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ASPECTS OF CHANGE AND DEVELOPMENT IN THE SMALL TOWNS OF LIBYA

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Thesis submitted for the Ph.D. degree in the Faculty of Social Sciences, University of Durham, Durham, England.

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Dedication

To my beloved brother Adnan who
passed away before seeing the
fruition of this work, and also
to my father and mother without
whose support this work would
not have been possible.

ABSTRACT

This thesis addresses itself to the study of the small towns in Libya. Thirty-seven settlements were identified as small towns having a population range between 2000 and 30,000 inhabitants in 1973.

An attempt has been made to build a perspective view of the literature of small towns in three major areas of the world, the United States, Africa and the Middle East.

The importance of the small towns in the Libyan settlement system is illustrated by the fact that they contained nearly 25 per cent of the total urban population in 1973. This represented about 17 per cent of the country's total population in that year.

The Libyan settlement system is characterised by a high degree of primacy and extreme spatial disparities among regions. The dramatic economic changes in the country following the discovery of oil in the late 1950's have increased the polarisation of population upon the two main cities, Tripoli and Benghazi. Since 1979 the Government has begun to formulate a national spatial strategy which attempts to bring about a certain restructuring of the Libyan settlement system. However in the absence of limitations on the growth of Tripoli and Benghazi the trend towards increasing polarisation on the two major cities seems likely to continue. Certain small towns have been selected for development as second and third rank centres under the new strategy but the success of such a policy of selective growth and development depends on the careful coordination of planning at the sectoral, national spatial and local levels. In the absence of effective planning structures, the success of such a strategy is far from assured.

The State has played a dominant role in developing and changing the small towns. Increasing oil revenues have made available massive funds for economic and social development programmes and brought certain changes

in the small towns, changes in their functions, populations and morphologies.

The small towns have grown rapidly and it is argued that the majority may well continue to grow in the future. This rapid growth is attributed to natural increase, internal migration and the influx of foreigners, all of which have been stimulated by State policies.

The small towns have experienced, and continue to experience, rapid physical expansion and in many cases have outpaced the planning process, reducing its effectiveness to control physical growth and creating serious problems of physical planning and social adaptation. This study highlights the main problems facing the small towns; namely, water supply, sewage, the deterioration of historic centres, housing and urban encroachment on agriculture.

State funds have transformed the small towns and in the process have made them almost totally dependent on national policies and priorities for their survival and future development. Since 1980 Libya has entered a new period of economic stringency and it remains to be seen whether the State will continue to sustain the weak and subsidised economies of the small towns.

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CHAPTER ONE

INTRODUCTION

1.1 THE SMALL TOWN

Small towns, though receiving little attention, are really of great importance. It is the large and rapidly expanding cities with their acute social problems which have received most attention, while the small towns have been somewhat neglected. The small towns are mostoften integrated with the rural areas, providing them with services and commodities. The small towns are the foundations of the rural culture, they are the points at which rural and urban ways of life meet. They are the linkages in the chain of interaction between the rural areas and the higher order urban centres.

Little is known about the causes of population change in small towns, with some growing rapidly and others stagnating or declining. In the Middle East for example political upheavals have disrupted the life of many small towns and they have lost substantial numbers of their inhabitants. The Jews and Europeans who left North Africa had often represented a substantial proportion of the population of certain small towns. The war between Libya and Egypt in 1977 disrupted the life of many small towns in the border area, for example Msaid, Bardiya and Elgaghboub on the Libyan side, and El Salum and Marsa Matrouh on the Egyptian side. The Arab-Israel Wars and the Gulf War between Iraq and Iran have also disrupted the life of many small towns in the area.

A whole range of questions require investigation concerning the functions, growth, decline, economic base and population of small towns and their spatial interaction with other towns and cities. There is a need to investigate the role of in-migration to small towns. Can

small towns absorb the increasing number of half-educated and semi-skilled young people who look down upon agriculture? Can the small towns match the attraction of big cities? The big cities are getting bigger - this is a world wide phenomenon - and the problems they present are immense. What role can small towns play in solving these problems?.

There is a huge gap in the status of many small towns. For example the status of small towns in advanced industrialised countries such as the United States is different from small towns in India or Africa. With the increasing population in some small towns, problems arise such as shortage of dwelling units, traffic problems, shortage in provision of services in health, education and water supply.

Many small company towns in the developed countries hit by the recent economic recession have declined. Blackburn, a textile town which lies at the heart of the north-east Lancashire area, is a good example. The steel town of Consett in County Durham is another example, whilst the steel town of Morgan Park, Minnesota in the United States, which has declined because of the change in steel production technology, marketing factors and the enforcement of pollution control standards, provides a third example. It remains to be seen what will happen to many small company towns which depend on oil in Libya and the Middle East?.

The need for dispersal from the larger centres is complementary to the need of many small towns for an increase in population. Planners therefore should marry these two needs by guiding the population from the congested areas to those smaller towns which are best able to receive more people.

To understand small towns, many questions need to be answered. We need to know about the growth, decline or stability of small towns; the problems resulting from their growth or decline and the

role of small towns in the urban system. The small town must be studied within the context of the urban systems. In addition we need to know about the consequences of many public policies and programmes intended to develop the small towns.

The four groups of people concerned with the small towns are: a) the residents, who may be local leaders or rank and file townspeople; b) policymakers who make decisions which affect small towns and their residents; c) the town developers and planners brought in to solve a particular problem and d) social scientists who carry out research and investigations in small towns, identify problems and often suggest possible solutions.

To understand a small town it is necessary to learn about its physical fabric (buildings, pattern of land use), its economic structure (trade, employment, local industry and the distribution of wealth), its sphere of influence and the impact of government policies. To these must be added cultural values of group organisation, shared values and human relationships.

1.2 THE STUDY AREA

The Socialist People's Libyan Arab Jamahiriya is one of the most urbanised countries in the Developing World. When it achieved its independence in 1951, however, it was one of the poorest countries in the world with a per capita GNP of only US $40. The discovery and rapid exploitation of its oil reserves during the 1960s brought a dramatic transformation to the country's fortunes. Libya today is one of the wealthiest nations in the world; in 1981 its per capita GNP was a staggering US $8,450, by far the highest of all the Mediterranean countries.

Geographically, Libya is one of the North African countries,

with a Mediterranean coastline of 1,980 km, and total area of 1,759,590 sq km which is more than seven times the total area of Britain and Northern Ireland and one third of the area of the United States. Libya is an exceptional country not only within the Third World, but in a global comparison. It is the only oil-rich developing country which through its ideological commitment to Arab socialism is trying to mobilise the masses politically and to distribute equitably the wealth received from its oil revenues.(1)

Libya's strategic location has made it a crossroads linking Europe and sub-Saharan Africa and the countries of the Arab East (Mashrek) with those of the Arab west (Maghreb). Its location made it an attractive target for conquest and from ancient times Libya was over-run by successive waves of invaders who swept in to occupy the country and shape much of its recorded history.

Physiographic factors have influenced to a great extent the country's physical structure, land use and the characteristics and distribution of its population. Approximately 94 per cent of the total area of the country is desert, most of which is considered to be unproductive. The only fertile areas are located along the Mediterranean coast in the western province, Tripolitania and the eastern province, Cyrenaica which are divided by the Sirte desert. The southern province of Fezzan has only limited areas of cultivable land. Water is scarce in Libya, and some observers fear that Libya may run out of fresh water before its oil reserves are exhausted. (2) Demographically, Libya had a small population (some 3 million inhabitants in 1980) which makes the country both sparsely populated and gives a high per capita GNP.

Oil wealth has transformed this arid and sparsely populated

country bringing in particular dramatic demographic changes. Population has become even more polarised upon the two major cities; Tripoli and Benghazi, accentuating the country's spatial and structural dualism. Libya is today passing through an unprecedented period of rapid socio-economic and demographic change from a land of nomads and scattered primitive agriculture to a rapidly urbanising, wealthy oil producing nation. This is accompanied by a heavy migration of population between regions, between rural and urban localities and between small and large towns and cities. In spite of one of the highest rates of natural increase in the world (4.1 per cent per annum) Libya's labour market suffers from an acute manpower shortage. The country has been forced to import a growing number of foreign workers who have further accentuated the concentration of population. (3) Conscious of the undesirable consequences of urbanisation, and the continued polarisation of population and investment, the State had to intervene. The problem of the present era is to distribute the benefits of this wealth throughout the society and evolve a sound economic, social and physical structure for later generations. Development decisions and initiatives are almost entirely in the hands of the Libyan government. The policies presently adopted will determine whether Libya can achieve and maintain the desired standard and way of life for all its citizens by the year 2000. (4)

Large scale government projects initiated here channelled oil revenues into extensive infrastructure construction and socio-economic development programmes aimed at diversifying the economy, redressing regional population and income imbalance, and curbing the alarming trend towards rapid growth and congestion in the two major cities of Tripoli and Benghazi. The process has been described by some sources as an industrial and urban revolution. The economic and social

consequences are only an intermediate stage in a much wider evolution, whereby societies are transformed from a pre-industrial and pre-urban character to one characterised by an urban and industrial economy. (5)

Libya's immense oil revenues have touched every aspect of the life and development of its small towns and have resulted in massive changes in their population, functions and physical fabric. It is the task of this study to investigate such changes.

1.3 OBJECTIVES

This thesis addresses itself to the study of the small towns in Libya. An examination of bibliographical sources reveals that little of significance has been published to date on small towns in Libya. Detailed geographical studies of these settlements do not exist despite their vital importance for future economic and social development. This being the case, it is important that a study is attempted to investigate small towns and hopefully to provide a foundation for future studies on this important aspect of the process of urbanisation in Libya. This is an area of study where further research needs to be undertaken not only in Libya but in the whole of the Middle East. The principal objectives are:-

(1) To investigate the position of small Libyan towns within the urban system.

(2) To examine the role of the State and its policies in the development of small towns.

(3) To investigate the role which the small towns play in the economic and spatial development of the country.

(4) To identify the significant aspects of demographic and physical change in the Libyan small towns.

(5) To investigate the most important problems which have resulted from the growth and the expansion of small towns.

(6) To look at the future of small towns and possible development trends during the post-oil era.

1.4 SOURCES AND FIELDWORK

1.4.1 Sources

Urban studies in the Middle East are still in their infancy. Scholarly research into Middle Eastern urban affairs has lagged behind both the growth of urban studies for other major regions and interest in other aspects of Middle Eastern society.

However, fields such as urban geography, urban sociology, urban anthropology and urban history have been increasing in importance in their respective disciplines. Bonine, reviewing the state of urban research in the Middle East in 1976, concluded that:

> "The traditional Middle Eastern city is still being explained in cliches and stereotypes...The modern city and processes of urbanisation have barely been touched upon". (6)

Nevertheless, although important gaps still exist in our understanding of the structure and function of the Middle Eastern city, substantial progress has been made in recent years, as evidenced by a growing number of individual case studies and monographs.(7) However, it is the large and rapidly expanding cities with their acute social problems which have received most attention, while the small towns have been somewhat neglected. The small towns may have much to teach us about the processes of growth and decline which have operated over a long period of time throughout the Middle East. As indicated by Lawless, it is the small and medium size towns which have to be revitalised in the future in order to reduce the ever widening gulf

which separates these towns from the few really big cities. They must become effective service centres for their surrounding regions and a means of bringing about modernisation and change.(8)

Blake draws attention to the neglect of small towns in the study of Middle Eastern urbanisation, and the uncertainty that surrounds the causes of their population change and their functions within urban networks and hierarchies. He indicates that there has been a considerable increase in the number of small towns. He identifies the types of small towns in the Middle East and suggests the need for small towns to be more fully integrated into national urban planning.(9)

Recently, small towns have been the focus of research on social organisation and political processes and several monographs on this subject have been published.(10) Geographers have been the major contributors in analysing the physical and spatial structure of the contemporary Middle Eastern city. Members of the Department of Geography at Durham University have produced several monographs on Middle Eastern towns and cities including Amman, Shiraz, Misurata, Kermanshah, Kashan and Tlemcen. These studies have concentrated on twentieth century spatial growth land use, population dynamics and the enumeration of activities in the bazaar and commercial districts. Problems of the changing contemporary city in the region provide the main theme of an edited volume with contributions by British geographers entitled The changing Middle Eastern city.(11) Urban studies in Libya are rare and still in their infancy. Two major works were carried out as Ph.D theses by Libyan geographers; the first by Hadi Bulugma in 1964 on The urban geography of Benghazi and the second by Mahmoud Khuja in 1969 on The growth and function of Tripoli. The Libyan small towns have never been the subject of a comprehensive study. However, the work of Blake in 1968 on Misurata was the first study of a small town which has since experienced dramatic

change as a result of the influence of Libya's huge oil revenues. (12) The changes evident in Misurata in 1975 were more spectacular than those predicted in 1968, largely because of the impressive physical planning schemes that had been implemented. (13)

As far as this study is concerned the basic sources of information have been derived from the following:-

1. The Population Census of 1954, 1964 and 1973.
2. A major study of the Libyan settlement system undertaken by Italconsult in 1976.
3. The Social and Economic Development Plans.
4. The National Physical Perspective Plan 1981-2000.
5. Physical planning schemes e.g. Master Plans and Layout Plans prepared by various foreign consultant companies.
6. Statistical publications and reports prepared by government agencies.
7. Maps and photographs consulted in Ministry of Planning and various other government offices.
8. Interviews and fieldwork observations.

Detailed information about the sources consulted in this study are included in the Bibliography.

1.4.2 Fieldwork

In the spring and summer of 1981 the author carried out a field investigation in Libya. During a five month period he interviewed officials in relevant government offices and in a number of Libyan and foreign companies. He collected specific data on the population, migration and economic development of small towns from the Department of

Statistics in Tripoli and from individual municipalities (Baladiyat). He visited over 20 small towns in order to study at first hand the changing pattern of land use and in particular to investigate the extent to which planned developments as set out in the Master Plans etc., had actually been implemented. He used this opportunity to study the historical evolution of selected small towns and to examine some of the problems of physical planning and development. To obtain a more detailed understanding of these problems, the author carried out informal interviews with some of the inhabitants of small towns. He also visited the sites of a number of new, small urban centres under construction at El Bregah, Ras Lanuf, Gasr Ahmed, El Gawarsha and Ez Zintan.

On his way to Libya, the author also visited the Centre de Recherches et d'Etudes sur les Societés Mediterraneennes in Aix-en-Provence to use their extensive library and bibliographical resources. In Rome he visited the head office of Italconsult to consult unpublished material relating to their major study of the spatial development of Libya and he held discussions with members of their staff involved in the Libyan project. In Tunisia he talked to members of staff in the Department of Geography at the University of Tunis about their work on small towns in Tunisia. He also worked in the libraries of the two Libyan Universities and discussed this work with members of the academic staff with research interests in urban developments.

1.5 PROBLEMS AND LIMITATIONS

1.5.1 Problems of Definition

From the outset, one of the most difficult problems in this study was that of defining a small town. To speak of small towns immediately raises two questions. Firstly, how does one make a meaningful distinction between urban and rural communities and secondly, what is the upper

size limit of a small town? The difficulty is more acute if one believes in the urban-rural continuum. Arthur Smailes for example stated that:

> "Nowadays there is no longer either socially or physically a simple clear-cut dichotomy of town and country; rather it is an urban-rural continuum that presents itself. There is no definite point where rural ends and urban begins" (14)

Several approaches could be used to distinguish urban from rural settlement but there is no agreement on a single acceptable formula; many of the apparent contradictions or weaknesses in the literature derive from such definitional differences. All descriptions, analyses and comparisons of towns depend on the validity of the urban definitions employed. One of the criteria is administrative; thus, a town or a city is so by definition, a town is what the State is prepared to call a town. (15) Many countries in the Middle East regard administrative status as a prime indicator of a town, regardless of population size. In Turkey the government designates as urban all localities which function as Provincial or District capitals; there are about 162 District capitals with less than 5,000 inhabitants and 18 with less than 2,000. Iran counts all Shahrestan centres (whatever their size) as urban. Anthony Lemon states:

> "any administrative distinction between urban and rural is likely to reflect historical conditions, which must reduce its value as a basis for geographical definition" (16)

Another unsatisfactory criterion is the size of the population, that is to say a settlement is a town if it has a certain population size, for example 2,000 and above, 5,000 and above or 10,000 and above. Israel, for example, considers all settlements of more than 2,000 inhabitants as towns except those where at least one third of the heads of households, particularly in the civilian labour force, earn their living from agriculture. They adopt a simple numerical value

whereby a town is bigger than a village community. This approach could be relevant for Libya but it is unsatisfactory in the case of Egypt where many village communities have more than 20,000 inhabitants.

The idea of using the density of population as a formula to define a town has also been rejected. Lemon for example has stated:

> "A town may be expected to have a greater density of population than rural areas, but there are other factors, notably the size of the administrative unit; thus a small village tightly enclosed by its parish boundaries may appear more densely populated than a small town whose boundary enclosed extensive areas of agricultural land" (17)

The functions of a settlement could be used to distinguish between urban and rural communities; wherever a town performs certain functions which are different from the functions of a village. However, a more precise definition based on functions is to classify the occupations of the inhabitants of a settlement; for a settlement to be defined as urban, some 60 or 70 per cent of the working force must be engaged in non-agricultural occupations. Many countries define urban places by a combination of different formulae. Table 1.1 shows the variety of definitions adopted in the Middle East. In India, for example, the 1971 Census of Population defines urban places as those places which have (i) a municipality corporation cantonment or notified town areas or (ii) satisfied the following criteria (a) a minimum population of 5,000, (b) at least 75 per cent of the male working population is non-agricultural and (c) a density of population of at least 400 persons per sq km. (18) Using any of these criteria, means that one assumes a break in the urban-rural continuum which may not exist in a given region and which will certainly not be of universal validity.(19)

Another arbitrary criterion is the upper size limit used to define small towns. Bujra (20) put the upper limit as 5,000 inhabitants, Blake (21) at 20,000 and Benhalima (22) at 30,000.

Table 1.1 Definitions of Urban Population in Middle Eastern Countries

Morocco	:	All municipalities, Centres autonomes and other urban centres
Algeria	:	Centres of communes with 1,000 or more population and at least 50 per cent or more of them in non-agricultural sectors. More than 75 per cent: urban; between 50 and 75 per cent: semi-urban
Tunisia	:	Population living in all communes
Libya	:	No specific definition. After the census is taken, population of Tripoli and Benghazi Muhafadat and the urban parts of the Mutassarifias of Beida and Derna are treated as urban
Egypt	:	The governorates of Cairo, Alexandria, Suez, Isma'ilya and Port Said and the chief towns of provinces and districts
Sudan	:	Centres with 5,000 or more population having some urban characteristics
Jordan	:	Urban includes the population resident in all localities of 10,000 or more population (excluding localities inhabited only by Palestinian refugees), all district capitals regardless of size, all localities of 5,000 to 10,000 inhabitants in which two-thirds or more of the economically active males were reported in non-agricultural occupations and those suburbs of Jerusalem and Ammam cities with at least two-thirds of males in non-agricultural pursuits
Israel	:	All settlements with more than 2,000 inhabitants, except those where at least one-third of the heads of households, participating in the civilian labour force, earn their living from agriculture
Syria	:	Cities, district (Mohafaza) centres and subdistrict (Mantika) centres
Cyprus	:	Six district towns and Nicosia suburbs
Turkey	:	Population of the localities within the municipality limits of administrative centres of provinces and districts
Iraq	:	Population living within the boundaries of municipality councils
Iran	:	All Shahrestan centres, regardless of size and all places of 5,000 or more inhabitants
Kuwait	:	Kuwait city (Dasman Sharq/1, Sharq/2, Murgeb, Salihia and Qibla) and Labourer's City
Bahrain	:	Towns of Al Manamah, Al Muarraq (including Al Muharraq suburbs), Hedd, Hiddhafs, Sitrah, Rifa's and Awali
PDR Yemen	:	The entire former colony of Aden excluding the oil refinery and villages of Bureika and Fugum

Source: Clarke, J.I. (1980) Contemporary urban growth in Blake,G.H. and Lawless, R.I. The Changing Middle Eastern city, Croom Helm,London,p.41

It is clear there is no single satisfactory means by which a small town can be defined. It is hardly surprising therefore that different definitions are presented by different authors. In the Libyan context what is the definition of urban? How can small towns be defined in Libya? It is not easy and the problem is compounded by the shortcomings of the population data for the years 1954, 1964 and 1973.

The 1954 Census of Population identified only nine settlements as urban, two of them were Tripoli and Benghazi and the other seven urban centres were small towns with populations of less than 20,000 inhabitants : Ejdabiah, Derna, El Merj, Misurata, Ez Zawiyah, Suq el Gumah, and Tobruq. (23) The 1964 Census identified only six settlements as urban; Tripoli, Benghazi, Derna, Tobruq, Ejdabiah and Sirte; but failed to identify others such as Misurata and El Merj.(24) In 1966, however, the Ministry of Planning and Development published separate figures and defined any settlement with more than 2,000 inhabitants as urban, regardless of its function. (25) The 1973 Census of Population divided the country into 46 Baladiyat (Municipalities) and 156 Fur Baladiyat (Sub-Municipalities). Each Fur Baladiyah was subdivided into Mahalat (Qarters). All settlements with an "urban development plan" were defined as urban regardless of their function and size.(26) On the basis of the 1973 Census, 189 settlements were identified as urban and 474 settlements as rural (see Table 1.2). The 1973 Census failed to recognise a large number of small towns simply because they did not have an urban development plan and even considered some parts of towns such as El Merj as rural and others urban.

The United Nations in 1976 defined urban Libya as the total populations of Tripoli and Benghazi Muhafadat (Provinces) and the urban parts of the Mutassarifiat (Sub-Provinces) of El Beida and Derna. (27)

Table 1.2 : Distribution of settlements between urban and rural areas by Muhafadat based on the 1973 Census of Population

Muhafadat (Provinces)	Number of Urban settlements	Number of Rural settlements	Total
Tripoli	74	12	86
El Khums	12	56	68
Misurata	4	52	56
Gherian	10	100	110
Ez Zawiyah	20	56	76
Sebha	16	51	67
El Khalij	8	37	45
Benghazi	29	36	65
Jabel Akhdar	7	39	46
Derna	9	35	44
Libya (Total)	189	474	663

Source: Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic).

This definition, however, considerably under-estimates the true proportion of urban dwellers since it excludes some small urban centres in the 10,000 to 20,000 range and even more in the 5,000 to 10,000 range. Such centres clearly perform urban functions of considerable importance. (28)

Blake indicates that it is possible to disregard national definitions and adopt a numerical basis. He thus regarded a settlement with more than 10,000 inhabitants as urban.(29) Others, like Attir, defined an urban community as a settlement of 5,000 inhabitants or more. (30) The problem is more acute when it is clear that many small settlements which are classified as "non-urban" often perform important urban functions and they should figure in any analysis.

In a study by Italconsult (1976) over 1,100 separate settlements were located, mapped and classified into three categories according to their size and function :

Firstly: Cities - 36 major population concentrations ranging from the two metropolitan areas of Tripoli and Benghazi down to small urban centres which have just topped the threshold of 10,000 inhabitants or are expected to attain it by 1985.

Secondly: Large settlements - there are 76 centres with either more than 3,000 inhabitants or which function as cluster or sub-cluster centres, performing a critical structural role in their regional systems.

Thirdly: Villages - about 1,000 small settlements existed in 1973, some of them with only 100 or 200 inhabitants. (31)

Where there is no agreement about the appropriate criteria to adopt, the objective definition of towns and cities will remain a basic problem that must be faced by all urban geographers.

On the basis of the 1973 Census of Population the author surveyed

all settlements in Libya (see Tables 1.3 and 1.4) and classified them into four major categories.

Firstly: Cities - the two major metropolitan areas of Tripoli and Benghazi.

Secondly: Intermediate Towns; seven towns - Ez Zawiyah, Misurata Ejdabiah, El Beida, Tobruq, Derna and Sebha with populations above 30,000 inhabitants.

Thirdly: Small Towns - including 37 small towns ranging between 2,000 to 30,000 inhabitants (Fig. 1.1).

Fourthly: Villages and hamlets.

Some 37 settlements within the population range 2,000 and 30,000 were considered as small towns because of the nature of the data and its availability. The reasons for lowering the definition to 2,000 inhabitants is to include some urbanising villages and other regional centres. A number of settlements with more than 2,000 inhabitants have not been classified as small towns (see Table 1.4). In some cases more than 50 per cent of the active population are engaged in agriculture and agriculture-related activities. In others the Fur'Baladiyah as an areal unit does not correspond to an individual settlement so that it is impossible to extract statistics relating only to that settlement.

1.5.2 Other problems

In addition to the problems of defining small towns, there are other problems relating to the use of available population data for Libya which must be considered. Although the availability and reliability of population data has improved considerably in recent years in Libya, the author is aware of many errors and inconsistencies which exist in official figures. Because of a number of major changes in the country's administrative boundaries since 1954, it is difficult to compare data

Table 1.3 Classification of the urban centres of Libya on the basis of the 1973 Census of Population

	Centre	Population	Rank
Cities:	Tripoli	615,161	1
	Benghazi	266,196	2
Intermediate Towns:	Ez Zawiyah	52,188	3
	Misurata	45,211	4
	Ejdabiah	41,830	5
	El Beida	41,643	6
	Tobruq	37,848	7
	Derna	37,716	8
	Sebha	33,273	9
Small Towns:	El Merj	28,939	10
	Zliten	22,329	11
	Tarhuna	22,179	12
	El Khums	20,624	13
	Sirte	16,713	14
	El Jmail	15,132	15
	Yefren	15,029	16
	El Garabulli	14,524	17
	Zwarah	14,084	18
	Sabratah	13,922	19
	El Aziziah	12,646	20
	Brak	12,606	21
	Gherian	12,247	22
	Bani Walid	12,019	23
	El Abiar	11,460	24
	Beninah	9,637	25
	El Jof (Kufra)	9,368	26
	El Ajelat	9,211	27
	El Gubbah	9,049	28
	Shahat	8,322	29
	Ez Zahra	8,195	30
	Nalut	7,968	31
	El Bregah	6,554	32
	Murzuq	6,151	33
	Jalu	5,400	34
	Hoon	5,336	35
	Mizdah	5,189	36
	Tokrah	5,128	37
	Waddan	4,840	38
	Gaminis	4,622	39
	M'said	4,328	40
	Ghdams	4,020	41
	Tolmeitha	3,834	42
	Ubari	3,750	43
	Ghat	3,715	44
	Sorman	3,443	45
	Soussa	3,294	46
		1,546,873	

Source: Author's calculation on the basis of the 1973 Census of Population. Ministry of Planning, (1977) The 1973 Census of Population, Tripoli (in Arabic).

Table 1.4: Settlements which were not classified as Towns in 1973 and the reasons

No.	Settlement	Total Population	Reasons for not being considered as a small town			No.	Settlement	Total Population	Reasons for not being considered as a small town		
1.	Kambut	2,980		0	63%	36.	Al.Kuwayfiyah	2,262		0	60%
2.	Bardiya	1,979	*	0	45%	37.	Suluq	4,125		0	42%
3.	Elgaghboub	1,437	*		50%	38.	Al Maqrun	1,233	*		50%
4.	Al.Qurdabh	1,538	*	0	60%	39.	Jardinah (El.Khdrah)	2,039		0	43%
5.	Umm ar Rizam	1,640	*	0	60%	40.	Nawwaqiyah	1,073	*		60%
6.	At Tamimi	1,537	*	0	60%	41.	Ar Rajmah	3,202		0	40%
7.	Martubah	1,515	*		40%	42.	Gabr Jierah	1,125	*		60%
8.	Al.Izziyat	380	*		43%	43.	Al Milaytaniyah	1,023	*	0	54%
9.	Lamludah	1,531	*		51%	44.	Al.Aqaylah	754	*		65%
10.	Bait Thamer	1,497	*		82%	45.	El.Zawiteniah	1,490	*	0	54%
11.	Dabousia	786	*		84%	46.	Mradah	1,654	*		60%
12.	Labraq	3,590		0	45%	47.	As Sidrah	525	*	0	60%
13.	Al Qayqab	2,490		0	70%	48.	Nuwfaliyah	1,406	*	0	58%
14.	Ayn Marah	2,210		0	40%	49.	Wadi Hrawah	1,485	*		58%
15.	Ras al Hilal	775	*	0	60%	50.	Wadi Al Ahmer	1,482	*		58%
16.	Al Athrun	406	*	0	60%	51.	Umm el Khanafes	1,574	*		58%
17.	Mekili	660	*	0	77%	52.	Bu Hadi	3,758	*	0	54%
18.	Al Fayidiyah	3,555		0	60%	53.	Wadi Jarif	2,326		0	75%
19.	Qarnadah	1,986	*		60%	54.	Rabyanah	1,257	*	0	43%
20.	Massah	5,517		0	60%	55.	Tazirbu	1,841	*		43%
21.	Zawiyat al Arqub	1,300	*		46%	56.	Tamanhant	511	*	0	60%
22.	El.Hania	1,378	*		60%	57.	Samnu	1,161	*	0	60%
23.	Salantah	1,256	*	0	55%	58.	Az Zighan	934	*	0	50%
24.	Umar al Mukhtar	2,648	*		48%	59.	Al Qardah	1,336	*	0	50%
25.	Qandulah	2,176		0	43%	60.	Barqan	1,388	*	0	50%
26.	Marawah	1,959	*	0	52%	61.	Idri	1,913	*	0	44%
27.	Jardas	5,369		0	51%	62.	Wanzarik	1,995	*	0	60%
28.	Taknis	2,820		0	49%	63.	Al Ghrayfah	1,988	*	0	44%
29.	Al Bayadah	3,535		0	40%	64.	Bint Bayyah	1,637	*	0	40%
30.	Battah	3,535		0	60%	65.	Traghan	3,746		0	45%
31.	Qasr Libya	1,883	*		49%	66.	Umm Al Aranib	1,892	*	0	41%
32.	Farzugha	1,805	*	0	40%	67.	Zuwaylah	974	*	0	55%
33.	Daryanah	2,291		0	55%	68.	Tmassah	653	*	0	50%
34.	Sidi Khalifah	1,618	*		55%	69.	Al Qatrun	1,296	*	0	60%
35.	Al.Qwarshah	3,509		0	40%	70.	Tajarhi	330	*	0	70%

Cont.....

No.	Settlement	Total Population	Reasons for not being considered as a small town			No.	Settlement	Total Population	Reasons for not being considered as a small town		
71.	Wadi Atabah	3,902		0	75%	106	El Ajelat Fur Baladiyah	27,382		0	41%
72.	Al Awaynat	1,039	*		55%	107.	Ras Ajdir	486	*	0	45%
73.	Al Barkat	2,170			41%	108.	Bu Kammash	508	*	0	45%
74.	Al Qawasim	12,017		0	60%	109.	Raqdalin	17,598		0	60%
75.	Bu Zayyan	8,423		0	50%	110.	Bin Ghashir villages	28,882		0	48%
76.	Taghrinnah	8,210		0	60%	111.	Sidi Assayah	4,499		0	77%
77.	Al Asabiah	11,279		0	40%	112.	Suqal Khamis	5,233		0	50%
78.	Al Urban	4,930		0	65%	113.	Sbiah	5,062		0	48%
79.	Kiklah	8,118		0	45%	114.	El Aziziah Fur Baladiyah	18,604		0	48%
80.	Ar Rayayinah	5,553		0	42%	115.	Swani Ben Adam	15,473		0	48%
81.	Ez Zintan	1,882	*	0	45%	116.	Al Mahjub villages	39,430		0	50%
82.	Jadu	1,617	*	0	45%	117.	Dafiniyah	6,259		0	56%
83.	Ar Rujban	5,114		0	45%	118.	Tawargha	7,811		0	50%
84.	Ar Ruhaybat	4,934		0	45%	119.	Abu Grin	562	*	0	50%
85.	Al Jawish	1,079	*	0	50%	120.	Al Hishah	830	*	0	60%
86.	Tiji	991	*	0	50%	121.	Al Gaddahiyah	770	*	0	70%
87.	Kabaw	4,140		0	45%	122.	Buwayrat al Hasun	700	*	0	50%
88.	Al Harabah	3,292		0	40%	123.	Abu Njaym	866	*		50%
89.	Wazin	967	*		40%	124.	Villages of Zliten	23,460		0	65%
90.	Sinawan	1,146	*		45%	125.	El Shargieh Villages of Zliten El Gharbiah	13,192		0	50%
91.	Darj	2,152		0	45%	126.	Socna	3,188		0	43%
92.	Nasmah	2,073		0	61%	127.	Al Fuqaha	574	*		50%
93.	Al Qaryat	2,495		0	66%	128.	Zallah	2,771			74%
94.	Ash Shwayrif	1,715	*	0	78%	129.	Sidi Omeir	2,328		0	44%
95.	Tamzin	975	*		60%	130.	Gasr Khier	8,568		0	44%
96.	Ez Zahra Fur Baladiyah	8,195		0	60%	131.	Al Alowss	4,779		0	44%
97.	Al Nasiriyah	5,734		0	60%	132.	Ghonima	1,944	*	0	44%
98.	Al Mamurah	3,140		0	60%	133.	Villages of Suq al Khamis	28,647		0	54%
99.	Gargoza	3,744		0	60%	134.	Villages of Gassbat	19,122		0	70%
100.	El Mayah	5,253		0	42%	135.	Al Amamrah	3,100		0	58%
101.	Al Harshah	3,079		0	54%	136.	Villages of Ad Dawun	15,409		0	62%
102.	Bir Al Ghanam	4,126		0	71%	137.	Villages of Abier Miji	6,580		0	62%
103.	Sorman Fur Baladiyah	23,942		0	41%	138.	Villages of Sidi El Saied	8,489		0	66%
104.	Abu Isa	10,238		0	50%	139.	Bani Walid el Shargieh(east)	7,094		0	60%
105.	Sabratah Fur Baladiyah	30,836		0	44%						

Key

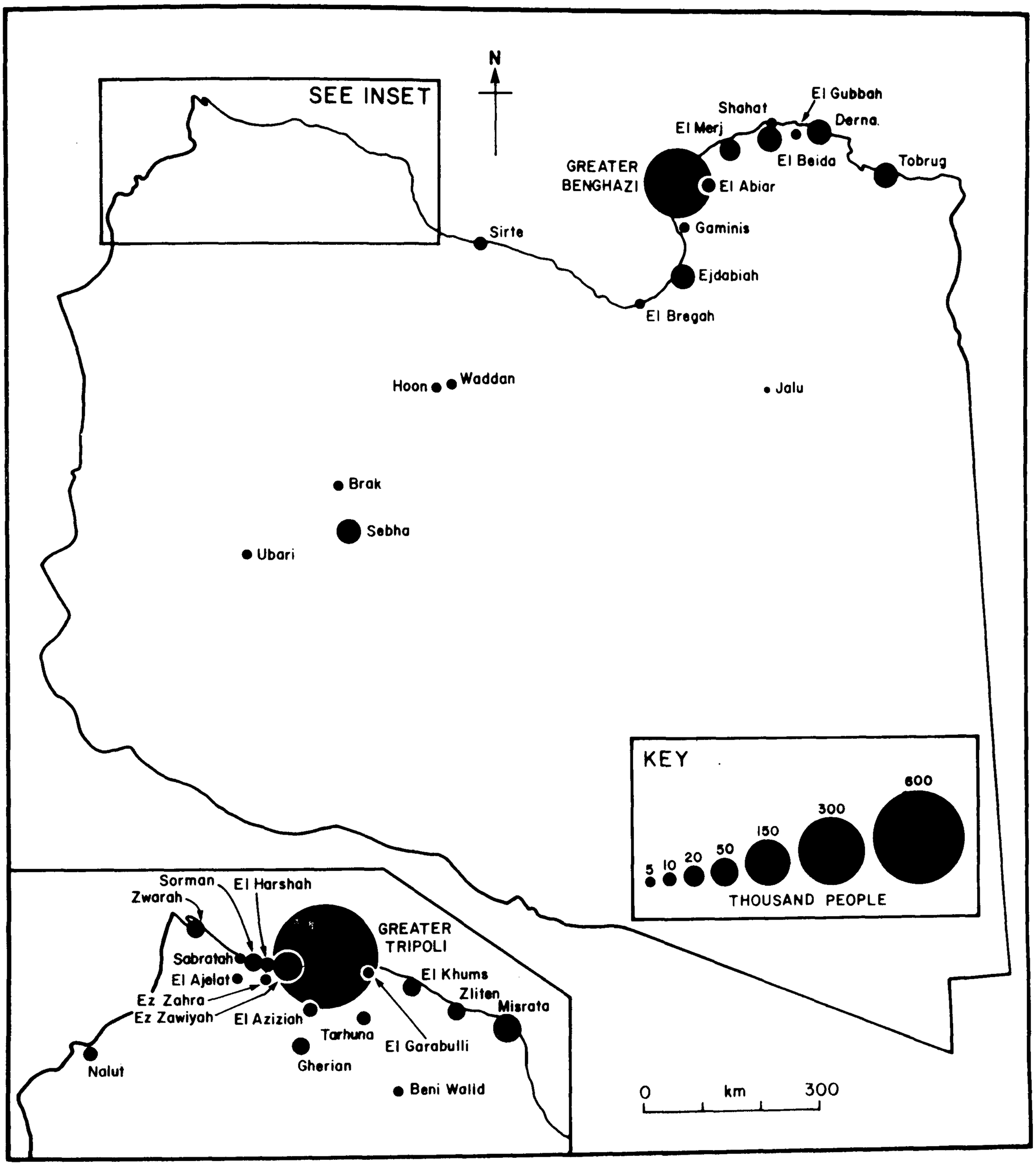
* Population less than 2000

0 The Fur Baladiyah as an area unit does not correspond to the Settlement

% Percentage of people working in Agriculture and Agriculture related activities.

Source: Ministry of Planning, (1977) The 1973 Census of Population, Tripoli (in Arabic).

Fig, 1.1 Urban Centres in Libya, 1973



Source: Compiled on the basis of the 1973 Census of Population, Ministry of Planning (1977) The 1973 Census of Population, Tripoli, (in Arabic).

from the three censuses of population. At the level of the Baladiyat, inconsistencies exist between the number and type of data sets regularly prepared by the local authorities. There are also inconsistencies in population data between the various studies carried out by foreign consultancies for the Libyan government e.g. Italconsult, Doxiadis, Polservice etc. To minimise errors, consistency checks have been applied by the author to all sources of data.

Statistical information on the number of people employed in the military establishment, foreign contract workers and foreigners in oil camps is not available. Official estimates of non-nationals in the country does not take account of the considerable scale of clandestine migration. Information on migration is not available at any level below that of the Muhafadat in the censuses of population hence it has not been possible to study the role of small towns in the migration process.

1.6 ORGANIZATION OF THE STUDY

This study consists of eight chapters. Following this first introductory chapter, Chapter Two provides an overview of recent works on small towns in three major areas of the world, namely; the United States, Africa and the Middle East. Chapter Three looks at small towns within the Libyan urban system and at issues such as the evolution of the settlement system up to the present day, urban growth and planning for the small towns and for the urban system as a whole. Chapter Four is concerned with the role of the State, which is identified as the dominant factor in the growth and development of small towns in Libya. Special emphasis is given to the processes of social and economic development, the decentralisation of industries and the expansion and restructuring of the administrative system. Chapter Five deals with population changes in the small towns, with specific reference to population growth, the presence of non-Libyans, internal migration and

structure. Chapter Six illustrates the physical changes experienced by small towns while Chapter Seven concentrates on the main problems facing the small towns. Chapter Eight, the conclusion, examines the future of small towns.

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CHAPTER TWO

SMALL TOWNS IN PERSPECTIVE

2.1 INTRODUCTION

The objective of this chapter is to build a perspective view on small towns in three areas of the world, namely in the United States, Africa and the Middle East. There is a considerable literature on the small towns of the United States which highlights the causes of their growth and decline, aspects of their economic and social development, the problems affecting these towns and the role of government intervention. The first section reviews the American experience which raises questions and issues which are relevant in the Libyan context. The second section on Africa is devoted to the role which the small towns could play in rural development. Two examples were chosen from East Africa, with emphasis being given to the need for government commitment to develop the African small towns. The third section on the Middle East illustrates the vast number of small towns, the problem of defining a small town within this region, their types, population changes and the need for small towns to be more fully integrated into the national urban planning.

2.2 SMALL TOWNS IN THE UNITED STATES

In the total settlement picture of the United States small towns are individually insignificant, but collectively important. Despite continuing urbanisation, small towns are still an important part of the rural settlement fabric as they are the communication centres for rural America and the common meeting ground of the rural and urban ways of living. Charles Galpin termed such towns and their hinterland as "rurban" communities. (1)

If the importance of the small town is accepted, the amount of substantive research is less than impressive. In the 1920's and 1930's, the small town was still being viewed by the social scientists who studied it,as the permanent unchallengeable heart of American life. In the 1930's and 1940's, studies of the small town increasingly viewed them as tending to pass outside the mainstream of American life, though they rarely questioned their capacity to survive or their intrinsic importance. In the 1950's and 1960's the changes in the small town, the problem of its survival and significance,have increasingly dominated work by social scientists. In the 1970's the problems of America's urban areas have been a focal point of concern by social scientists, policy analysts and the public.(2)

Howard Lee, a former Mayor of Chapel Hill, North Carolina, which is a rapidly growing small town in the United States, outlined four reasons for the sudden attention given to the problems of small towns:

> "First, there has been a sudden shift in migration trends. In the past, people moved out of the small town and into the big city. Now, it appears that exactly the opposite is the case. Since 1970, the smaller cities have seen rapid growth at the expense of larger ones. The second reason is that there is increasingly an awareness of a need to anticipate the problems that spin off from growth. Third reason is the increasing numbers of black Mayors of small cities. Finally, the problems of big cities have encouraged many people to consider the option of small city development as a way to relieve the pressure on the urban metropolis." (3)

2.2.1 Definition of small towns

In studying small towns we fall victim to the federal definition of an urbanised area that is, areas characterised by the presence of a central or twin cities of 50,000 or more and surrounding territory. This definition assumes that any settlement with a population of under 50,000 does not have the same cross-sectional needs of a settlement with above 50,000 inhabitants. Therefore, it does not qualify for certain federal funds and support, yet it still grapples with tremendous

problems. It must rely on local resources, while getting only crumbs from the federal government. (4)

The Bureau of the Census provides two population categories which can be used to define small towns outside the urban areas as defined by the federal government : settlements with populations of 2,500 to 10,000 and settlements with less than 2,500 which they also term "rural nonfarm". Swanson et al argue that these categories exclude unincorporated communities which function much like villages but are generally parts of the larger rural township.(5) Swanson et al therefore define a small town as having a population of 10,000 or less, whether it is an incorporated municipality or village or an unincorporated settlement. They think that communities with under 10,000 inhabitants constituted 88.9 per cent of urban and rural places in the country but contained only 22.3 per cent of the population in 1970.(6) Others like Alonso, stress that there are a range of very different small towns - towns that are booming, towns in decline, towns that are being transformed from market towns to industrial centres. (7)

2.2.2 Population growth

For many years writers have predicted the decline of the small town. Yet small towns have persisted up to the present and in most cases have experienced growth. In general, small towns in the United States are growing. However, there are some which are declining and others that are in a state of stagnation. Using the Bureau of the Census definition for small towns as having less than 10,000 inhabitants (incorporated places), Fuguitt in 1965 found that most of the small towns were growing, particularly, those places with over 1,000 inhabitants. He indicated that places in the population range of 1,000 to 2,500 inhabitants in 1950 (all taken together) increased 27 per cent, whilst places in the range of 2,500 to 10,000 increased

32 per cent. This compares favourably with the 29 per cent growth of the United States' urban population over the period 1950-1960. Places under 1,000, however, were together growing at about one-half this rate.(8) Despite this aggregate increase, many individual small towns were declining, especially the smaller ones in remote rural areas. Many others were faced with a real challenge as a result of changes in population and technology.

Fuguitt and Beale in 1977 examined the patterns of population change in small towns in the population range of 2,500 to 10,000 inhabitants over the two census decades of 1950 to 1970. They found that the number of small towns had increased from 2,642 in 1950 to 3,032 in 1960 and reached 3,303 in 1970. Also the total population had increased from about 13,061,552 inhabitants in 1950 to 15,210,592 inhabitants in 1960 and 16,562,674 inhabitants in 1970. However, the share of small towns in the total population of the United States had decreased from 8.6 per cent in 1950 to 8.5 per cent in 1960 and 8.2 per cent in 1970.(9)

Looking at post 1970 trends reveals the fact that small towns are growing, especially those close to metropolitan centres. These small towns function as dormitories for people who commute to metropolitan centres. Between 1970 and 1973 small towns grew by 4.9 per cent. (10)

There are several factors which cause such growth or decline in the population of small towns, notably annexation or de-annexation policies, migration, natural increase, the size of the town and location.

Annexation policies for example are an important factor. Small or large towns grow not only by filling their territory but also by adding to their corporate limits through annexation. Fuguitt and Beale in their study of small and large towns (including metropolitan and non metropolitan) observed that a majority of all urban incorporated

places typically annex some population in the course of a decade. They added that in the 1950's and 1960's about two-thirds of the non-metropolitan incorporated places and one-half of the metropolitan have experienced annexation. (11) These national averages, however, conceal wide regional differences. On the one hand, in the western region, over 80 per cent of both metropolitan and non-metropolitan places have annexed in each recent decade. But on the other hand, in the northeastern region, a comparatively small proportion of places annex, or are able to engage in annexation. In general the larger the place the more likely annexation has been. (12)

Migration is another important factor which causes growth or decline in a small town. In the United States, migration patterns show that people move towards higher income areas and the higher income people are the most mobile and those who are left behind in declining small towns are those with lower incomes, the less educated, the unskilled and the old.

The migration to and from small towns reflects the dynamics of citizen preferences. Post Second World War Surveys suggest that the preference for small scale living environments is pervasive and deeply rooted. (13) In 1972, the Population Commission, for example, found that the preference for smallness was especially strong among those residing in rural or small town areas, as 88 per cent of those surveyed preferred to live in rural or small towns. (14) The many factors influencing the migration process in the United States were high crime rates, unemployment, low pay, pollution, poor housing, traffic congestion and racial problems.

In addition to the annexation and migration factors, there are several other factors which cause growth or decline in the small towns.

Bryce has studied small towns in the population range of 25,000 to 50,000 in 1970 and found that growing and declining towns are significantly different in key socioeconomic characteristics. Many of these characteristics are the consequences or even the causes of decline. The overdependence on manufacturing is an example. The decline of the steel mill in Newcastle, Pennsylvania, and the automobile plant in Highland Park, Michigan certainly contributed to the secular decline in these towns; the age of the town and its inability to utilize the 'fill-in' process of growth also restrain growth. This appears to be the case of Williamsport, Pennsylvania. (15) He also isolated a series of indicators of a declining town or a town which might be viewed as a primary candidate for decline. The following characteristics are most relevant:

1. Annexation is rendered impossible, either by state law or political resistance.
2. The town is a heavy manufacturing centre with little room for the reorganisation of plants.
3. The town is fully developed.
4. The town is old in terms of construction, both residential and commercial. (16)

2.2.3 The economy of small towns

When one examines the literature on the economy of the small town it will be noted that most studies very rarely focus on the economy itself. They usually either include the small town as part of a larger area (metropolitan area, county, region) or interpret the small town as though it was a smaller version of a city.(17) This is due firstly to the nature of economic analysis which studies the systems which are open to trade and services with links to the external world and secondly,

to the data collected, which usually relates to a larger area.

The typical small town in most parts of the United States functions as a service and trade centre for the rural hinterland. The location of those centres was influenced by the transportation network of an earlier era. For example, a small town had to be located on a railway and have easy access by horse and wagon. Small towns were part of the hierarchy of places where large towns could provide more specialised goods and services for the smaller towns. However, this picture started to change as early as the 1920's when trade and service activities started to centralize with the improvement of transportation and technology so rural people began to have a wider range of choices of places to go for goods and services.(18) The location of a small town is an important and determining factor in its economy. Companies, for example, do not choose a location at random when setting up their businesses, but consider where it is possible to minimize costs and maximize profits. The types of industry which are likely to be found in small towns are food products and beverages, clothing, fabricated metal products and wood manufacturing. The small towns of Appalachia are known for their mining activities and in New England the small towns near major rivers are characterised by textile mills.

Some small towns have experienced economic growth and have shared in the nation's economic development and prosperity. Other small towns have not shared in the country's prosperity equally with large cities. In fact many small towns are declining economically with empty downtown areas and deteriorating public facilities. The economic decline of a small town does not mean the disappearance of that town; in many small towns the economic base is weak and the town

serves as a dormitory community for workers who commute as much as 30 or 40 miles every day to their jobs. This new role is more likely to be imposed on the town by its location than by the activities of its population. Another important factor is that small towns tend to be less diverse in the range of economic activities they perform and this tends to slow the pace of their economic growth. (19)

Although many small towns in the United States have not experienced the acute problems of large cities such as dying inner city areas, creeping suburbs, mass emigration, congestion, noise, high rate of crime and pollution, they do have their own problems. Among the problems which small towns face are in-migration, unemployment, poor housing,and low income. Low incomes, for example, have reduced the attraction of small towns as places in which to live. Most people in small towns have incomes below the national average. Table 2.1 shows that inhabitants of small towns earn substantially less than those who live in metropolitan areas.

In 1970 the US Senate Committee on Agriculture and Forestry examined the needs of 36 small communites with populations under 50,000, and outlined a list of community needs as follows:

(1) strengthened code enforcement inspection.

(2) supervised recreation programmes.

(3) improved fiscal capacity.

(4) greater effort to fully utilize available revenue sources from non-property taxes.

(5) strengthened planning process and schedule implementation.

(6) more realistic review of industrial development potential.

(7) increased vocational training and on-the-job training.

(8) greater risk capital for business and support for housing market.

Table 2.1 Differential Income Patterns by Type of Setting - 1970

	Metropolitan	Small towns
Median Family Income	$ 10,474	$ 8,487
Median Income of unrelated individuals	$ 2,902	$ 1,829
% of all families below the poverty level	8%	12%
% of unrelated individuals below poverty level	32%	47%

Source: Swanson, B.E. et al (1979) Small towns and small towners, SAGE, California, p.22.

(9) improved intra and inter city transportation.

(10) improved medical services.

(11) more adequate housing.

(12) extended public facilities, sewerage, street, refuse disposal facilities.

(13) renovated central business district.

(14) more government assistance.

(15) improved recreation and cultural programmes.[20]

2.2.4 The future of small towns

The future of the small town is tied up with the processes of urbanisation, population growth and redistribution taking place in the United States. It is estimated that in the next 30 years the population will grow by 60 to 80 million and smaller cities and towns will experience the greatest percentage of population increase.[21] If this is so, most villages and small towns where population is concentrated, will grow, and some will become cities. A proportion of these communities will be domitory towns and service centres for a growing, open-countrynon-agricultural population. As a matter of fact,the United States is going to experience a transformation towards urbanisation of the whole society. Macaluso has indicated that:

> "Small towns are today part of a national urbanising culture. Developing communications networks, including television, and improved transportation have changed the values and aspirations of all the nation. We are not faced, any longer, with an exodus of less skilled, less educated individuals from rural to urban areas, but rather with a transformation toward urbanisation of the whole society, including rural and urban metro and non-metro and the interdependencies among them." (22)

Small towns have been subject to many problems and changes. While the intensity and number of changes vary among small towns, the force of change comes from outside the town; the current national policy provides insufficient funds to the small town so problems will increase

with time and population growth. Most of the problems are not indigenous to the town, and require policies specifying the role and functions of the town, state and federal governments respectively in responding to these problems. There can be little prospect of a solution to the problems of townspeople of small towns without a comprehensive national urban policy.

2.3 THE ROLE OF SMALL TOWNS IN RURAL DEVELOPMENT IN AFRICA

The small towns in Africa have received relatively little attention and need to be studied to enable scholars, governments and international agencies to examine the actual and potential role of the small towns in rural development. The population of Africa, as a whole, is still overwhelmingly rural, therefore if any development is to have any positive result,it has to benefit the people who live in the rural areas. To what extent can small towns play a role in this development and what is the role of the state?

On the assumption that small urban centres could play a crucial role in the development of rural Africa, the University of Wisconsin, Madison in the United States set up a project in 1976 to investigate the role of the small urban centres. In 1978 a conference was held in the same University under the title "Small Urban Centres in Rural Development in Africa". The papers which were presented provide important studies on the role of the small towns and more detailed case studies and also highlight problems of development.

Southall, the editor argues that:

> "if effective rural development was achieved, small urban centres would certainly have to play a crucial part in it." (23)

He pointed out, that at present,small towns do not play a positive role in rural development and that it would not be easy to get them to do

so without major changes or even radical transformations of society.

The number of small towns in Africa is obviously vast. As fewer studies have been made of small towns than of large cities, it is not surprising that the overall results are fragmentary. Given the well-known built in tendencies towards centralisation, both political and economic, strengthened by forces both internal and external, whatever declared policies to the contrary may be, it is obvious that most small towns are less likely to be innovative local centres of stimulus for rural development than pawns in a larger contrary game.(24)

In his introduction to the conference proceedings Southall argues that:

> "As everyone knows, until very recently the Western theory of development was of stages of growth in imitation of the west, of capital investment, poles of development, demonstration effect and trickle down. Two decades of effort in this direction have amply demonstrated that in practice it does not work. The positive development role of small urban centres conceived as possible and desirable by our research project presupposes the possibility of decentralisation and deconcentration, permitting genuine grass roots participational input to the development process. Despite some serious efforts in this direction it is doubtful whether this is a reality anywhere in Africa. The commonest form of decentralisation effort is the devolution of planning and development decisions from the centre, in the capital city, to regional or provincial capitals. Where such efforts have been made they often involve duplication, overlapping and conflict, with an increase in the bureaucracy rather than a decrease as might naively have been expected. They result in autocratic, top-heavy regional bureaucracies which are just as impervious to grass roots participational inputs as the centralised bureaucracies which preceded them. This is not considered to be genuine decentralisation."(25)

In his introduction to the conference proceedings, Southall argues that the nation-states of Africa seem to be moving in the direction of the "polarized political economy." This he defines as one in which despite overall political though not economic control by the indigenous elite and despite some successful industrialisation, the mass of the people remain impoverished materially and effectively disenfranchised politically. Only a very strong idealistic and ideological commitment

from the governments can permit the decentralising forces to win at the bottom against the very prestigious and contradictory pressures in the direction of centralisation. He stresses that centralising pressures have not only dominated capitalist countries but most of the more advanced socialist countries as well. In the USSR, there is still a tendency for state farms to expand at the expense of collective farms and there is a strong technocratic vein which stresses that the economics of scale in large cities is more favourable to development than small cities, although this runs counter to the Marxist goal of transcending urban-rural differences.(26)

He regards Algeria as the most important case in Africa of an attempt to exploit mineral resources and industrialise within the framework of decentralisation. The most ambitious socialist development of decentralised small urban centres in the country was the 'one thousand socialist villages' programme. These new settlements were to consist of 120-150 houses with running water and electricity as well as a market place, canteen-recreation centre and mosque. In fact only 30-40 were in operation by 1974. The government and the peasantry appear to have become increasingly out of sympathy with one another, the latter seeing the result of the revolution as changing them from share-croppers of large landowners into share-croppers of the state, whilst the farmers have become increasingly impatient and patronising towards the peasantry.

Tunisia's brief flirtation with cooperatives in the 1960s was itself a highly centralised affair. But it might perhaps eventually have led to some decentralisation and the positive development of small urban centres, had it not been suddenly terminated because it threatened the dominant interests of the ruling group who were closely allied to private landowning interests.(27)

Tanzania's attempt at decentralised, participatory socialist development has failed with no empirical evidence of economic success in the experiment.

Given the nature and composition of the new nations of Africa, the state is the indispensable agency for creating certain necessary conditions of rural development, beyond a low level of relative self-sufficiency or subsistence. It is responsible for ensuring order and security for rural society itself, as well as for the national institutions by providing new infrastructures, for example roads and railways, schools, health facilities, and also for supplying credit and marketing services. These services have been provided both directly by the state and also by expatriate voluntary agencies and foreign entrepreneurs under the unbrella of the state. However, the more laissez-faire the national economic policy, the more rural development will depend upon the stimulus and demonstration effect of successful individual entrepreneurs, both in commerce, small industry and farming, making it all the harder to secure equitable distribution of the gains of development and to raise the level of the rural poor. By studying the spatial structure of settlement and spatial development policies of two case examples from Africa (Tanzania and Kenya), it is hoped to highlight the role of the small towns in the development process.

2.3.1 Tanzania

Tanzania, with a population of 17 million people in 1980, gained its independence in 1961 and is one of the 25 least developed countries in the world. (28) In 1975 only 6.8 per cent of the total population were considered as urban. (29) The rest of the population lived in rural areas. Tanzania is essentially a nation of small farmers most of whom have less than 2 ha of land. In 1980 the country had a per capita

income of less than US$ 250.(30) At independence, Tanzania inherited a highly distorted pattern of population distribution. Zones of high population density were concentrated on the periphery of the country and much of the central area was sparsely populated. In 1967 over 60 per cent of the total population was concentrated in less than 20 per cent of the total land area.(31)

The settlement system is characterised by strong urban primacy. The main city and port of Dar es Salam (with a population of about 517,000 in 1976) is the centre of trade, services, industry and also the country's main administrative centre. Since 1891 the city has continued to expand as a result of in-migration from rural areas. In 1976 Dar es Salam had four times the population of the next largest town and eight times that of any town in the interior.(32) There were at least six towns with less than 50,000 inhabitants and nine with less than 30,000 inhabitants in 1967. Tanzania is primarily a rural society, therefore the settlement system is marked by a vast number of rural settlements.

The national space as it appears today was greatly influenced by colonial rule which established a network of centres from which control over the surrounding areas was exercised. Maro and Mlay have indicated that:

> "The organisation of human activity was centred around plantations and small scale peasant cash crop, food crop and livestock farming areas and was controlled from eight provincial urban headquarters and 20 urban and proto-urban district centres. There were thus about 30 main centres of concentration of administrative, political and commercial activities, most of which were in the northern half of the country." (33)

Maro and Mlay have added that the spatial differentiation based on disparate ecological endowment was increased by the transport network established by the colonial government. Railways were built to link

the areas of export production with the ports and to ensure effective administration and military control of the country. Export-producing areas with transport facilities developed rapidly due to continued attraction and generation of economic activities.(34) Examples include the Arusha-Kilimanjaro-Tango corridor with coffee and sisal; the Coast-Morogoro-Kigoma, and the Mwanza-Shinyanga corridor with sisal and cotton. These zones of development cover less than 10 per cent of the national area, contain 25 per cent of the national population, contribute 40 per cent of the GDP and include the most dynamic and largest towns namely Dar es Salam, Tanga, Mwanza, Moshi and Arusha. Areas surrounding these export-producing zones specialised in food production, whilst areas farther away supplied migrant labour or stagnated in isolation from the core areas of the economy.(35) The relative backwardness of the whole of the southern part of the country is partly attributed to lack of transport facilities, inadequate rainfall, poor soils and a low level of education.

With this problem in mind Tanzania devoted major policy attention to the planned restructuring of their settlement system. Government intervention has four main aims:-

(i) To inhibit the growth of Dar es Salam through migration control.

(ii) To locate industry in nine urban centres namely in Tango, Mwanza, Arusha, Moshi, Morogoro, Dodoma, Tabora, Mbeya and Mtwarq.

(iii) To decentralise administrative responsibilities to all the regional capitals.

(iv) A villagisation programme to regroup the dispersed rural population and to develop the rural areas. (36)

Here attention will focus only on the villagisation programme and the role of small urban centres in the rural development of Tanzania.

The following analysis is based on the hypothetical statement which was declared by the conference on Small Urban Centres in Rural Development in Africa in 1977. The hypothesis was as follows:-

> "The more comprehensively and systematically rural development is planned and assisted by the state and its regional agencies the more certain it is that local points of concentration will assume a tiered structure in two and eventually three levels.." (37)

The assumption is that if the rural development policies succeed, the small urban centres in the area will grow and also some of the villages will become small towns. The argument is that with decentralization of human activities and the reorganisation of the settlement systems in Tanzania, small urban centres will come to play an important role. Hierarchical points of concentration of people and activities will be created in which villages will support small urban settlements and the small urban settlements will support a few large urban centres.

Tanzania is attempting to re-organise the national space economy and restructure the national settlement system by a political philosophy which is based upon African socialism and self-reliance in a context of community development and responsibility.

By far the most important vehicle of planned population redistribution in Tanzania in recent years is the villagisation programme which was adopted by the Government as a rural development strategy (38) Before 1967, village settlement schemes were established to absorb landless people from the densely populated areas and unemployed people from urban areas. The schemes were also intended to form model settlements within which levels of agricultural production could be raised and standards of living improved. Up to 1966 about 100,000 people were relocated in settlement schemes in five regions. The resettlement programmes were limited to certain areas.(39)

However, since 1967 a drastic change in the approach to rural development was introduced. This approach envisaged the relocation of the largely scattered population at the national scale into agricultural settlements (ujamaa programme). The aim of ujamaa is to transform the rural social environment into prosperous, self-reliant and self-determining communities - such settlements would also make it possible for the Government to provide social services to the people. (40) By 1969 some 650 ujamaa villages had been established with a total population of 300,000. However, in the early 1970's the government started to move more people into ujamaa villages. In total about three million people had moved into new villages in Tanzania by 1974. (41) These policies have had a profound impact on the existing small towns in Tanzania and at the same time have promoted a large number of villages to the status of small town by strengthening their service functions e.g. by the establishment of schools, clinics, agricultural machinery workshops,and administrative offices.

As a result of the development of ujamaa villages, basic services spread to a large number of people in rural areas. The small towns and large villages became centres of economic, political and social activities. In every small town or large village there is a school, market place, retail shops, health centre and administration office. The villagisation programme is highly relevant to the emergence of small towns. At independence in 1961 there were eight administrative provinces and 20 districts. By 1969 there were 16 regions and 62 districts. Since the early 1970's there was an increase in the administrative units which led to a corresponding increase in the number of small towns and services centres. Existing sub-centres were elevated to townships and new centres were created.(42) These centres may be expected to develop further in the future with the expansion of the road network and communications system. This is the framework

within which small urban centres are playing an important role in the socio-economic transformation which is taking place in Tanzania.

2.3.2 Kenya

Unlike Tanzania, Kenya has selected a "strategy of selective concentration" in which major emphasis is being placed on the development of the major cities of Nairobi and Mombasa and insufficient attention is being paid to the development of rural areas. In a country like Kenya with about 90 per cent of the total population living in rural areas in 1969 (43) any spatial programmes should benefit the majority of the population.

It is assumed that the small towns could play an important role in the development of the country. In addition to performing important service and residential functions, they could serve as centres for introducing innovations and stimulating socioeconomic growth.

In the precolonial period periodic markets formed very important nuclei for intra- and inter-ethnic trade. The settlement system was weakly organised. Some of these market places developed as caravan towns especially on the coastal strip which were controlled by the exogeneous elites, mainly the traditional Arab and Swahili merchants.

With the European colonisation of Kenya in the nineteenth century, a new pattern of urbanisation evolved. New administrative and marketing structures and a new communications system were introduced and a number of new towns were established. The precolonial spatial system was ignored in the early years of colonisation and the two sub systems, European and African, have never been fully integrated.(44) Obudho has pointed out that:

> "The urban or modern systems were initially dominated by the colonial administration, while the traditional or periodic market systems were dominated by the Africans. This dual sector structure has expanded further into a four-sector model (urban-formal, urban-informal, rural-formal and rural informal). While the 'modernized-urban' versus 'traditional-rural' model was the direct result of colonial urbanization, the rural-urban difference has been manifested and become more prominent in the post colonial era." (45)

Colonisation policies divided the country's settlement systems sharply into "growth nodes" and "lagging areas". The urban population was polarised in the major cities of Nairobi and Mombasa (both cities had 70 per cent of the total urban population in 1969). Maximum investment was concentrated on the core region stretching from Mombasa on the coast to Kisumu on Lake Victoria and containing the country's major urban centres. This unbalanced development restricted the overall urbanisation of the country.(46)

In 1962 (the year of independence) there were 34 urban centres, of which 22 were small towns with populations ranging from 2,000 and 20,000; in 1969 there were 47 urban centres, of which 43 were small towns. The growth in the number of towns was due to a high rate of natural population increase, rural to urban migration and the increase of township boundaries. Yet despite the increase in the number of towns, the major cities of Nairobi and Mombasa continued to dominate the urban system. The problem here is not re-structuring the urban system but rather the development of strengthening the country's rural settlement systems.

Unfortunately, despite the urgent need for rural development, the Government has concentrated the bulk of its investment in selected growth centres, principally Nairobi and Mombasa where the majority of industries and services are located. Other designated growth centres received only limited investments. (47)

Although the Government emphasised the importance of rural development in the two plans (1970-74 and 1974-78), in reality it was insufficiently integrated into the overall plan and in addition spatial development planning has also failed to recognise this problem. Obudho has argued that:

> "If the Kenya government wants to make a significant change in reorienting the growth of the spatial systems, then attention must be concentrated on the informal sector in both the urban and the rural systems. I am referring particularly to the periodic and daily markets, which provide the economic base for the majority of Kenya's Africans." (48)

He emphasised that planning the periodic market sub-systems would hasten the spatial development of periodic markets into fixed central places which could aid the economies of urbanisation. The development of small urban centres in the rural areas would reduce the polarisation and backwash effects resulting from growth centre policies. In conjunction with agricultural development, selected small market centres should be designated for development and investment. This is the only way to bridge the gap between the developed export enclaves and the under-developed rural areas.

Taylor argues that a strategy of concentrating most development efforts at this crucial level (small urban places) in the urban hierarchy is a logical alternative to the present development policies in Kenya. He outlined the following reasons to justify his view:-

1. The small urban centre is probably the smallest unit that can support an adequate package of basic services and which will not be in danger of declining or disappearing over the next 20 years.

2. If the present rate of population increase continues, the population of the rural areas will double in the next 30 years and the small urban places would have to provide residential accommodation for many of these people.

3. In the presence of a well-developed urban hierarchy small urban places will play an important role in filtering innovations and modernisation into rural areas. However in the absence of well-developed hierarchy, it seems logical to introduce innovations at the lowest level of the urban centre rather than allowing them to filter down.

4. Small urban places should be more important in coordinating all government planning agencies in order to be more effective in the transformation of the rural areas. Also, if planning is centred in these small urban places this will increase the opportunity for more local participation at the grass roots level. (49)

While Taylor, (50) Southall (51) and Obudho (52) emphasise the importance of small towns in rural development, Kabwegyere argues that their role in the development of rural areas has been exaggerated.(53) He goes on to say:

> "If the experience in Kenya is any indication, the growth of small urban centres is in many ways an intensification of dependence relationships and under-development and in no way concerned with development. The rural areas are adjunct and the small urban centres mere nodes in the process of the further impoverishment of the country. The rural people will continue to cope with this process of transformation but all the time benefitting less than their labour merits and suffering ever increasing inequalities. Nevertheless, small urban centres need to be studied, if for no other reason than to enable us to grasp the problems in pursuing the elusive goal of development in Africa." (54)

The success of a development strategy focusing on small urban centres, depends upon the existence of a suitable set of linkages or channels of communication between the small urban centres and their hinterland. If small urban places are to be used as injection points for innovation and change, then they must be not only accessible, but also attractive to the people in their hinterlands. A centre that is not visited frequently by the people is unlikely to have much impact on development.(55)

In conclusion : small towns in Africa at the present time are not generally playing a positive role in rural development, and it is difficult for them to do so. However, emphasis on small towns as local stimuli of rural development is a useful and concrete way of bringing into the limelight the difficulties of achieving this goal. Southall was right when he indicated that there can be little hope of achieving rural development except in the context of serious policies of decentralisation which are unlikely to succeed unless backed and powered by local participatory democracy, both political and economic. Therefore a change in the economic, political and social structures in the society is needed before small towns can play an effective role in the development process.

2.4 THE MIDDLE EASTERN SMALL TOWNS

The Middle East extending from Turkey to Sudan and from Morocco to Iran, is one of the most highly urbanised regions in the Third World with about 45 per cent of its population being urban in 1984 and with an average annual growth of urban population of about 5 per cent during 1960 to 1975. (56)

There is a tendency for population concentration in the largest cities. In the 1970s there were more than 140 cities with 100,000 inhabitants or more; at least a dozen with over one million. The middle-sized towns with 50,000 to 100,000 people are numerous, especially in the most populous countries.(57)

2.4.1 Number of Small Towns

The number of small towns is vast and impossible to estimate for various reasons. For example there is no universal formula to define small urban places, data is often inadequate and unreliable, and

studies on small towns are generally lacking. However, Blake has attempted to give some idea of the number of small towns in the Middle East (Table 2.2). He found that there are 738 settlements in the 5,000 to 9,999 range with 5.4 million inhabitants and with an average size of about 7,300; and there are more than 560 towns with 10,000 to 19,999 inhabitants, which represents about 4.5 per cent of the total urban population which was about 182.5 million for the countries listed in the table. (58)

He found that there has been a considerable increase in the number of settlements with 5,000 to 9,999 inhabitants, especially in the more populous countries such as Turkey and Iran. In Turkey, for example, the number rose from 113 in 1950 to 267 in 1975 and in Iran from 80 in 1956 to 163 in 1976. However, just how many of the total are genuine urban centres must be questioned and Blake pointed out that some are undoubtedly large villages with a high proportion of the population engaged in agricultural activities and with poorly developed regional functions. Their share of total national populations has declined somewhat; in Egypt from 3.9 per cent in 1947 to 0.6 per cent in 1970, and in Iran from 10.6 per cent in 1956 to 3.4 per cent in 1976. Only in Turkey does their share increase from 3.6 per cent in 1950 to 4.4 per cent in 1975. (59)

Without doubt a high proportion of settlements with 10,000 to 19,999 inhabitants are genuine towns. Only in Egypt are there settlements of this size that function as villages. Several countries have recorded a marked decline in the proportion of the population living in towns of this size. In Egypt their share declined from 9.6 per cent in 1947 to 4.1 per cent in 1970; and in Iran from 14.7 per cent in 1956 to 3.8 per cent in 1976. In contrast, other countries show an increase - Turkey from 5.3 per cent in 1950 to

Table 2.2

Small Towns in the Middle East

SETTLEMENTS WITH 5,000 to 9,999 INHABITANTS

Country	Year	Settlement	Population
Algeria	1966	79	950,900
Bahrain	1971	3	19,400
Egypt	1970	15	79,600
Gaza	1967	1	7,600
Iran	1976	163	1,123,100
Israel	1975	25	168,200
Jordan West Bank	1967	6	43,700
Kuwait	1970	18	134,600
Libya	1973	15	52,800
Morocco	1971	28	193,700
Syria	1970	58	400,400
Tunisia	1975	48	349,500
Turkey	1975	267	1,786,200
United Arab Emirates	1968	1	8,800
Yemen A.R.	1975	11	69,900

TOWNS WITH 10,000 to 19,999 INHABITANTS

Country	Year	Towns	Population
Algeria	1966	46	970,841
Bahrain	1971	2	21,883
Egypt	1970	57	579,500
Gaza	1967	3	32,174
Iran	1976	93	1,277,296
Iraq	1965	19	266,487
Israel	1975	23	309,217
Jordan	1975	12	141,527
Jordan West Bank*	1967	3	36,828
Kuwait	1970	8	104,498
Lebanon	1977	5	75,000
Libya	1973	4	54,573
Morocco	1971	25	362,704
Oman	1977	2	40,000
PDR Yemen	1977	2	30,000
Qatar	1977	Nil	-
Saudi Arabia	1972	1	19,000
Syria	1970	28	372,931
Tunisia	1975	35	517,825
Turkey *	1975	194	2,886,806
United Arab Emirates	1968	Nil	-
Yemen AR	1975	3	52,393
Middle East		565	8,151,483

Source: G.H. Blake (1980) "The Small Town" in Blake, G.H. and Lawless, R.I. (eds) The changing Middle Eastern City. Croom Helm, London, pp.212, 213.

* the figures for Gaza and the West Bank excluded refugee camps; figures for Turkey included towns up to 25,000 inhabitants.

7.2 per cent in 1975, and Tunisia from 6.7 per cent in 1966 to 9.3 per cent in 1975. (60) For example, in Algeria there were 79 settlements with 5,000 to 10,000 inhabitants and 46 with 10,000 to 19,999 inhabitants in 1966. Some of these small towns had originated as colonisation villages or garrison centres in the interior during the period of French rule. After independence the number of small towns increased as numerous villages acquired urban functions. Prenant has estimated that no fewer than 73 small centres in the 3,000 to 27,000 population range acquired urban characteristics in the decade 1966-1977. (61)

In Tunisia the 1975 census revealed that there were 48 settlements within the 5,000 to 9,999 population range and 35 urban centres within the 10,000 to 19,999 population range.(62)

In Egypt, a vast number of settlements within the 5,000 to 19,999 population range were large villages in 1970 with a high proportion of the population engaged in agriculture. However 72 settlements were identified as small towns.(63)

Turkey is important in studying the Middle Eastern small towns. According to Benedict, about 70 per cent of the population resided in settlements with less than 10,000 inhabitants in 1965. (64) Many of these settlements, however, were villages and lacked any urban characteristics. Population size and municipal standing are the official criteria used to define a town as distinct from a village or a city. The 1924 village law states that a town must have a population of between 2,000 and 20,000. Settlements below 2,000 are defined as villages and above 20,000 as cities. On this basis about 26 per cent of Turkey's population lived in settlements designated as towns in 1965, with an average size of 6,300 inhabitants. (65) On the basis of the 1975 population census, Blake identified 267 settlements with

5,000 to 9,999 inhabitants and 194 urban centres with 10,000 to 25,000 inhabitants. (66)

Iran has a large number of small towns. In 1976, there were 163 settlements with 5,000 to 9,999 inhabitants and 93 urban centres with 10,000 to 19,999 inhabitants. (67)

Iraq has experienced rapid urban growth. According to Al Rawi the urban population increased from 3.8 million in 1965 to 7.6 million in 1977. (68) He calculated that about 27 per cent of the total urban population lived in small urban centres with less than 26,000 inhabitants in 1977. While Blake identified only 19 small urban centres with population ranging between 10,000 to 19,999 in 1965, Al Rawi identified 230 small urban centres with less than 26,000 inhabitants in 1977. (69)

Clearly, the number of small towns in the Middle East is large. Because there is no single satisfactory criterion by which a small town can be defined, it is difficult to calculate their numbers and their proportion of the region's urban population. According to Blake, the number of settlements in the 5,000 to 20,000 population range has more than doubled in the period between 1955 to 1980. In some countries they accommodate a higher proportion of the total national population than in the past, although their growth rates tend to be more modest than those of the large cities.(70) In fact, the number of small towns could be much more than 1,298 identified by Blake in 1980, if the small town were to be defined as having 2,000 population as a lower limit and 30,000 as an upper limit.

2.4.2 Type of Small Towns

The Middle Eastern small towns represent an immense variety of urban types fulfilling a great range of functions. In very broad terms Blake identified three categories of small towns; modern foundations of the nineteenth and twentieth centuries; rural settlements which for a number of reasons have grown to acquire urban characteristics, and the old regional centres, many of which have fulfilled urban functions with fluctuating fortunes for several centuries.(71) Blake also speculates as to the number of towns in each category. He remarks that:

> "Probably a quarter are modern foundations, half are traditional regional centres and the rest are urbanising rural settlements. The proportion in each category obviously varies greatly from country to country." (72)

Some of the small towns in the Maghreb and Libya were founded in the nineteenth and twentieth centuries by the French, Spanish and Italian colonial rulers to fulfil a variety of functions. Some grew up from indigenous settlements while others were entirely new foundations. Some were mining towns, others garrison towns which later acquired administrative functions and many were market centres for the surrounding rural areas. Modern mining activities and the exploitation of oil have created several small towns; for example Redeyef in Tunisia associated with phosphates mining, Divrigi in Turkey associated with iron ore. Several of these small towns are ports specialising in mineral or oil export for example; El Bregah in Libya, Beni Saf in Algeria and Fao in Iraq. In recent years, several small towns were built as dormitory towns on the outskirts of the major cities. They are parts of large metropolitan complexes rather than proper small towns.(73)

A large number of villages have acquired urban characteristics and have retained and often increased their population. Government intervention is one of the main causes for such

change in the character of the villages. In Algeria, the strengthening of the country's administrative structure and its expansion after 1974 to incorporate many more towns has had probably the most profound effect on many small centres within the Algerian settlement system.(74) Some of these acquired urban functions for the first time while others had their urban function reinforced by their promotion to chefs-lieux of diarate. Examples include the villages of Azeffoun, Tigzint and Ain el Hammam in Grande Kabylie and Qued Amizour, Taher, El Arrouch, Zighout-Youcef, Ferdjiona and Ain El Kebira in Petite Kabylie. Other factors may be underlying causes for the urbanising of rural settlements in other countries, such as the allocation of certain social services or industries.(75)

The well-established regional centres in the Middle East include oasis towns which may have been the focus for long-distance trade routes for centuries and towns functioning as central places for a rural population. Most feature prominently as markets for local produce.(76) Examples of such centres are Tabouk and Sulayyil in Saudi Arabia, Ghdams, Murzuq and Kufra in Libya.

2.4.3 Population Change

Little is known about population change in the Middle Eastern small towns with some growing rapidly and other stagnant or in decline. Some small towns have lost their population as a result of economic decline or the decline of certain industries. For example the decline of craft industries has profoundly affected many small towns. Other small towns grew rapidly as a result of government intervention or by acquiring certain new functions. Many small towns in Iran, Turkey, Egypt, Syria and Sudan have experienced a decline in their population, others have experienced growth. For example, almost

all of Tunisia's small towns have experienced a population growth between 1966 and 1975. The growth of the small towns was slow before Independence in 1956. However, it accelerated after 1956 because of the increase in rural-urban migration, natural increase, economic and social development policies and administrative readjustments. However, there are differences from area to area. For example the southern governorate of Medinine with its five small towns (Medenine, Zarzis, Houmt Souk, Ben Gardane and Tataouire) has a high growth in its urban population. Medenine a town with 16,000 inhabitants is an administrative centre which became the hub of economic and transportation networks in the region by virtue of its location in relation to the larger city of Gabes to the north and the Libyan border to the east.(77) The expanding tourist industry on the island of Djerba and the coastal centre of Zarzis has provided a focal point for migrants from all areas of the governorate.(78) With economic and social development Medenine and the other small centres have become service centres with banks, schools and hospitals. The growth of other small towns can be attributed to the growth in industry and many small towns near the larger ones grew very fast as they became the residential areas for the workers in the larger towns. Some were villages which acquired urban characteristics due to the development of manufacturing industries. Other small towns grew to become medium size or large towns. For example, Monastir, which was an agriculturally based town with a population of 20,000 in 1960 grew to 37,000 by 1975 due to governmental initiative in promoting public and private investment aimed at providing basic infrastructures. Monastir became the focus of such attention because it is the birthplace of President Bourguiba and home for a number of government officials.(79)

2.4.4 Planning for Small Towns

Population change, the decline in certain functions of small towns, the need for housing, school, hospitals and jobs, all suggest the urgent need for government intervention and the need to plan for social and economic development. With the increased awareness of many governments of the spatial dimension of economic and social development, small towns could play a crucial role in implementing any social or economic strategies.

Small towns could play a significant role in the decentralisation of industry. The choices to locate small-scale manufacturing industries in small towns has proved moderately successful in Algeria, Tunisia and Turkey.(80) Small towns could play an important role in reducing the volume of in-migration to the large cities from rural areas. This could be achieved by raising the status of some selected small towns and by the creation of new employment opportunities and service functions. However because of the limited resources in some countries, priority must be given to the small towns which show evidence that they continue to function as effective regional centres.(81)

In the Middle East few countries with the exception of the oil-rich states have master plans for their small towns. In addition, the role of the small towns in the spatial planning is either vague or unspecified.(82)

Blake has rightly drawn our attention to several reasons why small towns need to be fully integrated into national urban planning. He has outlined the following reasons : (i) the population of some is declining, while the number of small towns shows a net increase; (ii) more widespread than population decrease is the gradual loss of regional influence being experienced by many provincial market towns,

resulting in a marked decline in wealth and status; (iii) small towns deserve attention because many of them still function as vigorous regional centres and they represent considerable potential for the implementation of the development policies of central governments.(83) Although several people suggest that small towns should be 'developed, 'activated' (84) or 'encouraged' (85) to grow, others have different opinions. For example, Janet Abu-Lughod does not hold this opinion and has argued eloquently in favour of the concentration of urban growth in major linear conurbations. (86) She believes that large towns and cities will experience more rapid growth at the expense of smaller towns. She has drawn attention to the fallacy of expecting a 'balanced' hierarchy of settlement in the Middle East with a broad base of small settlements supporting fewer small and medium sized towns, culminating in one or two metropolitan cities with major regional functions. The countries of the Third World 'appear' to be moving directly into the new larger scale of urban hierarchy, bypassing that intermediate stage which we have mistakenly called 'normal' or 'balanced' urban hierarchies.(87) She does not see any solution to the growth of primate cities, though it might be possible to channel the natural forces at work to create new directions of growth. In most countries it is clear that the forces of growth are concentrated along certain axes as between Cairo and Alexandria, Baghdad and Basra. These axes could become the location for a series of self-sufficient satellite communities, 'strung out like beads' along the major lines of communication which could relieve the pressure on the major cities at either end. Towns located along these axes have experienced impressive growth, whereas towns located equally close to the major cities but off the dominant axes have tended to show relative decline. (88)

Although Abu Lughod's ideas are important since they give proper perspective to the role of small towns, they also can be questioned because they are not well documented. Blake has criticised those ideas. He said:

> "Although possessing small populations, and growing slowly if at all, they may be exactly the right scale to perform the vital intermediate role between the large cities and the villages. Planning should be devised to stimulate the social and economic life of small towns, without striving to turn them into small cities. It must be recognised that their growth rates will nearly always be inferior to those of the large cities, but this is not indicative that their usefulness is at an end." (89)

In retrospect, small towns have been neglected in the study of Middle East urbanisation. A whole range of questions require investigation concerning their population change, functions within urban networks and hierarchies. There has been a considerable increase in the number of small towns though probably they contain a slightly smaller share of the total national population than previously. Small towns represent an immense variety of urban types, fulfilling a great range of functions. Small towns need to be more fully integrated into national urban planning. Planning should be devised to stimulate the social and economic life of small towns without striving to turn them into small cities.

2.5 CONCLUSION

The previous sections have attempted to provide a summary of the literature of small towns in three major areas of the world.

Unfortunately there has been an astonishing degree of neglect in academic studies regarding small towns. The future of the small towns is tied up with the processes of urbanisation, population growth and population distribution. There are many problems facing

the small towns and this suggests the need for government intervention and the need for comprehensive national urban planning. The aim of this chapter was to place Libyan small towns within the context of the world's small towns; the aim of the next chapter is to put the small towns in Libya within the Libyan context.

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CHAPTER THREE

SMALL TOWNS WITHIN THE LIBYAN URBAN SYSTEM

3.1 INTRODUCTION

Rapid urbanisation is one of the most significant processes which sets this century apart from the earlier ones. Urbanisation is a universal phenomenon. No country, developed or undeveloped, irrespective of its political ideology and sociocultural background, is immune from the influence and the impact of urbanisation. The character and the speed of urbanisation differ from region to region and from country to country depending on factors such as population growth, level of development, the socioeconomic structure of society and its style of development. In Libya, urbanisation is not a new phenomenon. All the old civilizations which flourished along the shores of the Mediterranean had an impact on the country at different periods of time. They built towns and large cities along the Libyan shore, and some of them are still major urban centres.

The previous chapter explored small towns within the settlement systems of the United States, Africa and the Middle East. It is the purpose of this chapter to set the Libyan small towns within the Libyan urban system. During the last few years the meaning of the term "urban system" has evolved rapidly toward the meaning used here, that is, an urban system is a set of interdependent cities comprising a region or a nation. Studies of the urban system or settlement systems may vary widely. However this chapter considers the following issues:- The historical evolution of the settlement system, urban growth, present urban system and the planning for small towns to shape them and to restructure the urban system.

3.2 THE EVOLUTION OF THE SETTLEMENT SYSTEM

Essential to the understanding of the cities and small towns of contemporary Libya is a historical background to illustrate how they evolved and grew. Libya's urban history has developed through a variety of settlement systems : Greeks, Phoenicians, Romans, Byzantines, Arabs, Turks, and Italians each established their own urban networks according to their different cultural traditions and economic and political aims. Despite the changing fortunes of individual towns and cities, urban life somehow has always managed to retain its vitality.

3.2.1 Classical Period

The first town in Libya was founded by the Greeks in 631 B.C. at Cyrene,[1] today the small town of Shahat,to absorb their surplus population from the Aegean Sea. The advantages of this site were the availability of an adequate water supply, large areas of cultivable land and an adequate harbour nearby at Apollonia for the maintenance of contact with the motherland. Those factors attracted many Greek immigrants to Cyrenaica and made possible its subsequent urban development.

Cyrene was an ideal place for the Greek settlers. Apart from the plentiful rainfall, there was the perennial spring known as the fountain of Apollo. The site was not difficult to defend and the sea was within easy reach. Cyrene functioned as a religious, political, agricultural, and commercial centre and a very important centre for exporting the silphium which was a favourite drug with a royal monopoly. Cyrene prospered and settlers flowed in from the motherland in such numbers that new cities were founded at Barce on the rich steppe land to the west, at Eusperides and Teucheira at either end of the western coastal plain and at Ptolemais and Apollonia. [2]

Barce (modern El Merj) flourished despite tension with Cyrene and developed its trade with the surrounding native population and with other settlements such as Teucheira (modern Tokrah).(3) Eusperides (modern Benghazi) was founded by Greek settlers from Cyrene and from other Greek settlements in Cyrenaica at some time during the sixth century almost certainly before 515 B.C. In the third century B.C. settlers moved from Eusperides to found another city close by which they called Berenice in honour of the wife of the Egyptian King Ptolemy III. Berenice became one of the main ports for the Greek settlements in Cyrenaica.

J.H. Little indicates that in any area subject to colonisation where communications by sea are important, the major urban developments will take place in the vicinity of the best natural harbours.(4) In view of this, it was proximity to the sea and the existence of natural harbours which determined the siting of the Greek cities in Cyrenaica. There were three important harbours in the Greek period Apollonia, Ptolemais and Berenice. Together with other small harbours such as Ausigda (El Hania), Naustathmos (Ras al Hilal), Phycus (Ras el Hammama) and Erythrum (Al Athrun), they served to link Cyrene itself and settlements inland with other ports of the Eastern Mediterranean. In 373 B.C. Cyrenaica was occupied by the Persians after their conquest of Egypt. Later, when the Egyptians drove the Persians out of Egypt, the area fragmented into independent city states. However, Egypt was conquered by Alexander the Great in 332 B.C. and the Ptolemies who succeeded him in 322 B.C. conquered and annexed Cyrenaica. The Cyrenaican towns then passed under Egyptian ruler.

Unlike Cyrenaica, Tripolitania was colonised by the Phoenicians. They established three ports at Oea (Tripoli) Sabratah and Leptis Magna as part of their extensive network throughout the Mediterranean

region. Those Phoenician trade centres had a limited built-up area which consisted mainly of a residential zone and a considerable number of shops and stores.(5) In 500 B.C. the Carthaginians took over the three centres and although they maintained their rule until 150 B.C. it did not extend beyond the walls of those cities.

The next major stage in the history of Libya's urban systems was the Roman conquest of Tripolitania in 148 B.C. closely followed by the occupation of the Pentapolis and Cyrenaica in 96 B.C. For the first time the two provinces of Tripolitania and Cyrenaica were governed by the same rulers, the Romans, whose sphere of influence also penetrated into the southern province of Phazania (modern Fezzan).

The Romans transformed the three major Phoenician settlements in Tripolitania into impressive Roman towns. At first both Sabratah and Leptis Magna experienced the major developments. Oea, the third town, grew very little in the beginning but later on was declared a free city by Emperor Augustus. In 193 A.D. Oea became the capital of Roman Africa when Emperor Septimus Serverus, a native Libyan, moved the capital from his native city Leptis Magna to Oea. The built-up area increased in size and consisted of private houses, public buildings for Government administration and baths. The town played a very important role as an export centre of agricultural products and other goods from Africa south of the Sahara to Rome.

In Cyrenaica, the five major towns, known since the Greek period as the Pentapolis, prospered like other Roman cities throughout the Empire but never outgrew their Ptolemaic defensive walls. This fact indicates not so much a decline of population during the Roman period as the fact that the Ptolemaic planners were over optimistic in their estimates for urban developments. (6)

Cyrene remained the capital of Cyrenaica until 297 A.D. when it was replaced by Ptolemais and later by Apollonia as the capital of the Pentapolis. Darnies (modern Derna) emerged as the capital of Marmarica, the eastern part of Cyrenaica. In the late fourth century the Pentapolis entered a period of marked decline leading to the eventual destruction of the five towns. In 365 A.D. Cyrene suffered a particularly disastrous earthquake. The cities were also exposed to the incursions of the Austuriana, a nomadic tribe from the Sirtic Gulf, which caused their decline and depopulation. (7) Despite indications that the urban population experienced a sharp decline, rural districts continued to flourish as the countryside gradually was transferred into a land of castles and fortified churches (8) which can be considered as the nucleus of small village agglomerations.

In 410 A.D., the Vandals conquered Rome and crossed into North Africa in 429 A.D. bringing with them havoc and destruction; all Libyan towns were seized by the Vandals. In spite of their short stay, these barbarians devastated what the Romans had achieved during five centuries.(9) In Oea they destroyed most of the residential area and public buildings and some parts of the town walls were pulled down. They removed its treasures and took away the most beautiful works of art. Throughout the country the urban population decreased through mortality and out-migration. However, in 533 A.D. Emperor Justinian liberated North Africa from the Vandals, and established Byzantine rule in the country. The Byzantines tried to rebuild the walls and defences of Oea, Berenice and Teucheira, but paid very little attention to the urban development of these towns. In contrast, the life of the rural settlements continued to prosper and saw the construction of many farmhouses, forts and churches. The Byzantines restored the agricultural prosperity of northern Libya together with

its trade and commerce, but their rule came to an end in the seventh century with the invasion of the Arabs.

Little is known about urban centres in Fezzan during the classical period. However, work by archaeologists such as Charles Daniels has revealed that there were settlements for example Garama, the capital of the Garamantes which has been identified with the deserted town of Germa in the Wadi el Agial. The picture is still very incomplete.(10)

3.2.2 Islamic Period

Arab armies from Egypt under the leadership of Amr Ibn Al Ass conquered Libya in 642 A.D. and within a decade had consolidated their power over all of Libya. By the eleventh century the Arabisation and Islamisation of the country was complete. In the early period of the Arab invasion continuity of settlement is known to have occurred, and the best measure of this continuity is the difficulty experienced by archaeologists in distinguishing between late Byzantine and early Islamic structures. Al-Yaqubi in his book "Kitab al Buldan" written in the ninth century indicated that many villages and towns such as Barce, Berenice and Ejdabiah contained a population of Arabs, Berbers and Rumi (Byzantines or Greek Orthodox Christians). (11)

Three types of settlement can be identified, towns of Greek and Roman origins which were developed under the Arabs as trade centres Barce, Berenice and Tripoli; second, major staging points which developed into towns such as Ejdabiah and Sultan near Sirte; third, minor staging points such as Tobruq, Jalu, Siwa, Mekili and Msus.

In Cyrenaica, the Arab period saw a change in the relative importance of the various Cyrenaican towns and a re-orientation towards the interior and the west of Cyrenaica. This can be illustrated by

the decline of centres which were important during the Roman period, such as Cyrene, Appolonia and Darnis, which were eclipsed by centres such as Barce and Ejdabiah which developed rapidly. Two reasons may be put forward to explain this change. Firstly, the Arabs tried to avoid coastal towns because at that time the Byzantines retained control of the Mediterranean. Secondly, the main line of overland communication between Egypt and the Maghreb passed through the interior along a route from Siwa to Tobruq, Mekili, Msus, Ejdabiah, Sultan, Tripoli to Kairouan and the Maghreb.

Barce was Amr's initial objective and it fell after only limited opposition. A treaty of peace was made whereby the Barceans paid 13,000 dinars a year to the new Arab rulers. The majority of the town's population in the early Islamic period were Berbers, although Arab immigrants, largely the descendants of soldiers, formed a prominent part of the urban community. (12) Barce became a very important military, commercial, agricultural and political centre. Among the major advantages were its position close to the major route from Egypt to the Maghreb, its site in the middle of a fertile plateau, surrounded by mountains, and its inland location which protected the town from Byzantine naval raids. These characteristics encouraged the Arabs to develop Barce as the main centre for Islamic political and military control in Cyrenaica and as a springboard for their future campaigns in the Maghreb. Barce prospered until the eleventh century when it declined after the invasion of the nomadic tribes of the Beni Hilal.

