking, Finance	Repairs	Consult.	Social Services, Admin.	Other	TOTAL
Tunis	3,170	6,630	2,620	6,320	1,760	27,230	8,770	5,280	19,340	24,420	19,950	5,870	6,230	8,060	11,700	60,670	15,820	233,820
Ariana	18,630	3,050	1,170	2,130	480	11,690	3,120	1,980	14,930	6,970	6,230	1,230	1,480	2,530	3,990	18,190	6,170	103,970
Ben Arous	5,720	2,210	2,470	3,520	1,510	6,860	2,970	1,560	6,350	6,780	5,610	1,070	1,510	1,580	2,040	13,440	5,760	70,960
Bizerte	31,650	790	1,790	4,440	400	12,830	1,980	1,680	12,840	5,320	3,850	1,200	520	1,980	1,430	14,780	4,170	101,650
Nabeul	49,450	1,670	3,600	1,570	220	14,780	3,570	1,130	14,620	8,230	3,740	6,420	420	2,580	2,200	16,400	5,390	135,990
Zaghouan	11,540	190	1,410	570	300	4,250	230	530	5,200	1,220	990	170	60	480	390	3,830	910	32,270
Siliana	21,420	220	540	190	80	4,520	540	690	7,970	1,800	1,530	250	80	660	510	676,720	4,410	52,130
Béja	28,590	1,140	640	330	30	68,980	740	780	10,450	3,620	2,360	740	190	970	1,180	10,070	3,890	72,700
Le Kef	21,040	570	700	180	40	5,870	480	2,170	7,750	2,480	1,570	380	100	680	640	7,540	5,470	57,860
Jendouba	27,280	930	990	210	10	9,070	1,150	1,380	12,750	3,300	1,720	1,260	130	1,150	1,500	9,340	9,150	81,320
Sfax	39,790	3,110	1,650	3,190	2,830	19,580	7,440	2,300	15,360	12,150	10,380	1,420	690	4,900	3,110	20,340	6,350	152,590
Sousse	11,940	1,500	2,090	3,260	380	11,580	3,460	340	13,210	6,070	6,390	5,280	410	2,120	1,260	15,160	2,580	85,630
Monastir	9,210	400	2,260	1,230	50	18,410	2,730	830	10,350	6,080	3,800	2,380	340	1,080	840	128,800	2,160	74,930
Mahdia	29,430	860	630	340	280	10,090	800	400	10,130	4,350	2,000	840	120	810	400	7,970	2,250	71,700
Kairouan	45,250	1,350	800	270	100	9,270	1,390	590	21,380	4,980	3,310	980	110	1,090	630	11,430	2,630	105,560
Kasserine	27,840	330	580	120	30	6,220	1,600	460	13,360	2,900	1,830	360	50	500	320	6,000	3,440	65,940
Sidi Bouzid	37,380	360	270	200	-	3,010	720	310	8,480	2,200	1,860	330	60	610	180	6,150	2,090	64,210
Gabès	11,000	1,090	1,510	850	2,420	5,640	1,290	640	7,820	3,150	3,270	750	190	1,340	490	7,830	4,350	53,630
Médénine	17,260	1,020	2,220	400	100	6,170	880	850	12,310	5,600	3,100	3,360	240	1,210	930	8,410	1,910	64,860
Tataouine	7,170	40	20	40	10	1,850	80	320	3,330	2,930	1,000	290	20	320	90	2,540	1,670	21,720
Gafsa	8,790	440	240	160	140	3,820	460	12,860	5,090	2,240	2,950	360	80	820	380	6,450	1,810	47,040
Tozeur	3,830	160	130	50	10	2,080	220	150	1,750	660	510	480	20	170	90	2,730	3,200	16,220
Kébili	7,990	90	160	100	-	2,090	230	200	2,770	890	750	120	10	300	80	2,590	1,500	19,870
All Tunisia	4,753,706	28,150	27,380	29,670	11,180	203,890	44,850	38,030	237,690	118,340	86,700	35,520	13,060	35,950	34,380	271,380	5,080	1,786,420

Source: Recensement Général de la Population et de l'Habitat (1984), Volume No. 5: Caractéristiques Economiques

**Table A-9. Distribution of Employed Governorate Populations by Primary, Secondary, and Tertiary Sectors (Percent of Total Employed), 1984**

Governorate	Primary Sector	Secondary Sector		Tertiary Sector		Undeclared	TOTAL
		Manufact./ Industry	Total	Productive Services	Total		
Tunis	1.4	(22.8)*	33.3	(32.6)*	58.5	6.8	100.0
Ariana	17.9	(20.8)	37.1	(21.6)	39.1	5.9	100.0
Ben Arous	8.1	(27.5)	38.7	(26.2)	45.1	8.1	100.0
Bizerte	31.1	(21.9)	36.2	(14.1)	28.6	4.1	100.0
Nabeul	36.4	(18.7)	30.3	(15.7)	29.4	3.9	100.0
Zaghouan	35.8	(21.5)	39.3	(10.3)	22.1	2.8	100.0
Silliana	41.1	(11.7)	28.3	(9.3)	22.2	8.4	100.0
Béja	39.3	(13.6)	29.0	(12.5)	26.3	5.4	100.0
Le Kef	36.5	(13.6)	30.8	(10.1)	23.2	9.5	100.0
Jendouba	33.5	(15.2)	32.6	(11.1)	22.6	11.3	100.0
Sfax	26.1	(24.8)	36.3	(21.4)	34.7	2.9	100.0
Sousse	13.9	(26.0)	42.5	(22.8)	40.5	3.1	100.0
Monastir	12.3	(33.5)	48.4	(19.4)	36.4	2.9	100.0
Mahdia	41.0	(18.1)	32.8	(11.9)	23.0	3.2	100.0
Kairouan	42.9	(12.5)	33.3	(10.5)	21.3	2.5	100.0
Kasserine	42.2	(13.5)	34.4	(9.0)	18.1	5.3	100.0
Sidi Bouzid	58.2	(7.1)	20.8	(8.2)	17.7	3.3	100.0
Gabès	20.5	(23.9)	39.6	(17.1)	31.7	8.2	100.0
Médenine	26.6	(14.9)	35.2	(22.3)	35.2	3.0	100.0
Tataouine	33.0	(9.4)	26.2	(21.4)	33.1	7.7	100.0
Gafsa	18.7	(11.2)	49.2	(14.5)	28.2	3.9	100.0
Tozeur	23.6	(16.3)	28.1	(11.8)	28.6	19.7	100.0
Kebili	40.2	(13.4)	28.4	(10.8)	23.9	7.5	100.0
All Tunisia	26.6	(19.3)	34.7	(18.1)	33.3	5.4	100.0

Source: Recensement Général de la Population et de l'Habitat (1984); Volume No. 5: Caractéristiques Economiques

\*Shown as a percentage of total employment in the sector.

**Table A-10. Distribution of Employed Governorate Populations  
by Secondary Sector Activity, 1984  
(Percent of Total Employed)**

Governorate	Food and Tobacco	Constr. Materials	Mechan. Industry	Chemical Industry	Textile Industry	Manufacturing	Mines and Energy	Public Works	TOTAL Secondary Sector
Tunis	8.5	3.4	8.1	2.3	34.9	11.2	6.8	24.8	100.0
Ariana	7.9	3.0	5.5	1.3	30.3	8.1	5.2	38.7	100.0
Ben Arous	8.1	9.0	12.8	5.5	25.0	10.8	5.7	23.1	100.0
Bizerte	2.1	4.9	12.1	1.1	34.9	5.4	4.6	34.9	100.0
Nabeul	4.1	8.8	3.8	0.5	35.9	8.7	2.7	35.5	100.0
Zaghouan	1.5	11.1	4.5	2.4	33.5	1.8	4.2	41.0	100.0
Siliana	1.5	3.7	1.3	0.5	30.6	3.7	4.7	54.0	100.0
Béja	5.4	3.0	1.6	0.1	33.1	3.5	3.7	44.6	100.0
Le Kef	3.2	3.9	1.0	0.2	33.1	2.7	12.2	43.7	100.0
Jendouba	3.5	3.7	0.8	0.4	34.3	4.3	5.2	48.1	100.0
Sfax	5.6	3.0	5.8	5.1	35.3	13.4	4.1	27.7	100.0
Sousse	4.1	5.7	9.0	1.0	31.8	9.5	2.6	36.3	100.0
Monastir	1.1	6.2	3.4	0.1	50.8	7.5	2.3	28.5	100.0
Mahdia	3.7	2.7	1.4	1.2	42.9	3.4	1.7	43.0	100.0
Kairouan	3.8	2.3	0.8	0.3	26.4	4.0	1.7	60.8	100.0
Kasserine	1.4	2.6	0.6	0.1	27.4	7.0	2.0	58.9	100.0
Sidi Bouzid	2.7	2.0	1.5	—	22.6	5.4	2.3	63.5	100.0
Gabès	5.1	7.1	4.0	11.4	26.5	6.1	3.0	36.8	100.0
Médenine	4.5	4.9	1.7	0.4	27.0	3.9	3.7	53.9	100.0
Tataouine	0.7	0.4	0.7	0.2	32.5	1.4	5.6	58.5	100.0
Gafsa	1.9	1.0	0.7	0.6	16.5	2.0	55.5	21.8	100.0
Tozeur	3.5	2.9	1.1	0.2	45.7	4.8	3.3	38.5	100.0
Kebill	1.6	2.8	1.7	—	37.1	4.1	3.6	49.1	100.0
All Tunisia	4.5	4.4	4.8	1.8	32.9	7.2	6.1	38.3	100.0

Source: Recensement Général de la Population et de l'Habitat (1984); Volume No.5: Caractéristiques Economiques

**Table A-11. Distribution of Employed Governorate Populations by Tertiary Sector Branch, 1984  
(Percent of Total Employed)**

Governorate	Commerce	Transport and Commun.	Hotel and Restaurant	Banks and Insurance	Repairs	Consulting	Social Services and Admin.	TOTAL
Tunis	17.8	14.6	4.3	4.6	5.9	8.5	44.3	100.0
Ariana	17.2	15.3	3.0	3.7	6.2	9.8	44.8	100.0
Ben Arous	21.2	17.5	3.3	4.7	4.9	6.4	42.0	100.0
Bizerte	18.3	13.3	4.1	1.8	6.8	4.9	50.8	100.0
Nabeul	20.6	9.4	16.1	1.0	6.4	5.5	41.0	100.0
Zaghouan	17.1	13.9	2.4	0.8	6.7	5.5	53.6	100.0
Siliana	15.6	13.2	2.2	0.7	5.7	4.4	58.2	100.0
Béja	18.9	12.3	3.9	1.0	5.1	6.2	52.6	100.0
Le Kef	18.5	11.7	2.8	0.8	5.1	4.8	56.3	100.0
Jendouba	17.9	9.3	6.8	0.7	6.3	8.2	50.8	100.0
Sfax	22.9	19.6	2.7	1.3	9.2	5.9	38.4	100.0
Sousse	17.5	12.7	15.2	1.2	6.1	3.6	43.7	100.0
Monastir	22.3	13.9	8.7	1.2	3.9	3.1	46.9	100.0
Mahdia	26.4	12.1	5.1	0.7	4.9	2.4	48.4	100.0
Kairouan	22.1	14.7	4.4	0.5	4.8	2.8	50.7	100.0
Kasserine	24.2	15.3	3.0	0.4	4.2	2.7	50.2	100.0
Sidi Bouzid	19.3	16.3	2.9	0.5	5.4	1.6	54.0	100.0
Gabès	18.5	19.2	4.4	1.1	7.9	2.9	46.0	100.0
Médenine	24.5	13.6	14.7	1.0	5.3	4.1	36.8	100.0
Tataouine	40.8	13.9	4.0	0.3	4.4	1.3	35.3	100.0
Gafsa	16.9	22.2	2.7	0.6	6.2	2.8	48.6	100.0
Tozeur	14.2	11.0	9.9	0.4	3.7	1.9	58.9	100.0
Kebilli	18.8	15.8	2.5	0.2	6.3	1.7	54.7	100.0
All Tunisia	19.9	14.5	6.0	2.2	6.0	5.8	45.6	100.0

Source: Recensement Général de la Population et de l'Habitat (1984), Volume No. 5: Caractéristiques Economiques

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Table A-12. Number of Jobs Created (1979 - 1989) by Type of Economic Activity

Type of Activity	Year	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	TOTAL
	<b>Agriculture</b>		200	600	1,200	500	500	700	1,300	1,500	1,500	1,000	800
<b>% of total</b>		0.5	1.5	2.5	1.3	1.2	1.6	2.9	5.0	4.3	2.4	1.8	2.2
<b>Manufacturing Industries</b>		19,700	17,400	18,660	14,000	15,200	13,000	15,000	12,000	11,000	14,000	15,000	164,960
<b>% of total</b>		45.5	43.6	39.2	35.1	35.6	30.6	33.6	39.8	31.4	33.3	34.1	36.5
<b>Non Manufacturing industries</b>		7,300	5,000	7,240	3,170	2,520	3,440	-550	-3,050	-1,450	-500	1,200	24,320
<b>% of total</b>		16.9	12.5	15.2	7.9	5.9	8.1	-1.2	-10.1	-4.1	-1.2	2.7	5.4
<b>Product, Services</b>		9,200	10,000	11,500	9,000	8,900	14,400	16,850	125,900	19,450	20,500	18,000	153,700
<b>% of total</b>		21.2	25.1	24.2	22.5	20.8	33.8	37.8	52.7	55.6	48.8	40.9	34.0
<b>Administration</b>		6,900	6,900	9,000	13,250	15,600	11,000	12,000	3,800	4,500	7,000	9,000	98,950
<b>% of total</b>		15.9	17.3	18.9	33.2	36.5	25.9	26.9	12.6	12.8	16.7	20.5	21.9
<b>TOTAL</b>		43,300	39,900	47,600	39,920	42,720	42,540	44,600	30,150	35,000	42,000	44,000	451,730
<b>% of total</b>		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Ministère du Plan, Direction des Ressources Humaines et de l'Emploi

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<b>Table A-13. Distribution by Governorate of Wholesale Points of Sale Approved between 1984 and 1988</b>						
<b>Governorates</b>	<b>1984</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>TOTAL</b>
<b>Northeast</b>	22	34	37	35	30	158
Tunis	12	17	17	15	15	76
<b>Northwest</b>	11	8	17	23	7	66
<b>Center East</b>	45	36	35	29	33	178
Sfax	14	16	24	6	16	76
<b>Center West</b>	8	10	14	8	3	43
<b>South</b>	8	22	24	21	8	83
<b>TOTAL</b>	94	110	127	116	81	528
<b>Source: Ministère de l'Economie Nationale, Agréments Commerciaux</b>						

**Table A-14. Change in the Number of Hotel Beds by Governorate and City  
Between 1983 and 1987**

GOVERNORATES and Cities	Number of Beds In 1983	Beds Added				Number of Beds in 1987	Average Annual Rate of Growth (%), 1983-87
		1984	1985	1986	1987		
TUNIS, Ariana, and Ben Arous	9,208	178	1,970	1,616	563	13,535	10.1
NABEUL	23,654	648	2,081	710	851	27,944	4.2
Nabeul	6,498	258	18	462	156	7,392	3.3
Hammamet	15,543	390	2,061	30	795	18,819	4.8
BIZERTE	1,807	0	158	0	0	1,965	2.1
Bizerte	1,767	0	126	0	0	1,893	1.7
ZAGHOUAN	170	0	0	90	0	260	11.2
SILIANA	12	0	0	0	0	12	0
BEJA	123	0	0	0	0	123	0
LE KEF	0	22	0	0	0	22	-
JENDOUBA	1,767	0	36	0	-132	871	-15.6
Jendouba	32	0	0	0	0	32	0
Tabarka	1,437	0	36	0	-932	541	-21.7
Ain Draham	286	0	0	0	0	286	0
SFAX	2,240	0	52	-11	124	2,405	1.8
Sfax	1,195	0	52	23	124	1,394	3.9
SOUSSE	17,161	546	1,026	878	699	20,222	4.2
MONASTIR	7,054	156	2,334	1,476	388	11,408	12.8
MAHDIA	710	0	200	306	0	1,216	16.6
KAIROUAN	794	0	0	0	0	794	0
KASSERINE	255	26	0	0	0	281	2.5
Kasserine	99	26	0	0	0	125	6.0
SIDI BOUZID	56	0	0	0	0	56	0
GABES	1610	56	25	60	0	1,751	2.1
Gabès	1,290	56	25	60	0	1,431	2.6
MEDENINE	12,337	430	958	386	35	14,146	3.5
Jerba	8,664	550	958	362	-65	10,469	4.8
Zarzis	3,607	-120	0	24	100	3,611	0
TATAQUINE	212	0	0	-106	0	106	-15.9
GAFSA	392	0	117	0	0	509	6.7
TOZEUR	1,429	0	0	78	126	1,633	3.4
Tozeur	707	0	0	78	126	911	6.5
KEBILI	790	40	0	0	0	830	1.2
ALL TUNISIA	81,781	2,102	8,957	5,483	1,766	100,089	5.2

Source: Office National du Tourisme Tunisien, Direction des Etudes et des Participations

**Table A-15. Distribution by Governorate of the Number of Projects Financed by FONAPRA  
and the Corresponding Number of Jobs Created**

Governorates	Total from 1982 to 6/30/89		1985		1986		1987		1988		1985-88			
	No. of projects	%	No. of projects	No. of Jobs	Projects		Jobs							
											Number	%	Number	%
Tunis	2,223	21.4	771	3,236	686	2,393	409	1,518	679	2,408	2,545	33.1	9,555	32.0
Ariana	741	7.2												
Ben Arous	605	5.8												
Nabeul	633	6.1	119	501	115	537	50	219	105	304	389	5.1	1,561	5.2
Zaghouan	175	1.7	40	174	23	89	11	35	36	99	110	1.4	397	1.4
Bizerte	577	5.6	132	506	91	390	49	231	83	266	355	4.6	1,393	4.7
Béja	189	1.8	51	200	43	118	13	34	36	118	143	1.9	470	1.6
Jendouba	173	1.7	69	269	44	192	15	53	38	176	166	2.2	690	2.3
Le Kef	152	1.5	67	297	41	169	17	54	22	85	147	1.9	605	2.0
Siliana	216	2.1	96	359	28	134	13	65	40	153	177	2.3	711	2.4
Kairouan	218	2.1	63	240	30	113	22	90	39	181	154	2.0	624	2.1
Kasserine	247	2.4	213	764	26	96	13	32	11	39	263	3.4	931	3.1
Sidi Bouzid	145	1.4	103	374	24	77	13	52	13	47	153	2.0	550	1.8
Sousse	428	4.1	122	621	97	521	34	162	117	450	370	4.8	1,754	5.9
Monastir	996	9.6	291	1,334	102	474	20	171	19	82	432	5.6	2,061	6.9
Mahdia	286	2.8	133	640	29	119	26	77	17	58	205	2.7	894	3.0
Sfax	1,230	11.9	275	1,280	230	1,038	126	606	365	1,306	996	13.0	4,230	14.1
Gafsa	238	2.3	95	393	34	113	42	119	33	126	204	2.6	751	2.5
Tozeur	54	0.5	16	75	13	42	1	2	5	13	35	0.5	132	0.4
Kebili	118	1.1	77	226	38	73	10	41	9	29	134	1.7	369	1.2
Gabès	398	3.8	249	851	85	238	50	100	47	125	431	5.6	1,314	4.4
Médenine	260	2.5	126	461	30	71	24	63	40	105	220	2.9	700	2.3
Tataouine	66	0.6	48	187	1	2	2	9	5	14	56	0.7	212	0.7
<b>All Tunisia</b>	<b>10,368</b>	<b>100.0</b>	<b>3,156</b>	<b>12,988</b>	<b>1,810</b>	<b>6,999</b>	<b>960</b>	<b>3,733</b>	<b>1,759</b>	<b>6,184</b>	<b>7,685</b>	<b>100.0</b>	<b>29,904</b>	<b>100.0</b>

Sources: Central Bank of Tunisia and FONAPRA

# **ANNEX B**

## **COUNTRY LEVEL INFRASTRUCTURE DATA**

<b>Table B-1. Urban Services by Governorate (In Percent)</b>					
<b>Governorates</b>	<b>Electricity</b>	<b>Water Supply</b>		<b>Sewer</b>	
	<b>Urban Households with Electricity</b>	<b>SONEDE</b>	<b>Public Water Fountain or Cistern</b>	<b>Sewer</b>	<b>Septic Tank</b>
<b>Tunis</b>	94.9	90.4	6.9	84.0	10.2
<b>Ariana</b>	89.6	83.2	11.8	55.7	22.4
<b>Ben Arous</b>	92.3	88.4	7.0	55.3	35.4
<b>Nabeul</b>	92.1	75.1	6.4	63.1	26.2
<b>Zaghouan</b>	79.3	73.8	22.6	50.1	26.6
<b>Bizerte</b>	93.6	81.8	11.0	78.7	12.9
<b>Béja</b>	88.5	79.9	15.9	77.4	11.0
<b>Jendouba</b>	91.9	87.8	5.3	54.9	17.9
<b>Le Kef</b>	79.9	64.5	24.1	50.1	25.5
<b>Siliana</b>	90.8	90.8	7.7	50.1	23.4
<b>Kairouan</b>	89.4	63.3	12.3	58.5	21.7
<b>Kasserine</b>	78.8	76.3	10.9	21.4	41.1
<b>Sidi Bou Zid</b>	92.3	81.5	3.0	12.6	64.5
<b>Sousse</b>	92.7	93.4	3.0	54.9	25.5
<b>Monastir</b>	93.2	92.0	3.5	37.3	29.0
<b>Matrdia</b>	87.5	74.2	4.6	19.5	45.1
<b>Sfax</b>	93.2	78.1	2.7	33.7	57.0
<b>Gafsa</b>	95.7	57.7	34.6	24.1	25.6
<b>Tozeur</b>	91.4	92.6	5.5	21.9	21.9
<b>Kebilli</b>	90.7	81.5	9.5	0.5	18.0
<b>Gabès</b>	92.0	80.9	14.1	27.2	52.7
<b>Médenine</b>	78.3	49.9	8.7	2.0	47.6
<b>Tataouine</b>	88.1	62.1	4.7	5.9	53.8
<b>All Tunisia</b>	91.3	81.7	8.7	51.5	28.7