The second major centre during this period was Ejdabiah which developed on the site of a Roman Corniclanum. During the Roman and Byzantine periods it had been a frontier post. The town had little in the way of natural resources to recommend it as the site of a large urban settlement. Nevertheless Ejdabiah was situated at the junction

of the caravan route which passed from the east to the west and functioned as an entrepot for Sudanese exports and imports. The town's population was a mixture of Arabs, Berbers, descendants of the ancient Romans, Copts and Jews.

Another important Islamic town was Sirte or Sultan which was a caravan centre five days journey west of Ejdabiah. The town had mosques, baths and markets. (13) Other settlements in Cyrenaica such as Berenice, Darnis, Cyrene, and Appolonia survived in the early Islamic period but declined in the eleventh century.

In the western part of Libya, Tripoli became an important centre during the early Islamic period, but Leptis Magna and Sabratah declined. The Arabs called Tripoli Atrabulus and they constructed a mosque there named after Amr Ibn el Ass. The construction of houses, shops and other mosques followed and there was a major expansion of the built-up area. The city's population increased by in-migration from the rural area and by the arrival of new Arab administrators. Tripoli, situated between Ejdabiah and Barce in the east and Kairouan in the west became the capital of Libya under both the Umayyads and the Abbasids.

It has been the traditional view that the prosperity of the country and its urban network did not continue beyond the eleventh century. Several writers notably Ibn Khaldun,(14) Idris (15) and Despois (16) have blamed the invasion of the nomadic tribes of the Beni Hilal and Beni Suleim from Egypt for the destruction of sedentary life not only in Libya but also in the Maghreb, Johnson has said

> "Various reasons have been advanced to explain the decline of urban and sedentary society in North Africa during the Middle Ages. The most common view, drawing its support from Ibn Khaldun, who claims the Hilalian invasion of A.D. 1050-52 for the disaster. The enemies of all things urban and civilized destroyed everything they encountered in their march towards El Kairouan." (17)

Therefore, agricultural activities, commerce and trade declined as a result of the new political and social situation.

Richard Goodchild indicated that in Al Bakri's time (1060) Barce and Ejdabiah were both flourishing cities with busy markets and an abundance of commodities at low prices, but a century later Edrisi recorded that Barce's inhabitants were few and its markets seldom frequented, whilst Ejdabiah had by then become merely 'two castles in the desert'. (18)

In recent years, however, other writers have questioned this view of the Hilali invasion. Poncet, for example, has pointed to the increased political fragmentation and rivalry in the eastern Maghreb during the early eleventh century, to the deep social and religious tensions within the society and to the extravagance of the rulers. He argues that these factors combined to bring about a collapse of law and order and bands of outlaws rather than the Hilali Arabs were responsible for the widespread destruction and economic decline of the eastern Maghreb. (19) Brett, on the other hand, is of the opinion that the intervention of the Hilali Arabs did not interfere with the pattern of trade and had little effect on the overall pattern of economic life in the region. (20) During the medieval period a regression of sedentary life certainly took place though it may not have been as widespread as has sometimes been maintained.

Between 1510 and 1551 Islamic rule was interrupted many times by European invasions. The Spaniards occupied Tripoli in 1510, and in 1530 they granted the city to the Knights of Malta. This occupation resulted in outmigration and damage to much of Tripoli's physical fabric but the European impact on other Libyan towns was negligible. The Knights were finally driven out in 1551 by the Turkish Corsairs. The Turks occupied Tripoli for several centuries and during this period

they encouraged the building of houses, shops, restaurants, cafes, baths, mosques and schools. The urban population of Tripoli increased owing to in-migration from the rural area, markets resumed their commercial activities and Tripoli became the capital of "Wilayat Tarabulus el Gharb" the Turkish province of Libya. Consequently Tripoli expanded and began to emerge as one of the major urban centres of North Africa. Cyrenaica, however, submitted to Turkish rule only in 1640 when most of the country passed under Turkish control. The rural population was little affected by their rule but the urban population was compelled to pay taxes. Benghazi and Derna were administrative towns while El Merj, Al Qayqab and Soussa were minor administrative centres.

In 1711 Libya came under the rule of the Karamanli family and for the first time, acquired some degree of autonomy within the Ottoman Empire. At first urban centres such as Tripoli, Benghazi and Derna prospered. But towards the end of Karamanli rule most of the towns began to experience economic problems and to suffer depopulation as a result of financial losses following the destruction of the Libyan fleet during the Libyan-American War (1801-1805), conflict among members of the Karamanli family and the decline of the caravan trade with Sub-Saharan Africa and the slave trade.

In the early nineteenth century Karamanli rule came to an end and in 1835 the Second Ottoman occupation began. Turkish rule in Libya continued until 1911 when it was swept away by the Italian invasion and conquest of the country. During this time the Turks realised the backwardness of Libya and started to initiate serious urban, social and economic schemes. It was during the Second Ottoman occupation that the Sanussiya, a powerful religious order, gained the confidence of the Libyan people. The first lodge or <u>zawiya</u> of the

order was founded in 1843 at El Beida in Cyrenaica and soon the order spread throughout the country until its network of lodges embraced the entire tribal system. Each zawiya consisted of a mosque, a school and other buildings, and the Sanusi encouraged settlement on the land by establishing agricultural and stock rearing activities to support members of each lodge.

Zawiyas were built on Greek, Roman or Turkish foundations. They were located on caravan routes, in small inlets on the coast or in strong defensive positions. Later the Italians were to use many of these sites for their administrative and agricultural settlements. These Sanusi lodges served several purposes, they were schools, caravanserai, commercial centres, social centres, forts, courts of law and banks. (21) Several present day small towns developed from zawiyas.

Throughout the pre-colonial period in Libya towns existed in isolation one from the other. They exercised political and administrative control over a limited area of the surrounding countryside. When the Italians invaded Libya, the settlement system created by the Turks was already in full decline and only Tripoli, Benghazi, Derna and Misurata could be considered as towns. In 1911, Tripoli, with a population of about 29,761 inhabitants, was the capital of the country. Benghazi with 16,500 inhabitants was the second town and both Derna and Misurata had less than 5,000 inhabitants.(22) Out of a total population of under one million just before the Italian occupation less than 7 per cent were urban dwellers. Other settlements were villages and hamlets and the majority of Libyans remained nomadic and semi-nomadic.

The pre-colonial towns contained a dense complex of dwellings separated by an intricate maze of narrow, winding streets and dead-end alleyways which reflected the absence of wheeled vehicles. The principal feature of the townscape was the mosques which functioned not only as a

place for prayer and other religious activities, but also as intellectual, educational and social centres. The bath houses were another feature of the physical fabric of the towns. Few buildings were more than one storey tall and only the slender minarets of the mosque broke the monotony of the townscape. Major commercial activities and crafts were conducted in specialised bazaars around the great mosque in each town and some streets were also devoted to various trades. With these commercial areas the nozel or inns and coffee houses functioned as important social centres.

In the nineteenth century before the decline of the trans-Saharan trade routes, a number of oases deep in the Sahara contained thriving towns, for example Jalu, Ghdams, Ghat, Kufra and, in particular, Murzuq which was famous with its artistic life; travellers used to call it the 'Paris of the Sahara.'

3.2.3 Colonial Period

In October 1911, the Italians invaded Libya after they declared war on Turkey. Having been defeated in the Balkan War, Turkey was anxious for peace and in October 1912 a treaty was signed with Italy and Libya passed under Italian rule. Libyans continued their resistance and the Italians were unable to bring the country completely under their control until 1932 when Omer El Mukhtar, the leader of the resistance, was captured and killed.

The Italian invasion and the establishment of colonial rule introduced a new phase of urbanisation in Libya. New extensions were built to the pre-colonial centres, in which wide streets, roads and

piazzas were laid out, municipal gardens and parks were established, and multi-storeyed buildings, modern shops, markets, schools, hospitals and churches were erected.

The Italian occupation resulted in the dominance, both spatially and visually of colonial style townscapes. The new urban developments undertaken by the Italians represented the first modern departure from the traditional urban fabric of the Arab world. Early European towns were characterized by a particular layout : a grid with streets crossing each other at right angles and at roughly equal intervals. Each town had a central square, a town hall, church and pavements lined with carefully pruned trees.(23) In addition, there were a large number of barrack complexes, grain silos, railways and new residential quarters were added characterised by villas set in walled gardens. The Italians also improved the water supplies and sewerage systems in the main towns.

The origins of town planning in Libya date from the colonial period. Towns had no Master Plans of any kind before the Italian occupation. The Turkish administration left the built up areas of the towns to expand without any proper planning. Four Italian Master Plans were prepared for Tripoli, Benghazi, Derna and Misurata. For the first time modern European planning ideas were applied in the country such as the creation of "Citta giardina" or the garden city. The major towns began to witness a new era of modern Italian urbanisation which has had a profound effect upon their morphology.(24) Most of the coastal towns developed, but on a smaller scale than Tripoli and Benghazi. A large number of settlements which are today small towns developed as part of the rural development programmes initiated by the Italians.

In Cyrenaica the Italians established an organisation called Ente Di Colonizzazione per La Cirenaica in 1932 to encourage mass

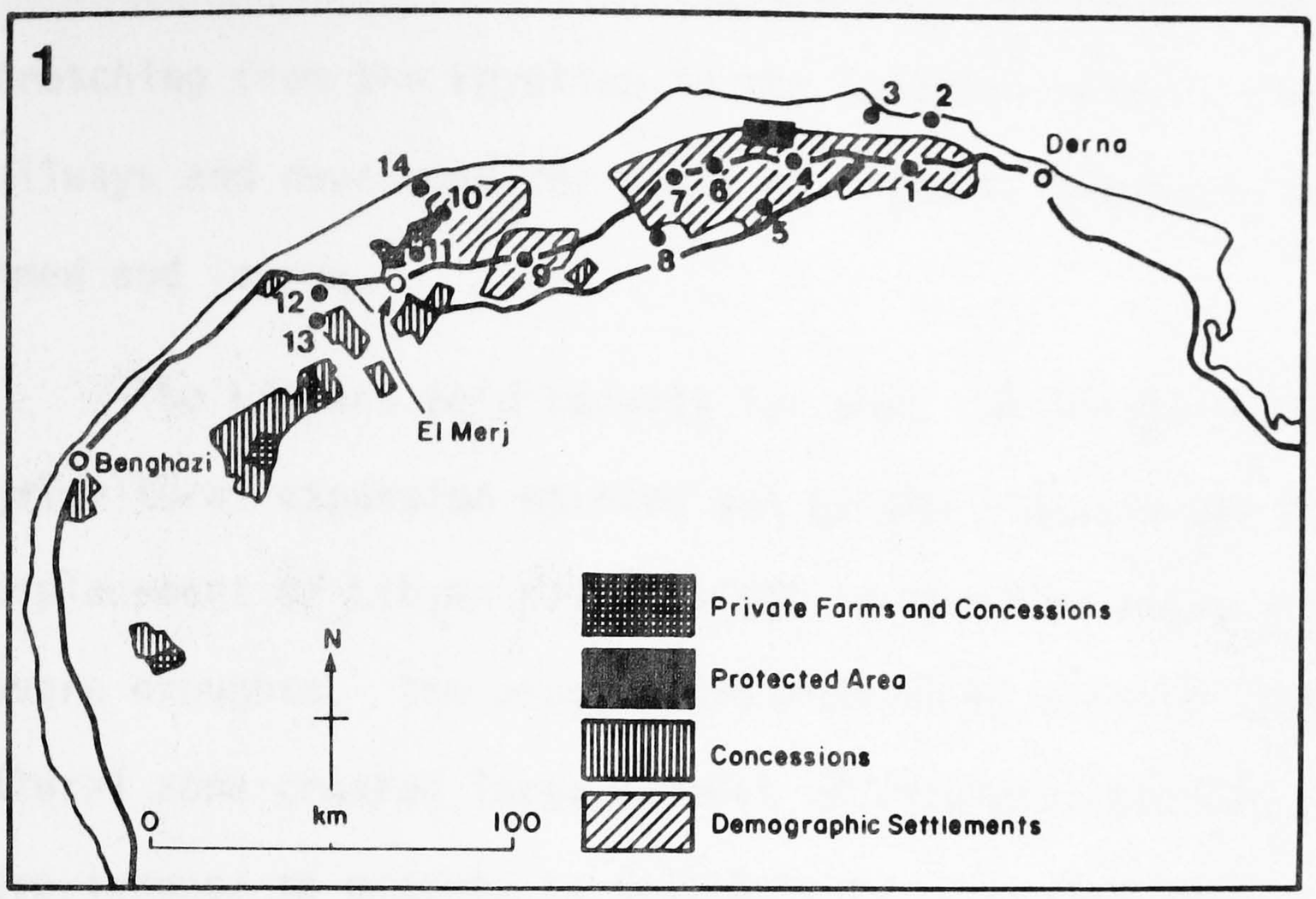
colonisation and rural development. The Ente developed the areas around Cyrene, El Beida, El Merj and started to establish agricultural centres in Beda Littoria (El Beida), Luigi di Savoia (Labraq), Luigi Razza (Massah), Giovani Berta (El Gubbah) and Umberto Maddalena (El Aweliya). They were equipped with a church, clinic, school, shops, Fascist clubhouse, governmental and Ente administrative offices. Each Italian settler and his family was given a farm with all facilities (house, well, livestock, seeds, agricultural tools etc.). Farming operations were undertaken using family labours. By 1940 there were some 15,014 Italian colonists in Cyrenaica (about 2206 families) and 80,000 ha of agricultural land had been developed by the settlers.(25)

The relative success of Ente in Cyrenaica encouraged the colonial authorities to extend the organisation to Tripolitania in 1935; it then became known as Ente di Colonizzazione della Libia. The Ente also built many rural centres in Tripolitania (Fig.3.1) Oliveti (Jud Daiem), Gioda (El Kararim), Garibaldi (Dafiniyah), and Sabotina (El Aziziah). some of which later developed into small towns. These rural centres were well connected with roads or principal highways to urban centres. By 1940 the colonisation schemes had provided 23,919 Italian colonists with farms in Tripolitania.

The success of the Italian settlement schemes depended on the development of the country's infrastructure. The Italian government invested heavily in public works and utilities during the period 1913 to 1942. All in all during the 30 years of its colonial administration, the Italian state invested 1.8 billion lire (equivalent to US $150 million (at pre-war rate of exchange). Most of the investment until 1937 was directed towards the construction

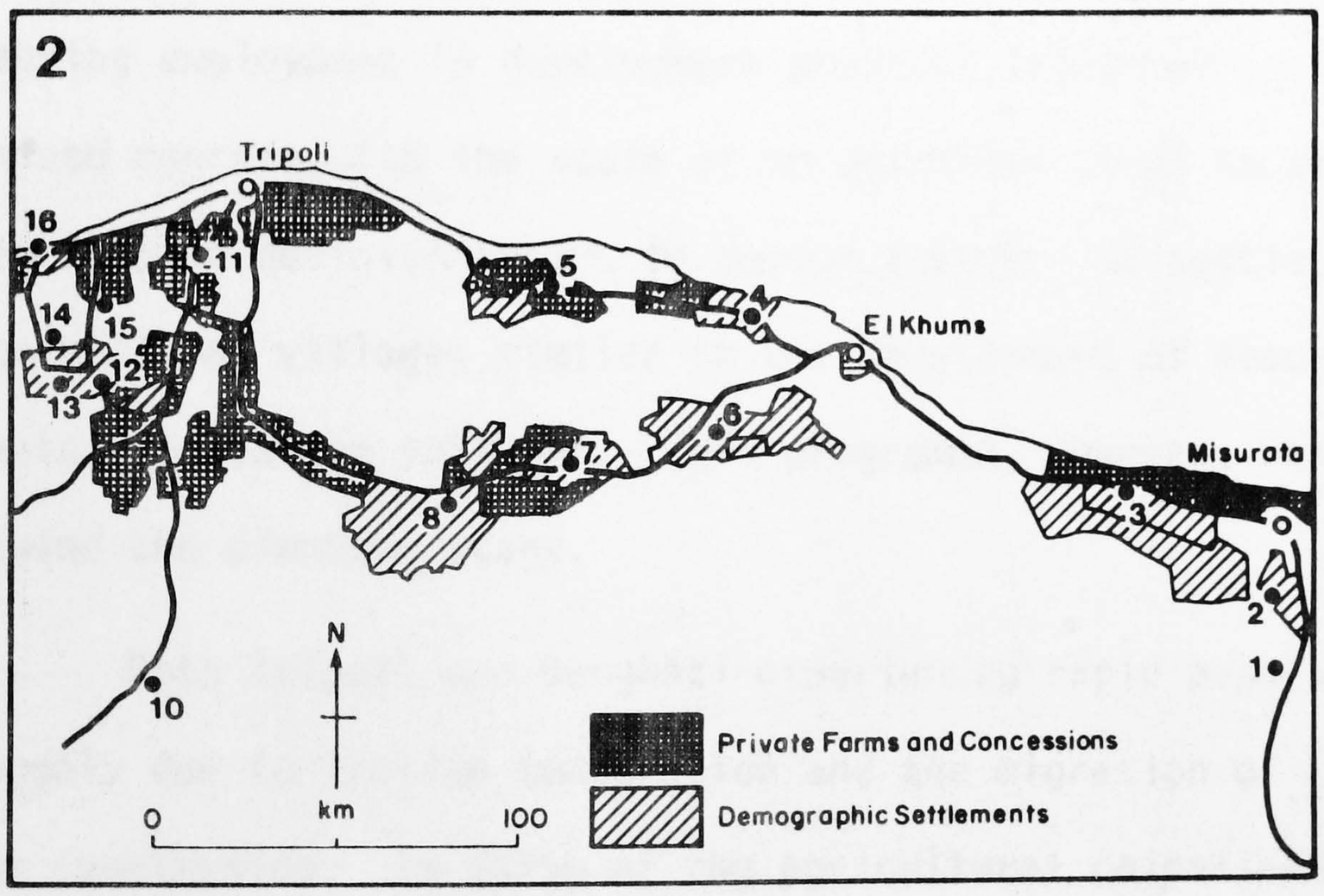
Fig 3·1 ITALIAN AGRICULTURAL DEVELOPMENT IN LIBYA

Italian Agricultural Development in Cyrenaica

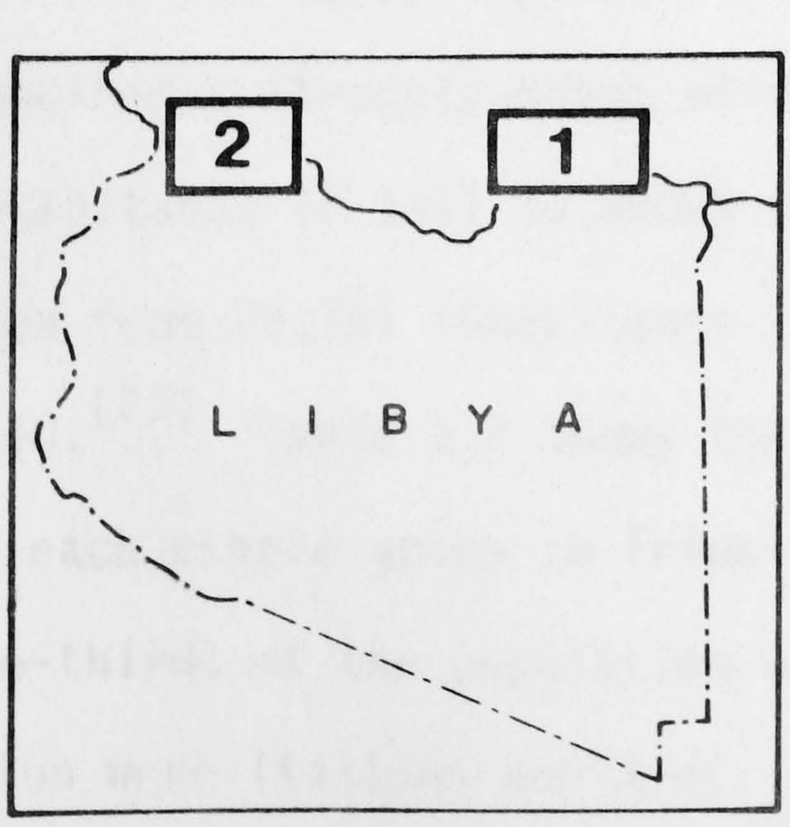


1 Giovani Berta
2 Fiorita
3 Alba
4 Luigi di Savoia
5 Battisti
6 Beda Littoria
7 Luigi Razza
8 Mameli
9 D'Annunzio
10 Oberdan
11 Umberto Maddalena
12 Baracca
13 Filzi
14 Tolmeitha

Italian Agricultural Development in Tripolitania



1 Gioda
2 Crispi
3 Garibaldi
4 Corradini
5 Castelverde
6 Marconi
7 Breviglieri
8 Tazzoli
9 Sabotina
10 Tigrinna
11 Fonduco
12 Mica
13 Giordani
14 Bianchi
15 Hascian
16 Oliveti



Source: Abdussalam, A.S. (1983) External Forces, Economic Development and Regional Inequality in Libya unpublished Ph. Dissertation – University of Oklahoma

of railways, roads, ports and public buildings.(26) During this period the Italians built the Litoranea, the major coastal highway stretching from the Egyptian to the Tunisian border, constructed railways and developed the ports of Tripoli, Benghazi, Derna, Gasr Ahmed and Tobruq.

The Libyans paid heavily for what the Italians achieved. The agricultural expansion carried out by the Italians meant the forced displacement of Libyan pastoralists to marginal regions subject to severe droughts. The massive deportation of Libyans from the agricultural zone created large numbers of displaced people. Some of them were induced to migrate to neighbouring countries such as Egypt or Tunisia, or to urban centres, especially Tripoli and Benghazi, seeking employment in development projects initiated by the Italians. Indeed concern with the scale of uncontrolled rural to urban migration led Italian decision-makers to design a scheme to settle Libyans in agricultural villages similar to the development of demographic settlements for Italian settlers. This programme, however, hardly advanced beyond the planning stage.

Both Tripoli and Benghazi experienced rapid population growth largely due to Italian immigration and the migration of Libyans from the countryside. In spite of the agricultural colonisation schemes, the Italian community, which numbered 112,694 in 1936 (Table 3.1), remained a strongly urban minority. Benghazi grew from 16,500 inhabitants in 1911 to about 50,000 inhabitants in 1936 while Tripoli grew from 29,761 inhabitants in 1911 to 113,390 inhabitants in 1940.(27) Table 3.2 shows the growth in population and the percentage of each ethnic group in Tripoli between 1911 and 1940. In 1911 over two-thirds of the population were Arabs, by 1940 over half the population were Italians and Jews. The Italian settlers were mostly

Table 3.1: The Population of Libya in 1931 and 1936

Administrative Division	Libyan		Italian		Others		Total	
	1931	1936	1931	1936	1931	1936	1931	1936
Tripoli	311,184	343,093	26,036	42,090	2,291	2,420	339,311	387,604
Misurata	168,715	203,922	1,892	2,954	114	111	170,721	206,987
Bengnazi	100,509	91,743	14,494	34,420	2,365	382	117,368	126,545
Derna	35,706	45,839	1,566	32,557	37	28	37,309	78,424
Libyan Sahara	38,716	48,376	612	672	-	2	39,328	49,050
Total	654,830	732,973	44,600	112,694	4,807	2,943	704,237	848,610

Source: Abdussalam, A.S. (1983) External Forces, Economic Development and Regional Inequality in Libya, unpublished Ph.D. dissertation. University of Oklahoma p.163.

Table 3.2: Population of Tripoli during the Italian Period 1911-1940

Year	Percentage of Arabs	Percentage of Italians	Percentage of Jews	Percentage of other foreign	Total
1911	69.9	-	28.9	1.2	29,761
1921	55.1	15.9	24.3	4.6	54,447
1926	50.4	21.1	24.0	4.5	55,244
1931	49.1	26.7	18.1	5.2	81,438
1936	47.6	30.7	17.6	4.0	99,415
1940	41.9	41.9	16.4	-	113,390

Source: Attir, M. (1983) "Libya's pattern of urbanisation" Ekistics, 300, p.158.

administrators, bankers, technicians, traders, professional men and skilled workers. They formed a privileged group and were economically, culturally and socially distinct from the Muslim population. The majority of the Jewish and Muslim urban population were shopkeepers, traders and artisans and the majority were working class. Some of the indigenous Jewish population and a few members of the Muslim bourgeoisie were granted "Cittadinanza Italiana Speciale" (Italian citizenship) and became identified with the privileged Italian and other European communities.

In short the Italians developed the country but for their own benefit and the price was very high. Nicandros wrote:-

> "They enlarged and embellished the coastal towns, they extended throughout the cultivable areas an excellent network of roads. They bored wells. They planted trees, and stabilised sand dunes. But this civilizing policy was mainly for the benefit of their own people. The object was clearly the settlement in Africa of as many as possible of Italy's surplus peasant population" (28)

In the Second World War, the Allies defeated the Axis and the Italians were driven out of Libya in 1943. From 1943 until 1951, Tripolitania and Cyrenaica were under British administration, and Fezzan was under French control. During the war all towns in Libya were devastated and of all cities in North Africa, Benghazi suffered the most serious destruction. Under the British Administration, no urban or economic development schemes were undertaken because of the uncertain future of the country, the lack of capital and Libya's limited resources.

Since ancient times, Libya has been coveted by foreign powers who were attracted by the importance of the country's geographic location on the Mediterranean and its links with sub-Saharan Africa.

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The prosperity and the development of the urban centres in Libya depended on the nature of each successive occupation. The Greek, Roman and also early Arab periods were characterised by prosperity and productivity. In contrast the medieval period was characterised by destruction and the expansion of nomadism. At the end of the period of Turkish rule Libya remained weakly urbanised. The Italians began urban development schemes but failed to complete them before their rule came to an end during the Second World War.

3.3 URBAN GROWTH

Libya, like many other developing countries has been subject to rapid urban growth, the rate of which has been very fast ever since the start of exploration for oil in 1955/56.

Estimates vary about the rate of growth of Libya's urban population during the first half of the twentieth century. Attir, [29] for example, argues that Libya's urban population increased steadily during the era which preceded the discovery and exportation of oil. He suggests that the growth rate of the urban population during this period was more or less similar to the growth rate of the total population and calculates that the average annual urban growth rate was 4 per cent. Misrati [30] on the other hand argued that between 1911 and 1954 the annual growth rate of the urban population was 8.1 per cent but the growth rate of the total population was only 0.5 per cent per annum. He pointed out that the very low growth rate of the total population was probably due to casualties of the Libyan-Italian war, the Second World War and the high rate of migration to neighbouring countries. The rapid growth of the urban population was the result of the worsening economic situation in rural areas.

During the second half of the twentieth century despite the existence of population census data for 1954, 1964 and 1973 there are still widely differing estimates of the rate of urban growth. This results in large part because of the different definitions of the urban population that have been adopted by various authors writing on the subject. Table 3.3 for example shows some of the different calculations that have been made of the urban population for the years 1954, 1964 and 1973.

Alawar [31] pointed out that as there was no rural-urban breakdown of the population in the 1954 census, urban population is normally determined according to occupational criteria. On this basis he calculated that in 1954 the urban population numbered 235,000 (21.6 per cent of the total population) and in 1964 385,239 persons (24.6 per cent of the total population). He also indicated that the average annual increase in the main cities - Tripoli, Benghazi, Derna, Ejdabiah, Tobruq, El Beida and El Merj - amounted to 6.5 per cent from 1954 to 1964.

On the basis of the 1954 census Misrati [32] identified nine centres with more than 5,000 inhabitants as urban giving a total urban population of 270,000 or 25 per cent of the total population. Using surveys carried out for urban planning purposes, he calculated that in 1966 there were 14 towns with populations of more than 5,000 inhabitants giving an urban population of 674,000 or 40 per cent of the total estimated population in that year. He pointed out that between 1954 and 1966 the urban population increased by 8 per cent per annum while the total population of the country increased by 3.7 per cent per annum. In 1973 he suggested that 62 per cent of the total population were urban and estimated that the average annual rate of urban growth between 1966 and 1973 was more than 11 per cent; almost three times the rate of total population growth.

Table 3.3: Variation in calculating urban population percentage in Libya

Authors	1954	1964	1973
Mohamed Alawar	21.6	24.6	45.5
Gerald Blake	-	-	55.9
Mustafa Attir	24.8	39.8	60.0
Ahmed Misrati	25.0	40.0 (1966)	62.0
Borham Atallah and Mona Fikry	31.0	34.0	-
Author's calculation	24.7	45.7	68.7

Source: Alawar, M. (1982) "Urbanisation in Libya : present state and future prospects" in Joffe,E. and McLachlan,K (eds) Social and Economic Development of Libya MENAS Press Ltd. Wisbech,Cambridgeshire pp.331-53. Blake, G.H. (1979) "Urbanization and Development Planning in Libya" in Obudho,R.A. and El Shakhs,S. (eds) Development of Urban Systems in Africa, Praeger, New York pp.99-115. Attir, M. (1983) "Libya's pattern of urbanisation" Ekistics 300, pp.157-162. Misrati, A.H. (1983) "Land conversion to urban use : its impact and character in Libya" Ekistics 300, pp.183-194. Atallah, B. and Fikry, M. (1972) "Le phenomene urbain en Libye, problemes juridiques et sociaux" Annuaire de Afrique du Nord, 11, Paris pp.79-103.

Blake [33] believes that a more realistic basis for analysis of Libyan's urban population is to consider all settlements with populations of over 5,000 inhabitants. On this basis he calculates that in 1973 55.9 per cent of Libya's population lived in settlements of over 5,000 inhabitants, 51.6 per cent in settlements with over 10,000 inhabitants and 49.2 per cent in settlements with over 20,000 inhabitants. Comparing 1966 and 1973 figures he concludes that the average annual urban growth rate was an astonishing 16 per cent.

According to Attir [34] the urban population defined as that living in settlements of 5,000 inhabitants or more increased from 24.8 per cent in 1954 to 39.8 per cent in 1964, and from 60 per cent in 1973 to 81 per cent in 1980. He calculated that the annual average growth rate of urban population between 1966 and 1978 was 7 per cent.

Atallah and Fikry [35] based their calculations on the population of the ten most important urban centres identified with the chief towns of the ten Muhafadat. On this basis they calculated that the urban population increased from 339,970 in 1954 (31 per cent of the total population) to 533,390 in 1964 (34 per cent of the total population), giving an average annual growth rate of 5.7 per cent.

It is hardly surprising, therefore, that different definitions of urbanisation are presented by different authors. The variations arise quite obviously from the method of calculation adopted. On the basis of the author's definition of the urban population (see Chapter One) and using the 1954, 1964 and 1973 censuses of population, it has been calculated that the urban population increased from 24.7 per cent in 1954 to 45.7 per cent in 1964 to 68.7 per cent in

1973. The average annual growth rate was 16.5 per cent for the period between 1954 and 1964 and 12.9 per cent for the period 1964-1973.

Of great importance from the point of view of the present work is the overall picture of a country experiencing rapid and large scale urbanisation, and the fact that the rates of population and urban growth in Libya are among the highest in the world. Table 3.4 reveals the striking changes in Libya's urban system between 1954 and 1964. The number of urban centres grew from nine in 1954 to 18 in 1964. In 1954 apart from Tripoli and Benghazi there were several small towns having populations varying from 4,000 to 17,000. In 1964 apart from the two major cities and Misurata (which grew from a small town to an intermediate centre between 1954 and 1964) there were 15 small towns, 14 of them with between 2,000 and 20,000 inhabitants and Derna with 21,401 inhabitants.

Table 3.5 reveals that for the period 1954-64 Tripoli experienced a higher annual growth rate than Benghazi - 19 per cent and 9.7 per cent respectively. However for the period 1964-73 Benghazi experienced a somewhat higher growth rate than Tripoli, 10.4 per cent and 7 per cent respectively. For the period 1964-73 five out of the seven intermediate towns all experienced a higher average annual growth rate than both Tripoli and Benghazi. Nevertheless to keep this in perspective it must be noted that in absolute terms the population of Tripoli and Benghazi grew by more than twice that of the combined population growth of all the intermediate towns between 1964 and 1973.

Misurata experienced the highest average annual growth rate during the period 1954-64 (26.6 per cent) closely followed by Tobruq

Table 3.4: Urban centres in Libya in 1954 and 1964

Urban Centres in 1954		Urban Centres in 1964	
Centre	Population	Centre	Population
Tripoli	129,728	Tripoli *	376,177
		Benghazi	137,295
Benghazi	69,718	Misurata	32,900
		Derna	21,401
Ejdabiah	16,336	Ez Zawiyah	
		Tobruq	16,374
Derna	15,891	Ejdabiah	15,476
		Sebha	14,000
El Merj	9,900	Zwarah	13,800
		El Beida	12,591
Misurata*	9,000	El Merj	11,200
		Gherian	10,200
Ez Zawiyah	8,000	El Khums	8,900
		Sirte	7,100
Suq el Gumah	6,000	Nalut	6,500
		Zliten	6,500
Tobruq	4,995	Bani Walid	2,800
		Tarhuna	2,400
Total	269,568	Total	715,314

* Figures for Misurata and Ez Zawiyah as estimated in 1954 by the Census and figures for Tripoli in 1964 including Suq el Gumah.

Source: Figures compiled from : Kingdom of Libya (1955) The 1954 Census of Population, Benghazi, (in Arabic). Kingdom of Libya (1966) The 1964 Census of Population, Benghazi, (in Arabic). ITalconsult, (1976) Settlement Pattern Study, (Tripoli Region) - Rome, p.120.

Table 3.5 : Population growth of large cities and intermediate towns 1954-73

Rank as in 1973	1954	1964	1973	Percentage growth 1954-64	Percentage growth 1964-73	Percentage growth 1954-73	Average annual growth rate		
							1954-64	1964-73	1954-73
1 Tripoli	129,728	376,177	615,161	190	64	374	19	7	19.6
2 Benghazi	69,718	137,295	266,196	97	94	282	9.7	10.4	14.8
3 Ez Zawiyah	8,000	19,700	52,188	146	165	552	14.6	18.3	29
4 Misurata	9,000	32,900	45,211	266	37	402	26.6	4.1	21.1
5 Ejdabiah	16,336	15,476	41,830	- 5	170	156	-0.5	18.8	8.2
6 El Beida	-	12,591	41,643	-	231	-	-	25.6	-
7 Tobruq	4,995	16,374	37,848	228	131	658	22.8	14.5	34.6
8 Derna	15,891	21,401	37,716	35	76	137	3.5	8.4	7.2
9 Sebha	-	14,000	33,273	-	138	-	-	15.3	-

Source: Computed from, Kingdom of Libya (1955) The 1954 Census of Population, Benghazi (in Arabic), Kingdom of Libya (1966) The 1964 Census of Population, Benghazi (in Arabic), Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic).

(22.8 per cent). In the case of Misurata, growth was certainly stimulated by rapid rural to urban migration. However the figure must be treated with caution because it may result in part from an underestimation of the population for 1954 which was the base year for the calculations. The rapid growth of Tobruq can be explained by a number of factors. It was chosen by the King as his main place of residence; it grew in importance as a commercial centre close to the Egyptian border; and it benefitted from the presence of a British military base nearby.

Ez Zawiyah also experienced a high average annual growth of about 14.6 per cent during the period 1954-64 and more than doubled its population. Derna in contrast experienced a small average annual growth in the same period which was less than the average annual urban growth for the whole country and more or less the same as the rate of total population growth of the country. This was due to outmigration to other urban centres, particularly to Benghazi and Tobruq. During the period 1964-73 Derna's rate of growth was lower than the average annual urban growth rate for the whole country. The town experienced significant immigration from the surrounding countryside but continued to lose some of its inhabitants to other towns, notably Benghazi and El Beida.

Ejdabiah experienced a decrease in its population from 16,336 inhabitants in 1954 to 15,476 inhabitants in 1964. This was due to out-migration as a large number of people moved to Benghazi, which became the centre for oil activities, and to work in oil camps closeby. However for the period 1964-73 Ejdabiah experienced a high average annual growth of 18.8 per cent which is higher than both Tripoli or Benghazi. In addition to a high rate of natural increase and rural to urban migration, growth was also stimulated by urban to urban

migration with the expansion of activities associated with the oil industry.

The highest average annual growth for the period 1964-1973 was experienced by El Beida which was chosen as the capital of Libya in 1964. It received large government investments and attracted migrants from other towns including Tripoli and Benghazi, and from the surrounding countryside.

It is particularly significant that a large number of towns experienced a higher growth rate than Tripoli and Benghazi during the period 1954 to 1973. Attir [36] documented the fact that 28 settlements had an average annual growth rate higher than that of Tripoli and Benghazi during the period 1966 to 1978, some of them even double the rate of Tripoli.

Table 3.6 shows the percentage of total population in small towns to the total urban population in Libya for the period 1954 to 1973. The total population of small towns in 1954 was 70,122 inhabitants which represents 26 per cent of the total urban population. Although the total population of small towns rose from 168,942 in 1964 to 375,807 in 1973, this percentage of the total urban population decreased to 23.6 in 1964 and rose slightly to 24.3 per cent in 1973. According to these calculations the average annual growth rate of small towns was 14 per cent between 1954 and 1964 and 13.6 per cent between 1964 and 1973, compared to the average annual growth rate for the total urban population of 16.5 per cent and 12.9 per cent respectively. However it should be remembered that the number of small towns increased from seven in 1954 to 15 in 1964 and rose to 37 in 1973. This can be illustrated by Table 3.7 which also subdivides the small towns according to size. The number of small towns in the 2,000-4,999

Table 3.6: Percentage of population in small towns to the total urban population of Libya for the years 1954, 1964 and 1973

1954			1964			1973		
Total Urban Population	Population of small towns	Percentage to the total	Total Urban population	Population of small towns	Percentage to the total	Total Urban population	Population of small towns	Percentage to the total
269,568	70,122	26.0	715,314	168,942	23.6	1,546,873	375,807	24.3

Source: Computed from, Kingdom of Libya (1955) The 1954 Census of Population, Benghazi (in Arabic), Kingdom of Libya (1966) The 1964 Census of Population, Benghazi (in Arabic), Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic).

Table 3.7: Small towns in Libya 1954, 1964 and 1973

Size	1954		1964		1973	
	Number	Population	Number	Population	Number	Population
2000 - 4,999	1	4,995	2	5,200	9	35,846
5000 - 9,999	4	32,900	4	29,000	13	95,508
10,000 - 14,999	-	-	5	61,791	8	103,508
15,000 - 19,999	2	32,227	3	51,550	3	46,874
20,000 - 24,999	-	-	1	21,401	3	65,132
25,000 - 29,999	-	-	-	-	1	28,939
Total	7	70,122	15	168,942	37	375,807

Source: Computed from, Kingdom of Libya (1955) The 1954 Census of Population, Benghazi (in Arabic) Kingdom of Libya (1966) The 1964 Census of Population, Benghazi (in Arabic), Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic).

group increased from one in 1954 to nine in 1973 and those in the 5,000-9,999 group increased from four to 13. Table 3.7 also shows that in 1973 there were 22 small towns with less than 10,000 inhabitants and 33 small towns with less than 20,000. In contrast there were only four small towns with a population range between 20,000 and 30,000.

In 1973 although the total urban population of small towns represented about 24.3 per cent of the total urban population, Tripoli alone represented 39.8 per cent of total urban population, Benghazi 17.2 and the seven intermediate towns some 18.7 per cent. This fact illustrates the polarization of population concentration in the two major cities.

Table 3.8 shows that although the percentage of non-Libyans in the total urban population was 11 per cent in 1973, the figure varied from large cities with 14 per cent to the small towns with 8 per cent. It is clear that the presence of non-Libyans in urban centres is a significant factor in explaining their growth. Table 3.9 reveals that out of the total non-Libyan population in the country only 12 per cent were in rural areas and 88 per cent were in urban areas. Out of the 88 per cent, 74 per cent were in large cities and intermediate towns and only 14 per cent in small towns.

The high rates of urban growth experienced in Libya since the 1950's can be expected to continue in the future. El Shakhs [37] has calculated that while Libya's total population has been increasing at an average annual rate of 3 per cent between 1966 and 1973, the urban population grew at an average rate of 16 per cent during the same period. He predicted that these high rates of growth will increase much faster in the future. By the year 2000 he calculates that the

Table 3.8: Libyan and non-Libyan population in large cities, intermediate towns and small towns in 1973

Number of urban centres	Type	Number of Libyans	Number of non-Libyans	Total	Percentage of Libyans	Percentage of non-Libyans	Total percentage
2	Tripoli and Benghazi	761,915	119,442	881,357	86.0	14.0	100.0
7	Intermediate towns	262,582	27,127	289,709	91.0	9.0	100.0
9	Total urban centres excluding small towns	1,024,497	146,569	1,171,066	88.0	12.0	100.0
37	Small towns	347,799	28,008	375,807	92.0	8.0	100.0
46	Total urban centres in Libya 1973	1,372,296	174,577	1,546,873	89.0	11.0	100.0

Source: Computed from the 1973 Census of Population. Ministry of Planning (1977) The 1973 Census of Population, Tripoli (In Arabic).

Table 3.9: Percentage of Libyans, Non-Libyans and total in small towns and the rest of Libya

Classification	Libyans	Non-Libyans	Total Population
Small towns	17.0	14.0	17.0
Large and intermediate	50.0	74.0	52.0
Urban Libya	67.0	88.0	69.0
Rural Libya	33.0	12.0	31.0
Total Libya	100.0	100.0	100.0

Source: Computed from the 1973 Census of Population. Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic).

total population of Libya will reach between a high of seven million and a low of five and a half million. He expects the proportion of this population residing in towns with 20,000 or more to rise to between 67 per cent and 74 per cent over the same period. If his projections prove to be accurate they suggest a tripling or quadrupling of Libya's urban population over the next 25 years.

The growth of the Libyan urban centres since the 1950's has come about as a result of natural increase in the population, rural to urban migration and the presence of foreign workers. However, there is some disagreement among authors concerning the relative importance of these factors. Blake argues that discussions about the causes of urban growth in Libya have frequently under-valued the high rate of natural increase which he believes is more significant than migration in the majority of towns. (38) Tobali on the other hand has stressed the importance of migration in the urbanisation in Libya.(39) Janet Abu-Lughod however has argued that the role of migration in urban growth is important but perhaps that this factor has been overstressed in the past. She emphasized that the high rates of growth in North African cities are largely accounted for by natural increase with the exception of Cairo and Tripoli, the latter because of its role as a reception centre of skilled manpower.(40) This remarkable change in urban development of Libya is also due to the extremely low point at which Libyan urbanisation began and to the discovery and subsequent exploitation of oil.(41) The high degree of urbanisation could also be attributed to the inhospitable environmental context which favours the concentration of population in town and cities along the Mediterranean coast.

3.4 PRESENT SETTLEMENT SYSTEM

Analysis of changes in the system of settlements in its spatial and hierarchical dimensions, at the national and regional levels, provides an important framework for the formulation and assessment of alternative national strategies on spatial development. It is increasingly clear that Libya's settlement pattern is marked by a high degree of primacy and extreme spatial disparities among regions. The only region displaying a relatively well balanced settlement hierarchy is the Benghazi region, where Benghazi City, intermediate towns, small towns and villages make up effective functional units. In contrast, in the Tripoli region, the pattern of location and settlement type distribution reflect its overly strong dependence on Tripoli City. The size distribution of settlements in 1954, 1964 and 1973 are characterised by a high degree of primacy. Table 3.10 and Figure 3.2 show the ranking of settlements for the years 1954, 1964 and 1973. The degree of primacy is simply defined here as the ratio of the population of the largest settlement to the combined population of the four largest settlements. When measured by a simplistic index (the proportion of the population of the four largest cities residing in the largest city), the degree of primacy of Libya's settlement pattern is deceptively low[42] (see Table 3.11). However, because the Libyan settlement pattern is basically split into two separate urban systems polarised on Tripoli and Benghazi, such primacy measures would actually be meaningful only within each of the two sub-systems, where such values become considerably higher. Below the cities of Tripoli and Benghazi there is a wide gap in the city size distribution. In fact, as El Shakhs indicates, if Tripoli and Benghazi were to be removed from the city-size distribution analysis, Libya's pattern of settlement would show hierarchical qualities close to those of Zif's "Rank-Size Rule".[43] Without removing Tripoli and Benghazi from the city-size distribution, Tobali argued that -

> "from the data available, regression analysis has shown that rank size rule holds in Libya and the argument that the

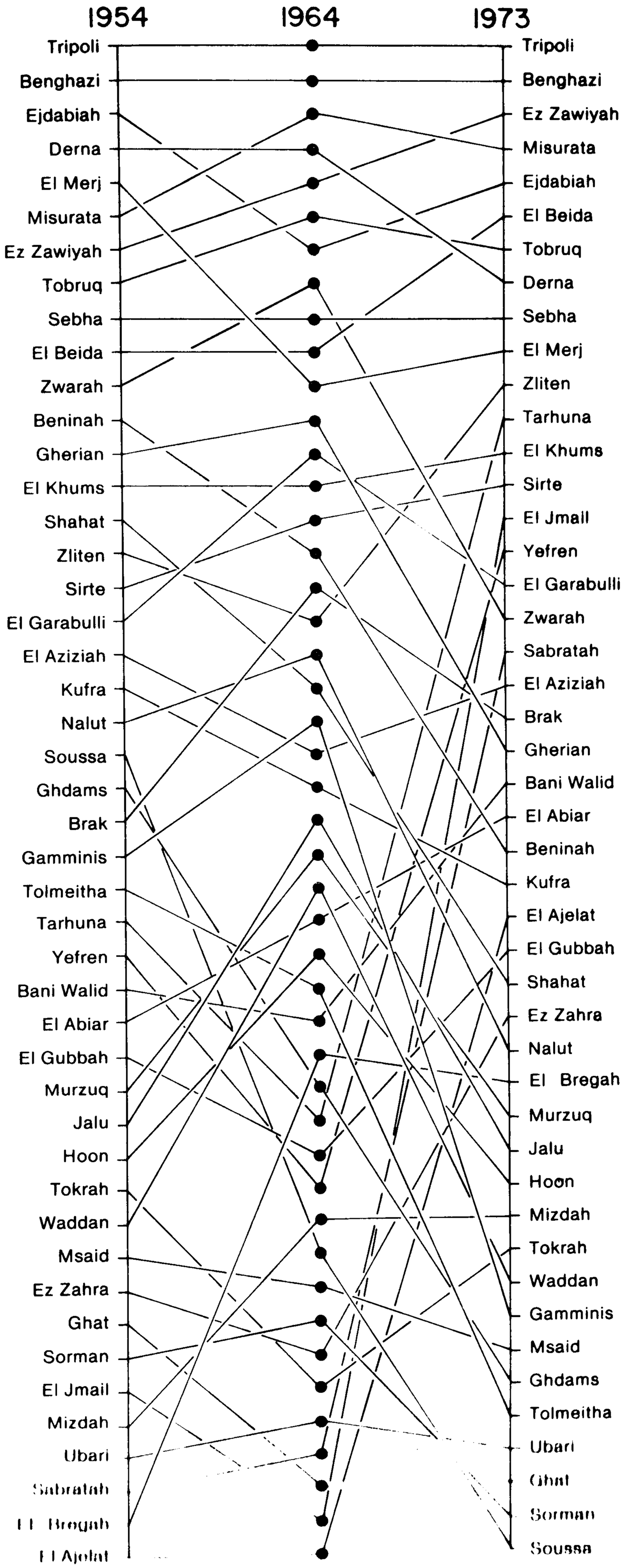
Table 3.10 : Rank size of urban centres of Libya with more than 2000 inhabitants

Urban Centres in 1954			Urban Centres in 1964			Urban Centres in 1973		
Centre	Population	Rank	Centre	Population	Rank	Centre	Population	Rank
Tripoli	129,728	1	Tripoli*	376,177	1	Tripoli	615,161	1
Benghazi	69,718	2	Benghazi	137,295	2	Benghazi	266,196	2
Ejdabish	16,336	3	Misurata	32,900	3	Ez Zawiyah	52,188	3
Derna	15,891	4	Derna	21,401	4	Misurata	45,211	4
El Merj	9,900	5	Ez Zawiyah	19,700	5	Ejdabiah	41,830	5
Misurata*	9,000	6	Tobruq	16,374	6	El Beida	41,643	6
Ez Zawiyah*	8,000	7	Ejdabiah	15,476	7	Tobruq	37,848	7
Suq el Gumah	6,000	8	Sebha	14,000	8	Derna	37,716	8
Tobruq	4,995	9	Zwarah	13,800	9	Sebha	33,273	9
			El Beida	12,591	10	El Merj	28,939	10
			El Merj	11,200	11	Zliten	22,329	11
			Gherian	10,200	12	Tarhuna	22,179	12
			El Khums	8,900	13	El Khums	20,624	13
			Sirte	7,100	14	Sirte	16,713	14
			Nalut	6,500	15	El Jmail	15,132	15
			Zliten	6,500	16	Yefren	15,029	16
			Bani Walid	2,800	17	El Garabulli	14,524	17
			Tarhuna	2,400	18	Zwarah	14,084	18
						Sabratah	13,922	19
Total	269,568		Total	715,314		El Aziziah	12,646	20
						Brak	12,606	21
						Gherian	12,247	22
						Bank Walid	12,019	23
						El Abiar	11,460	24
						Beninah	9,637	25
						El Jof (Kufra)	9,368	26
						El Ajelat	9,211	27
						El Gubbah	9,049	28
						Shahat	8,322	29
						Ez Zahra	8,195	30
						Nalut	7,968	31
						El Brega	6,554	32
						Murzuq	6,151	33
						Jalu	5,400	34
						Hoon	5,336	35
						Mizdah	5,189	36
						Tokrah	5,128	37
						Waddan	4,840	38
						Gaminis	4,622	39
						M'said	4,328	40
						Ghdams	4,020	41
						Tolmeitha	3,834	42
						Ubari	3,750	43
						Ghat	3,715	44
						Sorman	3,443	45
						Soussa	3,294	46
						Total	1,546,873	

* Figures for Misurata and Ez Zawiyah as estimated by the 1954 census while figures for Tripoli in 1964 include Suq el Gumah

Source: Figures compiled from : Kingdom of Libya (1955) The 1954 Census of Population, Benghazi (in Arabic). Kingdom of Libya (1966) The 1964 Census of Population, Benghazi (in Arabic). Italconsult, (1976) Settlement Pattern Study (Tripoli Region) Rome, p.120 Ministry of Planning (1977) The 1973 Census of Population Tripoli (in Arabic).

Fig 3·2 RANKING OF URBAN CENTRES IN LIBYA 1954, 1964 and 1973



Source 1954, 1964 and 1973 Census of Population

Table 3.11 : Relative change in the degree of primacy of settlement systems in Libya and its regions in 1966 and 1973

Settlement systems	Degree of Primacy		
	1966	1973	Percentage of change
Tripoli	0.82	0.82	0.0
Benghazi	0.75	0.70	-6.7
El Khalij	0.62	0.61	-1.6
Sebha	0.72	0.77	+6.9
Libya	0.58	0.61	+3.4

Source : El Shakhs, S. (1975)"Urbanization and spatial development in Libya" Pan African Journal vol 8, no.4, p.378.

> rank-size rule does not hold in less developed countries is not necessarily true". (44)

However, Tobali's argument is not correct because he based his conclusion on the 1973 population data for the Baladiyat, not on the correct figures for the urban centres. Thus he presented Misurata as the third town having 103,302 inhabitants, Benghazi with 282,192 and Tripoli with 709,117 inhabitants.

El Shakhs' analysis shows an obvious tendency towards hierarchical grouping. He identified four distinct levels of hierarchical grouping which are illustrated in Table 3.12.

Table 3.12: Levels of hierarchical grouping after El Shakhs

Level	1966	1973
One	Tripoli	Tripoli
Two	Benghazi	Benghazi
Three	Misurata & Derna Ez Zawiyah, Ejdabiah Tobruq, Zwarah, Sebha El Beida	Misurata, El Beida, Derna, Ez Zawiyah, Tobruq, Ejdabiah, Sebha
Four	El Merj Nalut, El. Khums	El Merj Zliten Zwarah El Khums

Source: El Shakhs, S. (1975) "Urbanisation and spatial development in Libya" Pan African Journal, vol.8, no.4, p.379.

Apart from these centres, other settlements are hierarchically more evenly distributed in terms of size.(45) (Apart from Tripoli and Benghazi which continue to dominate the urban system). Figure 3.2

shows that the rank size distributional characteristics for the system of settlement have changed significantly since 1954.

Table 3.13 shows the percentage of the population in intermediate towns to the population of Tripoli. There is no doubt that the Libyan settlement system is marked by a high degree of primacy.

Tripoli and Benghazi have dominated the urban system for a long time. In 1954, the population of the two cities accounted for 18 per cent of the total population. This proportion grew within ten years to 33 per cent. By 1973, it had reached 39 per cent, and it had jumped to 44 per cent in 1978. (46) Already in 1954 Tripoli and Benghazi contained 74 per cent of the total urban population. In that year Tripoli had 129,728 inhabitants, Benghazi 69,718 inhabitants whereas Ejdabiah had a population of only 16,000. The growth of a number of small towns between 1954 and 1966 led to a slight drop in the proportion of the urban population shared by the two cities from 74 to 72 per cent. By 1978 the share of small towns and the intermediate towns in the urban population had increased and the share of Tripoli and Benghazi had fallen to 68 per cent. (47) However, Tripoli and Benghazi still dominate the urban system.

Tripoli is the capital city of Libya, the natural focus of the country's most populous and productive area and the chief port. Its population grew from 129,728 inhabitants in 1954 to 615,161 inhabitants in 1973 and according to Attir grew to reach 875,000 in 1981. (48)

Even more remarkable however, has been the growth of Tripoli Muhafadah which increased by 79 per cent between 1964 and 1973. The Muhafadah, with little more than 1 per cent of the total area of Libya, accommodated 31 per cent of the total population in 1973. (49) Tripoli is now the largest, both in area and population that it has ever been.

Table 3.13: Large cities and intermediate towns 1973

(percentage of population to that of the largest settlement)

Rank	Centre	Population	% to largest settlement
1	Tripoli	615,161	100.00
2	Benghazi	266,196	43.27
3	Ez Zawiyah	52,188	8.48
4	Misurata	45,211	7.34
5	Ejdabiah	41,830	6.79
6	El Beida	41,643	6.76
7	Tobruq	37,848	6.15
8	Derna	37,716	6.13
9	Sebha	33,273	5.40

Source : Computed from the 1973 Census of Population. Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic).

The direct and indirect effects of revenue from oil stimulated the economy of Tripoli with expenditure on transportation, municipal services and buildings creating employment for Libyans and foreign workers. Demand for housing and administrative and commercial construction by the central government, foreign missions and oil companies accelerated urban expansion. (50) The city is the political, commercial, industrial and communications centre for Libya. With the supply of capital resources a massive physical expansion of the city has taken place since the 1960's, and as construction activities expanded, the city encroached on to neighbouring agricultural land. The city covered 1,650 ha in the early 1970's and 6,930 ha in the early 1980's; almost half of Tripoli was built between 1970 and 1975.

Benghazi is Libya's second city with a population of about 266,196 in 1973. The city is an administrative centre of great importance and a centre for a number of services covering the entire eastern part of the country. It is also the largest town in the eastern macro-region. Owing to the oil discoveries, it has grown rapidly attracting people from all over the country. When it became the administrative headquarters of the oil industry it seemed that Benghazi might rival Tripoli, and for a short period in the early 1960's Benghazi actually grew more rapidly than Tripoli. But between 1964 and 1973 the Muhafadah of Benghazi recorded only a 46 per cent increase in population compared with a 79 per cent increase for the Muhafadah of Tripoli.(51) Despite government attempts at administrative decentralisation since 1977, the two cities still provide more than three-fifths of service sector employment. Their overwhelming importance in employment and urban growth have over-shadowed the growth of other towns.

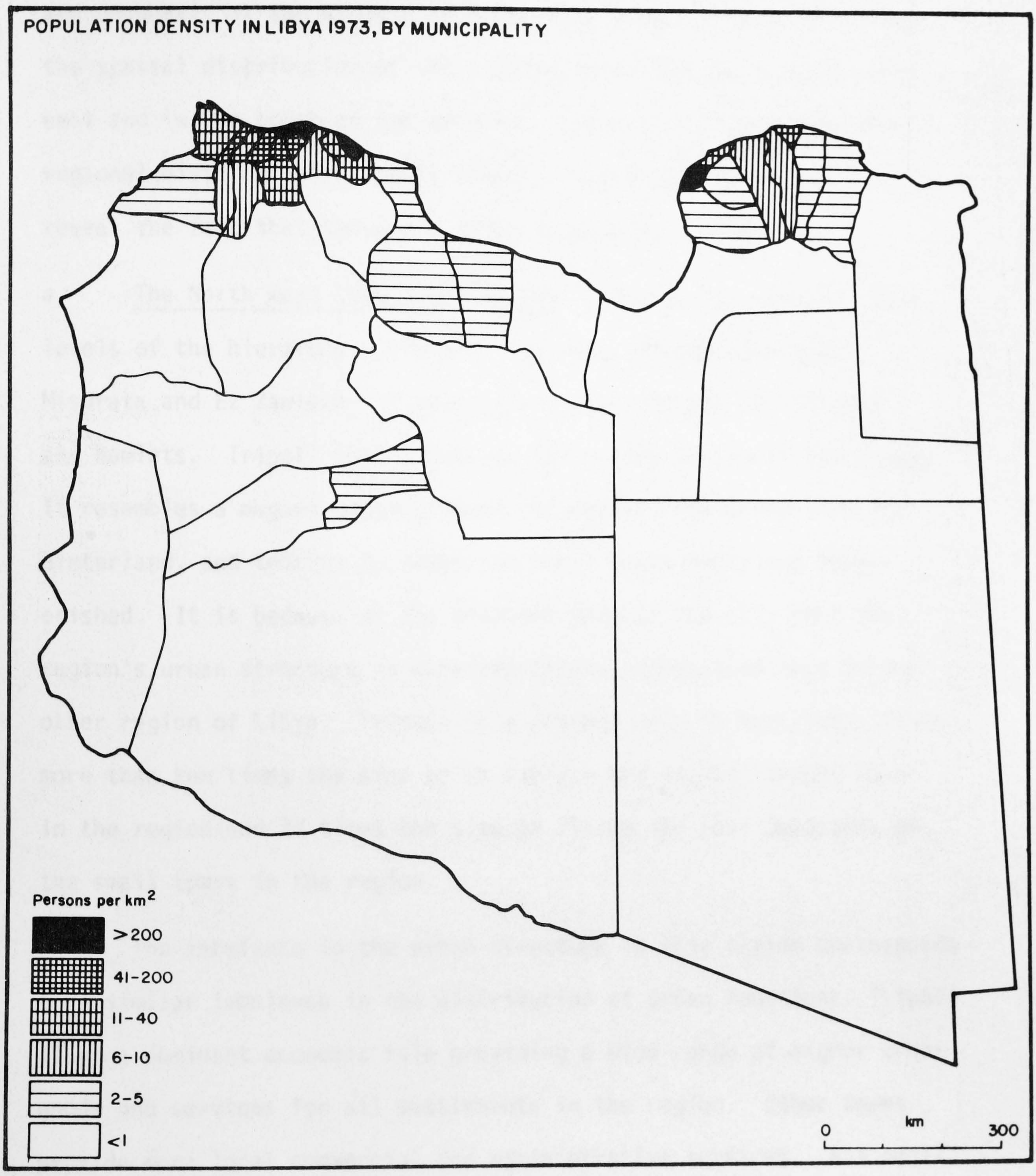
The dramatic economic changes in Libya have increased the polarisation of population concentration upon Tripoli and Benghazi. This

has given rise to acute problems for national economic and social development and the trend seems likely to continue simply because of the geographical location of Tripoli and Benghazi. Tripoli stands just on the edge of the rich agricultural area of the Gefara plain, and Benghazi is close to the richest oil fields in Libya. Both are located on the most important routes from the interior to the Mediterranean coast and are linked by the major coastal highway. These transport patterns have encouraged a major potential for urban development within these areas, just as the Mediterranean served to establish them throughout Libya's long history. (52) Libya is a large country in area and only a small portion of its vast territory is habitable. The inhospitable environment led to the concentration of population in major settlements particularly along the coast. Physiographic and climatic conditions have affected the general distribution of the population and help to explain the location of urban growth. Three physiographic zones of population concentration can be identified:

a. The coastal area
b. The two inland hill areas of Jabel Akhdar and Jabel Gharbi
c. The interior oases to the south

There is no doubt that the increasing temperature extremes to the south make the coastal regions and the Jabels the most favoured physical environments for optimum working and living conditions. It is the indirect influences of the physical environment which set more specific limits to Libya's ecumene. The presence or absence of water is the critical factor which influences the population distribution. Figure 3.3 shows the population density in 1973. It is clear from this figure that the Libyan population is concentrated in the coastal

Figure 3.3



Source : El Mehdawi, M. and Clarke, J.I. (1982) "Population Redistribution in Libya" in Clarke, J.I. and Kosinski, L.A. (eds) Redistribution of Population in Africa, Heinemann, London, p.70.

municipalities which have the most favoured climatic conditions. Table 3.14 reinforces this fact. It shows the increasing concentration of population in the coastal Muhafadat, especially in Tripoli and Benghazi, at the expense of other Muhafadat. Figure 3.4 shows the spatial distribution of the population in the north west, north east and in the south of the country. Table 3.15 illustrates the regional distribution of small towns. Figures 3.4 and Table 3.15 reveal the fact that there are three settlement systems:

a. The North West Settlement System This system contains four levels of the hierarchy : Tripoli City, two intermediate towns, Misurata and Ez Zawiyah, 17 small towns and hundreds of villages and hamlets. Tripoli City dominates its region in almost every way. It resembles a magnet drawing human and natural resources from its hinterland, and tending to leave the rural areas empty and impoverished. It is because of the dominant role of the city that the region's urban structure is more drastically unbalanced than in any other region of Libya. Tripoli is a primate city in every way; it is more than ten times the size of Ez Zawiyah and second largest town in the region and 27 times the size of Zliten the most important of the small towns in the region.

The imbalance in the urban structure in this region corresponds to a similar imbalance in the distribution of urban functions. Tripoli plays a dominant economic role providing a wide range of higher order goods and services for all settlements in the region. Other towns provide more local commercial and administrative services. All small towns in this region gravitate strongly towards Tripoli City bypassing other intermediate towns. (53)

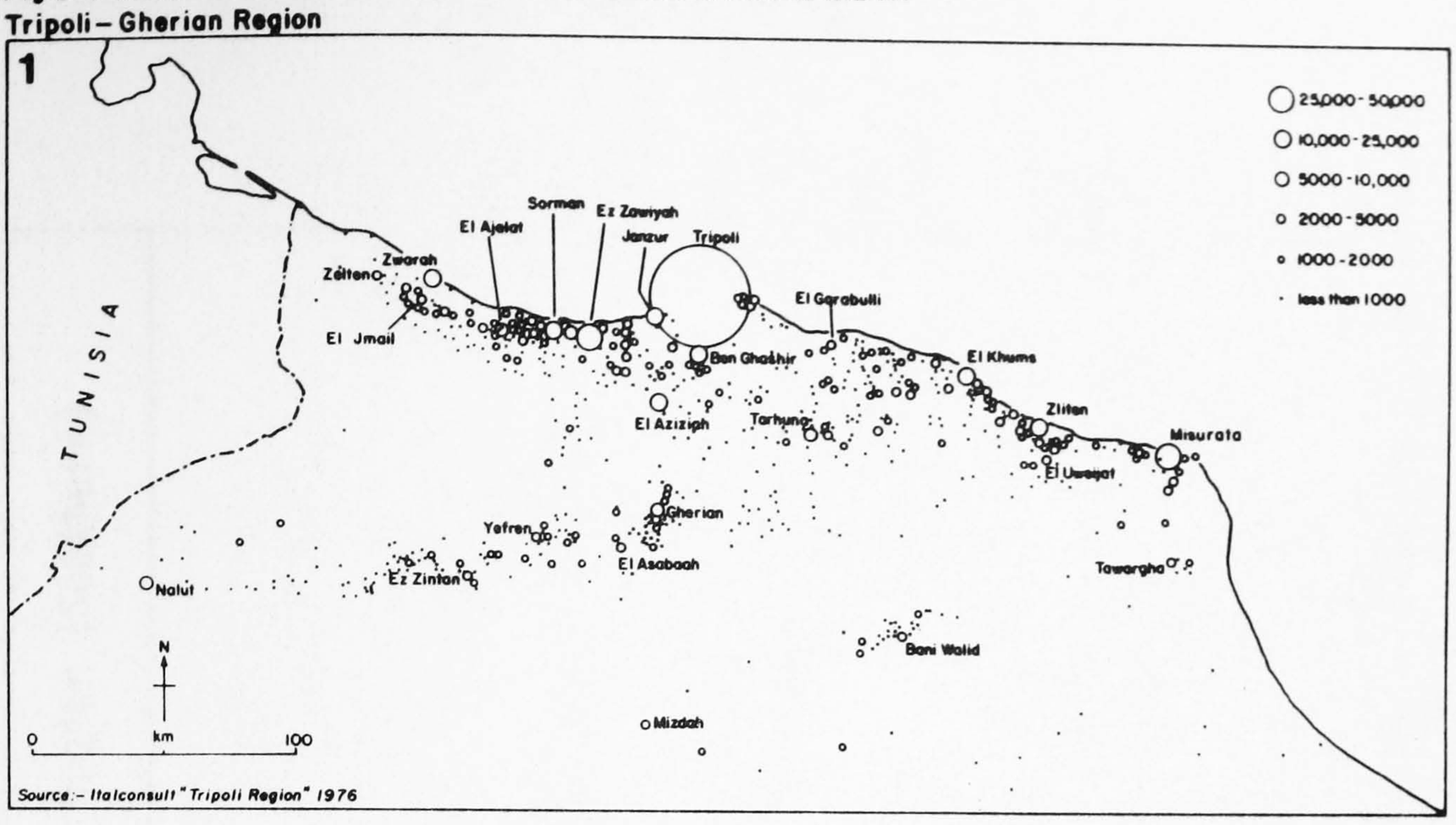
Table 3.14: Proportion of population in each Muhafadah in the year 1954, 1964, 1973

Muhafadat	1954 (%)	1964 (%)	1973 (%)
Derna	5	5	5
Jabel Akhdar	6	6	6
Benghazi	12	14	15
El Khalij	5	5	5
Misurata	10	8	8
El Khums	11	8	7
Tripoli	24	26	31
Ez Zawiyah	11	11	11
Gherian	11	11	6
Sebha	5	5	5

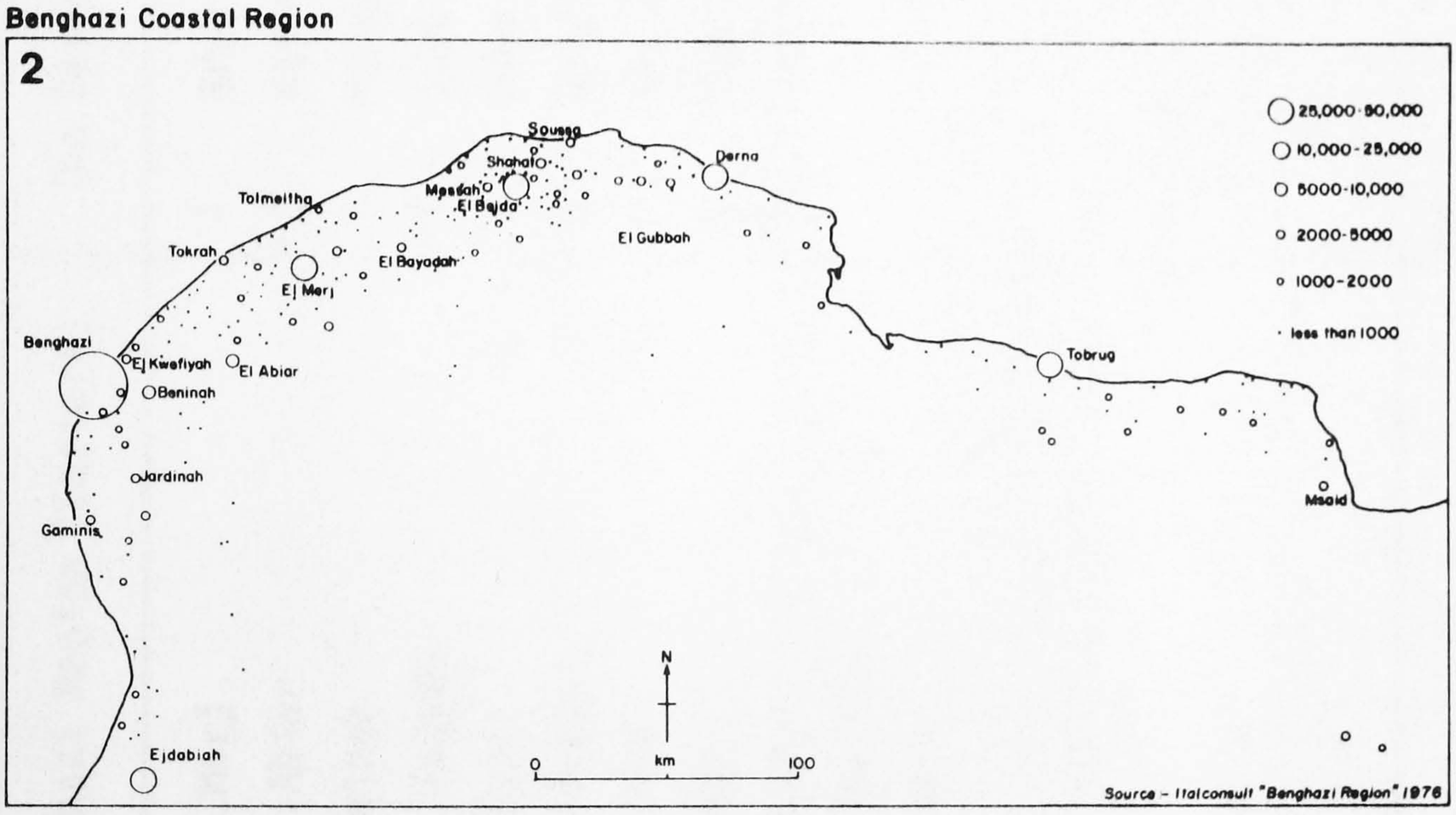
Source: The 1954, 1964 and 1973 Census of Population. See Kingdom of Libya (1955) The 1954 Census of Population, Benghazi (in Arabic). Kingdom of Libya (1966) The 1964 Census of Population Benghazi (in Arabic). Ministry of Planning (1977) The 1973 Census of Population, Tripoli,(in Arabic).

Fig 3·4 SPATIAL DISTRIBUTION OF THE POPULATION IN LIBYA

Tripoli – Gherian Region



Benghazi Coastal Region



Fezzan Region

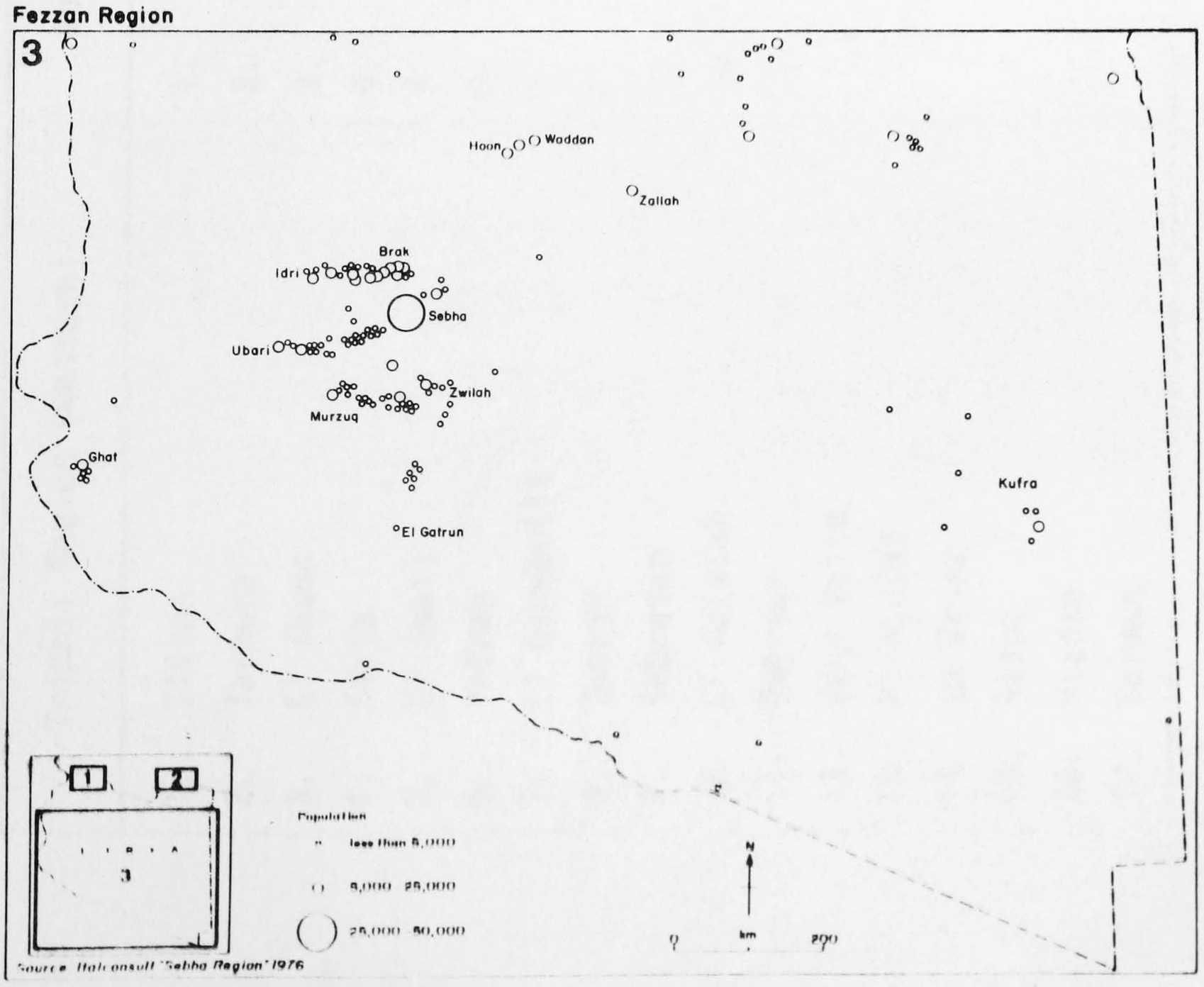


Table 3.15 : Regional Distribution of small Towns

Tripoli Region (Western)	Benghazi Region (Eastern)	The Desert Region (Southern)
1. Zliten	1. El.Merj	1. Brak
2. Tarhuna	2. El.Abiar	2. Kufra
3. El Khums	3. Beninah	3. Murzuq
4. Sirte	4. El.Gubbah	4. Jalu
5. El Jmail	5. Shahat	5. Hoon
6. Yefren	6. El.Bregah	6. Waddan
7. El Garabulli	7. Tokrah	7. Ghdams
8. Zwarah	8. Gaminis	8. Ubari
9. Sabratah	9. Msaid	9. Ghat
10. El Aziziah	10. Tolmeitha	
11. Gherian	11. Soussa	
12. Bani Walid		
13. El Ajelat		
14. Ez Zahra		
15. Nalut		
16. Mizdah		
17. Sorman		

b. The North East Settlement System This system is characterised by the dominance of Benghazi, but there are also four important intermediate towns, Tobruq, Derna, El Beida and Ejdabiah. In addition the region contains 11 small towns. Of the 11 small towns Gaminis, Tolmeitha, El Merj, El Abiar, Beninah and Tokrah clearly gravitate towards Benghazi, but the others have strong links with an intermediate town which is relatively close in time e.g. El Gubbah with Derna, Msaid with Tobruq, Shahat and Soussa with El Beida and El Bregah with Ejdabiah.

c. The Southern Settlement System This region has only one intermediate town which is Sebha and nine small towns. Because of the large size of the region and the great distances separating the towns within it the attraction of Sebha is weak and most of the small towns have stronger linkages with the major cities in the two Northern Sub-Systems. Only in the case of Brak, Murzuq, Ubari and Ghat, can Sebha attract their population for local services; Kufra and Jalu gravitate towards Benghazi, Hoon and Waddan towards Misurata and Ghdams towards Tripoli.

3.5 PLANNING FOR SMALL TOWNS

Although many Middle Eastern cities and towns, especially the small towns, have been generally neglected from the planning point of view, Libya is one of the exceptions. The need to plan and intervene stems from several factors, notably rapid population increase, urbanisation and polarisation of population in Tripoli and Benghazi. Uncontrolled growth of these two centres has created severe imbalance in population distribution among different regions. All this meant that the government had to plan for the increasing population, providing schools, hospitals, houses, employment opportunities and leisure amenities by means of urban and regional planning. There is

no doubt that the government is committed to the reduction of inequalities between regions and has tried to offset this high degree of spatial imbalance by channelling oil revenues into extensive improvement and expansion of infrastructures. Two aspects are considered in this section : the role of town planning in shaping the small towns and the role of spatial planning in restructuring the urban system in Libya.

3.5.1 Shaping the small towns

A major aspect of government intervention is in the commissioning of a series of physical Master and Layout plans for all settlements in the country, urban or rural, large or small.

The first town in Libya to have a Master plan after independence was the small town of El Merj. The old town was devastated by an earthquake in February 1963. Five months later, the government established the Barce Reconstruction Organisation (B.R.O) as an independent body to locate the new town of El Merj and to supervise its construction. The B.R.O. commissioned the American company Lublin McGaughy Architects and Consulting Engineers to survey, locate and design the new town. They instructed the planners to incorporate a number of concepts in the new town which were fundamentally Western in origin, such as detached houses with front gardens wherever possible, neighbourhood centres with a range of facilities, and a grid network of wide roads. Thus the company designed the town on the concept of the 'Modern Town' or the 'Garden City' which is based on the theory developed by Howard in the nineteenth century. (54)

The small market centre of El Beida, with 12,591 inhabitants in 1964, was chosen to be the capital of Libya in 1964 and became the second town to have a modern Master Plan. The Federal Government established

the Beida Project Committee (B.P.C) to supervise the construction and development of the town. In 1966 Doxiadis Associates prepared the Master Programme and Plan for El Beida, providing for a city of 50,000 inhabitants in the first phase and a future extension for a possible 100,000 inhabitants. The development of El Beida since this period has taken place within the broad guidelines set out by the Doxiadis Plan. (55) The Government was satisfied with the Master Plans adopted for El Merj and El Beida and with oil money flowing abundantly, the Ministry of Planning and Development initiated an extensive urban planning programme in March 1966. It had two aims, to regulate urban expansion and to spread the benefits of the country's new found wealth to as many citizens as possible.

The Government awarded four separate contracts to four western consultants for the preparation of a comprehensive planning programme. In addition to aerial photographs and maps, the programme required inventory reports of existing conditions including information on resources, population, land use, settlement, community facilities, economy and transportation. This information supplemented by additional field work and analysis was collected not only to serve as a reference for the existing conditions of the country but also as a basis for the preparation of Master Plans and Layout Plans.

Consultants were therefore allocated certain areas as follows:

(i) DOXIADIS ASSOCIATES carried out the study of the eastern Muhafadat (excluding Benghazi, El Beida and El Merj). Master Plans and Layout Plans were prepared for nine towns and 65 smaller settlements. (56)

(ii) McGAUGHY, MARSHALL, McMILLAN & LUCAN (U.K.) carried out the the study for the Muhafadat of El Khums and Misurata. Seven

Master Plans and 25 Layout Plans were prepared by them. (57)

(iii) ARCHITECTURAL PLANNING PARTNERSHIP LTD of Denmark was awarded the contract to study the Muhafadat Ez Zawiyah and Jabel Gharbi. The actual work was carried out by ALBERT SPEEIR a German Company operating under the aegis of APP. Eight Master Plans and 32 Layout Plans were prepared. (58)

(iv) WHITING ASSOCIATES INTERNATIONAL (U.K.) prepared Master Plans for three cities i.e. Tripoli, Benghazi and Sebha, as well as 26 Layout Plans for settlements in the southern Muhafadat. (59)

By 1970, the four consultants had prepared 29 Master Plans and 148 Layout Plans and covered the whole country by inventory reports. These documents still provide valuable information on the urban scene in Libya. The planning horizon adopted for the Master Plans and Layout Plans was the year 1988. The companies also prepared short-term programmes for implementing these Plans, each a five-year period, April 1968 to April 1973, and April 1973 to April 1978.

The report on each settlement outlines briefly the present structure of the town or village, examines the future development of the economy, and the changes in population,employment and income distribution. Each report defines the existing problems both quantitatively and qualitatively, and estimates the needs for each settlement in key areas such as housing, schools, hospitals commercial centres and infrastructures for the period to 1988. Conservation of the old parts of towns was taken into consideration and the Plans introduced some important ideas regarding the historic cores or medinas.

Although the physical plans themselves were instrumental in bringing modern services, such as sewage systems, fresh water, electricity, and attempting to rationalise road systems and urban

land use . certain weaknesses may be identified:

1. They failed to examine the growth potential of different urban centres within the national urban system.

2. They failed to give positive encouragement to those with a favourable location.

3. The time span of 20 years was probably too long considering the detailed nature of the plans and the spectacular rate of change due to rising oil revenues.

4. When the plans were devised, industrial development on a large scale was not foreseen especially the emphasis on heavy industry which is relatively recent.

5. The plans have largely overlooked the possibility of adopting traditional urban architectural styles to the needs of the modern world.

6. The plans failed to anticipate such a rapid urban development as observed at present in Libya.

7. The plans were characterised by an absence of citizens' participation in each municipality as they were essentially the work of the central Government. (60)

The first generation of Master Plans were prepared in isolation and were not part of a national spatial planning programme. By the 1970's new political objectives, new priorities in economic development and the rapid pace of urbanisation led the government to commission new Master and Layout Plans for all settlements in the country with a planning horizon to the year 2000.

These new Master and Layout Plans prepared by foreign consultancy companies were set within a framework established by three

important documents, the work of Italconsult on settlement patterns,[61] the National Physical Perspective Plan, which was prepared by the Government with the help of a technical team from the United Nations,[62] and the Termsof Reference for Regional and Master Plans which was prepared by the Secretariat of Municipalities.[63] In this way the Master and Layout Plans became one of the tools by which the Government began planning for the economic and social development of the country to the year 2000.

The National Physical Perspective Plan was divided into short term five year and long term 20 year periods and the country divided geographically into four main regions, Benghazi and the Jabel Akhdar, Tripoli and the western coastal districts, Sebha including much of what was generally termed the Fezzan and El Khalij stretching from the Gulf of Sirte to Kufra.[64] Within this regional planning context Master Plans and Layout Plans were formulated and designed up to the year 2000.

Four foreign planning groups were invited to prepare inventories of existing conditions within each region. A series of reports were prepared by each consultant company covering the development of each region up to the year 2000, including preliminary and final reports at the regional level and Master and Layout plans for certain settlements in each region. In addition each consultant was responsible for preparing relevant aerial photographs and maps. Each Master and Layout Plan analyses existing conditions, evaluates resources and constraints, sets out forecasts on population and employment and develops a physical planning programme for social and technical infrastructures.

The Government commissioned for the second time Doxiadis Associates International to undertake the development plan for the Benghazi Region and to prepare 11 Master Plans and 55 Layout Plans. [65] For the Tripoli

Region Polservice was commissioned to prepare 33 Master Plans and 46 Layout Plans.(66) Speerplan of Frankfurt, West Germany undertook the study, planning and mapping of all settlements in El Khalij Region with the cooperation of Finnmap of Helsinki.(67) Finnmap also carried out work in the Sebha Region which began rather later than in the other three regions.(68) The government also commissioned several separate consultants to prepare Master Plans for a number of new towns including Assarir, Gasr Ahmed, Ras Lanuf, El Bregah, El Gwarsha, Hrawah and Ez Zintan.

3.5.2 Re-structuring the urban system

Until the 1970's few developing countries showed any interest in adopting spatial planning as part of their economic development strategy. However, the relentless growth of the national population, the tendency for people to concentrate in major cities and the rapid growth of these cities have generated much more concern for the pattern of human settlements. (69) In addition to this there is an increasing realisation that the spatial distribution of socioeconomic activities cannot be treated independently from the broader issues of national economic, social and political development. Because of increasing awareness of the need for decentralisation, the problems of rural-urban balance and regional inequalities, decision makers have become more willing to integrate spatial considerations into their national development strategies. Despite political urgency, however, the selection of objectives, their validity and the coordination of various policy instruments remain a new field of operation for national settlement planning.(70)

In the developing countries today population is growing faster, rates of economic growth are higher and the role of the government is more pervasive than in the advanced industrial economies during the

early stage of their development. National settlement planning policies have three goals;[71] to correct the undesirable spatial effects of national economic policies; to make internal management of cities more efficient; and to increase economic efficiency and socioeconomic integration by eliminating the barriers to resource mobility and the diffusion of innovations.

Renaud stresses that in practically all developing countries, the role of the State is dominant. Therefore a laissez-faire approach to the location of population and economic activities similar to that of most advanced economies at comparable levels of urbanisation is in fact impossible. He states:

> "The government has an inevitable influence through its policies, the location of infrastructure investment, and the public enterprises that it controls. Because government is an important and sometimes even a dominant partner in the growth process, it must clarify its objectives and strategies. This does not mean that the state is relieved from all the economic constraints experienced by the private sector, but rather that a well-thought out strategy is a requirement for more rapid progress. In many developing countries national spatial development is also marked by a higher degree of economic dualism and inequality among regions and urban areas. The rapid rate of growth of the urban population can lead to the concentration of large groups of low-income households in a few large cities. This in turn complicates the task of development. Effective settlement strategies may alleviate this problem." (72)

There are several factors which affect the spatial development of any country, the physical and demographic constraints and the economic resources available. The national economic priorities determine the range of national urbanisation policies that can be adopted and in addition, the political and institutional context determines how these policies can be carried out. Renaud points out that any national urbanisation policy must make sure that national economic and social policies do not accentuate sharply and unnecessarily the concentration of population and economic activities in large urban

centres. To limit the growth of the large cities, decentralisation policies must encourage the growth of the agricultural sector, and the service sector in the small towns and rural areas. Decentralisation policies must be based on policies favourable to the rural sector because the stagnation of agriculture would slow the growth of provincial rural centres and small towns and would speed concentration in large cities. (73) Decentralisation policies must also encourage the development of intermediate size urban centres with a good growth potential because economic goods and services, financial flows, and innovations circulate through the country via the system of cities. Secondary urban centres can be strengthened through appropriate transport policies and industrial policies. The most crucial prerequisites for an effective national urbanisation strategy are political commitment at the highest level and appropriate adjustment of the governmental structure and modes of operation. A commitment to better policies for urbanisation is likely to bring greater convergence and interaction between the implicit effects of national policies, explicit spatial policies and policies addressed to the problems of the larger cities.(74)

Libya, as one of the developing countries, saw a dramatic economic change over the last two decades which has increased the polarisation of population concentration upon the major cities. The tide of migration from rural areas and from abroad into urban centres is undoubtedly a reflection of rapidly changing economic conditions. The present geographical pattern of economic activities is characterised by imbalance and is therefore a source of many tensions and difficulties. It is an unsatisfactory base for an accelerated process of economic growth. Over-concentration gives rise to particularly acute problems for national economic and social development. Substantial structural changes are necessary in order to make the spatial system more appropriate to a faster pace of economic development. In Libya urbanisation and

polarisation will be further accelerated if the present pattern of growth of industry and services continues and unless the state adopts a national settlement policy to re-shape the spatial distribution of the country's population. The problem is how to structure a national system of urban centres which will be hierarchically ordered, structurally more stable and spatially better distributed. What role could the small towns play in spatial development and what is the best approach to be used as an instrument for changing the geographical distribution of activities and hence of adjusting the system of settlement to the requirements of efficient development?

The absence of a national settlement policy in Libya before the 1970's has resulted in costly mistakes and in lost opportunities for effective national development planning. One of these mistakes was the abortive attempt to establish a new national capital at El Beida between 1964 and 1969. El Beida was a most unsuitable place from which to administer a small population in a vast territory. Although this became clear, the pretence was maintained for several years and a number of government departments and other services were located in the town. Much inefficiency and frustration resulted in the division of responsibilities between Tripoli, El Beida and sometimes Benghazi.(75) A further example of the absence of a decisive policy towards urban growth was the creation of five oil ports, four of them in the Gulf of Sirte and the fifth near Tobruq. Each oil port was established and operated by a different oil company and in the case of the four terminals on the Gulf of Sirte the opportunity to concentrate activities and create a potential national development pole was lost. (76) The laissez-faire approach before the 1970's has resulted in over-concentration of economic activities and population in Tripoli and Benghazi and the increasing attraction of those two cities for business and services due to economies of scale.

The absence of spatial development policies has resulted in marked disparities between different regions and between different Muhafadat within the same region. Tripoli region as a whole has fared better than the national average in terms of industrial and agricultural production and per capita income. The region possesses a relatively more diversified and integrated economic structure. Within it, however, there are two depressed areas the Muhafadat of El Khums and Gherian both of which are weakly industrialised and have a lower per capita income than Tripoli Muhafadah. The Benghazi region has a less developed agricultural base than Tripoli. Sebha region lacks a well developed industrial infrastructure and El Khalij region is one of the most depressed regions in the country with poor infrastructural development, particularly in terms of water supply.(77)

El Shakhs has identified three levels of spatial development nodes in Libya. The first, and relatively highest level of concentrated development is attained in the Muhafadah of Tripoli. A second level, and apparently rapidly growing core,has developed around Benghazi. He points out that three additional areas could be classified as third level cores because of different development strengths. They centre around the towns of Misurata, Derna, El Beida and Sebha. (78) The first two areas are closely linked spatially to the two primary development nodes in Tripoli and Benghazi and together form what El Shakhs terms the two major core regions or subsystems in Libya. He stresses that their share of Libya's population and economic activity indicate the extent of the polarisation of the nation's development in those two regions and their formidable influence on any future change in its spatial structure.

The above mentioned problems necessitate the need for spatial development policies and decentralisation of population and economic

activities away from the two major cities. It is clear that ever increasing discrepancies among the regions are no longer acceptable in Libya and that urgent priority should be given to the development of the depressed areas in order to reduce the tendency of unlimited concentration of investment in a few privileged cities.

The Government's increasing awareness of the importance of the spatial dimension in the development process and the need to achieve greater urban-rural balance and inter-regional equity resulted in the establishment of a Spatial Planning Department in the Ministry of Planning in the early 1970s. In 1973 the Government commissioned Italconsult to prepare a study of the entire Libyan settlement system. Three years later Italconsult produced the final report of its settlement pattern study composed of eight separate volumes and two sets of full scale maps. The first volume contains a summary of the study and a detailed evaluation of regional development in terms of the existing conditions, current Government policies and recommended settlement development strategies and infrastructure requirements to the year 2000. The five regional report volumes are concerned with the six planning regions into which Libya has been divided, namely, Benghazi, Tripoli, Gherian, El Khalij, Calanscio and Sebha Region. As far as town planning is concerned, the reports also contained 36 detailed city profiles with population and infrastructure forecasts elaborated at five-yearly intervals to the year 2000. The other two volumes consist of an Evaluation of Settlements and the Appendices. (79)

The Italconsult study is of major importance. For the first time in Libya, the development of settlements is seen at the regional and national level. Past settlement studies as we have seen, have been mainly town planning for individual cities concerned basically with local socio-economic analysis and land development possibilities.

However, the Italconsult study is of a different nature. It looks at the entire settlement system, identifies those settlements which should be upgraded or down-graded, suggests the creation of new settlements to become new growth poles and establishes priorities for the future development of economic, technical and infrastructure programmes.

3.6 CONCLUSION

Accidental wealth and eagerness to become modern in a very short period of time have contributed to the development of an imbalanced pattern of urbanisation. The absence of a coherent overall policy for urban growth before the 1970s resulted in costly mistakes and in missed opportunities for national development planning. Intervention in the operation of the Libyan urban system is extremely complex and is not an easy task. Every country sees its urban problems and potential solutions differently. Yet there is at least an underlying concensus, even if some governments are only satisfying public whims, that greater state intervention in the evolution of a national settlement pattern is both necessary and appropriate. As the role of the Libyan Government increases, the impact of state policies on the urban system increases. The importance of the state in formulating and implementing spatial development policies and the role of the small towns in the development process will be dealt with in the following Chapter.