Source: Recensement General de la Population et de l'Habitat, Volume 2 (1984), Institut National de Statistique (1989)

# **ANNEX C**

# **WATER**

**Table C-1. Major Connections by User Category (Governorate)**

GOVERNORATE:	TUNIS (DRGT)			NORTHERN REGION								
	GRAND TUNIS			BIZERTE			JENDOUBA			LE KEF		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
<b>SONEDE Subscriber Classification</b>												
Household Connections	209,444	14,631	224,075	38,700	2,462	41,162	16,260	1,158	17,418	15,397	193	15,590
Public Standpipes	195	30	225	38	10	48	20	13	33	22	9	31
<b>Industrial Sector</b>												
Food	263	24	287	48	6	54	15	28	43	26	-	26
Mechanical	125	8	133	15	2	17	1	-	1	6	1	7
Textile	114	9	123	28	4	32	10	1	11	6	1	7
Mining	6	-	6	-	1	1	-	-	-	-	-	-
Construction Materials	67	17	84	14	4	18	3	-	3	4	-	4
Chemical	157	4	161	9	4	13	2	-	2	4	-	4
Others	321	39	360	14	11	25	14	5	19	6	1	7
<b>Tourism</b>												
Hotels "haut classe" ONTT	62	-	62	9	-	9	1	-	1	-	-	-
Hotels "ordinaire"	84	-	84	8	-	8	17	-	17	6	1	7
<b>Mixed</b>												
Commerce	2,869	52	2,921	457	16	473	264	3	267	244	2	246
Government	837	15	852	110	8	118	148	12	160	133	1	134
Transport Facilities	99	8	107	42	2	44	11	1	12	12	2	14
Education	682	41	723	121	17	138	91	12	103	78	6	84
Medical	156	15	171	39	6	45	28	9	37	21	3	24
Defense	40	3	43	47	-	47	4	1	5	3	-	3
Municipal Facilities	227	12	239	37	-	37	30	1	31	10	-	10
Other	591	27	618	145	13	158	83	4	87	94	1	95
Irrigation	4	1	5	1	-	1	-	-	-	-	-	-
	1	-	1	1	-	1	1	-	1	-	-	-
None of above	229	35	264	23	6	29	16	5	21	29	2	31
<b>TOTAL</b>	<b>216,573</b>	<b>14,971</b>	<b>231,544</b>	<b>39,906</b>	<b>2,572</b>	<b>42,478</b>	<b>17,019</b>	<b>1,253</b>	<b>18,272</b>	<b>16,101</b>	<b>223</b>	<b>16,324</b>

Source: SONEDE, Nombre d'abonnés par usage - 4eme Trimestre 1987 (par gouvernorat). Assumes that "centre" is used by SONEDE to mean "Governorate"

Table C-1, page 2. Major Connections by User Category (Governorate)

GOVERNORATE:	NORTHERN REGION, cont'd											
	SILIANA			BEJA			NABEUL			ZAGHOUAN		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
SONEDE Subscriber Classification												
Household Connections	10,585	781	11,346	16,630	3,281	19,911	44,724	4,560	49,284	5,829	1,871	7,700
Public Standpipes	37	11	48	33	17	50	48	45	93	6	12	18
<b>Industrial Sector</b>												
Food	11	-	11	33	1	34	147	14	161	6	2	8
Mechanical	2	-	2	11	-	11	14	2	16	1	4	5
Textile	5	-	5	12	2	14	52	1	53	4	2	6
Mining	-	1	1	-	-	0	-	-	0	-	-	0
Construction Materials	1	-	1	6	-	6	55	3	58	5	1	6
Chemical	1	-	1	1	-	1	23	1	24	-	4	4
Others	4	-	4	6	1	7	38	2	40	10	5	15
<b>Tourism</b>												
Hotels "haut classe" ONTT	2	-	2	2	-	2	308	-	308	1	-	1
Hotels "ordinaire"	5	-	5	1	-	1	19	-	19	-	-	0
<b>Mixed</b>												
Commerce	219	-	219	175	11	186	1,199	37	1,236	31	2	33
Government	80	-	80	122	22	144	273	15	288	29	3	32
Transport Facilities	6	-	6	9	3	12	25	3	28	2	2	4
Education	64	-	64	66	29	95	188	34	222	16	17	33
Medical	22	-	22	29	9	38	47	15	62	6	4	10
Defense	-	-	0	9	1	10	-	3	3	1	-	1
Municipal Facilities	9	-	9	11	1	12	75	-	75	3	1	4
Other	55	-	55	91	8	99	203	38	241	12	3	15
Irrigation	3	-	3	-	-	0	-	-	0	-	3	3
	1	-	1	1	-	1	13	-	13	-	-	0
None of above	14	-	14	24	2	26	26	6	32	9	-	9
<b>TOTAL</b>	<b>11,126</b>	<b>773</b>	<b>11,899</b>	<b>17,272</b>	<b>3,388</b>	<b>20,660</b>	<b>47,477</b>	<b>4,779</b>	<b>52,256</b>	<b>5,971</b>	<b>1,936</b>	<b>7,907</b>

Source: SONEDE, Nombre d'abonnés par usage - 4eme Trimestre 1987 (par gouvernorat). Assumed that "centre" is used by SONEDE to mean "Governorate"

**Table C-1, page 3. Major Connections by User Category (Governorate)**

GOVERNORATE:	CENTRAL REGION											
	SOUSSE			MONASTIR			MAHDIA			KAIROUAN		
SONEDE Subscriber Classification	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Household Connections	50,600	4,890	55,490	50,476	1,212	51,688	18,899	2,014	20,913	21,452	446	21,898
Public Standpipes	21	43	64	56	10	66	22	30	52	38	26	62
<b>Industrial Sector</b>												
Food	125	11	136	137	9	146	55	4	59	50	1	51
Mechanical	23	-	23	7	-	7	4	-	4	2	-	2
Textile	25	-	25	99	-	99	2	-	2	1	-	1
Mining	-	-	0	1	-	1	-	-	0	-	-	0
Construction Materials	41	2	43	29	2	31	8	2	10	2	-	2
Chemical	72	4	76	39	1	40	37	3	40	2	-	2
Others	80	3	83	16	-	16	5	-	5	4	-	4
<b>Tourism</b>												
Hotels "haut classe" ONTT	71	-	71	28	-	28	6	-	6	8	-	8
Hotels "ordinaire"	5	-	5	-	-	0	2	-	2	6	-	6
<b>Mixed</b>												
Commerce	677	20	697	503	5	508	199	9	208	254	4	258
Government	256	16	272	238	1	239	159	12	171	190	15	205
Transport Facilities	37	1	38	26	1	27	6	-	6	14	-	14
Education	157	32	189	163	13	176	69	30	99	80	10	90
Medical	55	25	80	79	11	90	37	10	47	34	5	39
Defense	18	-	18	3	-	3	-	-	0	2	-	2
Municipal Facilities	49	-	49	33	-	33	14	-	14	33	3	36
Other	245	23	268	293	14	307	125	18	143	126	5	131
Irrigation	-	-	0	-	-	0	-	-	0	-	1	1
	-	-	0	-	-	0	-	-	0	-	-	0
None of above	62	4	66	42	-	42	1	1	2	14	1	15
<b>TOTAL</b>	<b>52,619</b>	<b>5,074</b>	<b>57,693</b>	<b>52,268</b>	<b>1,279</b>	<b>53,547</b>	<b>18,050</b>	<b>2,133</b>	<b>22,310</b>	<b>517</b>	<b>22,827</b>	

Source: SONEDE, Nombre d'abonnés par usage - 4eme Trimestre 1987 (par gouvernorat). Assumes that "centre" is used by SONEDE to mean "Governorate"

Table C-1, page 4. Major Connections by User Category (Governorate)

GOVERNORATE:	SOUTHERN REGION											
	KASSERINE			SFAX			SFAX P.R.			GAFSA		
SONEDE Subscriber Classification	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Household Connections	14,587	125	14,712	65,580	-	65,580	8,332	2,780	11,112	37,881	3,405	41,286
Public Standpipes	27	5	32	42	-	42	36	19	55	32	1	33
<b>Industrial Sector</b>												
Food	15	-	15	150	-	150	34	4	38	26	2	28
Mechanical	-	-	0	31	-	31	3	-	3	1	-	1
Textile	2	-	2	8	-	8	1	-	1	6	-	6
Mining	-	-	0	1	-	1	-	-	0	-	-	0
Construction Materials	4	-	4	4	-	4	1	-	1	3	-	3
Chemical	3	-	3	28	-	28	13	-	13	-	-	0
Others	2	-	2	9	-	9	3	1	4	1	-	1
<b>Tourism</b>												
Hôtels "haut classe" ONTT	6	-	6	10	-	10	6	-	6	12	-	12
Hôtels "ordinaire"	5	-	5	8	-	8	1	-	1	7	-	7
<b>Mixed</b>												
Commerce	59	-	59	201	-	201	39	8	47	95	1	96
Government	137	4	141	74	-	74	61	6	67	103	3	106
Transport Facilities	1	-	1	12	-	12	3	-	3	7	1	8
Education	61	1	62	84	-	84	36	7	43	64	4	38
Medical	33	1	34	28	-	28	22	3	25	35	1	36
Defense	6	-	6	-	-	0	2	-	2	2	-	2
Municipal Facilities	4	-	4	73	-	73	1	-	1	11	-	11
Other	60	1	61	118	-	118	38	7	45	72	3	75
Irrigation	-	-	0	183	-	183	-	-	0	1	-	1
	2	-	2	-	-	0	-	-	0	-	-	0
None of above	2	-	2	11	-	11	3	6	9	7	2	9
<b>TOTAL</b>	15,016	137	15,153	66,655	0	66,655	8,635	2,841	11,476	38,366	3,423	41,789

Source: SONEDE, Nombre d'abonnés par usage - 4ème Trimestre 1987 (par gouvernorat). Assumes that "centre" is used by SONEDE to mean "Governorats"

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Table C-1, page 5. Major Connections by User Category (Governorate)

GOVERNORATE:	SOUTHERN REGION, continued														
	SIDI BOUZID			GABES			KEBILI			MEDENINE			TATAOUINE		
SONEDE Subscriber Classification	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Household Connections	6,703	2,893	9,596	27,915	828	28,743	7,394	1,091	8,485	26,190	194	26,384	7,429	--	7,429
Public Standpipes	14	11	25	51	23	74	10	--	10	69	11	80	24	--	24
<b>Industrial Sector</b>															
Food	9	--	9	14	--	14	2	1	3	80	9	89	13	--	13
Mechanical	2	--	2	3	--	3	1	--	1	25	--	25	6	--	6
Textile	1	--	1	9	--	9	1	--	1	9	--	9	1	--	1
Mining	--	--	0	--	--	0	--	--	0	--	--	0	--	--	0
Construction Materials	1	--	1	9	2	11	--	--	0	10	1	11	1	--	1
Chemical	4	--	4	3	2	5	--	--	0	1	--	1	--	--	0
Others	4	--	4	2	7	9	--	--	0	14	--	14	1	--	1
<b>Tourism</b>															
Hotels "haut classe" ONTT	1	--	1	--	16	--	16	5	--	5	48	--	48	1	--
Hotels "ordinaire"	1	--	1	11	--	11	--	--	0	3	--	3	1	--	1
<b>Mixed</b>															
Commerce	61	2	63	262	8	270	32	--	32	104	5	109	20	--	20
Government	78	1	79	174	9	183	61	1	62	155	5	160	52	--	52
Transport Facilities	5	--	5	9	6	15	3	--	3	9	--	9	1	--	1
Education	43	7	50	111	7	118	30	5	35	124	11	135	28	--	28
Medical	10	3	13	29	2	31	19	3	22	69	3	72	10	--	10
Defense	2	--	2	10	--	10	2	--	2	1	--	1	3	--	3
Municipal Facilities	2	--	2	40	7	47	6	2	8	45	2	48	9	--	9
Other	28	6	34	94	6	100	36	1	37	117	10	127	25	--	25
Irrigation	--	--	0	1	--	1	1	--	1	1	--	1	--	--	0
	--	--	0	--	--	0	1	--	1	2	--	2	--	--	0
None of above	3	1	4	3	2	5	8	1	9	6	--	6	1	--	1
<b>TOTAL</b>	<b>6,972</b>	<b>2,924</b>	<b>9,896</b>	<b>28,766</b>	<b>909</b>	<b>29,675</b>	<b>7,612</b>	<b>1,105</b>	<b>8,717</b>	<b>27,063</b>	<b>251</b>	<b>27,334</b>	<b>7,626</b>	<b>--</b>	<b>7,626</b>

Source: SONEDE, Nombre d'abonnés par usage - 4eme Trimestre 1987 (par gouvernorat). Assures that "centre" is used by SONEDE to mean "Governorate"

**Table C-2. Water Connections By User Category**

SONEDE Subscriber Classification	Greater Tunis Region							TUNIC TOTAL
	Dist. 14	Dist. 15	Dist. 16	Dist. 17	Dist. 25	Dist. 26	Dist. 27	
Household Connections	35,178	20,384	30,852	38,492	34,196	24,012	40,961	224,075
Public Standpipes	35	17	43	38	13	28	51	225
<b>Industrial Sector</b>								
Food	67	14	64	20	13	40	69	287
Mechanical	13	-	41	3	15	41	20	133
Textile	16	14	26	8	18	20	21	123
Mining	1	2	1	-	1	1	-	6
Construction Materials	1	2	48	4	6	15	8	84
Chemical	35	6	35	7	13	56	9	161
Others	18	18	74	5	84	99	62	360
<b>Tourism</b>								
Hotels "haut classe" ONTT	29	28	-	-	-	5	-	62
Hotels "ordinaire"	78	-	-	3	2	1	-	84
<b>Mixed</b>								
Commerce	1,525	296	278	211	167	322	122	2,921
Government	433	118	71	54	50	72	54	852
Transport Facilities	23	21	27	7	4	17	8	107
Education	200	78	72	118	85	75	95	723
Medical	49	14	17	40	6	19	26	171
Defense	16	4	-	18	-	1	4	43
Municipal Facilities	84	21	17	28	38	25	26	239
Other	174	80	61	78	30	105	30	618
Irrigation	-	-	2	-	1	-	2	5
	-	-	-	1	-	-	-	1
None of the above	28	23	62	25	45	36	45	264
<b>TOTAL</b>	<b>38,003</b>	<b>21,140</b>	<b>31,781</b>	<b>39,160</b>	<b>34,787</b>	<b>24,990</b>	<b>41,673</b>	<b>231,544</b>
Source: SONEDE, Number of subscribers by usage, 4th trimester 1987								
* Governorate data								

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Table C-2, page 2. Water Connections by User Category

SONEDE Subscriber Classification	Northeast Region							Northwest Region			
	Nabeul	Hammamet	Kelibia	Korba	Blzerte	Menzel Bourguiba	Mateur	Béja	Jendouba	La Kef	Tabarka
Household Connections	8,433	5,069	3,465	3,011	9,685	7,845	3,890	8,424	7,303	6,391	2,193
Public Standpipes	7	6	2	3	12	12	-	12	9	6	2
<b>Industrial Sector</b>											
Food	23	13	4	8	27	5	4	19	7	8	-
Mechanical	1	-	-	-	5	10	-	4	1	2	-
Textile	9	1	1	4	15	10	1	4	3	4	1
Mining	-	-	-	-	-	-	-	-	-	-	-
Construction Materials	31	3	-	-	4	5	-	5	2	3	1
Chemical	1	-	-	-	4	3	-	1	2	2	-
Others	11	1	-	-	6	5	-	3	5	3	3
<b>Tourism</b>											
Hoteles "haut classe" ONTT	11	287	4	;	5	-	2	1	-	-	-
Hoteles "ordinaire"	4	13	-	-	4	-	3	-	2	4	7
<b>Mixed</b>											
Commerce	281	184	96	67	164	95	78	101	116	112	55
Government	81	29	18	16	51	16	12	65	59	62	20
Transport Facilities	4	2	8	2	17	9	10	5	3	7	4
Education	34	14	18	16	48	30	12	29	30	37	13
Medical	9	3	2	2	8	10	3	10	7	7	5
Defense	-	-	-	-	28	12	-	8	3	3	-
Municipal Facilities	29	13	5	6	17	8	7	7	12	1	6
Other	32	19	16	13	60	26	7	39	38	32	14
Irrigation	-	-	-	-	1	-	-	-	-	-	-
	6	7	-	-	-	-	1	1	-	-	-
None of the above	3	6	2	1	12	2	1	12	4	17	5
<b>TOTAL</b>	<b>9,015</b>	<b>5,670</b>	<b>3,641</b>	<b>3,150</b>	<b>10,173</b>	<b>8,103</b>	<b>4,029</b>	<b>8,750</b>	<b>7,606</b>	<b>6,701</b>	<b>2,329</b>
Source: SONEDE, Number of subscribers by usage, 4th trimester 1967											
* Governorate data											

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Table C-2, page 3. Water Connections by User Category

SONEDE Subscriber Classification	Center East Region									
	Mahdia	Moknine	Monastir	Kaer Hellal	Jemmal	Sousse	H. Sousse	Maskim	Kela Kebira	Sfax*
Household Connections	6,635	6,026	8,616	4,853	5,161	20,765	4,893	8,548	5,392	65,580
Public Standpipes	-	-	3	-	1	2	-	9	-	42
<b>Industrial Sector</b>										
Food	20	12	19	4	17	70	4	18	3	150
Mechanical	2	-	4	1	-	14	3	2	1	31
Textile	-	7	15	25	12	9	1	1	2	8
Mining	-	-	-	-	-	-	-	-	-	1
Construction Materials	2	10	1	-	7	17	7	7	2	4
Chemical	12	1	8	6	2	22	4	11	18	28
Others	1	3	9	1	-	28	5	9	3	9
<b>Tourism</b>										
Hotels "haut classe" ONTT	5	-	28	-	-	48	23	-	-	10
Hotels "ordinaire"	2	-	-	-	-	4	1	-	-	8
<b>Mixed</b>										
Commerce	63	50	152	57	54	389	39	83	26	201
Government	59	15	105	17	12	138	14	20	16	74
Transport Facilities	4	2	8	1	3	25	1	4	2	12
Education	22	12	32	14	14	74	9	14	16	84
Medical	9	7	18	6	4	22	3	7	3	28
Defense	-	-	1	-	-	17	-	-	-	-
Municipal Facilities	4	1	22	1	1	39	1	2	-	73
Others	33	35	57	23	27	103	17	49	17	118
<b>Irrigation</b>	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	183
None of the above	1	-	27	2	3	27	10	1	4	11
<b>TOTAL</b>	<b>6,874</b>	<b>6,181</b>	<b>9,125</b>	<b>5,011</b>	<b>5,318</b>	<b>21,813</b>	<b>5,035</b>	<b>8,785</b>	<b>5,505</b>	<b>66,655</b>
Source: SONEDE, Number of subscribers by usage, 4th trimester 1987										
* Governorate data										

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**Table C-2, page 4. Water Connections by User Category**

SONEDE Subscriber Classification	Center West Region			Southeast Region				Southwest Region		
	Kasserine	Kairouan	Sidi Bouzid	Gabès*	Zarzis	Médénine*	Tataouine*	Tozeur	Gafsa	Metlaoui
Household Connections	7,078	14,897	6,703	27,915	NA	26,190	7,429	5,491	9,725	5,261
Public Standpipes	7	6	14	51	-	69	24	3	2	-
<b>Industrial Sector</b>										
Food	5	21	9	14	-	80	13	4	11	3
Mechanical	-	1	2	3	-	25	6	-	1	-
Textile	-	-	1	9	-	9	1	2	2	-
Mining	-	-	-	-	-	-	-	-	-	-
Construction Materials	2	2	1	9	-	10	1	1	2	-
Chemical	1	1	4	3	-	1	-	-	-	-
Others	1	3	4	2	-	14	1	1	-	-
<b>Tourism</b>										
Hôtels "haut classe" ONTT	2	6	1	16	-	48	1	7	1	-
Hôtels "ordinaire"	5	5	1	11	-	3	1	1	6	-
<b>Mixed</b>										
Commerce	27	183	61	262	-	104	20	10	52	9
Government	60	91	76	174	-	155	52	13	37	8
Transport Facilities	1	10	5	9	-	9	1	1	3	-
Education	25	38	43	111	-	124	28	7	24	6
Medical	8	13	10	29	-	69	10	4	14	2
Defense	4	2	2	10	-	1	3	-	2	-
Municipal Facilities	3	19	2	40	-	46	9	1	5	-
Others	18	81	28	94	-	117	25	11	22	8
Irrigation	-	-	-	1	-	1	-	1	-	-
	-	-	-	-	-	2	-	-	-	-
None of the above	2	9	3	3	-	6	1	2	3	-
<b>TOTAL</b>	<b>7,249</b>	<b>15,388</b>	<b>6,972</b>	<b>28,766</b>	<b>0</b>	<b>27,083</b>	<b>7,626</b>	<b>5,560</b>	<b>9,912</b>	<b>5,297</b>

Source: SONEDE, Number of subscribers by usage, 4th trimester 1987

\* Governorate data

<b>Table C-3. Annual Increase In Number of Subscribers - SONEDE - Selected Centers 1975-80, 1980-85 &amp; 1985-88</b>			
	<b>Average Annual Growth Rates (In Percent)</b>		
	<b>75-80</b>	<b>80-85</b>	<b>85-88</b>
<b>Bizerte</b>	11.2	8.3	4.1
<b>Jendouba</b>	8.7	8.4	4.1
<b>Sousse</b>	15.0	6.7	3.0
<b>Kairouan</b>	11.8	10.6	4.1
<b>Sfax</b>	12.5	10.9	3.0
<b>Gafsa</b>	10.8	17.8	NA
<b>Kasserine</b>	14.5	9.1	3.1
<b>Greater Tunis</b>	10.2	10.9	3.3
<b>All Tunisia</b>	12.4	9.9	3.7
<b>Source: SONEDE 1988</b>			