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CHAPTER FOUR

THE ROLE OF THE STATE

4.1 INTRODUCTION : THE IMPORTANCE OF THE STATE AND THE ABSENCE OF LOCAL STIMULUS

Small towns in Libya provide rather striking evidence of the extent to which a small town can change and grow in a short period of time. Many related factors have caused these dramatic changes. One dominant factor is the State interventionist policies and the role of the government. In Libya, as in most developing countries, the burden of economic and social development falls squarely upon the government. It is the government which must stimulate industrial and urban development, build infrastructure and establish welfare programmes. The government is responsible for decisions concerning all aspects of urbanisation, land use, urban location, legislation, economic stimulation, and population redistribution; thus the State can be described as both the engine of development and purveyor of amenities. The participation of the government in the development of this oil-rich State has increased progressively with the growth in oil revenues so that today the State has become the dominant factor in the economy. By 1967 the public sector had grown dramatically and was already more important than theprivate sector; and by 1982 the private sector had vanished with the wide-scale nationalisation of all economic and social activities. At present, all aspects of development are entirely in the hands of the Libyan government.

Libya is currently undergoing profound economic and social changes. The pressures resulting from these changes have succeeded in influencing the development decisions and policies adopted by the government.(1)

The process may be described as an industrial and urban revolution. However, the economic and social consequences are only an intermediate stage in a much wider evolution which societies undergo from a pre-industrial and pre-urban character to a predominantly urban one based on an industrial economy. (2) The argument which will be investigated in this chapter is that State intervention in Libya resulted in the growth of most small towns and resulted in several changes i.e. changes in population, changes in functions and changes in the built-up area in towns.

The significance of the state as an external growth factor in the development of Libya's small town is very clear. The absence or weakness of the internal growth factor as local stimulus in Libya is due to the fact that Libya was one of the poorest nations in the world, if not the poorest during the 1950's. When oil was discovered in the 1960's the wealth was heavily concentrated in the two major cities of Tripoli and Benghazi where the private sector as an internal growth factor played a significant role in the development of those two cities. There the private sector invested mainly in commercial enterprises and in housing. The role of the private sector in the small towns of Libya was negligible during this period.

Although the private sector flourished during the early years of the Revolution, mainly in Tripoli and Benghazi, its contribution to total investment was nevertheless small with the public sector playing an ever-increasing role in the country's development programme. By the late 1970's the Government had begun to dismantle the private sector progressively so that by the early 1980's even small retailing outlets were nationalised and replaced by large state owned and state-run supermarkets. By 1984 there were very few opportunities for private investment in the Libyan economy, mainly in the agricultural sector, and the State played a dominant role in all aspects of the country's economy.

4.2 NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT POLICIES

It has become a tradition in many studies related to Libya to quote Benjamin Higgins' first work on Libya. He stated:

> "Libya combines within the borders of one country virtually all the obstacles that can be found anywhere : geographic, economic, political, sociological, technological. If Libya can be brought to a stage of sustained growth, there is hope for every country in the world." (3)

Until the discovery of oil, Libya had been economically stagnant and it was one of the poorest nation states in the world when granted independence in 1951. Its average per capita income was less than £14 per year. Over 70 per cent of the labour-force were engaged in agriculture which was the backbone of the economy and produced about 60 per cent of GDP. There were almost no known mineral resources. The chief exports were esparto grass, olive oil and scrap metal collected from the desert battle fields of World War II. (4) The population was small, poor, illiterate and backward in almost every respect. Education had been almost completely neglected and what economic development had been encouraged had been largely for the benefit of the foreign colonisers. The resources of the country simply were inadequate to support the very large investments needed to construct the transport and communication links required to unify the country geographically or to create the educational and health facilities required to develop the native abilities of the people, or to build the foundations for a productive and growing agriculture and industry.(5)

Until the discovery of oil, 80 per cent of the Libyan population lived as nomads or by agriculture and the economic life was concentrated around Tripoli and Benghazi and the oases in the Fezzan. These centres of population lay hundreds of kilometres apart, each isolated from the other in its own poverty and underdevelopment. (6) The country

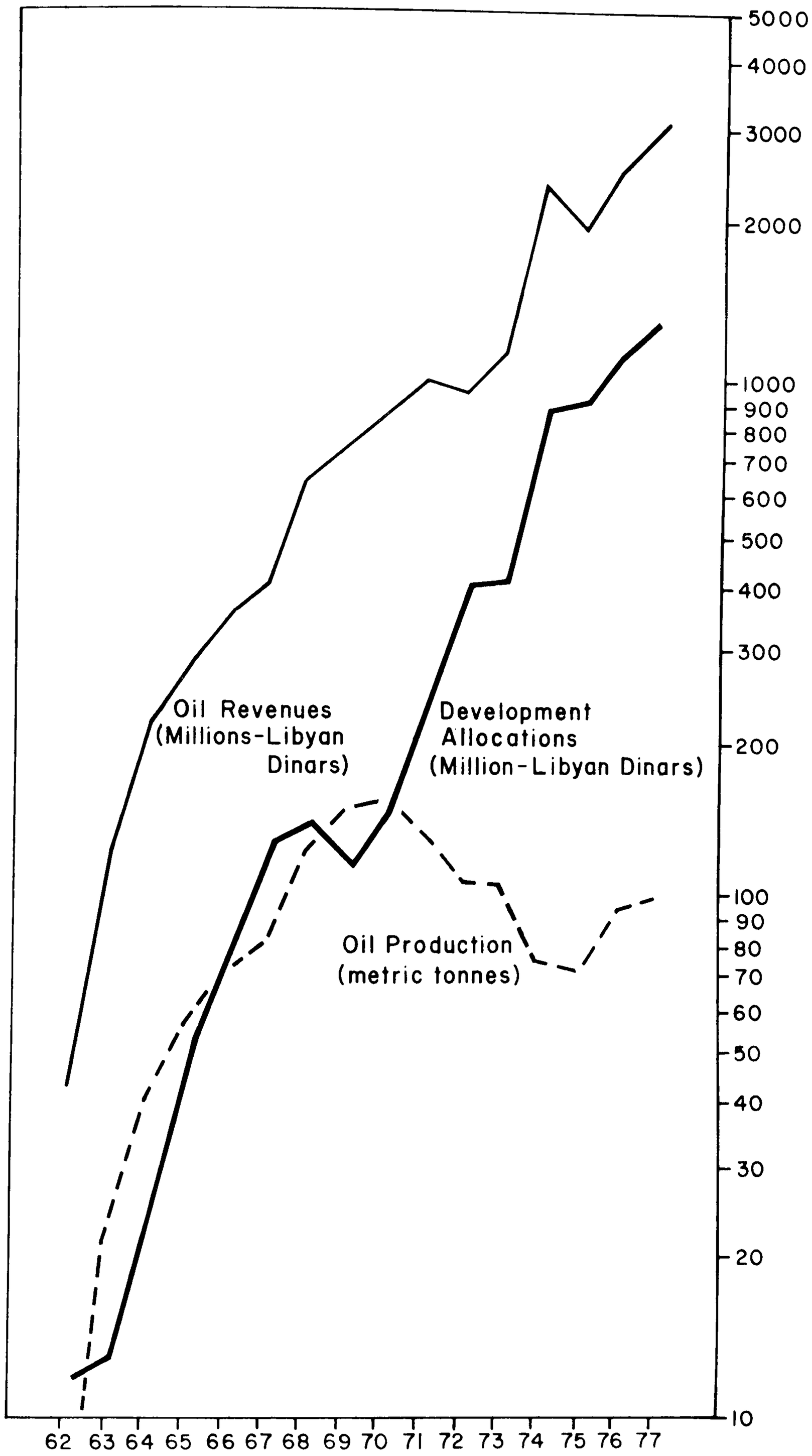
seemed to be an impossible base for development. In order to manage and run the country, the government was dependent upon massive international grants and assistance from 1950 until the early 1960's.

This bleak picture changed dramatically with the discovery of the country's oil resources in 1959. Oil was first exported in 1961 and the oil industry developed rapidly thereafter. A new stimulus to the Libyan economy was thus provided. For the first time the growing revenues from oil exports provided the necessary funds to mount major development programmes. This can be illustrated by Figure 4.1 and Table 4.1 which show the development of oil production, Libyan oil revenues and development allocations. Figure 4.1 also reveals the effect of the change in government following the Revolution in September 1969. The new government adopted a policy of conservation and at the same time pushed prices up through firm negotiations with the oil companies.(7) With the increase in government revenues the State became the dominant factor in the economy and, significantly, out of this a special form of 'étatism' was to grow.(8)

The importance of the oil sector, its role in the Libyan economy and its share of GDP can be shown by Table 4.2. This table reveals the fact that the national economy is excessively dependent upon the oil sector and until 1980 there was very little progress in the non-oil sector's contribution to the total national economy. This suggests that the term 'rentier state' introduced by Mohdavy and applied by Mabro and First is still valid. (9)

As a result of oil revenues, money supply increased rapidly and was concentrated in the main urban centres. There was a rapid wave of migration from countryside and small towns to the main coastal towns. The rush for the proceeds of oil attracted far more people off

Fig 4·1 OIL PRODUCTION, OIL REVENUES AND DEVELOPMENT ALLOCATIONS



Source: Allan J.A. (1981). Libya: The Experience of Oil, Croom Helm, London. pp 69,153

Table 4.1 Libya: Oil Production, Revenue, Take per Barrel and Gross National Product, 1962-1981

Oil Production (thousand b/d)		Oil Revenue (LD million)	Average take per barrel LD	GNP million LD
1962	182.3	14.2	0.4	164
1963	441.8	38.5	0.5	241
1964	862.4	75.2	0.5	307
1965	1,218.8	125.4	0.6	436
1966	1,501.1	186.7	0.8	559
1967	1,740.5	223.3	0.8	649
1968	2,602.1	357.8	0.9	883
1969	3,109.1	419.7	0.8	1,144
1970	3,318.0	482.6	0.9	1,210
1971	2,760.8	593.7	1.4	1,416
1972	2,239.4	514.0	1.4	1,519
1973	2,174.9	663.6	1.9	1,928
1974	1,521.3	1,776.0	7.4	3,534
1975	1,479.8	1,510.3	6.4	3,380
1976	1,932.6	2,220.4	7.2	4,389
1977	2,063.4	2,620.0	8.0	5,182
1978	1,982.5	2,486.8	7.9	5,407
1979	2,090.1	3,848.7	11.7	-
1980	1,700.0	-	-	-
1981	1,600.0	-	-	-

Source: Birks, S. and Sinclair, C. (1984) "Libya : Problems of a Rentier State" in Lawless, R.I. and Findlay, A. (eds) North Africa. Croom Helm, London, p.249.

Table 4.2 The Role of Oil in the Libyan Economy

	1962		1964		1972		1975		1980*		1985*	
	LD m	%	LD m	%	LD m	%	LD m	%	LD m	%	LD m	%
Non-Oil Activities	38.2	78.0	168.9	46.3	832.4	47.5	1713.2	46.6	3138	38.0	4353	53.4
Oil Activities	10.8	22.0	195.7	53.7	920.6	52.5	1961.1	53.4	5116	62.0	3801	46.6
Gross Domestic Product	49.0	100	364.6	100	1753.0	100	3674.3	100	8254	100	8154	100

m = million * estimated figure in 1979 prices, low variant in Development Plan for 1985.

Source : Naur, M. (1981) "The industrialisation model of The Socialist People's Libyan Arab Jamahiriya" Unpublished Paper presented at the Conference, Economic and Social Development of Libya, SOAS London, p.3.

the land than the oil industry could absorb. The result was crowded urban centres, particularly the two principal cities, Tripoli and Benghazi, but deserted farmland in many parts of the country. (10)

One approach to the study of the Government's economic and social development policies and their impact on small towns is to analyse the different development plans produced since 1963. The following section will outline the major priorities defined by these plans and examine the planned and actual investments in the major sector of the economy and the implications of these investments for the small towns.

From 1963 until 1981, five Development Plans have been published in the country :

(i) Five Year Economic and Social Development Plan 1963-68.
(ii) The Second Five Year Plan 1968-1972.
(iii) Three Year Plan of Social and Economic Development 1973-75.
(iv) The Plan of Economic and Social Transformation 1976-80.
(v) The Second Five Year Transformation Plan 1981-85.

Once oil money was flowing abundantly, it was decided that 70 per cent of oil revenues should be allocated for development projects. It was on this basis that the First Five Year Plan was drawn up in 1963. (11)

Table 4.3 illustrates the proposed and actual allocations under the First Five Year Plan 1963-1968. The Government overspent heavily on this plan which was the first of its kind since the late 1930's. Although proposed investment totalled £L 169.1 mn, actual expenditure rose to £L 298.2 mn. (12) Modest targets were achieved in some areas especially when they involved public works (6,250,000 Libyan pounds allocated for public administration were transferred to public works) and less success was achieved in matters involving agricultural and

Table 4.3 Comparison of the Proposed and Actual Allocations, First Five Year Plan Period 1963-1968

Proposed in 1963 (1)			Estimated actual expenditure (2)		
	£L m	%		£L m	%
Agriculture	29.3	17.3	Agriculture	37.8	12.7
Industry	6.9	4.1	Industry	14.7	4.9
National economy	2.9	1.1	Economics, etc.	2.9	1.0
Communications	27.5	16.2	Communications	52.7	17.7
Public works	38.7	26.6	Public works	87.3	29.2
Education	22.4	13.1	Education	25.9	8.7
Health	12.5	7.4	Health	8.7	2.9
Labour and social affairs	8.7	5.1	Labour and social affairs	13.8	4.6
News and guidance	2.6	1.5	Interior	19.8	6.7
Planning and development	11.4	6.7	Planning and development	3.4	1.1
Public administration	6.4	3.8	Housing	29.5	9.9
			Other	1.8	0.6
Total*	169.1	100.0		298.2	100.0

Source: Allan, J.A. (1981) Libya : The experience of oil, Croom Helm London, p.84.

industrial development.(13) In the first plan, investment in infrastructure was the main priority; 39.6 per cent of proposed allocations were devoted to communications and public works but these sectors absorbed 46.9 per cent of actual expenditure. Although 17.3 per cent of total investment was allocated to agriculture only 12.7 per cent was actually spent on this sector and industry absorbed a mere 4.9 per cent of actual expenditure.(14)

Government funds were made available for urban expansion and reconstruction on an impressive scale which resulted in a transformation of the urban and rural landscape. El Merj was reconstructed, work on the construction of the new town of El Beida was begun, and other urban centres were expanded during this plan. Schools were also built throughout the country. Housing was a pressing priority and the Idris Housing Project was launched with a £L 400 mn budget. Priority was also given to the development of the transport system, ports, water supply and sewerage systems in towns.

The Second Five Year Plan (1968-72) had just been launched when the Revolution occurred in September 1969 and a Revolutionary Command Council replaced the regime of King Idris. The priorities in economic development of the deposed regime were re-examined and replanned by the new government. In 1970 the new Government produced a transitional one year development budget which was increased during the course of the year. The 1971-72 development budget allocated 17 per cent of investment to agriculture and agrarian reforms and industry came second.(15) The new emphasis on agriculture reflected the new regime's enthusiasm for this sector. This early post-Revolution phase saw a continuation of the development of the urban centres. However many projects were stopped and some relocated or re-planned. The

revolutionary regime was committed to achieving a higher level of development spending than the monarchy and was anxious to create viable productive sectors in agriculture and industry. Housing was also a top priority and this can be illustrated by the total allocation for housing in the Three Year Plan of Social and Economic Development 1973-75. Table 4.4 shows that 22.3 per cent of the total expenditure was allocated to housing, 16.4 per cent to agriculture and 14.4 per cent to transportation and communication. Industry came in fourth place with 12.2 per cent.

Table 4.4 Three Year Development Plan Allocation and Expenditure 1973-75 (mnL.D.in Current Prices)

Sector	Expenditure	Yearly Average	Percentage of Expenditure
Agriculture	436.2	145.4	16.4
Oil & mining	84.7	28.2	3.2
Manufacturing	324.5	108.1	12.2
Electricity & gas	325.5	108.5	12.2
Construction	82.0	24.0	3.1
Trade & Insurance	21.9	7.3	0.8
Communication & storage	382.9	127.6	14.4
Housing	592.6	197.5	22.3
Education & health	236.8	78.9	8.9
Other services	174.7	58.2	6.5
TOTAL	2164.4	887.4	100.0

Source : Secretariat of Planning (1976) Evaluation of the Three Year Development Plan, Tripoli, (in Arabic) pp.9-15.

In 1976, the Government introduced The Plan of Economic and Social Transformation (1976-1980). It aimed at diversifying production to reduce the country's dependence on oil, expanding the economic and social infrastructure and reducing inequalities in the standard of living. This ambitious plan was compiled to satisfy and solve the country's needs in housing and food, and to provide an increasing level

of accessibility in the country in general and between all centres in particular, and to ease the movement of people, goods and other services to all remote areas.(16) Table 4.5 illustrates each sector's share in the Plan.

Table 4.5 Five-Year Economic and Social Transformation Plan 1976-1980 (L.D.000)

Development Sector	Total Allocations 1976-1980	Percentages
Agriculture & Agrarian reform	412,261	5.40
Internal agricultural development	857,760	11.39
Dams & water resources	86,040	1.14
Nutrition & maritime wealth	49,161	0.65
Industry & mineral wealth	1,149,418	15.27
Oil & gas exploitation	670,000	8.90
Electricity	683,195	9.07
Education	491,655	6.53
Information & culture	99,168	1.31
Manpower	56,002	0.74
Public health	197,655	2.62
Social affairs & social security	13,157	0.17
Youth & sports	52,020	0.69
Housing	794,236	10.55
Security Services	35,000	0.40
Municipalities	565,108	7.50
Transport & communications	659,854	8.76
Maritime transport	373,500	4.96
Trade & marketing	36,730	0.48
Planning & scientific research	13,045	0.17
Reserves for projects	230,027	3.05
TOTAL	7,525,000	100.00

Source: Ministry of Planning (1976) Economic and Social Transformation Plan, Tripoli, p.174 (in Arabic).

The size of investment was some L.D 7,525 mn, about three times that of the previous three year plan. First priority was given to agriculture (agriculture, agrarian reform, dams and water resources) which received 18 per cent of proposed investment. Industry came second with 15.2 per cent. Thirdly, transport and communications with maritime transport were allocated 13.7 per cent and in fourth place came housing with 10.5 per cent.

In March 1979, a team of United Nations experts and Libyan planners drafted the National Physical Perspective Plan 1981-2000 and presented it to the consultative committee and secretariates concerned with sectoral development for discussion and comments prior to the final Report and Plan. The Draft Report was approved by the Consultative Committee.(17) In preparing the perspective plan the planning process was based on a number of assumptions which have been outlined by Allan:

> "First the population was expected to grow to 6 million by 2000, secondly, oil resources were viewed as limited and the year 2010 was thought at first to be the moment when they would be exhausted. Discoveries in the late 1970s changed that position and the production/reserves ratio improved significantly by 1980 so that without significant conservation measures (i.e. that would bring production well below the two million barrels a day production level general after 1971) Libya's oil reserves should last into the 2020s. Thirdly, even though the constraints of water supplies on agricultural development were recognised, agricultural self-sufficiency was to be attempted. Fourthly, industry was seen as an alternative means of employing the population. Fifthly, adequate provision should be made in housing, public utilities, social services, education and communications. Sixthly, development should be balanced between the economic sectors and between the regions and the latter should be ensured by adequate local government arrangements. Finally, the environment had to be protected from the impact of economic change." (18)

The 1970's were characterised by rapid economic and social development. Expenditure on this development over the period 1970-1977

reached L.D. 5,417 mn. Between 1970 and 1977 absolute increases were announced of sixfold in allocations to housing, twofold to education, ninefold to public health and fourfold to transport and communications at current prices. By any standards, the achievements in the provision of houses, schools, health facilities and communications were dramatic.(19)

This rapid development required co-ordinated economic and physical planning at national, regional and local levels and in urban areas and rural areas, in large cities, small towns and villages. It also demanded advance planning to enable future problems to be anticipated and solutions put forward. The National Physical Perspective Plan (N.P.P.P) provides the framework within which the many sectorial activities can be co-ordinated so that, if possible, all developments may be accompanied by an improvement in quality of the environment, and an equalisation and further development of the living standard of all Libyans.

Within the framework of the general strategy presented in the N.P.P.P the Second Five Year Transformation Plan 1981-85 was put to the General People's Congress in January 1981. It was explained that the economy's dependence upon oil must be diminished and that the input of non-oil sectors, estimated at 35.7 per cent of GDP in 1980 should reach 53 per cent by 1985,(20) a structural readjustment to be achieved by giving priority to agriculture and industry, especially heavy industry. The five year period was to be regarded as the first phase of a 20 year development programme. The Second Five Year Transformation Plan 1981-85 should give rise to a growth rate of 9.4 per cent a year by comparison with 7 per cent achieved by the previous plan. The total amount for the new plan is L.D.18.5 bn (Table 4.6). L.D. 4 bn or 23 per cent is allocated for industry (which accounted for

Table 4.6: Total Development Allocations of the 1981/85 Plan and Actual Allocations for 1981 and 1982 (in LD million)

Sector	Transformation Plan 1981/1985		1981		1982	
	Alloca- tions	Share %	Alloca- tions	Share %	Alloca- tions	Share %
Agriculture, Reclamation and Land Development	3,100	18.2	460	16.0	347	13.3
Light Industry	1,200	7.0	200	6.9		
Heavy Industry	2,730	16.1	500	17.4	493	19.0
Oil and Gas Mining	200	1.2	60	2.0	40	1.5
Electricity	2,000	11.8	250	8.7	190	7.3
Education	1,000	5.9	180	6.2	157	6.0
Information and Culture	150	0.9	24	0.8	20	0.8
Manpower	150	0.9	25	0.9		
Health	560	3.3	105	3.6	82	3.2
Social Security	130	0.8	22	0.7	15	0.6
Public Sports	100	0.6	23	0.8		
Housing	1,700	10.0	270	9.4	230	8.8
Utilities	1,300	7.6	220	7.6	215	8.3
Transport and Communications	2,100	12.3	306	10.6	355	13.7
Economy	500	2.9	200	6.9	140	5.4
Planning	80	0.5	15	0.5	10	0.4
Total	17,000	100.0	2,860	100.0	2,600	100.0
Reserve for Projects	1,500		140			
GRAND TOTAL	18,500		3,000			

Source: COMET (1982) Libya : The Five Year Development Plan 1981-85 (Special Report) London, p.20.

2.5 per cent of the GDP in 1980) to achieve a projected annual growth rate of 21.6 per cent; L.D 3 bn or 18.2 per cent is allocated to agriculture, which is projected to grow at an annual rate of 7.4 per cent. Agriculture had experienced a negative growth rate of 3.6 per cent in 1976-1980 plan. (21)

While industry and agriculture are planned to have major expansion, the oil sector is to be scaled down. At the beginning of 1981 daily oil output was about 1.7 million barrels, but this will be reduced by 15.3 per cent during the plan period. The intention is to prolong the life of Libya's most valuable natural resource for as long as possible with the end result that about 53 per cent of Libyan national income should be accounted for by the non-oil sector, compared with the 35.7 per cent in 1980. (22) Special emphasis has been placed on heavy industries and the new projects are being concentrated mainly in a series of small coastal towns that are being developed into major manufacturing centres, such as the steel complex at Gasr Ahmed, the aluminium smelter at Zwarah, the petro-chemical complexes at Ras Lanuf and El Bregah and the oil refinery to be set up at Misurata. There is also to be a massive investment in agro-industry, enormous investment in the field of urban expansion, new towns, housing and infrastructure, as well as in the social services such as education, health and a large allocation to the development of water resources.

Comparisons between the 1981-85 Plan and earlier Plan allocation by sector underlines several significant changes in emphasis. Those changes were summarized in a report of the Committee for Middle East Trade as follows:-

a) the allocations to industry have in fact been rising steadily over the past decade at the expense of agriculture.

b) the oil and gas allocation for 1981-85 has been cut right-back;

c) allocation for housing, education and health have been declining relatively since 1970-72, as a basic infrastructure programmes have been completed; and

d) the other major sectoral allocations (electricity, transport and communications, and municipal utilities) have remained fairly constant, reflecting the continuing need to develop essential utilities.(23)

In discussing economic and social development policies and their impact on the development of the small towns, each sector will be examined in turn. Special attention is paid to the industrial sector because of the importance of industrial development in the expansion of some small towns.

4.2.1 Transport and Communications Sector

The State has paid this sector a significant amount of attention since the mid-sixties. This sector plays a vital role in driving the economic and social wheel, as well as in developing other sectors such as production and services. The First Five-Year Development Plan (1963-68) allocated a total of L.D 71 mn to this sector which represented 21.1 per cent of the total proposed allocation for development. However, the actual expenditure was L.D. 51.7 or 17.8 per cent of the total investment. As a result of the plan, the State constructed about 5,268 kilometres of roads, including the main coastal highway, developed the handling capacity of Tripoli and Benghazi harbours and constructed extra runways and installed new equipment in the main airports. This resulted in a tremendous improvement in linkages between the major centres and between Libya and the outside world.(24) In the transitional

period, 1969-72, development of the sector was carried out on an annual basis. The total allocation for the years 1971-73 was L.D 112.9 mn, however the actual expenditure was estimated at L.D 75.8 mn. (25) In the Three Year Development Plan 1973-75, the allocation to transport and communications rose to L.D 382.9 mn or 14.4 per cent of the total proposed development allocation. (26) Much attention was given to the development of harbours and sea transport. The Five Year Development Plan (1976-80) was considered as an ambitious plan which allocated L.D. 960 mn to this sector, about 12.6 per cent of the total proposed investment. Table 4.7 shows the dramatic development of the transport sector between 1975 and 1980.

Table 4.7 Development of the Transport Sector 1975-1980

Sub-Sector	Unit	Year 1975	1980	Change %
Paved Roads	km	7,747	10,700	+ 38.1
Civil Plans	No	10	17	+ 70.0
Commercial ships	Ton(000)	18.3	39.3	+114.0
Oil tankers	Ton(000)	412	766	+ 86.0
Ports Capacity	Mn.Ton	3	7	+133.3
Telephone per person	No (00)	1.8	6	+290.0
Air passengers	No (000)	559	1.125	+100.1
Cars per kilometre	No	37.8	62.2	+ 64.5

Source : Secretariat of Planning (1980) The Evaluation of the Five Year Development Plan, Tripoli, p.76.

The current Five Year Development Plan 1981-85, allocated about L.D 2,100 mn to this sector, over double the level of investment in the First Five Year Development Plan (1976-1980). (27) The 1981-85 plan calls for the construction of 6,805 km of roads and also the improvement of the coastal highway by 1985. Every settlement will be connected by paved roads, and some small towns will become major transport centres. By 1985 feasibility studies for two major railway lines will be completed. The first, from Tripoli to the Tunisian border covering 170 km, will pass through Ez Zawiyah, Sorman, Sabratah and Zwarah. The second line from Tripoli to Misurata covering 200 km will be a high speed line with nine stations. The following small towns will be linked by the railway: El Garabulli, El Khums and Zliten. In addition, another two major railway lines have been proposed. One is intimately linked to the country's first integrated steelworks at Gasr Ahmed near Misurata. A 922 km standard gauge railway from Sebha north to Misurata is proposed linking many small towns and oases on its route. When completed it will carry an estimated 5 million tons of iron ore annually from mines in the Sebha region to the steelworks. The other line proposed for study is from Misurata to the Egyptian border, a distance of 1,300 km. If this line is built it would be possible to travel from Cairo to Casablanca by train.

The State has given much attention to the development of the country's ports since the 1960's to handle the growing volume of imported goods and to facilitate the movement of the country's major export, oil. Developments are taking place at the present time in the following ports : Tripoli, Benghazi, Gasr Ahmed, Derna, Tobruq, as well as in the small towns of El Bregah, Zwarah, Sirte and Tolmeitha. Table 4.8 shows the development plan to the year 2000, when the handling capacity of Libya's ports is estimated to reach 30 million tons. Small fishing

ports are being constructed at many sites along the coast such as Al Bardiya, El Bumbah, Karsah, Soussa, El Buerat and Ras Ajdir.

Table 4.8 Port Development to the Year 2000

Type of Port	Location	Size in (000) tons
(i) Large ports	Tripoli	10,500
	Gasr Ahmed	7,000
	Benghazi	5,000
(ii) Middle size ports	Zwarah	3,000
	El Bregah	1,500
	Derna	1,200
	Tobruq	800
(iii) Small ports	Sirte	500
	Tolmeitha	500
TOTAL		30,000

Source : Secretariat of Municipalities et al (1979) National Physical Perspective Plan 1981-2000, Tripoli, p.97.

International and domestic air communications will be extended during the 1981-85 plan. Besides Tripoli, Benghazi and Sebha International Airports, Sarir will have an international airport, and new domestic airports are being constructed or extended in Misurata, Sirte, El Beida, Hoon, Kufra, Bani Walid, Derna, Tobruq, Murzuq and Ghat. By the year 2000 Libya will have four International airports and 11 domestic airports.

As a result of the high investments in transport and communications during the last 20 years most small towns are no longer isolated but are linked by paved roads to neighbouring centres and to the major cities. Some small towns have grown because they have acquired new urban functions as transportation centres with garages,

repair shops, petrol stations, restaurants and cafes e.g. El Gubbah, El Merj, Tokrah, El Abiar, Gaminis, El Bregah, Sirte, El Khums, Zwarah and Gherian. Others have seen their urban functions strengthened as a result of new port developments e.g. Zwarah. Without these improvements in transport and communications the economic expansion of many of the small towns, and the strengthening of their administrative and regional functions would have been impossible. Good linkages between the small towns and the major cities are essential if the small towns are to play an effective role in spatial development. Finally while improvements in communications have facilitated the development of some small towns, often resulting in substantial in-migration, they have also encouraged an increase in out-migration especially from some of the more depressed regions (see Chapter 5).

4.2.2 Housing Sector

The Libyan Government plays a large and increasing role in all aspects of housing construction and allocation. They act as financiers, regulators, speculators, administrators, builders, landlords and redevelopers. The role of the State is pervasive, not only in a country such as Libya, but also in most market-oriented economies.(28)

During the 1960's the government launched the Idris Housing Scheme which was considered to be the biggest scheme ever planned in Libya. The scheme, which began in 1965, aimed at the construction of 100,000 housing units in various parts of the country as well as infrastructure for each housing estate. It was proposed to spend L£ 400 mn on the project over a period of ten years. The largest number of dwellings were built in the major cities where housing shortages were most acute, but many small towns and villages also benefited from the scheme. Some criticisms have been expressed about the scheme, namely that the new housing was badly sited in areas

already abandoned by their inhabitants; that the new units were unsuitable for the Libyan way of life; and that in the case of the villages, the new houses were located far from the farmers' fields.(29)

In spite of this ambitious scheme, by 1969 no less than 150,000 families were living in shanty towns and in bad housing and of the total housing stock of just under 189,000 units, about 45,000 or 30 per cent were on the point of collapse and 36,000 were in urgent need of basic repairs. Housing standards in rural areas were totally inadequate and the situation in the towns was also bad.(30) After the Revolution, the Revolutionary Command Council decreed that housing should take priority and announced its intention that by 1982 every Libyan should have a decent home of his own.(31) In the first eight years of the Revolution 125,000 new homes were built, equal to two thirds of the existing housing stock. (32) The Government encouraged low income families to build their own homes with the help of interest-free, 100 per cent loans provided by the Real Estate Bank. Citizens who preferred to purchase houses from the State were exempted from 90 per cent of the cost if their income was less than LD 6,00 a year. Workers who could not be given government housing near their places of employment were given generous housing allowances to encourage private house building.(33) This policy benefited people in large and small towns and in both urban and rural areas. One of the major achievements in the housing sector since the Revolution has been the complete demolition of all shanty towns and the rehousing of their inhabitants in new estates.

Under the Kingdom and during the early years of the Revolution the private housing sector flourished although the bulk of the funds for private sector construction was provided by the State. At the same time the public sector was also active in house construction. During the late 1970's the nationalisation programme had effectively ended private

speculation in housing and the State became the dominant agent in house construction. The following government bodies are in charge of locating, building and distributing houses:-

1. General Housing Corporation
2. Secretariat of Land Reclamation and Development
3. Secretariat of Agriculture
4. National Investment Company
5. General Organisation for Wakfs
6. Industrial and Real Estate Bank
7. Social Security
8. Real Estate Investment Company

All these bodies have their main offices in Benghazi and Tripoli with branches in many small towns. Although private speculation in housing has been terminated, individuals are able to build their own houses but only for their own use and not for rent. They may apply for a Government loan, which are provided at low rates of interest, or use their own savings.

Enormous Government funds were allocated to housing throughout the 1960's and 1970's. For example the Five Year Economic and Social Transformation Plan (1976-1980) allocated LD 794 mn or 11 per cent of total allocations, rising to LD 1,700 mn or 10 per cent of total allocations in the latest Five Year Plan 1981-1985.

Table 4.9 illustrates the achievement in the housing sector between 1970-1980 in terms of housing units. The state intervened not only in building new houses but also by issuing important legislation which has had an important impact on the redistribution of houses among Libyans.

Table 4.9 Number of Housing Units Built in the Period 1970-1980

Type of Housing	Number of units
Public Housing	83,000
Rural Housing	14,000
Complete Housing Estate in Towns & Villages	3,900
Invested Housing	3,300
Housing by Real Estate & Commercial Banks, Cooperative Societies & Private	101,400
TOTAL	205,600

Source : Secretariat of Planning (1980) Achievements of Economic and Social Transformation 1970-1980. Tripoli, (in Arabic) p.55.

In planning for future housing needs, the NPPP stated that the magnitude of new housing required by the year 2000 is three times that of the present housing stock. Instead of housing schemes, new neighbourhoods, new communities and new towns, complete with their necessary social and technical facilities, are needed.(34) The NPPP estimated that between 750,000 and 850,000 new dwelling units will be required in the period between 1981 and 2000. (35) The regional distribution of new housing should be in accordance with the planned distribution of population and the settlement network, taking into account development priorities established for agriculture and industry. The regional distribution of new dwelling units required between 1981-2000 is shown in Table 4.10.

Table 4.10 Estimates of Regional Distribution of Dwellings 1981-2000 (000)

Sub-Regions	Dwelling Units Required	
	By Sub-Regions	By Regions
Tripoli	220 - 250	
Zwarah	54 - 61	
El Khums	35 - 39	
Misurata	74 - 84	
Gherian	33 - 38	416 - 472
Benghazi	135 - 153	
El Beida	50 - 57	
Derna	37 - 42	222 - 252
El Khalij	62 - 70	62 - 70
Sebha	50 - 56	50 - 56
Libya 1981 - 2000	Total	750 - 850

Source : Secretariat of Municipalities et al (1979) National Physical Perspective Plans 1981-2000, Tripoli, p.89.

A total of between 750-850,000 housing units will be required between 1981-2000. In the light of the recent pace of annual house construction, this requirement is a formidable one and will probably not be achieved unless special steps are taken to increase the capacity of the building industry in both the public and the private sector. The following small towns are among those settlements which are to receive top priority for comprehensive development with housing and the necessary social and technical infrastructure; Zwarah, Mizdah, Bani Walid, El Bregah, Tolmeitha, Hoon, Brak and Murzuq. These centres are the location for the development of industrial complexes or have expanding service functions for the surrounding areas.(36)

4.2.3 Education Sector

A further major new development has been the strengthening of the educational functions of Libya's urban centres as a result of massive expansion of the school system and the creation of new university and technical institutes. Since independence when 81 per cent of the Libyan population were illiterate (37) spectacular progress has been made at all levels and in all types of education. This can be illustrated by Table 4.11 for the period 1950/51-1962/63 and by Table 4.12 for the period 1969/81.

Table 4.11 Development in Education Sector 1950 - 1963

Stage of Education	No. of Students 1950/1951	No. of Students 1962/1963
Kindergarten	-	1,414
Primary	32,115	144,511
Preparatory	-	14,691
Secondary	300	2,708
Technical	237	1,497
Teacher's Training	89	2,295
Total	32,741	167,116
Total Male Students	29,077	135,753
Total Female Students	3,664	31,363

Source : Farley, R. (1971), Planning for Development in Libya Praeger, New York p.83.

Another indication of the progress in education is the increase in the number of the University students from 32 in 1956 to 1,028 in 1963 and rising to 25,470 in 1981. (38) According to the Secretariat of Planning, about 31.2 per cent of the total population were in different stages of education in 1980.(39) Total allocation for the education sector rose from £L 22.3 mn in the 1963-68 Development Plan to LD 491 mn in the 1976-80 Plan and to LD 1000 mn in the current plan (1981-85).

Schools have been built in every settlement and an ambitious programme for the construction of new educational facilities continues. All small towns have acquired primary, preparatory and secondary schools serving not only their own populations, but also those living in the surrounding villages which are only provided with primary schools.

Table 4.12

Development in Educational Sector 1969-1980

Stages of Education	Number of students				No.of Schools	No.of classrooms		No. of Teachers	
	Boys	Girls	Total	Increase %		Number	Increase %	Number	Increase %
Primary :									
1968/1969	183080	87537	270617	-	1069	8311	-	9161	-
1972/1973	270772	187516	458288	69.3	1494	15276	83.8	17497	91.0
1975/1976	282451	251758	534209	16.6	1741	18989	24.3	22654	29.5
1980/1981	292416	285338	577654	8.1	-	32128	69.2	26324	16.2
Preparatory :									
1968/1969	25637	3544	29181	-	144	818	-	2076	-
1972/1973	43653	13026	56679	94.2	216	1757	114.7	3771	81.6
1975/1976	78186	38444	116630	105.8	444	3839	118.5	7024	86.3
1980/1981	102156	88749	190905	63.7	-	9464	146.5	11284	60.6
Secondary :									
1968/1969	6237	944	7181	-	25	250	-	608	-
1972/1973	8926	1976	10902	51.8	43	385	54.0	974	60.2
1975/1976	12276	3563	16839	54.5	66	633	64.4	1720	76.6
1980/1981	36373	29336	65709	290.2	-	2189	245.8	5394	213.6
Technical Secondary :									
1968/1969	517	-	517	-	6	31	-	87	-
1972/1973	2348	-	2348	311.2	9	90	190.3	379	235.6
1975/1976	3600	100	3700	57.6	12	155	72.2	455	20.1
1980/1981	7920	230	8150	120.3	15	300	93.5	1002	120.2
Teachers' Institutes :									
1968/1969	2956	2203	5159	-	23	180	-	466	-
1972/1973	6738	4088	10826	109.8	56	382	112.0	713	56.9
1975/1976	9156	12090	21246	96.2	110	769	101.3	1629	122.8
1980/1981	6451	5703	12154	42.8	-	887	15.3	919	43.6

Source: Secretariat of Information (1979) Facts and Figures , Tripoli, p.90.

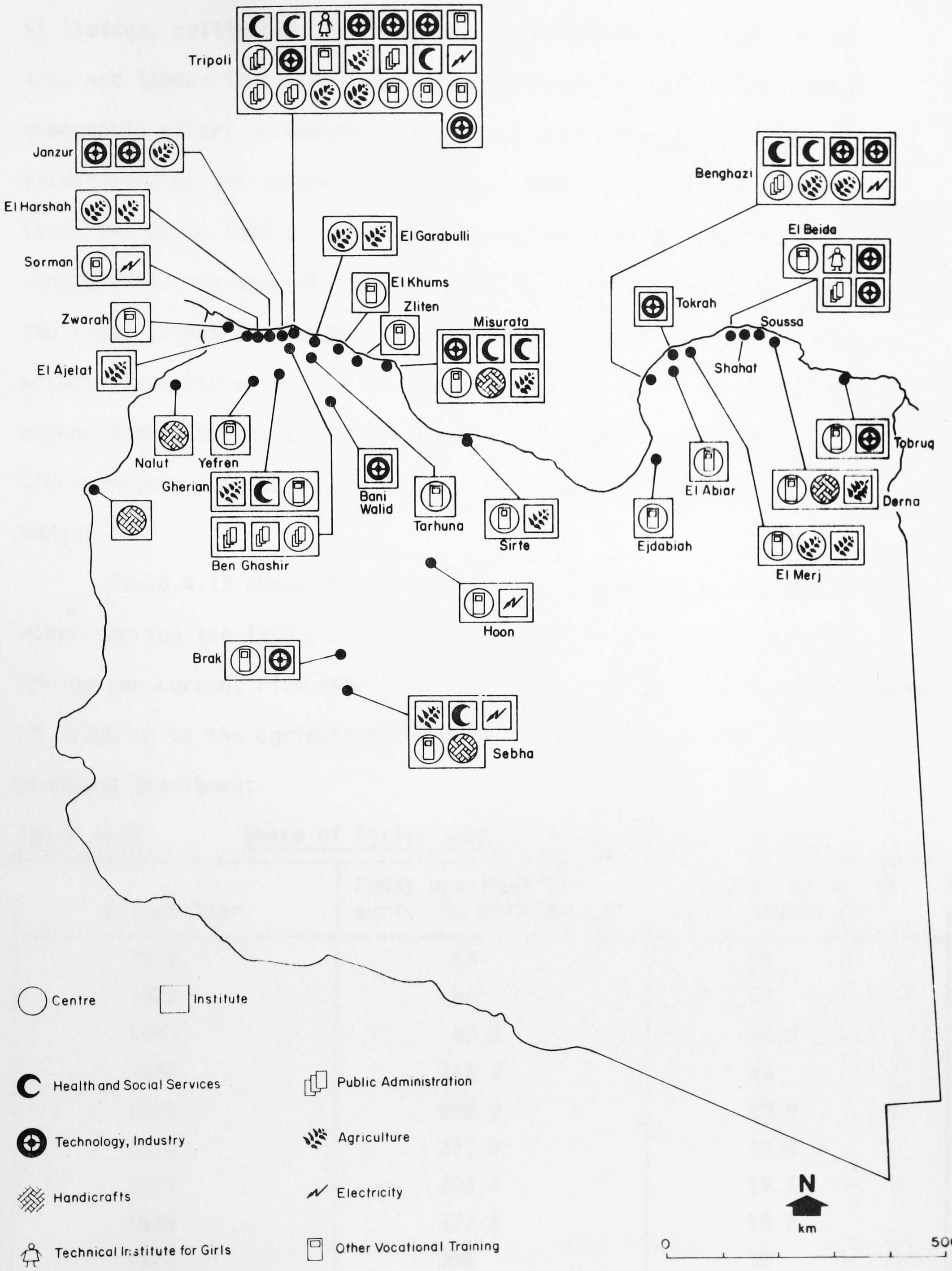
These new educational facilities have strengthened the urban functions of the small towns and their role as local service centres. University education remains heavily concentrated in the two major cities, Tripoli and Benghazi, although a number of facilities have been opened in the intermediate towns; for example the Faculty of Agriculture at El Beida, and Faculties of Education in Sebha and Ez Zawiyah respectively. However, many of the new higher technical institutes have been located in small towns as part of a deliberate Government policy of decentralisation. For example there are High Institutes of Technology at Brak and Bani Walid, the High Institute of Electricity in Hoon together with Agricultural Institutes in Sirte, El Merj, El Garabulli, El Ajelat and Gherian. Figure 4.2 shows the distribution of existing training institutes and centres in 1980. A major new development has been the creation of the country's first technical university in the small town of El Bregah.

4.2.4 Agricultural Sector

The responsibility for establishing agricultural policy in Libya has fallen to governments with widely different political goals.(40) Over the last half century, governments both foreign and national, have approached the development of the country's agricultural resources with determination and high hopes, at least at the outset.(41) The Italians believed that Libya's agricultural potential was worth developing, while the revolutionary regime, like the monarchy before it, also acknowledged agriculture as the basis for a viable economy during the post oil era.(42) The record of agricultural development in Libya is one of continual readjustment of the agricultural goals of increased production and productivity to the realities of the limited and fragile base.(43)

Fig 4.2

DISTRIBUTION OF TRAINING INSTITUTES AND CENTRES, 1980



Source - National Atlas of SPLAJ, 1978

Obstacles to agricultural development are enormous. Water supply is limited, cultivable land does not exceed 2 per cent of the total area and labour shortages are acute. Nevertheless Libya has made a remarkable effort to develop its agricultural resources as can be illustrated by the increasing amount of funds allocated to this sector since the early 1960's. Government investment in agriculture has been substantial. In the 1963-68 plan about L£ 29.2 mn or 17.3 per cent of the total proposed investment was devoted to this sector but estimated actual expenditure rose to L£ 37.8 mn or 12.7 per cent of the total expenditure. During the first year of the revolution (1970-71) agriculture received LD 50 mn or 25 per cent of the LD 200 mn of the budget.(44)

Table 4.13 shows the increasing amount of funds allocated to agriculture during the 1970's and their share of the development budgets. During the current Five Year Plan (1981-1985) the Government has allocated LD 3,100 mn to the agricultural sector, or 18.2 per cent of total proposed investment.

Table 4.13 Share of Agriculture in the Development Budgets

Fiscal Year	Funds provided for agric. in millions LD	Share of agric. in total budget (%)
1971	50	25
1972	64	17
1973	63.9	20.9
1974	164.3	23
1975	230.9	20.8
1976	271.9	19.4
1977	279.7	18.4
1978	337.4	18.9
1979	358	18
1980	432	18
TOTAL	2,252.1	19.9

Source: Schliephake, K. (1980) "Libyan agriculture : natural constraints and aspects of development, Maghreb Review, vol.5 pp.51-56.

The State has intervened in the agricultural sector by providing generous subsidies and loans to farmers but the bulk of investment in agriculture has been devoted to five major development projects located in the Gefara Plain, Jabel Akhdar, Fezzan, Kufra, Sarir, and Sulul el Khudur. (see Table 4.14 and Fig.4.3). The main purpose of agricultural investment has been and will continue to be self-sufficiency in food, but this goal has proved impossible to achieve (Table 4.15).

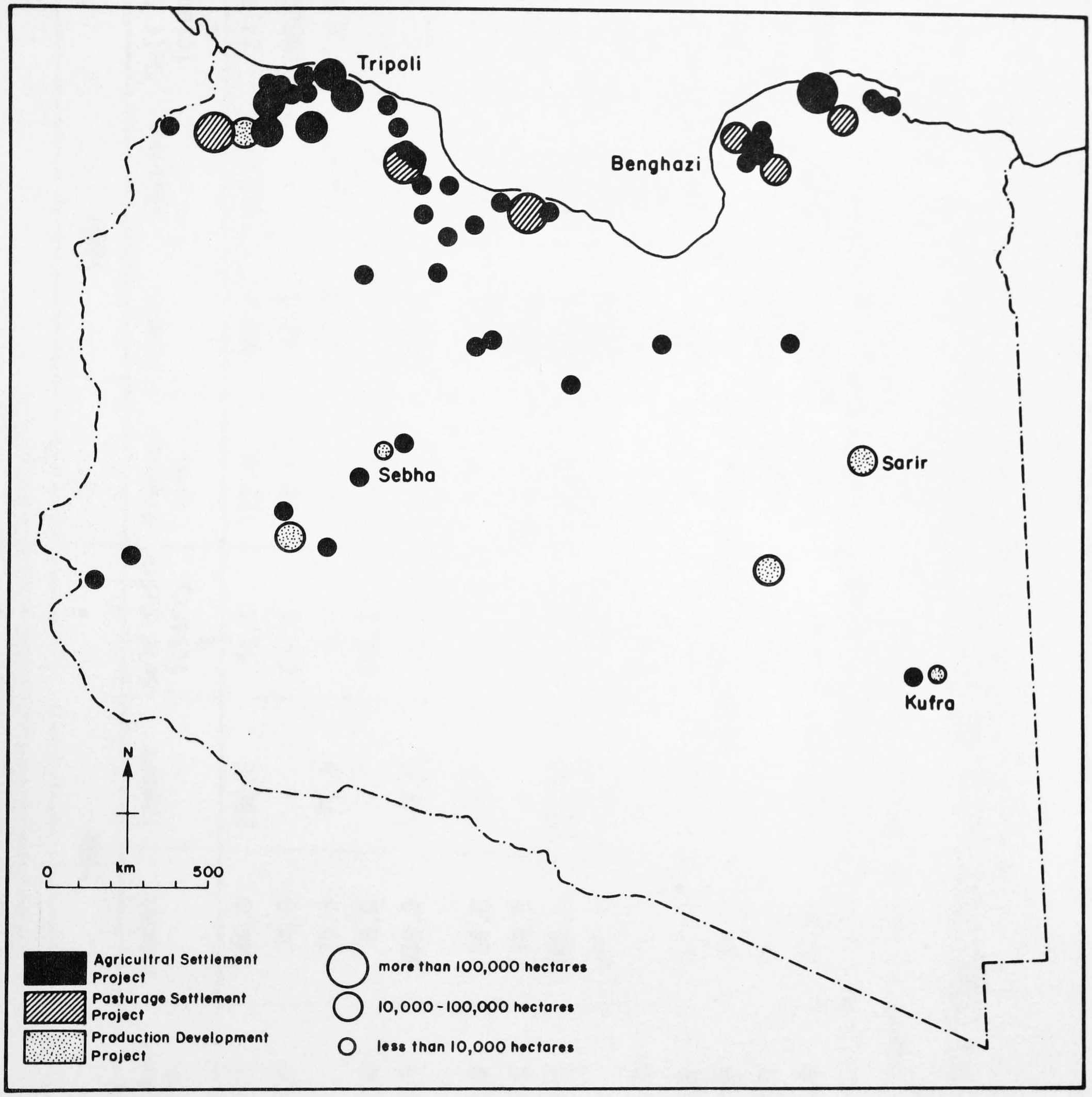
Table 4.14 Agricultural Development Project - September 1980 (hectares)

Project	Programmed	Achieved	Percentage
Gefara Plain	539,010	299,906	55.6
Jabel Akhdar	1,247,659	335,486	26.9
Fezzan	38,877	17,009	43.8
Kufra and Sarir	27,350	18,940	69.3
Sulul el Khudur	469,240	92,145	19.6
TOTAL	2,322,136	763,486	32.9

Source : Secretariat of Planning (1980) Achievement of Economic and Social Transformation 1970-1980, Tripoli (in Arabic) p.20.

The obstacles facing agricultural development in Libya are immense. At best no more than 2 per cent of the total land area is suitable for cultivation (see Table 4.16). Rainfed farming is limited to parts of the Gefara, Jabel Nafusah and Jabel Akhdar and in the mid 1970's 97 per cent of water was drawn from the ground. There is growing competition for scarce water resources (Table 4.17). Groundwater resources are now actually deteriorating in some coastal areas and urban expansion is encroaching upon irrigated lands. Manpower shortages are also acute. Gazzo[45] (1981) has estimated that to farm 1,180,000 ha in 1985

Fig 4·3 AGRICULTURAL PROJECTS IN LIBYA 1980



Source: Speerplan / Finnmap 1981, El Khalij Region – Regional Plan 1980-2000 Tripoli

Table 4.15

Self Sufficiency Ratios in 1980 and 1985

Commodity	1985				1980			
	Production	Demand	Import	Self Sufficiency %	Production	Demand	Imports	Self Sufficiency %
Wheat*	247.5	544.0	296.5	45.4	122.0	440.0	318.0	27.7
Barley**	34.0	34.0	-	100.0	66.5	66.5	-	100.0
Rice	-	75.9	75.9	0.0	-	51.6	51.6	0.0
Other Cereals	6.0	6.0	-	100.0	6.0	6.0	0.0	100.0
Total	287.5	659.9	372.4	43.6	194.5	564.1	369.6	33.8
Legumes and Nuts	12.0	58.0	46.0	20.7	12.6	29.6	17.0	42.6
Vegetables	779.0	779.0	-	100.0	564.0	168.4	104.4	84.4
Fruits	184.0	358.0	174.0	54.8	160.0	318.0	156.6	50.5
Sugar	-	140.5	140.5	0.0	-	110.0	110.0	0.0
Oils	36.0	74.4	38.4	48.4	23.0	61.7	33.7	45.4
Meat	70.0	164.0	94.0	42.7	53.7	137.7	84.0	35.0
Fish	7.0	48.2	41.2	17.0	4.0	11.7	7.7	34.2
Eggs	30.0	30.0	-	100.0	16.4	16.4	-	100.0
Milk and milk products	140.0	310.1	170.1	45.1	110.0	250.1	140.1	44.0

* The difference from total import is due to changes in stock
** Excludes Feed Requirements

Source: Szwed-Cousins, M. (1982) Libya: Industry and Agriculture El Hikma, London, pp.3-15.

Table 4.16 Present General Land Use in Libya

Land Use	Km^2	Percentage of total area
Urban	500	0.03
Agriculture/Irrigated & rainfed	18,000	1.10
Pastureland & Grassland	70,000	4.00
Forest & Grove	5,000	0.30
Wasteland (mainly desert)	1,666,500	94.57
TOTAL	1,760,000	100.00

Source: Secretariat of Municipalities et al (1979) National Physical Perspective Plan 1981-2000, Tripoli p.36.

Table 4.17 Water Estimation for 1985 (in millions m^3)

Consumption		Resources	
Industry	44	Surface water	36
Agriculture	725	Recycled water	146
Urban	373	Underground water	640
		Desalination*	350
TOTAL	1,142	TOTAL	1,172

* for urban areas only

Source : Gazzo, Y. (1980)"Petrole et Developpement: Le cas libyen" Economica Paris, p.164.

Libya will need 348,000 agricultural workers on the basis that 3 workers are needed for every 10 ha of farm land. However, on the basis of his population projections, only 160,000 workers will be available for agriculture in 1985. Finally, agricultural development in Libya is sustained only by massive injections of public funds which in turn depend on a single finite resource, oil.

The development of agriculture in Libya has strengthened the administrative functions of several small towns which have become the headquarters of the major agricultural projects. For example El Merj is the headquarters of the entire Jabel Akhdar Project with no less than 500 persons employed in this office. Kufra, Brak, El Gubbah and Sirte are other examples. Investment in the agricultural sector has also strengthened the commercial and business functions of the small towns. The existence of wholesale and retail markets, agricultural banks and agricultural machinery repair shops serving the surrounding agricultural areas are found in towns such as Tokrah, Shahat, El Gubbah, Brak, Ubari, El Ajelat, Tarhuna, Zliten and Sabratah. Agro industries are planned by the State in a number of small towns using raw materials from the surrounding agricultural areas e.g. Hoon (date processing), El Merj (flour milling) and El Abiar (fodder plant). It remains to be seen whether these heavy investments in agriculture will succeed in reducing the flow of migrants from the villages and small towns to the major cities.

The impact of agricultural development on the small towns will depend on the success achieved in this sector. The boom in agriculture that affected the 1960's and 1970's systematically exploited limited and fast-declining water reserves in the northern area of the country.(46) At the same time, irrigation developments on the Kufra model in the south

of the country were running into severe difficulties. McLachlan (1981) stated :

> "While the Perspective Plan made the assumption that a major degree of land settlement should take place in the Libyan South, including sites such as Sarir and Kufra, it was apparent that intensive demographic settlement was facing great difficulties. Migration of Libyans to the new production and land settlement projects in the decade 1970-80 had been negligible. Indeed, the projects had made no appreciable impact on out-migration from the south of the indigenous peoples." (47)

He also indicated that costs of the agricultural development projects in the south appeared to have a capital cost at least eight times that of farms established in the coastal areas. It is difficult to argue with the view that both settlement and production farms in the south would survive only for as long as the government was able to make available subsidies and that once oil wealth began to fail, the farms would be economically unviable even taking the charitable view that farmers could be found to settle and would remain long-term in the south.(48)

4.3 DEVELOPMENT OF INDUSTRY : INDUSTRIALISING THE SMALL TOWNS

Another major area in which government intervention is affecting urbanisation and bringing change to a large number of small towns in Libya is in the development of manufacturing industry.

During the early years of this century industry was mainly in the nature of handicrafts. There was no opportunity for modern industry owing to the simple life of the people and the lack of capital, transportation, skilled labour and power supplies. Traditional craft industries such as weaving, carpet making and rug weaving using handlooms, leatherwork, copperware, metalwork, woodwork and mat making were developed from local materials for home consumption.(49) Weaving was the chief handicraft and was carried on in all Libyan towns and villages.

However, the small town of Zliten was particularly famous for this craft. Misurata and Tawargha specialized in mat-making and produced many different types of mats with various designs and colours. The Libyan pottery production was concentrated in and around the small town of Gherian where deposits of clay were to be found.

During the Italian period (1911 - 1943), industrial development witnessed three features : a decline in the existing handicrafts in main towns; the introduction of new types of handicrafts and the beginning of modern industry. (50) The introduction of modern industry was due to colonial motives to assist in the settlement of Italian families. Industries such as those producing building materials, metal work, olive oil, pasta, flour, tobacco, and soft drinks, were among the important establishments. The Italian government invested in industries such as textiles, leatherwork, printing, paper, as well as industries which engaged in the processing of agricultural and fishing products.

During the Second World War many factories were completely destroyed, and only about 100 industrial establishments, many of them very small, remained in operation. (51) The situation appears to have improved substantially during the 1950's. According to the International Bank for Reconstruction and Development (IBRD), quoting the 1956 Census of Employment and Production, there were 3,121 industrial establishments employing 14,504 workers in that year. Significantly about 87 per cent of the establishments were small in size with less than 10 workers. As regards industrial location, both Tripoli and Benghazi accounted for 77 per cent of the total number of industrial units and 90 per cent of the industrial labour force. (52) The marked concentration of industry in the two major cities was a feature of Libya during both the Turkish and Italian periods. In view of this and

as early as 1960 the I.B.R.D. mission suggested that:

> "in the interests of more balanced economic growth, the government should encourage decentralization whenever practical through measures to improve the relative cost advantages of production in rural areas. We do not suggest that legislation should be enacted to regulate the location of industry, but would rather see incentives given for the establishment of new industries in rural areas." (53)

In spite of these recommendations and some Government policies to encourage the decentralization of industry, the marked concentration of manufacturing in the two major cities has continued to the present day.

The concentration of industries in two or three large cities is a geographic phenomenon which can be seen in many developing countries. In many cases it was the colonial ports which developed into industrial centres; Examples include Algiers and Oran in Algeria and Bombay in India. As regards industrial location there is the view that industry should be given free play in its choice of location. This can lead to agglomeration in and around the large cities. This was the case in Libya before the Revolution when most industrial enterprises were under private ownership. Tripoli and Benghazi offered to the private entrepreneur the advantages of a concentrated market, an established business community, financial and other services. Diametrically opposed to this argument is the view that industry should be completely decentralised - dispersed and based in other settlements outside the major cities.

In the Indian context, Brown outlined the advantages and disadvantages in locating industry in the villages on the one hand and in the larger cities on the other, and wrote:

> "It remains that some compromise must be found between the two extremes. One suggestion is to encourage the development of medium-sized settlements". (54).

In order to achieve this she favours stage development. At the first stage regional centres (200,000 population) should be chosen and developed as growth points. Once these primary centres reach the stage of self-sustained growth, then smaller centres could be developed in a second stage of decentralisation, producing as the end result a regional hierarchy of towns and cities, each containing industry appropriate to its size and functions.(55)

In Libya, Government policies towards industrial development in general and industrial location in particular have passed through three phases which may be analysed through the different development plans:

(i) Pre-Revolutionary development (before 1969)

(ii) Post-Revolutionary development (1969-1979)

(iii) Total nationalisation period (after 1979)

In the first Five Year Economic and Social Development Plan (1963 - 1968) the proposed allocation to the industrial sector was £L 6.9 mn or 4.1 per cent of total investment but actual expenditure reached £L 14.7 mn or 4.9 per cent of total investment. State intervention in the industrial sector was primarily to support and encourage the private sector. The plan states:

> "The Government's responsibility in promoting industrial development stems from the fact that some fields of development work offer initially less attractive possibilities and the intervention of the state is justified on the grounds that without it no development will occur at all. However, it is the basic policy of the Government to encourage, whenever feasible, the maximum degree of private investment in the industrial sector of the economy. Where state intervention is deemed necessary, it is firmly held by the Government that its function is to assist and support infant industrial enterprises so that they may in due course become independent and self-sustaining undertakings within the private sector, functioning without further state intervention." (56)

To implement the I.B.R.D. recommendations the Government tried as part of a deliberate policy, to promote the dispersal of industrial activities into small towns and villages. This policy failed completely and industrial activities remained heavily concentrated in Tripoli and Benghazi. The private sector showed no interest in setting up industrial establishments outside the major cities. The major cities offered good infrastructures for industrial development, the major markets for manufactured goods and were the main source of skilled labour. These advantages were absent in the small towns.

The Second Five Year Plan (1968-1972) was abandoned after the Revolution in 1969. Under the annual development budgets that were introduced the share of the industrial sector in investments increased from 10 per cent in 1970-71 to 15 per cent in 1972-73. Private enterprise remained important but state control was extended more widely and more deeply than would be considered desirable in a capitalist or free enterprise type of economy. (57)

In the Three Year Plan of Social and Economic Development (1973-75) some LD 324.5 mn were allocated to manufacturing industry, representing 12.2 per cent of proposed investment. A state organisation, the National General Industrialisation Establishment, was created to implement Libya's industrialisation programme. All the factories set up by this organisation were state owned and run, but the Government continued to support the private industrial sector through agencies such as the Real Estate Industrial Bank. Table 4.18 shows the location of new industries established during the 1973-75 Development Plan and illustrates the efforts made by the State to set up factories outside the two major cities.

Table 4.18 Location of new industries established during the 1973-75 Development Plan

Large Cities	Intermediate Towns	Small Towns
Dairies - Tripoli	Flour Mill - Sebha	Petrochemicals - El Bregah
Mineral Waters - Tripoli	Canned Tomatoes - Sebha	Dairies - Beninah
Sardines - Benghazi	Canned Fruit & Vegetables - Ez Zawiyah	Flour Mill - El Merj
Animal fodder - Tripoli	Animal Fodder - El Beida	Flour Mill - Zliten
Compressed leather - Tripoli	Soft drinks - Sebha	Date processing - El Khums
Furniture - Tripoli	Ready-made clothing - Derna	Date processing - Hoon
Lime - Benghazi	Footware - Misurata	Sardines - El Khums
Cement and lime bags - Benghazi	Furniture - El Beida	Sardines - Zwarah
Bricks - Benghazi	Oil Refining - Ez Zawiyah	Wool Weaving - El Merj
Lime - Tripoli		Ceramic and Pottery Plant - Gherian
Wires and Cables - Benghazi		Sanitary Equipment plant - Gherian
Babyfood - Tripoli		
Batteries - Tripoli		
Prefabricated Housing - Tripoli		
Prefabricated Housing - Benghazi		
Tuna Canning - Tripoli		
Sardines - Tripoli		
Textiles - Tripoli		
Pipes - Tripoli		

Source: Ministry of Planning (1973) The Three Year Plan of Social and Economic Development 1973-75 Tripoli (in Arabic) pp.204-222.

In the Plan of Economic and Social Transformation 1976-80 some LD 1,149 mn was allocated to the industrial sector, representing 15.27 per cent of proposed investment. This plan introduced a new emphasis on creating a heavy industrial base in Libya with the establishment of basic metal and chemical industries. The plan also emphasised the decentralisation of industry by locating two-thirds of new industrial plants outside Tripoli and Benghazi, many in small towns (see Table 4.19). Figure 4.4 illustrates the distribution of industry in Libya in 1978 and reveals that although industry remained heavily concentrated in Tripoli and Benghazi, significant progress had been made to locate new industries in the intermediate towns and in some of the small towns. In addition, the Government established centres of craft industry in most of the small towns. They are state-owned and each employs between 20 and 40 workers, mainly women.

Throughout the 1970's the State controlled industrial sector had become progressively more influential. The year 1979 saw the start of a wave of nationalisation measures which by 1981 had virtually eliminated privately owned industry. The Second Five Year Transformation Plan (1981-85) which forms the first stage of the NPPP gives priority to the industrial sector in the allocation of proposed investment. The industrial sector is allocated LD 3,930 mn or 23 per cent of total investment. Government emphasis on heavy industry continues with some LD 2,730 mn allocated to this branch, 16 per cent of total investment under the plan. As a result of this high investment, industry is expected to grow at over 20 per cent annually during the plan period.

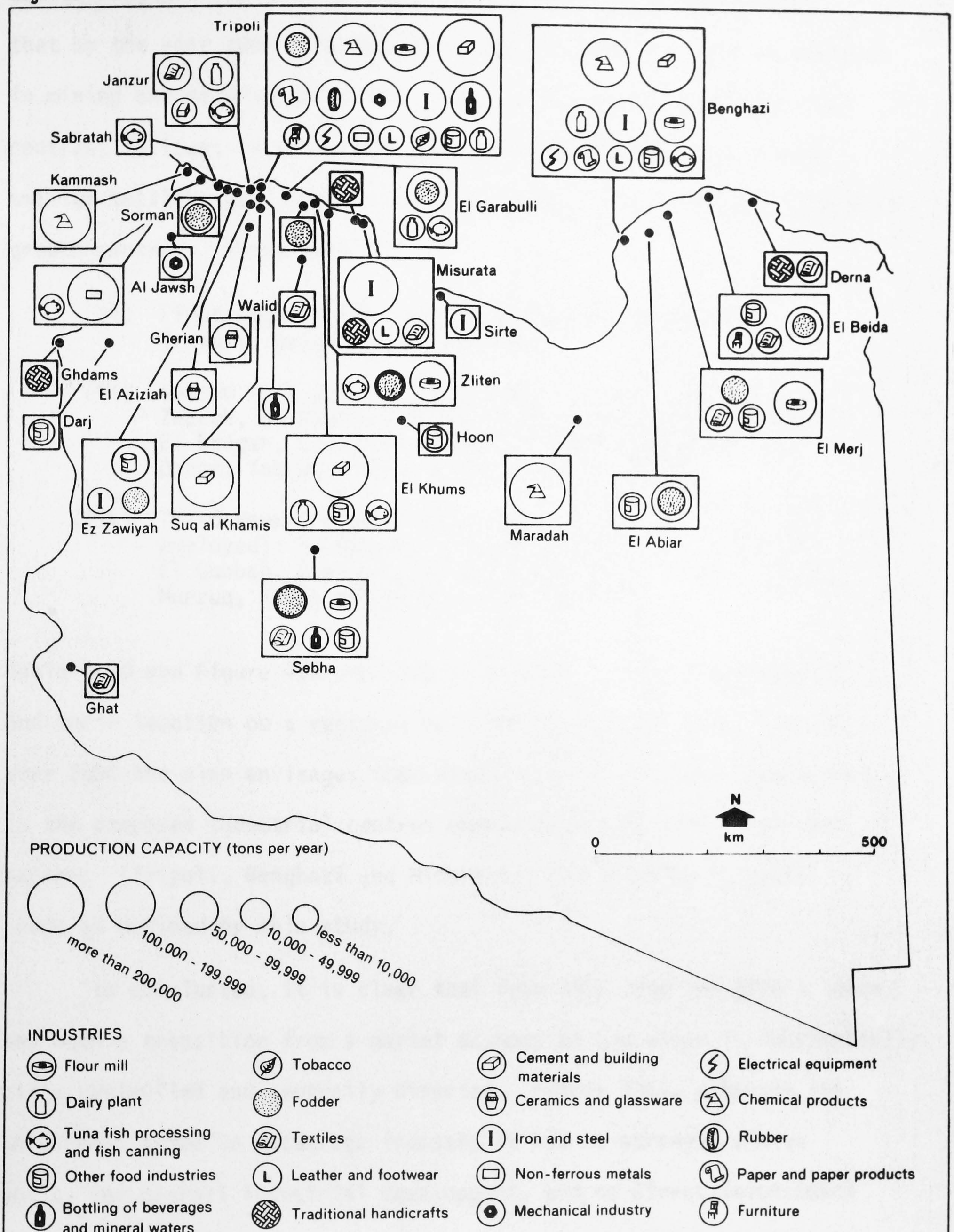
Part of the funds allocated to this sectorare devoted to the construction of a number of new industrial towns to provide accommodation and services for workers employed in major new industrial projects.

Table 4.19 Small Towns Shares of new Industries in the 1976-80 Development Plan

Large Cities	Intermediate Towns	Small Towns
Tyres Plant - Tripoli	Flour Mills - Tobruq	Minerals & Aluminium Plant - Bu Kamash-Zwarah
Spirally Welded Pipes - Benghazi	Dairies - Misurata	Second Cement Plant - El Khums
Iron Smelting Plant - Tripoli	Military Boots - Misurata	Wool Plant - Bani Walid
Agricultural Tractors - Benghazi	Iron and Steel - Misurata	Blanket Plant - El Merj
Second expansion cement - Benghazi	Cement Plant - Sebha	Flour mills - Sorman
Fertilizer Plant - Tripoli	Babyfood - Ez Zawiyah	Fodder Plant - Sorman
		Fodder Plant - El Abiar
		Fodder Plant - El Garabulli
		Fodder Plant - Zliten
		Dairies - El Garabulli
		Flour mill - Beninah

Source: Ministry of Planning (1976) The Plan of Economic and Social Transformation 1976-1980 Tripoli, (in Arabic), pp.244-277.

Fig 4.4 LIBYA: Distribution of Industries, 1978



Source: **'National Atlas'** of S.P.L.A.J., 1978

Examples of these new industrial towns include Ras Lanuf, Gasr Ahmed and El Bregah. The National Physical Perspective Plan projected that by the year 2000 from 265,000 - 360,000 people should be employed in mining and manufacturing industries in 18 established industrial centres, 18 towns in the process of industrialisation and in many smaller settlements. The plan also envisaged three ranks of industrial growth centres. These are:

(i) First rank centres with 40,000 - 50,000 employed: Tripoli, Benghazi and Misurata.

(ii) Second rank centres with 5,000 - 12,000 employed: Zwarah, El Khums, Zliten, Sirte, Ben Jawad, Ras Lanuf, El Bregah, Ejdabiah, El Merj, Tolmeitha, El Beida, Derna, Tobruq, Tarhuna, Hoon and Sebha.

(iii) Third rank industrialised towns (less than 5,000 employed): Bu Kamash, Sabratah, Sorman, El Garabulli, El Gubbah, Gherian, Mizdah, Bani Walid, Waddan, Ubari, Murzuq, Kufra and Brak. (58)

Table 4.20 and Figure 4.5 show the proposed industrial developments and their location on a regional basis up to the year 2000. By the year 2000 the plan envisages that almost half of the total employment in the proposed industrial centres should be outside the first rank centres (Tripoli, Benghazi and Misurata); the majority in small towns as defined by this study.

In conclusion, it is clear that from 1960 into the 1970's there has been a transition from a market economy to one which is substantially state controlled and centrally directed. Before 1969, although the Government tried to encourage industry, it had no strongly stated policy for overall industrial development, and no direct involvement or intervention in any way in the location of industrial establishments. Subsidies and tax exemptions had failed to create large scale industry; capital investment in industry was modest compared with investment in other sectors of the economy. After 1969 the Government embarked

Table 4.20 Industrial Centres Proposed by the N.P.P.P 1981-2000

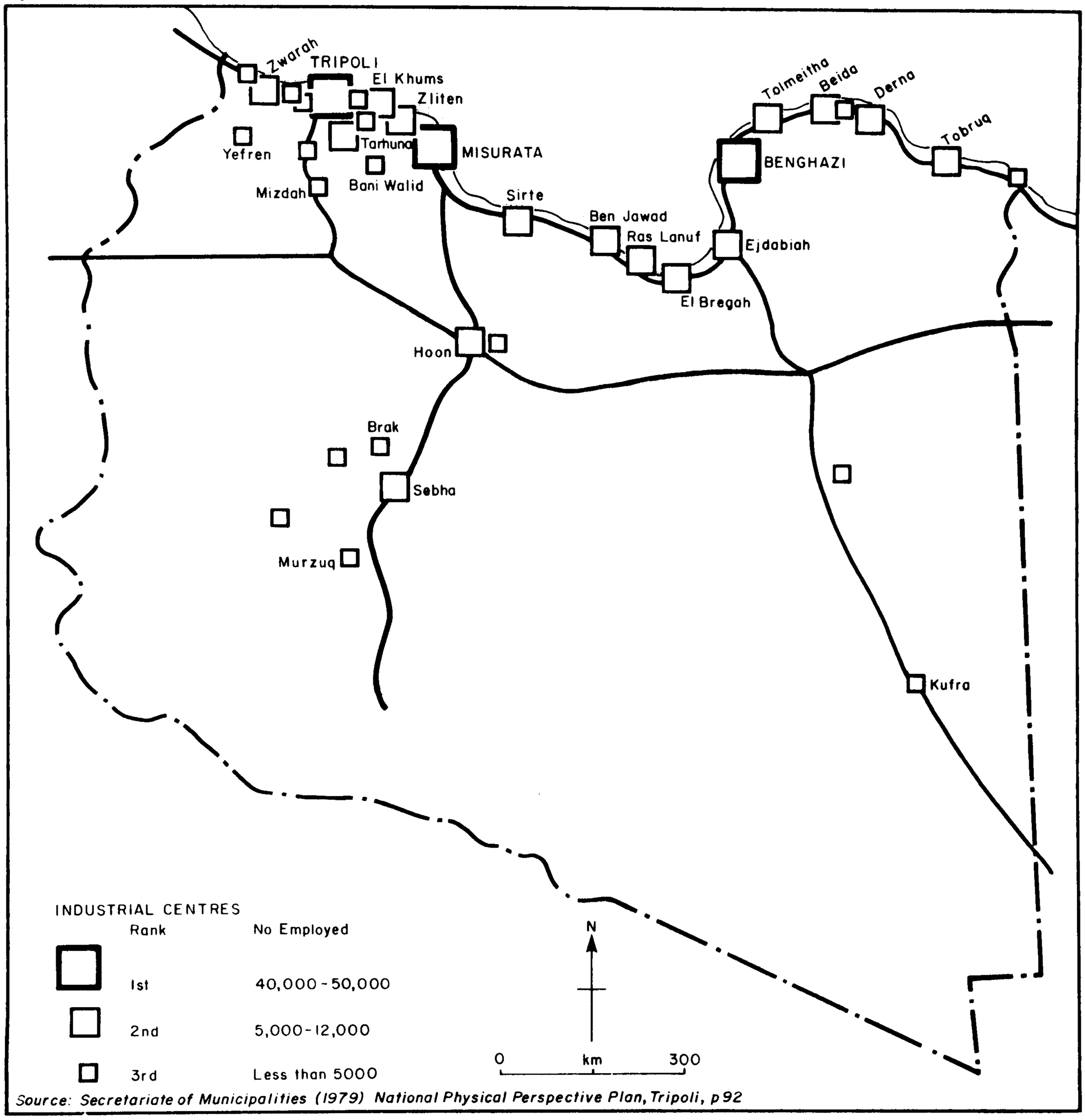
Location	Employment site area in Ha Provisional Estimates	Types of industry or production	Extended or new
Tripoli Region Tripoli	50,000 500 Ha	1. Motor car and other vehicles: tracks, tractors, mobile houses. 2. Cotton & leather 3. Refining & Chemicals 4. Food 5. Building materials 6. Glass 7. Printing 8. Plants connected with the University research: scientific staff 9. Selected electronics	Extended " " " " " " New New
Misurata	40,000 50,000 500 Ha	1. Footwear 2. Steel complex and metal industry 3. Military equipment 4. Processing of imported goods 5. Food for local markets 6. Building material industry for local use	Extended New " " " "
Bu Kamash	3,000 40 Ha	Chemicals:chlorine, caustic soda.	Extended
Zwarah	9,000 90 Ha	1. Aluminium ingots, raw sheets, roofing foils, doors, windows, kiosks. 2. Alloys from aluminium also using magnesium from Marsa Bregah(Marada) 3. Fertilizers: compound	New " "
Glosh	2,000	1. School equipment 2. Plastic miscellaneous items, matresses.	New
Sorman	3,000 20 Ha	1. Miscellaneous goods for Tripoli Area 2. Processing of agricultural products	New "
El Garabulli	4,000	1. Miscellaneous goods for Tripoli area 2. Processing of agricultural goods	New Extended
El Khums	8,000 70 Ha	1. Building materials: cement 2. Building materials, prefabricated elements for buildings (stores, shops, services) 3. Food 4. Furniture	Extended New Extended New
Zliten	5,000 50 Ha	1. Building machinery assembly 2. Steel processing	New
Tarhuna	5,000 50 Ha	Knitwear and readymade cloths	New
El Khamis	2,000 20 Ha	1. Building materials (cement) 2. Prefabricated elements	Extended New
Bani Walid	3,000 25 Ha	Wool, textiles & carpets	New
Gherian	4,000 40 Ha	1. Ceramics 2. Ceramic electric & other equipment 3. Metal furniture	Extended New "
Mizdah	2,000 14 Ha	Stationery, buttons, needles, clips & household tools .	New
2. Benghazi Region	50,000 500 Ha	1. Steel processing complex 2. Metal based on alloys using steel and aluminium 3. Building structural and other elements 4. Food 5. Kitchen utensils production and water irrigation equipment 6. Car assembly 7. Book printing	Extended New Extended " New " "
El Merj	8,000	1. Wool textiles and blankets 2. Building materials and finishes sanitary installations 3 Kitchen, cookers, electric heaters & storage heaters	Extended New

Table 4.20 (Cont.)

Location	Employment site area in Ha Provisional Estimates	Types of industry or production	Extended or new
Tolmeitha	3,000 25 Ha	1. Metal processing 2. Tourist items: Yachts, small boats, etc.	New
El Beida	8,000 50 Ha	1. Processing of agricultural products 2. Furniture 3. Spare parts for vehicles 4. Electrical equipment for buildings	New Extended New "
El Gubbah	2,000 10 Ha	1. Miscellaneous plastic goods 2. Other goods	New "
Derna	8,000 60 Ha	1. Ready made cloths 2. Electromechanical equipment, engines	Extended New
Tobruq	6,000 60 Ha	1. Export products 2. Fine cotton and polyester, spinning textile 3. Clothing knitwears	New " "
El Bardya	2,000 15 Ha	1. Ready made cotton clothes 2. Processing of imported materials	New "
3. Sebha Region Hoon - Waddan	8,000	1. Agricultural products processing 2. Central military equipment complex	Extended New
Sebha	10,000	1. Agricultural products processing 2. Spinning knitwear & ready made clothes 3. Building materials 4. Military equipment	Extended New " "
Brak	5,000	1. Iron ore mining 2. Ceramics 3. Building materials	New " "
4. El Khalij Region Gulf of Sirte Area) Sirte	10,000 100 Ha	1. Forging and Foundry 2. Petrochemicals: rubber etc. 3. Metal works	Extended New "
Ben Jawad	5,000 50 Ha	1. Plastics 2. Synthetic fibres	New "
Ras Lanuf	3,000 40 Ha	1. Refining of crude oil 2. Processing of refinery (primary and intermediate products)	New "
El Bregah	8,000 100 Ha	1. Petrochemicals: primary and intermediate products from gas 2. Chemicals (Marada) 3. Asphalt	Extended New "
Ejdabiah	8,000 100 Ha	1. Refining of crude oil 2. Petrochemicals 3. Artificial paper	New " "
Sarir Area			
Sarir	2,000 20 Ha	Agricultural products processing	New
Kufra	1,000	Agricultural products processing	"

Source: Secretariat of Municipalities et al (1979) National Physical Perspective Plan 1981-2000 Tripoli, pp.78-82.

Fig 4·5 INDUSTRIAL CENTRES 2000 RECOMMENDED BY NPPP



Source: Secretariate of Municipalities (1979) National Physical Perspective Plan, Tripoli, p 92

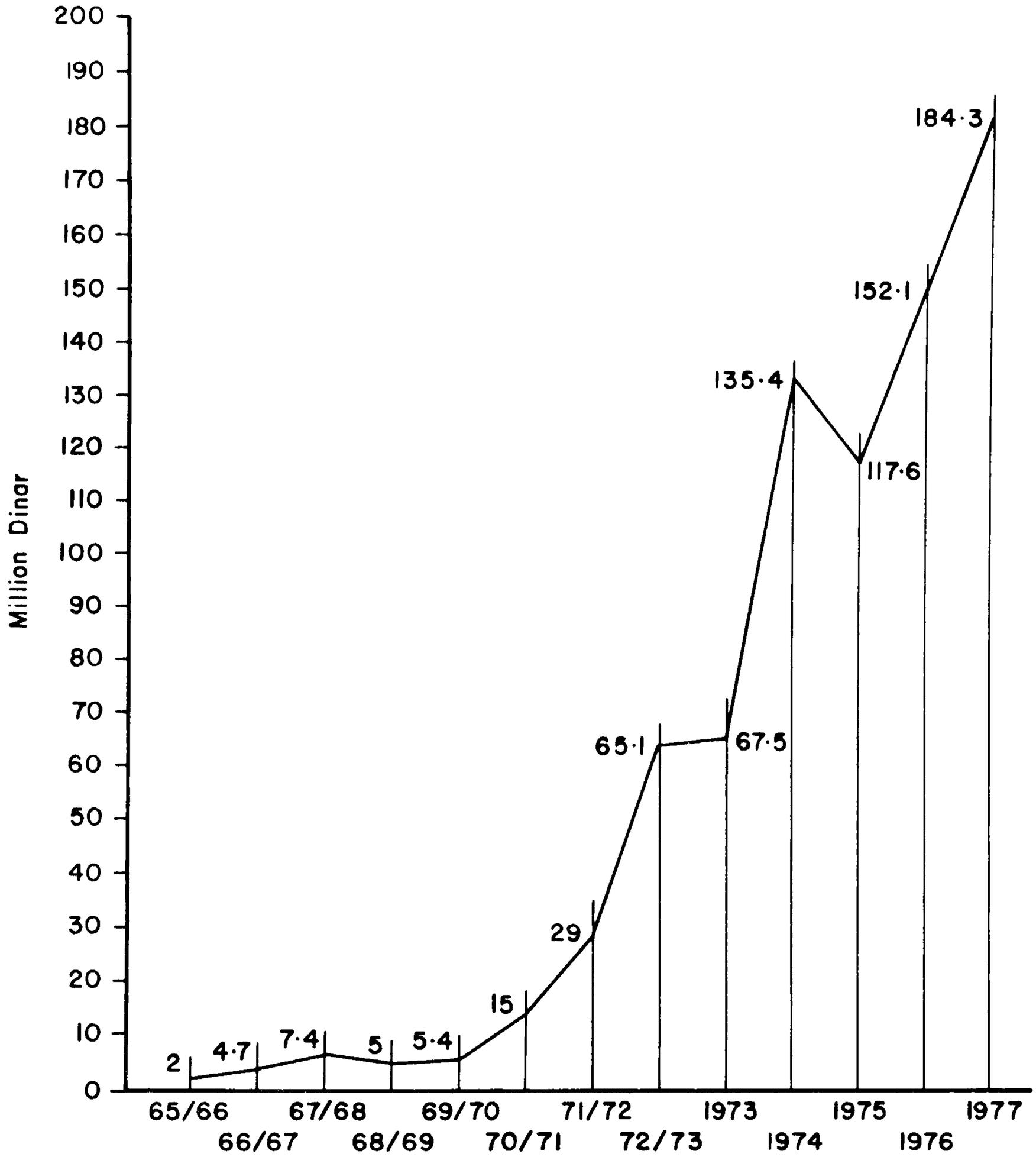
upon a vigorous policy of industrial development with the aim of reducing the country's dependence on oil revenue and foreign trade. Progress has been impressive and capital investment in the industrial sector increased massively. This can be demonstrated by Figure 4.6 which shows the increase in the development of expenditure on the industrial sector between 1965 - 1977.

Although allocations to industry, and especially to the public sector, were extremely generous, actual expenditure did not match allocations during much of the 1970s. Many new factories have been built but few data are available about productivity and available evidence suggests that many establishments do not operate at full capacity. Promoting industrial development in Libya has encountered serious difficulties, among them management, marketing, manpower, maintenance of industrial equipment and water shortages.

Although the existence of a large market in the major population centres of Tripoli and Benghazi is bound to provide a strong economic argument against the small towns as a location for new industries, nevertheless, the Government in its stated policy is committed to the location of industries outside the two major cities. New industries have been established in many small towns bringing about often striking morphological changes. However, no studies have examined the economic effectiveness of this decentralisation policy or investigated in detail the problems experienced by industrial establishments in small towns.

Barker [59] draws our attention to the fact that all Libya's major new industrial developments are located on the Mediterranean coast to minimise the overland transport costs of plant imports and product exports, to maximise the freight advantage of Libya's proximity to the European market, and to be next to the only readily available

Fig 4·6 DEVELOPMENT OF EXPENDITURE ON INDUSTRIAL SECTOR 1965-1977



Source: Secretariat of Industry. "Revolution Achievements in Industrial Sector, (no date) Tripoli

source of cooling water; the sea. He believes that Libya's industrialisation policy effectively limits the possibility of creating new population centres inland.

4.4 ADMINISTRATIVE REORGANISATION

Another area in which state intervention is strengthening the functions of many small towns in Libya is through the reorganisation of the country's administrative structure. Between 1951 and 1963 Libya was divided into three Provinces (Wilayate) under a federal system. After federalism was abolished in 1963,the country was divided on tribal and regional bases into ten Muhafadat and each Muhafadah was subdivided into Mutasarifiyat and Mudiriat. After the Revolution in 1969 the new government reorganised the ten Muhafadat; they abolished Ubari which was absorbed into Sebha Muhafadah; El Beida was renamed Jabel Akhdar incorporating a part of Benghazi Muhafadah, and a new Muhafadat, El Khalij, was created out of parts of the Muhafadat of Benghazi and Misurata. The ten Muhafadat were further subdivided into 46 Baladiyat. In 1975 the ten Muhafadat were abolished and the 46 Baladiyat became the major administrative units. Each Baladiyah was further subdivided into Fur Baladiyat and Mahalat. Table 4.21 illustrates the stages of administrative reorganisation since 1951 and Figure 4.7 shows the boundaries of the Baladiyat and the headquarters of each Baladiyah and Fur Baladiyah.

Under the Muhafadat system regional government was strongly concentrated in the headquarters of the ten Muhafadat; after 1969 these were Tripoli, Benghazi, Sebha, Misurata, El Beida, Gherian, Ez Zawiyah, El Khums, Ejdabiah and Derna. Only two of these headquarters were located in small towns, Gherian and El Khums. After 1975 these functions were transferred to the headquarters of the 46 Baladiyat, of which 31

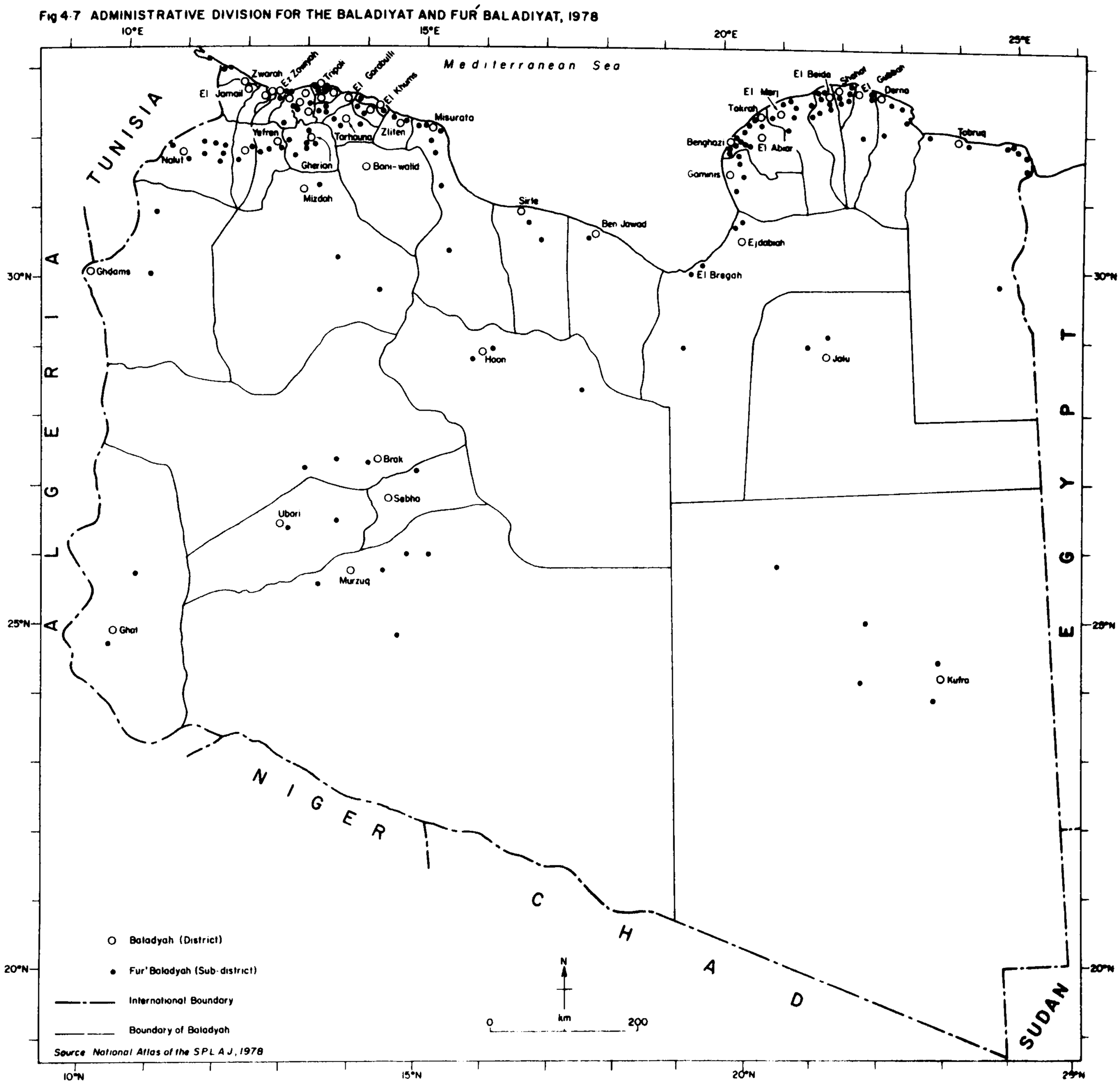
Table 4.21

Stages of Administrative Reorganisation since 1951

1951-1963	1963-1969	1969-1975	1975
3 Wilayte Tripolitania Cyrenica Fezzan Administrated by Tripoli Benghazi Sebha	10 Muhafadat Central Government —Tripoli —Benghazi —Sebha —Misurata —El Beida —Gherian —Ez Zawiyah —Derna —El Khums —Ubari	10 Muhafadat Central Government —Tripoli —Benghazi —Sebha —Misurata —Jabel Akhdar —Gherian —Ez Zawiyah —El Khums —El Khalij —Derna	46 Baladiyat Central Government —4 Tripoli —I Benghazi —7 Intermediate Towns —31 Small Towns —3 Rural

Sources: Compiled from Ministry of Information and Culture (1968) This is Libya Tripoli, pp.56-59 and Habib, H. (1979) Libya : Past and Present, Aedam Publishing House Limited, Malta, pp.261-272.

Fig 4·7 ADMINISTRATIVE DIVISION FOR THE BALADIYAT AND FUR BALADIYAT, 1978



Source National Atlas of the SPLAJ, 1978

were located in small towns (Table 4.22). Until 1975 the regional offices of the Ministries were located in the 10 Muhafadat headquarters. After 1975 branches of the Ministries were established in the Baladiyat headquarters. The following departments exist in each Baladiyah : Education, Health, Industry, Agriculture, Housing, Transport and Communication, Information and Culture, Interior, Labour, Planning, Trade, Treasury, Municipalities, Social Affairs and Security. In addition the State companies and national agencies with the Head Offices in Tripoli also have branches in most of the Baladiyat. With the nationalisation measures introduced since the late 1970's, the Baladiyat headquarters increasingly function as the key centres through which the state not only administers the country but controls and directs the economy. These new offices have created new employment opportunities and strengthened the regional functions of those small towns selected as the headquarters of a Baladiyah.

Thus the existing urban functions of many small towns have been reinforced by their promotion in the country's administrative hierarchy. (60) The market town of El Gubbah, for example, once administered from Derna, 40 km to the east, has become the centre for a Baladiyat with six Fur Baladiyat and 15 Mahalat. Shahat, Tokrah and Jalu formerly administered by El Beida, Benghazi and Ejdabiah respectively are now the centres of flourishing Baladiyat. The oasis towns of Jalu, Kufra, Hoon, El Jmail, Ghdams, Brak, Ubari, Murzuq and Ghat which have been the focus for long-distance trade routes for centuries and regional centres for the surrounding settlements have seen their administrative functions strengthened since they became headquarters of Baladiyah.