<b>Table C-4. Average Number of New Connections Per Year Selected Governorates - 1975-80, 1980-85 &amp; 1985-88</b>			
	<b>1975-80</b>	<b>1980-85</b>	<b>1985-88</b>
<b>Bizerte</b>	2,093	2,503	2,953
<b>Jendouba</b>	796	1,041	1,090
<b>Sousse</b>	3,888	3,121	3,162
<b>Kairouan</b>	1,028	1,257	1,288
<b>Sfax</b>	3,183	4,797	3,759
<b>Gafsa</b>	1,395	1,913	3,626
<b>Kasserine</b>	898	931	848
<b>Greater Tunis</b>	10,518	12,920	13,063
<b>All Tunisia</b>	49,495	48,935	50,004
<b>Source: SONEDE 1988</b>			

<b>Table C-5. Average Extension of Network Per Year (In Linear km) Selected Governorates - 1975-80, 1980-85 &amp; 1985-88</b>			
	<b>1975-80</b>	<b>1980-85</b>	<b>1985-88</b>
<b>Bizerte</b>	18	18	17
<b>Jendouba</b>	21	10	12
<b>Sousse</b>	25	30	25
<b>Kairouan</b>	11	17	19
<b>Sfax</b>	30	36	27
<b>Gafsa</b>	18	14	19
<b>Kasserine</b>	6	11	19
<b>Greater Tunis</b>	29	44	76
<b>All Tunisia</b>	414	353	402
<b>Source: SONEDE 1988</b>			

<b>Table C-6. Annual Percentage Increase in Water Consumption Selected Governorates - 1975-80, 1980-85 &amp; 1985-88</b>			
	<b>Percent/yr</b>		
	<b>1975-80</b>	<b>1980-85</b>	<b>1985-88</b>
<b>Bizerte</b>	4.8	5.7	4.3
<b>Jendouba</b>	6.5	6.9	6.0
<b>Sousse</b>	9.1	6.0	7.3
<b>Kairouan</b>	5.7	4.6	4.8
<b>Kasserine</b>	7.3	6.7	2.0
<b>Sfax</b>	11.1	8.5	3.8
<b>Gafsa</b>	8.4	10.7	12.9
<b>Gabès</b>	19.5	10.0	2.1
<b>Greater Tunis</b>	4.4	4.2	3.9
<b>All Tunisia</b>	7.1	5.9	5.1
<b>Source: SONEDE 1988</b>			

<b>Table C-7. Industrial Sector - 1987-88</b>						
<b>Variation in Number of Subscribers and Volume Consumed</b>						
<b>Governorate</b>	<b>H2O Consumed (1000 M3)</b>		<b>Percent Change</b>	<b>Number of Subscribers</b>		<b>Percent Change</b>
	<b>1987</b>	<b>1988</b>		<b>1987</b>	<b>1988</b>	
<b>Bizerte</b>	2,836	2,105	-25.8%	162	166	2.5%
<b>Jendouba</b>	164	198	20.7%	79	80	1.3%
<b>Sousse</b>	996	1,884	89.2%	386	435	12.7%
<b>Kairouan</b>	44	161	265.9%	62	64	3.2%
<b>Kasserine</b>	86	103	19.8%	26	27	3.8%
<b>Sfax</b>	413	481	16.5%	237	236	-0.4%
<b>Gafsa</b>	29	81	179.3%	40	50	25.0%
<b>Gabès</b>	6,287	7,177	14.2%	54	60	11.1%
<b>Greater Tunis</b>	6,804	7,671	12.7%	1,165	1,375	18.0%
<b>All Tunisia</b>	21,254	24,601	15.7%	3,481	3,830	10.0%

Source: SONEDE 1988

**Table C-8. Water Consumption - Major Cities**

SONEDE Subscriber Classification	Greater Tunis Region							TUNIS TOTAL
	Dist. 14	Dist. 15	Dist. 16	Dist. 17	Dist. 25	Dist. 26	Dist. 27	
<b>Household Connections</b>	8,585,084	5,158,336	4,939,300	6,655,332	7,175,877	5,059,560	5,753,723	43,327,212
<b>Public Standpipes</b>	93,001	33,508	206,616	191,497	51,504	92,189	398,202	1,066,517
<b>Industrial Sector</b>								
<b>Food</b>	1,366,095	31,618	394,090	37,601	55,791	454,813	169,803	2,509,811
<b>Mechanical</b>	17,960	-	242,942	5,307	39,678	82,559	86,408	474,854
<b>Textile</b>	50,937	15,791	1,055,974	58,508	29,153	40,567	53,179	1,304,109
<b>Mining</b>	14	142,136	2,154	-	853	1,632	-	146,769
<b>Construction Materials</b>	891	1,203	550,376	2,064	41,929	36,101	8,103	640,667
<b>Chemical</b>	323,057	20,065	130,070	34,499	35,324	433,635	33,625	1,010,275
<b>Others</b>	18,488	27,820	216,416	3,180	169,208	179,433	148,510	763,055
<b>Tourism</b>								
<b>Hotels "haut classe" ONTT</b>	545,558	485,428	-	-	-	147,231	-	1,178,217
<b>Hotels "ordinaire"</b>	76,447	-	-	5,072	8,775	111,706	-	202,000
<b>Mixed</b>								
<b>Commerce</b>	754,872	153,898	452,033	209,006	168,916	204,735	102,349	2,045,809
<b>Government</b>	1,378,518	822,711	165,830	284,892	178,727	123,536	74,028	3,028,242
<b>Transport Facilities</b>	162,517	81,562	164,220	17,149	9,175	24,063	6,541	465,227
<b>Education</b>	619,532	131,627	124,669	772,186	317,817	140,733	397,381	2,503,945
<b>Medical</b>	416,458	17,952	85,085	462,998	47,678	10,444	11,044	1,051,659
<b>Defense</b>	282,037	364,358	-	310,195	-	821	113,053	1,070,464
<b>Municipal Facilities</b>	242,433	28,621	24,539	38,760	102,989	126,730	101,742	665,814
<b>Others</b>	482,292	146,475	92,437	155,243	328,352	213,555	80,396	1,498,750
<b>Irrigation</b>	-	-	1,129	-	258	-	3,138	4,525
				469				469
<b>None of above</b>	55,322	42,153	153,672	196,407	55,839	49,278	44,051	596,722
<b>TOTAL</b>	15,471,513	7,705,262	9,001,552	9,440,365	8,817,843	7,533,321	7,585,276	65,555,132
<p>Source: SONEDE, Volume consommé par usage élémentaire et par localités</p> <p>Note: Totals may vary due to illegible input data.</p> <p>* Governorate data</p>								

Table C-8, page 2. Water Consumption - Major Cities

SONEDE Subscriber Classification	North East Region							North West Region			
	Nabeul	Hammamet	Keilbla	Korba	Blzerte	Menzel Bourguiba	Mateur	Béja	Jandouba	La Kef	Tabarka
Household Connections	1,344,872	1,037,470	470,877	463,083	1,738,737	1,156,680	623,493	1,126,455	1,005,316	724,378	327,040
Public Standpipes	26,950	20,151	1,622	2,658	60,009	34,537	-	80,061	53,090	11,597	4,708
<b>Industrial Sector</b>											
Food	69,209	21,945	2,097	7,303	46,532	47,625	12,084	654,731	5,272	2,188	-
Mechanical	225	-	-	-	22,028	206,254	-	1,174	535	1,041	-
Textile	10,063	1,164	231	6,797	31,602	13,322	542	21,471	305	6,674	142
Mining	-	-	-	-	-	-	-	-	-	-	-
Construction Materials	37,514	1,937	-	-	46,398	511	-	5,012	2,111	1,664	33,957
Chemical	453	-	-	-	461,122	1,484,113	-	726	1,609	-	-
Others	12,412	148	-	-	72,313	1,255	-	5,546	10,260	1,783	7,996
<b>Tourism</b>											
Hotels "haut classe" ONTT	329,000	2,078,331	20,600	50,792	126,463	-	5	71	-	-	-
Hotels "ordinaire"	1,969	8,104	-	-	2,213	-	2,225	-	4,314	1,323	70,427
<b>Mixed</b>											
Commerce	78,619	169,917	24,673	14,648	97,475	51,202	36,832	75,752	54,628	63,720	23,518
Government	85,159	18,398	9,653	10,778	148,121	7,103	10,836	69,792	65,074	62,967	14,064
Transport Facilities	4,826	193	43,626	1,007	24,705	20,465	7,862	50,369	4,504	20,183	7,562
Education	105,745	17,545	26,517	27,660	109,923	39,240	45,020	104,001	98,464	67,451	39,187
Medical	51,770	6,575	7,417	4,999	32,847	87,550	7,465	39,647	3,908	40,746	7,847
Defense	-	-	-	-	1,316,448	304,509	-	36,205	25,585	51,114	-
Municipal Facilities	3,196	10,498	2,658	2,175	11,239	7,679	519	21,313	15,398	1,004	1,766
Others	25,453	24,236	11,543	7,994	131,357	19,370	10,990	81,612	67,645	28,473	11,274
Irrigation	-	-	-	-	6,320	-	-	-	-	-	-
	2,405	8,917					9,307	8,870			
None of above	11,869	16,215	1,008	1,284	19,814	21,955	373	5,172	4,504	11,094	24,736
<b>TOTAL</b>	<b>2,201,709</b>	<b>3,441,744</b>	<b>622,522</b>	<b>601,178</b>	<b>4,505,666</b>	<b>3,505,390</b>	<b>767,553</b>	<b>2,387,960</b>	<b>1,422,522</b>	<b>1,097,400</b>	<b>574,224</b>

Source: SONEDE, Volume consommé par usage élémentaire et par localités

Note: Totals may vary due to illegible input data.

\* Governorate data

**Table C-8, page 3. Water Consumption - Major Cities**

SONEDE Subscriber Classification	Center East Region									
	Mahdia	Moknine	Monastir	Kasr Helal	Jemaa	Sousse	H. Sousse	M'aekim	Kala Kebira	Sfax
Household Connections	875,809	694,028	1,168,911	554,426	681,645	3,209,159	792,268	1,150,194	614,061	11,947,842
Public Standpipes	-	-	1,196	-	2,539	39,219	-	11,033	-	31,981
<b>Industrial Sector</b>										
Food	32,380	3,316	85,436	1,117	6,867	65,225	1,543	10,890	3,413	220,162
Mechanical	40	-	1,139	232	-	120,788	750	1,776	140	18,282
Textile	-	50,530	149,263	416,128	50,522	71,864	248	88	8,749	11,483
Mining	-	-	-	-	-	-	-	-	-	301
Construction Materials	1,026	3,501	4,513	-	44,861	63,047	2,149	23,459	3,247	13,205
Chemical	61,067	159	27,997	43,962	2,652	156,989	846	2,115	2,050	140,137
Others	1,531	966	13,654	965	-	55,715	5,462	5,064	2,928	3,929
<b>Tourism</b>										
Hotels "haut classe" ONTT	114,585	-	1,899,070	-	-	1,373,003	820,835	-	-	68,629
Hotels "ordinaire"	452	-	433	-	-	839	463	-	-	4,758
<b>Mixed</b>										
Commerce	31,441	12,200	47,427	25,531	25,001	204,447	11,655	48,383	15,085	328,230
Government	57,964	11,124	246,536	14,727	5,715	271,405	7,704	11,791	11,157	108,669
Transport Facilities	53,557	518	37,007	489	2,162	35,932	1,944	4,818	758	113,096
Education	19,468	14,044	246,454	13,588	13,147	261,930	30,934	31,189	13,162	276,923
Medical	75,019	10,333	85,535	7,614	3,275	196,372	537	1,544	3,169	116,596
Defense	-	-	17,223	-	-	125,969	-	-	-	94,691
Municipal Facilities	71	142	10,824	375	39	29,510	10	4,051	-	63,595
Others	17,363	10,176	72,582	16,621	15,618	135,578	14,714	28,919	11,676	127,496
Irrigation	-	-	-	-	-	-	-	-	-	317,481
	-	-	-	-	-	-	-	-	-	183
None of above	744	-	39,719	3,820	5,812	24,787	14,465	747	1,215	11,310
<b>TOTAL</b>	<b>1,342,517</b>	<b>811,037</b>	<b>4,154,939</b>	<b>1,099,595</b>	<b>858,856</b>	<b>6,441,778</b>	<b>1,706,525</b>	<b>1,335,871</b>	<b>691,810</b>	<b>14,018,779</b>

Source: SONEDE, Volume consommé par usage élémentaire et par localités

Note: Totals may vary due to illegible input data.

\* Governorate data

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Table C-8, page 4. Water Consumption - Major Cities

SONEDE Subscriber Classification	Center West Region			South East Region					South West Region		
	Kasserine	Kalrouan	Sidi Bouzid	Gabès*	Zarzis	Médenine	Médenine	Tataouine	Tozeur	Gafsa	Metlaouel
Household Connections	961,482	1,834,391	575,374	4,130,217	965,433	668,907	3,814,654	619,447	752,975	1,446,259	774,608
Public Standpipes	23,563	11,743	72	331,974	19,137	5	111,120	12,460	3,751	9,135	
<b>Industrial Sector</b>											
Food	60,797	14,283	5,410	39,327	11,850	12,319	96,401	10,401	2,984	8,312	1,569
Mechanical	-	1	251	342	353	3,434	8,627	2,050	-	20	
Textile	-	-	-	4,327	-	268	5,570	9	156	1,668	
Mining	-	-	-	-	-	-	-	-	-	-	-
Construction Materials	1,840	1,893	209	61,170	203	1,375	23,140	2,977	300	1,617	
Chemical	562	11,691	-	6,015,524	529	-	529	-	-	-	-
Others	-	2,888	844	122,781	31,911	1,019	38,839	25	312	-	-
<b>Tourism</b>											
Hotels "haut classe" ONTT	8,627	20,259	2,976	76,021	380,304	8,202	1,725,022	393	103,647	15,772	-
Hotels "ordinaire"	3,448	5,013	681	6,409	-	480	2,425	48	493	1,130	-
<b>Mixed</b>											
Commerce	26,273	39,553	15,658	95,887	18,162	7,882	51,200	4,585	15,257	29,783	2,660
Government	79,979	98,040	37,429	103,673	107,785	42,761	325,238	52,889	19,013	82,257	28,114
Transport Facilities	202	13,795	225	125,714	-	615	16,594	627	11,620	13,775	
Education	99,997	74,534	47,967	303,037	22,183	27,824	112,916	12,005	6,005	64,418	2,892
Medical	175,387	67,896	5,164	84,174	3,453	54,440	109,297	6,097	14,653	18,110	14,117
Defense	21,792	10,313	-	149,370	-	3,865	3,865	3,304	-	18,400	
Municipal Facilities	7,113	36,156	450	70,534	1,571	12,100	24,498	2,913	404	7,205	4,810
Others	45,179	52,851	10,849	87,540	9,311	25,278	90,402	14,775	18,024	23,972	
Irrigation	-	-	-	690	-	-	247	-	110	-	-
	-	-	-	-	-	509	1,120	-	-	-	-
None of above	197	56,641	34,882	11,609	-	-	767	49	298	1,196	
<b>TOTAL</b>	<b>1,516,438</b>	<b>2,351,941</b>	<b>738,441</b>	<b>11,820,320</b>	<b>1,572,185</b>	<b>871,283</b>	<b>6,562,471</b>	<b>745,054</b>	<b>950,002</b>	<b>1,743,009</b>	<b>828,768</b>

Source: SONEDE, Volume consommé par usage élémentaire et par localités

Note: Totals may vary due to illegible input data.

\* Governorate data

**ANNEX D**

**SEWERAGE**

<b>Table D-1. ONAS - Kilometers of Network Per City Per Year, 1984-88</b>					
<b>City</b>	<b>1984</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>
<b>Greater Tunis</b>	1,591	1,804	1,852	2,175	2,362
<b>Bizerte</b>	120	120	120	160	160
<b>Jendouba</b>	--	--	--	--	--
<b>Sfax</b>	182	189	193	206	275
<b>Sousse</b>	152	153	198	216	228
<b>Kairouan</b>	81	84	113	115	138
<b>Kasserine</b>	--	19	30	31	31
<b>Gabès</b>	92	93	96	97	112
<b>Gafsa</b>	--	51	51	65	70
<b>Number of Connections Per City Per Year</b>					
<b>Greater Tunis</b>	--	--	165,740	184,100	194,000
<b>Bizerte</b>	11,750	11,800	15,358	15,900	16,000
<b>Jendouba</b>	--	--	--	--	--
<b>Sfax</b>	14,936	15,468	16,062	16,400	21,100
<b>Sousse</b>	8,200	9,840	11,125	12,100	13,800
<b>Kairouan</b>	5,934	6,287	8,650	8,900	10,000
<b>Kasserine</b>	--	2,150	2,200	2,365	2,400
<b>Gabès</b>	6,630	6,988	7,800	8,600	9,400
<b>Gafsa</b>	--	4,046	4,047	4,100	4,130
<b>Source: ONAS</b>					

**Table D-2. Percent of Population Served with ONAS Connections by Year and City, 1984-88 (In Percent)**

City	1983	1984	1985	1987	1988
Greater Tunis	79	77.8	78.6	82	82
Bizerte	89	88	91	90	90
Jendouba	--	--	--	--	--
Sfax	59.7	60.7	62	62	64
Sousse	61	64	66	75	76
Kairouan	71	80	83	86	86
Kasserine	--	37	40	40	41
Gabès	38	48.1	50	56	58
Gafsa	--	30	32	35	38
<b>Population Served by ONAS (with Connections by Year and City)</b>					
Greater Tunis	943,240	963,600	1,011,740	1,093,576	1,169,400
Bizerte	84,165	85,640	90,960	98,165	103,760
Jendouba	--	--	--	--	--
Sfax	117,270	122,585	128,890	131,445	139,860
Sousse	50,615	55,020	58,120	67,345	70,900
Kairouan	51,473	59,660	63,434	67,100	69,600
Kasserine	--	17,920	20,345	21,020	21,800
Gabès	344,854	45,960	48,780	56,050	60,500
Gafsa	--	19,245	21,540	24,600	28,000
Source: ONAS					

**ANNEX E**

**ELECTRICITY**

Table E-1. High and Medium Voltage Power Use According to Sector and District

Sector	Total Turin Kwh X1000	Turin Co.		Bzaria		Jandoube		Sfax		Soussa		Kairouan		Kasserine		Gabes		Gafsa		Total Target Cities %Total
		Kwh X 1000	%Total Sector																	
Mining Industries	207461	1499	0.74	3838	1.89	5215	2.57	3418	1.69	1563	0.77	2252	1.12	561	0.28	606	0.40	133689	65.97	75.42
Food Industries	191933	55160	28.74	1312	0.68	529	0.28	26922	14.03	17792	9.27	3649	1.90	2290	1.19	321	0.17	112	0.06	42.31
Textile Industries	156296	10586	6.77	6575	5.49	168	0.11	15744	10.07	26525	16.97	2064	1.32	0	0.00	122	0.08	355	0.23	41.04
Paper Industries	80640	4796	5.95	693	0.86	0	0.00	1151	1.44	7235	8.97	35	0.04	47383	58.78	459	0.57	0	0.00	76.83
Chemical Industries	123578	12916	10.45	11391	9.22	27	0.02	22219	17.94	4360	3.53	128	0.10	36	0.03	47675	38.58	6541	5.29	85.20
Construction Materials	710110	52304	7.38	81753	11.51	2782	0.39	12950	1.82	132125	18.61	1098	0.15	33863	4.77	83843	11.81	116	0.02	56.46
Metal works	124799	7239	5.71	97978	77.27	0	0.00	68	0.05	86	0.07	21	0.02	0	0.00	0	0.00	0	0.00	83.12
Other Industries	167420	17775	10.62	17549	10.48	2486	1.49	20481	12.23	39121	23.37	713	0.43	0	0.00	1735	1.04	10	0.01	59.65
Agriculture	154487	1173	0.76	3676	2.38	2644	1.74	12079	7.82	1527	0.99	6036	3.91	3420	2.21	8065	5.22	278	0.18	25.31
Pumping Sanitary Services	150910	10230	6.78	6512	5.63	20304	13.45	1665	1.10	4295	2.85	16169	10.73	3149	2.09	6020	3.99	8275	5.48	52.10
Transportation	88019	35344	40.38	743	0.84	724	0.82	7434	8.45	4755	5.40	333	0.38	5563	6.32	2098	2.38	3014	4.45	69.43
Tourism	143341	13245	9.24	1198	0.83	595	0.42	3112	2.17	32085	22.38	609	0.42	104	0.07	878	0.61	370	0.26	36.41
Services	249251	82972	29.66	9075	4.34	2571	1.23	24180	11.56	8507	4.07	8333	3.98	2928	1.25	5853	2.70	2412	1.15	59.94
Others	0	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0.00
Total Sector	2505435	284621	11.36	249277	9.83	38247	1.53	151621	6.05	279976	11.17	41460	1.65	98995	3.95	157873	6.29	156072	6.23	56.07

Source: STEG 1988

Table E-2. Distribution of High and Medium Voltage Power Users by Sector and Target City

Sector	Total Turin Users	Turin City		Bzaria		Jandoube		Sfax		Soussa		Kairouan		Kasserine		Gabes		Gafsa		Total Target Cities % Total
		No. of Users	% Total Users																	
Mining Industries	203	7	3.45	14	6.90	7	3.45	18	8.87	14	6.90	10	4.93	4	1.97	7	3.45	11	5.42	45.32
Food Industries	413	61	14.77	12	2.91	11	2.66	39	9.44	24	5.81	9	2.18	6	1.45	3	0.73	8	1.94	41.89
Textile Industries	606	56	9.54	40	5.58	1	0.16	80	13.16	50	8.22	7	1.15	0	0.00	2	0.33	1	0.16	36.31
Paper Industries	95	24	25.26	3	3.16	0	0.00	8	8.42	8	8.42	1	1.05	8	8.42	1	1.05	0	0.00	55.79
Chemical Industries	275	23	8.36	36	13.09	2	0.73	47	17.09	17	6.18	8	2.91	2	0.73	12	4.36	11	4.00	57.45
Construction Materials	321	25	7.79	25	7.79	5	1.56	16	4.98	31	9.66	2	0.62	8	2.49	11	3.43	1	0.31	38.63
Metal works	80	14	17.50	5	6.25	0	0.00	3	3.75	3	3.75	1	1.25	0	0.00	0	0.00	0	0.00	32.50
Other Industries	746	94	12.57	56	7.49	8	1.07	111	14.84	97	12.97	9	1.20	0	0.00	8	1.07	1	0.13	51.34
Agriculture	1084	17	1.57	63	5.81	49	4.52	82	7.56	32	2.95	39	3.60	30	2.77	65	6.00	10	0.92	35.70
Pumping Sanitary Services	714	12	1.68	48	6.72	65	9.10	15	2.10	32	4.48	92	12.89	21	2.94	28	3.92	56	7.70	51.54
Transportation	319	70	21.94	9	2.82	6	1.88	37	11.60	22	6.90	5	1.57	15	4.70	14	4.39	21	6.58	62.38
Tourism	298	20	6.71	6	2.01	3	1.01	9	3.02	50	16.78	3	1.01	1	0.34	4	1.34	4	1.34	33.56
Services	1722	323	18.76	92	5.34	48	2.87	103	5.98	117	6.79	78	4.53	41	2.38	63	3.66	36	2.21	52.32
Others	10	0	0.00	0	0.00	0	0.00	1	10.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	10.00
Total Sector	8890	748	10.66	409	5.94	203	2.95	599	6.75	497	7.21	264	3.63	136	1.97	218	3.16	161	2.34	46.52