Table 4.22 Baladiyat Administrated by Small Towns

Name of Baladiyat which is also the name of the town	Population in 1973 for the Baladiyat	Area in km^2	Number of Fur' Baladiyat	Number of Mahalat
El Gubbah	20,455	6,950	6	15
Shahat	17,167	730	3	10
El Merj	55,444	9,210	7	19
Tokrah	10,714	680	2	9
Gaminis	16,991	8,500	4	15
El Abiar	17,685	4,790	2	9
Jalu	8,032	108,670	2	6
Sirte	22,797	16,790	2	11
Kufra	12,466	483,510	5	7
Zliten	58,981	2,470	2	21
Hoon	16,709	117,410	3	7
El Khums	66,890	890	2	18
Tarhuna	52,657	3,820	4	21
Bani Walid	19,113	19,710	-	15
El Garabulli	14,524	270	-	6
El Aziziah	34,077	1,270	1	9
Ez Zahra	32,158	450	2	7
Sorman	34,180	790	2	12
Sabratah	30,832	580	1	11
El Ajelat	23,382	1,550	-	8
Zwarah	15,078	1,030	1	6
El Jmail	32,730	2,670	1	10
Gherian	65,224	4,660	6	37
Yefren	30,721	5,450	3	19
Nalut	23,535	13,300	8	22
Ghdams	6,172	51,750	2	6
Mizdah	11,472	72,180	3	13
Brak	27,183	97,160	3	24
Ubari	19,132	31,890	2	13
Murzuq	22,185	349,790	6	24
Ghat	6,924	72,700	2	3

Source : Ministry of Municipalities (1976) Transformation Stage Tripoli (in Arabic), pp.33-34 also Secretariat of Planning (1978) The National Atlas of Libya, pp.25-26.

4.5 SPATIAL DEVELOPMENT POLICIES

Spatial development programmes are important tools in restructuring urban systems. Before 1973 the Libyan Government was concerned with the national development of the country and used sectoral planning as a tool for overall economic growth. However, since the early 1970's there has been an increasing awareness of the importance of the spatial dimension in the development process. Questions of spatial balance and inter-regional equity have thrust themselves upon leaders and planners of developing nations as legitimate and equally justifiable goals of development. Thus space is no longer treated as a mere economic location, and constraints based on spatial differentials in comparative advantage play a role in devising national development strategies. Planners must therefore attempt to envisage desirable patterns for the future in terms of spatial and social equity as well as economic growth. (61)

The need for long-term national settlement policy stems from three basic considerations :

First, Libya recorded a fast population growth as we have seen in the previous chapter which effectively means more than a doubling of the national population by the year 2000. The national goal of improved living conditions for all Libyans necessitates an extension of basic infrastructure services and economic opportunities down to the smallest or more remote settlement. Actualising this goal requires an evaluation of individual settlement viability so that government investment programmes can be elaborated to fit the development potential of each settlement, and also to identify those settlements which lack economic viability and whose populations must be relocated.

A second reason for an integrated long-term settlement policy relates to the discovery in recent years of valuable natural resources in hitherto relatively uninhabited regions. Programmes are on-going to tap the inland ground water reservoirs to implement large-scale agricultural projects, and for new basic industrial complexes exploiting the mineral products of El Khalij region. Hence the need to assess relative settlement growth potential in pioneer areas and their accompanying infrastructure requirements.(62)

Finally, the most fundamental problem is the concentration of population in the two main cities, Tripoli and Benghazi. These two cities have served as regional economic capitals of western and eastern Libya respectively and this role will continue for the foreseeable future. Uncontrolled growth of these two centres has created severe imbalance in economic and demographic distribution among different regions with resultant underdevelopment of some regions. If future spatial patterns in the country were to be shaped purely by market forces, the result would certainly be a continuation of the past trends, with concentration of population and economic activity in the two main cities. The restructuring of spatial patterns demands state intervention.

Analysing the trends and policies in 1976 Italconsult outlined the main problems concerning the country's spatial development. They identified ten major problems:

"1. Libya is almost totally dependent upon imports.

2. The shortage of water is increasing in the more settled regions of the country. Lack of water may become a crucial negative factor within the next decade with serious repercussions on any programme to boost agricultural or industrial production.

3. Both the existing and the planned location of industrial projects tends to polarise growth in a restricted number of cities. Manufacturing employment opportunities created in large cities must compete with higher-paying job opportunities in other urban occupations.

4. The communication and distribution system is not yet sufficiently developed to afford effective and agile flows within regions. While substantial improvement is planned for the main national highways, progress on the development of a complementary system of feeder roads is slow and not yet prepared to service new agricultural projects. Port traffic has been excessively centralised on the two congested main harbours of Tripoli and Benghazi.

5. Serious gaps still persist in the existing distribution of social services throughout the country. Many problems stem from the predominant role of the two major metropolitan centres.

6. Notwithstanding considerable current efforts to expand educational and vocational training, a sizeable amount of alien labour will be needed to keep the Libyan society running, The problem of Libyan dependence upon foreign workforces in many key areas of its economy must be carefully considered and rapidly solved.

7. Mobilisation of local participation in development efforts is not yet sufficient. Many areas are short of capable leadership at different levels of society. Greater progress is needed towards fuller utilisation and integration of existing knowledge and experience of local conditions within the framework of established national priorities.

8. The national settlement pattern is basically split into two separate urban systems polarised in Tripoli and Benghazi. Intermediate size cities are few and very much smaller than the two metropolitan areas.

9. A great number of small villages need more effective provision of basic social and technical infrastructure and general improvement of living conditions. The lack of economic and social opportunities in rural areas increase large-scale rural out migration and gravitation towards the largest urban centres.

10. Nomads and their invaluable specialised knowledge of regional ecology and animal breeding should be put to effective use in modernised range management.(63) "

On the basis of their analysis of these problems,the Italconsult team made the following recommendations:

(i) that the existing eastern and western urban subsystems should be integrated by the creation of a star-shaped main communication network focussed on a large new city to be created in the Sirtic Gulf.

(ii) that the middle rank cities should be upgraded, particularly the regional capitals by decentralised industrial strategy and location of specialised social, commercial, administrative facilities.

(iii) that a balanced hierarchy of settlement should be encouraged through the provision of social and technical infrastructure according to size and function and with regard to entire cluster needs so that even small settlements will be assured access to employment and social facilities.

(iv) that 24 new growth centres should be created to exploit untapped resourses, absorb excess population, settle new lands and integrate the settlement network (Figure 4.8).

(v) that 159 villages which lack natural, economic and physical resources essential for future development and improvement of living conditions should be downgraded and their population eventually resettled.

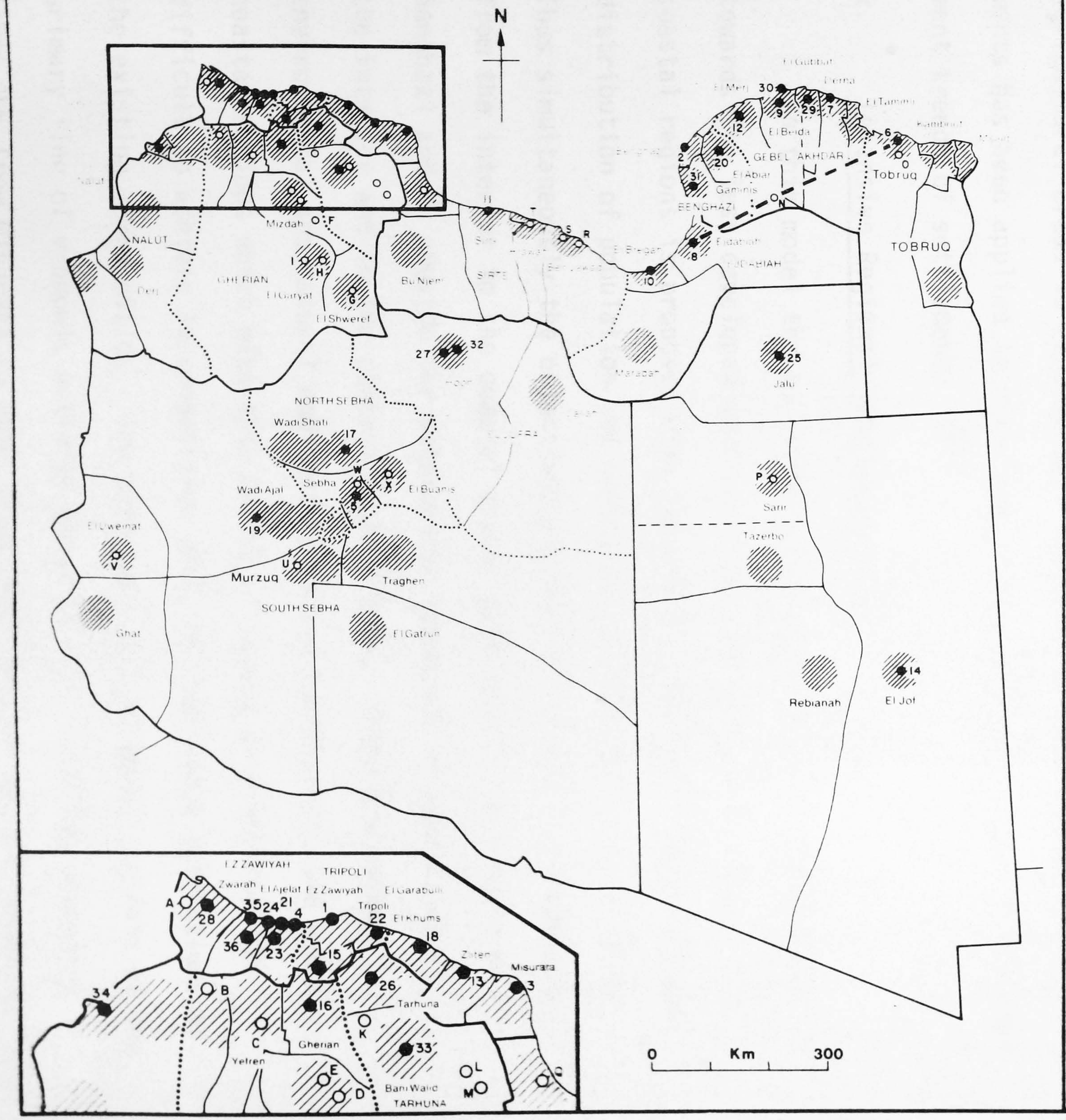
(vi) that the nomad population should be integrated into a Government sponsored national rangelands development programme. (64)

The importance of this study stems from the fact that it recommends the establishment of a close-knit relationship between local, regional and national investment policies. It also aims to identify those settlements which should be up-graded and those which should be down-graded to provide well-defined priorities for future economic, technical and social infrastructure programmes.

A good deal of preliminary work was performed by Italconsult, including the mapping of administrative boundaries, location of existing settlements and evaluation of their economic viability and development potential.

The Government, through its various Secretariats, Baladiyat and Agencies, and with the collaboration of the United Nations team in Tripoli, studied the recommendations set out in the Settlement Pattern Study by Italconsult. Some of the main recommendations concerning spatial planning were incorporated in the National Physical Perspective Plan (NPPP) published in 1979.

Fig 4-8 NEW GROWTH CENTRES RECOMMENDED BY ITALCONSULT



CITIES		NEW GROWTH CENTRES	
1	Greater Tripoli	A	El Assah Project Centre
2	Greater Benghazi	B	Shakshuk Project Centre
3	Misurata	C	Bir Ayyad
4	Ez Zawiyah	D	Nissmah
5	Sebha	E	El Shagigah
6	Tobruq	F	Bir El Ghani
7	Derna	G	El Shweref
8	Ejdabiah	H	El Garyat
9	El Beida	I	Tabgah
10	El Bregah	J	Bani Walid
11	Sirte	K	Wadi Abu Rahma
12	El Merj	L	Wadi Suf El Jin
13	Ziten	M	Wadi Zam Zam
14	El Jof	N	El Fawakher
15	El Aziziah	O	Wadi Shu'bah
16	Gherian	P	Sarir
17	Brak	Q	Wadi Bayy
18	El Khums	R	Ras Lanuf
19	Ubari	S	Es Sidra
20	El Abiar	T	Hrawah
21	El Harshah	U	El Maknusah
22	EL Garabulli	V	Wadi Tanezzuft
23	Ez Zahra	W	Sebha Project Centre
24	Sorman	X	Wadi Kneir
25	Jalu		
26	Tarhuna		
27	Hoon		
28	Zwarah		
29	El Gubbah		
30	Shahat		
31	Gaminis		
32	Waddan		
33	Bani Walid		
34	Nalut		
35	Sabratah		
36	E Ajelat		

Road proposed or under construction

36 Cities over 10,000

24 New growth centres

Planning region limit

Planning area limit

Planning cluster limit

Planning cluster core

Source Italconsult (1976) Settlement Pattern Study, Rome

In planning the country's spatial development the NPPP have constructed and analysed five variant physical models as alternative strategies to meet the development needs of the country. Figure 4.9 illustrates the five spatial development models.

1. Extrapolated Trends Models

This proposed a continuation of present development trends and Government policies in the distribution of basic economic activities and employment in the agricultural, manufacturing, housing and manpower sectors, with all regions benefiting economically and socially. The progressive development of the existing settlement network and agricultural areas is recommended. The hierarchical system of settlements has been applied to stimulate different growth rates and development trends of settlements. (65)

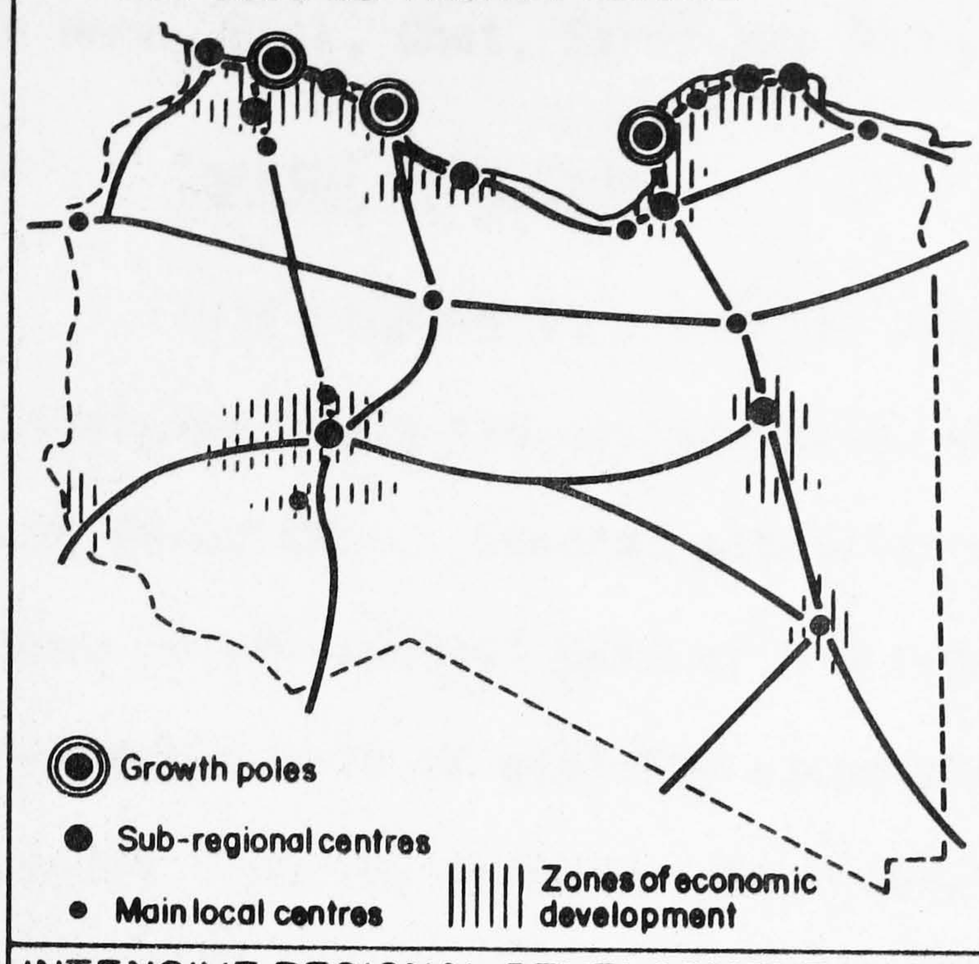
2. Intensive Regional Development Model

In this model the direction of economic and other activities towards the less developed southern areas and middle sections of the coastal regions is proposed with the aim of achieving a more balanced distribution of population and employment in the country as a whole. Thus simultaneously the objectives would be to restrain out-migration from the interior to the coastal areas, particularly to Tripoli and Benghazi and to provide for substantial increases in population in the interior and in the central coastal area. There are, however, environmental and natural constraints in the interior and the central coastal regions which make this policy of strong decentralisation difficult to achieve in competition with the inevitable attractions of the existing large cities. The structure of this model consists of one primary line of economic activity along the coast and two secondary lines one from Misurata to Hoon, Sebha and Ghat and another from

Figure 4.9

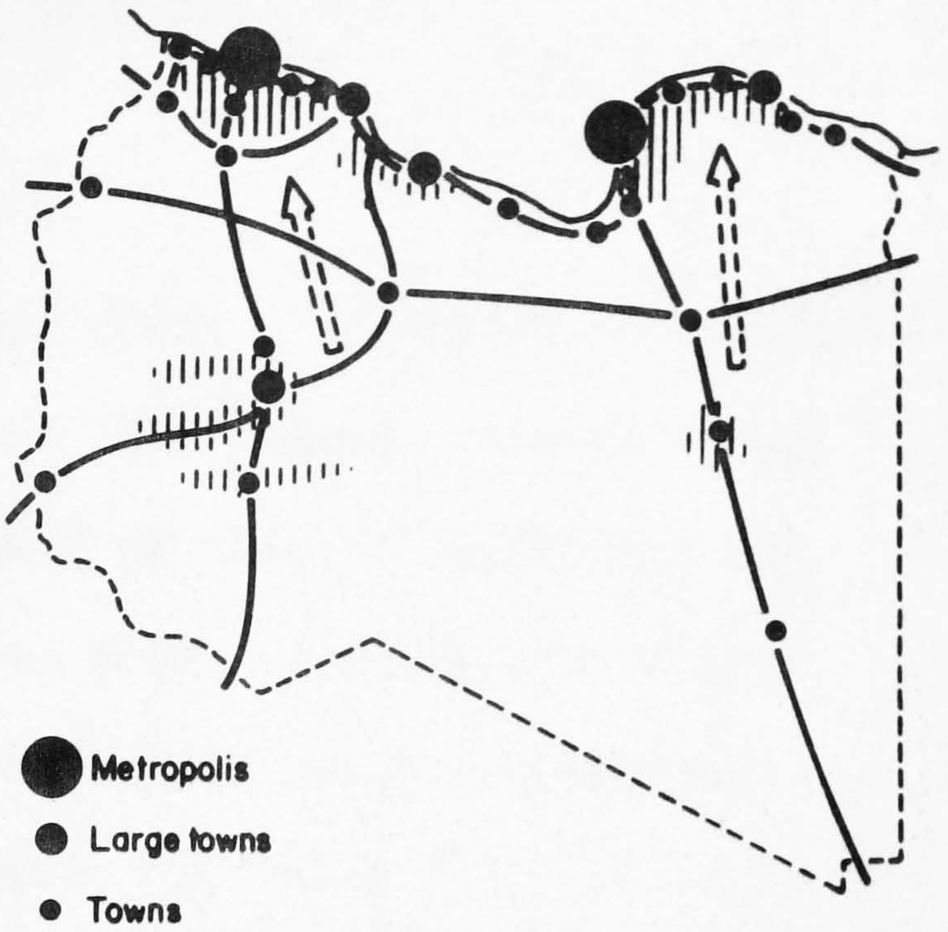
VARIANTS OF SPATIAL DEVELOPMENT MODELS

EXTRAPOLATED TRENDS MODEL



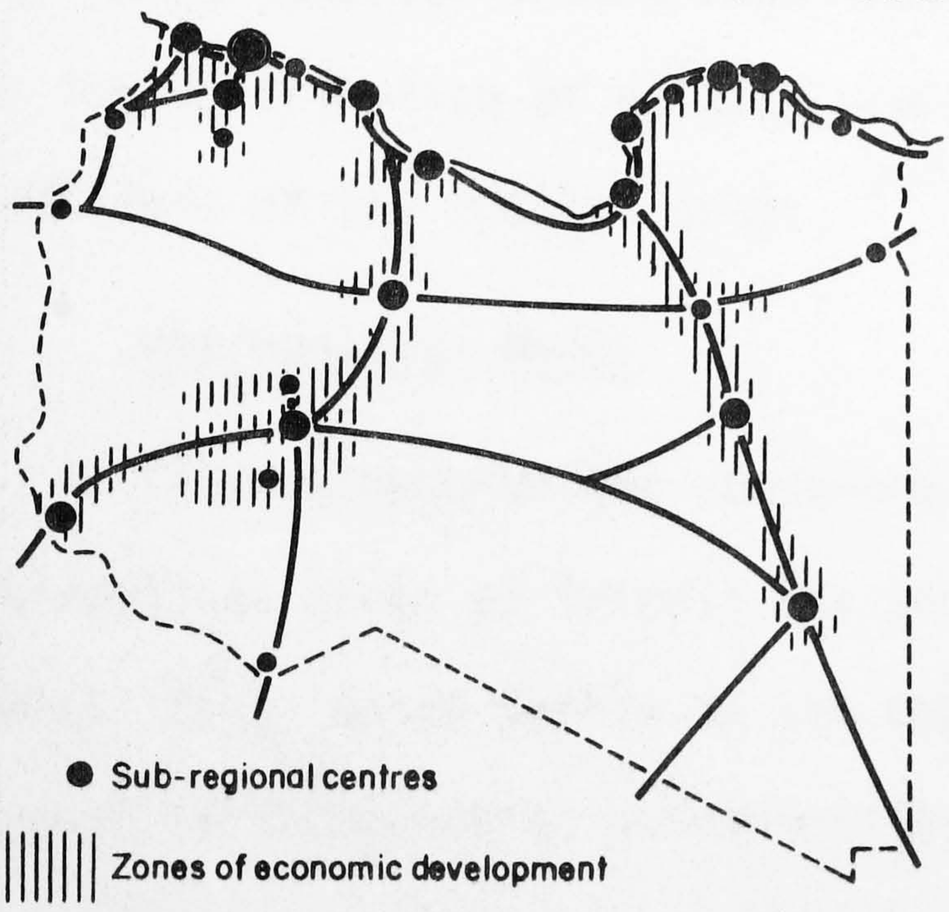
Growth poles
Sub-regional centres
Main local centres
Zones of economic development

METROPOLITAN MODEL



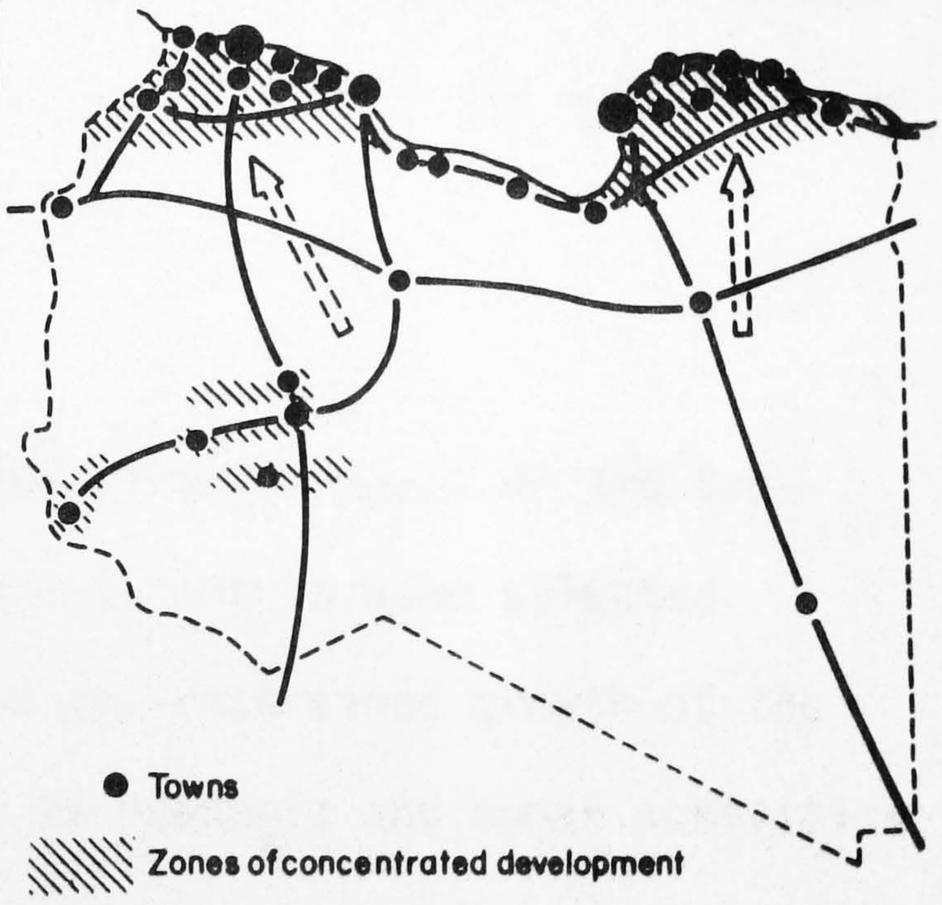
Metropolis
Large towns
Towns

INTENSIVE REGIONAL DEVELOPMENT MODEL



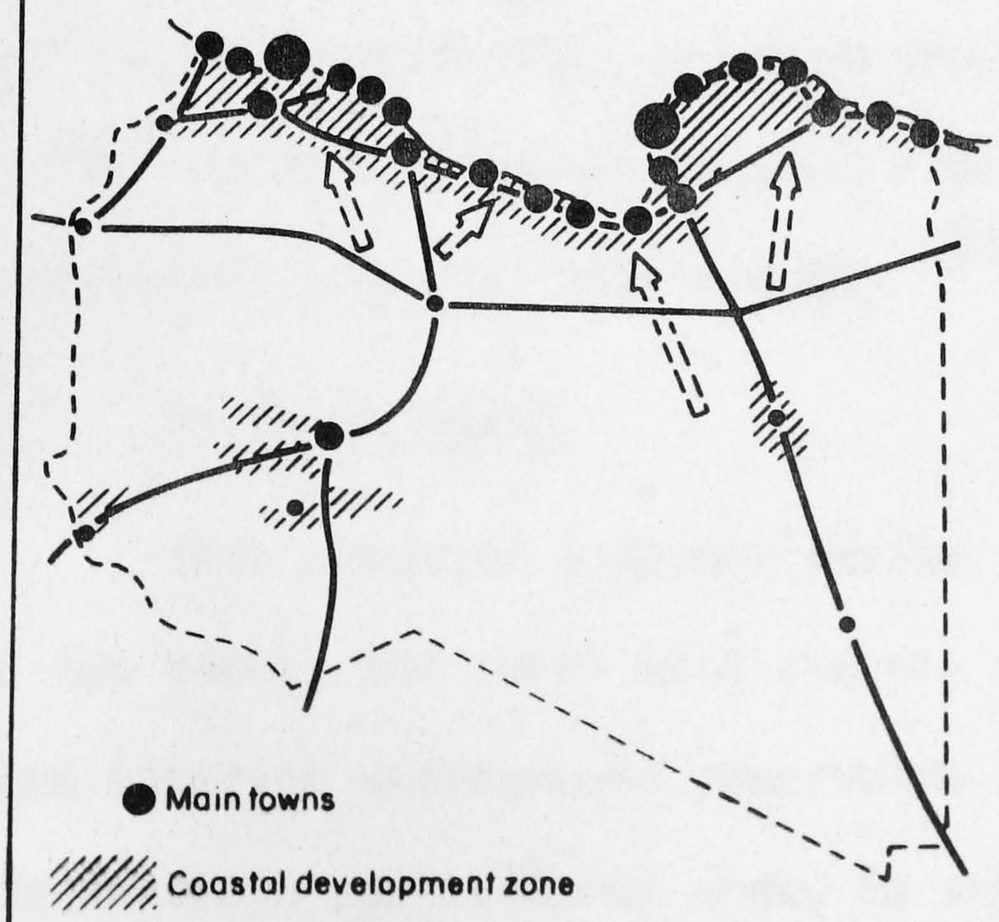
Sub-regional centres
Zones of economic development

BIPOLAR MODEL



Towns
Zones of concentrated development

COASTAL BELT MODEL



Main towns
Coastal development zone

Transport of water from ground water resources

Main roads

N

km
0 500

Source: Secretariat of Municipalities and Secretariat of Planning with U.N.T.C.P.P.P. "National Physical Perspective Plan 1981-2000" Draft 1979 Vol. I

Ejdabiah to Jalu, Sarir New Town and Kufra, with New Growth Centres in Hoon, Brak, Ghat, Sarir and Kufra. (66)

3. Coastal Belt Model

This recommends a general concentration of economic and physical activities along the coastal belt, where the climatic conditions are most favourable. Special attention would be paid to developing the towns in the central part of the coastal area, so as to give a more continuous belt of activity along the coast and secure the maximum benefit from the infrastructure developed, including the piping of water from interior underground water reservoirs. This model provides for the distribution of as many people as possible in the best climatic conditions of the coastal areas. (67)

4. Metropolitan Model

This recommends the concentration of development in the two metropolitan areas of Tripoli and Benghazi, and in some selected towns. It is based mainly on the rapid non-restrained growth of the largest cities creating concentrations of economic and human activities in selected areas, with the remaining areas being developed mainly for agricultural production and food processing. There are advantages in the concentration of economic and technical activities but it accentuates regional disparities. (68)

5. Bi-Polar Model

This proposes a concentration of economic and physical activities in two zones, the north west and the north east. In this model water from interior underground reservoirs would have to be transported to the northern agricultural areas to supplement existing water reservoirs. The development of the interior, and the central coastal areas would be limited. (69)

All the five models were analysed and evaluated by the NPPP.(70) Each was found to have some advantages and also some weaknesses. The last two models (Bi-polar and Metropolitan) were rejected, being in conflict with official policies and present development trends, while the first three were considered the most likely variants as a basis for future development.(71)

A new model was constructed on the basis of the first variant but incorporating some proposals selected from the second and the third variants (see Fig. 4.10). The main features of this model are illustrated in Figure 4.10. They may be summarised as follows:

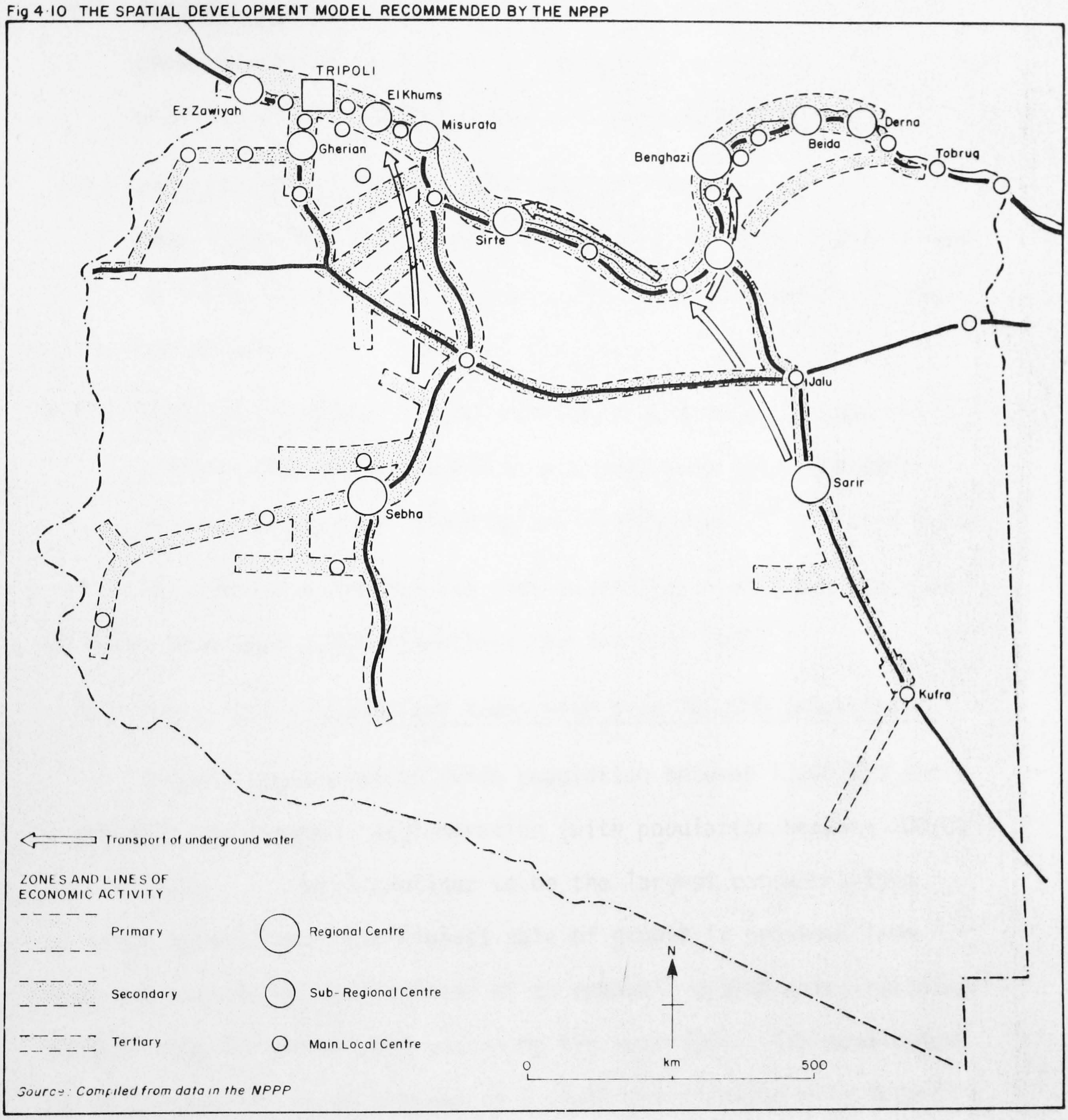
(i) A primary coastal line of economic activities between Misurata and Benghazi with the location of new sub regional centres along the central part of the coastal belt. The proposed new capital city has been rejected and, instead, a new service town at Harawah is to be created. It is envisaged that Tripoli will remain for a long time the seat of government and therefore it is necessary to bring up to date the city centre so that it is adequate for the administrative, cultural and scientific role of the State capital.

(ii) A secondary line of economic activity linking Misurata, Hoon and Sebha.

(iii) A secondary line of development linking Ejdabiah, El Bregah, Sarir New Town and Kufra.

(iv) The piping of water from underground reservoirs in the interior to the northern agricultural areas.(72)

Fig 4·10 THE SPATIAL DEVELOPMENT MODEL RECOMMENDED BY THE NPPP



Source: Compiled from data in the NPPP

The plan recommends a strengthening of regional and sub-regional centres based on the following definitions:

(i) Regional centre : in the Libyan context a major urban centre which concentrates economic, administrative, social and cultural activities for national as well as regional purposes.

(ii) Sub-regional centre : a main urban centre where certain economic administrative, social and cultural activities are centralised to serve the towns and villages within the boundaries of the sub-region.

(iii) Main local centres : towns which are centres of a local activity and which coordinate and implement local economic social and physical planning and development. (73) (Table 4.23).

The plan also defines the rank according to size and function of every town over 7,000 inhabitants by the year 2000.

(i) First rank : cities and towns with over 100,000 inhabitants

Tripoli agglomeration (with population between 1,600,000 and 1,900,000) and Benghazi agglomeration (with population between 700,000 and 900,000) will continue to be the largest concentrations of urban population. The highest rate of growth is provided from Misurata because of its function as an economic growth pole, reaching between 250,000 and 350,000 people by the year 2000. The development of Ez Zawiyah has to be planned in a close coordination with Tripoli's development, but a growth to 150,000 - 200,000 people in Ez Zawiyah is likely to be achieved up to 2000. The next town of more than 100,000 people is Sebha with population between 110,000 and 130,000 people.

Table 4.23 Hierarchy of Centres Recommended by N.P.P.P for the year 2000

Regional Centres	Sub-Regional Centres	Main Local Centres
1. TRIPOLI		1. El Aziziah
	1. Zwarah or Ez Zawiyah	2. Ez Zawiyah or Zwarah 3. Bu-Kamash
	2. El Khums	4. El Garabulli 5. Tarhuna
	3. Misurata	6. Zliten 7. Bani Walid 8. Bu Grein
	4. Gherian	9. Nalut 10. Jado 11. Yefren 12. Mizdah 13. Ghdams
2. BENGHAZI		14. Tokrah 15. Gaminis 16. El Abiar
	5. El Beida	17. El Merj
	6. Derna	18. Tobruq 19. Bardiya
3. SARIR (planned)		20. Kufra 21. Jalu
	7. Sirte	22. Ben Jawad
	8. Ejdabiah	23. El Bregah
4. SEBHA		24. Hoon 25. Brak 26. Ubari 27. Murzuq 28. Ghat

Source: Secretariat of Municipalities et al (1979) National Physical Perspective Plan, Tripoli, p.47.

(ii) Second rank with population between 50,000 and 100,000

Zwarah, El Khums, Garabulli, Zliten, Gherian, El Beida, Derna, Sirte, Ejdabiah, El Bregah and Hoon.

(iii) Third rank towns with population between 20,000 and 50,000

El Aziziah, Bu-Kamash, Sorman, Sabratah, Tarhuna, Bani Walid, El Gubbah, Tolmeitha, Tobruq, Ben Jawad, Sarir, Waddan and Brak.

(iv) Fourth rank size towns with population between 7,000 and 20,000 at least 43 towns.

(v) Fifth rank size towns, small towns with less than 7,000 population - towns and villages serving rural population.

In total it is estimated that the urban population will be between 4.5 and 5.4 mn people by the year 2000.

The plan places no limits on the growth of Tripoli and Benghazi which will continue to dominate the urban system in the year 2000. However below the level of the two major centres a certain restructuring of the urban system is proposed. Three intermediate towns are scheduled for rapid growth, in particular Misurata, but also Ez Zawiyah and Sebha, Ejdabiah, Derna and El Beida, also intermediate towns, are to become sub-regional centres, but Tobruq is to experience only limited growth and will remain a centre of local activity. Eight small towns (Zwarah, El Khums, El Garabulli, Zliten, Gherian, Sirte, El Bregah and Hoon) have been selected for development as second rank centres; moreover Zwarah, El Khums, Gherian and Sirte are to become sub regional centres. A further nine small towns are promoted to third rank centres - El Aziziah, Sorman, Sabratah, Tarhuna, Bani Walid, El Gubbah, Tolmeitha, Waddan and Brak. With the exception of Hoon, Beni Walid, Brak and Waddan, all the small towns scheduled for development as second and third rank centres, lie on the primary coastal axis.

The major feature of the proposals incorporated in the new spatial model recommended by the NPPP are now being implemented. A plan for the ambitious project to pipe water from aquifers in the interior to the primary development axis along the Mediterranean coast has been completed. In November 1983 a South Korean company was awarded a US$ 3,300 mn contract to build pipelines linking Tazerbo and Sarir in the Sahara with the coastal strip from Benghazi to Sirte. The development of the coastal area between Ejdabiah and Misurata has already begun by locating major industrial developments in the small town of El Bregah and in the new towns of Ras Lanuf and Gasr Ahmed. Ras Lanuf, the site of Mobil Oil's crude oil export terminal is being transformed into Libya's major petrochemicals centre. The new town is under construction 17 km west of the petrochemicals complex and is planned to house some 15,000 people. The new town of Gasr Ahmed is located 8 km to the east of Misurata and 3 km from the harbour. It is being built to house workers from the nearby steel complex. Another new town is being constructed at Kufra to the north of the existing town of El Jof on the secondary axis linking Ejdabiah and Kufra. It will have 2,000 people most of them workers in the agricultural project nearby. Plans are well advanced for a new town at Sarir 400 km north of Kufra and 600 km south of Benghazi. It was proposed by Italconsult in their settlement study as one of the new growth centres. The economic base of the town will depend on agricultural development in the Sarir Productive Project and it will also act as a focus for the oil industry in the area providing leisure and recreation facilities for oil workers who live in camps in the vicinity. Sebha on the other secondary axis is already developing rapidly as a major growth centre.

It remains to be seen whether plans to restructure the urban system and to develop selected small towns as second and third rank

centres will be implemented and if they are carried out whether they will succeed in reducing the existing trend towards ever increasing migration to the major urban centres. On the basis of past experience, the success of the Government's declared spatial development policies is far from assured.

4.6 CONCLUSION

The creation and expansion of an important public sector and a wave of nationalisation measures since the late 1970s have given the State a dominant position in the Libyan economy. Since the late 1970's the State has controlled almost all areas of economic activity in the country to the extent that even the private retailing sector has been abolished.

The changes which have occurred in the urban centres of Libya are the result of many interrelated factors but it is argued that State intervention has played the dominant role in the change and development of the small towns since the 1960's. Before the private sector was abolished it was heavily concentrated in the two major cities and did not exert a significant influence on the development of the small towns. During the last 20 years massive funds have been allocated to urban developments and all the small towns, although in varying degrees, have been affected by government investment programmes. Heavy investment in economic and social infrastructures (transport and communications, health and education, housing, water and sewage) has transformed the small towns and investment in the productive sectors (agriculture and industry) have sought to strengthen and diversify their economies. Most of the small towns have benefited from the reorganisation of the country's administrative structure and their promotion in the administrative hierarchy. In some cases these

functional changes have been dramatic, for example El Bregah is being transformed from a dormitory settlement for workers at the oil terminal to a major industrial centre and the site of Libya's new technical university. In others the scale of change is less impressive as in Ghat and Ubari where existing regional functions have been strengthened. Detailed information on the changing function of the small towns and their relationship to their hinterland is lacking and there is an urgent need to investigate this topic through field research.

Attempts are now being made to integrate sectoral and spatial development policies and to produce a coordinated approach to regional development and the restructuring of the urban system. It is still too early to evaluate the impact of these spatial development policies on the small towns. Although State intervention has transformed the small towns, it has also made them totally dependent on national goals and policies. They are especially vulnerable to changing policies and priorities at the national level and totally dependent on government investment to finance their development and on the continued availability of State funds. Most of the new agricultural and industrial projects remain heavily subsidised and dependent on continued Government support.

Demographic, functional and morphological changes in the Libyan small towns have resulted almost exclusively from State initiative and intervention. The following chapters attempt to illustrate these changes.

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CHAPTER FIVE

POPULATION CHANGES

5.1 INTRODUCTION

The social and economic developments which have taken place in Libya in the last two decades have greatly affected the structure and distribution of population in the whole country.

Aware of the impact of demographic characteristics on social, economic and other aspects of community life and indeed vice-versa, this chapter seeks to describe, analyze and comment on those characteristics, and on population changes in the Libyan small towns.

A population study of small towns is of vital importance to an understanding of the urban growth of the small towns and their functions. Such a study is essential in the planning process, not only to the planners, but also to the administrators and policy makers to enable them to gear their action programmes according to the needs of the small towns.

This aspect of change in the small towns is discussed in relation to the following issues:

(i) Population growth

(ii) Non-Libyans

(iii) Internal migration

(iv) Age and Sex structure

5.2 POPULATION GROWTH

At the first census in 1954, only three years after independence, the total population of Libya was little more than 1,089,000; by 1964 and the second census it had grown to 1,564,000, an increase of 43.7 per cent. At the third census in 1973 the total population was

2,251,000, an increase of 46.5 per cent. The average annual growth exceeded 4 per cent between 1964 and 1973. Estimates based on the maintenance of a rapid growth rate of at least 4.2 per cent suggest that the population totalled at least 3 million in 1980.(1) These growth rates, compared to the growth rates of neighbouring Arab countries, or other Arab countries, seem rather high, even too high to be attributed to natural growth alone.(2)

In such a case two hypotheses seem plausible: either the figures provided by the census have been distorted by errors or alongside the natural growth there exists an important migratory current coming into the country. In fact, in Libya's case both of these hypotheses should be considered. The 1954 census has certainly made multiple omissions which have not been accounted for elsewhere, but also it is certain that immigration has played an important role in the growth of the population since the early 1960's. For example, it is known that following the discovery and exploitation of oil there has been, in addition to the considerable large influx of foreign workers into Libya a significant number of Libyans returning to their own country who had, up until then, lived abroad in neighbouring countries such as Tunisia and Egypt. In short, the growth rate is attributable to a high rate of natural increase, the return of numerous Libyans from other countries, and the influx of foreign workers.

Indeed, Libya has experienced a high rate of natural increase. In 1976 the crude birth rate was 47.7 per thousand, while the crude death rate was 7.0. The main factor responsible for the increase in the crude natural increase rate between 1964 and 1976 is the substantial improvement in health and welfare facilities, all of which are available free of charge.(3)

Since Independence,the Libyan government has given high priority to the health sector. In 1960 there were 19 hospitals with 3,563 beds, 205 doctors and 12 health centres mostly concentrated in the main cities; the small towns were lacking in health facilities; by 1974 there were 55 hospitals with 9,741 beds, 2,130 doctors and 57 health centres, an average of one doctor per 1,122 inhabitants and one hospital bed per 245 inhabitants. These figures are comparable with developed countries. Figures for 1980 and estimates for 1985 are even more impressive. Table 5.1 shows the number of hospital beds and staff for 1980 and estimates for 1985. It is expected that by 1985 there will be 23,765 hospital beds, 5,270 doctors, 16,500 nurses, 40 dispensaries and 1,038 preventive health staff. Figure 5.1 shows the distribution of hospitals, health centres and medical centres in Libya in 1978. There is no doubt that recent progress in the Libyan health services is remarkable. The health facilities in all small towns have improved dramatically through the construction of hospitals, medical and health centres and their inhabitants have easy access to more specialised medical services in the major cities. The country's 1981-85 health programme includes building two hospitals (1,200 beds) one in Tripoli and the other in Benghazi, five others, each with 200 beds in the small towns of Sabratah, Ez Zahra, Tarhuna, El Merj, Kufra and 40 smaller regional ones are either being built or planned. It will take some time before these facilities take full effect. The infant mortality rate is about 130 and life expectancy 55; therefore one can expect further mortality decline.

Libya, unlike its neighbours Tunisia and Egypt, has not yet experienced any fertility decline and remains in a phase of very high natural increase. Between 1964 and 1973 the average family size rose from 4.3 to 5.9. Early marriage and generous family allowances from

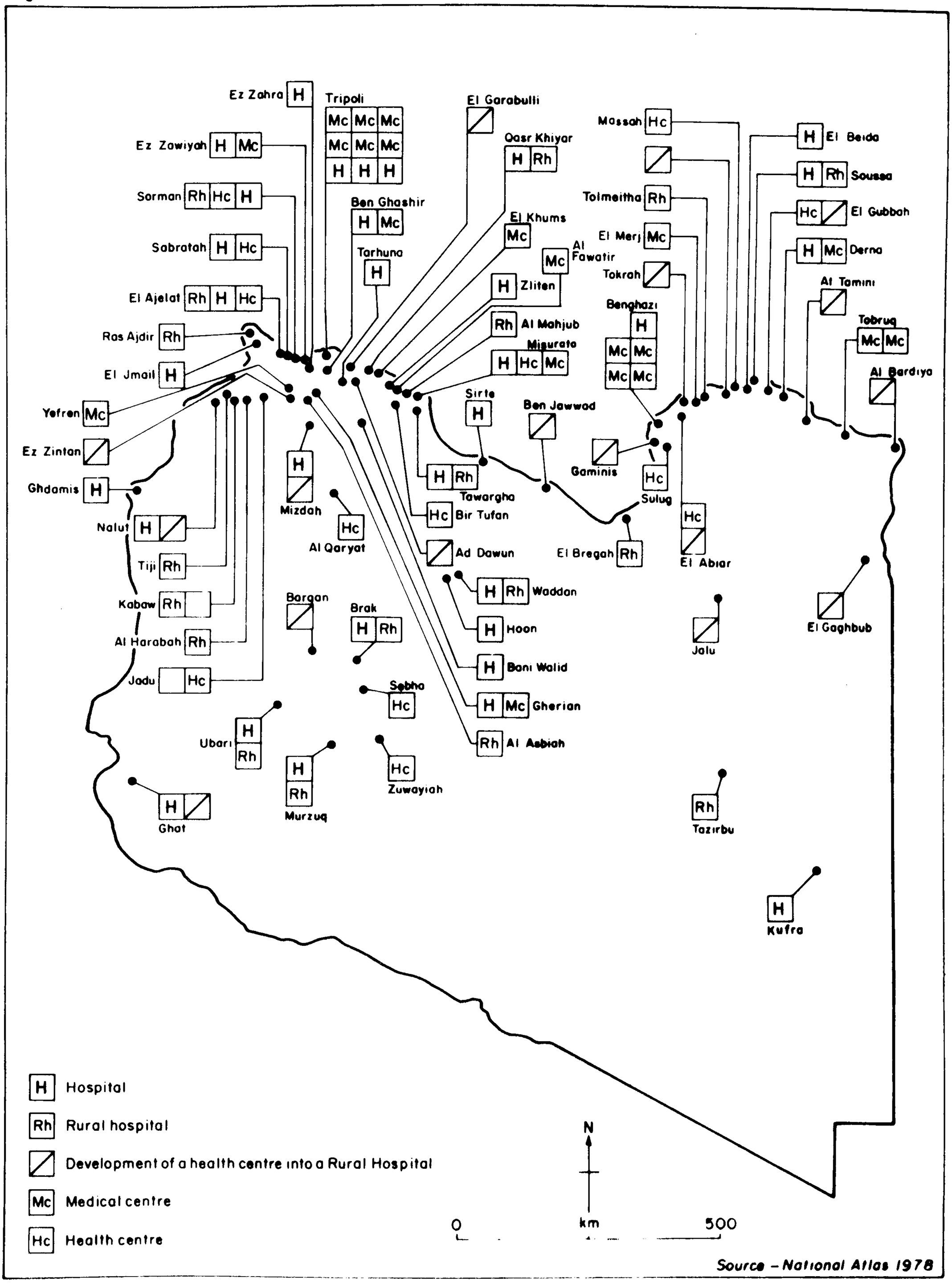
Table 5.1 : Numbers of Hospital Beds and Staff 1980 and 1985

	1980	1985*	Growth %
Hospital beds	14,472	23,765	64.2
Ratio of beds per 1000 people	4.5	6.0	33.3
Doctors	4,300	5,270	22.8
Ratio of people per doctor	755	750	0.7
Nurses	13,524	16,500	22.0
Technicians and ancillary staff	2,300	4,830	110.0
Dispensaries	28	40	42.9
Preventive health staff	838	1,038	23.9

* Estimate

Source : Secretariat of Health (1980) Economic and Social Development Plan 1980-85. Tripoli pp.21-32 (in Arabic)

Fig 5·1 DISTRIBUTION AND TYPE OF MEDICAL CENTRES 1978



Source – National Atlas 1978

the State contribute to the maintenance of high fertility. (4)

During the period 1954 to 1973 by far the greatest absolute and relative increase in population took place in the two most populous muhafadat of Tripoli and Benghazi. Tripoli grew by 169 per cent, Benghazi by 147 per cent, and together they accounted for 56 per cent of the total population growth of Libya during this period. The population of these two muhafadat rose from 36.5 per cent of the total population in 1954 to 46 per cent in 1973 (Table 5.2). Only Derna and Sebha muhafadat grew at rates above the national average. Gherian and El Khums, the most depressed regions, had the largest number of outmigrants and experienced very slow population growth, about one-third of the national average (Figure 5.2); their combined populations declined from some 21.4 per cent of the total population in 1954 to 14.1 per cent in 1973. Tripoli and Benghazi muhafadat gained most at the expense of neighbouring muhafadat. Half of all Tripolitanian migrants concentrated in Tripoli City and the majority originated in the neighbouring muhafadat of Gherian, El Khums and Misurata; the majority of Benghazi's in-migrants came from Jabel Akhdar and Misurata.(5)

Because of the polarisation of population concentration upon the two cities and other intermediate towns, and also because of experiences in other Middle Eastern countries, one might assume that the Libyan small towns are not growing; in other words they are stagnating, or even declining. The aim of this section is to test this hypothesis. After compiling population data from several sources and after checking and counter checking this information Table 5.3 and Figure 5.3 show the population growth of the small towns between 1954 and 1973. These statistics must be treated with caution particularly since the accuracy of the 1954 census has been repeatedly questioned. Nevertheless they do allow us to gain some impression of the scale of population growth in the small towns.

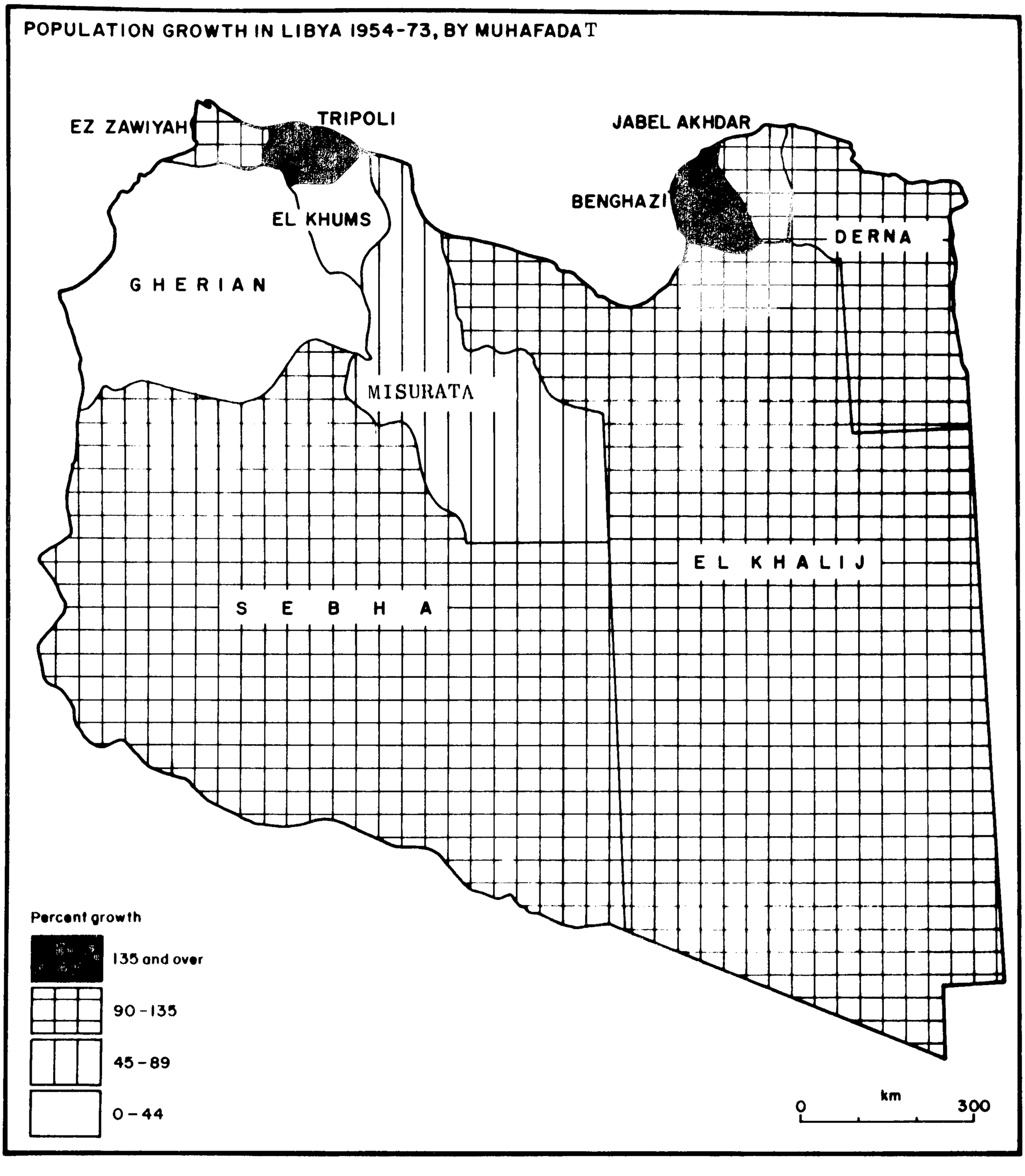
Table 5.2

Population of Libyan Muhafadat, 1954-73

Muhafadat	Area (thousand sq km)	Density 1973 (per 100 sq km)	Pop ('000 1954	% of total pop.	Pop ('000 1964)	% of total	Pop ('000 1973)	% of total pop	% growth		Males per 100 females 1973
									1964-73	1954-73	
Derna	103	119	56	5.2	84	5.3	123	5.4	45	120	112
Jabel Akhdar	17	776	67	6.2	91	5.8	131	5.8	44	96	111
Benghazi	17	1,982	134	12.3	225	14.4	331	14.7	47	147	119
El Khalij	720	15	52	4.8	80	5.1	108	4.8	35	108	122
Misurata	148	120	108	9.9	130	8.3	179	8.0	38	66	110
El Khums	25	648	124	11.4	137	8.8	163	7.2	19	31	109
Tripoli	3	24,500	264	24.2	406	25.0	709	31.4	75	169	116
Ez Zawiyah	7	3,543	120	11.0	154	10.4	244	10.8	49	103	110
Gherian	150	104	114	10.0	181	11.6	155	6.9	-14	36	109
Sebha	559	20	50	4.6	67	4.3	113	5.0	69	126	106
Total	1,749	131	1,089	100	1,565	100	2,257	100	44	107	114

Source Compiled from: Kingdom of Libya (1955) The 1954 Census of Population, Benghazi (in Arabic). Kingdom of Libya (1966) The 1964 Census of Population, Benghazi (in Arabic) Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic).

Fig. 5.2



Source: El Mehdawi,M and Clarke, J.I. (1982) "Population Redistribution in Libya" in Clarke, J.I. and Kosinski, L.A. (eds) Redistribution of Population in Africa, Heinemann, London. p.71.

Table 5.3 Population Growth Of Small Towns 1954-1973

Small Towns	Population			Population Growth (Percentage)		Annual Rate of Growth	
	1954	1964	1973	between 1954-64	between 1964-73	1954-64	1964-73
El Merj	9,900	11,200	28,900	13	158	1.0	18.0
Zliten	2,000	6,500	22,300	225	243	22.0	27.0
Tarhuna	1,000	2,400	22,100	140	820	14.0	91.0
El Khums	2,500	8,900	20,600	256	131	26.0	14.0
Sirte	2,000	7,100	16,700	255	135	25.0	15.0
El Jmail	700	1,500	15,100	114	906	11.0	100.0
Yefren	1,000	2,000	15,000	100	650	10.0	72.0
El Garabulli	2,000	10,100	14,500	405	43	40.0	5.0
Zwarah	4,000	13,800	14,000	245	1	24.0	0.1
Sabratah	600	1,600	13,900	166	768	17.0	85.0
El Aziziah	2,000	5,000	12,600	150	152	15.0	17.0
Brak	1,500	7,000	12,600	366	80	37.0	9.0
Gherian	3,000	10,200	12,200	240	20	24.0	2.0
Bani Walid	1,000	2,800	12,000	180	328	18.0	36.0
El Abiar	1,000	3,400	11,400	240	235	24.0	26.0
Beninah	3,200	7,100	9,600	121	35	12.0	4.0
Kufra (El Jof)	2,000	4,300	9,300	115	116	11.0	13.0
El Ajelat	300	900	9,200	200	922	20.0	102.0
El Gubbah	1,000	2,100	9,000	110	328	11.0	36.0
Shahat	2,500	6,200	8,300	148	33	15.0	4.0
Ez Zahra	800	1,800	8,200	125	355	13.0	39.0
Nalut	2,000	6,500	7,900	225	21	22.0	2.0
El Bregah	500	2,700	6,500	440	140	44.0	16.0
Murzuq	1,000	3,800	6,100	280	60	28.0	7.0
Jalu	1,000	3,900	5,400	290	38	29.0	4.0
Hoon	1,000	3,400	5,300	240	55	24.0	6.0
Mizdah	700	2,000	5,100	185	155	18.0	17.0
Tokrah	1,000	1,800	5,100	80	183	8.0	20.0
Waddan	1,000	3,500	4,800	250	37	25.0	4.0
Gaminis	1,500	5,800	4,600	286	- 20	29.0	- 2.0
Msaid	900	1,900	4,300	111	126	11.0	14.0
Ghdams	1,600	2,600	4,000	62	53	6.0	6.0
Tolmeitha	1,100	2,900	3,800	163	31	16.0	3.0
Ubari	700	1,700	3,700	142	117	14.0	13.0
Ghat	800	1,600	3,700	100	131	10.0	15.0
Sorman	800	1,800	3,400	125	88	12.0	10.0
Soussa	1,800	2,000	3,300	11	65	1.0	7.0

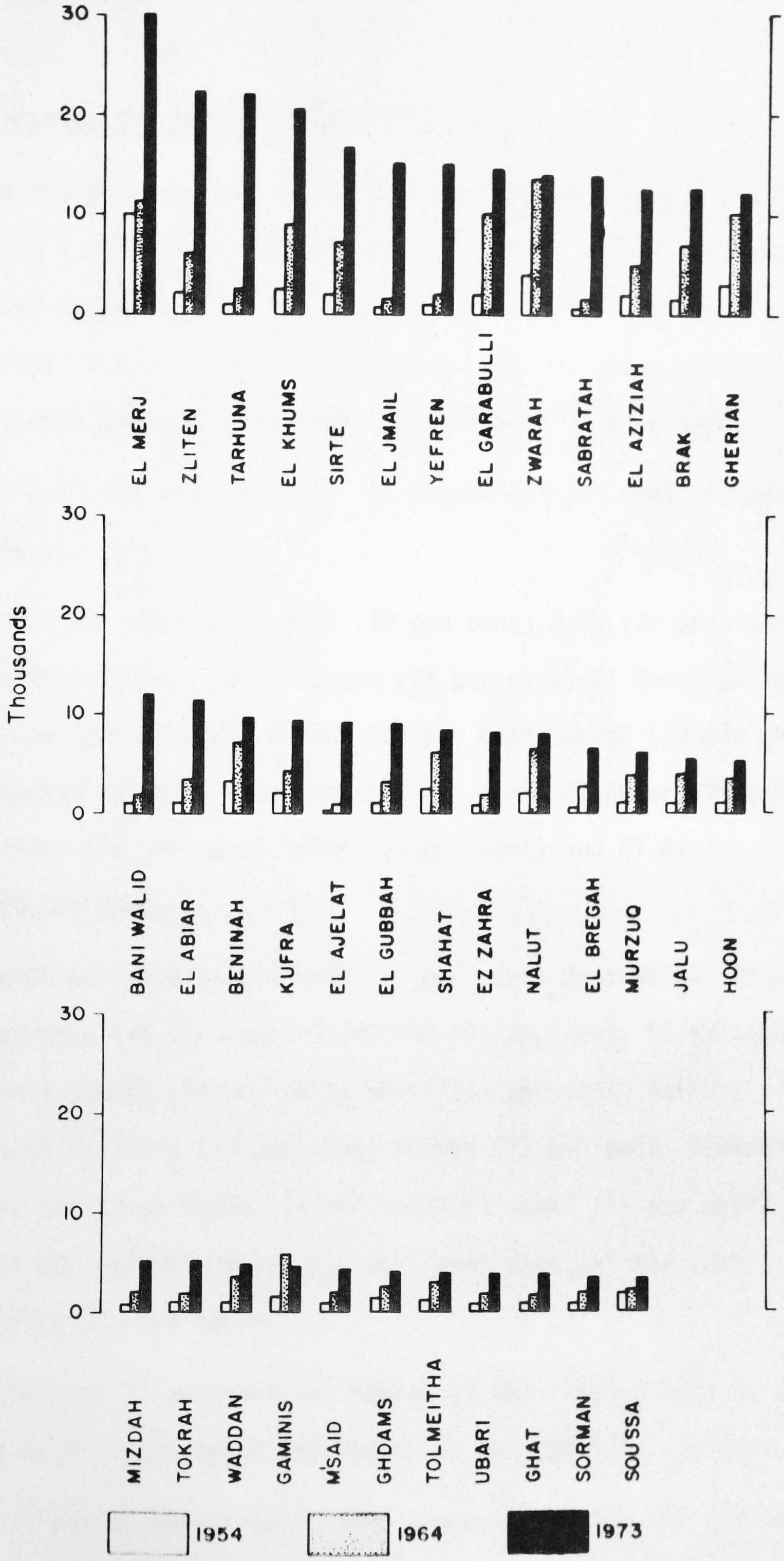
Source Compiled from : Kingdom of Libya (1955) The 1954 Census of Population, Benghazi (in Arabic), Kingdom of Libya (1966) The 1964 Census of Population, Benghazi, Libya (in Arabic), Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic). Italconsult (1976) Settlement Pattern Study, 8 volumes, Rome. Polservice (1980) Existing condition and evaluation of development potentials, Warsaw. for the year 1954 in addition to the census figures also as estimated by several officials during the author's fieldwork.

To calculate the annual growth rate of population the author has used the following formula:

$$r = \left(t \sqrt{\frac{P1}{Po}} - 1 \right) \times 100$$

where Po is the population at the beginning of the period, P1 is the population at the end of the end of the period, t the number of years between the two censuses and r is the annual percentage rate of growth. See Clarke, J.I.(1972) Population Geography Pergamon Press. Oxford,p.146.

Fig 5·3 POPULATION GROWTH OF SMALL TOWNS 1954–1973



SOURCE Compiled by the Author from the following sources – (a) Figures for 1954 were extracted from the 1954 Census and as estimated by many officials during the Author's fieldwork. (b) 1964 census of population. (c) 1973 census of population. (d) Italconsult Reports 1976. (e) Polservice Reports 1980

Analysing Table 5.3 and Figure 5.3, the following facts can be revealed.

Firstly, the period between 1954 and 1964:-

During this period the annual rate of growth of the small towns varied from 1 per cent to 44 per cent. However, only four towns experienced an annual rate of growth of less than 10 per cent and almost half recorded a rate of over 20 per cent. On the basis of the annual rate of growth the small towns may be divided into four groups:

(i) 40 per cent and above (2) El Bregah (44 per cent) El Garabulli (40 per cent)

(ii) 20-40 per cent (14) Brak (36 per cent) Jalu (29 per cent) Gaminis (28 per cent) Murzuq (28 per cent) El Khums (26 per cent) Sirte (25 per cent) Waddan (25 per cent)Zwarah (24 per cent) Gherian (24 per cent) Hoon (24 per cent) El Abiar (24 per cent) Zliten (22 per cent) Nalut (22 per cent) and El Ajelat (20 per cent)

(iii) 10-20 per cent (17) Mizdah (18 per cent) Bani Walid (18 per cent) Sabratah (16 per cent) Tolmeitha (16 per cent) El Aziziah (15 per cent) Shahat (14 per cent) Ubari (14 per cent) Tarhuna (14 per cent) Ez Zahra (12 per cent) Sorman (12 per cent) Beninah (12 per cent) Kufra (11 per cent) El Jmail (11 per cent) Msaid (11 per cent)El Gubbah (11 per cent) Ghat (10 per cent) Yefren (10 per cent)

(iv) less than 10 per cent (4) Tokrah (8 per cent) Ghdams (6 per cent) El Merj (1 per cent) and Soussa (1 per cent)

This period immediately after independence saw the discovery and rapid development of Libya's oil resources which stimulated rural to urban migration. This was a peaceful period and the people started to settle and look for jobs in order to create a better life.

The high population growth in El Bregah may be explained by the establishment of an oil terminal and associated facilities there in 1959/60. Other small towns in the oil producing area such as Jalu, Hoon and Sirte benefitted from the multiplier effect of the oil industry with the growth of service and commercial activities; in addition the families of Libyan workers in the oil camps settled in these towns because married quarters were not available in the camps. The growth of border towns such as Msaid, Ghdams, Zawarah and Ghat can be attributed to the expansion in commercial activities, tourism and the existence of the security services (police and military). The military function was one of the major factors in the growth of El Khums, Bani Walid and El Abiar all of which became the location of important military camps. A number of small towns became the headquarters of the Mutassarifiyah and Mudiriyah and this meant that civil servants employed in the administration came from towns such as Derna, Ez Zawiyah and Misurata to settle there. Derna, for example, once supplied most of these small towns with administrative staff and teachers. Several small towns were the site for extensive construction activities stimulated by numerous government infrastructure projects which attracted young men from nearby villages; examples include El Gubbah and Shahat. Much of the growth in small towns such as Bani Walid, Mizdah, Yefren, Gherian, Sirte, Kufra, El Abiar, Tokrah and Tolmeitha were attributed to the settling of nomadic populations. Waddan and Hoon also benefitted from the construction of the new Fezzan road linking Misurata and Sebha. Beninah grew as the site of the main airport serving the eastern part of Libya and the location of the main water reservoir for Benghazi City.

The smallest percentage of growth was recorded by El Merj and Soussa. El Merj suffered severe destruction as a result of the

earthquake in 1963 and there was substantial outmigration to other towns such as Benghazi and El Beida. Soussa, close to El Beida, may have also experienced outmigration of workers to construction sites in the new capital.

Secondly, the period between 1964 and 1973:-

During this period the annual rate of growth of the small towns varied from 1 per cent to 102 per cent. On the basis of the annual rate of growth the small towns may be divided into four groups:

(i) Above 40 per cent (5) Tarhuna (91 per cent) El Jmail (100 per cent) Yefren (72 per cent) Sabratah (85 per cent) and El Ajelat (102 per cent)

(ii) 20-40 per cent (5) Zliten (27 per cent) Bani Walid (36 per cent) El Abiar (26 per cent) El Gubbah (36 per cent) and Ez Zahra (39 per cent)

(iii) 10-20 per cent (12) El Merj (18 per cent) El Khums (14 per cent) Sirte (15 per cent) El Aziziah (17 per cent) Kufra (13 per cent) El Bregah (16 per cent) Mizdah (17 per cent) Tokrah (20 per cent) Msaid (14 per cent) Ubari (13 per cent) Ghat (15 per cent) and Sorman (10 per cent)

(iv) Less than 10 per cent (15) El Garabulli (5 per cent) Zwarah (1 per cent) Brak (9 per cent) Gherian (2 per cent) Beninah (4 per cent) Shahat (4 per cent) Nalut (2 per cent) Murzuq (7 per cent) Jalu (4 per cent) Hoon (6 per cent) Waddan (4 per cent) Gaminis (-2 per cent) Ghdams (6 per cent) Tolmeitha (3 per cent) and Soussa (7 per cent)

This period 1964-1973 saw two important events which had a dramatic impact on demographic changes, namely rising oil revenues and the 1969 Revolution. All small towns have experienced population

growth with two exceptions Zawarah and Gaminis. Zawarah recorded only 1 per cent growth and could be classified as a stagnant small town which experienced outmigration of workers to Tripoli. The population of Gaminis declined from 5,800 in 1964 to 4,600 in 1973. This may have been due to the fact that its administrative functions as a baladiyah headquarters were transferred to Suluq and also to the low economic potential of the area. The low percentage growth for Gherian, Zawarah and Nalut could be attributed to outmigration to Tripoli, in the case of Shahat to El Beida and in the case of Beninah and Tolmeitha to Benghazi. However over half of the small towns experienced an annual rate of growth of over 10 per cent during this period. One of the major factors must be the impact of government investment programmes in urban areas which resulted in an acceleration in rural to urban migration and the arrival of large numbers of foreign workers in the small towns. The very high rates of growth experienced by El Ajelat, Tarhuna, El Jmail, Sabratah and Yefren are difficult to explain because of lack of detailed population statistics particularly related to rural to urban migration and the possibility of error in the census data. The absence of data on internal migration in Libya as one of the variables in population growth is a major obstacle to further research on the population dynamics of small towns.

5.3 NON-LIBYANS

The oil economy has stimulated an enormous programme of economic and social development with emphasis being placed on the planning for industrial and agricultural self-sufficiency and the provision of improved and extended welfare and social services. The large scale development projects initiated have resulted in a heavy dependance upon expatriate workers due to the fact that the Libyan population has been

unable to meet the heavy demand for labour. The number of Libyans entering the workforce has been much less than the rate of population growth. Due to the expansion of the educational system more Libyans are staying longer as students. Females have a low participation rate - in 1973 males formed 93 per cent of the economically active population. Many skills needed for the development effort are not available from within the Libyan workforce. Therefore much of the new development is dependent upon foreign workers. This shortage of human resources is one of the most critical problems that beset economic and social development in Libya.(6)

Although the demand for labour was solved in the sixties by the return of the Libyans who for various reasons had been living abroad, in the seventies and the eighties foreign workers supplied the hungry market with skilled and non-skilled labour. The growth in the numbers of non-Libyans employed in the country can be illustrated by the fact that in 1964 there were only some 17,000 non-Libyan workers in the country, but the figure had soared to an estimated 170,000 in 1974.(7) This meant that the figure had increased tenfold between 1964 and 1974. Birks and Sinclair estimated that the number of expatriates in Libya rose to 400,000 in 1978. (8) If one adds the clandestine migration and the dependants of the economically active workers one could easily estimate that the non-Libyan population had reached more than half a million in the late seventies. A survey by the Libyan General Administration of Passports and Immigration in 1982 revealed that there were about 569,000 foreigners in Libya from more than 34 countries, accounting for 18 per cent of the official estimated population of 3.2 million(9) (Table 5.4). The survey noted that the overall figures for some countries might be understated because certain nationalities such as Syrians, Algerians and Tunisians do not need visas. The actual figure

Table 5.4 Non-Libyan Population by Nationality in 1982

Nationality	Number
Egyptians	174,158
Tunisian	73,582
Syrians	23,227
Sudanese	18,053
Palestinians	12,042
Turks	44,546
Pakistanis	23,680
Indians	23,472
South Koreans	17,483
Thais	13,383
Romanians	17,868
Yugoslavs	12,707
Poles	10,430
Bulgarians	8,942
Russians	6,233
Germans (East and West)	5,570
Italians	14,906
British	10,674
French	2,743
Greeks	1,024
Irish	1,024
North Americans	2,608

Source: General Administration of Passports and Immigration Survey as quoted by Jamahiriya Review, January 1983, p.18.

is probably more than 600,000 if we take into account the clandestine migration from Chad and the Sudan, as well as expatriate military personnel working in the Libyan military establishment. Nevertheless despite the shortcomings in the survey, it represents the latest official figures for the non-Libyans residents in the country. Table 5.4 shows that the majority of non-Libyans are Egyptians and Tunisians; Turks are in third place.

This section argues that by recruiting expatriate labour the Libyan government has speeded up the process of urban growth in the small towns. As a result of the massive large scale development programmes affecting many of the small towns a large number of non-Libyans have entered these towns. This has resulted in dramatic changes in their population structure and employment structure. It has also had a significant impact on urbanisation and the spatial distribution of the population.

The 1982 survey by the General Administration of Passports and Immigration does not give detailed statistics about the non-Libyan population and the following analysis is therefore based on two official sources, the 1973 Census of Population and the Manpower Survey of 1980.(10)

5.3.1 The 1973 Census of Population

According to the 1973 Census, there were about 197,000 non-Libyans in the country and 2,.052,000 nationals. This meant that 9 per cent of the total population were non-Libyans. About 90 per cent of the total non-Libyans were Arabs, 5 per cent Europeans and 5 per cent from Asia, Africa and Latin and North America; males represented about 68 per cent of the total non-Libyan population. Table 5.5 shows the percentage of non-Libyans to total population in each Muhafadah. It reveals that the muhafadat of Benghazi, Tripoli, Derna and Jabel Akhdar had the highest percentage of non-Libyans and above the average. This was due to the

fact that government investment and construction activities were higher in those four muhafadat. In addition, the majority of the non-Libyans in 1973 were Egyptian and the muhafadat of Derna and Benghazi and the Jabel Akhdar were the first destinations for the Egyptians because of their proximity to the Egyptian border.

Table 5.5 Non Libyans as a percentage of the total population in each Muhafadah in 1973

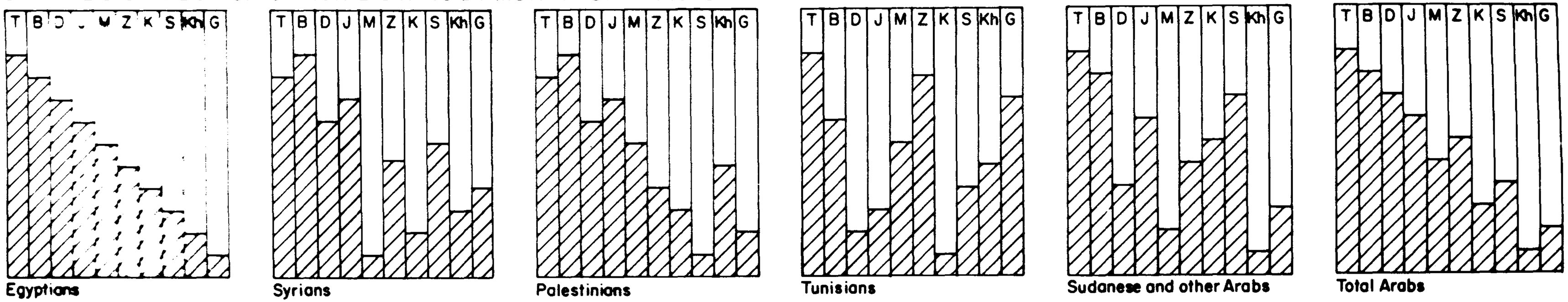
Muhafadat	Percentage
Derna	11.9
Jabel Akhdar	9.4
Benghazi	19.5
El Khalij	6.3
Misurata	3.9
El Khums	2.9
Tripoli	12.4
Ez Zawiyah	4.6
Gherian	3.2
Sebha	7.0
Average	9.0

Source : Secretariat of Planning The Internal Migration 1973, p.23 (in Arabic).

The spatial distribution of the different nationalities by muhafadat in 1973 can be seen in Figure 5.4. Some 50 per cent of Egyptians, who form the majority of foreigners, were concentrated in the eastern part of Libya, 48 per cent in the west and 2 per cent in the south. In contrast 94 per cent of Tunisians were found in the western part, especially in Zwarah, Ez Zawiya and Tripoli area, 4 per cent

Fig 5·4

SPATIAL DISTRIBUTION OF NON-LIBYANS BY MUHAFADAT IN 1973



MUHAFADAT

T Tripoli	B Benghazi	D Derna	J Jabel El-Akhdar	M Misurata
Z Ez Zawiyah	K El-Khalij	S Sebha	Kh El-Khums	G Gherian

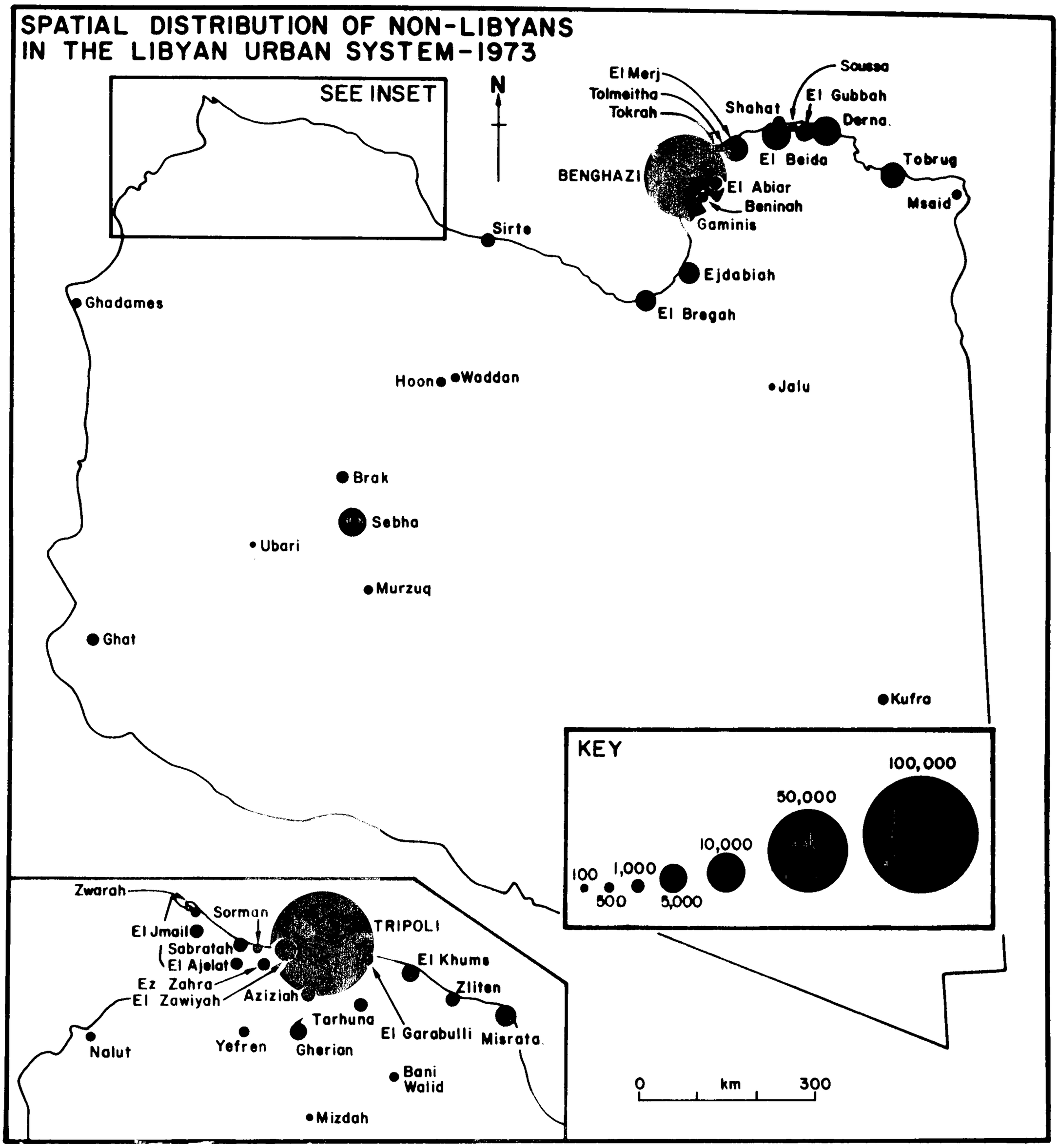
Source: 1973 Census of Population

in the south and 2 per cent in the east. The Syrians are concentrated in Benghazi and Derna areas, Africans in the southern part of Libya, North Americans and Europeans in the oil field areas and in Tripoli and Benghazi.

The spatial distribution of non-Libyans in the Libyan urban system can be seen by Figure 5.5 which shows the concentration of non-Libyans in the two major cities of Tripoli and Benghazi. However, the impact of non-Libyans on the small towns is significant. Table 5.6 shows that on average the percentage of non-Libyans in the total population of the small towns was 8 per cent but in some cases non-Libyans represented one fifth of the total population. Table 5.6 shows that the highest number of non-Libyans can be found in Beninah 21, Soussa, 20, Tokrah 18, Ghat 17, Gherian 14 and El Gubbah 14 and lowest percentage can be found in Bani Walid 1, Murzuq 1, Yefren 2, Jalu 3, Mizdah 3, Ubari 4, Gaminis 4, Nalut 4, El Garabulli 4, Zliten 4, and each of the following with 5 per cent, Tarhuna, Sirte, El Jmail, El-Abiar, Waddan and Tolmeitha.

Unlike some Middle Eastern countries there are no laws prohibiting foreign workers from bringing their families to Libya. Thus many of the foreign workers in the small towns were accompanied by their dependents. Table 5.7 shows the number of active and inactive non-Libyans in the small towns; on average the active population represents 66 per cent of the total non-Libyan population, the inactive 34 per cent. In most small towns the percentage of economically active is higher than non-active. However there are four exceptions : Msaid, where the percentage of inactive is 83 per cent, El Jmail 67 per cent, El Bregah 65 per cent and Bani Walid 51 per cent. This may be explained by the relatively large number of non-Libyan females who are married to Libyans. Towns

Fig. 5.5



Source: Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic)

Table 5.6 : Small Towns : Total Population, Libyans, Non-Libyans, Households and their Percentage 1973.

	Small Towns	Libyans	Non-Libyans	Total	Percentage of Libyans	Percentage of Non-Libyans	Total
[illegible]	El Marj	25,166	3,773	28,939	87.0	13.0	100.0
2	Zliten	21,340	989	22,329	96.0	4.0	100.0
3	Tarhuna	21,153	1,026	22,179	95.0	5.0	100.0
4	El Khums	18,578	2,046	20,624	90.0	10.0	100.0
5	Sirte	15,824	889	16,713	95.0	5.0	100.0
6	El Jmail	14,416	716	15,132	95.0	5.0	100.0
7	Yefren	14,658	371	15,029	98.0	2.0	100.0
8	El-Garabulli	13,909	615	14,524	96.0	4.0	100.0
9	Zwarah	12,987	1,097	14,084	92.0	8.0	100.0
10	Sabratah	12,970	952	13,922	93.0	7.0	100.0
11	El Aziziah	11,634	1,012	12,646	92.0	8.0	100.0
12	Brak	11,886	720	12,606	94.0	6.0	100.0
13	Gherian	10,582	1,665	12,247	86.0	14.0	100.0
14	Bani Walid	11,847	172	12,019	99.0	1,0	100.0
15	El Abiar	10,836	624	11,460	95.0	5.0	100.0
16	Beninah	7,653	1,984	9,637	79.0	21.0	100.0
17	El Jof (Kufra)	8,734	634	9,368	93.0	7.0	100.0
18	El Ajelat	8,671	540	9,211	94.0	6.0	100.0
19	El Gubbah	7,799	1,250	9,049	86.0	14.0	100.0
20	Shahat	7,672	650	8,322	92.0	8.0	100.0
21	Ez Zahra	7,668	527	8,195	94.0	6.0	100.0
22	Nalut	7,671	297	7,968	96.0	4.0	100.0
23	El Bregah	5,809	745*	6,554	89.0	11.0	100.0
24	Murzuq	6,059	92	6,151	99.0	1.0	100.0
25	Jalu	5,253	147	5,400	97.0	3.0	100.0
26	Hoon	4,819	517	5,336	90.0	10.0	100.0
27	Mizdah	5,056	133	5,189	97.0	3.0	100.0
28	Tokrah	4,228	900	5,128	82.0	18.0	100.0
29	Waddan	4,614	226	4,840	95.0	5.0	100.0
30	Gaminis	4,433	189	4,622	96.0	4.0	100.0
31	M'said	3,961	367	4,328	91.0	9.0	100.0
32	Ghaams	3,725	295	4,020	93.0	7.0	100.0
33	Tolmeitha	3,643	191	3,834	95.0	5.0	100.0
[illegible]	Ghart	3,597	153	3,750	96.0	4.0	100.0
[illegible]	[illegible]	3,102	613	3,715	83.0	17.0	100.0
[illegible]	[illegible]	3,207	236	3,443	93.0	7.0	100.0
[illegible]	[illegible]	2,639	655	3,294	80.0	20.0	100.0
	Total Small Towns	347,799	28,008	375,807	92.0	8.0	100.0

* Excluding non-Libyans working with oil company.

Source Compiled from : Ministry of Planning (1977) The 1973 Census of Population, Tripoli, (in Arabic).

Table 5.7 : Small Towns : Economically Active and Inactive Non-Libyan Population and their Percentage in 1973

R	Small Towns	Economically Active	Economically Inactive	Total	Percentage		
					Economically Active	Economically Inactive	Total
1	El Merj	2,422	1,351	3,773	64.0	36.0	100.0
2	Zliten	603	386	989	61.0	39.0	100.0
3	Tarhuna	563	463	1,026	55.0	45.0	100.0
4	El Khums	1,227	819	2,046	60.0	40.0	100.0
5	Sirte	530	359	889	60.0	40.0	100.0
6	El Jmail	237	479	716	33.0	67.0	100.0
7	Yefren	236	135	371	64.0	36.0	100.0
8	El Garabulli	501	114	615	81.0	19.0	100.0
9	Zwarah	806	291	1,097	73.0	27.0	100.0
10	Sabratah	nd	nd	nd	nd	nd	nd
11	El Aziziah	nd	nd	nd	nd	nd	nd
12	Brak	612	108	720	85.0	15.0	100.0
13	Gherian	1,093	572	1,665	66.0	34.0	100.0
14	Bani Walid	84	88	172	49.0	51.0	100.0
15	El Abiar	442	182	624	71.0	29.0	100.0
16	Beninah	1,556	428	1,984	78.0	22.0	100.0
17	El Jof	388	246	634	61.0	39.0	100.0
18	El Ajelat	nd	nd	nd	nd	nd	nd
19	El Gubbah	1,097	153	1,250	88.0	12.0	100.0
20	Shahat	530	120	650	82.0	18.0	100.0
21	Ez Zahra	nd	nd	nd	nd	nd	nd
22	Nalut	180	117	297	61.0	39.0	100.0
23	El Bregah *	263	482	745	35.0	65.0	100.0
24	Murzuq	62	30	92	67.0	33.0	100.0
25	Jalu	99	48	147	67.0	33.0	100.0
26	Hoon	449	68	517	87.0	13.0	100.0
27	Mizdah	106	27	133	80.0	20.0	100.0
28	Tokrah	721	179	900	80.0	20.0	100.0
29	Waddan	158	68	226	70.0	30.0	100.0
30	Gaminis	134	55	189	71.0	29.0	100.0
31	M'said	62	305	367	17.0	83.0	100.0
32	Ghdams	236	59	295	80.0	20.0	100.0
33	Tolmeitha	140	51	191	73.0	27.0	100.0
34	Ubari	112	41	153	73.0	27.0	100.0
35	Ghat	360	253	613	59.0	41.0	100.0
36	Sorman	nd	nd	nd	nd	nd	nd
37	Soussa	500	155	655	76.0	24.0	100.0
			Average		66	34	100.0

* excluding non-Libyans working in the oil industry.

nd : no data available

Source: Compiled from : Ministry of Planning (1977) The 1973 Census of Population Tripoli (in Arabic).

with more than 80 per cent of non-Libyans in the economically active category include El Garabulli, Brak, El Gubbah, Shahat, Hoon, Mizdah, Tokrah and Ghdams.

Women represent a very small proportion of the non-Libyan work force. Table 5.8 shows that on average,women represent only 3.5 per cent of the non-Libyan workforce in the small towns. Even where the percentage of active females rises to over 10 per cent, as in the case of Murzuq and Bani Walid, their absolute number is very small.

With few exceptions males outnumber females in the non-Libyan population of the small towns (Table 5.9). The exceptions are Msaid, El Bregah and El Jmail. In the small town of Msaid near the Egyptian border the percentage of females is 67 per cent. The explanation for this phenomenon is the large number of Egyptian women married to Libyans. In the case of El Bregah, where females represent 47 per cent of the non-Libyan, many foreign workers are accompanied by their wives and children and some Libyan residents are married to foreign women. In El Jmail, near the Tunisian border, where females represent 45 per cent of the non-Libyan population, the explanation probably lies in the fact that a large number of Libyans are married to Tunisian women.