Source: STEG 1988

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# **ANNEX F**

## **ANALYSIS OF SAMPLE MUNICIPALITIES**

Figure F-1. City Evaluation: Factors and Ratings: UIS City Sample

CITY	FINANCIAL CAPACITY			INSTITUTIONAL CAPACITY				ECONOMIC ACTIVITY			INFRASTRUCTURE			TOTAL SCORE	RANK		
	(1)	(2)	(3)	SCORE	(4)	(5)	(6)	SCORE	(7)	(8)	SCORE	(9)	(10)			(11)	SCORE
	DEBT	FOCL	RESERVE		EXEC	TECH	PROP TX		PERMITS	BIZTAX		WATER	POWER			WASTE	
TUNIS	++	-	++	3	-	0	+	0	++	++	4	++	++	++	6	13	2
BIZERTE	+	0	+	2	+	0	0	1	0	+	1	0	+	0	1	5	4
JENDOUBA	--	+	0	(1)	-	0	-	(2)	--	-	(3)	0	-	0	(1)	(7)	8
TABARKA	0	-	+	0	--	--	++	(2)	--	++	0	-	0	-	(2)	(4)	7
BFAX	+	0	+	2	++	++	++	6	++	++	4	+	+	+	3	15	1
BOUBBE	+	+	++	4	0	+	+	2	++	+	3	++	+	0	3	12	3
KAIROUAN	-	0	0	(1)	-	-	++	0	0	-	(1)	0	0	+	1	(1)	6
KASERINE	--	--	+	(3)	--	--	--	(6)	--	-	(3)	--	-	0	(3)	(15)	10
GABES	+	-	++	2	--	0	++	0	++	0	2	+	0	-	0	4	5
GAFSA	--	-	--	(5)	0	--	++	0	--	0	(2)	-	-	--	(4)	(11)	9

Source: PADCO, February 1990

Note: Numbers in parentheses indicate a negative score.

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FACTOR	Financial Capacity			
INDICATOR	(1) Debt Level			
DATE SOURCE (year)	Ministry of Finance (1989) Economic Development Bank of Tunisia (1989)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	<5 years	1	Tunis
ABOVE AVERAGE	+	5 - 10	4	Sfax, Sousse, Bizerte, Gabès
AVERAGE	0	11 - 15	1	Tabarka
BELOW AVERAGE	-	16 - 25	1	Kairouan
POOR	--	>25	3	Kasserine, Gafsa, Jendouba

Note: Based on years required to liquidate debt from property tax revenues.

FACTOR	Financial Capacity			
INDICATOR	(2) Dependency on National Aid			
DATE SOURCE (year)	Ministry of Finance (1988)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	<20 percent	0	
ABOVE AVERAGE	+	20 - 30	2	Sousse, Jendouba
AVERAGE	0	30 - 40	3	Bizerte, Sfax, Kairouan
BELOW AVERAGE	-	40 - 50	4	Tunis, Tabarka, Gabès, Gafsa
POOR	--	>50	1	Kasserine

FACTOR	Financial Capacity			
INDICATOR	(3) Reserve Funds			
DATE SOURCE (year)	Ministry of Finance (as of 12/31/86)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>500,000 TD	3	Tunis, Sousse, Gabès
ABOVE AVERAGE	+	499,999 - 250,000	4	Sfax, Bizerte, Kasserine, Tabarka
AVERAGE	0	249,999 - 100,000	2	Jendouba, Kairouan
BELOW AVERAGE	-	99,999 - 50,000	0	
POOR	--	<50,000	1	Gafsa

FACTOR	Institutional Capacity			
INDICATOR	(4) Executive Staff Levels			
DATE SOURCE (year)	Ministry of Interior (1986)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>100 employees	1	Sfax
ABOVE AVERAGE	+	99-50	1	Bizerte
AVERAGE	0	49-25	2	Sousse, Gafsa
BELOW AVERAGE	-	24-10	3	Kairouan, Tunis, Jendouba
POOR	--	<10	3	Tabarka, Kasserine, Gabès

Note: Ranges refer to number of positions.

FACTOR	Institutional Capacity			
INDICATOR	(5) Technical Capacity			
DATE SOURCE (year)	Ministry of Interior (1988)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>100 employees	1	Sfax
ABOVE AVERAGE	+	99-50	1	Sousse
AVERAGE	0	49-25	4	Jendouba, Bizerte, Tunis, Gabès
BELOW AVERAGE	-	24-10	1	Kairouan
POOR	--	<10	3	Gafsa, Tabarka, Kasserine

Note: Ranges refer to number of positions.

FACTOR	Institutional Capacity			
INDICATOR	(6) Property Tax Collection Performance			
DATE SOURCE (year)	Ministry of Interior (1988)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>60 percent	5	Sfax, Kairouan, Gabès, Gafsa, Tabarka
ABOVE AVERAGE	+	59 - 50	2	Tunis, Sousse
AVERAGE	0	49 - 30	1	Bizerte
BELOW AVERAGE	-	29 - 20	1	Jendouba
POOR	--	<19	1	Kasserine

Note: Actual collections are compared to tax roll, not to budget estimate.

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FACTOR	Economic Activity			
INDICATOR	(7) Building Permits			
DATE SOURCE (year)	Ministry of Interior (1986)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>1,000 permits	4	Tunis, Sfax, Gousse, Gabès
ABOVE AVERAGE	+	999 - 750	0	
AVERAGE	0	749 - 500	2	Kairouan, Bizerte
BELOW AVERAGE	-	499 - 250	0	
POOR	--	<250	4	Kasserine, Gafsa, Jendouba, Tabarka

FACTOR	Economic Activity			
INDICATOR	(8) Business Taxes			
DATE SOURCE (year)	Ministry of Finance (1988)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>3 Dinars per capita	3	Tunis, Tabarka, Sfax
ABOVE AVERAGE	+	2.99 - 1.50	2	Bizerte, Sousse
AVERAGE	0	1.49 - 1.00	2	Gabès, Gafsa
BELOW AVERAGE	-	.99 - .50	3	Jendouba, Kairouan, Kasserine
POOR	--	<.49	0	

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FACTOR	Infrastructure			
INDICATOR	(9) Water Service (Business Connections)			
DATE SOURCE (year)	SONEDE (1987)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>500 connections	2	Tunis, Sousse
ABOVE AVERAGE	+	499 - 250	2	Sfax, Gabès
AVERAGE	0	249 - 100	3	Bizerte, Jendouba, Kairouan
BELOW AVERAGE	-	99 - 50	2	Tabarka, Gafsa
POOR	--	<50	1	Kasserine
Note: Range refers to total commercial and industrial connections.				

FACTOR	Infrastructure			
INDICATOR	(10) Power			
DATE SOURCE (year)	STEG (1988)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>500 users	1	Tunis
ABOVE AVERAGE	+	499 - 200	2	Sfax, Sousse, Bizerte
AVERAGE	0	199 - 100	2	Kairouan, Gabès
BELOW AVERAGE	-	99 - 50	3	Jendouba, Kasserine, Gafsa
POOR	--	<50	0	
Note: 1) Insufficient data to rate Tabarka; 2) Range refers to high- and medium-voltage users in export categories.				

FACTOR	Infrastructure			
INDICATOR	(11) Solid Waste			
DATE SOURCE (year)	Ministry of Interior (1986) IBRD Environmental Report (1987)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	Controlled (>1,000)	1	Tunis
ABOVE AVERAGE	+	Some control (600-700)	2	Sfax, Kairouan
AVERAGE	0	Limited (600-800)	4	Sousse, Bizerte, Kasserine, Jendouba
BELOW AVERAGE	-	Uncontrolled (500-500)	2	Gabès, Tabarka
POOR	--	Hazard (<500)	1	Gafsa

Note: Ranges refer to degree of site control.

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**Analysis of Governorates with Urban Places**  
**(those Governorates having a settlement of 30,000 population or more)**

Figure F-2. Governorate Evaluation Factors and Ratings

GOVERNORATES	EMPLOYMENT					INVESTMENTS						BUSINESS RESOURCES				EXPORT INFRASTRUCTURE				TOTAL SCORE	RANK	
	(1)	(2)	(3)	(4)	(5)	(6)		(7)		(8)	SCORE	(9)	(10)	(11)	SCORE	(12)	(13)	(14)	SCORE			
	TOTAL	% URBAN	URBAN UNRATE	EXPORT	PRO-SERV	SCORE	PROJECTS A	PROJECTS B	JOB GEN A	JOB GEN B		SALES	BANKS	BEDS		TELECOM	RAILROAD	SEAPORT				AIRPORT
TUNIS	++	++	0	--	++	4	++	++	0	-	+	4	++	++	++	6	+	+	+	3	17	2
ARIANA	+	0	+	--	++	2	+	--	0	++	--	(1)	++	+	0	3	+			1	5	5
BEN AROUS	0	++	0	--	++	2	+	--	0	++	0	1	++	+	0	3	+			1	7	4
BIZERTE	+	0	-	+	0	3	0	+	0	-	-	(1)	++	+	0	2	+	+		2	7	4
NABEUL	+	0	++	+	+	5	+	++	+	++	0	6	+	++	0	3	+			1	15	3
BEJA	0	-	-	+	0	(1)	-	+	--	0	-	(3)	+	-	0	0	+			1	(3)	8
LE KEF	-	-	--	0	-	(5)	-	0	+	0	--	(3)	0	--	0	(2)	+			1	(9)	10
JENDOUBA	0	--	--	0	-	(5)	-	--	+	--	--	(6)	--	0	0	(1)	+		+	2	(10)	11
SFAX	+	+	++	0	++	6	++	+	+	++	++	8	++	+	+	4	+	++	+	4	22	1
SOUSSE	0	++	+	-	++	4	0	+	++	+	+	5	+	++	+	4	+	+		2	15	3
MONASTIR	0	++	+	-	+	4	+	+	++	+	+	6	+	++	0	3	+		+	2	15	3
MAHDIA	0	-	+	++	-	1	-	++	++	--	0	1	-	+	0	0	+			1	3	6
KAIROUAN	+	--	0	+	-	(1)	-	--	+	--	+	(3)	--	0	0	(2)	+			1	(5)	9
KASSERINE	0	--	--	++	--	(4)	0	0	-	-	-	(3)	--	--	0	(4)	+			1	(10)	11
GABES	-	+	0	--	+	(1)	+	--	--	0	-	(4)	+	+	+	3	+	+		2	0	7
MEDENINE	0	0	++	-	++	3	-	0	--	-	--	(6)	+	++	0	3		+	+	2	2	6
TATAOUINE	--	-	0	-	++	(2)	--	--	0	--	--	(8)	--	--	0	(4)				0	(14)	13
GAFSA	-	+	--	--	0	(4)	-	--	-	--	-	(7)	--	-	0	(3)	+			1	(13)	12

Source: PADCO, February 1990

Note: Numbers in parentheses indicate a negative score; 6A and 7A refer to FONAPRA; 6B and 7B refer to FOPRODI

FACTOR	Employment			
INDICATOR	(1) Number Employed			
DATE SOURCE (year)	Institut National de Statistique (1984)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>200,000 employes	1	Tunis
ABOVE AVERAGE	+	199,999 - 100,000	5	Ariana, Nabeul, Bizerte, Kairouan, Sfax
AVERAGE	0	99,999 - 60,000	9	Ben Arous, Béja, Jendouba, Kasserine, Sidi Bouzid, Sousse, Monastir, Mahdia, Médénine
BELOW AVERAGE	-	59,999 - 30,000	5	Zaghuan, Le Kef, Siliana, Gafsa, Gabès
POOR	--	<29,999	3	Tozeur, Kebill, Tataouine

FACTOR	Employment			
INDICATOR	(2) Urban Share of Total Employment			
DATE SOURCE (year)	Institut National de Statistique (1984)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>70 percent	4	Tunis, Ben Arous, Sousse, Monastir
ABOVE AVERAGE	+	69 - 50	4	Sfax, Gafsa, Tozeur, Gabès
AVERAGE	0	49 - 40	4	Ariana, Nabeul, Bizerte, Médénine
BELOW AVERAGE	-	39 - 30	4	Béja, Le Kef, Mahdia, Tataouine
POOR	--	<30	7	Zaghuan, Jendouba, Siliana, Kairouan, Kasserine, Sidi Bouzid, Kebill
Reference Page:				

FACTOR	Employment			
INDICATOR	(3) Urban Unemployment Rate			
DATE SOURCE (year)	Institut National de Statistique (1984)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	<11.9 percent	3	Nabeul, Sfax, Médenine
ABOVE AVERAGE	+	12.0 - 14.9	7	Ariana, Zaghouan, Sousse, Monastir, Mahdia, Sidi Bouzid, Tozeur
AVERAGE	0	15.0 - 17.9	6	Tunis, Ben Arous, Kairouan, Gabès, Tataouine, Kebili
BELOW AVERAGE	-	18.0 - 20.9	3	Siliana, Béja, Bizerte
POOR	--	>21	4	Le Kef, Jendouba, Kasserine, Gafsa

FACTOR	Employment			
INDICATOR	(4) Concentration in Export-Related Categories			
DATE SOURCE (year)	Institut National de Statistique (1984)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>55 percent	3	Mahdia, Kasserine, Sidi Bouzid
ABOVE AVERAGE	+	54 - 50	7	Bizerte, Nabeul, Zaghouan, Siliana, Béja, Kairouan, Kebili
AVERAGE	0	49 - 45	3	Le Kef, Jendouba, Sfax
BELOW AVERAGE	-	44 - 40	4	Sousse, Monastir, Médenine, Tataouine
POOR	--	<40	6	Tunis, Ariana, Ben Arous, Gabès, Gafsa, Tozeur

Note: Export-related categories are: Agriculture/Fishing, Food and Tobacco, Textiles, Manufacturing, and Mechanical Industries.

FACTOR	Employment			
INDICATOR	(5) Concentration in Productive Services Categories			
DATE SOURCE (year)	Institut National de Statistique (1984)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>20 percent	7	Tunis, Ariana, Ben Arous, Sfax, Souasse, Médenine, Tataouine
ABOVE AVERAGE	+	19.9 - 15.0	3	Nabeul, Monastir, Gabès
AVERAGE	0	14.9 - 12.5	3	Bizerte, Béja, Gafsa
BELOW AVERAGE	-	12.4 - 10.0	7	Zaghouan, Le Kef, Jendouba, Mahdia, Kairouan, Tozeur, Kébili
POOR	--	<10	3	Siliana, Kasserine, Sidi Bouzid

Note: Percentage of tertiary sector in productive services--excludes administration

FACTOR	Investments			
INDICATOR	(6A) Total Projects/FONAPRA			
DATE SOURCE (year)	FONAPRA (1985-88)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>10 percent of total	2	Tunis, Sfax
ABOVE AVERAGE	+	9.9 - 5.0	5	Ariana, Ben Arous, Monastir, Gabès, Nabeul
AVERAGE	0	4.9 - 3.0	3	Bizerte, Kasserine, Soussse
BELOW AVERAGE	-	2.9 - 1	11	Zaghouan, Béja, Jendouba, Le Kef, Siliana, Kairouan, Sidi Bouzid, Mahdia, Gafsa, Kébili, Médenine
POOR	--	<1	2	Tataouine, Tozeur

FACTOR	Investments			
INDICATOR	(68) Total Projects/FOPRODI			
DATE SOURCE (year)	Agence de Promotion Industrielle (1976-88)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>100 projects	4	Tunis, Nabeul, Zaghuan, Mahdia
ABOVE AVERAGE	+	99-50	5	Bizerte, Béja, Sfax, Sousse, Monastir
AVERAGE	0	49-40	3	Siliana
BELOW AVERAGE	-	39-30	1	Sidi Bouzid, Tozeur, Tataouine, Kébili, Jendouba, Gafsa, Gabès, Kairouan, Ariana, Ben Arous
POOR	--	<30	10	

FACTOR	Investments			
INDICATOR	(7A) Job Generation Ratio - FONAPRA			
DATE SOURCE (year)	FONAPRA (1984-88)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>4.25 jobs/project	3	Sousse, Monastir, Mahdia
ABOVE AVERAGE	+	4.24 - 4.00	6	Nabeul, Jendouba, Sfax, Kairouan, Siliana, Le Kef
AVERAGE	0	3.99 - 3.75	5	Tunis, Ariana, Ben Arous, Bizerte, Tataouine
BELOW AVERAGE	-	3.74 - 3.50	4	Kasserine, Sidi Bouzid, Gafsa, Zaghuan
POOR	--	<3.50	5	Béja, Gabès, Médenine, Kébili, Tozeur

FACTOR	Investments			
INDICATOR	(7B) FOPRODI Jobs Generated			
DATE SOURCE (year)	Agence de Promotion Industrielle (1978-88)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>1,000 jobs	5	Sfax, Naboul, Zaghouan, Ariana, Ben Arous
ABOVE AVERAGE	+	999-600	2	Monastir, Sousse
AVERAGE	0	599-500	3	Béja, Le Kef, Gabès
BELOW AVERAGE	-	499-400	4	Tunis, Bizerte, Kasserine, Médenine
POOR	--	<400	9	Jendouba, Gafsa, Kairouan, Mahdia, Sillana, Sidi Bouzid, Tozeur, Tataouine, Kebili

FACTOR	Investments			
INDICATOR	(8) New Commercial Establishments Authorized			
DATE SOURCE (year)	Ministry of Planning (1984-88)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>2,000 licenses	1	Sfax
ABOVE AVERAGE	+	1,999 - 1,000	4	Tunis, Sousse, Monastir, Kairouan
AVERAGE	0	999 - 750	3	Ben Arous, Nabeul, Mahdia
BELOW AVERAGE	-	749 - 500	7	Bizerte, Zaghouan, Béja, Sillana, Kasserine, Gabès, Gafsa
POOR	--	<500	7	Ariana, Le Kef, Jendouba, Sidi Bouzid, Médenine, Tataouine, Kebili

Note: No data for Tozeur

FACTOR	Business Resources			
INDICATOR	(9) Banks/Bank Employment			
DATE SOURCE (year)	Institut National de Statistique (1984)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>1.3 percent	5	Tunis, Ariana, Ben Arous, Bizerte, Sfax
ABOVE AVERAGE	+	1.29 - 1.00	6	Nabeul, Béja, Sousse, Monastir, Gabès, Médenine
AVERAGE	0	.99 - .80	2	Zaghuan, Le Kef
BELOW AVERAGE	-	.79 - .70	3	Siliana, Jendouba, Mahdia
POOR	--	<.69	7	Kasserine, Kairouan, Sidi Bouzid, Tataouine, Gafsa, Tozeur, Kebili

**Note:** Percentage of tertiary employment in banking and insurance categories.

FACTOR	Business Resources			
INDICATOR	(10) Hotel Beds			
DATE SOURCE (year)	Ministry of Planning (1987)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	>5,000 beds	5	Tunis, Nabeul, Sousse, Monastir, Médenine
ABOVE AVERAGE	+	4,999 - 1,000	7	Ben Arous, Ariana, Bizerte, Sfax, Gabès, Mahdia, Tozeur
AVERAGE	0	999 - 600	3	Jendouba, Kairouan, Kebili
BELOW AVERAGE	-	599 - 400	1	Gafsa
POOR	--	<400	7	Zaghuan, Siliana, Béja, Le Kef, Kasserine, Sidi Bouzid, Tataouine

FACTOR	Business Resources				
INDICATOR	(11) Telecommunications				
DATE SOURCE (year)	Directorate of Telecommunications (1988)				
RATING	SCORE	RANGE		NO.	CITIES
		Telephone	Telex		
GOOD	++	>10 % lines installed	>10	1	Tunis
ABOVE AVERAGE	+	9.9 - 5	9.9 - 5	3	Sousse, Sfax, Gabès
AVERAGE	0	4.9 - 0	4.9 - 0	19	Médénine, Kairouan, Le Kef, and all others
BELOW AVERAGE	-	--	--		
POOR	--	--	--		

Note: Governorates not rated according to available data are assigned an average rating.

FACTOR	Export Infrastructure				
INDICATOR	(12) Railroad				
DATE SOURCE (year)	Ministry of Planning (1989)				
RATING	SCORE	RANGE		NO.	CITIES
		Telephone	Telex		
GOOD	++	--	--		
ABOVE AVERAGE	+	1 line		13	Tunis, Ariana, Ben Arous, Bizerte, Béja, Le Kef, Jendouba, Sfax, Sousse, Kairouan, Kasserine, Gabès, Gafsa
AVERAGE	0	--	--	3	Nabeul, Monastir, Mahdia
BELOW AVERAGE	-	--	--		
POOR	--	--	--		

Note: Rating of urban Governorates only.

FACTOR	Export Infrastructure			
INDICATOR	(13) Seaport			
DATE SOURCE (year)	Ministry of Planning (1989)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	2 ports	1	Sfax
ABOVE AVERAGE	+	1	5	Tunis, Bizerte, Sousse, Gabès, Médénine
AVERAGE	0	--	--	
BELOW AVERAGE	-	--	--	
POOR	--	--	--	

FACTOR	Export Infrastructure			
INDICATOR	(14) Airport			
DATE SOURCE (year)	Ministry of Planning (1989)			
RATING	SCORE	RANGE	NO.	CITIES
GOOD	++	--	--	
ABOVE AVERAGE	+	1 airport	5	Tunis, Jendouba, Sfax, Monastir, Médénine
AVERAGE	0	--	--	
BELOW AVERAGE	-	--	--	
POOR	--	--	--	