The economically active non-Libyan population (10 years of age and above) may be divided into four groups on the basis of economic sectors (Table 5.10). For the small towns as a whole the average distribution of the economically active non-Libyan population was as follows : 16 per cent in agriculture and related activities; the majority, 60 per cent, in industry, mainly construction; 21 per cent in services; 1 per cent in commercial activities and 2 per cent not stated. This was the general picture in 1973. However, the pattern of employment varied from one town to another. The percentage of non-Libyans

Table 5.8 : Small Towns : Percentage of Females To Males in The Non-Libyan Workforce in 1973

R	Small Towns	Total workforce	Percentage		
			Males	Females	Total
1	El Merj	2,422	96.5	3.5	100.0
2	Zliten	603	95.0	5.0	100.0
3	Tarhuna	563	94.0	6.0	100.0
4	El Khums	1,227	94.5	5.5	100.0
5	Sirte	530	92.0	8.0	100.0
6	El Jmail	237	99.0	1.0	100.0
7	Yefren	236	92.0	8.0	100.0
8	El Garabulli	501	98.0	2.0	100.0
9	Zwarah	806	95.0	5.0	100.0
10	Sabratah	nd	nd	nd	nd
11	El Aziziah	nd	nd	nd	nd
12	Brak	612	98.0	2.0	100.0
13	Gherian	1,093	96.0	4.0	100.0
14	Bani Walid	84	90.0	10.0	100.0
15	El Abiar	442	99.0	1.0	100.0
16	Beninah	1,556	99.0	1.0	100.0
17	El Jof	388	100.0	0.0	100.0
18	El Ajelat	nd	nd	nd	nd
19	El Gubbah	1,097	100.0	0.0	100.0
20	Shahat	530	97.0	3.0	100.0
21	Ez Zahra	nd	nd	nd	nd
22	Nalut	180	95.5	4.5	100.0
23	El Bregah *	263	92.0	8.0	100.0
24	Murzuq	62	90.0	10.0	100.0
25	Jalu	99	97.0	3.0	100.0
26	Hoon	449	98.0	2.0	100.0
27	Mizdah	106	93.0	7.0	100.0
28	Tokrah	721	99.0	1.0	100.0
29	Waddan	158	99.0	1.0	100.0
30	Gaminis	134	96.0	4.0	100.0
31	M´said	62	98.0	2.0	100.0
32	Ghdams	236	97.0	3.0	100.0
33	Tolmeitha	140	99.0	1.0	100.0
34	Ubari	112	93.0	7.0	100.0
35	Ghat	360	99.0	1.0	100.0
36	Sorman	nd	nd	nd	nd
37	Soussa	500	100.0	0.0	100.0
Small Towns		Average	96.5	3.5	100.0

* excluding non-Libyans working in the oil industry.

nd : no data available

Source : Ministry of Planning (1977) The 1973 Census of Population. Tripoli (in Arabic)

Table 5. 9 : Small Towns : Non-Libyan Population by Sex and Percentage of Males and Females in 1973

R	Small Towns	Males	Females	Total	Percentage		
					Males	Females	Total
1	El Merj	2,729	1,044	3,773	72.0	28.0	100.0
2	Zliten	725	264	989	73.0	27.0	100.0
3	Tarhuna	687	339	1,026	67.0	33.0	100.0
4	El Khums	1,429	617	2,046	70.0	30.0	100.0
5	Sirte	615	274	889	69.0	31.0	100.0
6	El Jmail	397	319	716	55.0	45.0	100.0
7	Yefren	269	102	371	72.0	28.0	100.0
8	El Garabulli	529	86	615	86.0	14.0	100.0
9	Zwarah	871	226	1,097	79.0	21.0	100.0
10	Sabratah	nd	nd	nd	nd	nd	nd
11	El Aziziah	nd	nd	nd	nd	nd	nd
12	Brak	633	87	720	88.0	12.0	100.0
13	Gherian	1,268	397	1,665	76.0	24.0	100.0
14	Bani Walid	110	62	172	64.0	36.0	100.0
15	El Abiar	494	130	624	79.0	21.0	100.0
16	Beninah	1,677	307	1,984	85.0	15.0	100.0
17	El Jof	438	196	634	69.0	31.0	100.0
18	El Ajelat	nd	nd	nd	nd	nd	nd
19	El Gubbah	1,128	122	1,250	90.0	10.0	100.0
20	Shahat	549	101	650	84.0	16.0	100.0
21	Ez Zahra	nd	nd	nd	nd	nd	nd
22	Nalut	218	79	297	73.0	27.0	100.0
23	El Bregah *	395	350	745	53.0	47.0	100.0
24	Murzuq	69	23	92	75.0	25.0	100.0
25	Jalu	109	38	147	74.0	26.0	100.0
26	Hoon	462	55	517	89.0	11.0	100.0
27	Mizdah	110	23	133	83.0	17.0	100.0
28	Tokrah	779	121	900	87.0	13.0	100.0
29	Waddan	178	48	226	79.0	21.0	100.0
30	Gaminis	137	52	189	72.0	28.0	100.0
31	M´said	120	247	367	33.0	67.0	100.0
32	Ghdams	249	46	295	84.0	16.0	100.0
33	Tolmeitha	158	33	191	83.0	17.0	100.0
34	Ubari	120	33	153	78.0	22.0	100.0
35	Ghat	543	70	613	89.0	11.0	100.0
36	Sorman	nd	nd	nd	nd	nd	nd
37	Soussa	551	104	655	84.0	16.0	100.0
Small Towns					75.0	25.0	100.0

* excluding non-Libyans working in the oil port and oil camps.

nd : no data available

Source ; Ministry of Planning (1977) The 1973 Census of Population. Tripoli (in Arabic)

Table 5.10 : Employment Structure of the Non-Libyan Population in 1973

R	Town	Males	Females	Total	Percentage of the economically active in each sector and their related activities					Total Percentage
					Agriculture	Industry	Service	Commerce	Unknown	
1	El Merj	2,338	84	2,422	17.0	64.0	17.0	1.0	1.0	100.0
2	Zliten	574	29	603	1.0	67.0	32.0	-	-	100.0
3	Tarhuna	530	33	563	2.0	58.0	40.0	-	-	100.0
4	El Khums	1,160	67	1,227	3.0	66.0	30.0	-	1.0	100.0
5	Sirte	489	41	530	3.0	54.0	43.0	-	-	100.0
6	El Jmail	235	2	237	43.0	49.0	6.0	-	2.0	100.0
7	Yefren	218	18	236	-	55.0	44.0	1.0	-	100.0
8	El Garabulli	490	11	501	21.0	63.0	16.0	-	-	100.0
9	Zwarah	769	37	806	6.0	75.0	18.0	1.0	-	100.0
10	Sabratah	nd	nd	nd	nd	nd	nd	nd	nd	nd
11	El Aziziah	nd	nd	nd	nd	nd	nd	nd	nd	nd
12	Brak	598	14	612	5.0	76.0	18.0	-	1.0	100.0
13	Gherian	1,045	48	1,093	1.0	71.0	27.0	1.0	-	100.0
14	Bani Walid	76	8	84	-	30.0	70.0	-	-	100.0
15	El Abiar	437	5	442	11.0	77.0	11.0	1.0	-	100.0
16	Beninah	1,541	15	1,556	27.0	68.0	4.0	1.0	-	100.0
17	El Jof	386	2	388	12.0	65.0	11.0	1.0	11.0	100.0
18	El Ajelat	nd	nd	nd	nd	nd	nd	nd	nd	nd
19	El Gubbah	1,091	6	1,097	5.0	89.0	6.0	-	-	100.0
20	Shahat	513	17	530	6.0	81.0	11.0	-	2.0	100.0
21	Ez Zahra	nd	nd	nd	nd	nd	nd	nd	nd	nd
22	Nalut	172	8	180	43.0	23.0	32.0	2.0	-	100.0
23	El Bregah	242	21	263	1.0	34.0	56.0	1.0	8.0	100.0
24	Murzuq	56	6	62	-	58.0	40.0	2.0	-	100.0
25	Jalu	96	3	99	25.0	38.0	37.0	-	-	100.0
26	Hoon	442	7	449	4.0	84.0	11.0	1.0	-	100.0
27	Mizdah	99	7	106	-	79.0	20.0	1.0	-	100.0
28	Tokrah	714	7	721	55.0	35.0	7.0	1.0	2.0	100.0
29	Waddan	156	2	158	29.0	61.0	8.0	-	2.0	100.0
30	Gaminis	128	6	134	25.0	59.0	14.0	1.0	1.0	100.0
31	M´said	61	1	62	16.0	33.0	25.0	8.0	18.0	100.0
32	Ghdams	229	7	236	3.0	81.0	15.0	-	1.0	100.0
33	Tolmeitha	139	1	140	61.0	34.0	4.0	-	1.0	100.0
34	Ubari	104	8	112	18.0	46.0	33.0	3.0	-	100.0
35	Ghat	356	4	360	16.0	58.0	14.0	2.0	10.0	100.0
36	Sorman	nd	nd	nd	nd	nd	nd	nd	nd	nd
37	Soussa	500	-	500	4.0	81.0	15.0	-	-	100.0
				Average	16.0	60.0	21	1.0	2.0	100.0

nd : No data available

Source : Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic)

working in agriculture was higher than in other sectors in El Jmail (43 per cent), Nalut (43), Tokrah (55) and Tolmeitha (61). A large number of Tunisians were working in agriculture in El Jmail and Nalut, and Palestinians in Tokrah and Tolmeitha. A significant number of non-Libyans was also employed in agriculture El Merj (17), El Garabulli (21), Beninah (27), Jalu (25), Waddan (29), Gaminis (25)and Ubari (18) but agriculture was not the most important sector of employment. No foreigners were employed in agriculture in Yefren, Bani Walid, Murzuq and Mizdah.

The majority of non-Libyan workers in 1973 were in the industrial sector, especially in the building and construction industries. The highest percentages, 70 per cent and more, were found in Zwarah, Brak, El Abiar, Gherian, El Gubbah, Shahat, Hoon, Mizdah, Ghdams and Soussa. A higher than average percentage of non-Libyans were working in the service sector in Tarhuna (40), Sirte (43), Bani Walid (70), El Bregah (56), Murzuq (40) and Yefren (44), but only in Bani Walid and El Bregah was the service sector the major employer of non-Libyan workers. Very few foreign workers were employed in the commercial sector. The only exception is the small border town of Msaid with 8 per cent of non-Libyans working in commercial activities, but the percentage is higher than the real figure.

The non-Libyan active females were heavily concentrated in the service sector. This can be illustrated by Table 5.11 in which one can see that 95 per cent of them were working in the service sector, mainly as teachers or nurses.

The importance of foreign workers in the urban labour force is illustrated by Figure 5.6 Non-Libyans represented 29 per cent of the total labour force in the two major cities, 27 per cent in the intermediate towns, and 22 per cent in the small towns. Table 5.12

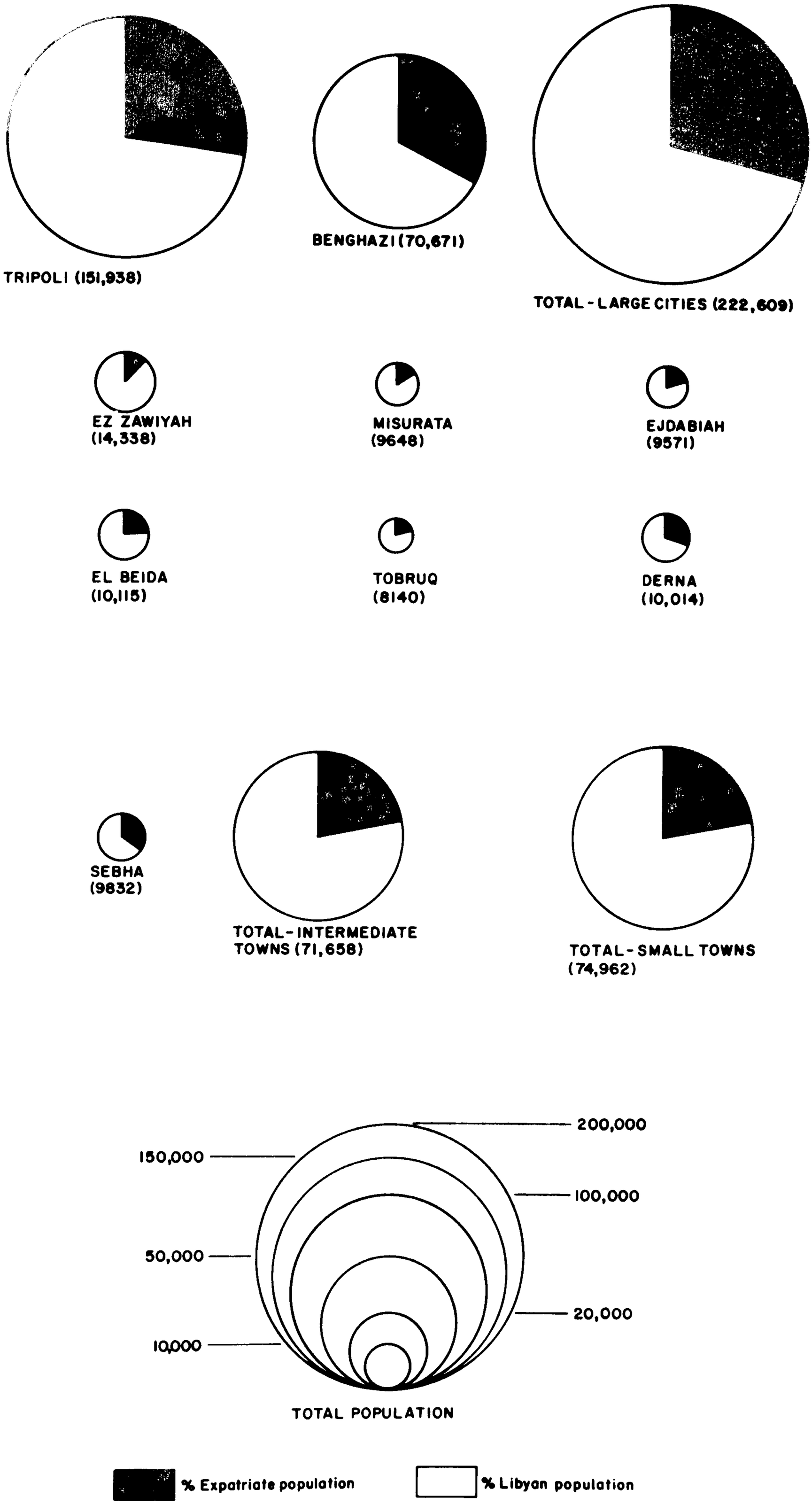
Table 5.11 : Small Towns : Non-Libyan Females Population By Economic Activities in 1973

R	Small Towns	Agricul-ture	Industry	Service	Commerce	Unknown	Total
1	El Merj	4	-	77	-	3	84
2	Zliten	-	-	29	-	-	29
3	Tarhuna	-	-	33	-	-	33
4	El Khums	-	-	66	-	1	67
5	Sirte	-	-	41	-	-	41
6	El Jmail	-	-	2	-	-	2
7	Yefren	-	-	18	-	-	18
8	El Garabulli	2	-	9	-	-	11
9	Zwarah	-	-	37	-	-	37
10	Sabratah	nd	nd	nd	nd	nd	nd
11	El Aziziah	nd	nd	nd	nd	nd	nd
12	Brak	-	-	14	-	-	14
13	Gherian	-	-	48	-	-	48
14	Bani Walid	-	-	8	-	-	8
15	El Abiar	-	-	5	-	-	5
16	Beninah	8	2	4	1	-	15
17	El Jof	-	-	2	-	-	2
18	El Ajelat	nd	nd	nd	nd	nd	nd
19	El Gubbah	-	-	5	-	1	6
20	Shahat	-	-	17	-	-	17
21	Ez Zahra	nd	nd	nd	nd	nd	nd
22	Nalut	-	-	8	-	-	8
23	El Bregah	-	-	21	-	-	21
24	Murzuq	-	-	6	-	-	6
25	Jalu	-	-	3	-	-	3
26	Hoon	-	-	7	-	-	7
27	Mizdah	-	-	7	-	-	7
28	Tokrah	4	-	3	-	-	7
29	Waddan	-	-	2	-	-	2
30	Gaminis	-	-	6	-	-	6
31	M'said	-	-	1	-	-	1
32	Ghdams	1	-	6	-	-	7
33	Tolmeitha	-	-	-	-	1	1
34	Ubari	-	-	8	-	-	8
35	Ghat	-	1	3	-	-	4
36	Sorman	nd	nd	nd	nd	nd	nd
37	Sodsna	-	-	-	-	-	-
	Total Small Towns	19	3	496	1	6	525

nd : no data available

Source : Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic).

Fig 5.6 THE SHARE OF EXPATRIATES IN THE TOTAL LABOUR FORCE



Source: The 1973 Census of Population

Table 5.12 The Shares of Expatriates in the total Labour Force, 1973 in Selected Small Towns

Small Towns	Totals	Libyans %	Expatriate %	Total %
El Merj	7,747	69.0	31.0	100.0
Zliten	4,639	87.0	13.0	100.0
Tarhuna	4,744	88.0	12.0	100.0
El Khums	4,992	75,0	25.0	100.0
Sirte	3,730	85.0	15.0	100.0
El Jmail	3,029	92.0	8.0	100.0
Yefren	2,796	90.0	10.0	100.0
El Garabulli	3,273	85.0	15.0	100.0
Zwarah	3,178	75.0	25.0	100.0
Brak	2,774	78.0	22.0	100.0
Gherian	3,012	65.0	35.0	100.0
Bani Walid	2,250	96.0	4.0	100.0
El Abiar	2,691	83.0	17.0	100.0
Beninah	3,062	49.0	51.0	100.0
Kufra	2,086	81.0	19.0	100.0
El Gubbah	2,545	57.0	43.0	100.0
Shahat	2,029	74.0	26.0	100.0
Nalut	1,455	88.0	12.0	100.0
El Bregah	1,491	82.0	18.0	100.0
Murzuq	1,101	94.0	6.0	100.0
Jalu	1,064	90.0	10.0	100.0
Hoon	1,345	67.0	33.0	100.0
Mizdah	1,025	90.0	10.0	100.0
Tokrah	1,534	54.0	46.0	100.0
Waddan	937	83.0	17.0	100.0
Gaminis	1,012	87.0	13.0	100.0
Msaid	839	92.0	8.0	100.0
Ghdams	857	72.0	28.0	100.0
Tolmeitha	873	84.0	16.0	100.0
Ubari	805	86.0	14.0	100.0
Ghat	957	62.0	38.0	100.0
Soussa	1,090	54.0	46.0	100.0
Average small towns	-	78.0	22.0	100.0

Source: Ministry of Planning (1977) The 1973 Census of Population Tripoli (in Arabic).

and Figure 5.7 provide detailed information about the share of foreign workers in the total labour force of selected small towns. They show that in four small towns over 4.0 per cent of the total labour force were non-Libyan (Beninah 51 per cent, Tokrah and Soussa 46 per cent, and El Gubbah 43 per cent). In a further nine small towns the share of foreign workers in the total labour force was above average (Ghat 30 per cent, Gherian 35 per cent, Hoon 33 per cent, El Merj 31 per cent, Ghdams 28 per cent, Shahat 26 per cent, El Khums 25 per cent, Zawarah 25 per cent and brak 22 per cent). In the other small towns the share of foreign workers was below average but the absolute number of foreign workers was often considerable e.g. Bani Walid with 2,250 foreign workers representing 4 per cent of the total workforce.

5.3.2. The Manpower Survey 1980

This survey took place between January and April 1980. It included all the establishments, organisations, companies, agricultural and industrial projects and factories but excluded the military establishments, private farms, travelling salesmen, embassies both outside and inside the country, closed down and nationalised shops and people looking for jobs for the first time. Table 5.13 shows the estimated workforce not included was 233,000 which is a large number and represents over one-third of the total workforce. These estimates do not indicate what proportion of the workforce excluded from the survey was non-Libyan but they do show that of the 125,000 farm workers, 18,000 were foreigners.

The survey discovered that the size of the workforce was 500,317 which included 301,236 Libyans (60.2 per cent) and 199,081 non-Libyans (39.8 per cent) (Table 5.14). As was the case in 1973 the vast majority of non-Libyan workers were men, women representing only 7.2 per cent of the non-Libyan workforce.

Fig. 5.7

SHARE OF EXPATRIATES IN THE TOTAL LABOUR FORCE IN SELECTED SMALL TOWNS, 1973

1 EL-MERJ (7747)
2 ZLITEN (4639)
3 TARHUNA (4744)
4 EL KHUMS (4992)
5 SIRTE (3730)
6 EL-JMAIL (3029)
7 YEFREN (2796)
8 EL-GARABULLI (3273)
9 ZWARAH (3178)
10 BRAK (2774)
11 GHERIAN (3012)
12 BANI WALID (2250)
13 EL-ABIAR (2691)
14 BENINAH (3062)
15 KUFRA (2086)
16 EL-GUBBAH (2545)
17 SHAHAT (2029)
18 NALUT (1455)
19 EL-BREGAH (1491)
20 MURZUQ (1101)
21 JALU (1084)
22 HOON (1345)
23 MIZDAH (1025)
24 TOKRAH (1534)
25 WADDAN (937)
26 GAMINIS(912)
27 MSAID (839)
28 GHDAMS (857)
29 TOLMEITHA (873)
30 USARI (805)
31 GHAT (957)
32 SOUSSA (1090)

Average make-up of Labour Force

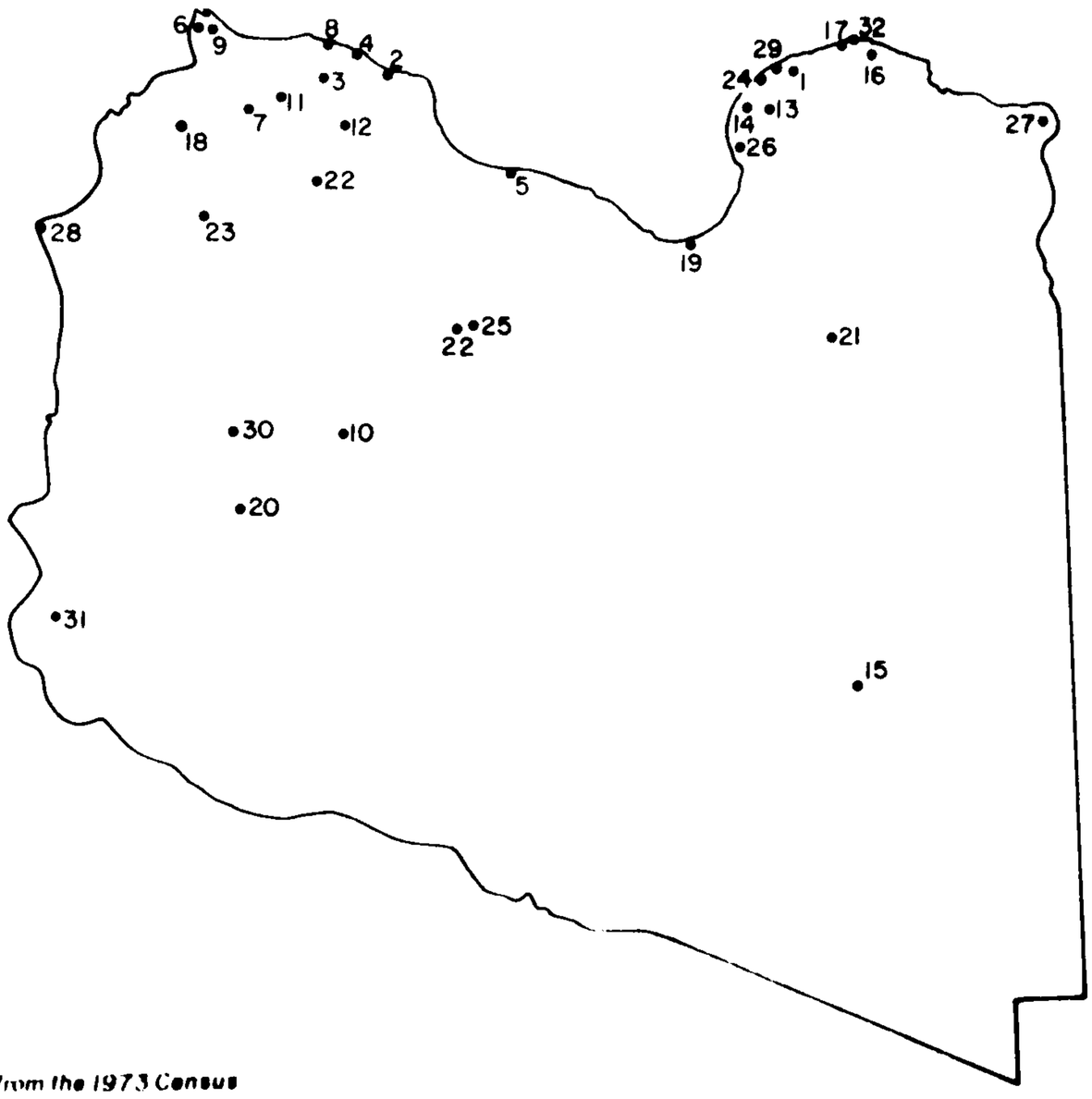
KEY

Expatriates

Libyans

(log scale) 8000, 5000, 4000, 3000, 2000, 1000

Total number of Labour Force



Source Computed by Author from the 1973 Census

Table 5.13 Workforce excluded from the Manpower Survey 1980

Classification	Estimated number
Travelling salesmen	2,000
Farm workers, including 18,000 non-Libyans	125,000
Embassy staff in and outside Libya	4,000
Taxi and lorry drivers	8,000
Closed down establishments	4,000
First time job seekers	20,000
Others	70,000
Total	233,000

Source : Secretariat of Planning (1980) The Final Results of The Manpower Survey Trqpoli (in Arabic) p.5.

Table 5.14 Workforce included in the survey by sex and percentage in January-April 1980

Manpower	Males	Females	Total	% of Males	% of Females	Total
Libyans	256,865	44,371	301,236	85.3	14.7	100.0
Non-Libyans	184,662	14,419	199,081	92.8	7.2	100.0
Total	441,527	58,790	500,317	88.2	11.8	100.0

Source : Secretariat of Planning (1980) The Final Results of The Manpower Survey. Tripoli (in Arabic). p.9.

The nationalities of the expatriate workers and the number of each nationality can be seen in Table 5.15. It shows that 45.9 per cent were of Arab nationality, 30 per cent Asians, 3.6 per cent African, excluding Arab countries of North Africa, 8.3 per cent West Europeans, 10.8 per cent East Europeans, 1.2 per cent North and Latin Americans. Egyptians represented the largest group of foreign workers with 14.5 per cent, followed by Sudanese (10.5 per cent), Pakistanis (10.4 per cent) Tunisians (10.1 per cent), Turks (7.3 per cent) and Indians (7 per cent). These six nationalities comprised almost 60 per cent of all non-Libyan workers.

The survey showed that in addition to the 199,081 economically active non-Libyans there were 202,284 dependents, giving a total non-Libyan population of 401,365. Thus economically active non-Libyans represented 49.6 per cent of the total community surveyed. Figures 5.8 and 5.9 show the economically active and dependant non-Libyan population by major areas of origin and by nationality; Table 5.16 gives more detailed information regarding each nationality. This table reveals that 77.7 per cent of the total non-Libyan workforce surveyed had no dependents, while 22.3 were accompanied by their dependents. Palestinians had the largest average number of dependents to each worker, 3.2, Egyptians 1.3 and Tunisians 1 person.

Table 5.17 shows the economically active non-Libyan population of 10 years of age and above by economic sector. This table shows the number and percentage of Libyan and non-Libyan workers to the total workforce in each sector. The largest percentage of Libyan workers (56.1 per cent) are found in community and social services, 10.9 per cent in trade, restaurants and hotels, 7 per cent in manufacturing and 6 per cent in agriculture. The majority of non-Libyans were employed in construction (45.7 per cent) and secondly, in community and social

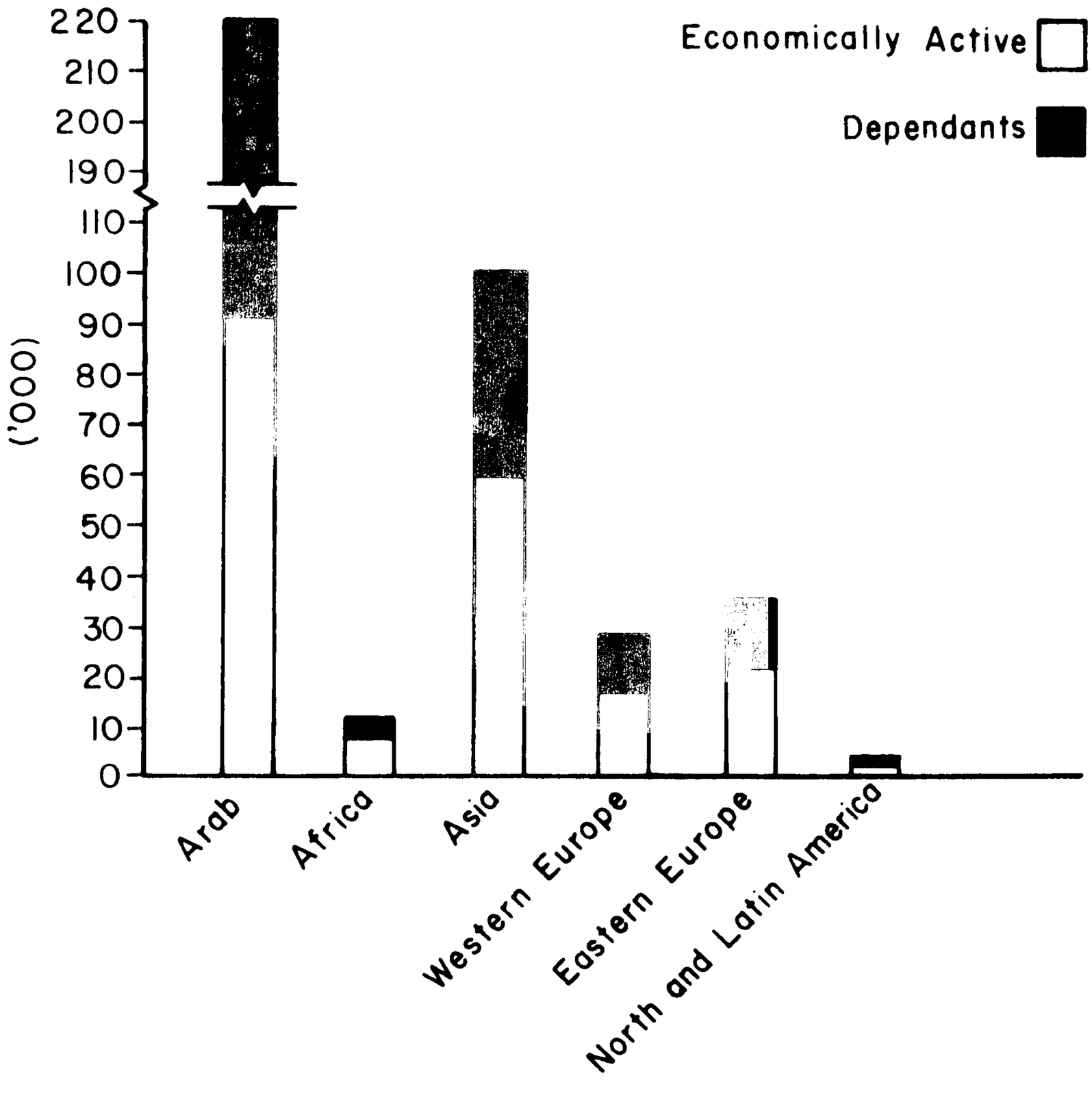
Table 5.15 Numbers of Expatriate Workers in Libya by Nationality in January-April, 1980

Nationality	Number	Per cent
Egypt	28,912	14.5
Sudan	20,874	10.5
Tunisia	20,157	10.1
Palestine	8,737	4.4
Other Arab countries	12,681	6.4
Arabs	91,361	45.9
Pakistan	20,751	10.4
Turkey	14,613	7.3
India	13,895	7.0
Other Asian countries	10,530	5.3
Asian	59,789	30.0
African (excluding Arab countries of Africa*	7,235	3.6
Italy	7,706	3.9
Other West-European countries	8,810	4.4
West Europe	16,516	8.3
Bulgaria	7,746	3.9
Poland	5,586	2.8
Rumania	3,900	2.0
Other East-European countries	4,233	2.1
East Europe	21,465	10.8
North and Latin America	2,424	1.2
Other Nationalities	113	0.1
Unknown	178	0.1
Total	199,081	100.0

* These are : Egypt, Tunisia, Morocco, Algeria, Mauritania, Sudan and Somalia

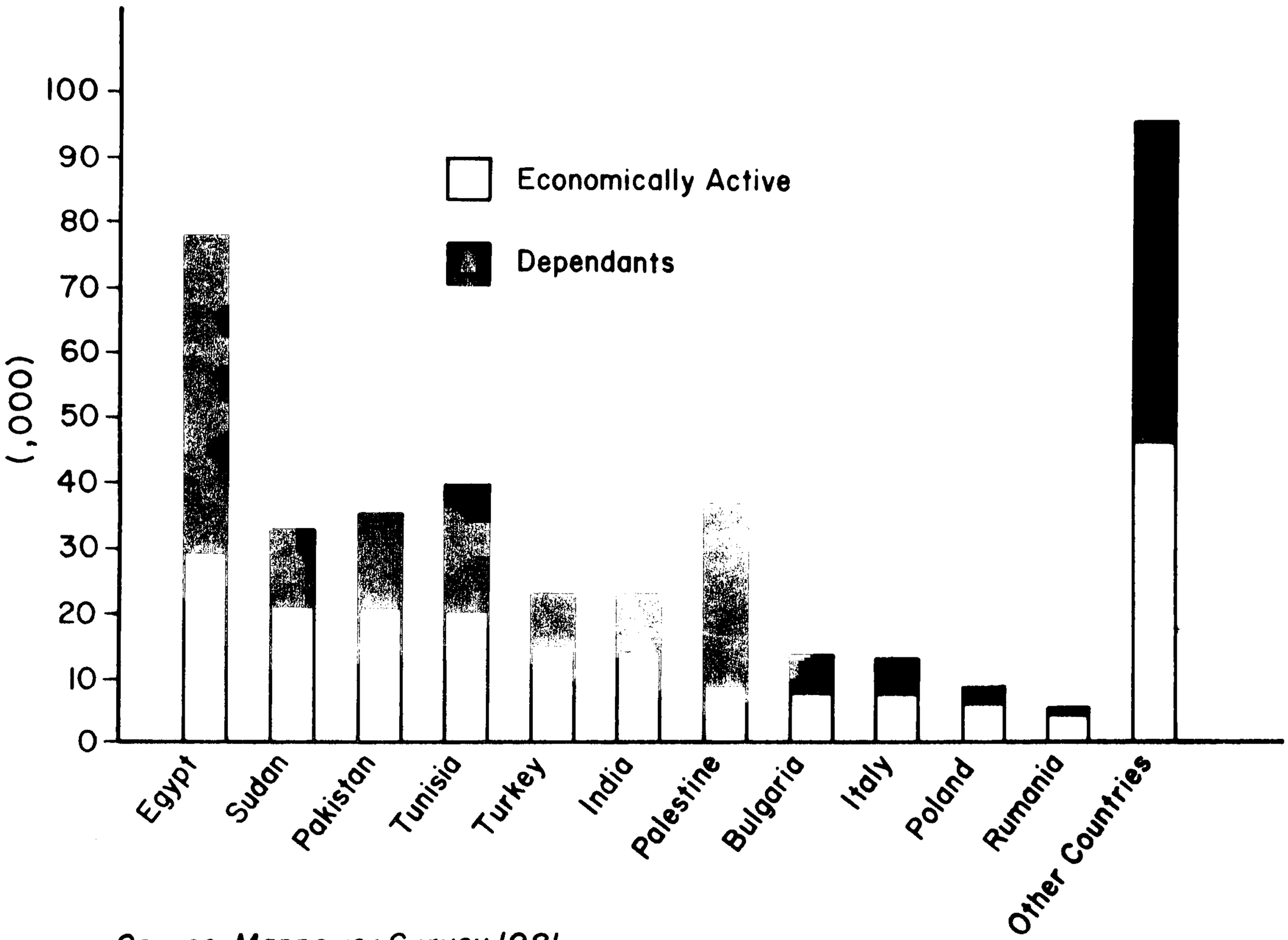
Source : Secretariat of Planning (1980) The Final Results of The Manpower Survey Tripoli (in Arabic) p.14.

Fig.5.8 ECONOMICALLY ACTIVE AND DEPENDANT NON-LIBYAN POPULATION IN LIBYA BY AREAS IN 1980



Source: Manpower Survey 1981

Fig.5.9 ECONOMICALLY ACTIVE AND DEPENDANT NON-LIBYAN POPULATION IN LIBYA BY NATIONALITIES IN 1980



Source: Manpower Survey 1981

Table 5.16: The Economically Active and Dependant Non-Libyan Population by Nationality. January - April 1980

Nationality	Economically Active Non-Libyans				Dependants	Total dependants and Economically Active	Average dependants to each worker
	Without dependants	With dependants	Total	Percentage without dependants to total			
Egypt	15,355	13,557	28,912	53.1	49,074	77,986	1.7
Sudan	18,623	2,251	20,874	89.2	11,620	32,494	0.6
Tunisia	16,311	3,846	20,157	80.9	19,451	39,608	1.0
Palestine	2,277	6,460	8,737	26.1	27,709	36,446	3.2
Other Arab Countries	8,874	3,807	12,681	70.0	20,771	33,452	1.6
Arabs	61,440	29,921	91,361	67.2	128,625	219,986	1.4
Pakistan	18,141	2,610	20,751	87.4	14,154	34,905	0.7
Turkey	13,633	980	14,613	93.3	7,747	22,360	0.5
India	12,189	1,706	13,895	87.7	8,639	22,534	0.6
Other Asian Countries	9,450	1,080	10,530	89.7	10,318	20,848	1.1
Asian	53,413	6,376	59,789	89.3	40,858	100,647	0.7
African (ecluding Arab countries of Africa*	6,685	550	7,235	92.4	4,422	11,657	0.6
Italy	7,078	628	7,706	91.9	4,920	12,626	0.6
Other West-European countries	7,309	1,501	8,810	83,0	6,506	15,316	0.7
West Europe	14,387	2,129	16,516	87.1	11,426	27,942	0.7
Bulgaria	5,405	2,341	7,746	69.8	5,562	13,308	0.7
Poland	4,895	691	5,586	87.6	2,554	8,140	0.5
Rumania	3,242	658	3,900	83.1	1,278	5,178	0.3
Other East-European countries	2,959	1,274	4,233	69.9	4,523	8,756	1.1
East Europe	16,501	4,964	21,465	76.9	13,917	35,382	0.6
North and Latin America	2,099	325	2,424	86.6	1,780	4,204	0.7
Other Nationalities	82	31	113	72.6	218	331	1.9
Unknown	111	67	178	62.4	1,038	1,216	5.8
Total	154,718	44,363	199,081	77.7	202,284	401,365	1.0

* These are : Egypt, Tunisia, Morocco, Algeria, Mauritania, Sudan and Somalia

Source : Secretariat of Planning (1980) The Final Results of The Manpower Survey. Tripoli (in Arabic).pp.18-19.

Table 5.17 Economically Active (10 years of age and above) by Economic Sector and Nationality January - April 1980

Sector	Libyan		Non-Libyan		Percentage Non-Libyan
	Number	%	Number	%	
Agriculture, Forestry Fishing and Hunting	18,080	6.0	13,134	6.6	42.0
Mining and Quarrying	4,633	1.5	6,126	3.1	57.0
Manufacturing	21,123	7.0	18,198	9.1	46.0
Electricity, Gas and water	11,629	3.9	3,532	1.8	23.0
Construction	11,779	3.9	90,987	45.7	88.5
Trade, Restaurants and Hotels	32,877	10.9	11,260	5.7	25.5
Financial Institutions and Business Services	6,879	2.3	1,492	0.7	18.0
Community and social services	169,145	56.1	50,715	25.5	23.0
Not stated	236	0.1	162	0.1	40.0
Totals	301,236	100.0	199,081	100.0	39.8

Source : Secretariat of Planning (1980) The Final Results of The Manpower Survey Tripoli (in Arabic).p.29.

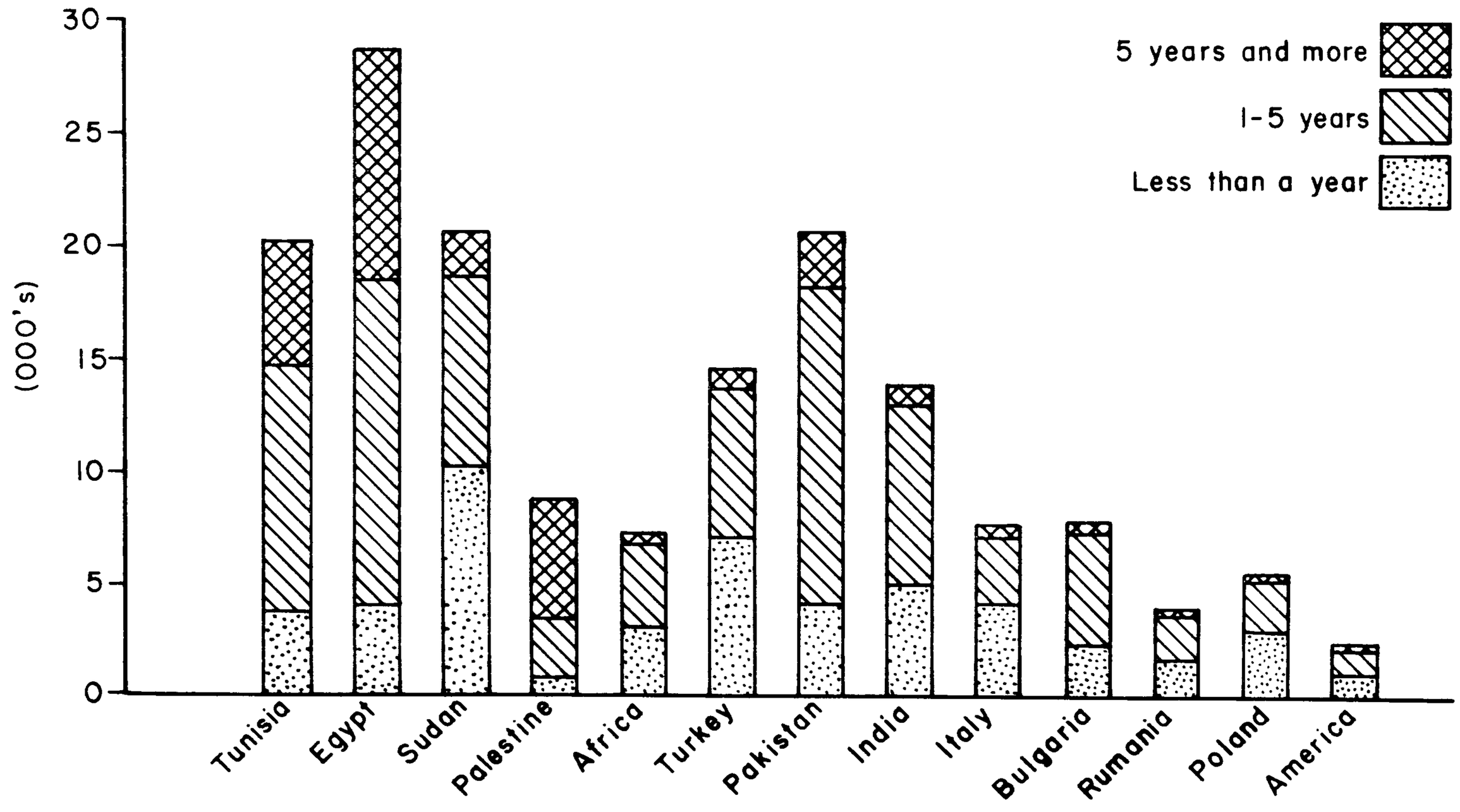
services with 25.5 per cent. Non-Libyans represented 88.5 per cent of the total workforce in the construction sector, 57 per cent in mining and quarrying, 46 per cent in manufacturing, 42 per cent in agriculture (excluding the 18,000 foreigners working on private farms).

Figure 5.10 shows the length of stay in Libya for the foreign population. Some 82 per cent of non-Libyans had been in Libya for less than five years; about 50 per cent had arrived during the last two years and 31 per cent during the year preceeding the date of the survey.

It was difficult to extract information from the survey about foreign workers in small towns because the area unit used was the baladiyah which does not correspond to all the small towns as defined in this study. Table 5.18 shows the number and sex of foreign workers in those small towns where the baladiyah corresponds to the limits of the urban area. Unfortunately data on the dependent non-Libyan population are not given in the survey.

Although the 1981 survey data is of only limited relevance to the small town it does enable us to compare the contribution of non-Libyans to the total workforce of selected small towns with the data from the 1973 census. Table 5.19 and Figure 5.11 show the dramatic increase in the share of the Libyans to the total workforce between 1973 and 1980. On average the share has increased from 22 per cent to 42 per cent. The increase was particularly great in small towns such as Sirte (from 15-74 per cent), Bani Walid (4-57 per cent), Jalu (10-65 per cent), Mizdah (10-66 per cent) El Abiar (17-48 per cent), Kufra (19-54 per cent), and Murzuq (6-39 per cent). This change is due to the increase of development and construction activities and the increase in investment and development in every economic and social aspect of life in the small

Fig.5.10 LENGTH OF STAY IN LIBYA FOR EXPATRIATE WORKERS IN JANUARY–APRIL 1980



Source: Manpower Survey 1981

Table 5.18 Expatriate Workers in Selected Small Towns in January-April 1980

R	Small Towns	Males	Females	Total	Percentage		
					M	F	T
1	El Merj	2,443	322	2,765	88.0	12.0	100.0
2	Zliten	1,325	240	1,656	85.0	15.0	100.0
3	Tarhuna	1,597	213	1,810	88.0	12.0	100.0
4	El Khums	1,934	318	2,252	86.0	14.0	100.0
7	Yefren	973	67	1,040	94.0	6.0	100.0
10	Sabratah	1,045	54	1,099	95.0	5.0	100.0
11	El Aziziah	2,403	48	2,451	98.0	2.0	100.0
13	Gherian	1,707	261	1,968	87.0	13.0	100.0
14	Bani Walid	3,475	52	3,527	99.0	5.0	100.0
15	El Abiar	1,181	58	1,239	95.0	5.0	100.0
18	El Ajelat	1,339	53	1,392	96.0	4.0	100.0
24	Murzuq	669	34	703	95.0	5.0	100.0
28	Tokrah	423	30	453	93.0	8.0	100.0
30	Gaminis	641	24	665	96.0	4.0	100.0
33	Tolmeitha	138	2	140	99.0	1.0	100.0
36	Sorman	1,018	52	1,070	95.0	5.0	100.0
			Average Percentage		93.0	7.0	100.0

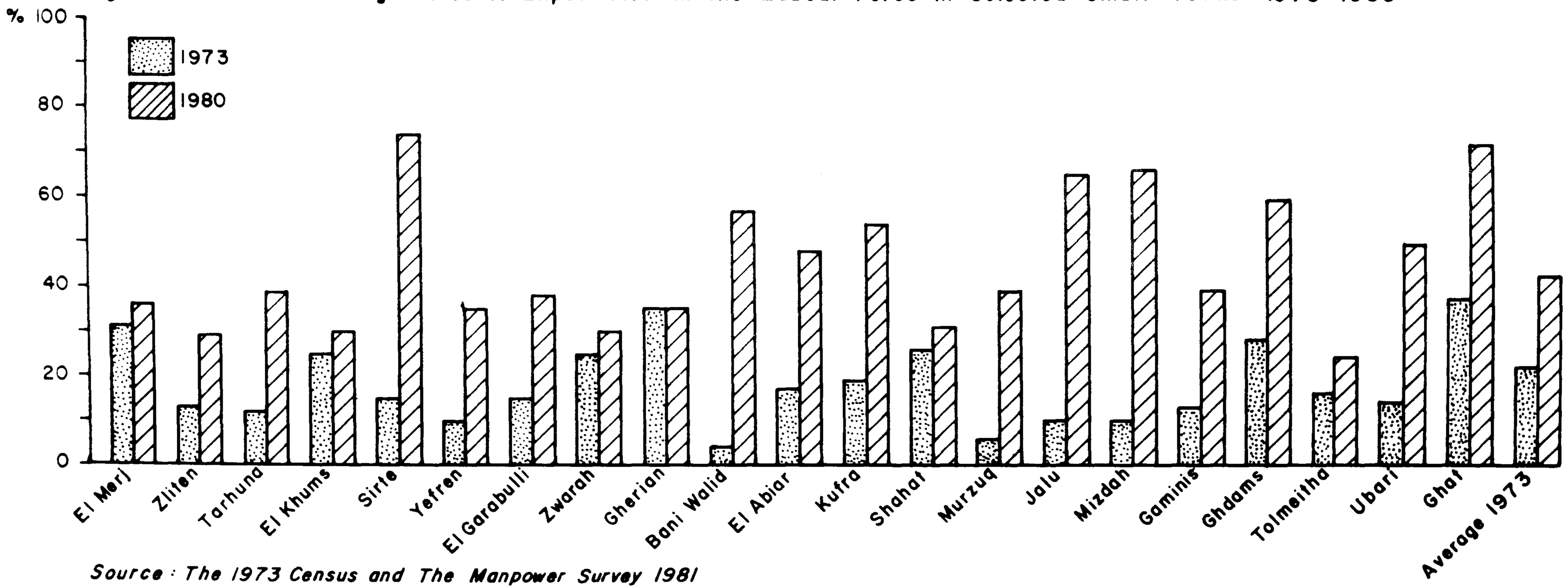
Source : Secretariat of Planning (1980) The Final Results of The Manpower Survey. Tripoli (in Arabic). pp.111-112.

Table 5.19 Expatriates in the labour force in selected Small Towns 1973-1980

Small Towns	1973	1980
	%	%
Sirte	15	74
Bani Walid	4	57
Jalu	10	65
Mizdah	10	66
El Abiar	17	48
Kufra	19	54
Murzuq	6	39

Source: Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic) and Secretariat of Planning (1980) The Final Results of The Manpower Survey, Tripoli, (in Arabic).

Fig. 5.11 The Increasing Shares of Expatriotes in the Labour Force in Selected Small Towns 1973–1980



Source : The 1973 Census and The Manpower Survey 1981

towns with the growth in Libya's oil revenues during the second half of the 1970's.

In conclusion Libya has a comparatively small number of skilled workers and managers,and training and education for Libyans forms a major theme of the 1981-85 Development Plan. Until the transition phase of labour intensive,large-scale construction has passed and until more Libyans gain the necessary skills, there is no option but to recruit foreign workers to meet the demands of economic and social development programmes.

The demand for non-Libyans will probably increase in the immediate future and will only begin to decline towards the end of the century when the industrial development programme is substantially completed. It was estimated by NPPP that the total numbers of non-Libyans in 1985 will be about 744,000.(11)

The existence of non-Libyans in small towns had a great impact on them as there can be no doubt that the imports of labour have enhanced the indigenous labour force considerably in terms of both numbers and skills. This has facilitated a scale and pace of development which would otherwise have been quite impossible.

Expatriates play a very essential role in the economic development of the country. They participate in the employment structure to a significant extent and they make up a significant percentage of the highest qualified workers.

The future of foreigners, their growth, composition and distribution will largely, if not entirely depend upon the policies and programmes of the Government.

There is no doubt that the heavy recruitment of expatriate labour has accelerated the urbanisation process and has changed the population structure of Libya's towns dramatically.

5.4 INTERNAL MIGRATION

Migration is a significant mechanism of demographic change and a stimulus to reactions in other demographic and economic conditions. Internal migration acts as an instrument of cultural diffusion and social integration. As such migration was a necessary element of normal demographic and economic adjustment to a new equilibrium.(12)

Small urban centres play a dual role in the migration process. While they are the termini of in-migration, they are also a source of out-migration; migrants move from small urban centres having had several years education and having acquired saleable occupational skills, while migrants from rural areas to the small urban centres and cities have much lower educational and skill levels.(13) Three movements concern the small urban centres: Firstly from rural areas to the small urban centres, secondly from the small urban centres to the large urban centre or Metropolis, thirdly, from large urban centres to the small urban centres.

In the first case small towns have traditionally served as urban foci for surrounding rural hinterlands and have attracted migrants from nearby villages. In the second case small towns are points of emigration to the primate city or to the large cities. In the third case many small towns, especially those within 10 or 15 kilometres of larger centres attract people from the large cities to live in them and commute every day to their work. These small towns usually function as residential districts for commuters. Many of the small towns near Cairo, Baghdad, Damascus, Benghazi and Tripoli have developed as dormitory towns. However, in more advanced countries such as the United States many small industries have moved to the small towns because of lower taxation, or cheap land.

There is a relation between the first two movements. That is, the migration from the countryside to the small towns and emigration from the small towns to the major urban centres. It is interesting to ask whether small towns are truly termini to one migration system and sources to another, or whether they serve as intermediary points in a more complex step-migration process.(14)

One common feature of developing countries is the increasing migration of people from rural to urban areas. The dramatic changes in Libya's economy have clearly induced heavy migration movement over both short and long distance. Population movements in Libya have varied in space and time, depending on the variation of regional conditions and resulting from the changing relationships between the three main economic groups in the country namely urbanites, farmers and bedouins engaged in pastoral nomadism.(15)

In the past, the basic social and cultural forms of the traditional subsistence economy influenced and shaped the traditional forms of migration as follows:

(i) Large seasonal movements of the pastoral nomads.

(ii) Limited rural migration to the towns.

(iii) Limited migration from small towns to the larger towns.

(iv) Limited movement from the interior to the coastal regions.

Growing wealth from oil brought about a rapid increase in the volume of rural to urban migration which became the major characteristic of internal migration in Libya.

The two core cities of Tripoli and Benghazi were the first to be influenced by the modern economic and social transformation. Traditional activities such as trading and craft industries gave way to new activities

such as modern style businesses, modern manufacturing industries, a wider range of occupations in a greatly expanded public administration, and a variety of other jobs in urban services. As a result there was a sharp increase in employment opportunities and wages which attracted a large number of people from the countryside to urban areas in search of better paid jobs in the modern economy. Subsistence agriculture and nomadism as ways of life have been abandoned for service jobs in towns and particularly for public service employment which has swollen to incorporate a third of the Libyan workforce.

Major economic and social development programmes financed by rising oil revenues in the early 1960's and new policies introduced after the 1969 Revolution represent the most important factors influencing internal migration in Libya during the last two decades.

These two factors have produced new conditions under which internal migration rapidly increased to a larger volume than ever before.

Urban development. There has been a marked difference in the time and the scale of modern development between urban areas and rural areas and between large cities and small towns. The small towns and villages were not only the last to be developed but for some time they developed more slowly than Benghazi and Tripoli in both economic and social spheres with only two exceptions, the new towns of El Merj and El Beida. Urban development started first in Tripoli and Benghazi, then in El Beida and El Merj followed by the intermediate towns (Derna, Tobruq, Ejdabiah, Misurata, Sebha and Ez Zawiyah) and finally in the small towns and the rural areas. This meant that urban development went down the urban system. Development has been larger and faster in Tripoli than in Benghazi, in Benghazi than in Derna and in Derna than in the small town of El Gubbah. This difference in time, space and scale of development increased the volume of migration from the

less developed to the more highly developed urban centres. As early as the 1960's the contrast between the two major cities, Tripoli and Benghazi and the rest of the country was so marked that the choice of destination for potential migrants was clear. No other town in Libya provided the same range of employment opportunities, or educational and medical facilities.(16)

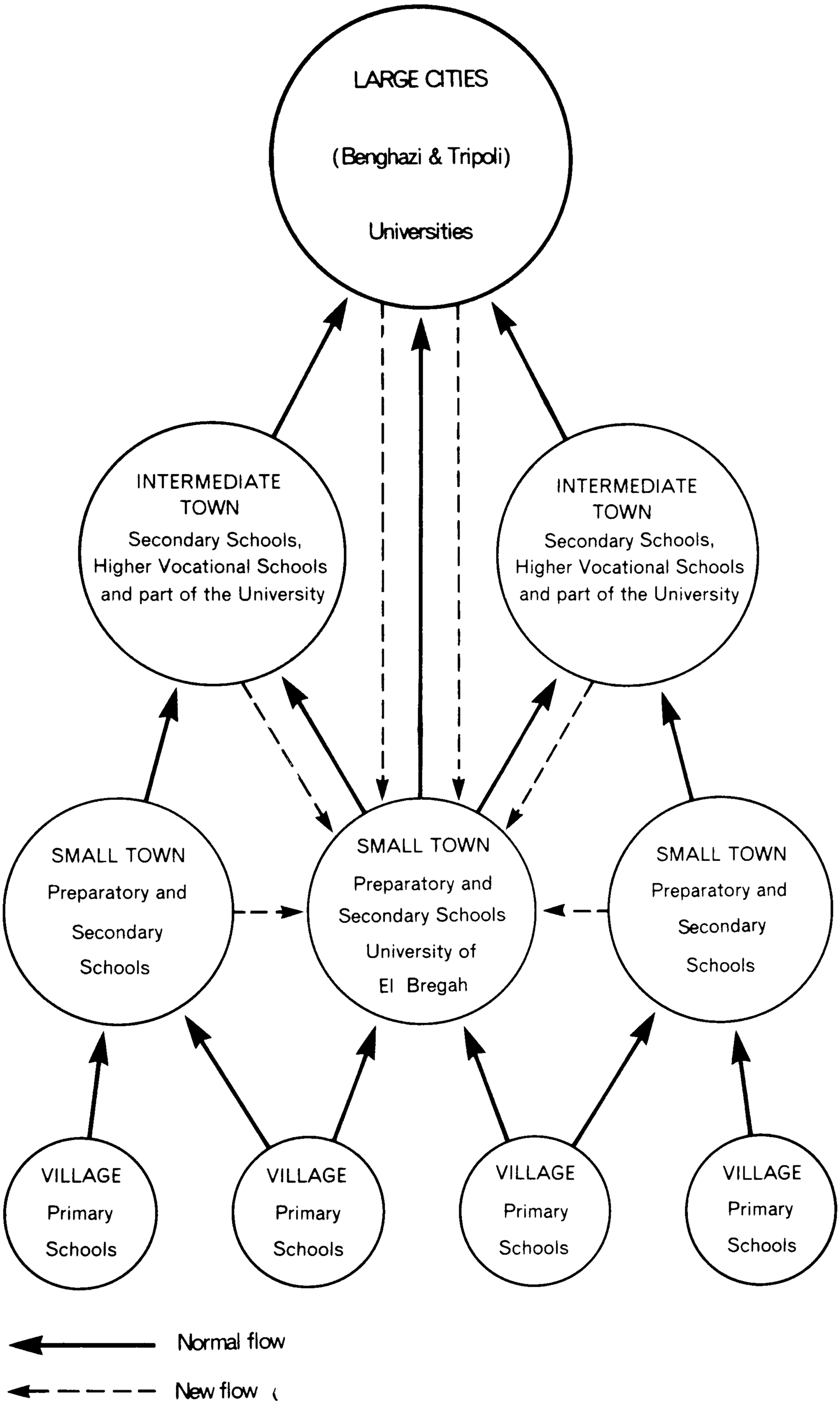
Education. There is no doubt that education has accelerated the process of migration. Figure 5.12 shows the flow of students from one stage of the educational system to another. Students move from primary schools in the villages to preparatory schools in the small towns, and then to secondary schools in the intermediate towns and to Universities in Benghazi and Tripoli. This movement suggests that small towns are playing a role in step-migration. The government has established schools in all settlements, and small towns now have not only primary and preparatory schools but also secondary schools. The small town of El Bregah is the site of Libya's new technical university. Thus the effect of education has been to accelerate rather than to weaken the process of migration.

Substantial numbers of students who complete their primary education in rural areas must migrate to the small or intermediate towns to attend secondary schools and then to Tripoli and Benghazi for higher education. The majority are not enthusiastic about returning to their original homes after completing their studies.

Development of Transportation. The dramatic improvement in road networks and communication between rural areas and urban areas, between the coast and the interior and remote oases has facilitated the current heavy emigration from poor regions such as Gherian with its chronic problems of difficult terrain and water shortage. The development of road systems has greatly facilitated commercial activities, as well as

Fig. 5.12

Pattern of Students' Migration



Source:- compiled by Author

social mobility and contributed to the modern development of the isolated small towns and also served to introduce new technology to the smallest towns and villages. Although the development of roads has facilitated out-migration from many small towns and villages, some small towns near the two major cities have retained their population as their inhabitants commute to jobs in Tripoli and Benghazi. A large number of migrants have also been attracted to certain small towns located close to the two major cities.(17)

Social, political and administrative changes. Libyans are traditionally attached to their families, tribes and towns and despite moving to other urban centres they never lose their attachment to their place of origin. It was noticed by Kikhia that when recent socio economic development reached the small towns, villages and oases some of the migrants were induced to return. Political change after the 1969 revolution has resulted in changes in the size and organisation of the political and administrative system and therefore intensified the flow of population by providing new jobs in local administration not only in the big cities but also in many small towns which were promoted to be headquarters for Baladiyat and Fur' Baladiyat.

The nationalisation programme in the 1970's which culminated in the establishment of state control over almost all sectors of the Libyan economy,has transformed most workers into state employees. This means that the state can transfer any of its employees to any part of Libya according to national needs and interests.(18)

Development of the oil industry. The immediate influence of petroleum exploitation and the establishment of the oil industry on internal migration were somewhat limited. The new oil sector provided only limited opportunities for employment, particularly after the end of the construction phase. Some migrants were attracted to jobs in the

service sector in the oil field areas in the central part of the country and they contributed to the growth of Ejdabiah and the small towns of El Bregah, Sirte, Jalu, Ras Lanuf and other settlements in the El Khalij region. Before oil the El Khalij region experienced outmigration to other parts of Libya, especially Benghazi. Since the early 1960's this situation has changed and El Khalij began to maintain its own population and also attract migrants from other regions.

In view of the small total population, the scale of Libyan migration has been particularly significant. According to the 1964 census over 600,000 persons or 40 per cent of the total population had changed residence during their lifetime; half of them were nomads. About 175,000 Libyans or 12 per cent of the total population were enumerated in a region other than their region of birth, and about 37,000 Libyans were born abroad. Tripoli and Benghazi had the largest population gain due to both types of migration, i.e. the return of Libyans from abroad and internal migrants. The Muhafadat of Jabel Gharbi, Ez Zawiyah, Derna and Ubari had experienced a high rate of population growth between 1954 and 1964, mainly influenced by in-migration and with some Libyans returning from abroad. The Muhafadat of Sebha, El Khums, Misurata and Jabel Akhdar suffered population loss through outmigration.(19)

The 1973 census revealed that between 1964 and 1973 about 36 per cent of the total population had changed their place of original residence. About 24 per cent of the total population had moved from one baladiyah to another within the same Muhafadah, and about 12 per cent of the total Libyan population moved to another muhafadah.

As outlined by Kikhia, the level of rural to urban migration has become increasingly important, both in volume and effect. Moreover new forms of migration which were previously not feasible have begun to occur consistently such as the flow of urban-to-urban migrants and the

return of some former migrants to the villages and towns of their previous residence. Given the fact that the majority of Libyans are now urban dwellers, internal migration is largely between urban areas rather than between rural and urban areas. Khalfallah (1979) found out that over 66 per cent of migrants surveyed came either from a city or a town.(20)

The flow of population between muhafadat on the basis of the 1973 census, can be seen in Table 5.20 which is analysed as follows:

1. Derna

Of the 10,600 inhabitants who migrated to Derna Muhafadat about 60 per cent came from Benghazi and Jabel Akhdar Muhafadat and the rest from the Muhafadat of Misurata and Tripoli. Of the 14,800 migrants who left Derna Muhafadah 90 per cent moved to the Muhafadat of Benghazi Jabel Akhdar and Tripoli.

2. Jabel Akhdar

The majority of the 15,800 migrants to Jabel Akhdar came from Derna and Benghazi. About two thirds of all the migrants from the Jabel Akhdar Muhafadah settled in Benghazi Muhafadah and about one fifth in Derna Muhafadah.

3. Benghazi

Of the 58,000 migrants to Benghazi Muhafadah 14,400 of them came from Misurata, 10,600 from Jabel Akhdar and the rest from El Khalij, Derna, El Khums and Tripoli Muhafadat.

Of the 21,000 migrants who left Benghazi Muhafadah 6,100 went to Jabel Akhdar Muhafadah, 5,700 to Tripoli, 3,000 to Derna and 2,300 to El Khalij.

Table 5.20 Population Flow Between Muhafadat in 1973*

Muhafadat	in-migration	out-migration	net-migration
Derna	10,600	14,800	- 4,200
Jabel Akhdar	15,800	16,000	- 200
Benghazi	58,000	21,000	+37,000
El Khalij	7,100	15,000	- 7,900
Misurata	6,300	29,000	-22,700
El Khums	4,000	44,000	-40,000
Tripoli	115,000	33,000	+82,000
Ez Zawiyah	27,000	25,000	+ 2,000
Gherian	5,000	50,000	-45,000
Sebha	7,000	8,600	- 1,600

* These figures refer to Libyan nationals only and exclude non-Libyans.

Source : Secretariat of Planning (1979) The Internal Migration in 1973 Tripoli (in Arabic). pp.3-15.

4. El Khalij

In-migration of 7,100 inhabitants was mainly from Benghazi, Misurata and El Khums Muhafadat. Some 15,000 inhabitants left the Muhafadah; 65 per cent of them went to Benghazi and the rest to Tripoli, Misurata and Sebha Muhafadat.

5. Misurata

Of the 6,300 in-migrants to Misurata Muhafadah about 1,800 came from El Khums, 1,200 from El Khalij and about 700 from Sebha. On the other hand the total number of out-migrants was 29,000 inhabitants, the majority of them going to Benghazi and Tripoli.

6. El Khums

The total volume of in-migration was 4,000; about 1,700 came from Tripoli, 800 from Benghazi Muhafadah and the rest from different regions. The total volume of out-migration was 44,000, about 75 per cent of them settled in Tripoli and 15 per cent in Benghazi.

7. Tripoli

Tripoli Muhafadah received some 115,000 migrants. The majority of them, some 40,000 persons,came from Gherian Muhafadah, 40,000 from El Khums and 21,000 from Ez Zawiyah. Out migration totalled 33,000; about 21,000 migrants settled in Ez Zawiyah Muhafadah, 4,000 in Benghazi and the rest in different parts of the country.

8. Ez Zawiyah

Of the 27,000 migrants to the Muhafadah about 21,000 came from Tripoli and about 4,000 from Gherian Muhafadah. Out of a total out-migration of 25,000 persons, about 21,000 moved to Tripoli, 2,000 to Benghazi and the rest to other regions.

9. Gherian

All of the 5,000 migrants to Gherian Muhafadah came from Tripoli and most of them were return migrants. In contrast there was a large volume of outmigration, some 50,000 people, the majority of whom settled in Tripoli Muhafadah.

10. Sebha

Only 7,000 migrants moved to Sebha; about 31 per cent of them came from Gherian, and 19 per cent from Tripoli. Out-migration totalled about 8,600 inhabitants and they settled in Tripoli and Benghazi Muhafadat.(21)

On the basis of the 1973 Census of Population and using the simplest form of gravity model (22) Kikhia described the differential of migration flows between the regions (Muhafadat) during the 1964-1973 period and found that migration between regions represents a disequilibrium situation. He classified the Muhafadat into four categories as follows:

> "The first group of regions which have very high positive residuals of net migration such as Tripoli and Benghazi. Tripoli had a positive net migration from all regions except from Ez Zawiyah, and Benghazi had a positive net migration from all regions except from Tripoli region.
>
> The second group where the positive residuals of net-migration are relatively more important than the negative residuals were Jabel Akhdar and Ez Zawiyah. The reason for the net migration in Jabel Akhdar is the development of the two urban centres of El Beida and El Merj, while in Ez Zawiyah the reason was the recent urban development of some small towns inhabited by commuters who commute to Tripoli for work.
>
> The third group represented by Derna, El Khalij, Sebha and Misurata are considered as less developed regions. Here we see that the negative residuals of net-migration were more important than the positive residuals.
>
> The fourth group represented by Gherian and El Khums were the most depressed regions in the country and had the largest numbers of out migrants. Their residuals of net migration were negative in comparison to all other regions." (23)

The pattern of inter-regional migration outlined above provides a certain background for the study of small towns. However there does not appear to be any correlation between population change at the Muhafadah level and population change in the small town. For example we find that in Tripoli and Benghazi Muhafadat, which experienced high rates of in-migration between 1964 and 1973 some small towns show a low rate of growth (Beninah and El Garabulli) and in one case, Gaminis, an absolute decline in population. In contrast some small towns in the Muhafadah experiencing a high rate of out migration show substantial growth e.g. Tarhuna in El Khums and Yefren in Gherian

Unfortunately the limitations of the census data mean that detailed analysis of migration in Libya below the Muhafadat level is difficult. Although information on in-migration to the small towns is available from the 1973 census there is no data on outmigration from the small towns. It is therefore impossible to determine the net-migration. Thus this section of the study is limited in scope due to the nature of the available data and many questions cannot be answered. However, an attempt is made using the limited information available to provide some general points about migration to the small towns which we believe have validity.

Figure 5.13 and Table 6.21 illustrate the in-migration process into the small towns. The following points may be made.

Firstly for most small towns, the majority of migrants came from the Muhafadah in which the town is located. However there are some exceptions. Only 11 per cent of the total in-migration to Sirte was from the Muhafadah of El Khalij in which it is located - 24 per cent was from Misurata and 16 per cent from El Khums. The Muhafadah of El Khalij is a vast sparsely populated region stretching from the Mediterranean coast to the southern borders of Libya. Sirte is situated in the north-west of the Muhafadah close to the densely populated

Fig: 5.13 In-migration in Selected Small Towns by Birth Place in 1973

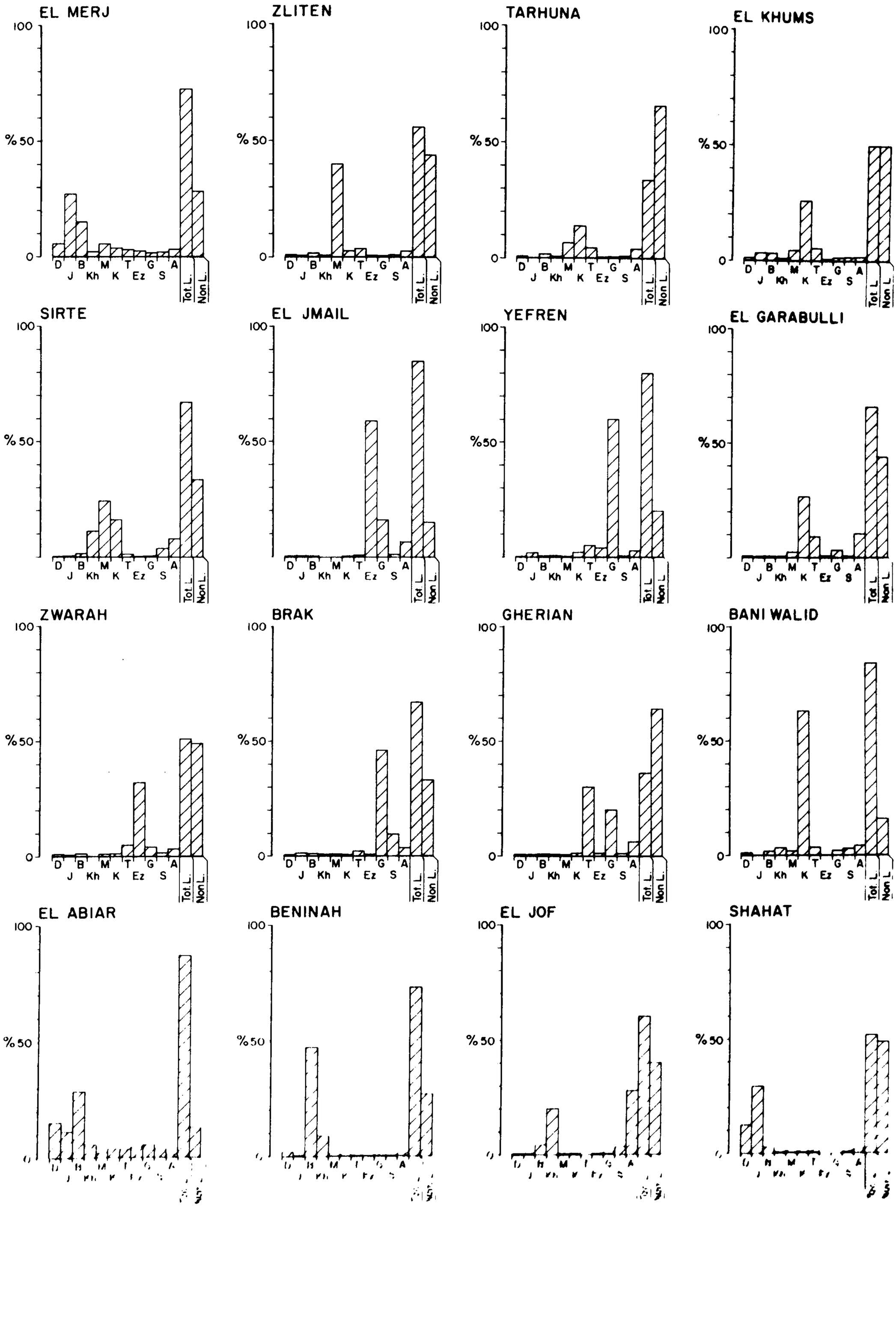
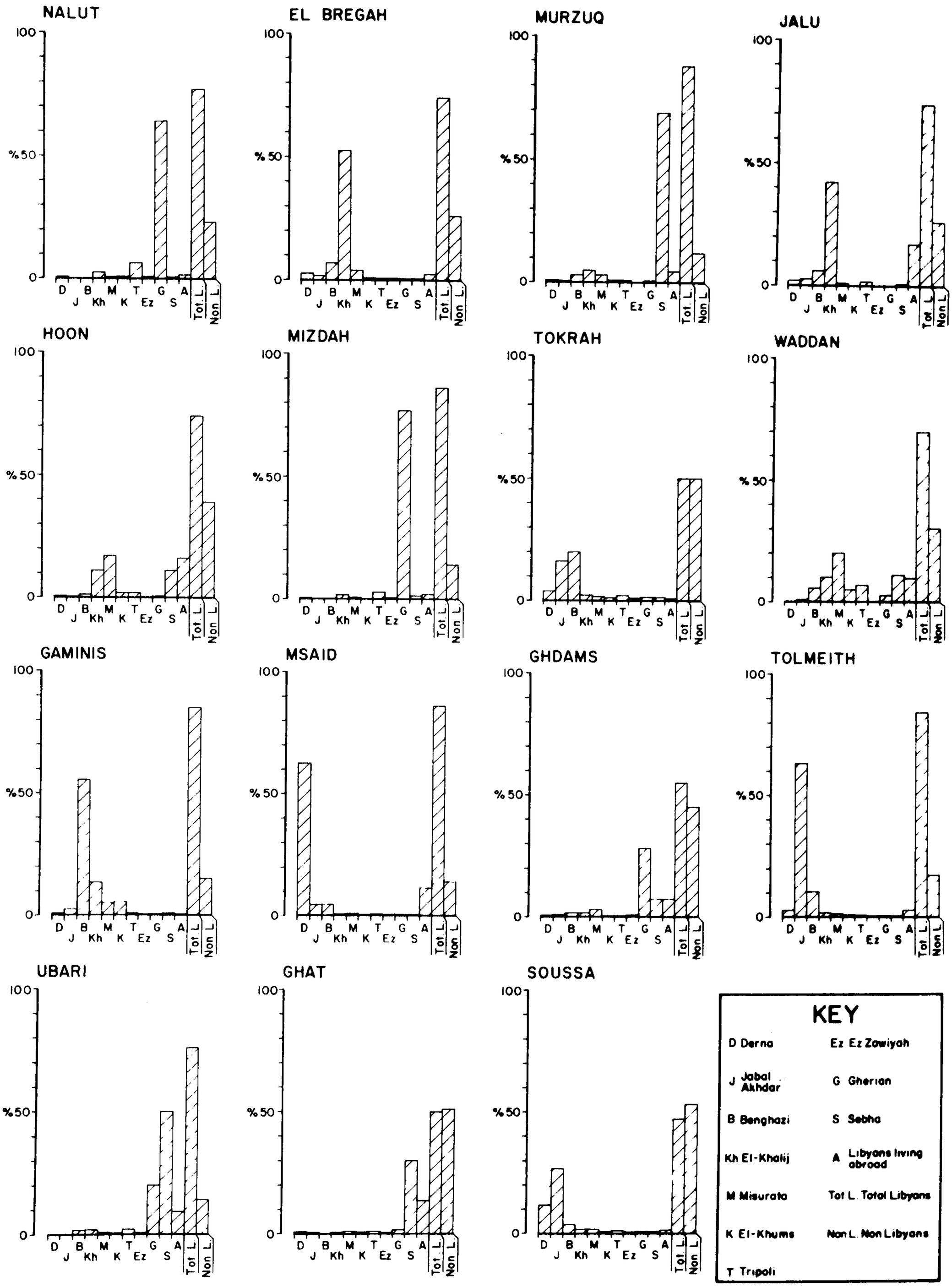


Fig. 5.13 Cont.



Source: Computed by the Author from the 1973 Census of Population

Table 5.21 : Small Towns : In-migration by Place of Birth 1973

R	Small Towns	Derna		Jabel Akhdar		Benghazi		El Khulij		Misurata		El Khums		Tripoli		Ez Zawiyah		Gherian		Sebha		Abroad		Unknown		Total Libyans		Foreigners		Total Immigration 1964-1973	
		No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	El Merj	771	5.7	3,681	27.0	2,027	15.0	279	2.0	777	5.7	500	3.7	411	3.0	361	2.6	239	1.7	255	2.0	402	3.0	1	0.0	9,704	72.0	3,773	28.0	13,477	100.0
2	Zliten	26	1.1	25	1.1	38	1.7	16	0.7	891	40.0	64	2.8	80	3.6	17	0.7	8	0.4	14	0.6	64	2.8	1	0.0	1,244	56.0	989	44.0	2,233	100.0
3	Tarhuna	20	1.2	1	0.0	32	2.0	6	0.4	89	5.7	216	13.9	71	4.6	4	0.3	9	0.6	15	1.0	61	3.9	-	0.0	524	34.0	1,026	66.0	1,550	100.0
4	El Khums	67	1.6	140	3.4	138	3.4	36	0.9	180	4.4	1,051	26.0	231	5.6	28	0.6	55	1.3	63	1.5	64	1.6	2	0.0	2,055	50.0	2,046	50.0	4,101	100.0
5	Sirte	5	0.2	16	0.6	47	1.7	296	11.0	638	24.0	435	16.0	37	1.4	4	0.1	19	0.7	100	3.7	201	7.4	-	0.0	1,798	67.0	889	33.0	2,687	100.0
6	ElJmail	18	0.4	7	0.1	13	0.3	-	0.0	1	0.0	10	0.2	58	1.2	2,720	59.0	735	16.0	56	1.2	300	6.4	-	0.0	3,918	85.0	716	15.0	4,634	100.0
7	Yefren	6	0.3	42	2.3	9	0.5	19	1.0	5	0.2	29	2.5	107	5.8	73	4.0	1,088	60.0	20	1.0	56	3.0	-	0.0	1,454	80.0	371	20.0	1,825	100.0
8	El Garabulli	20	1.4	3	0.2	9	0.6	7	0.4	40	2.8	371	26.4	126	9.0	9	0.6	46	3.3	10	0.7	150	10.7	-	0.0	791	56.0	615	44.0	1,406	100.0
9	Zwarah	24	1.0	11	0.5	28	1.2	1	0.0	24	1.0	27	1.2	111	4.9	726	32.3	88	3.9	34	1.5	73	3.3	-	0.0	1,147	51.0	1,097	49.0	2,244	100.0
10	Sabratah	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
11	El Aziziah	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
12	Brak	5	0.2	29	1.3	29	1.3	13	0.5	24	1.0	8	0.3	54	2.4	15	0.7	1,019	46.0	209	9.5	74	3.4	-	0.0	1,479	67.0	720	33.0	2,199	100.0
13	Gherian	5	0.2	4	0.2	27	1.0	25	1.0	6	0.2	33	1.3	78	3.0	20	1.0	518	20.0	36	1.4	169	6.3	-	0.0	921	36.0	1,665	64.0	2,586	100.0
14	Bani Walid	10	0.9	1	0.0	23	2.0	39	3.5	22	2.0	688	63.0	35	3.5	1	0.0	23	2.0	30	3.0	44	4.4	-	0.0	916	84.0	172	16.0	1,088	100.0
15	El Abiar	732	15.5	542	11.5	1,341	28.5	274	5.8	94	2.0	186	4.0	184	3.9	203	4.3	258	5.5	187	4.0	86	1.8	-	0.0	4,087	87.0	624	13.0	4,711	100.0
16	Beninah	172	2.4	422	5.6	3,452	47.3	664	9.1	100	1.4	117	1.5	73	1.0	41	0.6	106	1.4	48	0.7	112	1.4	-	0.0	5,307	73.0	1,984	27.0	7,291	100.0
17	El Jof	5	0.3	10	0.6	68	4.3	323	20.3	11	0.6	8	0.5	17	1.0	1	0.0	13	0.7	56	3.5	444	28.0	-	0.0	956	60.0	634	40.0	1,590	100.0
18	El Ajelat	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
19	El Gubbah	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
20	Shahat	171	12.8	394	29.4	39	2.9	8	0.6	14	1.0	12	0.9	12	0.9	1	0.0	-	0.0	14	1.0	25	1.9	-	0.0	690	51.5	650	48.5	1,340	100.0
21	Ez Zahra	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
22	Nalut	5	0.4	-	0.0	-	0.0	24	2.4	5	0.4	8	0.8	79	6.2	10	0.8	816	64.0	7	0.5	18	1.4	-	0.0	972	77.0	297	23.0	1,269	100.0
23	El Bregah	78	2.7	52	1.8	202	7.0	1,501	52.5	116	4.0	29	1.0	21	0.7	22	0.8	13	0.4	18	0.6	62	2.2	-	0.0	2,114	74.0	745	26.0	2,859	100.0
24	Murzuq	8	1.0	4	0.5	24	3.0	36	5.0	25	3.0	9	1.0	7	1.0	1	0.0	4	0.5	524	69.4	27	4.6	-	0.0	669	88.0	92	12.0	761	100.0
25	Jalu	11	2.0	14	2.5	34	6.0	235	42.0	6	1.0	-	0.0	10	1.7	2	0.0	1	0.0	4	0.7	98	17.0	-	0.0	415	74.0	147	26.0	562	100.0
26	Hoon	6	0.4	3	0.2	17	1.2	150	11.0	221	17.0	24	2.0	29	2.0	2	0.1	6	0.4	145	11.0	204	16.0	2	0.0	809	61.0	517	39.0	1,326	100.0
27	Mizdah	2	0.2	1	0.1	1	0.1	16	1.6	5	0.5	-	0.0	28	2.8	2	0.2	734	77.0	12	1.2	17	1.7	-	0.0	818	86.0	133	14.0	951	100.0
28	Tokrah	66	3.7	285	15.9	351	19.6	35	2.0	28	1.6	18	1.0	35	2.0	17	0.9	19	1.1	20	1.1	13	0.7	-	0.0	887	50.0	900	50.0	1,787	100.0
29	Waddan	1	0.0	5	0.6	40	5.2	73	10.0	55	20.0	36	4.7	49	6.4	-	0.0	18	2.3	84	11.0	75	9.8	-	0.0	535	70.0	226	30.0	761	100.0
30	Gaminis	10	0.8	29	2.3	707	55.2	173	13.5	65	5.0	70	5.5	13	1.0	4	0.3	4	0.3	13	1.0	3	0.2	-	0.0	1,091	85.0	189	15.0	1,280	100.0
31	M said	1,689	62.3	120	4.4	125	4.6	13	0.5	28	1.0	9	0.3	20	0.7	12	0.5	11	0.4	11	0.4	310	11.4	-	0.0	2,348	86.0	367	14.0	2,715	100.0
32	Ghdams	2	0.3	7	1.0	9	1.4	9	1.4	20	3.0	1	0.1	30	4.5	5	0.6	184	28.0	47	7.1	47	7.1	-	0.0	361	55.0	295	45.0	656	100.0
33	Tolmeitha	27	2.4	706	63.0	117	10.4	18	1.6	12	1.1	6	0.5	5	0.4	2	0.2	6	0.5	3	0.3	28	2.5	-	0.0	930	83.0	191	17.0	1,121	100.0
34	Ubari	3	0.0	-	0.0	19	1.7	21	1.9	9	0.8	6	0.3	22	2.0	5	0.3	225	20.9	544	50.0	97	9.0	-	0.0	951	86.0	153	14.0	1,104	100.0
35	Ghat	9	0.8	4	0.3	1	0.0	3	0.3	10	0.8	7	0.6	11	0.9	2	0.2	14	1.2	359	30.0	160	13.4	1	0.0	581	49.0	613	51.0	1,194	100.0
36	Sorman	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
37	Soussa	142	11.5	324	26.3	42	3.4	16	1.3	16	1.3	4	0.3	8	0.7	3	0.3	5	0.4	4	0.3	14	1.1	1	0.0	578	47.0	655	53.0	1,233	100.0

nd : No data available

Source Compiled from : Ministry of Planning (1977) The 1973 Census of Population, Tripoli (in Arabic).

regions of Misurata and El Khums. The second exception is the small town of Brak in Sebha Muhafadah. Only 9.5 per cent of total in-migration came from Sebha Muhafadah, 46 per cent from the depressed Gherian Muhafadah, the major region of out-migration. The third exception is Gherian where a higher proportion of in-migration is from Tripoli than Gherian Muhafadah. This is explained by return migration from Tripoli of migrants who originally lived in the Gherian Muhafadah.

Secondly,the second major source of in-migration was from the Muhafadah closest to the Muhafadah in which the small town is located. This can be seen in the case of the following small towns : El Merj, Tarhuna, Sirte, Shahat, Hoon, Tokrah, Waddan and Soussa.

Thirdly, very few Libyans returning from abroad settle in small towns and the majority tend to settle in the large cities of Benghazi and Tripoli.

Fourthly, the large volume of in-migration into El Merj (9,704) during this period was due to the construction of the new town and the return of those citizens who left the town after the earthquake.

Finally, the share of non-Libyans in the in-migration movement is significant. This is an important aspect of population change in the small towns. The percentage of non-Libyans to Libyans who migrate to the small towns can be seen in Table 5.21. On average, the percentage of non-Libyans to Libyans is 33 to 67. However, in Tarhuna, Gherian, Ghat and Soussa in-migration of non-Libyans is higher than Libyan in-migration. In El Khums and Tokrah the percentage is equal and this represents the second group. The third group in which the percentage is less than equal but more than average is represented by : Zliten, Sirte, El Garabulli, Zwarah, Brak, El Jof, El Gubbah, Shahat, Hoon and Ghdams. The fourth group of towns where the percentage is less than the average can be found

in El Merj, El Jmail, Yefren, Bani Walid, El Abiar, Beninah, Nalut, El Bregah, Murzuq, Jalu, Mizdah, Waddan, Gaminis, Msaid, Tolmeitha, and Ubari.

Of the three variables affecting population dynamics of the small towns (natural increase, internal migration and the presence of non-Libyans) internal migration is the most difficult to study because of the limitations of the data available to us. However, it is internal migration that appears to be the key variable in accounting for population change in most of the small towns. It remains to be seen whether the next census of population will provide more detailed data on this subject that will enable us to begin to understand more about the role of small towns in the migration process. For a country like Libya undergoing rapid economic and social change, it is vitally important that the collection of data on internal migration should be based on the settlement system and not just on the Baladiyat so that the information can be used effectively in spatial planning.

5.5 AGE AND SEX STRUCTURE

In any discussion of population dynamics, the analysis of age and sex distribution constitute a major element. One can not proceed very far in the study of population growth or migration without examination of age structure. There is hardly any aspect of individual or communal life which is not affected by age, such as economic and social activities, military service, social attitudes and mobility. Information on sex ratio and age distributions are important in the preparation of economic and social development programmes, at the regional and national levels as well as for rural and urban areas.

The ratio between the two sexes is influenced by certain factors such as the preponderance of male births, the different mortality of the

sexes and migrations. One would assume that the sex ratio varies from company towns, military towns, market towns etc.,and one could also assume that there are variations in the ratio between core cities and periphery towns and areas.

Age structure is directly influenced by three variables: mortality, fertility and migrations. These variables are not entirely independant and any change in one may eventually influence the other two. Social and economic conditions only influence age structure through them. One would assume that migration affects the age structure of the small towns and that age structure is increasingly weighted at the base. This section is divided into two parts, i.e. age structure and sex structure.

5.5.1 Age Structure

The age structure of the Libyan population is characterised by the predominance of children and young people. This has resulted from a very high birth rate and a declining death rate. Both give evidence of the improvement in medical facilities, as well as better living standards due to direct and indirect state intervention. The death rate is expected to continue to decline and hence will cause an increase in the share of the age group 0-19 years in the whole population in the coming years.

With high population growth it is not surprising that Libya's age structure is increasingly weighted at the base. About 49 per cent of the total population were under 15 years of age in 1973 compared with 38 per cent in 1954. In contrast the age structure of the non-Libyans is characterised by a very high proportion in the productive age group and also the preponderance of males. Indeed the 1973 census revealed that about two thirds of the population were under 25 years of age and that those aged 15-59 represented only 46 per cent of the total

population; significantly only 24 per cent of the total population were economically active reflecting the low participation rate of women in the workforce.

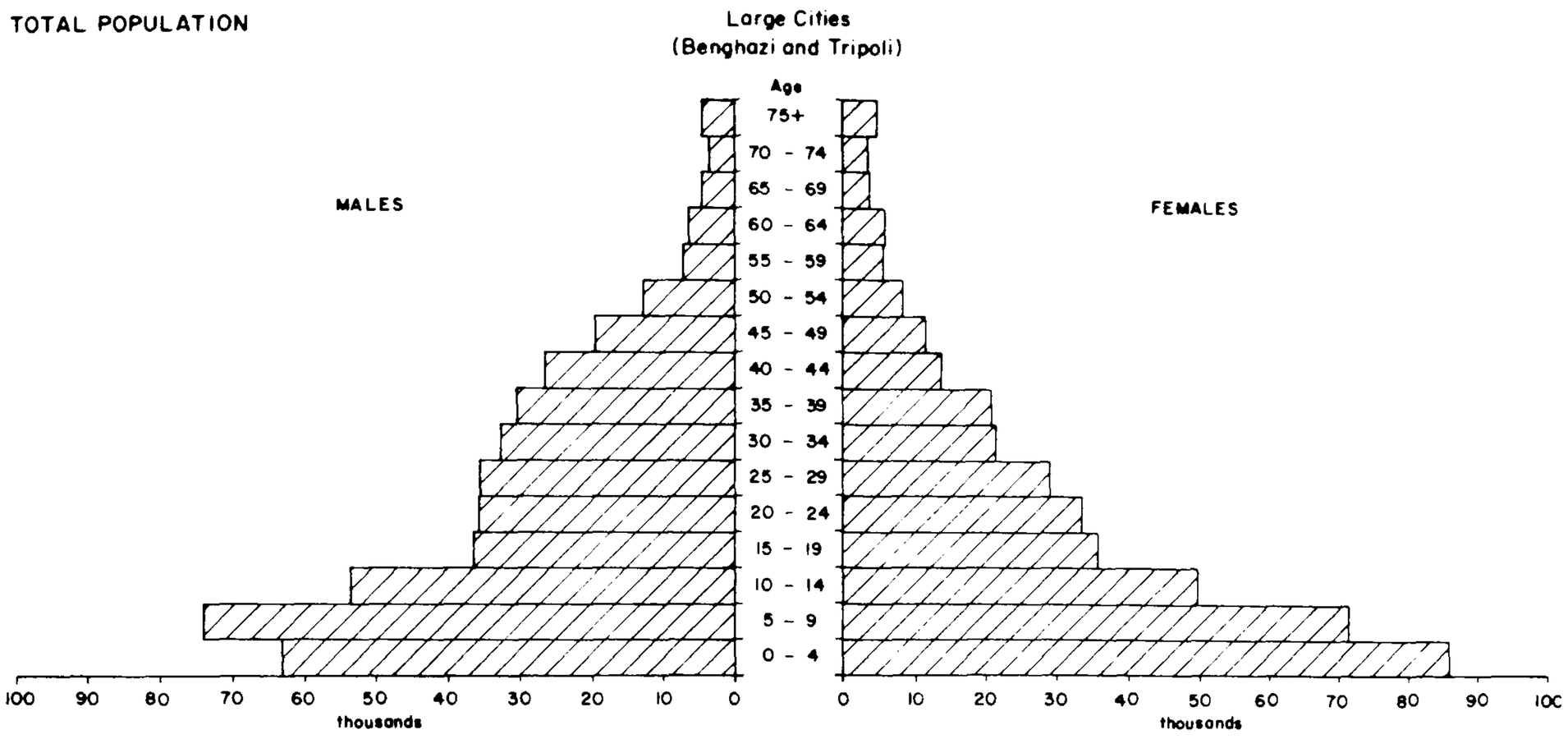
Figure 5.14 shows the distribution by age and sex of the total Libyan and non-Libyan population in the large cities and intermediate towns. The figure illustrates the fact that the total population for those urban centres is heavily weighted at the base, which is also true of the Libyan population. However the high proportion of non-Libyans in the productive age group is clearly illustrated.

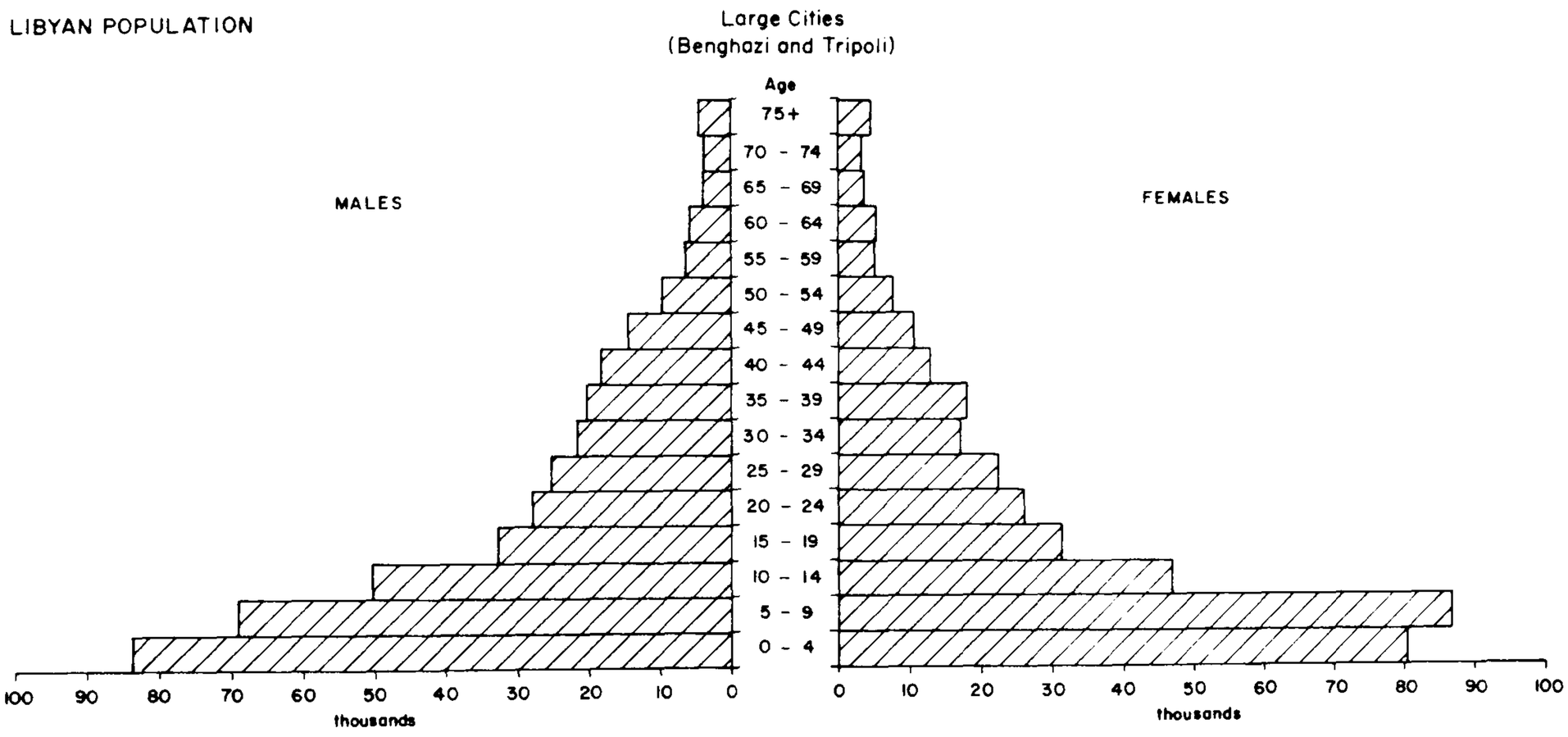
Figures 5.15, 5.16 and 5.17 show the total Libyan and non-Libyan population in the small towns. They reveal that while the pyramids of the total, as well as of the Libyan population are more or less normal and smooth, those of the non-Libyan population are uneven, due to the over-presentation of the working age groups compared to the other age groups. Furthermore, it can be seen that among the working non-Libyan age groups 'young male immigrants' (15-40) constitute the overwhelming majority in most small towns. The main exceptions are El Bregah, Msaid and El Jmail.

5.5.2 Sex Structure

The sex ratio (percentage of males to females) in 1973 was 53 to 47 per cent as a national average for Libya. Tripoli and Benghazi Muhafadat had above the national average in 1954, 1964 and 1973 because both were the primary destination of migrants; El Khalij, Gherian were well above the national average in 1954 and 1964. However, El Khalij moved from a region with a female surplus in 1954 and 1964 to one with a considerable male surplus in 1973. The other Muhafadat were close to the national average.(24)

Fig 5.14 TOTAL LIBYAN AND NON-LIBYAN POPULATION BY AGE AND SEX IN LARGE CITIES AND INTERMEDIATE TOWNS 1973





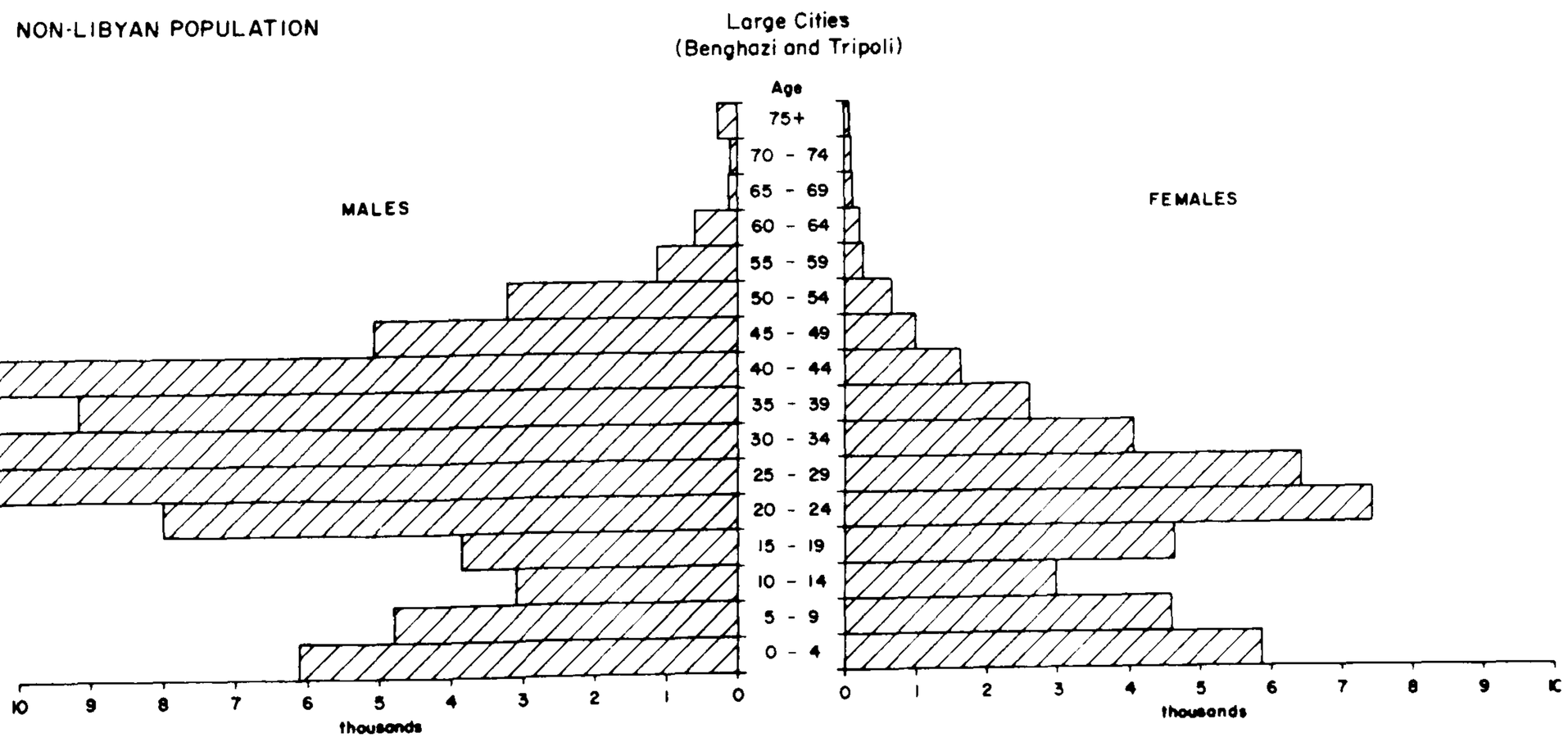
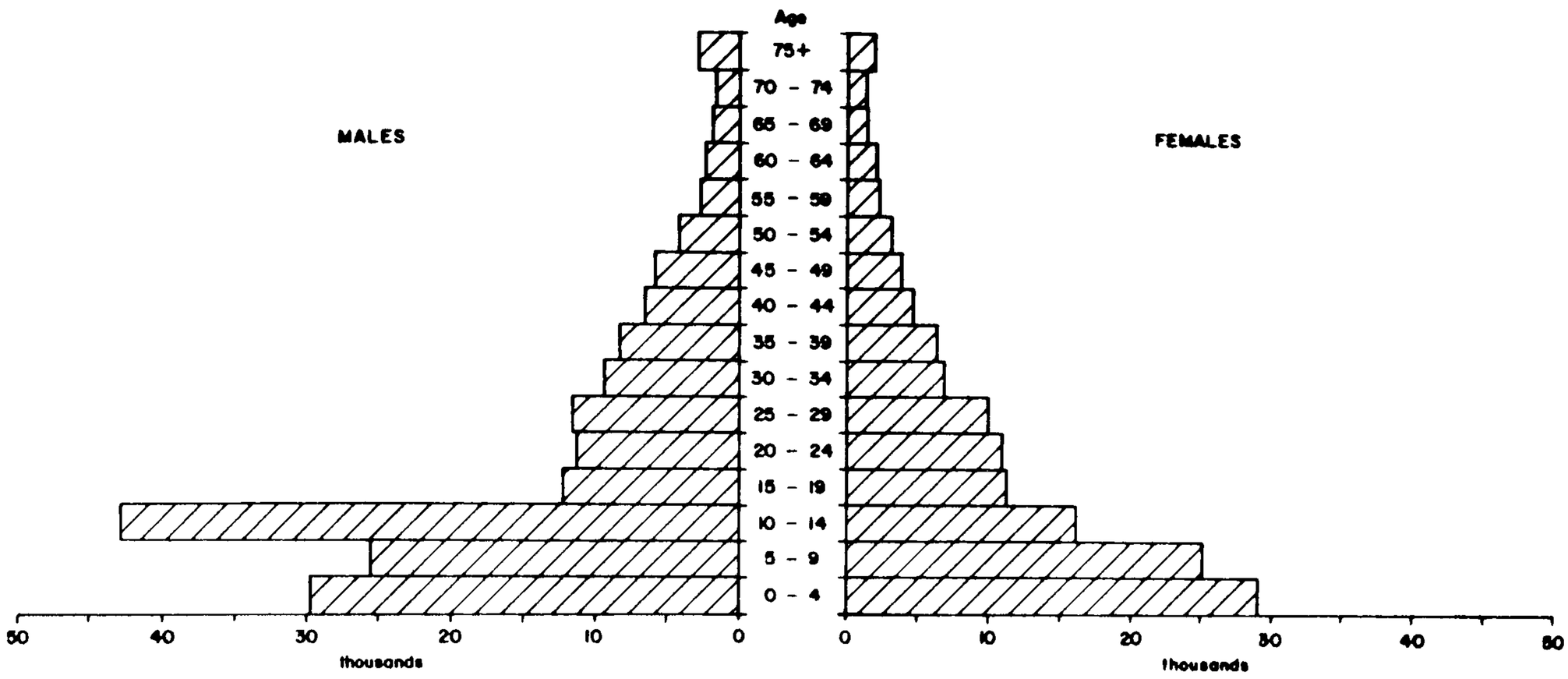
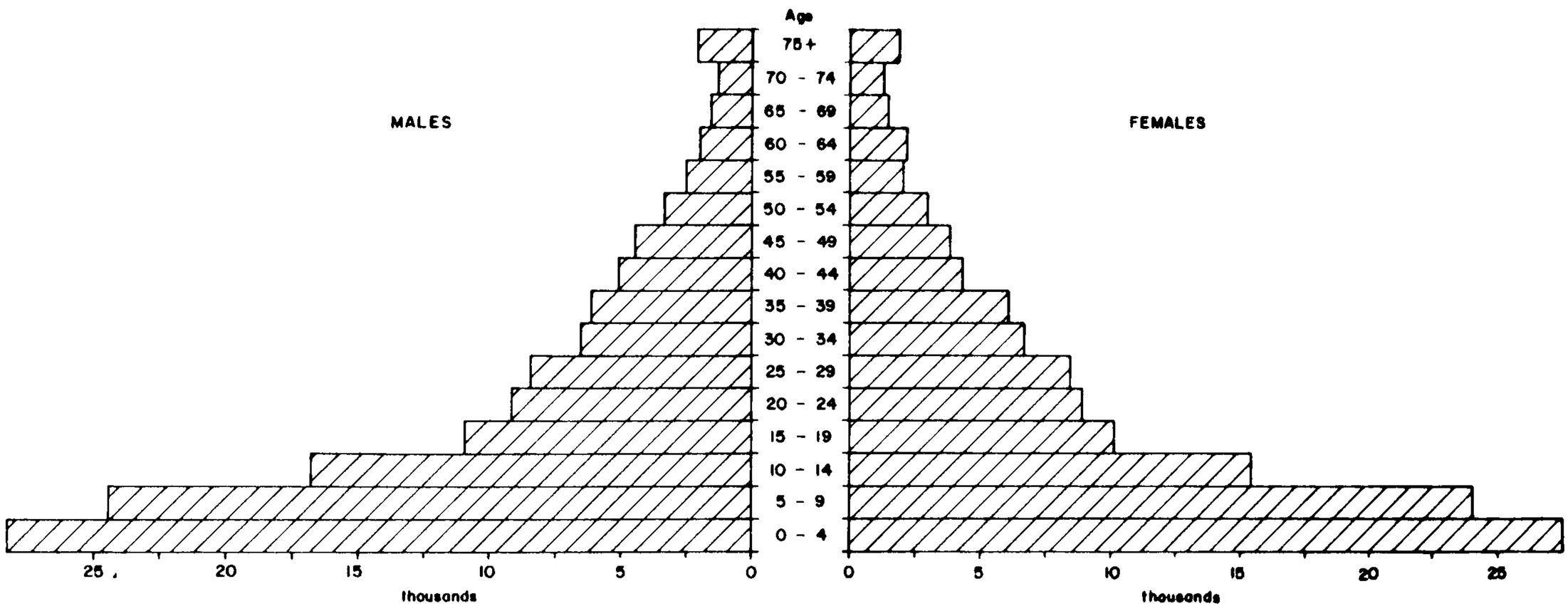


Fig 5.14(cont)

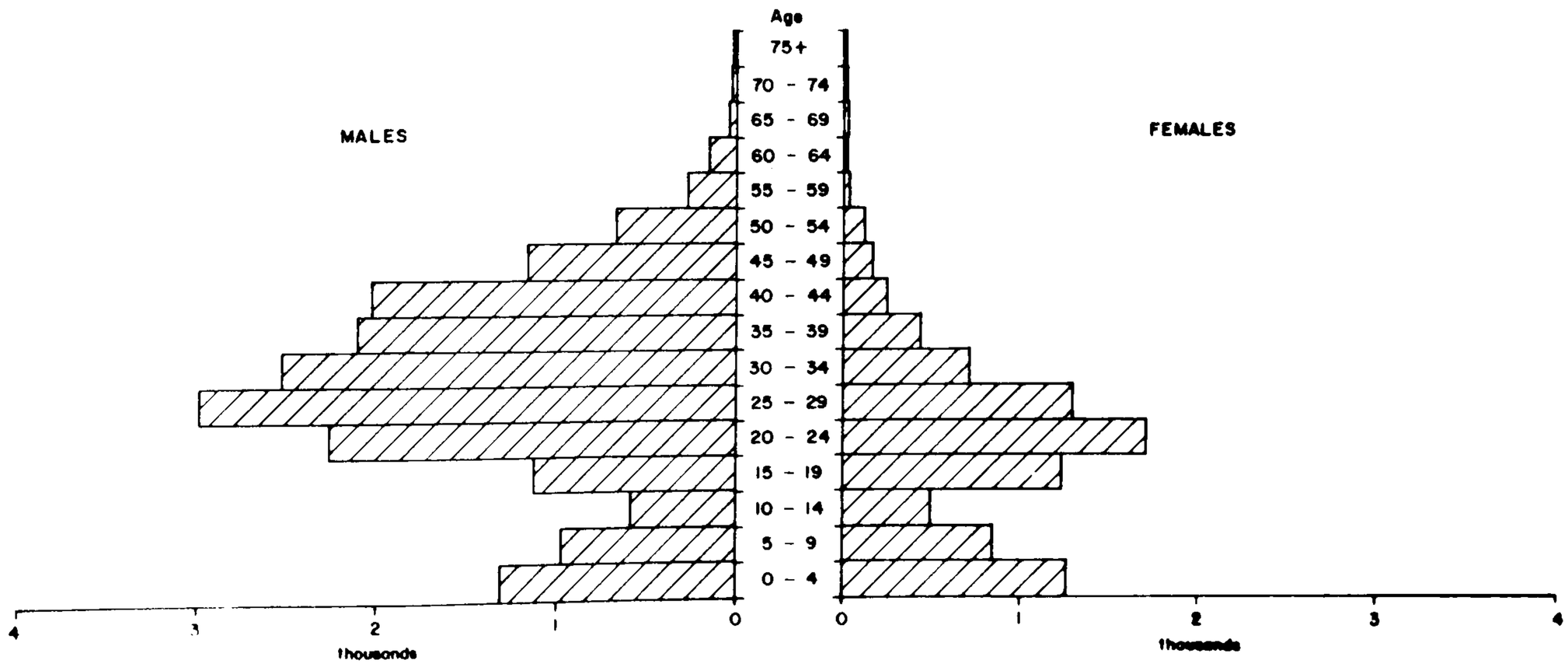
TOTAL POPULATION



LIBYAN POPULATION



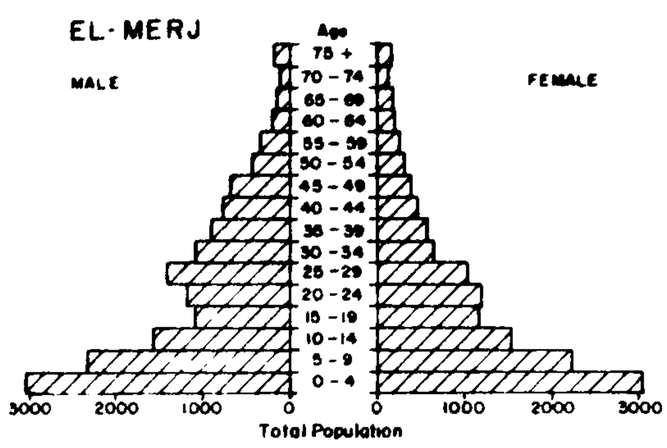
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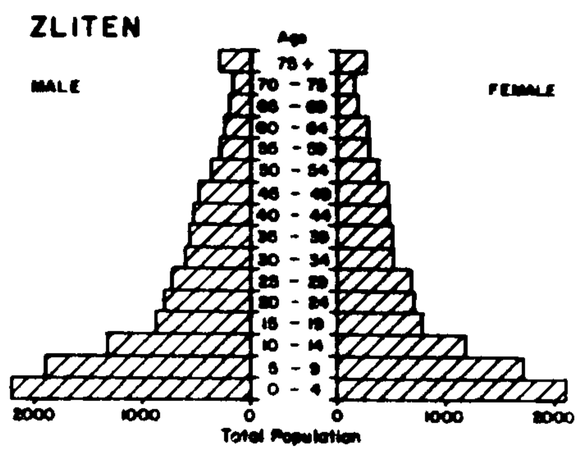


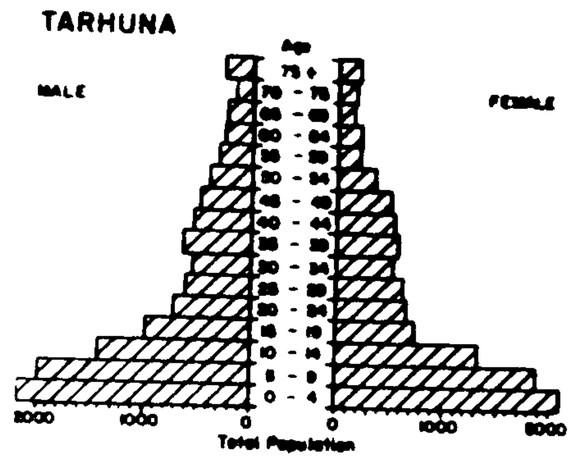
Source: The 1973 Census of Population

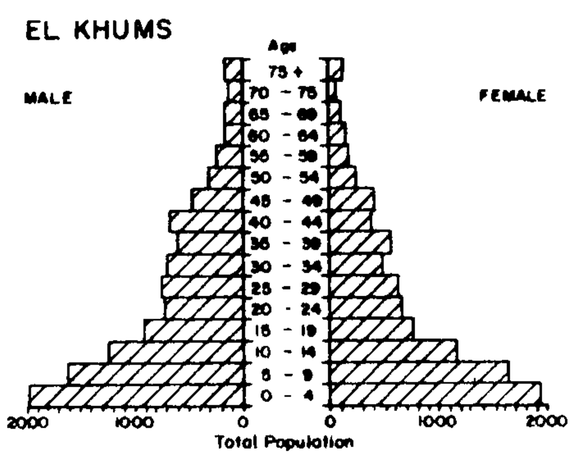
Fig 5.15

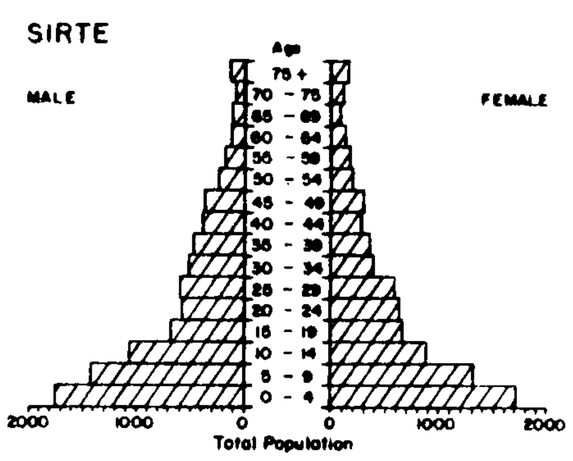
TOTAL POPULATION IN SMALL TOWNS 1973

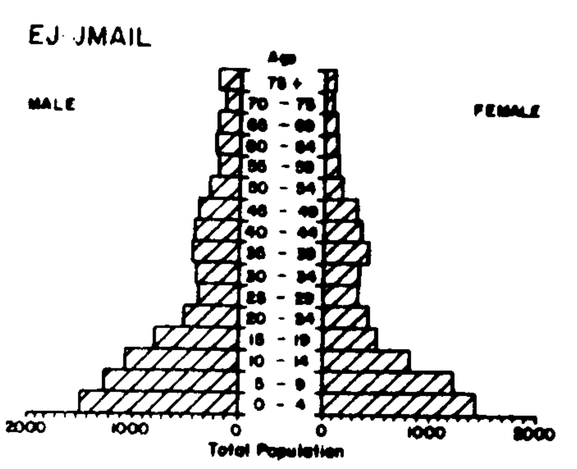


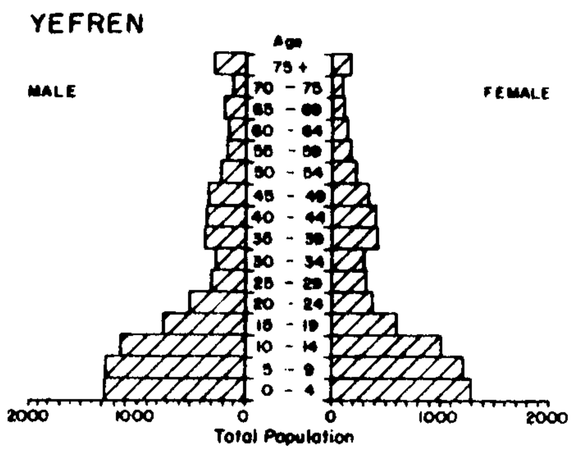


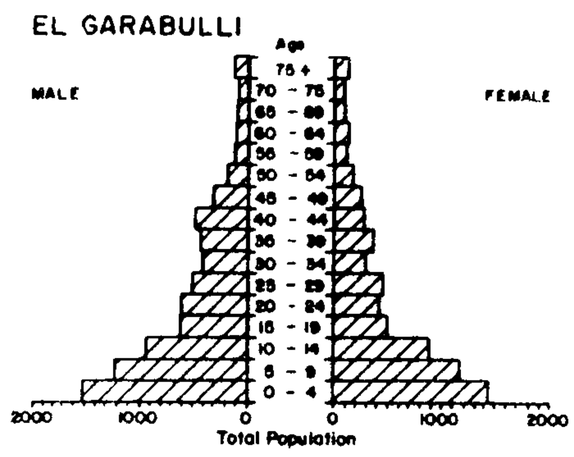


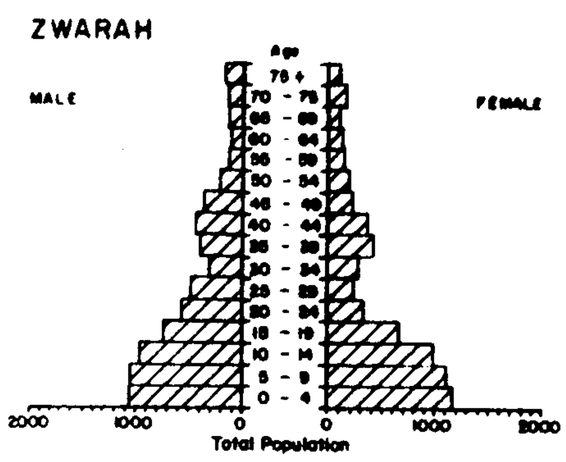


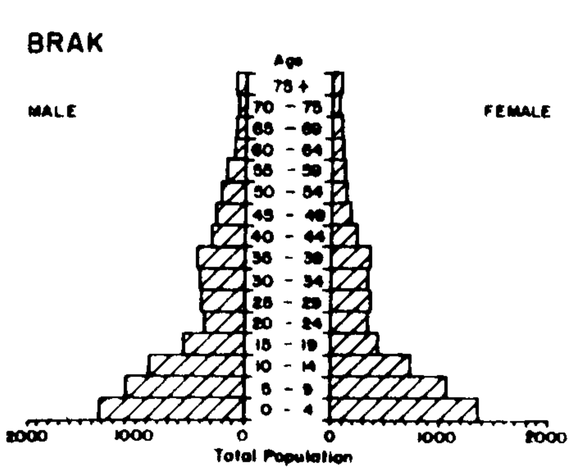


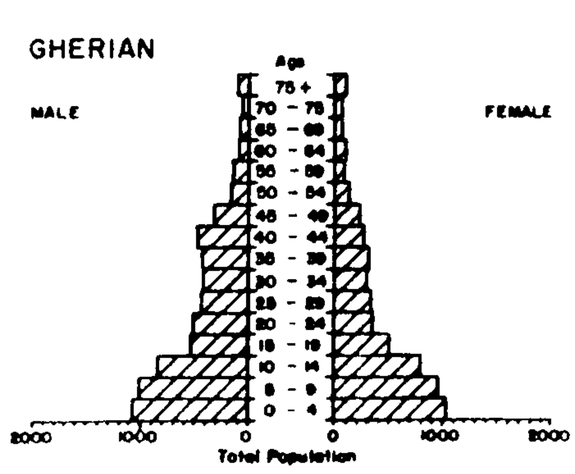












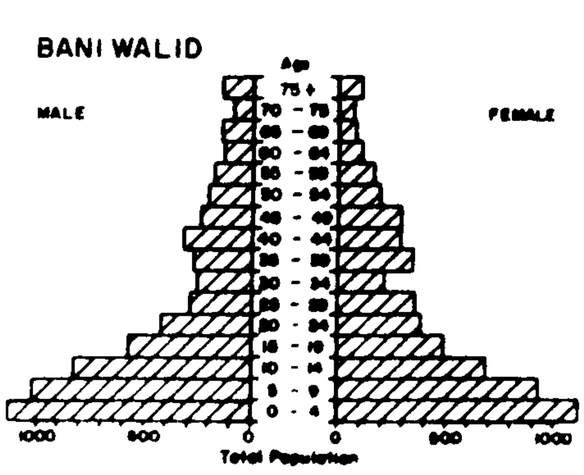
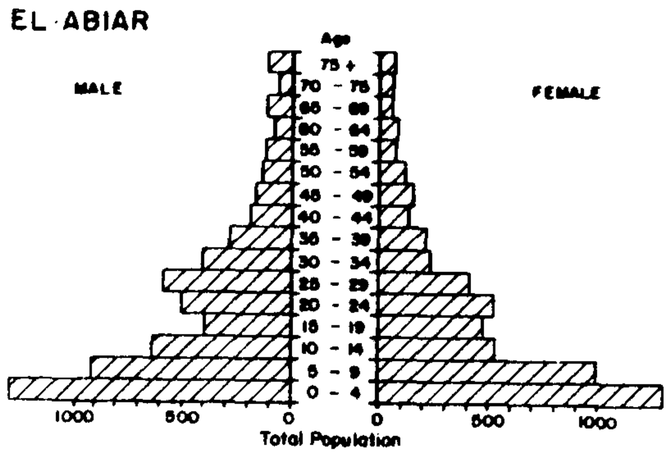
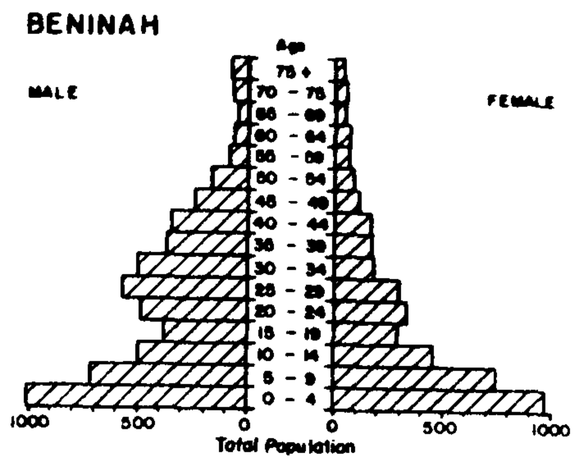
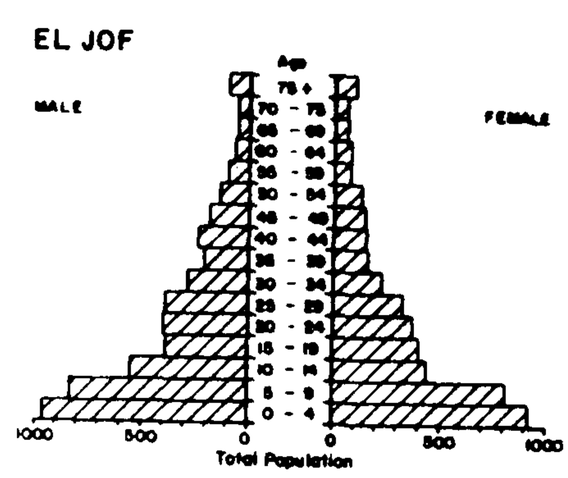
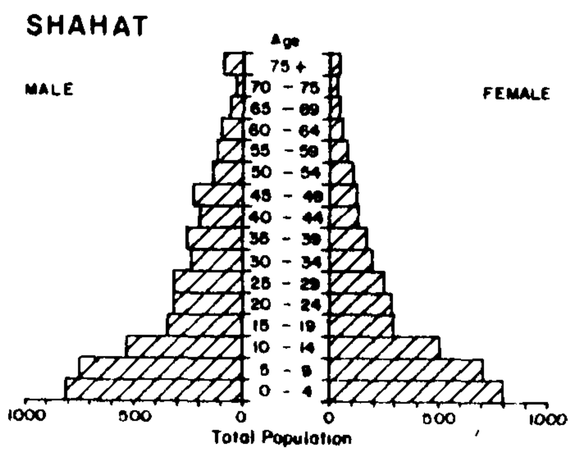


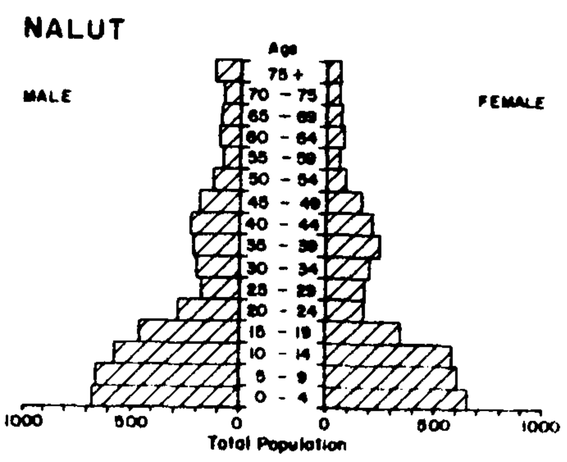
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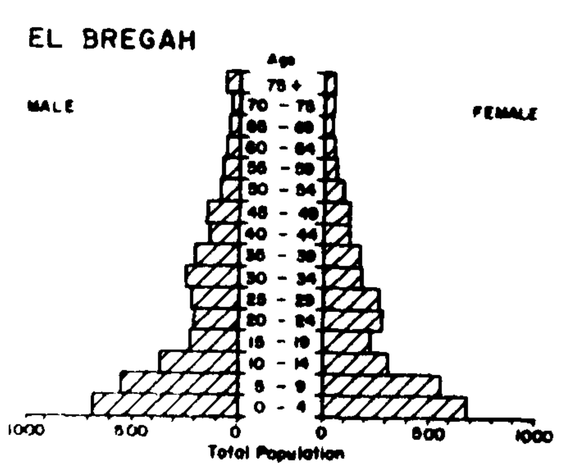

EL ABIAR
Age
75 +
70 - 75
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
MALE
FEMALE
1000
500
0
0
500
1000
Total Population

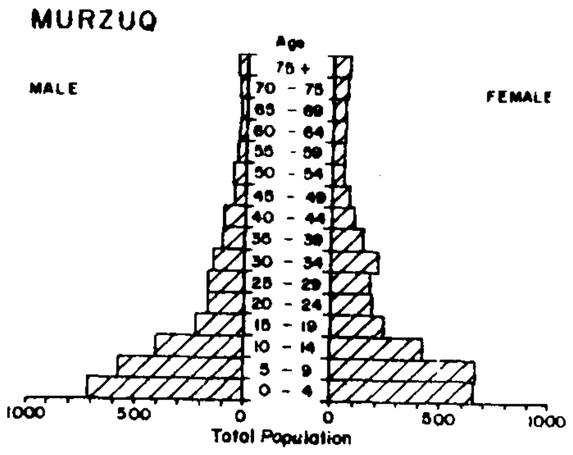

BENINAH
Age
75 +
70 - 75
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
MALE
FEMALE
1000
500
0
0
500
1000
Total Population

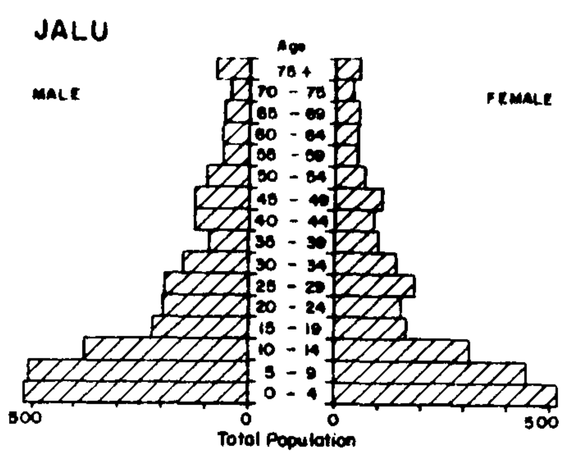

EL JOF
Age
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70 - 75
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
MALE
FEMALE
1000
500
0
0
500
1000
Total Population

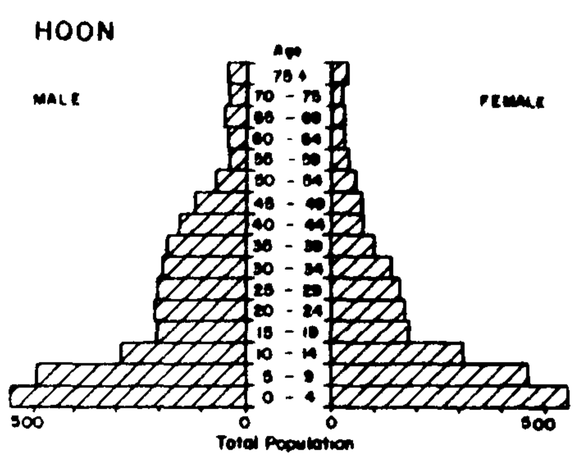

SHAHAT
Age
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70 - 75
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
MALE
FEMALE
1000
500
0
0
500
1000
Total Population

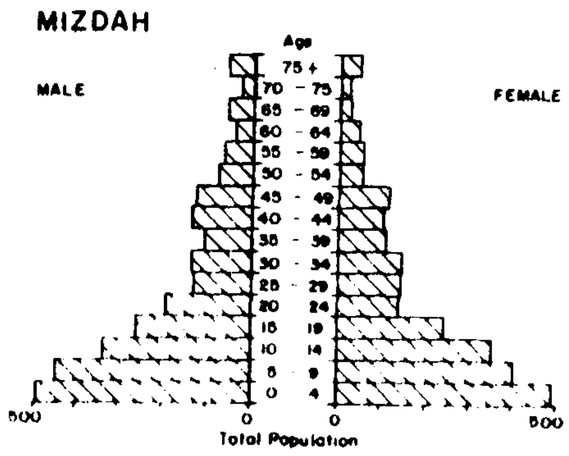

NALUT
Age
75 +
70 - 75
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
MALE
FEMALE
1000
500
0
0
500
1000
Total Population

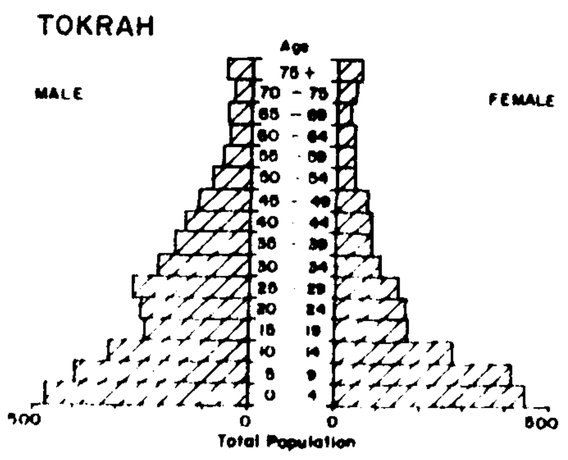

EL BREGAH
Age
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70 - 75
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
MALE
FEMALE
1000
500
0
0
500
1000
Total Population


MURZUQ
Age
75 +
70 - 75
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
MALE
FEMALE
1000
500
0
0
500
1000
Total Population


JALU
Age
75 +
70 - 75
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
MALE
FEMALE
500
0
0
500
Total Population


HOON
Age
75 +
70 - 75
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
MALE
FEMALE
500
0
0
500
Total Population


MIZDAH
Age
75 +
70 - 75
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
MALE
FEMALE
500
0
0
500
Total Population


TOKRAH
Age
75 +
70 - 75
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
MALE
FEMALE
500
0
0
500
Total Population

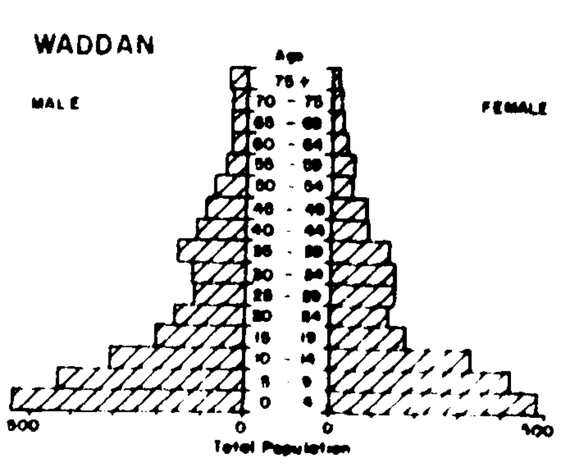
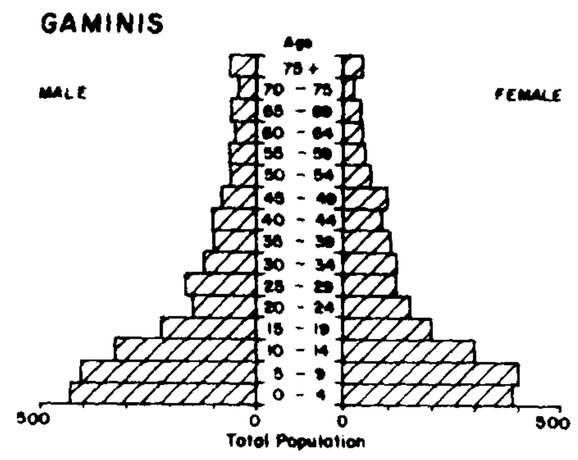
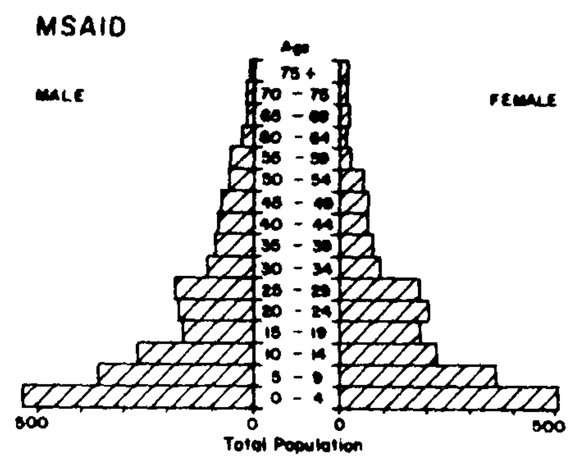
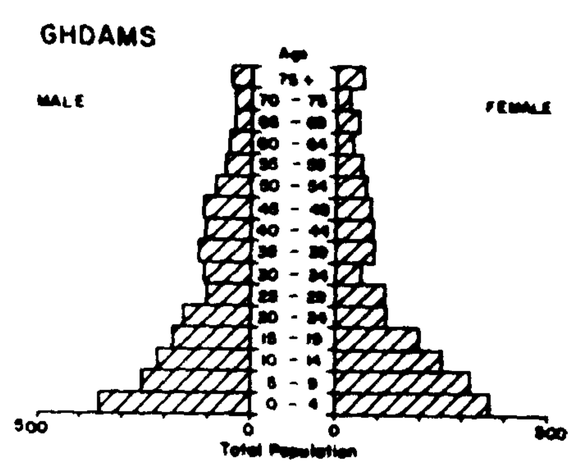
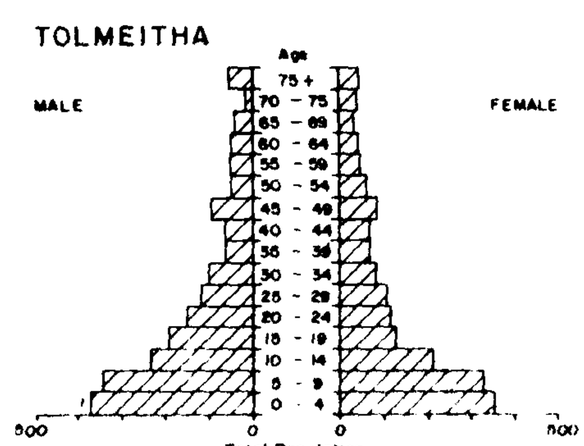

WADDAN
Age
75 +
70 - 75
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
MALE
FEMALE
500
0
0
500
Total Population

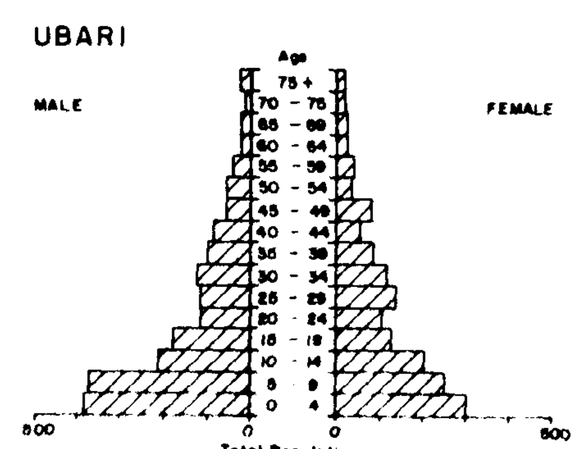
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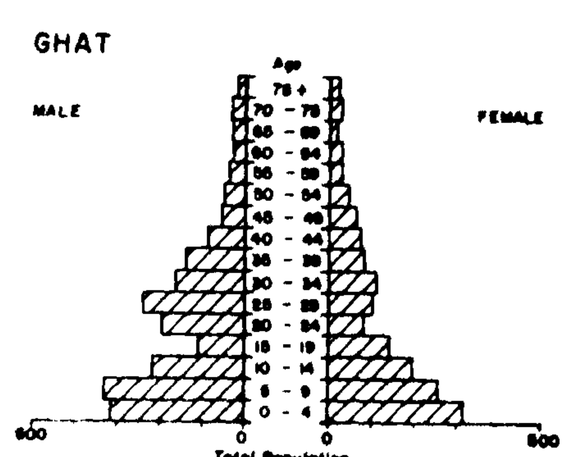


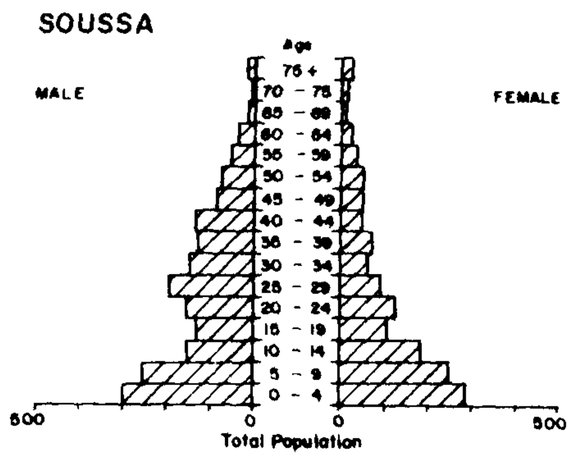












Source: The 1973 Census of Population

Fig 5.16
LIBYAN POPULATION IN SMALL TOWNS, 1973

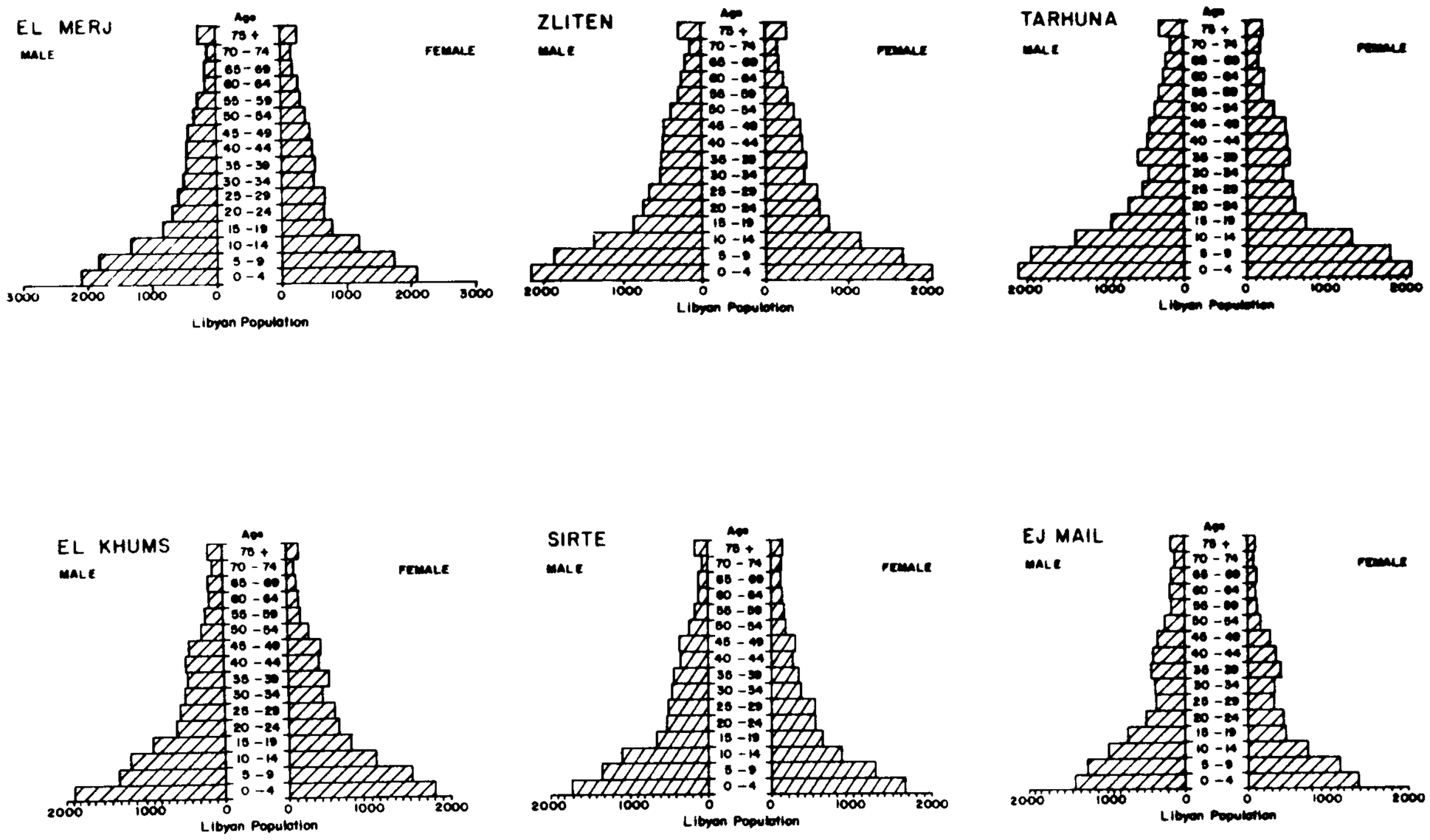
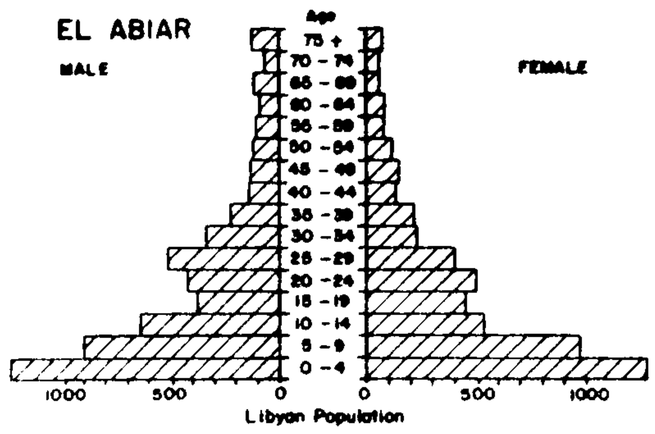
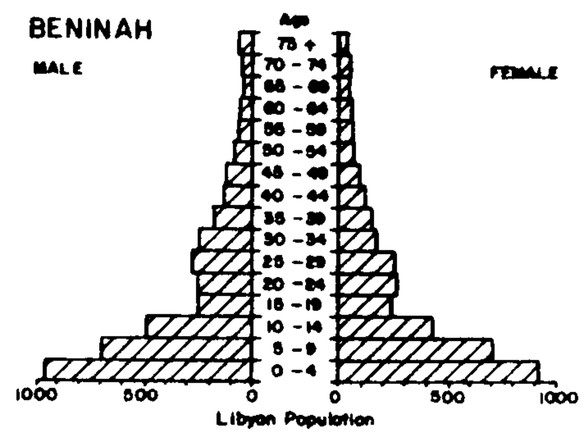
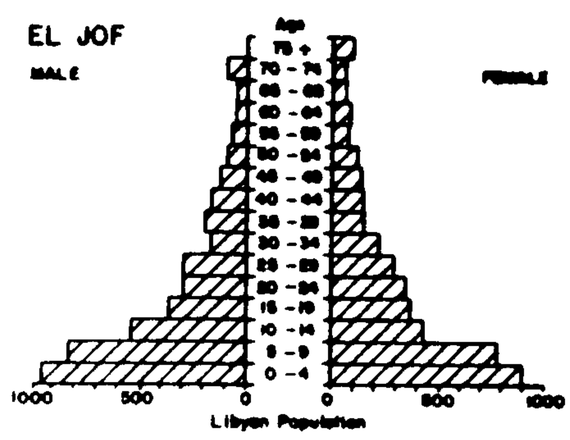
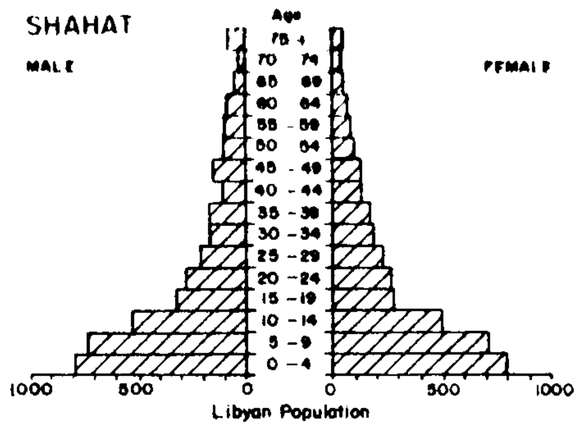


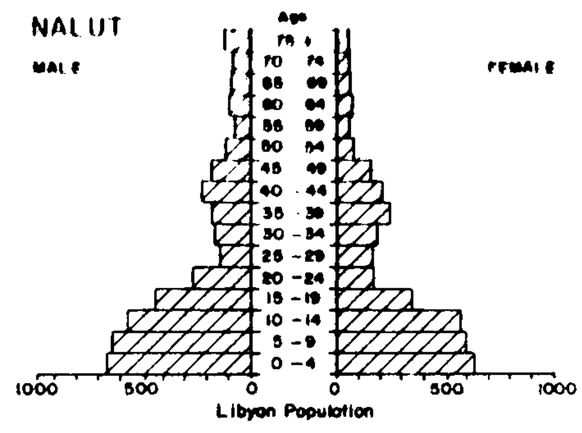
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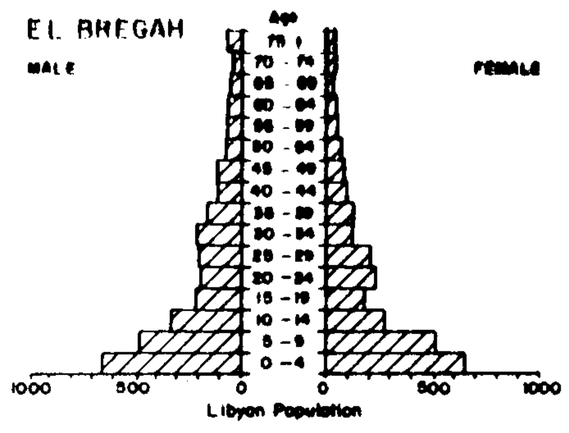

EL ABIAR
MALE
FEMALE
Age
75 +
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
1000 500 0 0 500 1000
Libyan Population

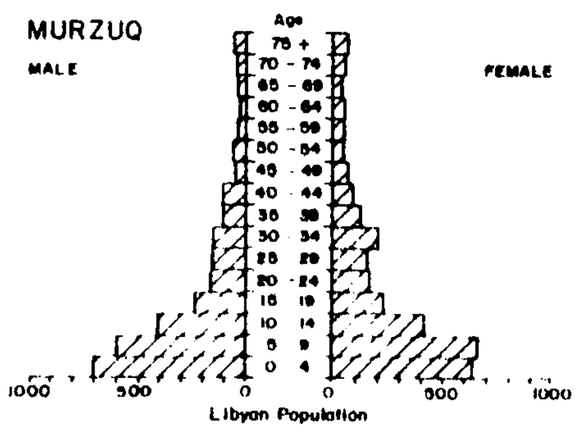

BENINAH
MALE
FEMALE
Age
75 +
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
1000 500 0 0 500 1000
Libyan Population

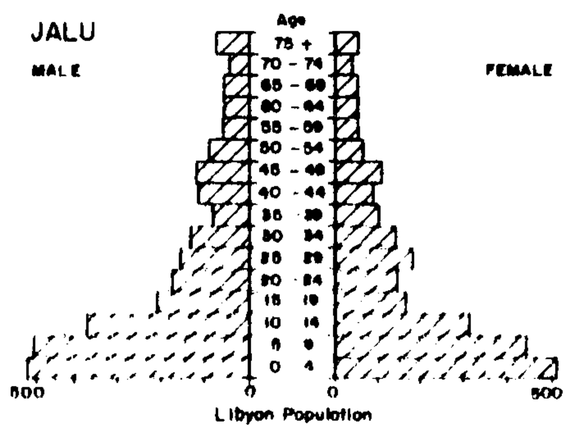

EL JOF
MALE
FEMALE
Age
75 +
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
1000 500 0 0 500 1000
Libyan Population

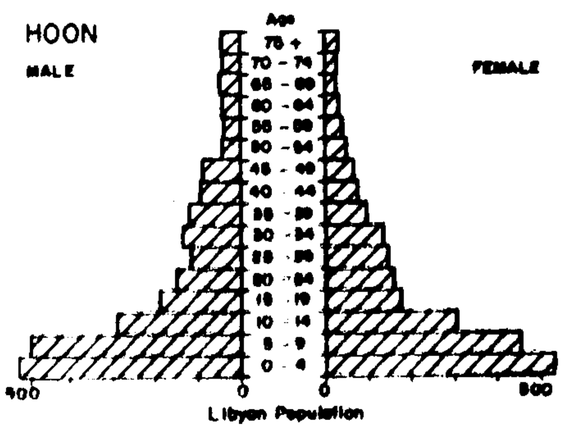

SHAHAT
MALE
FEMALE
Age
75 +
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
1000 500 0 0 500 1000
Libyan Population

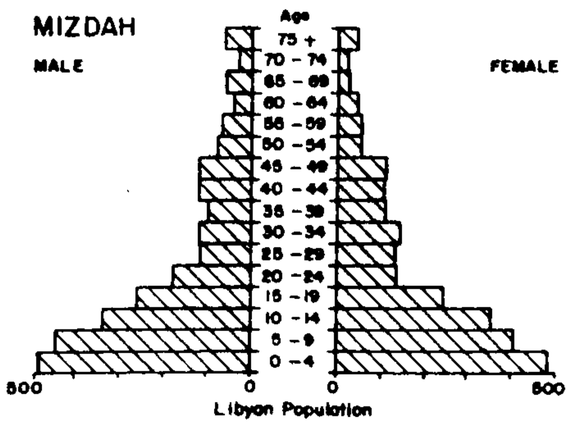

NALUT
MALE
FEMALE
Age
75 +
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
1000 500 0 0 500 1000
Libyan Population

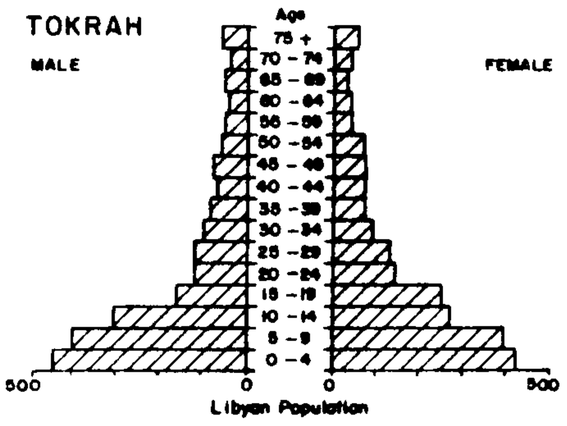

EL BREGAH
MALE
FEMALE
Age
75 +
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
1000 500 0 0 500 1000
Libyan Population


MURZUQ
MALE
FEMALE
Age
75 +
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
1000 500 0 0 500 1000
Libyan Population


JALU
MALE
FEMALE
Age
75 +
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
500 0 0 500
Libyan Population


HOON
MALE
FEMALE
Age
75 +
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
500 0 0 500
Libyan Population


MIZDAH
MALE
FEMALE
Age
75 +
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
500 0 0 500
Libyan Population


TOKRAH
MALE
FEMALE
Age
75 +
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
500 0 0 500
Libyan Population

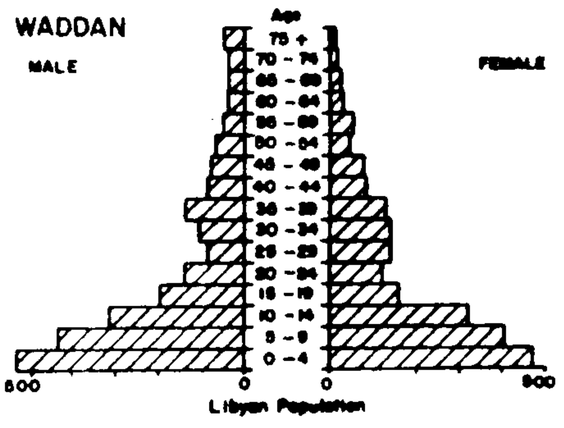
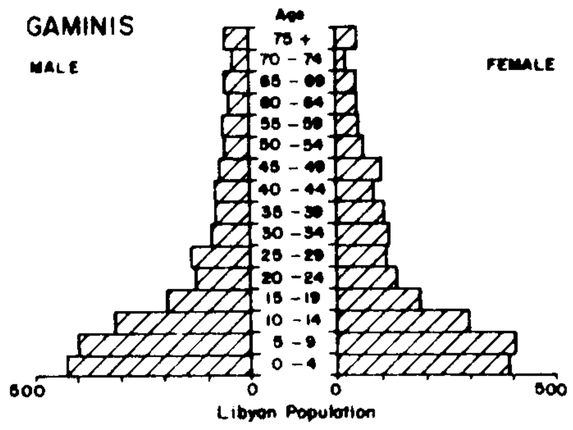
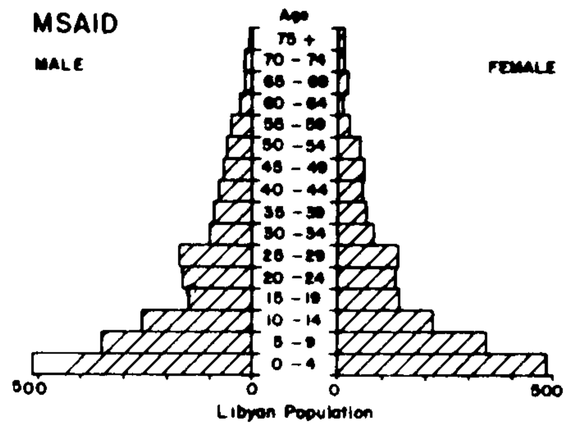
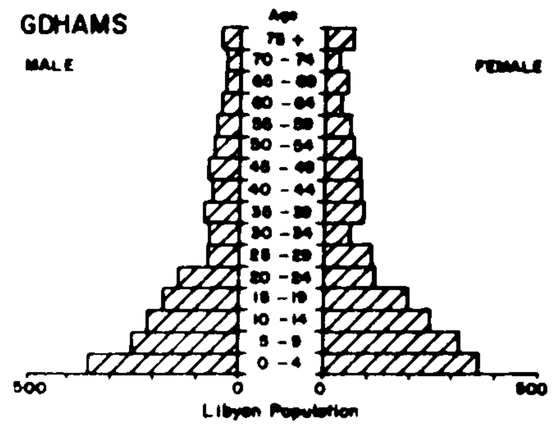
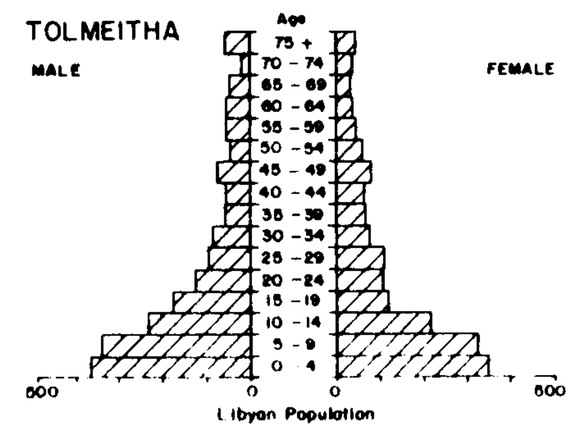

WADDAN
MALE
FEMALE
Age
75 +
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
500 0 0 500
Libyan Population

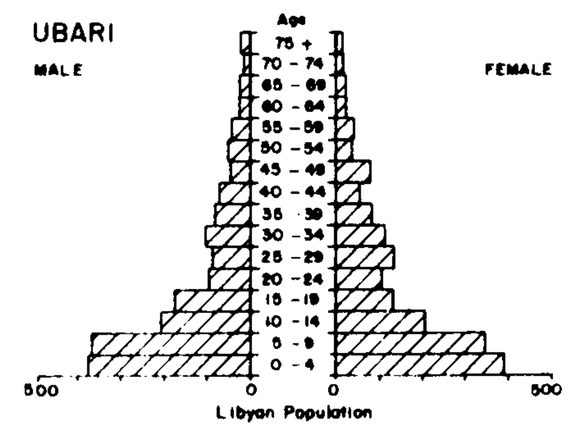
Fig 5.16(cont.)

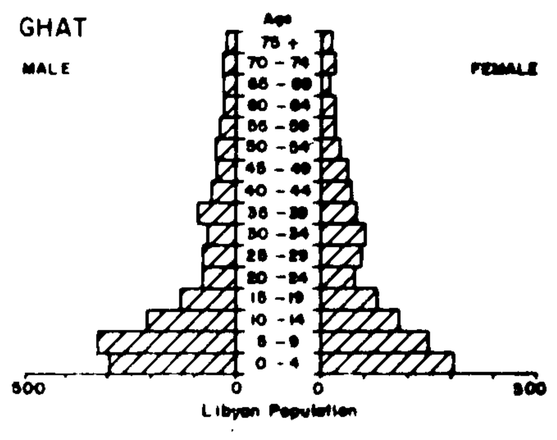


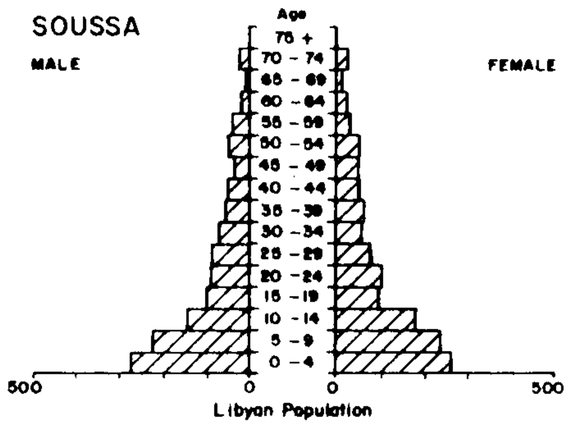






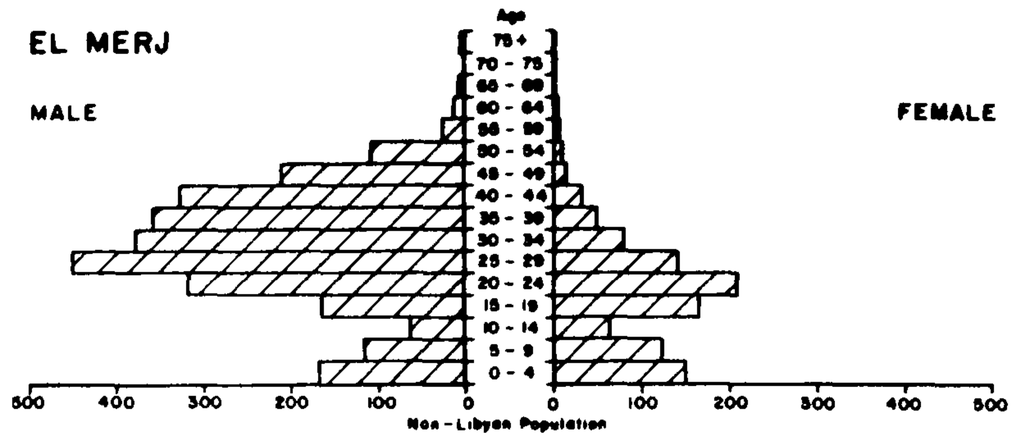


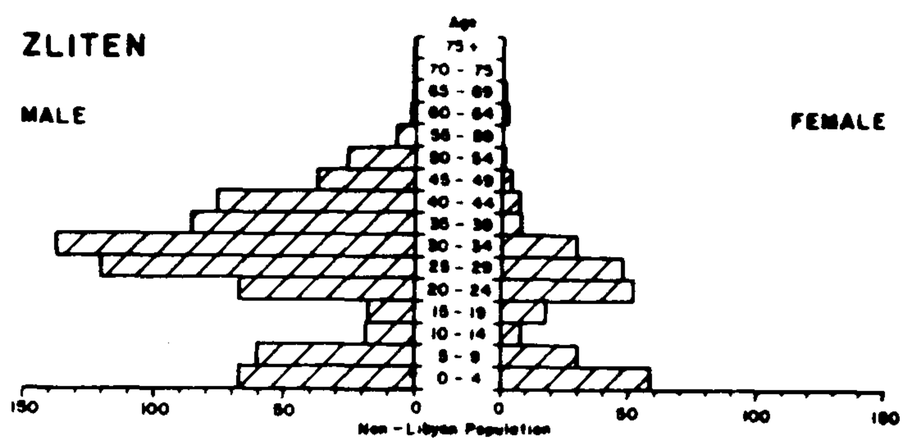


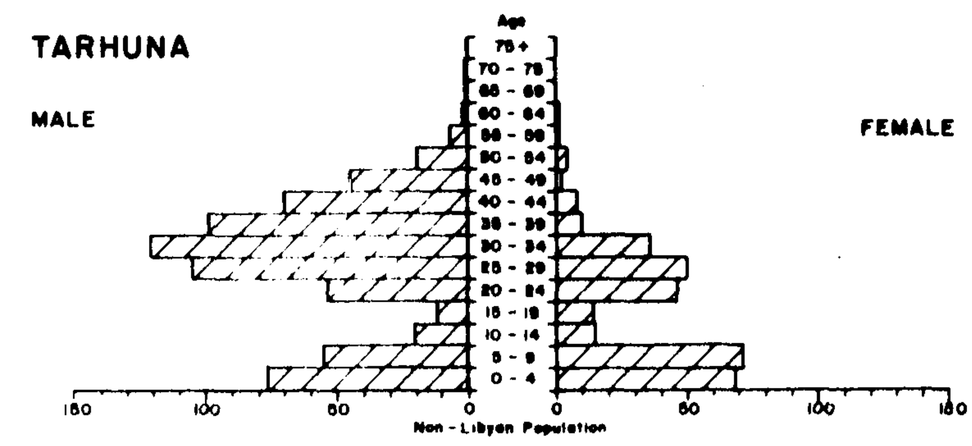


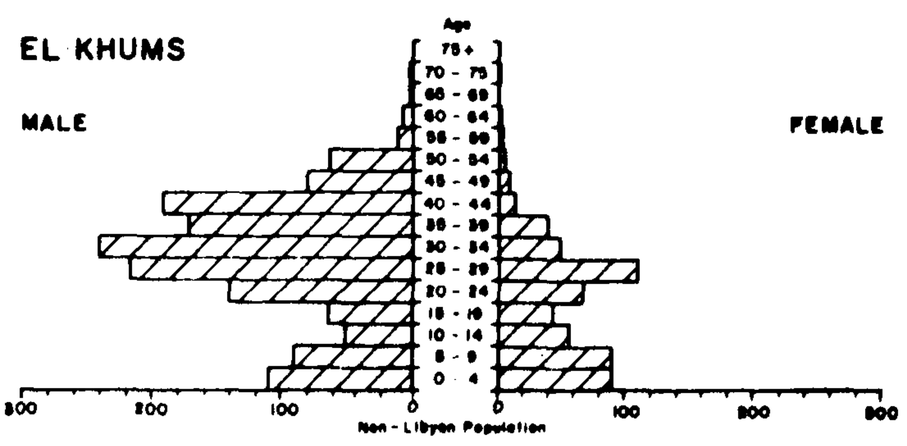
Source: The 1973 Census of Population

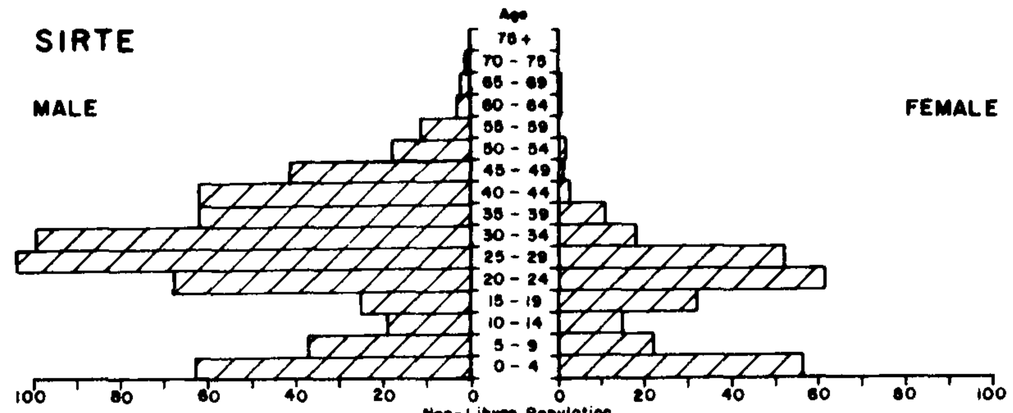
Fig 5.17
NON-LIBYAN POPULATION IN SMALL TOWNS 1973

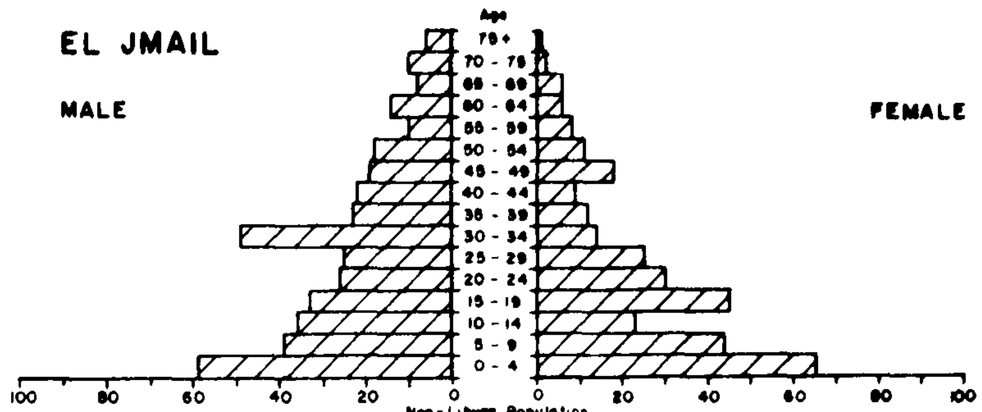


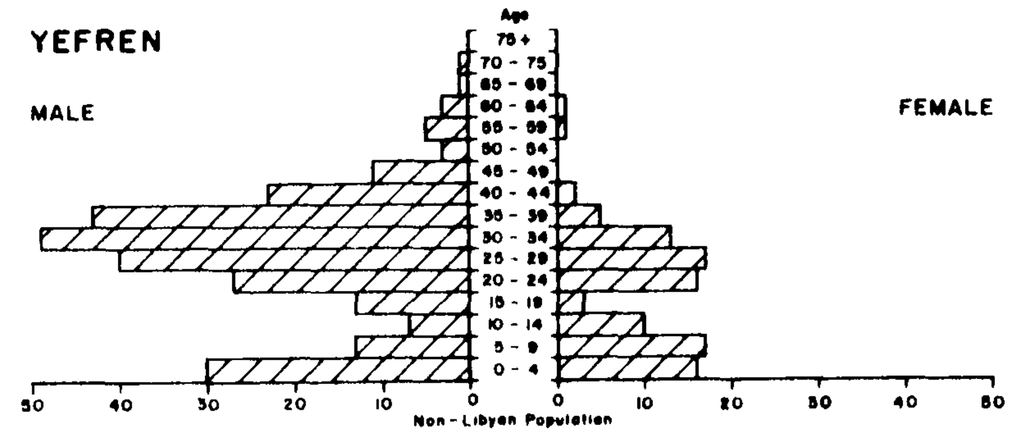


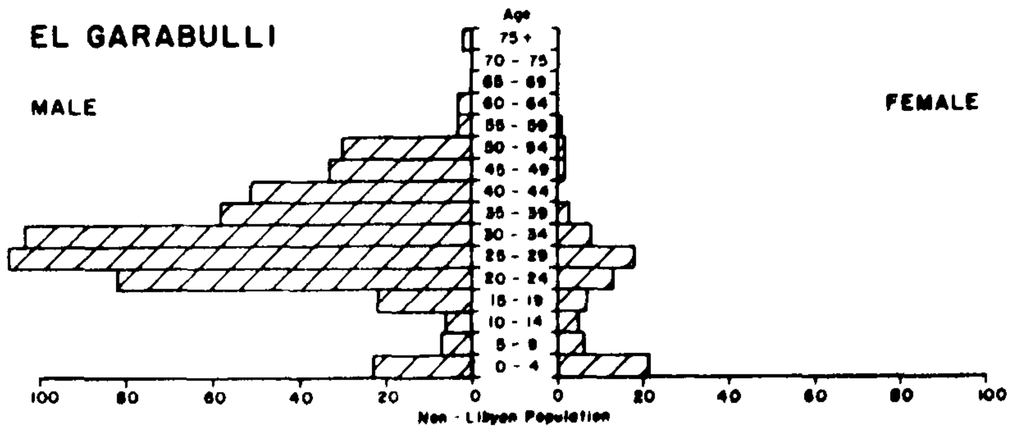


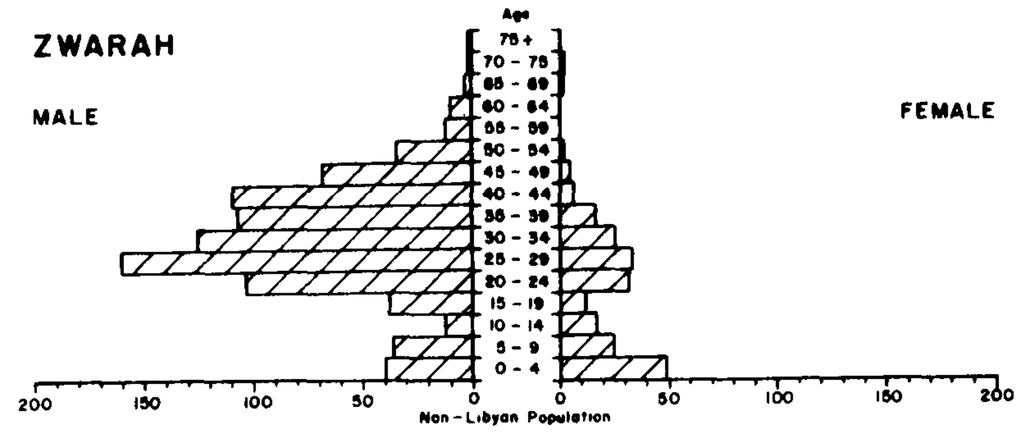


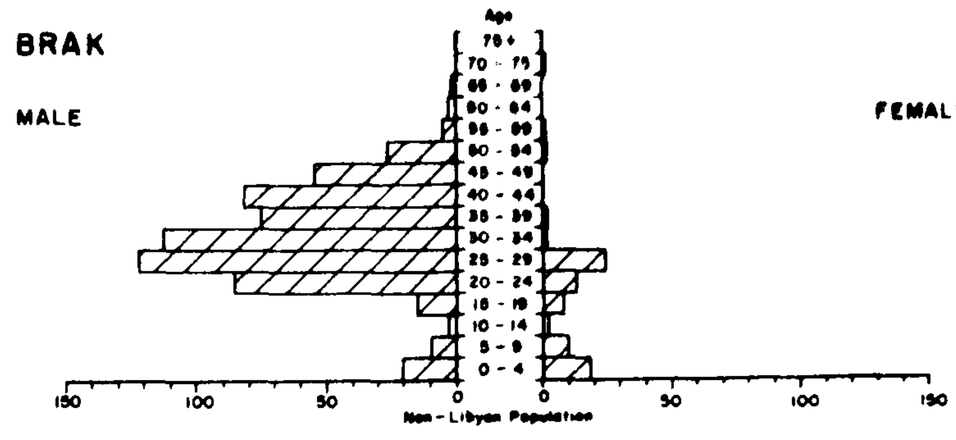


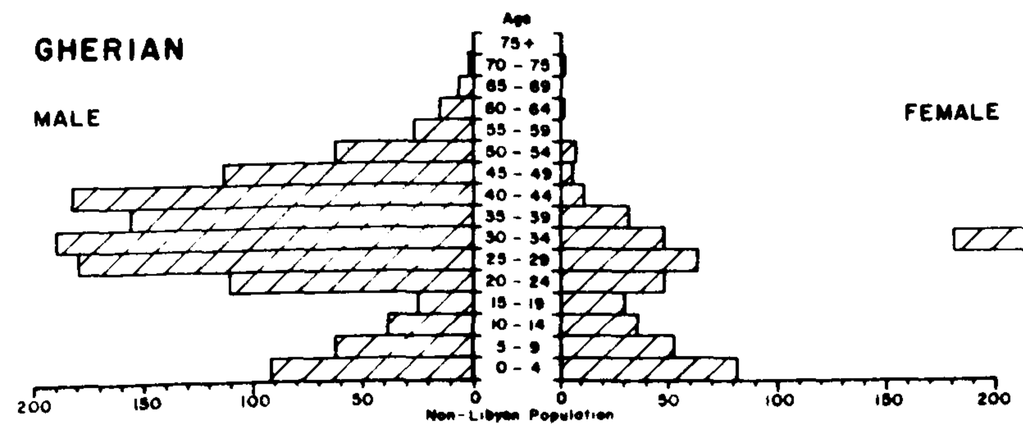












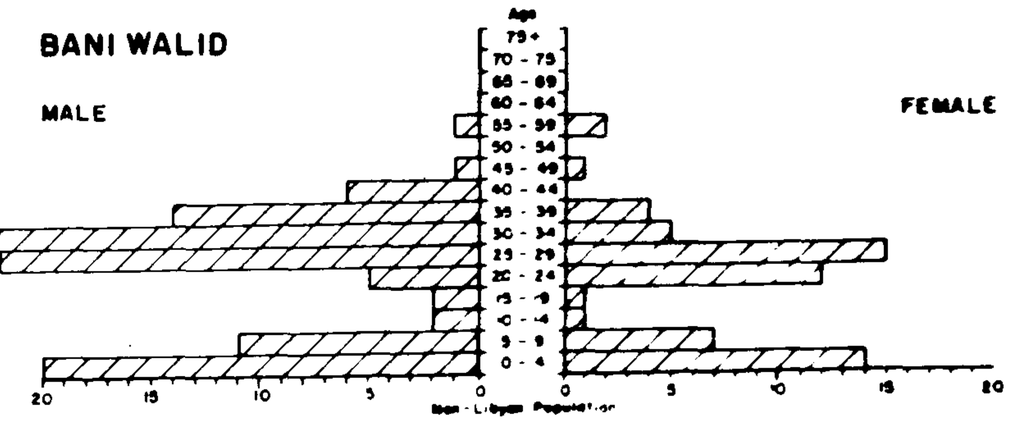
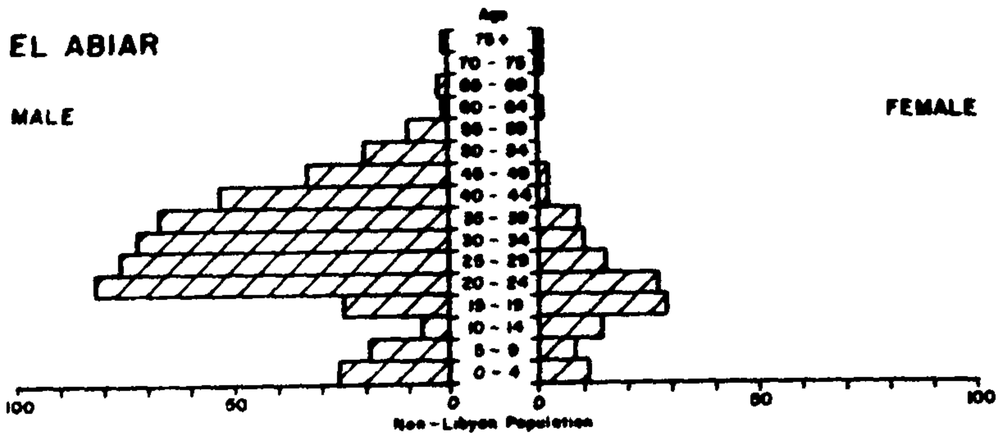
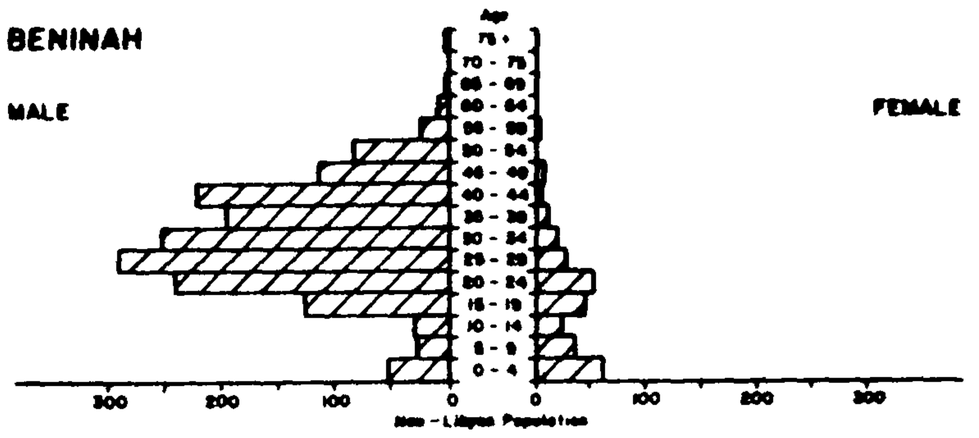
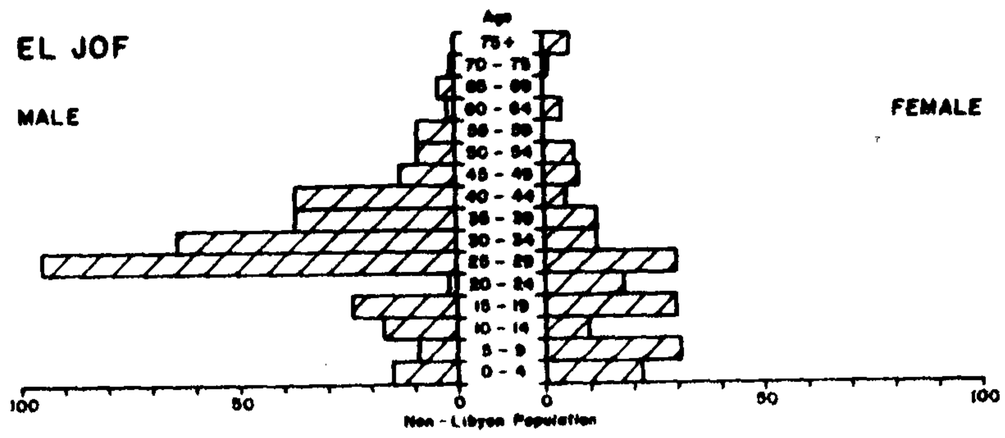
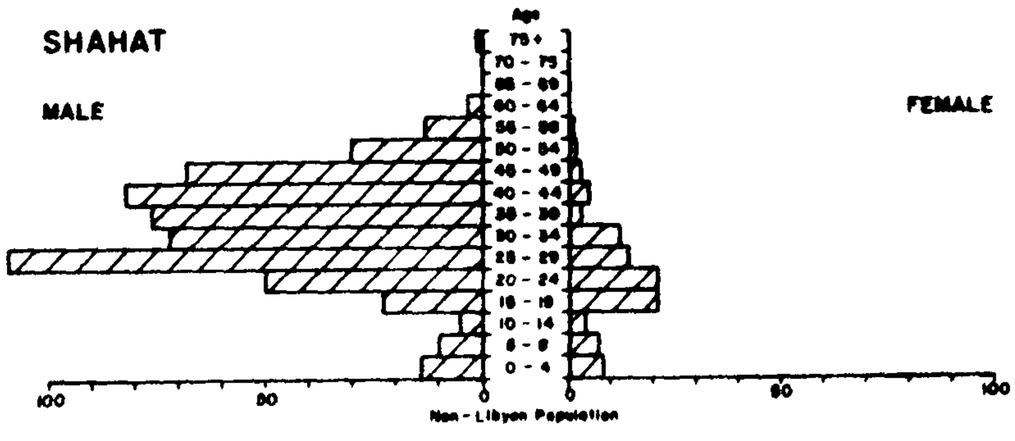


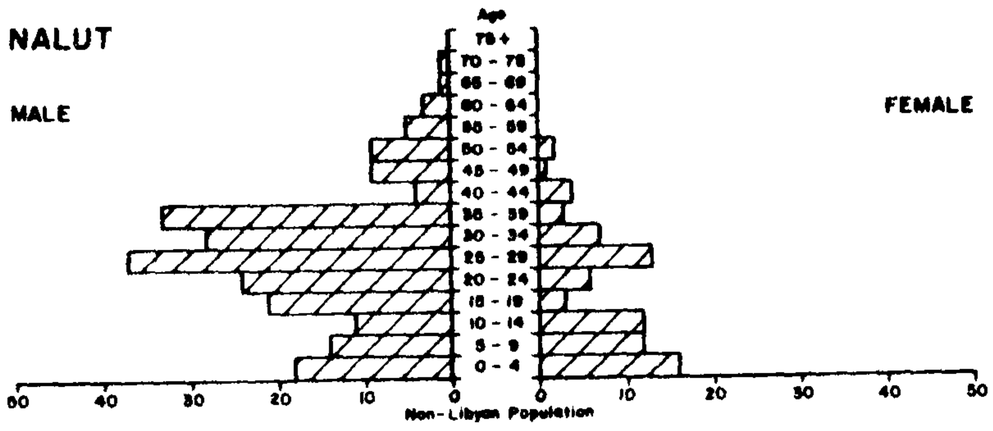
Fig 5.17(cont)

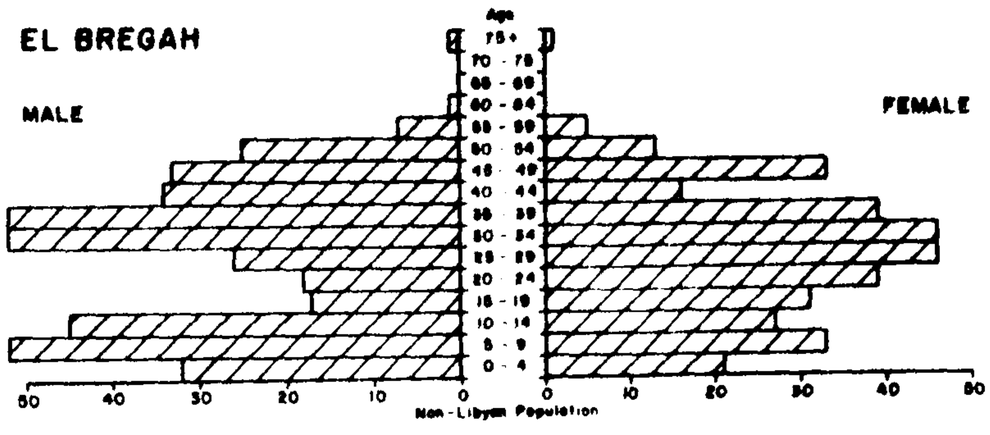

EL ABIAR
MALE
FEMALE
Age
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
100
50
0
0
50
100
Non - Libyan Population

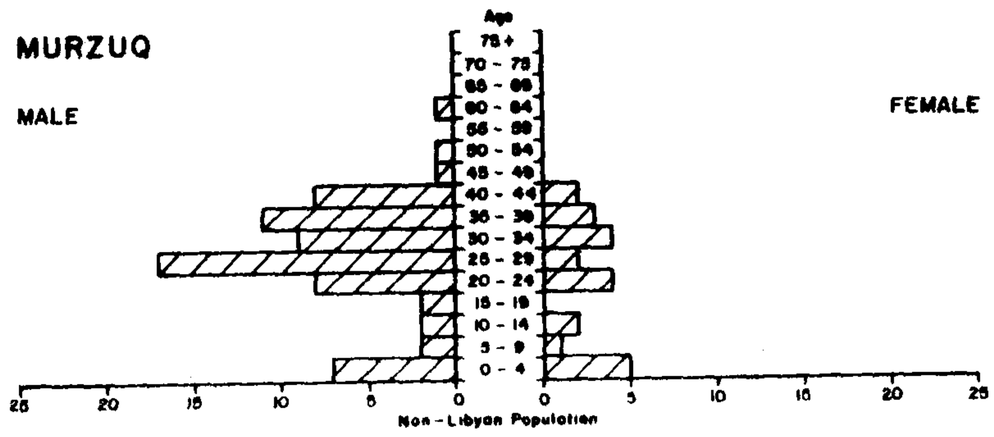

BENINAH
MALE
FEMALE
Age
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
300
200
100
0
0
100
200
300

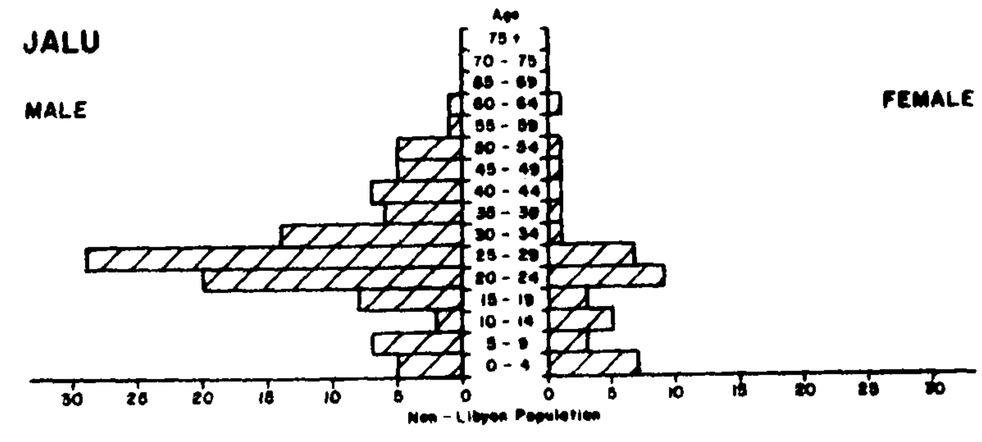

EL JOF
MALE
FEMALE
Age
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
100
50
0
0
50
100
Non - Libyan Population

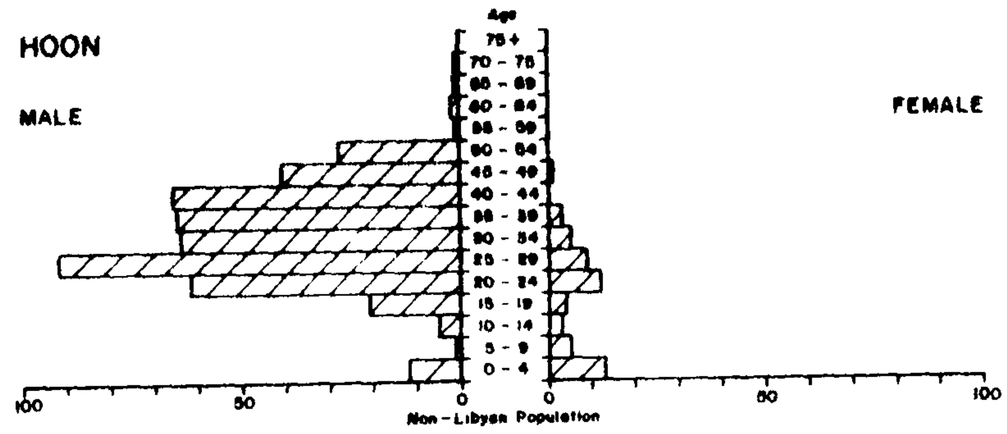

SHAHAT
MALE
FEMALE
Age
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
100
50
0
0
50
100
Non - Libyan Population

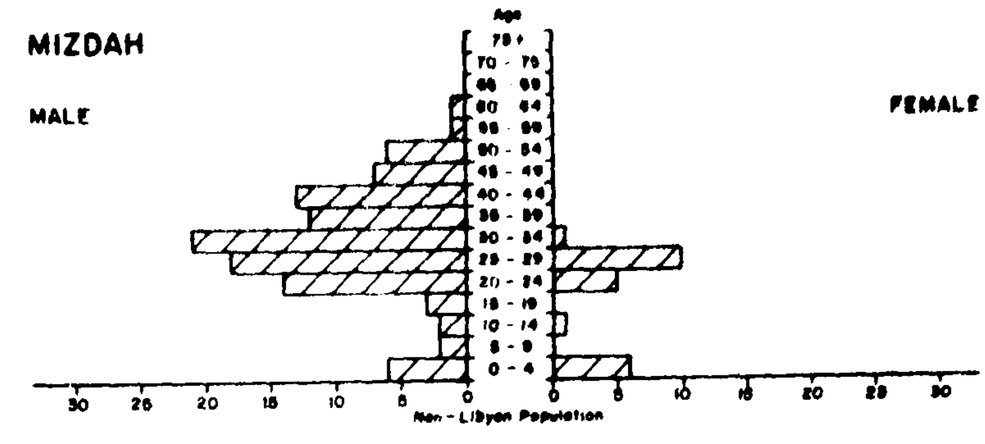

NALUT
MALE
FEMALE
Age
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
50
40
30
20
10
0
0
10
20
30
40
50
Non - Libyan Population

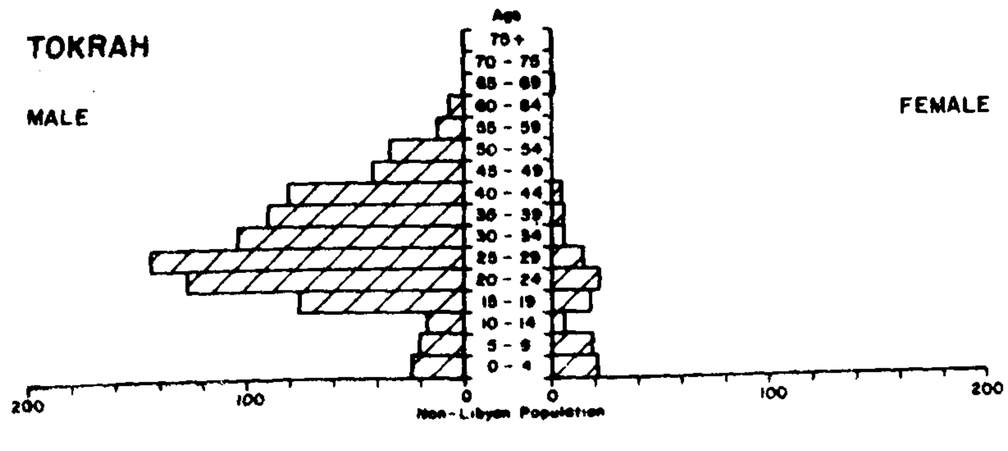

EL BREGAH
MALE
FEMALE
Age
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
50
40
30
20
10
0
0
10
20
30
40
50
Non - Libyan Population


MURZUQ
MALE
FEMALE
Age
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
25
20
15
10
5
0
0
5
10
15
20
25
Non - Libyan Population


JALU
MALE
FEMALE
Age
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
30
25
20
15
10
5
0
0
5
10
15
20
25
30
Non - Libyan Population


HOON
MALE
FEMALE
Age
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
100
50
0
0
50
100
Non - Libyan Population


MIZDAH
MALE
FEMALE
Age
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
30
25
20
15
10
5
0
0
5
10
15
20
25
30
Non - Libyan Population


TOKRAH
MALE
FEMALE
Age
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
200
100
0
0
100
200
Non - Libyan Population

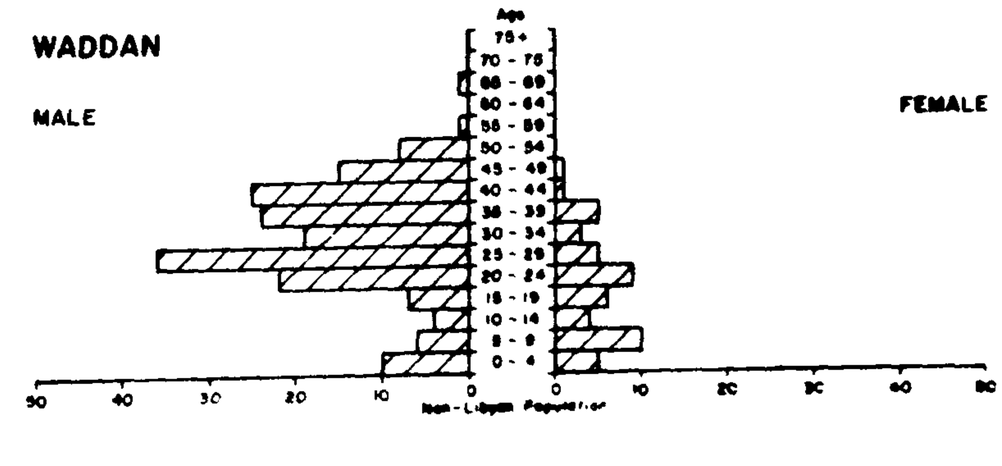
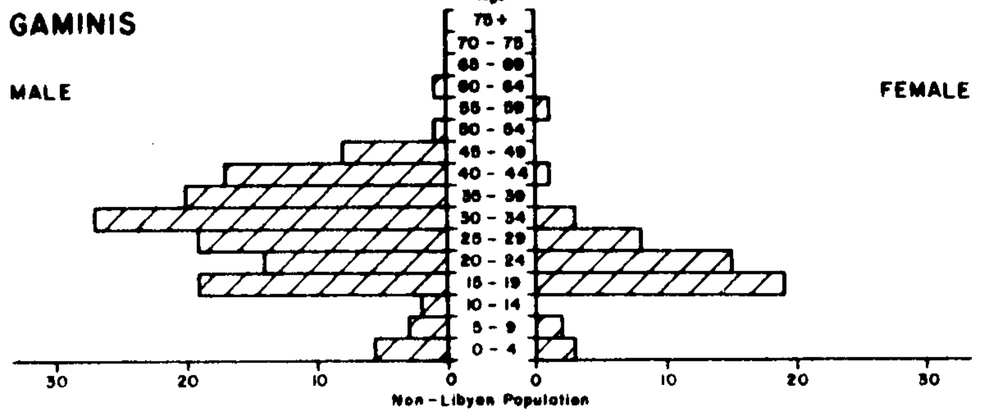
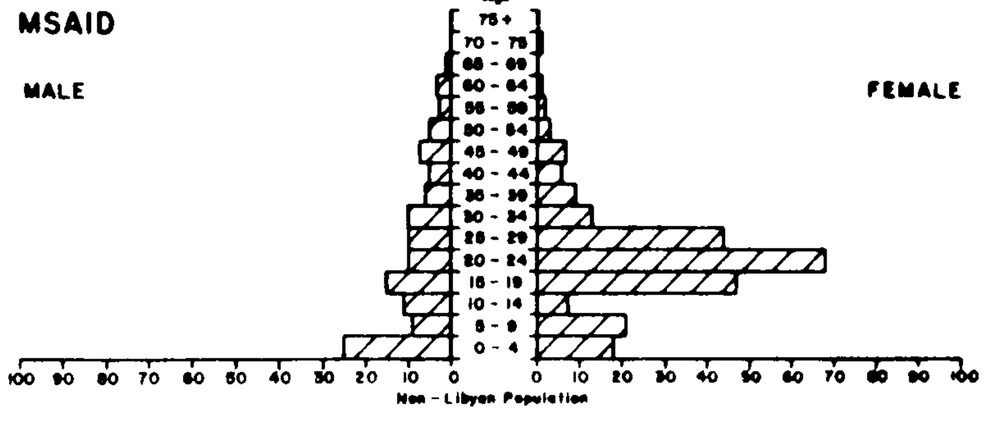
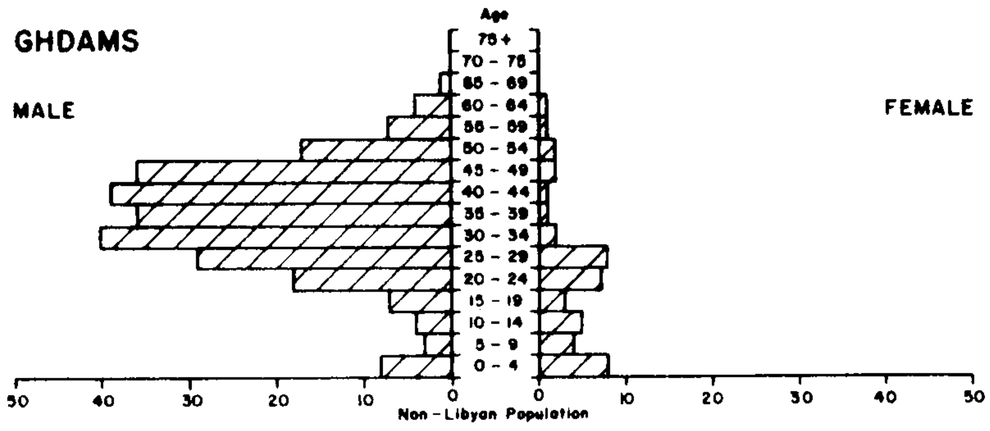
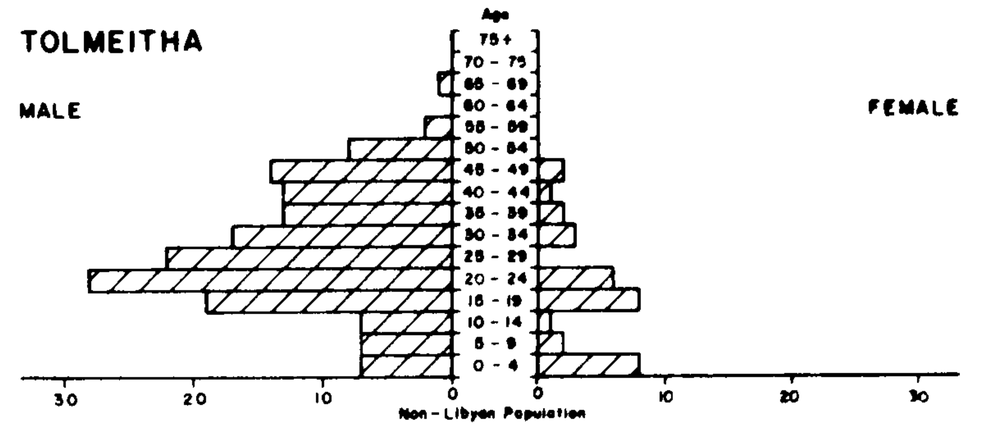

WADDAN
MALE
FEMALE
Age
75+
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
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40
30
20
10
0
0
10
20
30
40
50
Non - Libyan Population

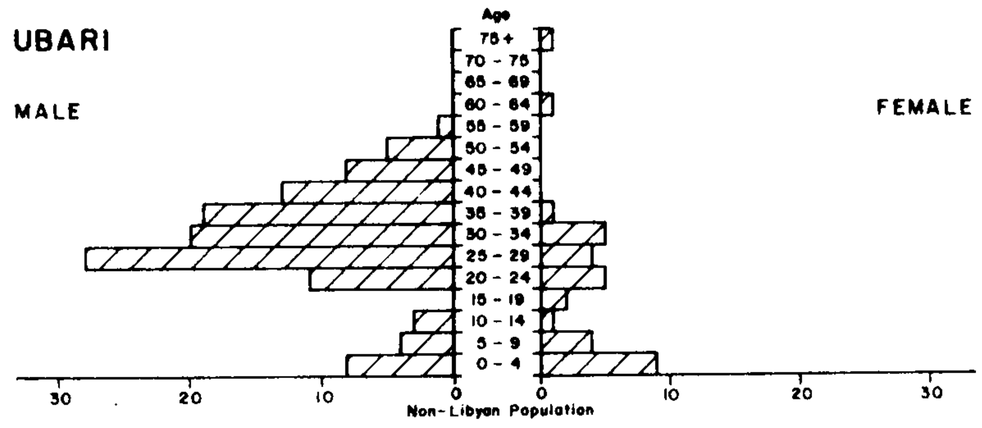
Fig 5.17 **(cont)**

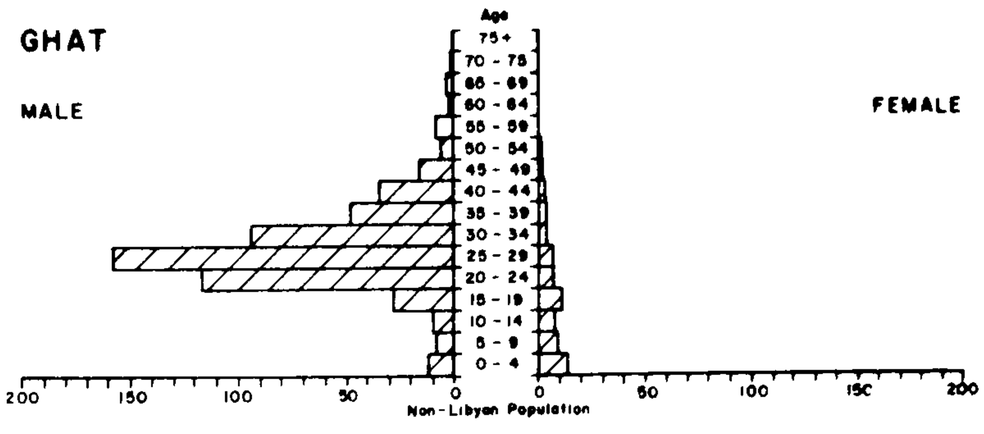


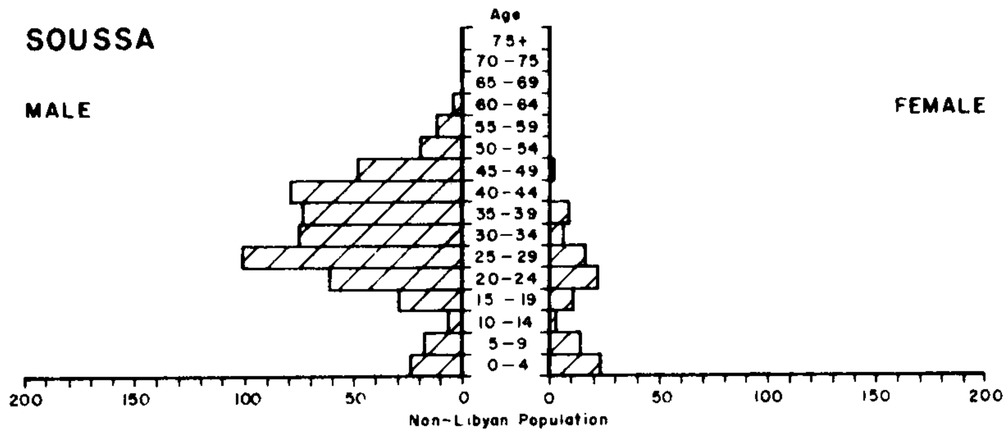












Source: The 1973 Census of Population

One of the population characteristics in Libya is the predominance of males, especially in urban centres. According to the 1973 census there were 115 males per 100 females in towns compared with 109 males in rural areas. This reflects the presence of non-Libyan workers in urban areas. According to the 1973 census all the Libyan small towns had a predominance of males, with one exception, the small oases town of Murzuq in the Fezzan where the percentage of females (51.5%) was higher than that of males (49.5%) (Table 5.22). On the basis of this table the small towns may be divided into three groups:

a. Towns where the percentage of males was higher than the national average for the whole country and also higher than the average for all small towns. This group included 14 small towns: Beninah 59 (the largest percentage), Soussa 57, Ghat 56, Tokrah 56, El Gubbah 56, El Aziziah 55, Gherian 55, Hoon 55, El Garabulli 54, Zwarah 54, Shahat 54, Ez Zahra 54, El Merj 53.5, Sabratah 53.5.

b. Towns where the percentage of males was below the national average. The 21 small towns in this category included Zliten 52.5, Sirte 52.5, El Jmail 52.5, Brak 52.5, Tarhuna 52, Yefren 52, Al Abiar 52, Kufra 52, El Ajelat 52, Nalut 52, El Bregah 52, Jalu 52, Waddan 52, Gaminis 52, Sorman 52, Bani Walid 51.5, Murzuq 49.5, Mizdah 51.5, Msaid 51, Ghdams 51 and Ubari 51 per cent.

c. Towns where the percentage was equal to the average including El Khums 53 and Tolmeitha 53.

Both age and sex structure have dramatically changed due to the influx of foreigners, internal migration, high population growth, high birth rate and declining death rate, all of which were stimulated by the state and its activities.

Table 5.22 Sex-ratio of Small Towns 1973

Small Towns	Percentage of Females	Percentage of Males
El Merj	46.5	53.5
Zliten	47.5	52.5
Tarhuna	48.0	52.0
El Khums	47.0	53.0
Sirte	47.5	52.5
El Jmail	47.5	52.5
Yefren	48.0	52.0
El Garabulli	46.0	54.0
Zwarah	46.0	54.0
Sabratah	46.5	53.5
El Aziziah	45.0	55.0
Brak	47.5	52.5
Gherian	45.0	55.0
Bani Walid	48.5	51.5
El Abiar	48.0	52.0
Beninah	41.0	59.0
El Jof (Kufra)	48.0	52.0
El Ajelat	48.0	52.0
El Gubbah	44.0	56.0
Shahat	46.0	54.0
Ez Zahra	46.0	54.0
Nalut	48.0	52.0
El Bregah	48.0	52.0
Murzuq	51.5	49.5
Jalu	48.0	52.0
Hoon	45.0	55.0
Mizdah	48.5	51.5
Tokrah	44.0	56.0
Waddan	48.0	52.0
Gaminis	48.0	52.0
Msaid	49.0	51.0
Ghdams	49.0	51.0
Tolmeitha	47.0	53.0
Ubari	49.0	51.0
Ghat	44.0	56.0
Sorman	48.0	52.0
Soussa	43.0	57.0

Source: Computed from 1973 Census of Population. Ministry of Planning (1972) The 1973 Census of Population, Tripoli, (in Arabic).

5.6 CONCLUSION

In the early 1960's petroleum revenues began to finance the economic and social development of Libya. In the early 1970's radical revolutionary changes took place. Their effects have produced new conditions under which dramatic population changes have occurred. The Libyan small towns have grown rapidly and it is expected that the majority will continue to grow in the future. Their growth can be attributed to natural increase, internal migration, the influx of foreigners, all of which have been stimulated by the state. The physical expansion of towns, as we will see, is an indication of their growth. Large scale development projects initiated by the state have resulted in an increase in the number of non-Libyans in the towns which has affected the composition of their population.

The dramatic socio-economic changes instigated by the state with its revenues and revolutionary policies,have brought about an acceleration in internal migration in Libya but limitation of data make it difficult for us to analyse the role of the small town in the migration process.

The high rate of population growth experienced by the small towns in Libya may well be maintained in the future. Natural increase of the Libyan population will rise with the continuing decline in the death rate. An increase in the number of foreign workers is projected until the year 2000. The development projects initiated in the small towns may reduce outmigration and induce some return migration from the large cities. Population change in the small towns in the future will depend on the state and its policies.

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$$Mif = a \frac{Pi^{b1} \times pj^{b2}}{Di\ jb^{3}}$$

where (M) is the volume of migration from region (i) to region (j), (P) represents population size (mass) of region (i) and region (j), (D) is the distance between the two regions (a) is the constant of proportionality and (b1, b2, b3) are the regression coefficients.

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CHAPTER SIX

QUALITATIVE AND QUANTITATIVE PHYSICAL CHANGE

6.1 INTRODUCTION

The previous chapter has concentrated on the changes in population in the small towns. The purpose of this chapter is to illustrate the physical changes which have occurred in the Libyan small towns, both qualitatively and quantitatively as a result of the massive development initiated by the State. The profound functional changes which have affected Libya's small towns during the last two decades have produced some striking morphological changes. Land use changes will be analysed, illustrated and documented by several tables and figures. Case studies of towns with different functions and locations have been selected.

6.2 FUNCTION AND MORPHOLOGY

Research in urban studies has been handicapped by the general lack of a method of measuring and classifying the functions or activities of towns. Although many attempts have been made, so far no single method has been generally accepted. Historically, towns have developed to serve a variety of functions. Whatever the primary reason for the existence of a town, as it grows it will usually accumulate a range of other functions. Thus, at any one point in time the economic structure of a town will consist of a complex amalgam of functions of varying strength.(1) Whereas this consideration tends to preclude the development of an unambiguous classification of towns based upon function, most towns tend to display significant imbalance in their functional bases which are related to past and contemporary economic circumstances. A knowledge of such functional imbalances is clearly of value in any analysis of urban systems.(2) Economic base, employment

and location analysis all provide the basis for identifying the function of small towns. The particular economic mix and locational pull or advantages of a small town or labour market combine to give each town a distinctive character.(3)

The earliest attempts at classification were mainly concerned with qualitative methods: general observations expressed in the form of lists of types - such lists are in effect expressions of the concept of functional differentations. Cities were divided into administrative, defensive, cultural, productive, commercial and recreational types.(4)

In 1943 Harris produced a classification of urban centres. To produce such a classification he indicated that it was important to understand the main economic function of the urban centre, and he based his classification on the percentage of employees in specific activities. The following are definitions based on Harris' classification scheme:

"

1. Manufacturing towns: At a minimum, at least 30 to 45 per cent of the workers should hold manufacturing related occupations.

2. Wholesale trade towns: Employment in wholesale trade is at least 20 per cent of total employment, or almost 50 per cent of retailing.

3. Transportation communities: At least 10 per cent of all employed workers are in jobs connected with transportation.

4. Retail towns: Employment in retailing is at least half of total employment.

5. Mining towns: at least 15 per cent of employees in resource extraction.

6. University towns: one-fourth of the town's population is enrolled in post secondary education.

7. Governmental towns: Those designated as county seats which account for the development of other industry.

8. Resort communities: Local industry composed mostly of hotels and motels, souvenir shops and other tourist or seasonal activities.

9. Diversified: Those with a mixture of occupational and industrial activities in which no one category dominates.

10. Satellites: One in which a substantial majority commute to neighbouring employment centres." (5)

Although such classifications are of value, their usefulness tends to diminish when applied to particular instances. The use of such terms as manufacturing town, retail centre and mining town seems to exclude the possibility that a mining town can also have retailing and a manufacturing functions. Therefore this classification offers little assistance in our understanding of the complexity of the functions of individual towns.

In 1945, Harris and Ullman divided cities into three main categories according to their predominant function and they incorporated spatial components into the scheme:

1. A clustered pattern of cities consisting of places performing specialised functions such as mining and recreation was identified. Its location was related to the localisation of particular resources not found elsewhere in the region.

2. A linear pattern of centres performing transport-oriented functions, the location of which was directly related to the disposition of transport routes.

3. A regular pattern of centres whose primary function was the provision of retail and administrative services for dispersed hinterland populations. (6)

In addition to Harris' classification (1943) using employment statistics, there are several other quantitative approaches. These are the basic - non basic classification, arithmetical means, standard deviation, the minimum requirement approach and multivariate analytical techniques.(7) All these methods have their own points of weakness and strength. However a classification should not be an end in itself but the particular research design adopted should be appropriate to the nature of the available data.

Although the author is aware of these quantitative and qualitative methods of measuring the functions of towns, applying such methods to the Libyan small towns is impossible because of the nature and availability of data on economic activities and employment. Therefore no matter which approach is taken to the problem of functional classification the criteria have to be selected on a subjective basis.

Table 6.1 classifies small towns in Libya by origin using Blake's classification of modern foundations, urbanising rural settlements, and old regional centres. This provides us with a broad picture of the changing functions of Libyan small towns. Almost half of the small towns were originally old regional centres providing services for the surrounding hinterland. The majority of small towns however are rural settlements which have acquired urban functions in recent years. Five small towns are modern foundations established during the colonial period and since independence.

Table 6.2 shows the distribution of the economically active population of the small towns by economic sector in 1973. Recent data which may be used to classify small towns by function are limited but the employment data provided by the 1973 census does give some insight into the contemporary functions of these towns. Table 6.2 shows that all the Libyan small towns fulfil a number of functions. For the small towns as a whole, service activities, which include administrative, health, education and security, together with industry, including manufacturing and construction, represent the two major sectors in terms of employment. This reflects a strengthening of their administrative functions but much of industrial employment was probably in the construction sector at this time. Employment in agriculture remained significant in a number of towns e.g. Tarhuna, El Jmail, El Garabulli and Tokrah, highlighting their origin as rural settlements which have only recently acquired urban functions. The lowest percentage of the economically active population was employed in commerce. Therefore on the basis of thesedata it is very difficult to classify the small towns according to a single function.

Table 6.1 Type of Small Towns

Modern Foundation	Urbanising rural settlements	Old Regional Centres
El Merj (new town)	Tarhuna	Zliten
El Abiar	El Jmail	El Khums
Beninah	Yefren	Sirte
El Bregah	El Garabulli	Zwarah
Msaid	El Aziziah	Sabratah
	El Ajelat	Brak
	El Gubbah	Gherian
	Shahat	Bani Walid
	Ez Zahra	El Jof
	Nalut	Murzuq
	Mizdah	Jalu
	Tokrah	Hoon
	Gaminis	Waddan
	Tolmeitha	Ghdams
	Ghat	Ubari
	Sorman	
	Soussa	

Source: Compiled by Author using Blake's classification.
See Blake, G.H. (1980) "The Small town" in Blake, G.H. and Lawless, R.I. (eds) The Changing Middle Eastern City. Croom Helm, London pp.214-217.

Table 6.2 : The Distribution of the Economically Active Population by Economic Sectors in 1973

R	Town	Males	Females	Total	Percentage of the economically active in each sector and their related activities					Total Percentage
					Agriculture	Industry	Service	Commerce	Unknown	
1	El Merj	7,281	466	7,747	14.0	41.0	34.0	6.0	5.0	100.0
2	Zliten	4,539	100	4,639	20.0	40.0	27.0	11.0	2.0	100.0
3	Tarhuna	4,581	163	4,744	36.0	34.0	22.0	4.0	4.0	100.0
4	El Khums	4,800	192	4,992	18.0	42.0	32.0	4.0	4.0	100.0
5	Sirte	3,656	74	3,730	25.0	36.0	27.0	6.0	6.0	100.0
6	El-Jmail	3,017	12	3,029	36.0	34.0	18.0	7.0	5.0	100.0
7	Yefren	2,730	66	2,796	26.0	26.0	36.0	5.0	7.0	100.0
8	El Garabulli	3,152	121	3,273	38.0	38.0	17.0	3.0	4.0	100.0
9	Zwarah	3,061	117	3,178	10.0	43.0	39.0	7.0	1.0	100.0
10	Sabratah	nd	nd	nd	nd	nd	nd	nd	nd	nd
11	El Aziziah	nd	nd	nd	nd	nd	nd	nd	nd	nd
12	Brak	2,689	85	2,774	16.0	33.0	42.0	3.0	6.0	100.0
13	Gherian	2,860	152	3,012	8.0	40. 0	44.0	5.0	3.0	100.0
14	Bani Walid	2,223	27	2,250	40.0	26.0	22.0	5.0	7.0	100.0
15	El Abiar	2,652	39	2,691	25.0	30.0	25.0	4.0	16.0	100.0
16	Beninah	2,991	71	3,062	17.0	48.0	27.0	3.0	5.0	100.0
17	El Jof	2,041	45	2,086	19.0	30.0	41.0	5.0	5.0	100.0
18	El Ajelat	nd	nd	nd	nd	nd	nd	nd	nd	nd
19	El Gubbah	2,419	126	2,545	13.0	52.0	31.0	3.0	1.0	100.0
20	Shahat	1,840	189	2,029	8.0	35.0	52.0	3.0	2.0	100.0
21	Ez Zahra	nd	nd	nd	nd	nd	nd	nd	nd	nd
22	Nalut	1,438	17	1,455	24.0	29.0	39.0	7.0	1.0	100.0
23	El Bregah *	1,465	26	1,491	30.0	27.0	36.0	3.0	4.0	100.0
24	Murzuq	910	191	1,101	32.0	25.0	38.0	3.0	2.0	100.0
25	Jalu	1,056	8	1,064	23.0	31.0	37.0	6.0	3.0	100.0
26	Hoon	1,278	67	1,345	11.0	45.0	38.0	4.0	2.0	100.0
27	Mizdah	997	28	1,025	29.0	31.0	32.0	5.0	3.0	100.0
28	Tokrah	1,482	61	1,543	36.0	25.0	34.0	2.0	3.0	100.0
29	Waddan	910	27	937	19.0	36.0	39.0	3.0	3.0	100.0
30	Gaminis	977	35	1,012	33.0	26.0	35.0	3.0	3.0	100.0
31	M´said	818	21	839	15.0	19.0	46.0	14.0	6.0	100.0
32	Ghdams	832	25	857	10.0	35.0	48.0	6.0	1.0	100.0
33	Tolmeitha	844	29	873	36.0	17.0	42.0	2.0	3.0	100.0
34	Ubari	707	98	805	26.0	27.0	39.0	3.0	5.0	100.0
35	Ghat	911	46	957	22.0	34.0	33.0	5.0	6.0	100.0
36	Sorman	nd	nd	nd	nd	nd	nd	nd	nd	nd
37	Soussa	985	105	1,090	5.0	50.0	42.0	3.0	0.0	100.0
	Average				22	30	35	5	8	100.0

nd : No data available

Source : Computed from Ministry of Planning (1977) The 1973 Census of Population, Tripoli, (in Arabic).

* Excluding oil workers.

The profound functional changes which have affected Libya's small towns during the last two decades have produced some striking morphological changes. Some small towns have been completely transformed, others experienced a major expansion and restructuring of the built-up area. New developments, many of which are still under construction, have occurred almost exclusively on the edges of the existing small towns and include new industrial estates, new administrative complexes, schools and housing projects. In this way small towns are being rapidly urbanised, a process which results almost exclusively from state initiative and intervention; private investment is negligible.

The major morphological changes which have been introduced to the small towns are:-

1. New housing projects and administrative buildings
2. Industrial estates, and new shopping centres
3. People's squares, large military camps, buildings for the people's committees, political camps and the Revolutionary committees.
4. Buildings for schools, libraries, mosques, banks and insurance
5. Public utilities buildings such as for water and electricity, hospitals, clinics, pharmacies and health centres, cinemas and clubs
6. Slaughter houses, cattle market and veterinary services
7. Roads, streets
8. Changes in the design and style of buildings which in many cases do not accord with the culture or the environment, and the deterioration of the old town

The arrangement of the buildings (settlement pattern) and the functions (use of the land) in a town are together referred to as the town's morphology. Both aspects of urban morphology exhibit interesting patterns which can be observed and studied in the field. The term

"townscape" is given different emphasis depending on the particular discipline in which it occurs, but in urban geography it is taken to mean the whole objective visible in the urban area, or the total subjective "image of the city". It has now become a convention to break down the complexity of a townscape into three component parts: street plan or layout, architectural style or building, function or land use.(8)

The pattern of land use within an urban area is the result of the interaction of many socio-economic forces. The identification and explanation of internal patterns and processes is a major topic of inquiry in urban geography. There are several approaches which urban geographers have adopted in analysing the internal structure of the towns; namely the ecological, economic factorial ecology, conflict-management, Marxist analysis approaches and social area analysis. Irrespective of their contrasting philosophical and ideological standpoints, the different approaches to urban structure all emphasise the close link between socio-economic processes and urban patterns.(9)

Morphologically, the Libyan small town is divided into two distinct parts, the old traditional core and the modern additions. Both exist in sharp contrast visually and functionally. The old part of the town had achieved a balance between man and man, also man and nature. The principal physical institutions are the mosque, the citadel and the bazaar. The pattern of their narrow streets is irregular and the town is compact in form reflecting the complex social patterns and harsh climatic conditions. The network of backstreets and alleys are shaded by the high walls of buildings which twist and turn to stop the passage of dust carrying winds. Even in the larger public squares and courtyards the feeling of enclosure is maintained as these areas are often surrounded by high walls and arcades to provide cool pedestrian routes which can be used during the heat of the day.(10)

Most of the Libyan small towns contain an old traditional core in the centre of the town which developed slowly through time and whose structure was adopted to the traditional needs and livelihood of the inhabitants. It was relatively densely populated. Socio-economic and environmental factors have formed and structured the old settlement of these small towns. Urban experience in arid areas shows that compact town forms can effectively adjust to climatic stress. The necessity of human adaptation to the desert brought about the development of these compact urban forms which have microclimates more moderate than those of the environs. Examples from the small town of Ghdams can be seen in Plates 6.1 and 6.2.

Since the 1960's the traditional small towns have been undergoing rapid growth and change as a result of the fast economic development. The small towns have changed completely. New housing estates, wide streets, new building styles and new industrial areas have all replaced the intimate vista, the courtyard, the domain and the human scale. These new developments have little evidence of an established architectural or urban heritage and they are strongly influenced by European styles. They have been the subject of most of the elements of contemporary and passing fashions in urban planning.

Fieldwork observations in 1981 identified three main types of housing, namely the <u>housh</u>, flat and the villa. The housh is a traditional dwelling type with an interior courtyard and windows on the street elevation above eye level. The quality of the housh varies depending on location, the building materials available, and above all the socio-economic status of the owner. The flat is a dwelling unit within a block of several storeys, with balconies which are the only private outdoor space. The villa is a modern type of residence, usually a

Plate 6.1



Ghdams: Examples of the narrow winding alleys and streets which block sunlight, break stormy winds and are relatively cool.

Source:- Dawton, A. (1981) Libya : A Personal view of a Jamahiriya, Hakima Ltd, London.

Plate 6.2



Ghdams : Trees are usually seen only as branches showing over garden walls

Source:- General Board of Tourism and Fairs (1976) Souvenirs from Libyan Arab Republic, Tripoli.

free standing building surrounded by gardens. The Italians were the first to introduce this type of housing in Libya. This type of residence if it has more than one storey is known as a "Doublex". The number of each type of house varies from one small town to another.

Mosques form the best developed network of the cultural facilities. They can be found in each small town and their number and size depend on the number of inhabitants involved and the layout of the built up area. Mosques are notably situated in the residential areas but also near the major places of work e.g. factories. New public facilities provided include schools, which have become an increasingly important element in land use, hospitals and clinics. With the expansion of the administrative functions of the small town, new administrative complexes have appeared whereas in the past these activities were carried out in one or two modest buildings. Some towns have also acquired modern shopping centres which exist in sharp contrast to the traditional retailing areas or suqs in the historic cores.

The urban form of the small towns is the product of three major factors, i.e. climate and landform, social systems and life style and the nature of growth. In many cases planners and designers have ignored these factors in the great rush to "modernise" and to accommodate the automobile.

The construction of new housing estates and towns which do not incorporate traditional architectural styles e.g. the concept of the courtyard house, has resulted in many social and environmental problems. In a country with a harsh environment it can be argued that the concept of a compact form represents the most appropriate design for new towns or new neighbourhoods. This design provides for the close proximity of residential areas, shopping and educational facilities, public offices

and community service centres. A compact form can also reduce encroachment of the urban area on valuable agricultural land and reduce the high cost of construction and maintenance of urban utility networks.

6.3 LAND USE ANALYSIS

All the small towns with the exception of the small border town of Msaid have experienced, and continue to experience, rapid physical expansion. This is illustrated by Table 6.3 and Figure 6.1 which show the physical change in the total built up area in selected small towns between 1966 and 1978. The highest percentage change in the towns listed in Table 6.3 occurred in El Merj where the built up area increased by 1582 per cent during the period 1966 to 1978. The total built up area of the old town of Barce was estimated by the Baladiyah at 35 ha in 1966. In 1978 the new town constructed after the earthquake covered 588.6 ha. Other examples show the dramatic expansion of the built up area of Libya's small towns. Only Msaid has experienced limited physical change, increasing from 8.02 ha to 8.10 ha or 0.1 per cent. The growth of this border town has been affected by the strained relations between Egypt and Libya which has caused outmigration and led the Government to transfer all administrative and commercial functions to the small fishing port of Bardiya some 17 km from Msaid.

The amount of land allocated to each major category of use e.g. residential, education, administrative, commerce and industry has increased. Table 6.4 and Figure 6.2 show the residential changes in some small towns between 1966 and 1978. The residential area represents the largest built up area and is one of the main factors of recent physical change in the small towns. In Soussa, for example, the amount of land allocated for residential use increased from 19.85 ha to 65.14 ha, an annual rate of growth of 19 per cent. Table 6.5 and Figure 6.3

Table 6.3 Physical Changes In Selected Small Towns Between 1966-1978 (Total Built-up Areas In ha.)

Small Towns	1966	1978	% change 1964-1978
Soussa	35.38	93.23	164.0
El Abiar	35.14	187.1	432.0
Tolmeitha	10.00	26.8	168.0
Beninah	24.93	55.9	124.0
Shahat	24.64	168.50	584.0
Tokrah	10.52	118.1	1022.0
El Gubbah	14.34	66.64	365.0
M'said	8.02	8.10	0.1
Gaminis	17.92	43.4	142.0
Gherian	72.46	309.4	327.0
Sirte	43.7	207.5	375.0
Jalu	14.74	49.8	238.0
El Merj	35.00*	588.6	1582.0
Zliten	63.7	314.9	394.0
Yefren	23.2	136.0	486.0
Mizdah	26.18	62.0	137.0
Bani Walid	21.8	248.3	1039.0
El Jof (Kufra)	32.0*	159.9	400.0
Ghdams	32.15	166.8	419.0
Nalut	30.10	137.3	356.0

* Official Estimation in the Baladiyah of El Merj and Baladiyah of Kufra.

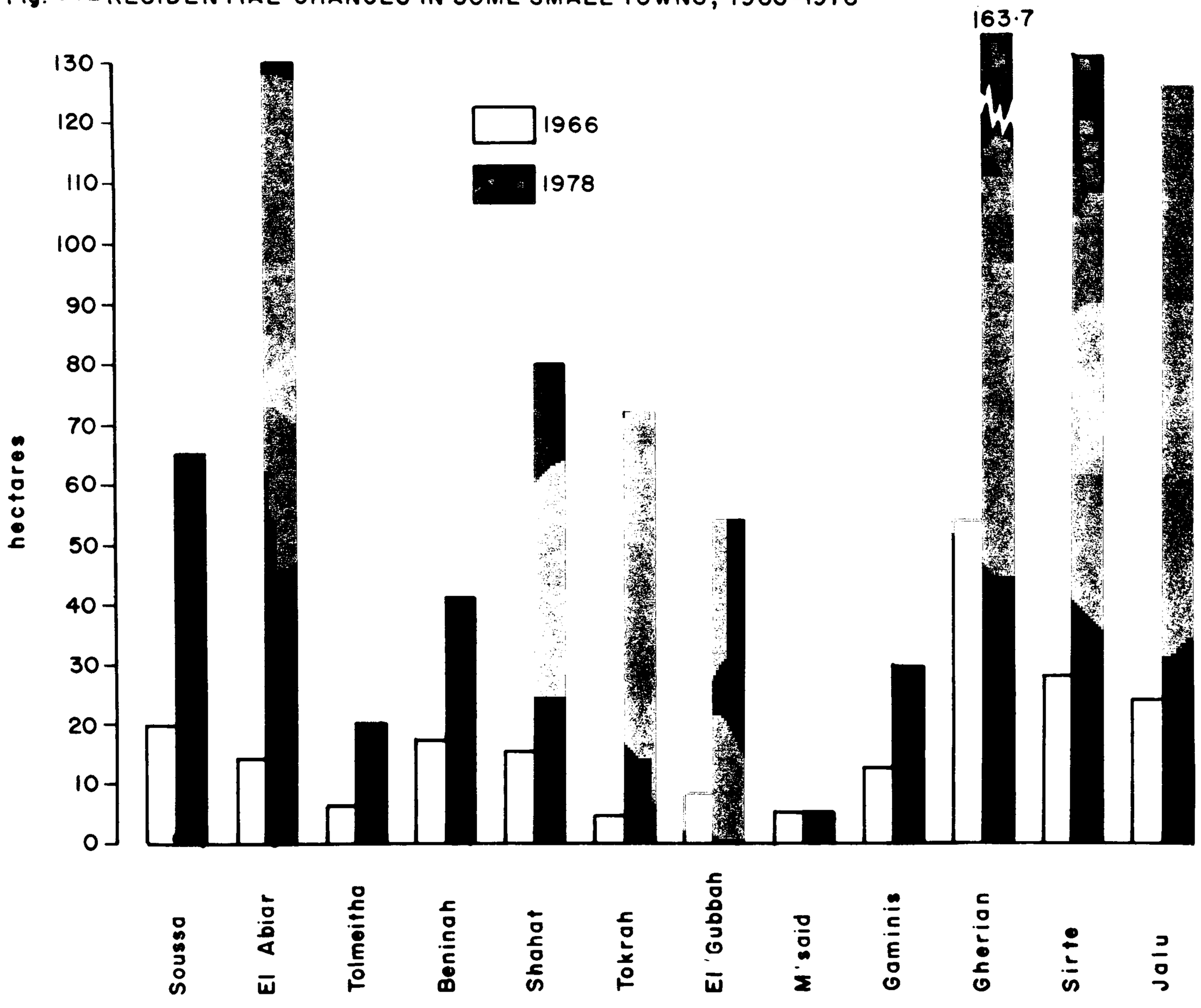
Source : Compiled from Master and Layout Plans for Small Towns.

Table 6.4 Residential Changes In Some Small Towns 1966 - 1978
(in ha.)

Small Towns	1966	1978	Percentage increase
Soussa	19.85	65.14	228.0
El Abiar	14.51	130.5	799.0
Tolmeitha	6.25	20.0	220.0
Beninah	17.27	41.4	140.0
Shahat	15.63	80.46	415.0
Tokrah	4.57	72.8	1493.0
El Gubbah	8.40	54.23	546.0
M'said	5.10	5.10	0.0
Gaminis	12.91	29.6	129.0
Gherian	54.43	163.7	201.0
Sirte	28.3	131.3	364.0
Jalu	11.0	24.9	126.0

Source: Compiled from Master and Layout Plans.

Fig. 6.2 RESIDENTIAL CHANGES IN SOME SMALL TOWNS, 1966-1978



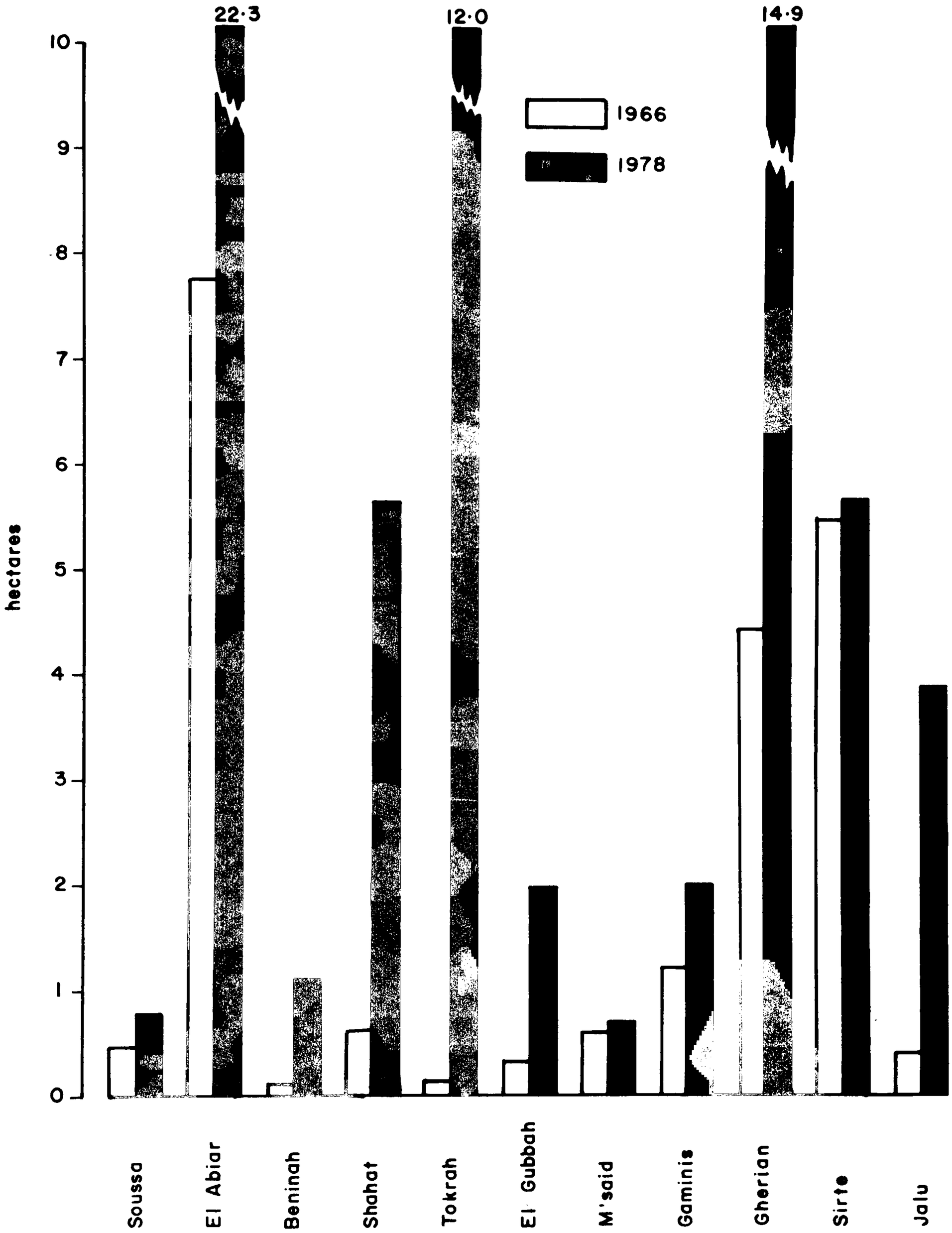
Source: Compiled from the Master and Layout Plans for Small Towns

Table 6.5 : The Increase of Landuse by the Government and its Institutions in Selected Small Towns, 1966-1978 (in ha)

Small Towns	1966	1978	Percentage of change
Soussa	0.47	0.78	66.0
El Abiar	7.76	22.3	187.0
Beninah	0.12	1.1	816.0
Shahat	0.62	5.66	813.0
Tokrah	0.13	12.0	9130.0
El Gubbah	0.32	1.97	516.0
Msaid	0.60	0.70	16.0
Gaminis	1.21	2.1	74.0
Gherian	4.45	14.9	235.0
Sirte	5.5	5.7	3.6
Jalu	0.4	3.9	875.0

Source : Compiled from various Master and Layout Plans

Fig. 6.3 THE INCREASE OF LANDUSE BY THE GOVERNMENT AND ITS INSTITUTIONS IN SELECTED SMALL TOWNS, 1966-1978



Source: Compiled from the Master and Layout Plans for Small Towns

illustrate the increase in the amount of land allocated for government and administrative uses. In Tokrah, land allocated for government and administrative offices increased from 0.13 ha in 1966 to 12.0 ha in 1978 following the town's promotion in the administrative hierarchy to the headquarters of the Baladiyah.

Master plans and layout plans formulated and designed by the various consultants did not anticipate such rapid urban development. Table 6.6 and Figure 6.4 which compare actual land use in 1978 and total planned land use for 1988 illustrate this fact. Bani Walid for example, which was planned to cover an area of 63.1 ha in 1988 already covered 248 ha in 1978. This rapid physical expansion has outpaced the planning process, reducing its effectiveness to control physical growth, and creating problems for the small towns.

6.4 CASE STUDIES

6.4.1 El Merj (Barce)

El Merj is located in the former province of Cyrenaica on the coastal strip of the Jabel Akhdar in the north east of Libya. It is situated approximately 95 km east of Benghazi and approximately 18 km south of the Mediterranean. The town is located at 280 m above sea level on the fertile Barce plain between the first and the second escarpment of the Jabel Akhdar.

El Merj had a population of 28,939 inhabitants at the last census in 1973. It is a market centre for the fertile agricultural region of the Jabel Akhdar, the administrative centre for the Baladiyah, and, as the only major town along the 200 km main highway linking Benghazi and El Beida, has also developed as a transportation centre.

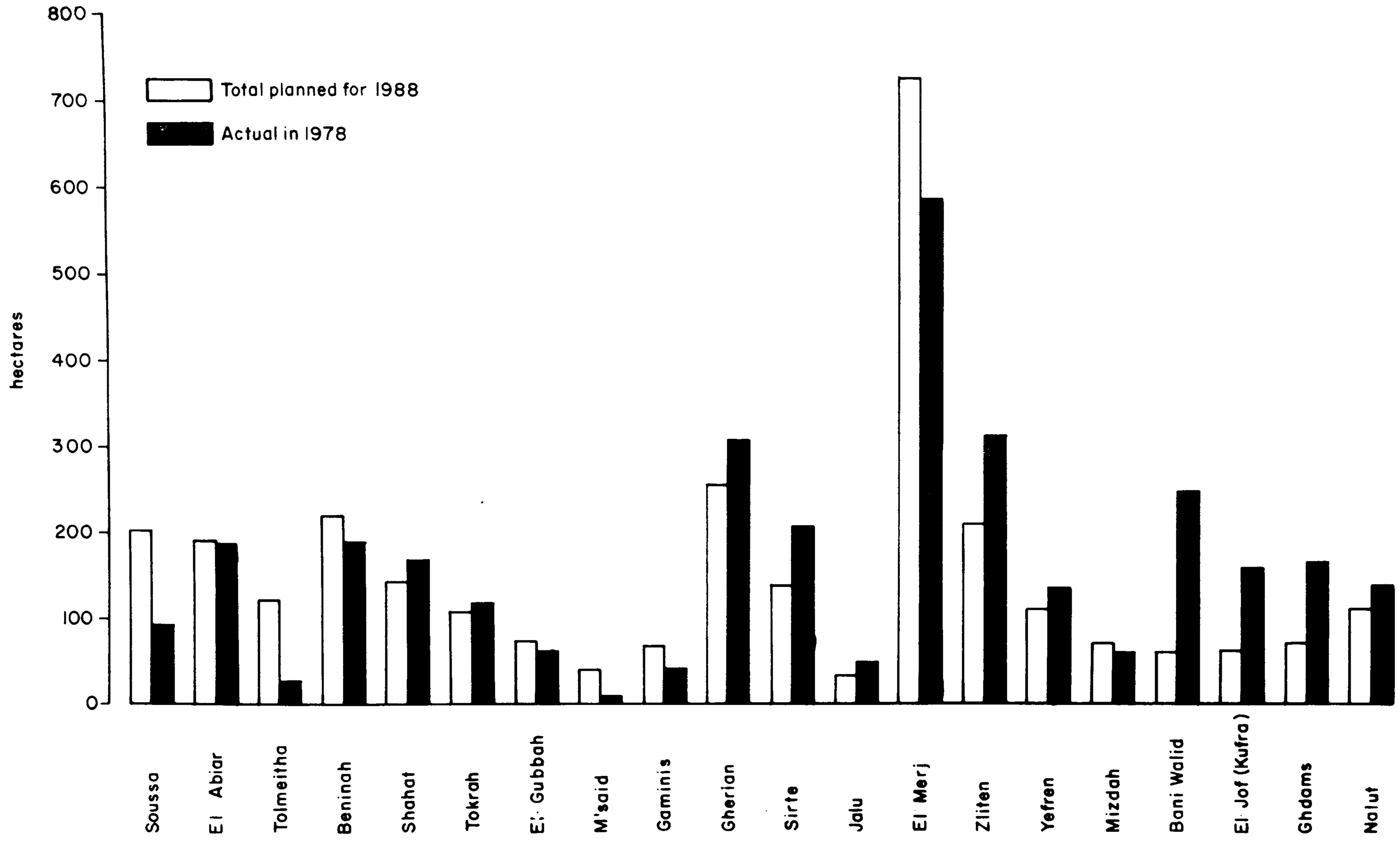
Table 6.6: Planned and Actual Landuse in Selected Small Towns, 1988 and 1978

(in ha.)

Small Towns	Total Planned For 1988	Actual in 1978
Soussa	203.76	93.23
El Abiar	191.99	187.1
Tolmeitha	122.40	26.8
Beninah	220.27	189.7
Shahat	143.6	168.50
Tokrah	107.35	118.1
El Gubbah	74.85	66.64
M'Said	43.98	8.10
Gaminis	61.9	43.4
Gherian	257.1	309.4
Sirte	138.1	207.5
Jalu	33.55	49.8
El Merj	727.0	588.6
Zliten	212.9	314.9
Yefren	112.4	136.0
Mizdah	72.7	62.0
Bani Walid	63.1	248.3
El Jof (Kufra)	63.5	159.9
Ghdams	71.95	166.8
Nalut	112.4	137.3

Source : Compiled from Master and Layout Plans for Small Towns

Fig.6.4 PLANNED AND ACTUAL LANDUSE IN SELECTED SMALL TOWNS, 1988 and 1978



Source: Compiled from Master and Layout Plans for Small Towns

In 1963, El Merj or Barce as it was known during the Italian period, was devastated by an earthquake. In 1964 a comprehensive plan for the reconstruction of the town on a new site four kilometres to the west of the original site was published. The new town of El Merj was subsequently built by the Libyan agency, Barce Reconstruction Organisation (B.R.O). El Merj enjoys a unique position in the sense that its plan and its layout anticipated many of the needs of a rapidly growing urban centre. Many of the problems that are now plaguing other growing cities have been avoided in El Merj, for example traffic congestion due to inadequate street patterns, the need for city centre by-passes for regional traffic, lack of space for expansion of commercial activities, and the up-grading of water and sewerage systems.

When establishing priorities for investment or identifying growth centres in a new spatial planning programme, the ability of a town to absorb projects within its physical structure is an important consideration. For El Merj its highly functional network should be a factor in its favour.

The Barce Reconstruction Organisation, established by the Government in 1963 as an independent body to locate the new town and supervise the construction, commissioned LUBLIN McGAUGHY, an American firm of Architects and Consulting Engineers, to survey, locate and design the new town of El Merj. The consulting company submitted their report which they prepared in accordance with the general remarks and suggestions of the BRO. It was estimated that the cost of building the new town would be £L 10 million.[11] It was the biggest single financial project ever undertaken in Libya at that time. The design concept used in the planning of the new town has been to create residential neighbourhoods. Vehicular and pedestrian traffic were all coordinated so as to produce a unified development which could be built economically, operated

efficiently and maintained with minimum expense.(12)

The morphology of the new town of El Merj is based on the following principles:-

a) The inhabitants should not spend an unreasonable time walking to the town centre.

b) The time needed to walk from the residential area to each of the children's gardens, to the elementary schools, to the local stores or to the public means of transportation should not exceed 20 minutes.

c) Each residential neighbourhood should have a local shopping centre, mosque and schools all designed to be reached in a short period of time on foot.(13)

Since the consultant submitted the master plan, development has been largely within the guidelines of this master plan. It proposed a total land use of about 737 ha to be developed up to the year 1988 (see Table 6.7). This should be compared with Table 6.8 which shows existing land use in 1978 and may be compared with Figure 6.6 which shows the pattern of land use in the old town of El Merj before its destruction by the earthquake in 1963. On the basis of Table 6.8 and Figure 6.5 the following observations can be made:

1. The total built-up area of El Merj has increased from 35 ha in 1966 to 588.6 ha in 1978, an average annual growth rate of 132 per cent.

2. This rapid development is due to the fact that a new town was completely built by the State as a result of the earthquake.

Table 6.7 : Proposed Land Use of the New Town of El Merj in 1988

a	-	Residential area	663 hectares
b	-	Town centre	27 "
c	-	Industrial area	28 "
d	-	Sports centre	9 "
e	-	Campsite	5 "
f	-	Cemetery	5 "
			737 hectares

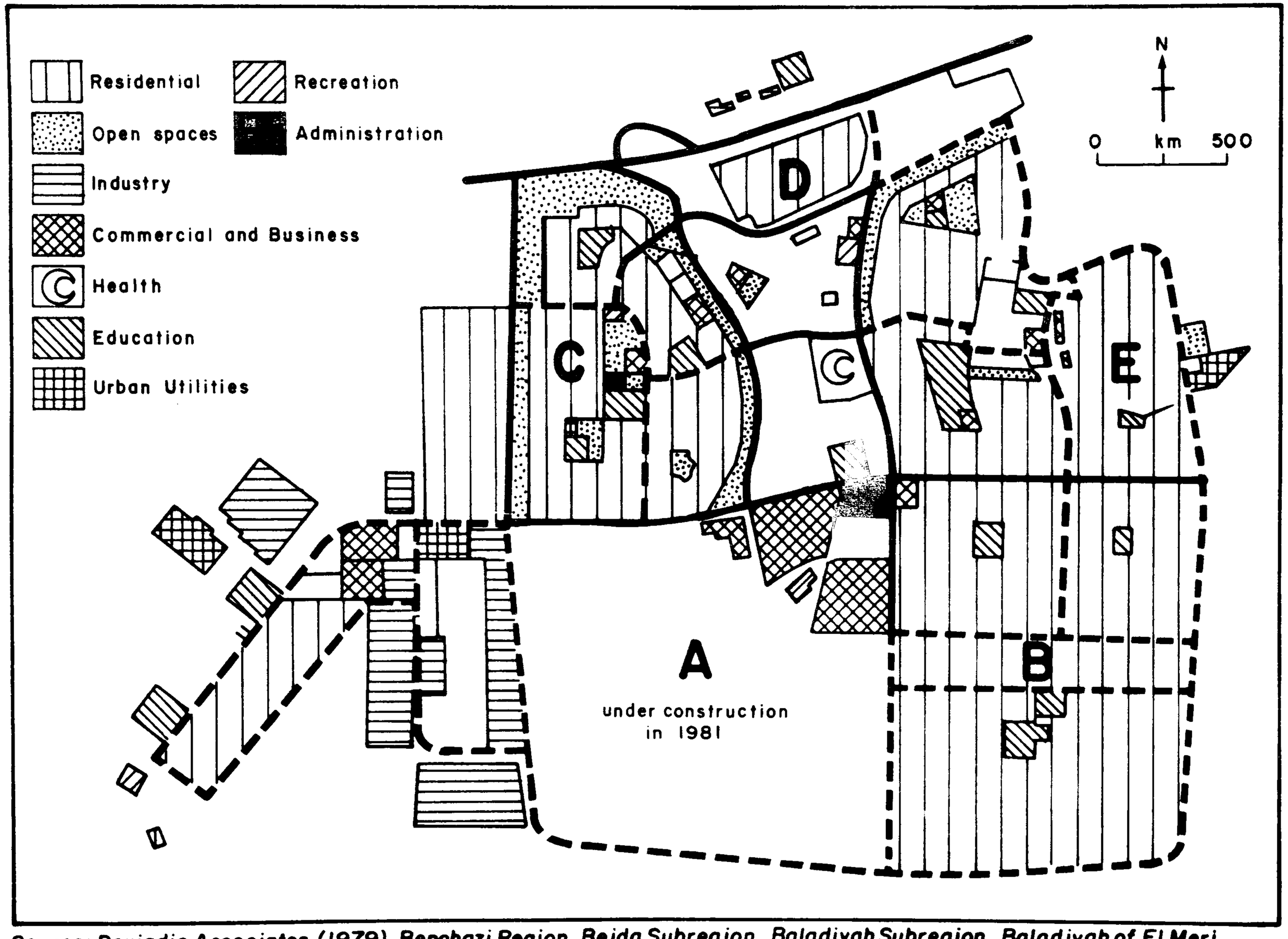
Source: Lublin McGaughy, 1964. Planning Report for the New Town of El Merj , Benghazi, p.26.

Table 6.8: El Merj - Existing Land use in 1978

Type of use	Area in ha.	% of Built up Area	% of Planned Area
Residential	357.9	60.8	36.2
Commerce and Business	41.4	7.0	4.4
Government, Administration and Military	8.3	1.4	0.9
Education	28.6	4.9	3.0
Health	8.3	1.4	0.9
Social, cultural and religious facilities	11.7	2.0	1.2
Industry and warehousing	61.8	10.5	6.6
Green open space	49.5	8.4	5.3
Public utilities	9.3	1.6	1.0
Road network	11.8	2.0	1.3
Total Built-up area	588.6	100.0	62.8
Vacant	348.8		37.2
Total area	937.4		100.0

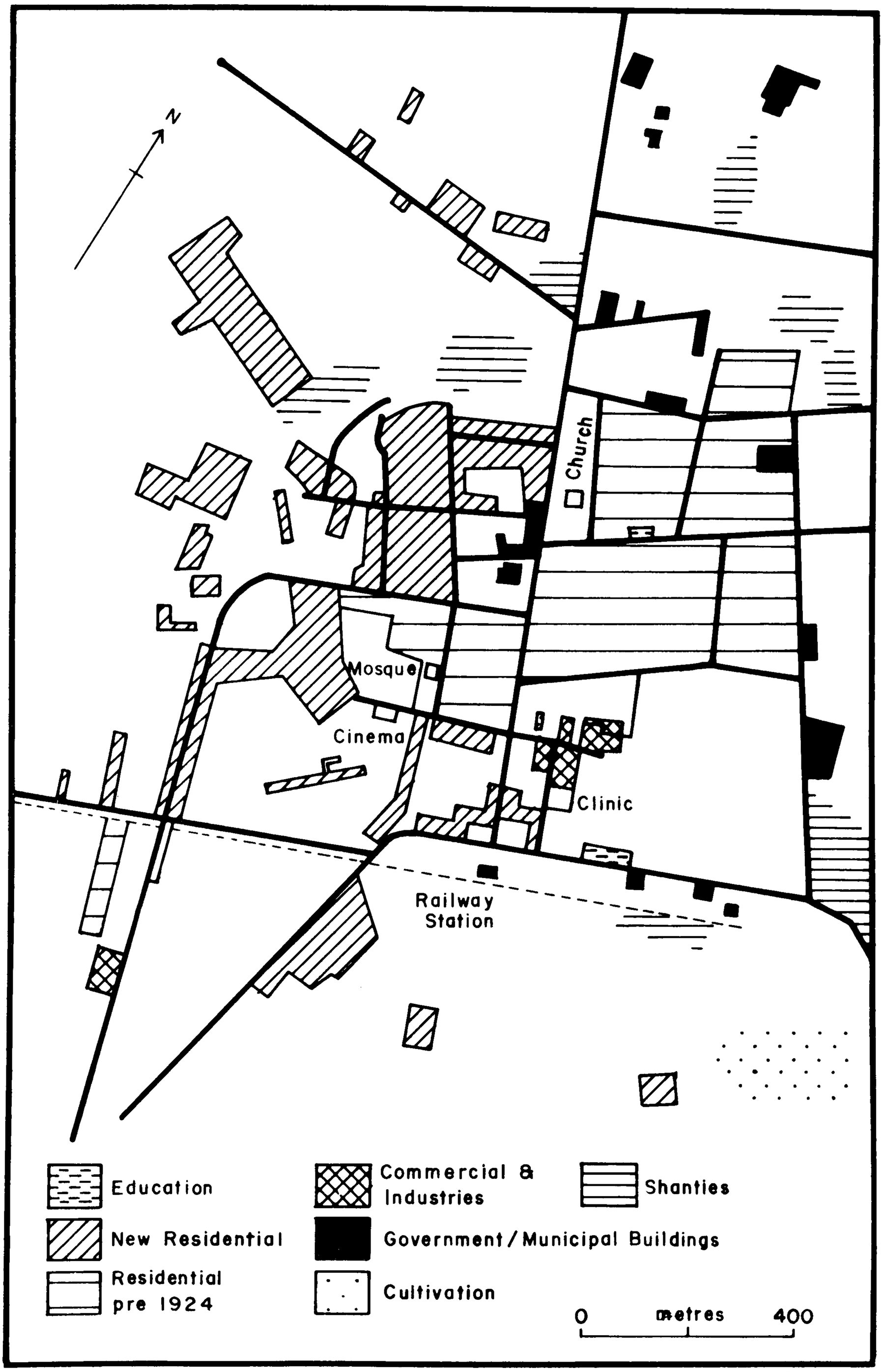
Source : Doxiadis Associates (1979) Baladiyah of El Merj. Existing Conditions Projections and Future Development Trends, Tripoli, p. 27.

Fig 6·5 EL MERJ: Existing landuse, 1978



Source: Doxiadis Associates (1979) Benghazi Region, Beida Subregion, Baladiyah Subregion, Baladiyah of El Merj, Athens, Report 3 vol 3 p 35

Fig. 6·6 EL MERJ: The Old Town



Source: Buru, M.M. (1965) El Merj Plain: A Geographical Study Unpublished Ph.D Thesis. Department of Geography, University of Durham

3. The total amount of land used for residential purpose in 1978 was about 357.9 ha or about 60.8 per cent of the total built-up area in the same year.

4. Commerce and business used about 41.4 ha, or about 7 per cent of the total area while government, administration and the military used only about 8.3 ha or about 1.4 per cent of the total area. The small proportion of the built up area devoted to government and administration may be explained by the fact that when the plan for the new town was formulated a new capital city was being built at El Beida only 100 km away.

5. Educational use of land was about 28.6 ha or about 4.9 per cent of the total built-up area. Health used about 8.3 ha or about 1.4 per cent whilst social, cultural and religious facilities used about 11.7 ha or about 2.0 per cent.

6. The total area of land allocated to industry and warehousing was about 61.8 ha or about 10.5 per cent of the total built-up area, while green open spaces used about 49.5 ha or about 8.5 per cent of the built-up area.

7. Public utilities used about 9.3 ha or about 1.6 per cent of the built-up area, while road networks used about 11.8 ha, or 2.0 per cent.

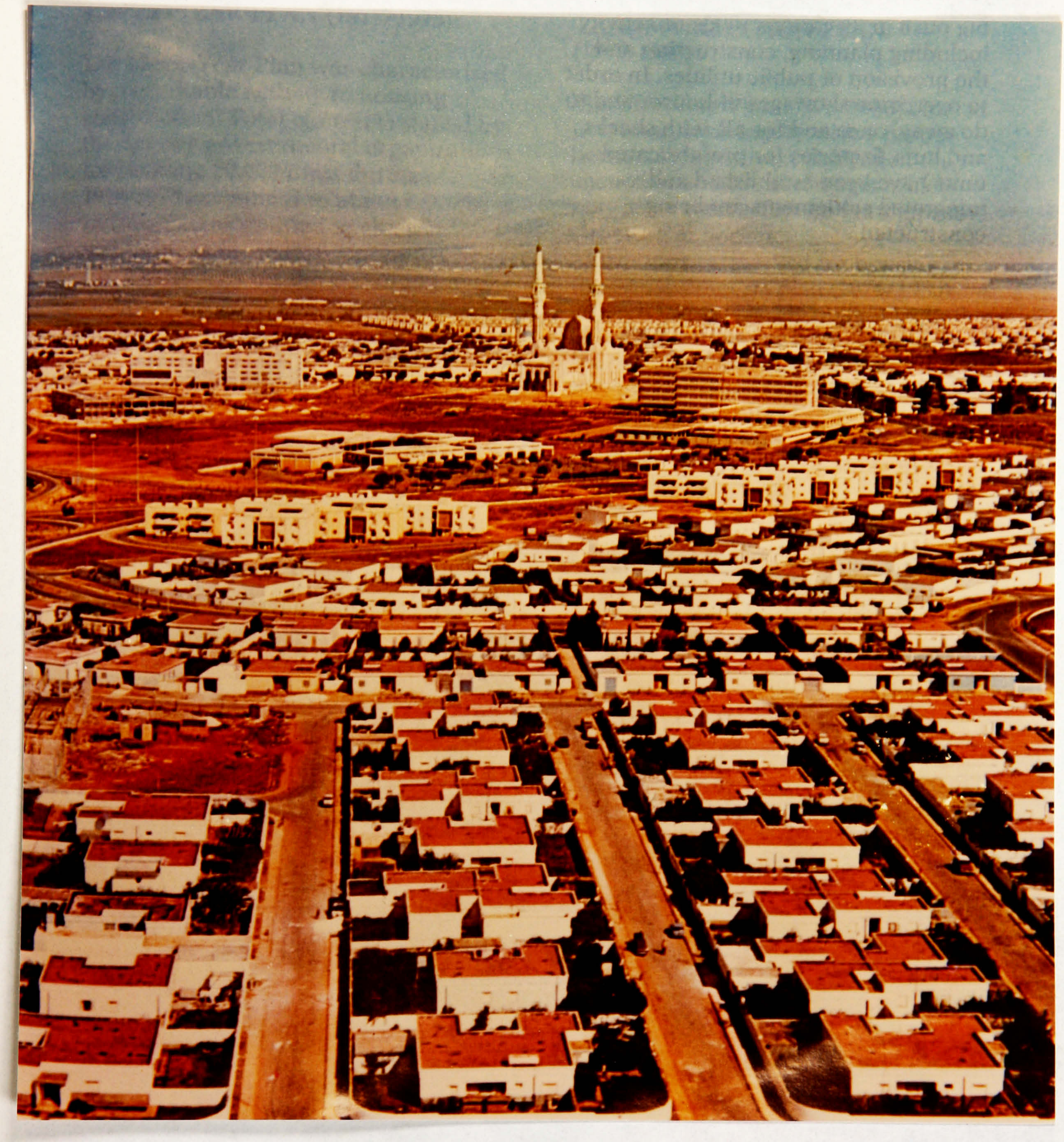
Morphologically, the new town is divided into two main parts : the northern half is occupied by the residential quarters, C, D and E and half of the town centre including government offices, a shopping centre, two secondary schools and the hospital. The southern half is occupied by the residential quarters A and B and the "Self Constructed Sector". The industrial district is located in the south-western part of the town. The southern half of the town centre is

formed of the major three "bazaars" for retail business and further to the west lie the wholesale and livestock markets (Plates 6.3 and 6.4). Plate 6.3 provides a panoramic view across the new town from southeast to northwest and shows villa type housing (foreground), low cost houses, appartment blocks and the city centre dominated by the main mosque. Plate 6.4 shows a close-up of the main mosque.

The residential area occupied about 357.9 ha in 1978 which represents about 60.8 per cent of the total built-up area and has been designed to form four major quarters (A,B,C,D) and a small quarter (E). In the first stage the B.R.O. built 1400 residential units as compensation to those who lost their homes in the old town; about 650 units in the western quarter (C) and about 750 units in the eastern quarter (D). Most of the units were of the one-storey "villa" type with a small number of multi-storey apartment blocks. About 600 multi-storey apartment blocks were built around the town centre in order to form a gradual change from high government buildings in the town centre to the one-storey villas in the surrounding residential quarters. About 1000 units were built as popular houses at low cost. They consisted of rows of small single-storey dwellings containing only three rooms. Some low cost housing was built in each quarter. Plate 6.5 shows the typical villa type of housing in the western quarter (C).

All houses in quarter (B) in the south east of the town were built by the people with the help of loans from the Real Estate Industrial Bank; the Government gave the land to the people and they designed their own houses. Quarter (E) in the northern part is occupied mainly by semi-detached houses and the Government started building quarter (A) in 1981/82. In addition, the Baladyiah provided land for a "self-constructed" housing quarter in the west of the town which was occupied by the workers employed in the industrial district nearby.

Plate 6.3



View of El Merj

Source:- Ministry of Foreign Affairs (1976) The Human March in the Libyan Arab Republic, Tripoli.

Plate 6.4



The main mosque of El Merj

Source:- General Board of Tourism and Fairs (1976)
Souvenirs from Libyan Arab Republic, Tripoli.

Plate 6.5



Typical villa type of housing in the Western Quarter (C)
of El Merj

Source:- Ministry of Foreign Affairs (1976) The Human March in the Libyan Arab Republic, Tripoli.

The four major quarters (A, B, C, D) all contain shops which provide goods and services demanded daily by the residents, together with schools, clinics and mosques.

The multi-storey apartment blocks have been built around the centre to provide a transition between the centre and the single storey residential units. The principles maintained in the location of the multi-storey buildings are: provision of privacy for the individual family, convenient community shopping facilities, recreational facilities and open parks and convenient access for automobile and pedestrian traffic.(14) However, since most Libyans object to living in multi-storey blocks where family privacy is lacking, these buildings are occupied mainly by foreigners together with some government employees.

There are four suqs (markets):

1. Suq al Jamahiria, the main shopping complex, located in the town centre, offers a wide range of goods including clothing, fabrics, furniture and home appliances as well as products consumed daily, e.g. foodstuffs. It serves all the town's population and also attracts people from the surrounding rural area. The suq is divided into three sections, each with 88 shops, a cafeteria and a cafe. There is also a car park and small post office.

2. Suq al Seyaha (the tourist shopping centre) is located between the eastern quarter (C) and the northern quarter (E) and contains 55 shops, a cafe and a restaurant; the market is also equipped with a car park.

3. Suq phlisteen (Palestine market) is located in the eastern quarter (D) and contains 66 shops and one cafe. Both markets (Palestine and Tourist) mainly serve the surrounding residential quarters and provide mainly goods and services demanded daily by the residents such as fresh

vegetables, meats, bread, drinks, newspapers and journals.

4. Al Foundk (the wholesale market) is divided into two parts: the wholesale market for food, vegetables, fruit, cereals etc. and the livestock market. Both are located on the outskirts of the town in the industrial district. The livestock market is provided with a slaughter-house and veterinary practice. The wholesale market contains 104 stores and a cafe. The Foundk is equipped with a car park and serves both the town and its rural hinterland.

In addition to those markets, there are about 20 individual stores distributed throughout the residential quarters. These small shops provide the residents of each quarter with cigarettes, sweets, food and vegetables. It is interesting to note that these individual stores in the residential areas were not provided for in the original plan. Retailing was to have been concentrated in the main suqs. Although the main suqs were built by the Government, individual shops and businesses were owned and operated by private retailers until 1979 when the Government began to nationalise the private commercial sector. Most of the people running businesses in the suqs are now state employees

The industrial district had been planned originally adjacent to the northern part of the town. However, it was relocated in the south-western part of town for two reasons; so that the prevailing northerly winds will carry atmospheric pollution away from the town and so as to avoid building on good agricultural land to the north of the town.

The industrial zone contains the following establishments: spinning and weaving wool, flour mills, car-service workshops, carpentry workshops, manufacture of cement blocks, leather processing, the power station, wholesale and livestock markets, a slaughterhouse, veterinary service and car park. This zone has also been connected with the main

highway between El Beida and Benghazi and the workers provided with land in the "Self Constructed District" to build their own houses.

The public services include town centre services, neighbourhood centres and public utilities. The design concept used in the planning of the town centre has been to produce an open pedestrian area with a number of small gardens. The focal point of the town centre is the Great Mosque which dominates all other elements in the town. The centre also includes Government offices, the Baladiyah, Police Station, Fire Station, the General Hospital, Post Office, Schools, Banks, Parks, Court, market and the Public Library. The centre provides services, not only to El Merj inhabitants, but also to the rural communities in the hinterland. Therefore special "exits" on the national highway between Benghazi and Derna have been established in order to make the centre accessible by both the inhabitants of the town and its hinterland. In addition to the services provided by the town centre, each neighbourhood centre is equipped with a school, a clinic, mosque and some shops.

As a new town, the rapid expansion of El Merj has remained within the control of the planning process, although the detailed implementation of the different phases of the master plan have not always been carried out according to the original schedule. On the whole the quality of the new houses constructed at El Merj has been good but their design has been criticised by many of the inhabitants as inappropriate to their social organisation and cultural values. This problem has been aggravated by the fact that the town is now inhabited not only by citizens rehoused from the old town but by large numbers of new urbanites many of whom were until recently semi nomads. With a measure of public participation in the formulation of the master plan some of these problems could have been avoided. The strict functional zoning envisaged by the master plan has not been fully achieved; maintenance of basic

infrastructures has been poor; landscaping of open spaces has not been implemented by the municipality and provision of parking facilities in the town centre has proved inadequate.

El Merj is the headquarters for the Baladiyah but fulfils a wider role than that of a transport and service centre to its local agricultural hinterland. Its sphere of influence expands beyond the boundaries of the Baladiyah. This is supported by the presence of regional agricultural offices and a regional hospital. The town, as the only major town along the 200 km highway linking Benghazi and El Beida,has also developed as an important regional transportation centre. Although the modern manufacturing sector is in its early stages of development (the majority of jobs in the industrial sector were in construction in 1973), the agricultural potential of the hinterland could stimulate growth of the industrial base.

A new master plan is being drawn up by Doxiadis with several alternative directions for the development of the town to the year 2000.(15) As a new town it has the potential to absorb new economic projects and a significant increase in population. However, it has not been designated as a regional or sub regional centre by the National Physical Perspective Plan (NPPP) but is categorized as a centre of local activity.

6.4.2 El Bregah

Marsa El Bregah is one of the fastest growing towns in Libya. The town is located on the most southerly point along the Gulf of Sirte about 75 kms southwest of Ejdabiah and 40 kms east of El Ageilah on the main coastal road linking Tripoli and Benghazi. To the south are the main oil producing and natural gas wells of Zaltan and Ragaba. El Bregah is one of six sub-municipalities (Fur' Baladiyat) within the Baladiyah of

Ejdabiah. The Fur' Baladiyah of Bregah includes the two Mahalat (quarters) of El Bregah and Marsa, the port.El Bregah comprises three sites. The first is Bregah centre, the old village, which is situated on the main highway connecting Benghazi with Tripoli. The second site is Marsa, the port and associated industrial area. The third site is the new town of El Bregah approximately 10 kms to the north east from the port and industrial area.

El Bregah is one of the six oil terminals in Libya extending from east to west: El Harriga near Tobruq, Ez Zwitinah near Ejdabiah, El Bregah, Ras Lanuf and Sidra in the Gulf of Sirte and Ez Zawiyah. El Bregah was established by Esso in 1959 to export oil from its Zaltan field. Drawing a straight line north from the oil field to the coast leads one into the southern sector of the Gulf of Sirte and here Esso established its terminal on the site of an abandoned harbour village with a long history. Although El Bregah provided an elevated site for the tank farm and the foundation for a harbour large enough to receive cargo vessels, hydrographic surveys revealed an important shortcoming in the site. El Bregah's location in the southeast of the Gulf of Sirte exposed it to the maximum development of winter Mediterranean storms whose winds and high wave swells could easily halt all petroleum loading activities in the open sea berths. While Esso considered other sites, none offered such good harbour potential. Moreover the pipeline would have had to be extended considerably in order to achieve any significant gain in protection for the sea berths.(16)

Therefore Esso chose El Bregah, leasing 28 km^2 from the Government. From the outset it served as a terminal to export oil but also a port through which goods for use in the oilfields inland could be imported. Between the port and the small village of Bregah the company established a housing estate for their employees. Twenty-seven bachelor units

were constructed in 1963 on low ground south of the port and in 1965 some 115 family homes for the American and Libyan staff were added.

In the early 1960's Esso called on a Greek consultant to make a series of studies of the factors involved in expanding El Bregah into a town including both Libyan and American families. The consultant stressed the high cost of maintaining a settlement at El Bregah.(17) which is situated in one of the most inhospitable parts of the country. No action was taken by the Company. In 1966 however the Libyan Government commissioned Doxiadis Associates to prepare a Master Plan for the development of a town. In their report prepared in 1968 Doxiadis suggested three options for the development of El Bregah.

Firstly: The development of two separate urban centres, one in the industrial and port area administered by Esso and the second in the old village of El Bregah administered by the local authority.

Secondly: Major development at the port and industrial area and little development in the old village.

Thirdly: The development of a modern town in the port and industrial area and no development in the old village.

The third option was adopted by the Libyan Government, and the consultant was asked to prepare a Master Plan for the town on the basis of this proposal, taking into consideration the many physical, economic and demographic factors. On a regional scale the consultant stressed the importance of concentrating the development effort for the area extending from Sirte to Ejdabiah at El Bregah.(18) The consultant projected that the town should have about 7,000 inhabitants in 1973 and 17,400 by the year 2000.

Table 6.9 and Figure 6.7 show the existing land use in El Bregah in 1966 on the basis of studies undertaken by Doxiadis. Both emphasise

the large amount of land allocated to industrial uses, some 64.5 ha or 49 per cent of the total built up area. The industrial area at that time included the port, a small oil refinery, power station, desalination unit and storage tanks. The residential area contained the family houses and bachelor units. Table 6.10 and Figure 6.8 illustrate the planned land use for El Bregah in 1988 put forward in the Master Plan by Doxiadis. The 825 ha allocated for industrial use, 59 per cent of the total area, emphasises that the town was projected to become a major industrial centre.

The Doxiadis master plan was never implemented but some individual urban projects were built such as schools, clinics and shops. The Italconsult study in 1976 recommended that El Bregah should be developed as a major growth pole and projected a population growth to 16,000 in 1980, 32,000 in 1985 and 90,000 in the year 2000. On the basis of this study Italconsult also projected the level of infrastructures needed to accommodate this scale of population growth.(19) This recommendation was accepted by the Government and included in the NPPP. A "Higher Committee for the Execution of El Bregah and Ras Lanuf Towns Projects" was set up in 1979. It commissioned McGaughey, Marshal and McMillan, Holmes and Narver Inc. to plan the new town.(20)

The poor quality of the environment contributes to the instability of labour which is considered to be one of the main problems of the oil industry; the annual labour turnover rate was 22 per cent.(21) Recent attempts to improve conditions have been judged to be only partial or isolated solutions to a problem requiring a comprehensive plan of greater scope. The commissioning of El Bregah New Town Master Plan Project is the response to this need for a comprehensive plan. Phase one of the project was a preliminary study to identify overall objectives and formulate alternative Master Plan strategies. Phase two is the development

Table 6.9 : Existing Land Use in El Bregah 1966

Land Use	Area ha	Percentage of planned area
Residential	25.4	8.7
Utilities and Commercial	2.8	1.0
Education	0.8	0.4
Sport and Recreation	25.5	8.7
Industrial	64.5	22.2
Surface Roads	11.2	3.8
Vacant	160.8	55.2
TOTAL	291.0	100.0

Source: Doxiadis Associates, (1968) Report on the Development of Marsa El Bregah Benghazi, p.9 (in Arabic).

Table 6.10 : Planned Land Use for El Bregah in 1988

Land Use	Area ha	Percentage of planned area
Residential	194	13.9
Town Centre and Commercial	11	0.8
Administration	18	1.3
Green Areas and Squares	33	2.4
Reserved Area	132	9.4
Light Industry	20	1.4
Heavy Industry	825	59.1
Roads	163	11.7
TOTAL *	1,396	100.0

* excluding the industrial area located beside the highway (215 ha) and the Airport (188 ha)

Source: Doxiadis Associates (1968) Report on the Development of Marsa El Bregah. Benghazi p.39 (in Arabic).

Fig 6·7 EL BREGAH: Existing landuse 1966 and Proposed landuse 1988

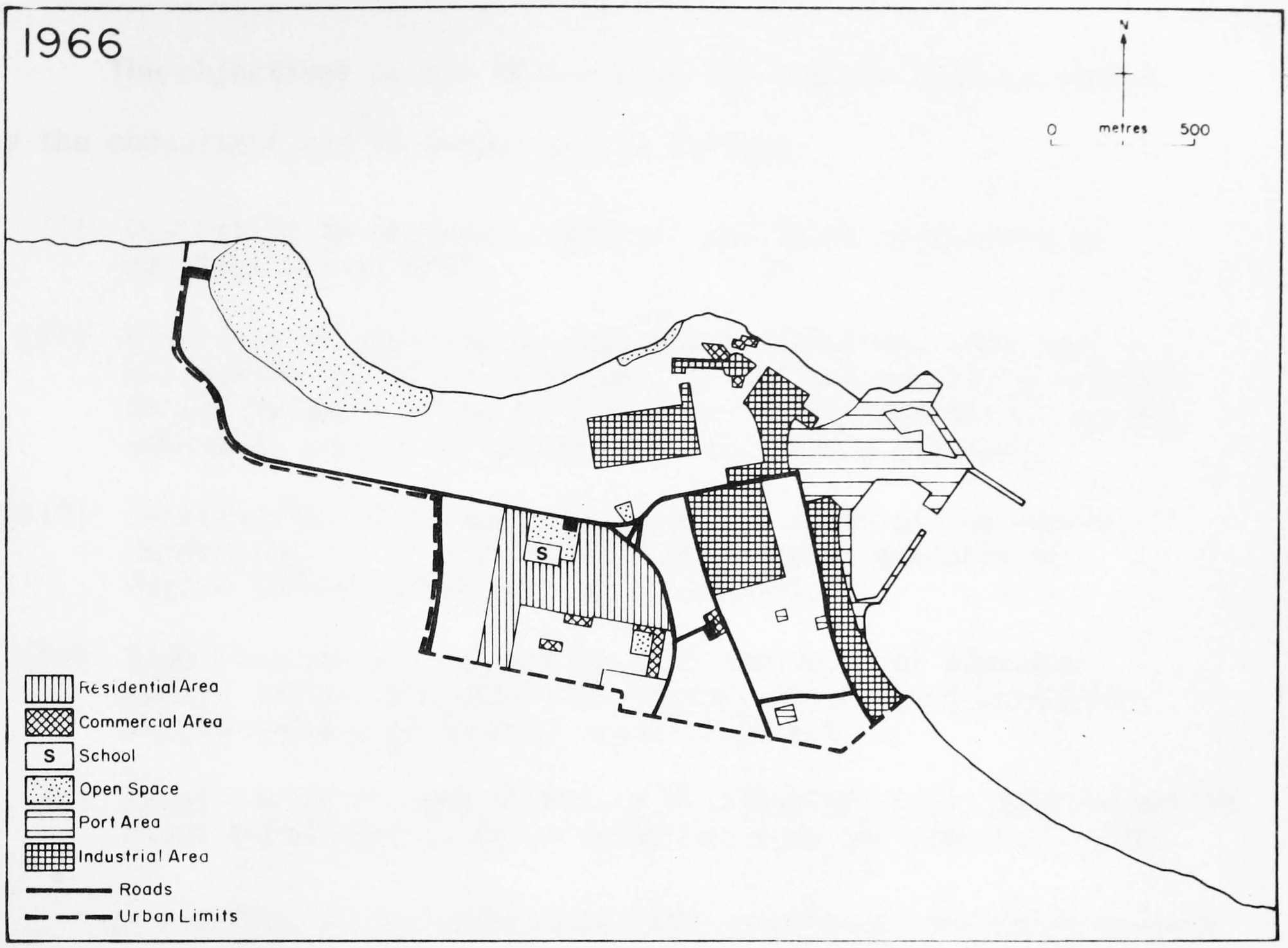
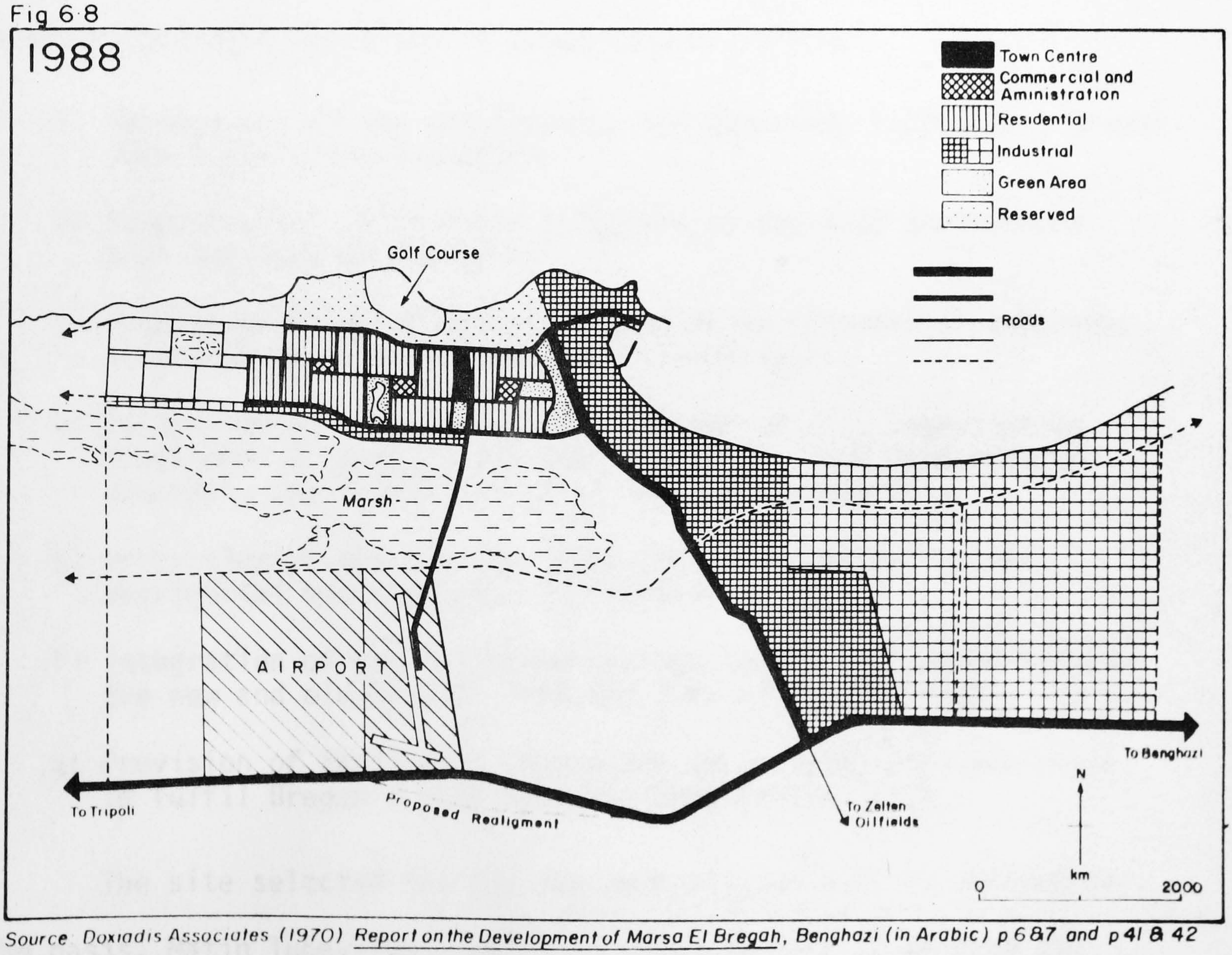


Fig 6·8



Source: Doxiadis Associates (1970) Report on the Development of Marsa El Bregah, Benghazi (in Arabic) p 6&7 and p 41 & 42

of the selected strategy into a physical plan.

The objectives of the Master Plan for the new town as stated by the consultant can be summarised as follows:

" (i) Conformity to national, regional and local objectives as outlined by the NPPP.

(ii) Provision of mobility to employment, services, shopping, recreation and civic functions, easily and equally accessible to all by means of an efficient public transportation system, vehicular access, or pedestrian and bicycle pathways.

(iii) Satisfaction of cultural and physical needs of the people, respecting social and cultural traditions, amenable to future technological and social evolutions.

(iv) Stabilisation of the workforce by provision of adequate public and private amenities thereby encouraging permanent settlement and productive social interaction.

(v) Provision of an open community eliminating social discrimination where settlement is on an equal basis to all people. " (22)

In addition to the objectives, the consultant considered certain planning policies which can be summarised as follows:

a) Maximum use of the sea frontage for community recreation, visual impact and climate comfort.

b) Harmonisation of an urban structure of man-made environment with the natural features.

c) Establishment of an orderly expansion by incremental sequence, according to economic and population growth.

d) Establishment of a hierarchical system of city organization from home to local residential community, from community to district, and from district to the overall New Town.

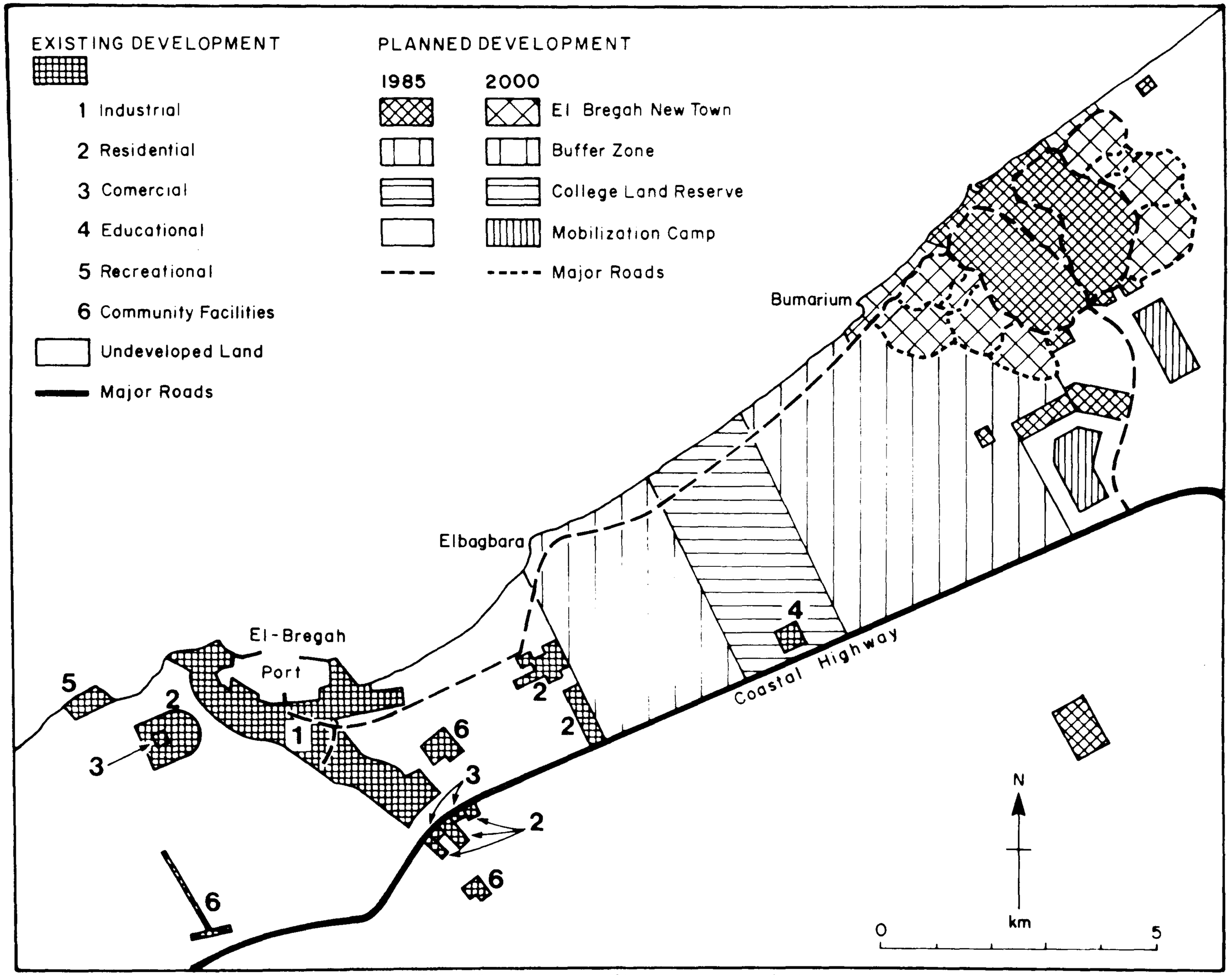
e) Protection of the New Town from industrial pollution and detrimental environmental influences.

f) Integration of the Petroleum College (which is located between the new and old Bregah) into the life of the New Town.

g) Provision of facilities convenient to outlying adjacent areas to fulfil Bregah's role as a regional centre. (23)

The site selected for the New Town (Figure 6.9) is centred on the oasis, Matin Tubaylibah, which is approximately 10 km from the

Fig 6·9 EL BREGAH: Existing and Planned Development



Source: M.M.M. / H.N.(1980) Bregah New Town, Phase Two Preliminary Master Plan, Tripoli P5

existing industrial area of El Bregah. Access to the site will be from a new arterial road intersecting the coastal highway 2 kms beyond the road curve from the direction of Benghazi, and from an additional route immediately adjacent to the seafront.

On the basis of the consultant's forecast, the New Town should have 45,000 inhabitants by the year 1985 and 100,000 by the year 2000. Land use requirements, based on population and employment forecasts, will give the town a projected land area of 1,148 ha and 1,809 ha in 1985 and 2000 respectively.(24)

The urban form selected which would suit environmental conditions was a single mass town with a dominant centre and supporting sub-centres taking the shape of a compressed radial or fan structure centred on the oasis and restricted to one side by the sea. By 1985 the town should have two districts which will be divided into six residential communities with 11,500 dwelling units.

The projected land use requirement for the New Town in 1985 and 2000 can be seen in Table 6.11 while Figure 6.10 shows the projected spatial distribution of land use in 1985 and 2000.

The town centre will be an intensive multifunctional zone, most simply described in the form of an extended Y. The fulcrum of the Y is the town centre square dominated by the main mosque. Within the town centre commercial area, a concentration and mix of uses provide the attraction for this large catchment area. Consolidated here are the major administrative, recreational, educational, commercial, religious and cultural buildings of the town. Buildings such as the Municipal Offices, Post and Telecommunications, Town Stadium and Vocational Schools are all concentrated here, together with the pedestrian shopping areas and provide the town with a focal point.(25)

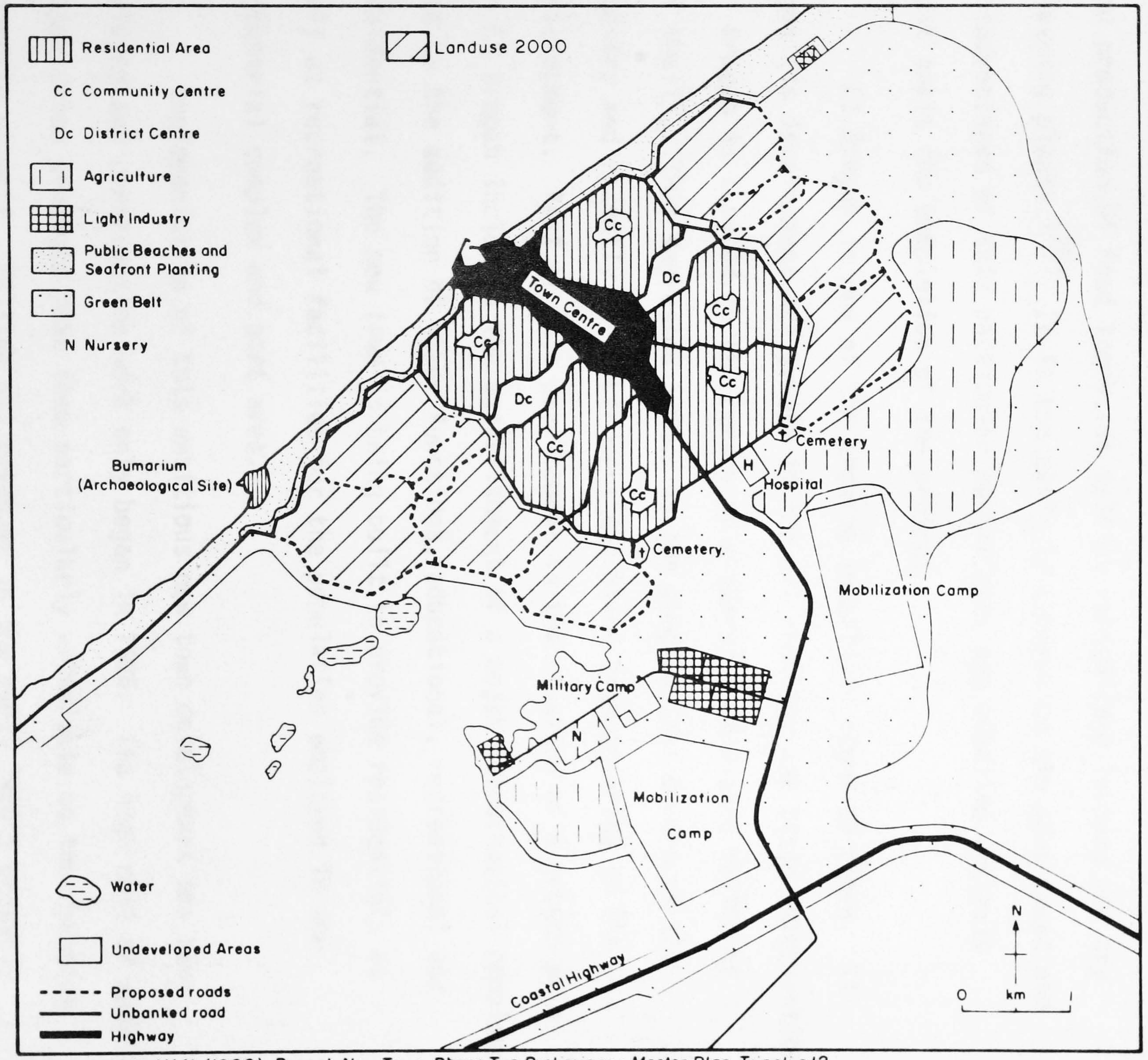
Table 6.11 : El Bregah : Land Use Requirements 1985 - 2000

Land Use	Year 1985		Additional	Year 2000	
	Area (ha)	%	Area (ha)	Area (ha)	%
Residential	324.00	30.9	390.8	669.0	37.0
Open Space					
- Recreational	32.26	3.1	16.14	37.30	2.0
- Conservational	47.50	4.5	94.04	148.11	8.1
Educational	25.62	2.4	19.15	42.25	2.3
Cultural-Religious	13.35	1.3	4.82	18.14	1.0
Public Facilities and Utilities	138.98	13.4	5.15	126.80	7.0
Commercial	8.94	0.8	7.54	16.84	0.9
Ligh Industry	14.70	1.4	12.30	27.00	1.5
Mobilisation Camp	76.00	7.2	-	76.00	4.2
Circular Vehicular	273.04	26.0	170.00	453.00	25.1
Circulation Pedestrian	93.88	8.9	101.00	195.00	10.9
Total	1048.27	100.0	820.22	1809.44	100.0

Source: McGaughey, Marshall and McMillan, Holmes and Harver (1980) Bregah New Town. Phase Two Preliminary Master Plan. Tripoli, p.12.

A number of district centres - the basic units of the urban structure - will be grouped around the town centre providing mainly residential functions but also equipped with schools, local shops, playground and public gathering areas. Each district will have a mixture of housing types. Six of these districts were scheduled for completion by 1985.

Fig 6·10 EL BREGAH: Proposed General landuse 1985 and 2000



Source M.M.M./H.N. (1980) *Bregah New Town Phase Two Preliminary Master Plan*, Tripoli p12

A separation of vehicular, pedestrian and bicycle movement will provide a community environment safe to live in. Parking facilities will be provided as well as a special busway system. In addition to the large industrial section in the port area, the new town will have a light industry estate which will incorporate warehousing, storage and production of food items, as well as centralised laundry and dry cleaning plants.[26] It is too early to comment on the advantages and disadvantages of this particular master plan and detailed analysis must await the completion of the project.

El Bregah is one of the growing industrial towns of Libya. It owes its development and growth to the oil industry and State intervention. El Bregah is located in the centre of a sparsely populated region of El Khalij. This depressed region is the geographical centre of the country and recently the Government has given high priority to its development. Part of this development is the creation of a growth pole in El Bregah including the establishment of a major petrochemical complex and by the addition of other functions, educational, recreational and residential. The new town is being built to provide residential, as well as recreational facilities for the population employed in the industrial complex and port area.

Implementation of this ambitious new town development has been delayed and construction work only began in 1984. The high cost of such major urban projects make them particularly vulnerable to the changing economic climate. Falling oil revenues in the early 1980's probably accounted for the delays in implementing this project. However the decision to start work on the creation of the man-made river scheme to bring water from the interior to the coastal zone has highlighted the strategic importance of El Bregah. It will be one of the main junction points for the pipeline system, a base for the construction of the

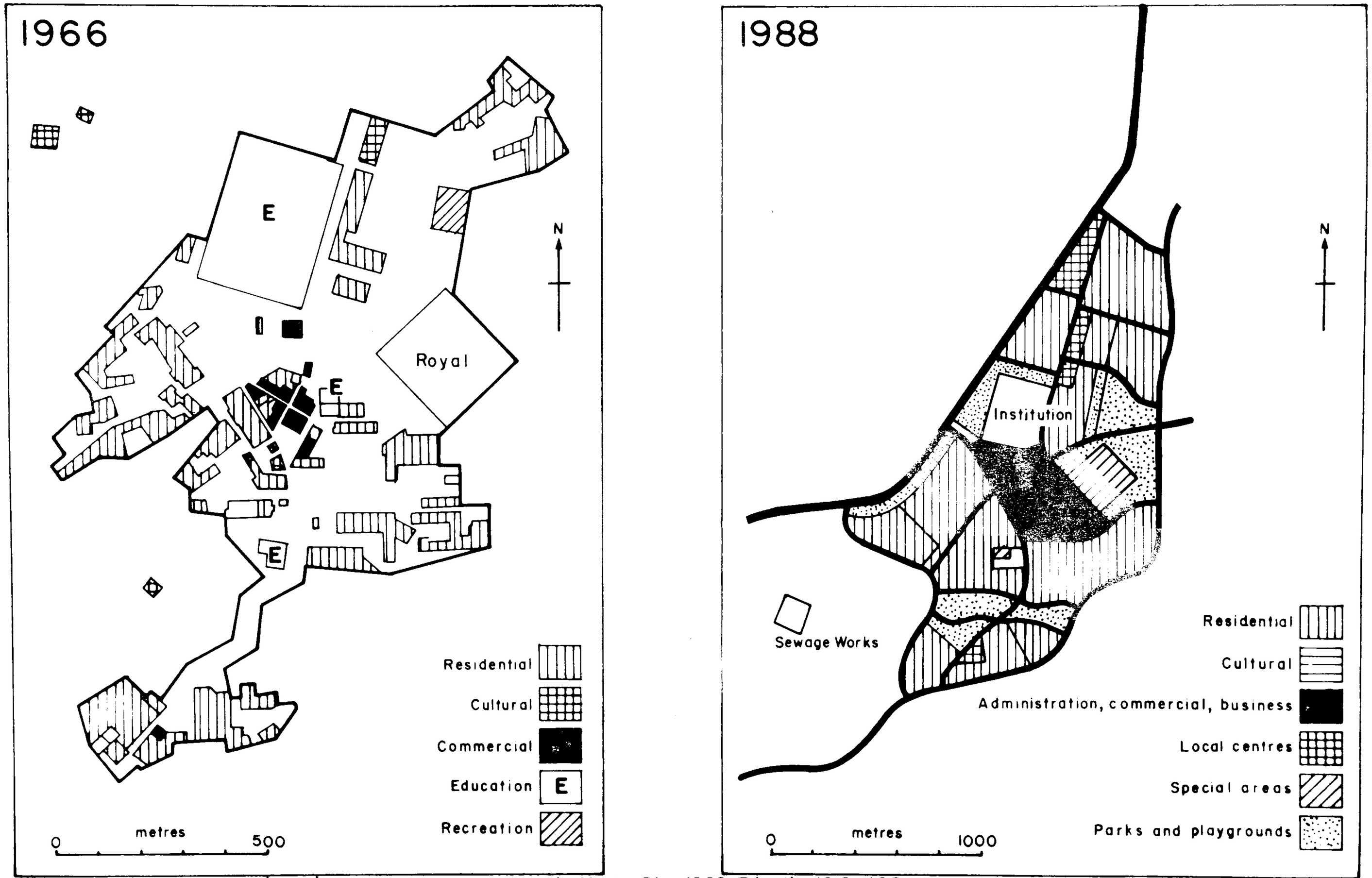
project and for importing the necessary raw materials.

Another major industrial centre is being created at Ras Lanuf only 100 km to the west of El Bregah which could compete with the new centre at El Bregah. The concentration of all development schemes in this stretch of the coastal zone in one rather than two centres might have been more advantageous. It will be interesting to examine the relationship between these two growth poles in the future.

6.4.3 El Abiar

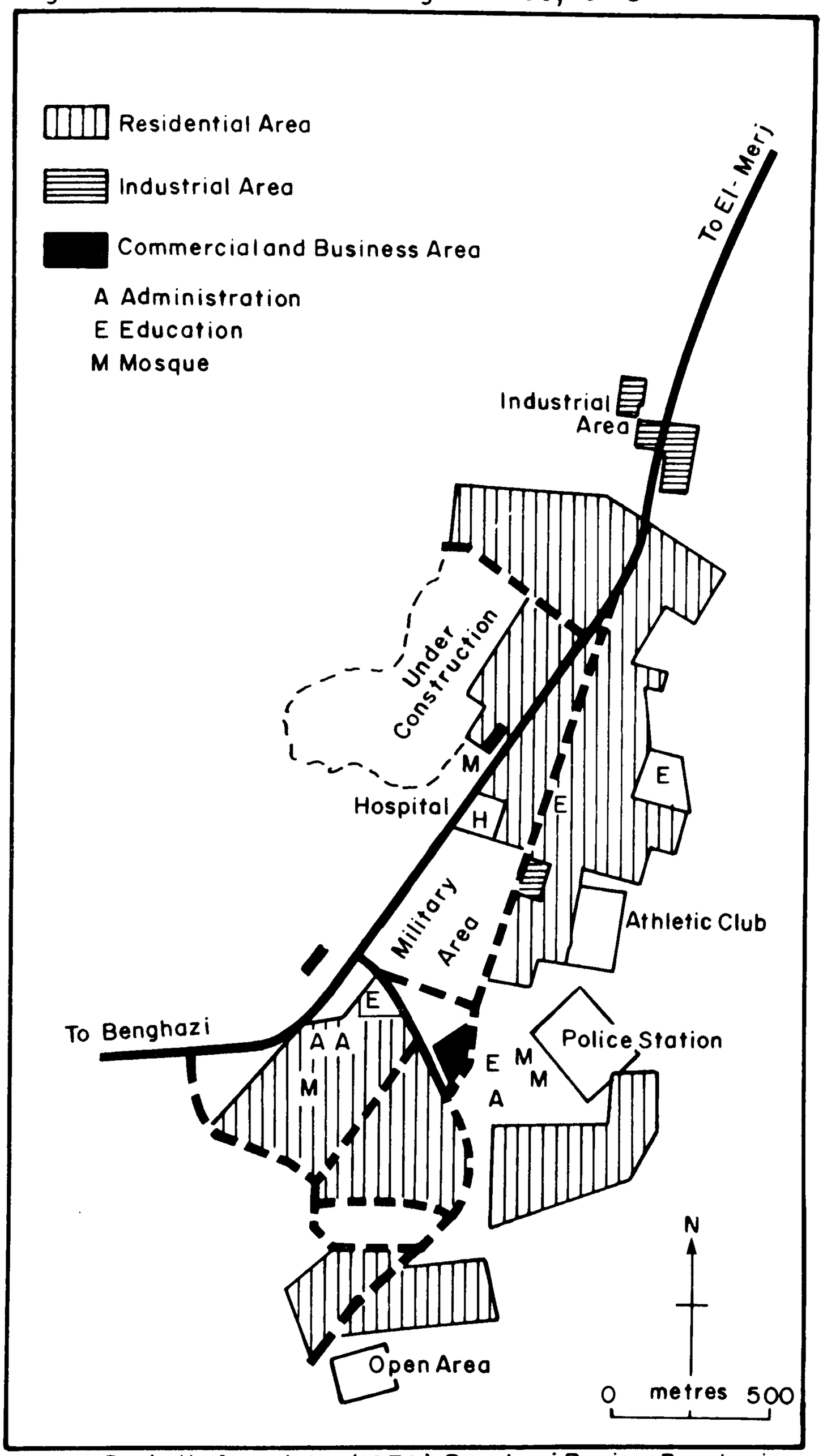
El Abiar is a growing small town located on a flat plain about 54 km east of Benghazi and 46 km southwest of El Merj. El Abiar, with some 11,460 inhabitants in 1973, serves as a very important administrative, commercial and transport centre for the surrounding region. The town is an important service centre, providing basic services such as communications, schools, hospitals and other facilities. After the Italian occupation the town developed steadily until the discovery of oil. Since then, and particularly in the last 14 years, the town has experienced rapid urban development. This rapid physical expansion is attributed to the government's development programme and, also to another very important factor, namely the presence of a military camp in the town. In 1968, Doxiadis Associates submitted the master plan for the town which provided for its development until 1988 (Figure 6.11) including areas for future expansion.(27) Development in the town has taken place within the broad guidelines set out by the consultant's plan. However during the author's fieldwork in 1981 it was found that all the space provided for in the 1968 master plan had already been developed. In addition, a large residential area had been built to the northwest of the road which had been planned as a bypass and limit to development in the west (see Figure 6.12).

Fig 6·11 EL ABIAR: Existing landuse 1966 and Proposed landuse 1988



Source: Doxiadis Associates, (1968) El Abiar: Final Report on the Master Plan 1988, Tripoli p19 & p103

Fig 6·12 EL ABIAR: Existing landuse, 1978



Source: Doxiadis Associates (1979) Benghazi Region, Benghazi Subregion, Baladiyah of El Abiar, Athens Report 5 vol 4 p 40

The town's major role is that of a service centre to its local agricultural hinterland. El Abiar is the seat of a Baladiyah serving the major settlements of Al Milaytaniyah, Er Rajmah, Sidi Mahyus and Bu Maryam. As these villages are located closer to the town than to any other urban centre they also use the town for services such as the hospital, schools, commerce and other public facilities such as administrative and banking facilities. All these services belong to and are run by the State.

The small town of El Abiar has evolved from an old settlement whose history goes back to the Turkish occupation. The old settlement is located about 800 m south of the present town centre on a hill south of the wadi in that vicinity. The evolution of the town was influenced by the Italians during their occupation after the Second Italo-Sanusi war and prior to the Second World War. During this period the centre of the town has shifted to the north.(28) After the Second World War the town saw little development until the 1960's when the government started to develop the town. Morphologically the town can be divided into the following five distinct areas (see Figure 6.12):-

(i) The old town in the south which has a local shopping centre and mosque.

(ii) The sector of the town that developed during the interwar period. The first commercial and public facilities of the modern town tended to locate in this sector and the trend has continued with the result that the major commercial and public facilities are still located here.

(iii) The military areas north and east of the new centre. These tend to separate the southern parts of the town from the more recent developments to the north.

(iv) North of the military areas is a recent residential area largely developed by the housing corporation and consisting of a group of small housing schemes, together with two secondary schools, a hospital and a local shopping centre.

(v) The industrial area located in the northernmost sector of the town.(29)

In analysing land use changes in the town between 1966 and 1978 as illustrated by Figure 6.11 and supported by Table 6.12 and Figure 6.12 one can note the following changes that have taken place in the physical layout of the town due to the huge investment by the State since the 1970's:-

1) The total built-up area of El Abiar has increased from 35.14 ha in 1966 to 187.1 ha in 1978, an annual growth rate of 36 per cent.

2) This rapid physical expansion was not predicted by the 1968 Master Plan. The total built-up area projected for 1988 was 191.99 ha (Table 6.13) but the actual built-up area in 1978 was already 187.1 ha, only 4.89 ha short of the planned area for 1988.

3) The total amount of land allocated for residential use rose from 14.51 ha in 1966 to 130.5 ha in 1978. In addition to this absolute increase in the amount of land allocated to residential use, the proportion of the total built up area devoted to residential use increased from 41.3 per cent in 1966 to 69.7 per cent in 1978. Residential land use as a proportion of the total planned area rose from 16.6 per cent in 1966 to 52.3 per cent in 1978.

4) The importance of the commercial and business functions of the town can be documented by the fact that the total amount of land

Table 6.12

El Abiar - Land use Changes Between 1966 and 1978

Type of use	1966			1978		
	Area in ha.	% of Built up Area	% of Planned Area	Area in ha.	% of Built up Area	% of Planned Area
Residential	14.51	41.29	16.55	130.5	69.7	52.3
Commerce and Business	0.48	1.37	0.56	5.9	3.2	2.4
Government, Administration and Military	7.76	22.00	9.00	22.3	11.9	9.0
Education	9.24	26.29	10.74	6.2	3.3	2.5
Health	0.13	0.37	0.15	1.5	0.5	0.6
Social, cultural and Religious facilities	0.07	0.20	0.08	0.6	0.3	0.2
Industry and Warehousing	0.07	0.20	0.08	6.3	3.4	2.4
Green Open Space	0.07	0.20	0.08	5.6	3.0	2.2
Public Utilities	-	-	-	1.4	0.7	0.6
Road network	2.81	8.02	3.27	6.8	3.6	2.7
Total Built-up Area	35.14	100.0	41.0	187.1	100.0	75.1
Vacant	50.86		59.0	62.2		24.9
Total Area	86.00		100.0	249.3		100.0

Source: Compiled from Doxiadis Associates (1968) El Abiar : Final Report on the Master Plan 1988. Tripoli pp.9-12.
Doxiadis Associates (1979) Benghazi Region Benghazi Subregion, Baladiyah of El Abiar, Athens Report 5 vol.4 p.44.

Table 6.13 El Abiar - Proposed Land use, 1988

Type of Use	Area in ha.	% of the Total Area
Residential *	75.85	38.50
Local Centres	2.67	1.38
Central Functions Zone	11.03	5.73
Institutions	9.35	4.87
Military Areas	5.97	3.10
Parks and Sportsgrounds	27.22	14.20
Industrial and Warehousing	5.80	3.10
Main Roads	54.1	28.12
Total	191.99	100.00

* Including schools and local streets

Source: Doxiadis Associates (1968) El Abiar : Final Report on the Master Plan 1988. Tripoli p.145.

allocated to this use has increased from 0.48 ha in 1966 to 5.9 ha in 1978. The share of this function to the total built up area has also increased from 1.37 to 3.2 in 1966 and 1978 respectively and also its share in the planned area has also risen from 0.56 per cent to 2.4 per cent during the same period.

5) As the headquarters of the Baladiyah, the number of administrative and government buildings has increased. The total amount of land allocated to Government, Administration and Military has increased from 7.76 ha in 1966 to 22.3 ha in 1978. Although the share of this type of land use in the total built up area has decreased from 22 per cent to 11.9 per cent between 1966 and 1978 this is actually attributed only to the large increase in the total share of residential use. The same argument can also be applied to the static percentage of the shares in the planned areas; both years were 9 per cent.

6) Although the town still provides educational services to the surrounding areas, especially at the secondary level, the number of primary schools in the surrounding villages has increased in recent years. Thus the amount of land allocated to education has decreased from 9.24 ha in 1966 to 6.2 ha in 1978 and its share of the total built up area decreased from 26.29 per cent in 1966 to 6.2 per cent in 1978, this being attributed to the large area devoted to residential use. It is important to point out that although the total amount of land allocated to educational use decreased, the total number of pupils increased from 667 in 1966 to 5,357 in 1978.(30)

7) The amount of land devoted to health services has increased from 0.13 ha to 1.5 ha in 1966 and 1978 respectively. Its share of the total built-up area has increased from 0.37 per cent in 1966

to 0.8 per cent in 1978 and for the total planned area from 0.15 per cent to 0.6 per cent for the same period.

8) As regards the total land used by social, cultural and religious facilities, the area has increased from 0.07 ha to 0.6 ha and from 0.2 per cent of the total built-up area to 0.3 per cent and as percentage of the total planned area, it has risen from 0.08 in 1966 to 0.2 in 1978.

9) For the same years 1966-1978 the total land used by industry and warehousing increased from 0.07 ha to 6.3 ha. This represents an increase from 0.20 to 3.4 per cent of the total built-up area during this period and an increase from 0.08 to 2.4 per cent of the planned area.

10) Green areas were allocated only 0.07 ha in 1966. This represents about 0.20 per cent of the total built-up area and about 0.08 of the planned area. In 1978 this category of land use had increased to 5.6 ha or 3 per cent of the total built-up area and 2.2 per cent of the planned area.

11) There is no figure for public utilities in 1966. The amount of land allocated for this type of use in 1978 was 1.4 ha which represents about 0.7 per cent of the total built-up area or 0.6 per cent of the planned area.

12) Road network area has increased from 2.81 ha in 1966 to 6.8 ha in 1978. This represents about 8.02 per cent of the total built-up area in 1966 and 3.6 per cent in 1978 or 3.27 per cent of the planned area in 1966 and 2.7 per cent in 1978.

13) Total area, that is the total built up area,plus vacant land, has increased from 86 ha in 1966 to 249.3 ha in 1978, an annual growth rate of some 16 per cent. This rapid expansion has taken

place at the expense of the agricultural land in the area.

The residential area is divided into ten sectors. The total number of dwelling units in the town in 1978 was 2,513 divided into three types of housing. There are two sectors of two-storey flats comprising about 15 per cent of the total dwelling units. One sector is a strip along the western side of the new highway in the north, and the second is situated east of the old Benghazi - El Merj road. Traditional courtyard houses are found in the old town in the south built of mud and stone; this type of house constitutes 59 per cent of the dwelling units in the town.(31) There are also privately built single detached residences with a mixture of one and two storeys mainly on the periphery of the old town (see Plate 6.6). This category constitutes about 26 per cent of the dwelling units in the town.(32) As regards the quality and condition of these houses Doxiadis (1979) indicated that 93 per cent of the dwellings in the town were in a good condition, 1 per cent in a fair condition and 6 per cent in a bad condition. Most of the buildings in a bad condition are located in the old town where some 58 per cent of the residences were in a poor state of repair.(33)

The town functions as a very important wholesale and retail centre. The number of commercial establishments in 1978 was about 328 units the majority of which were concentrated in the town centre to the north of the old town (see Plate 6.7). Table 6.14 shows the distribution of the commercial establishments in the town in 1978. Many of the small shops selling foodstuffs have been closed down and replaced by three Government-owned large supermarkets and six mini-supermarkets all of which are run by the state. Two of the large supermarkets are located in the town centre and the third in the northern residential area. The six mini-supermarkets have been built in the residential areas. The

EL ABIAR
HOUSING

Plate 6.6



Old Mud/Stone Housing of Old Settlement



Old Mud/Stone Housing of Old Settlement



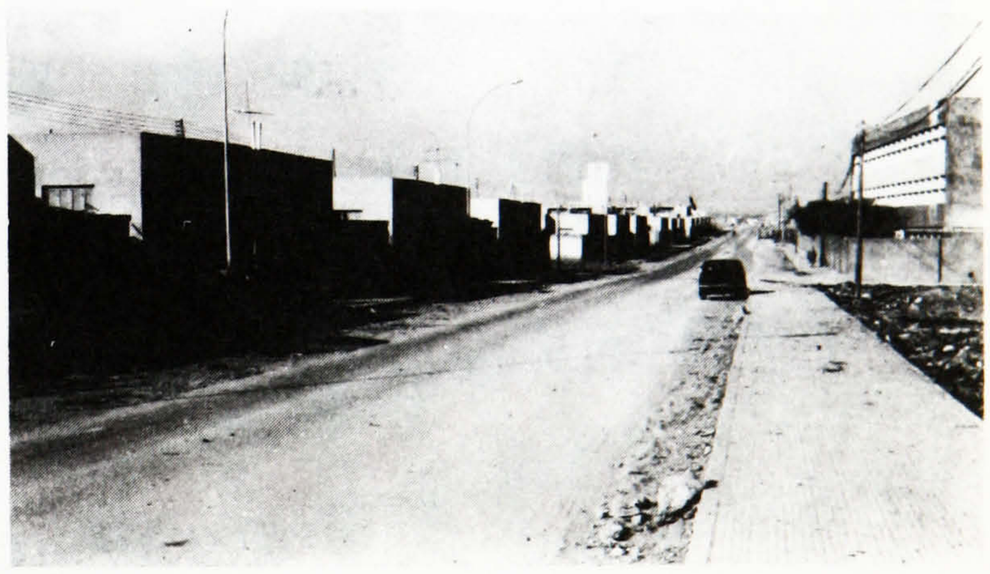
Privately Sponsored Housing Area



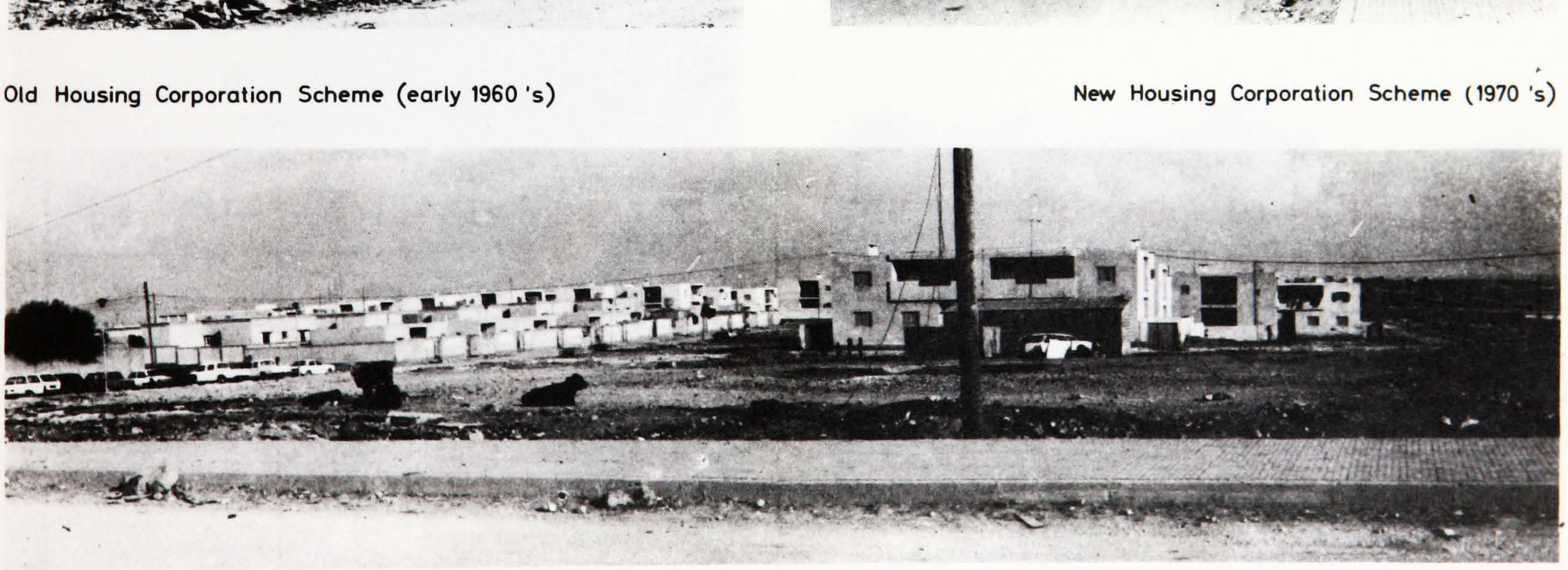
Privately Sponsored Housing Area



Old Housing Corporation Scheme (early 1960 's)



New Housing Corporation Scheme (1970 's)



New Housing Corporation Scheme (1970 's)

Source: Doxiadis Associates (1979) Benghazi Region, Benghazi Subregion, Baladiyah of El Abiar, Athens. Report 5, vol.4.p.47.

Plate 6.7

EL ABIAR

COMMERCE AND INDUSTRY



New Buildings in Town Centre



New Buildings in Town Centre



Older Buildings in Town Centre



Food Manufacturing Industry

Source: Doxiadis Associates (1979) Benghazi Region, Benghazi Subregion, Baladiyah of El Abiar, Athens Report 5, vol.4. p.55.

construction of these supermarkets was carried out by the Baladiyah. Even after the nationalisation of all types of commercial activities, the town continues to play a very important commercial role.

Table 6.14 Commercial Establishments in El Abiar, 1978

Establishments	Number of Units	%
Food, meat, vegetables	175	53.4
Cafeteria - restaurant	15	4.6
Clothing	30	9.2
Filling and car washing station	8	2.4
Building materials	5	1.5
Electrical appliances	11	3.4
Stationery	4	1.2
Photography	4	1.2
Barber shop	5	1.5
Pharmacy	1	0.3
Other Services	70	21.3

Source: Doxiadis Associates (1979) Benghazi Region : Benghazi Subregion, Baladiyah of El Abiar, Report 5, vol. 4 Athens, p.37.

The industrial area is located in the northern most sector of the town. It includes a number of agro-industries under construction, grain silos and car repair shops. Schools are distributed throughout the town and the hospital, which also serves the nearby settlements, is located adjacent to the new Benghazi-El Merj road. The town is also well served by a number of mosques. There are several buildings used for administrative purposes and they are located adjacent to the old Benghazi-El Merj road (see Plate 6.8). They consist of branches of

EL ABIAR

PUBLIC FACILITIES

Plate 6.8



New Central Mosque



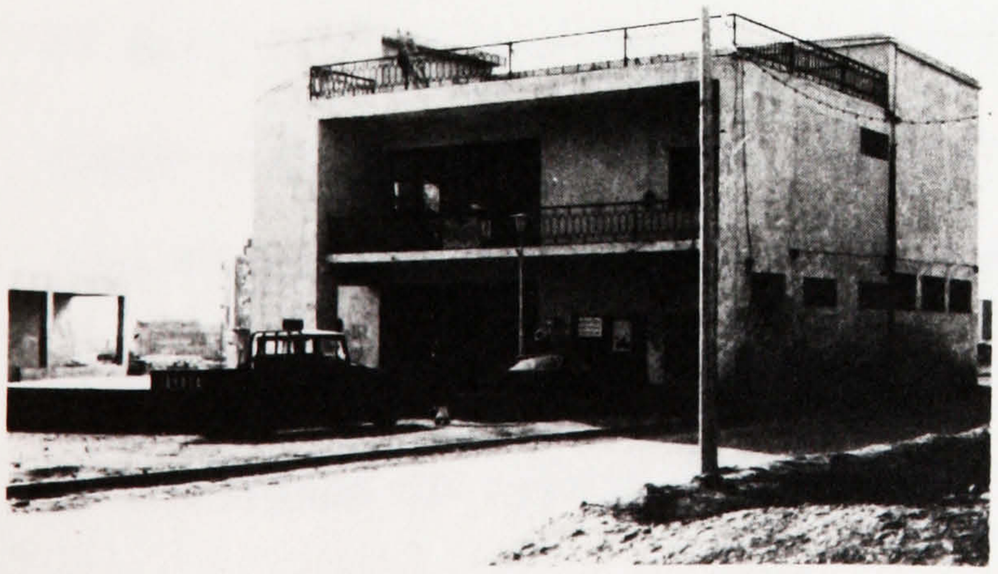
New Police Station under Construction



New Communications Centre under Construction

Baladiyah Offices

New Administrative Building under Construction



Community Centre



Secondary School

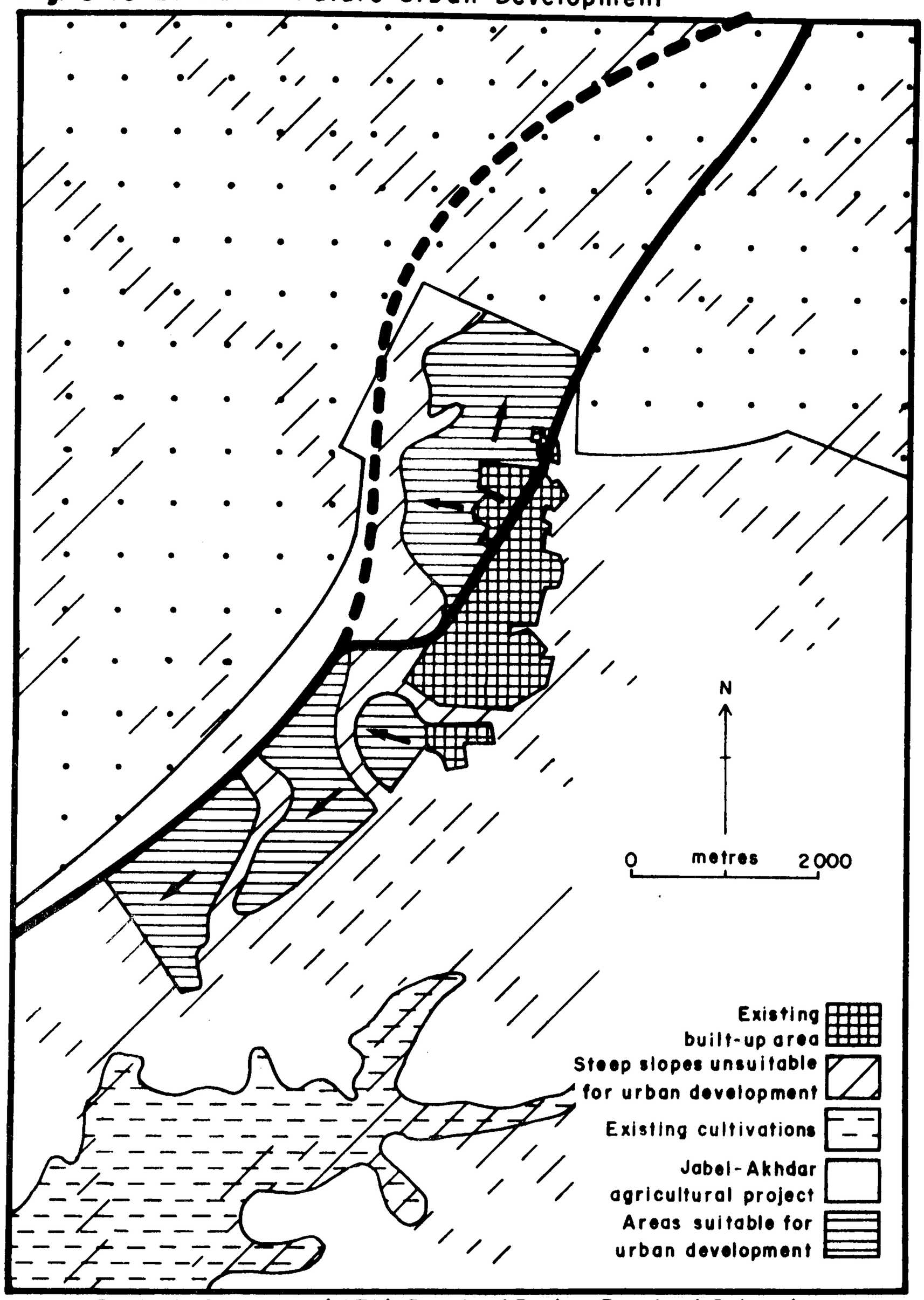
Source: Doxiadis Associates (1979) Benghazi Region, Benghazi Subregion, Baladiyah of El Abiar, Athens, Report 5, vol.4. p.57.

Central Government offices, Municipality, Post Office and a Police Station. There is one club and one playing field in El Abiar. The two large military areas are located between the town centre and the housing corporation development to the north. As these camps are located within the confines of the town, they pose a problem as they separate the northern and southern parts of the town. The existing main road network of the town is in a satisfactory condition, but some of the local streets are unsurfaced and many streets lack proper pavements. On the whole the townscape is unattractive and little attention has been paid to the upkeep of the gardens and open spaces.

One of the major problems facing El Abiar is the fact that expansion has outpaced the planning process. As a result Doxiadis Associates were commissioned to produce a new master plan in the late 1970's. Although the detailed master plan has not yet been published, Doxiadis have identified the main guidelines for the town's development to the year 2000. By that year they project a population of 50,000. Their preliminary studies delineate land suitable for urban development to accommodate this increase. The main constraints upon urban development are the wadis in the west and east and the agricultural lands of the Jabel Akhdar agricultural project to the north. Future expansion should therefore be directed towards the north west between the Benghazi and El Merj highway and the Jabel Akhdar agricultural project and towards the south west between the two roads which run in a south-westerly direction (see Figure 6.13). Doxiadis recommend that the Benghazi El Merj highway, originally intended to limit urban development in the west, should be realigned to bypass the town further to the west in order to prevent heavy and high speed traffic passing through the town centre.

In addition, the Baladiyah should also consider relocating the two military camps at present located in the centre of the town and

Fig. 6·13 El Abiar : Future Urban Development



Source: Doxiadis Associates (1979) Benghazi Region, Benghazi Subregion, Baladiyah of El Abiar, Athens Report 5 vol4 pl21

the development of these areas for commercial purposes and services.

Although the NPPP sees El Abiar continuing to function as a local centre, the Italconsult survey suggested that the town has good growth potential given the fertile agricultural hinterland and the location there of new agricultural projects.

6.4.4 Gaminis

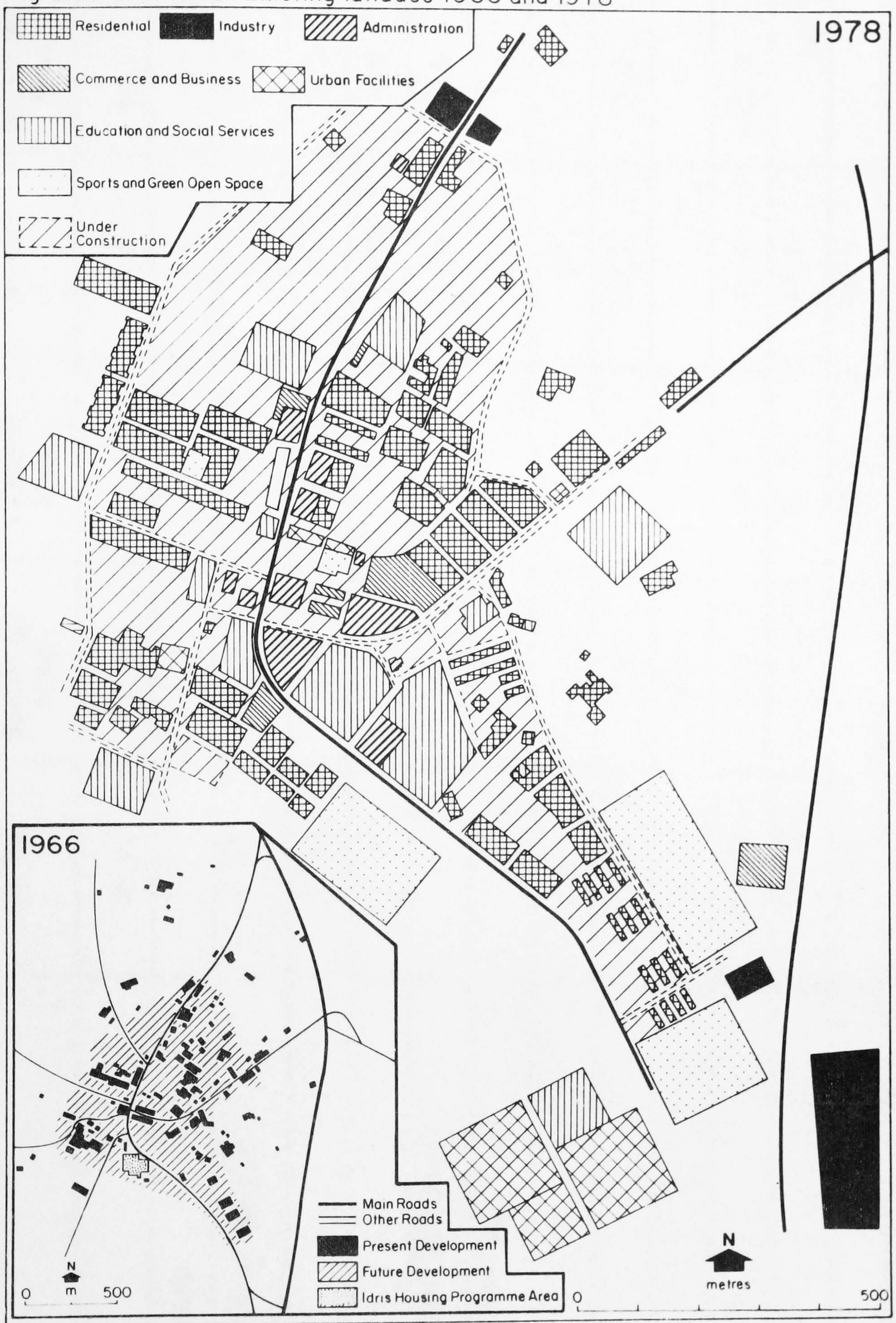
The small town of Gaminis, with a population of 4,622 in 1973, is located on a flat coastal plain on the major Benghazi-Tripoli highway about 50 kms south of Benghazi. As a permanent settlement it dates back to the 1920's when a fort and various administrative buildings were built in the area by the Italian colonial authorities.(34) After independence, it developed due to its location at the intersection of the Benghazi-Tripoli highway and the local Gaminis-Suluq road. It also became the headquarters of the Baladiyah which strengthened its function as a service centre, with government offices, schools, hospital and a relatively large commercial sector, for the agricultural hinterland. However the town depends on Benghazi for higher order functions. The expansion of the settlement has been closely related to the road network as can be seen in Figure 6.14 which shows the pattern of land use in 1966 and 1978.

In analysing land use patterns in Gaminis between 1966 and 1978, as illustrated by Figure 6.14 and supported by Table 6.15 one can note the following changes that have taken place in the physical layout of the town.

1) The total built-up area of Gaminis has increased from 17.92 ha in 1966 to 43.4 ha in 1978, an annual growth rate of 11.6 per cent.

2) This rapid physical development was not expected by the planners. The proposed land use for 1988 can be seen in Table 6.16.

Fig 6 14 GAMINIS: Existing landuse 1966 and 1978



Gaminis, sources for 1966 and 1978:

1966 Doxiadis Associates, (1968) Gaminis Final Report on the Layout Plan, 1988, Tripoli p7

1978 Doxiadis Associates, (1979) Benghazi Region, Benghazi Subregion, Baladiyah of Gaminis, Report 5 vol 5 Athens P12

Table 6.15 Gaminis - Land use Changes Between 1966 and 1978

Type of use	1966			1978		
	Area in ha.	% of Built up Area	% of Planned Area	Area in ha.	% of Built up Area	% of Planned Area
Residential	12.91	72.0	17.5	29.6	68.2	34.6
Commerce and Business	-	-	-	1.6	3.7	1.9
Government, Administration and Military	1.21	6.7	1.6	2.1	4.8	2.5
Education	0.51	2.8	0.7	3.7	8.5	4.3
Health	-	-	-	1.8	4.1	2.1
Social, cultural and Religious facilities	-	-	-	0.4	0.9	0.5
Industry and Warehousing	-	-	-	0.6	1.4	0.7
Green Open Space	-	-	-	3.1	7.1	3.6
Public Utilities	1.04	5.8	1.4	0.5	1.2	0.6
Road network	2.25	12.7	3.1	-	-	-
Total Built-up Area	17.92	100.0	24.3	43.4	100.0	50.8
Vacant	56.02		75.7	42.1		49.2
Total Area	73.92		100.0	85.5		100.0

Source: Compiled from Doxiadis Associates (1968) Gaminis : Final Report on the Layout Plan 1988- Tripoli p.9.
Doxiadis Associates (1979) Benghazi Region : Benghazi Subregion, Baladiyah of Gaminis. Report 5 vol.5 Athens pp.5-30.

Table 6.16 : Gaminis - Proposed Land use, 1988

Type of Use	Area in ha.	% of the Total Area
Residential	30.58	49.4
Commercial and civic	2.33	3.8
Educational	3.59	5.8
Green Open Space	4.25	6.9
Transportation	21.15	34.1
Total	61.9	100.0

Source : Doxiadis Associates (1968) Gaminis : Final Report On the Layout Plan 1988, Tripoli p.39.

In total, the town should have had 61.9 ha by 1988 divided into five major uses. The actual built-up area in 1978 was 43.4 ha and the total amount of land planned in that year was 85.5 ha.

3) Residential areas occupy the major share of the total built-up area. The total amount of land allocated for residential use in 1966 was 12.91 ha which represented about 72 per cent of the total built-up area and 17.5 per cent of the planned area. However, in 1978 this figure had risen to 29.6 ha which represented about 68.2 per cent of the total built-up area and 34.6 per cent of the planned area.

4) Although there are no figures for the commercial and business use in 1966, the amount of land used by these activities in 1978 was 1.6 ha which represented 3.7 per cent of the total built-up area and 2.5 per cent of the planned area.

5) The promotion of this town to be a centre of the Baladiyah has meant that the total amount of land allocated for use by the government and its agencies has had to be increased. This can be illustrated by the fact that in 1966 this type of use was 1.21 ha which represents 6.7 per cent of the total built-up area and 1.6 per cent of the planned area. However, by 1978 the figure had doubled to 2.1 ha which represented 4.8 per cent of the total built-up area and 2.5 of the planned area.

6) The importance of the educational function of the town can be illustrated by the fact that the amount of land allocated to educational use has risen from 0.51 ha or 2.8 per cent of the total built-up area and 0.7 per cent of the planned area to 3.7 ha or 8.5 per cent of the total built-up area and 4.3 per cent of the planned area during the period 1966-1978.

7) There were no recorded figures for the following land use categories in 1966 - health, social, cultural, religious, industry, warehousing and green areas. However, all these categories existed in 1978 and amounted to a total of 5.9 ha or 13.5 per cent of the total built-up area and 6.9 per cent of the planned area.

8) The amount of land devoted to public utilities has declined from 1.04 ha in 1966 to 0.5 ha in 1978. As regards the road network there are no figures for 1978 and it seems that they were included with other land use categories. By and large, the total built-up area has increased and the total vacant land has decreased from 56.02 ha in 1966 to 42.1 ha in 1978. The total amount of land allocated for the development of the town has increased from 73.92 ha in 1966 to 85.5 ha in 1978.

Gaminis has developed along the old Benghazi to Tripoli road and the Baladiyah offices, schools, hospital, mosque and shopping centre have tended to locate along this road (Plate 6.9). Since the construction of the bypass in 1970 however little inter urban traffic passes through the town. Three distinct housing types are found. Pockets of traditional single-storey houses built of mud and stone occur in almost all parts of the settlement. Some of these houses have been renovated but generally they are in a poor condition (Plate 6.10). There are three housing corporation schemes in the southern sector of the town along both sides of the main road. There is a fourth housing corporation scheme north of the shopping centre along the eastern side of the main road and another on the western side. These are group housing schemes which consist of single storey attached dwellings in good condition. Finally there are the new privately sponsored housing areas widely dispersed throughout the town consisting of detached houses with one or two storeys in good condition (Plate 6.10). The town possesses few industries but land has

GAMINIS



Public Facilities Centre on Main Road



Typical Primary and Preparatory School, Baladiyah Building and Police Station under Construction

Source:- Doxiadis Associates (1979) Benghazi Region, Benghazi Subregion Baladiyah of Gaminis, Athens. Report 5 . vol. 5 . p. 15 .

Plate 6.10.

GAMINIS



Old Housing Corporation Scheme (Early 1960 's)



New Housing Corporation Scheme (1970 's)



New Housing Corporation Scheme (1970 's)



Privately Sponsored Housing



Privately Sponsored Housing



Old Mud/Stone Housing

Source:- Doxiadis Associates (1979) Benghazi Region, Benghazi Subregion Baladiyah of Gaminis, Athens, Report 5 , vol. 5 . p. 17 .

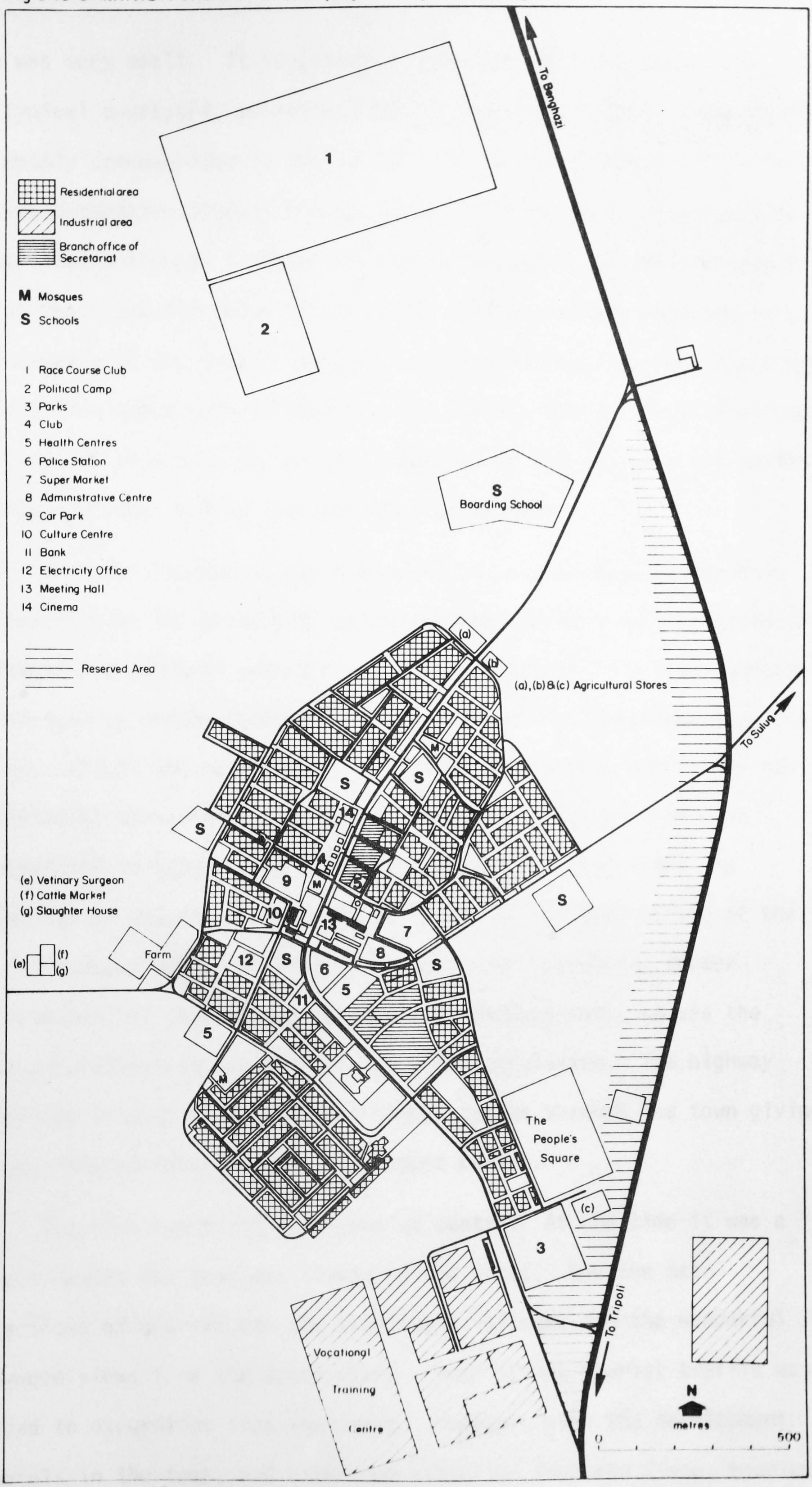
been allocated for industrial purposes along the main road to the north of the town and along the bypass road to the south of the town. Figure 6.15 shows the pattern of land use projected by the Baladiyah for 1984 and the new buildings under construction in 1981. The only constraints limiting the physical expansion of the town are the agricultural areas surrounding it and the bypass road to the east.

The town has already outgrown the Master Plan prepared in 1968. A new master plan is being prepared by Doxiadis and in their preliminary survey they suggest that the population will grow at 1 per cent per annum between 1985 and 2000.(35) This, they argue, reflects the limited employment opportunities which will result in a steady wave of out migration towards the major urban centres. However, fieldwork observations in 1981 suggest that the town is experiencing rapid physical development and that today its population is probably greater than the 5,345 projected by Doxiadis for the year 2000. The agricultural development schemes projected for this area and the location of the town on the main road from Benghazi to the fast developing El Khalij region will have a beneficial effect on the future growth of the town.

6.4.5 Gherian

The small town of Gherian, with a population of 12,247 in 1973, is situated on the northern edge of the Jabel Gherian. The town was one of the stations on the caravan route from West and Central Africa to the Mediterranian coast. The town is situated on the second escarpment about 700 metres above sea level overlooking the Ain Tobi plateau which is one of the most fertile areas in the Jabel. Before the Turks took over control of Libya in the sixteenth century, Gherian was a small village with perhaps a few shops and houses catering for the caravan traffic. The Turks constructed a large fort which was both a military and administrative centre. During the Turkish period the

Fig 6 15 GAMINIS: Pattern of landuse projected by the Baladiyah for 1984



Source: Baladiyah of Gaminis, Survey Department, 1981

town was very small. It consisted of the fort with its many large rooms and typical courtyard, an ancient mosque and a few shops. The population was mainly concentrated in the various troglodyte villages.(36) The Italian occupation brought radical changes to the town. The Italians constructed buildings for their administrators and military personnel and at that time the urban developments at Gherian were regarded as a good example of the modern type of Italian planning. By 1960 there were two distinct types of settlement within Gherian town, the old troglodyte dwellings of Tegassat, the original nucleus of Gherian, and the modern buildings of the Italian and post-Italian period.

An understanding of the functions of Gherian must be based on its position as the principal centre of Jabel Gherian and the economic, political and cultural centre of the area. Gherian is a very important administrative centre, being the headquarters of the Baladiyah with its various offices and departments. The town is a market centre for the agricultural hinterland. It is the centre for the collection and transportation of tobacco and previously it was the centre for the collection of esparto. Until the early 1960's the head office of the Esparto Company was in Gherian. Its important commercial sector now dominated by the new government owned supermarkets, serves the urban population and the surrounding rural population. The highway connecting Tripoli with Nalut and Mizdah passes through the town giving it some limited functions as a transport centre.

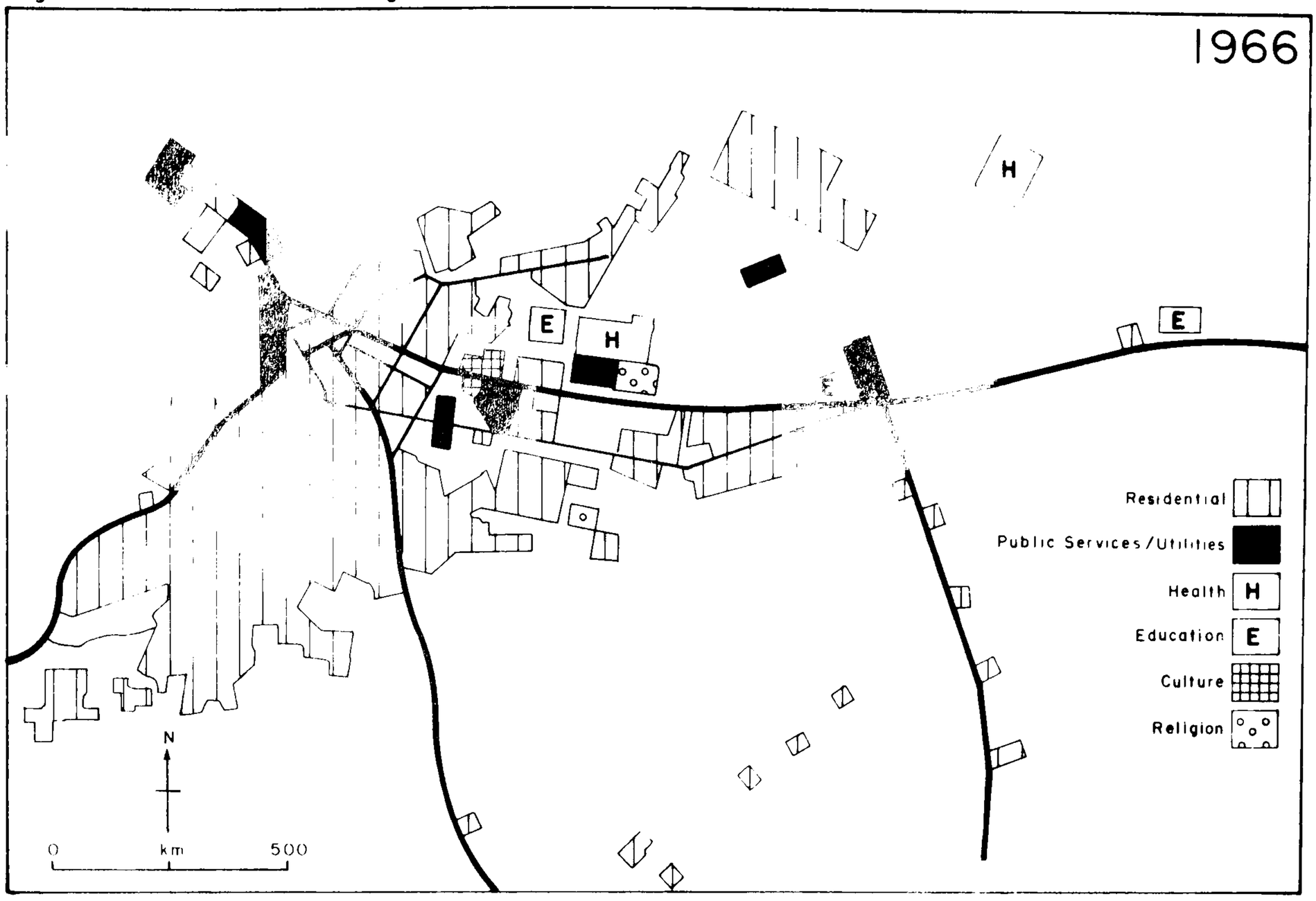
The town functions as a tourist centre. At one time it was a weekend resort for Italians living on the coast. Now the main attractions of Gherian are the troglodyte villages and the wonderful panoramic views from the Jabel scarp. Much of the tourist traffic was limited to excursions from the coast. However, with the development of hotels in the town, and with some attention from the State, tourism

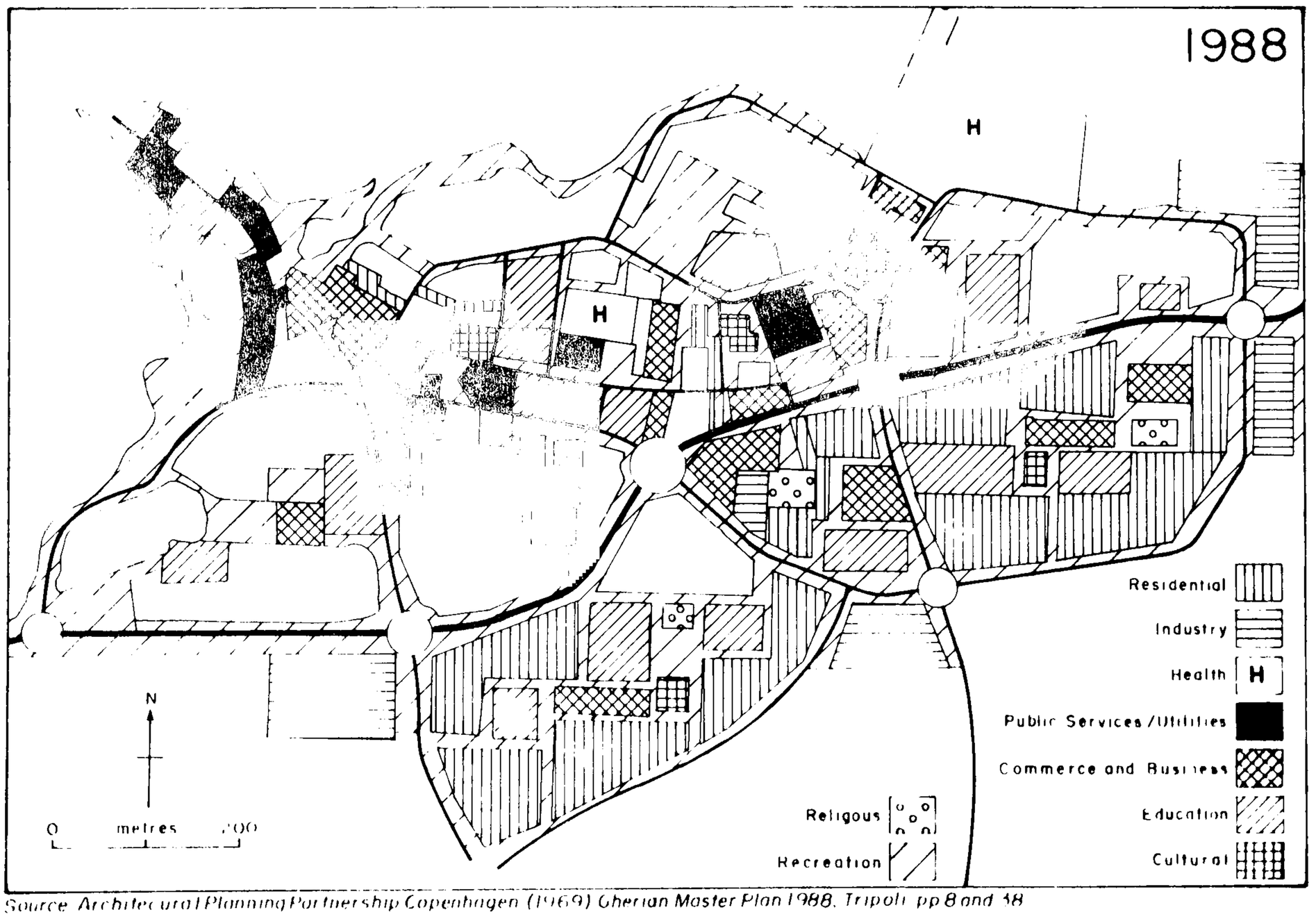
could achieve much greater dimensions. The town provides leisure, educational, health and cultural facilities for its population and for the surrounding villages.

The rapid development of this small regional centre in recent times, especially since 1970, has completely changed the appearance and the morphology of the town. As a result of the accelerated development the town has expanded with numerous housing projects, public buildings and work places being established. The Master Plan prepared in 1969 by Architectural Planning Partnership, Copenhagen, has determined the development potentials and established the directions of the spatial development of the town up to the year 1988. Figure 6.16 shows both existing land use in 1966 and that planned for 1988. The proposed land use can also be seen in Table 6.17 and that for 1966 can be seen in Table 6.18. According to this plan the target population of the town was estimated at 20,000 inhabitants in 1988, distributed in four neighbourhoods. The development of the central part was planned in an elongated form based on the existing system of the urban centre. Provision for an industrial area was made. The plan also provided for a system of main roads which would bypass the existing town centre and the establishment of green belts.(37)

Figures 6.16 and 6.17 allow us to compare the proposed land use plan and the existing land use of 1978. It is clear, that with few exceptions, the 1969 master plan has not been fully respected and that the urban authorities have failed to enforce its recommendations. For example the system of bypass roads has not been completed so that the main roads linking Gherian with Tripoli and Nalut via Yefren continue to pass through the town centre. The planned system of green belts separating and connecting all the residential complexes has not been implemented. Only part of the planned town centre to fulfil administrative

Fig 6·16 GHERIAN: Existing landuse 1966 and Proposed landuse 1988





Source Architectural Planning Partnership Copenhagen (1969) Gherian Master Plan 1988. Tripoli pp 8 and 18

Table 6.17 Gherian - Proposed Land use, 1988

Type of Use	Area in ha.	% of the Total Area
Residential	89.7	35.0
Public Facilities	59.3	23.0
Commercial	12.5	4.8
Industrial	19.0	7.4
Green Open Space	32.0	12.4
Transportation	44.6	17.4
Total	257.1	100.0

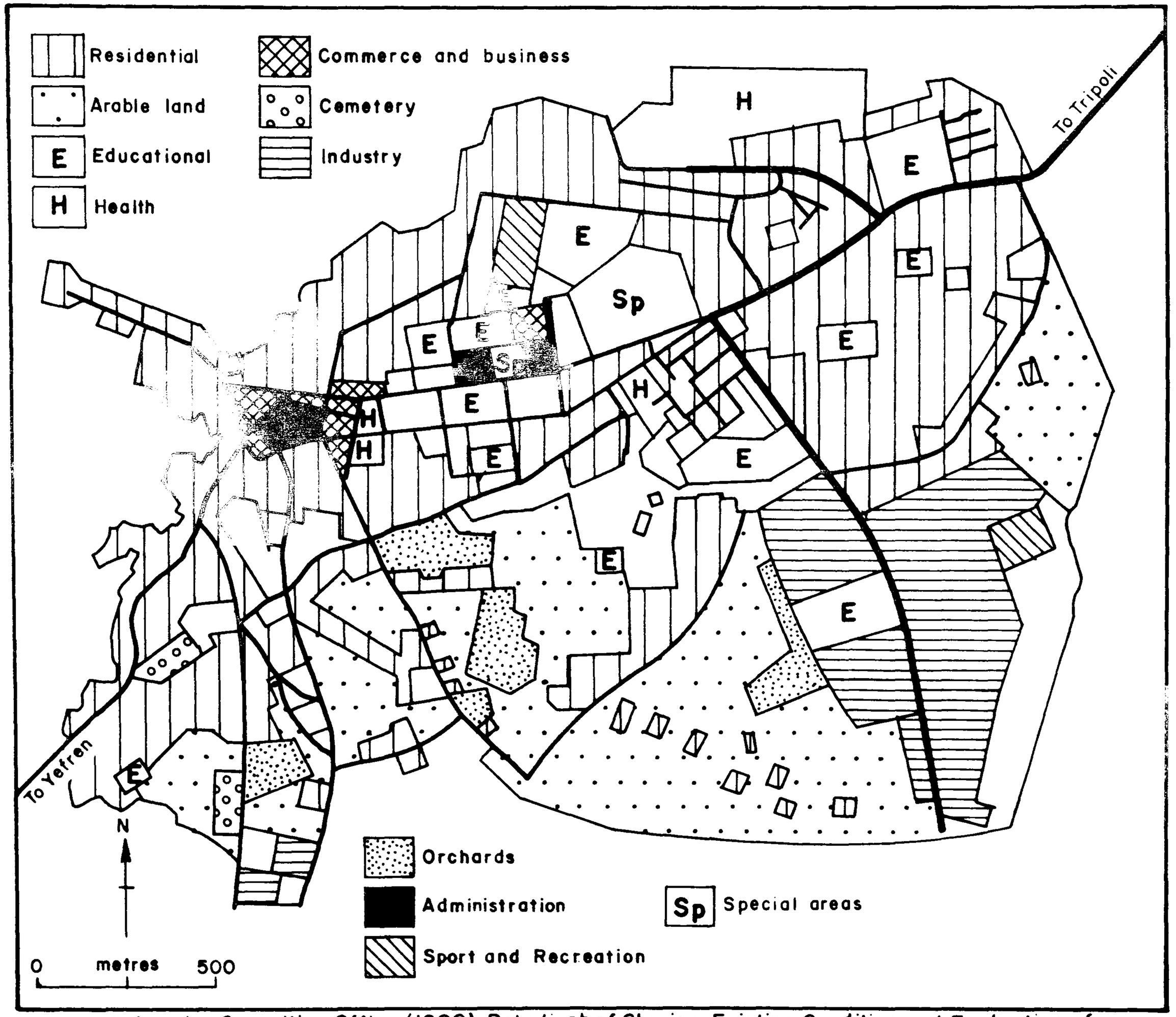
Source: Architectural Planning Partnership Copenhagen (1969) Gherian Master Plan 1988. Tripoli, p.122.

Table 6. 18 Gherian - Land use Changes Between 1966 and 1978

Type of use	1966			1978		
	Area in ha.	% of Built up Area	% of Planned Area	Area in ha.	% of Built up Area	% of Planned Area
Residential	54.43	75.2	32.7	163.7	52.9	35.5
Commerce and Business	2.57	3.5	1.5	5.1	1.6	1.1
Government, Administration and Military	4.45	6.1	2.6	14.9	4.8	3.2
Education	2.78	4.0	1.7	23.2	7.5	5.0
Health	2.67	3.6	1.6	15.4	4.9	3.4
Social, cultural and Religious facilities	4.06	5.6	2.5	12.5	4.0	2.8
Industry and Warehousing	-	-	-	42.1	13.6	9.1
Green Open Space	-	-	-	-	-	-
Public Utilities	-	-	-	1.6	0.5	0.3
Road network	1.50	2.0	0.9	30.9	10.2	6.7
Total Built-up Area	72.46	100.0	43.5	309.4	100.0	67.1
Vacant	93.04		56.5	151.6		32.9
Total Area	165.50		100.0	461.0		100.0

Source: Compiled from Architectural Planning Partnership Copenhagen (1969) Gherian Master Plan 1988. Tripoli p.10. Polservice Consulting Office (1980) Baladiyah of Gherian, Existing Condition and Evaluation of Development Potentials. Report 7 vol. 2 Warsaw p.39.

Fig 6·17 GHERIAN: Existing landuse 1978



Source : Polservice Consulting Office (1980) Baladiyah of Gherian, Existing Condition and Evaluation of Development Potentialy Report 7 vol 2 Warsaw p44

and service functions has been completed. Instead of a number of small industrial zones, all factories and storage depots are located in the southern part of the town to form an integrated complex.

For these reasons, the government found it necessary to prepare a new master plan to guide the development of the town. Polservice of Poland was asked in 1978 to prepare the new plan. This is still under evaluation by the planning authorities in Tripoli.

In analysing Table 6.18 and Figures 6.16 and 6.17, the following facts can be extracted:-

1) The total built-up area of the town has increased from 72.46 ha in 1966 to 309.4 ha in 1978, an annual growth rate of some 27 per cent.

2) This rapid physical change of Gherian was not predicted or planned by the Consultant in 1969. The total built-up area was projected to be only 257.1 ha in 1988.

3) Residential use of land has increased from 54.43 ha in 1966 to 163.7 ha in 1978. The percentage of this use in 1966 was 75.2 per cent and in 1978 it was 35.5. In 1966 residential areas occupied 75.2 per cent of the built-up area and in 1978 52 per cent.

4) Land allocated for the use of commerce and business has increased from 2.57 ha in 1966 to 5.1 ha in 1978. This use represented 3.5 per cent of the built-up area and 1.5 per cent of the planned area in 1966 while in 1978 the figure represented about 1.6 per cent of the total built-up area and 1.1 per cent of the total planned area.

5) Government, administrative and military use has increased from 4.45 ha in 1966 to 14.9 ha in 1978, an annual growth rate of 20 per cent for the period 1966-78. This type of use represented 6.1 per cent of the built-up area and 2.6 per cent of the planned area in 1966, while in 1978 it represented 4.8 per cent of the built-up area and 3.2 per cent

of the planned area. This physical increase is the result of the strengthening of the town's administrative structure.

6) The importance of the educational function of the town can be illustrated by the fact that the total amount of land allocated has increased from 2.78 ha in 1966 to 23.2 ha in 1978; an annual growth rate of 61 per cent . The share of the total built-up area of this category of land use has also increased from 4 per cent in 1966 to 7.5 per cent in 1978 and for the planned area from 1.7 to 5 per cent for 1966 and 1978 respectively.

7) The use of land by the health sector has increased from 2.67 ha in 1966 to 15.4 ha in 1978, an annual growth rate of 40 per cent for the same period. In 1966, this category of land use represented 3.6 per cent of the built-up area and 1.6 per cent of the planned area, while in 1978 it represented 4.9 per cent of the built-up area and 3.4 per cent of the planned area.

8) Social, cultural and religious facilities occupied 4.06 ha in 1966 and tripled their area to 12.5 ha in 1978, an annual growth rate of 17 per cent for the same period. Although their share of the built-up area decreased from 5.6 to 4 per cent, their share of planned area increased from 2.5 to 2.8 per cent for 1966 and 1978 respectively.

9) Although there are no figures for industry and warehousing in 1966, this category of land use accounted for 42.1 ha in 1978, a large area representing about 13.6 per cent of the total built-up area and 9.1 per cent of the planned area.

10) No data can be found for the amount of land used by green open space in either 1966 or 1978. There are also no figures for public utilities in 1966. However in 1978 public utilities occupied about 1.6 ha which represents about 0.5 per cent of the total built-up area and 0.3 per cent of the planned area.

11) The massive development of the urban road network can be documented by the fact that the total amount of land used for this purpose has risen from 1.50 ha in 1966 to 30.9 ha in 1978. This represents an average annual growth rate of some 163 per cent. Its share of the built-up area has increased from 2.0 per cent to 10.2 per cent and of the planned area from 0.9 per cent to 6.7 per cent in 1966 - 1978 respectively.

12) Total amount of vacant land also increased from 93.04 ha in 1966 to 151.6 ha in 1978. There is no doubt this increase is at the expense of agricultural land with land going out of cultivation as it awaits urban development.

Modern buildings dominate the spatial structure of the town. The central part of the town where the administrative institutions and service establishments are located is clearly distinguished. Among the new developments, the Baladiyah headquarters is especially conspicuous and is surrounded by other administrative buildings, the banks, the former post office and the courthouse. The main commercial establishments were also found in this part of the town until the late 1970's when most of the small retail outlets were closed down and the Baladiyah began to construct large supermarkets to replace them. A military camp on a 7.2 ha site is located in the central part of the town and represents a major constraint on the expansion of the town centre. There is a well organised network of schools throughout the town, most of the schools being located close to the main thoroughfares. The new 300 bed hospital is to be extended to 500 beds. Of the six mosques, four are located in the central part of the town and two in the new residential areas. The network of social facilities and services is generally inadequate for the needs of this fast developing centre. The new industrial district lies in the southern part of the town and contains three major

plants, making sanitary equipment, ceramics and pottery, and wall tiles. Traditional dwellings, some of which have been modernised but others remaining poorly equipped and in a poor state of repair, occupy some 68.12 ha, over a third of the total residential area. Family detached houses, the so-called villas and row-houses were the dominant type of dwelling occupying 85.54 ha, while multi family blocks of flats with more than one storey occupied some 10.04 ha. While the construction of new housing estates has contributed to a marked improvement in the functional and technical standards of new housing facilities, too much standardisation imports to them a feeling of anonymity. Traditional architecture is on the decline and is being replaced by imported designs. The local tradition of architecture survives only in the old mosques and in the oldest residential districts. Only part of this ambitious residential development has been carried out according to the Master Plan.

Gherian is the main town in the Gherian sub-region and in the future should be active as a service centre on a regional scale. It is also necessary to develop in the town a processing industry based on local agriculture and animal husbandry. According to the NPPP Gherian is designated as a second rank centre with a projected population of between 50,000 and 100,000 by the year 2000. However, the Polservice preliminary survey argues that without changes in the technical infrastructures the town could grow to 16,000. Further expansion is possible in a southerly direction and, if the water supply problem can be overcome, the town could attain 50,000 inhabitants by the year 2000.(38)

6.4.6 Soussa

Soussa, the smallest of the small towns, had a total population of 3,294 inhabitants in 1973. It lies on the coastal strip of the Jabel Akhdar about 12 km north east of Shahat. Soussa is built next to the site once occupied by ancient Apollonia which was one of the five cities

of the Pentapolis. The modern history of Soussa dates back to 1897, when Moslem refugees of Turkish extraction came from Crete and settled there. After its occupation by the Italian troops in May 1913, the town was extensively rebuilt serving as a harbour for coastal shipping and as an administrative centre. The role of Soussa is limited at present to that of a local market centre for the surrounding agricultural area. It is also the seat for the Fur' Baladiyah.

In 1968 Doxiadis Associates submitted the Master Plan providing a development programme for a town of 5,600 inhabitants in 1988.(39) Figure 6.18 shows existing land use in 1966 and proposed land use for 1988. Since 1968, Soussa has grown according to the broad guidelines of the Master Plan. The development has taken place south of the old town, along both sides of the Shahat - Derna road. The Master Plan proposed a bypass road south of the town.

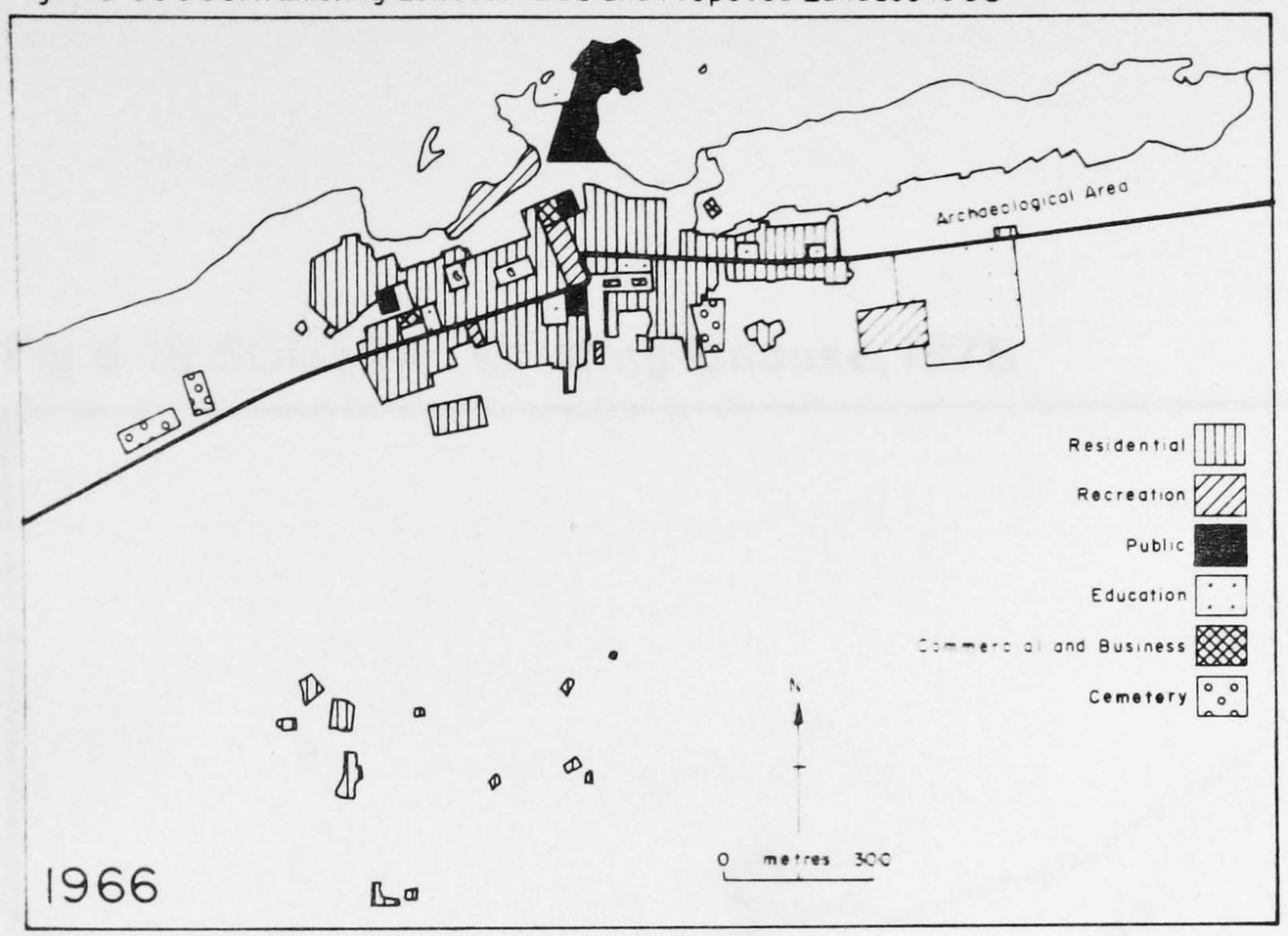
Analysing land use changes in the town between 1966 and 1978 (see Figures 6.18 and 6.19 and Table 6.19) one can note the following changes.

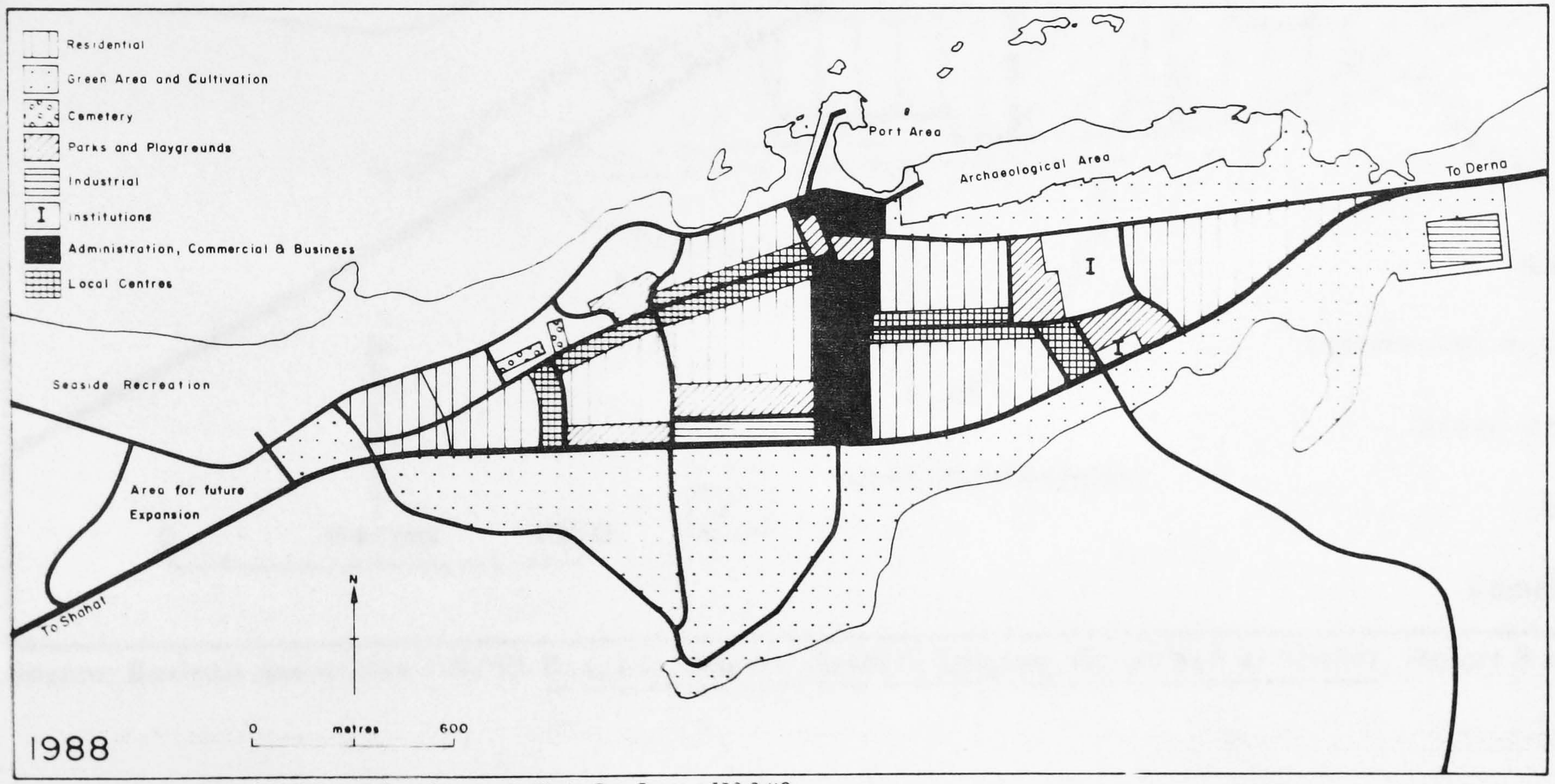
1. The total built-up area of Soussa has increased from 35.38 ha in 1966 to 93.23 ha in 1978, an annual growth rate of 14 per cent.

2. The consultant proposed a total built-up area of 218.83 ha for 1988 (see Table 6.20). The total area occupied by the town in 1978 was only 163 ha. At the time of preparing the 1968 Master Plan El Beida was the capital of Libya, therefore the planners proposed that Soussa should be developed as a weekend resort for the population of the capital. In 1969, however, Tripoli became the capital and this has affected the expansion of Soussa.

3. The total amount of land allocated for residential use rose from 19.85 ha in 1966 to 65.14 ha in 1978. In addition to this absolute

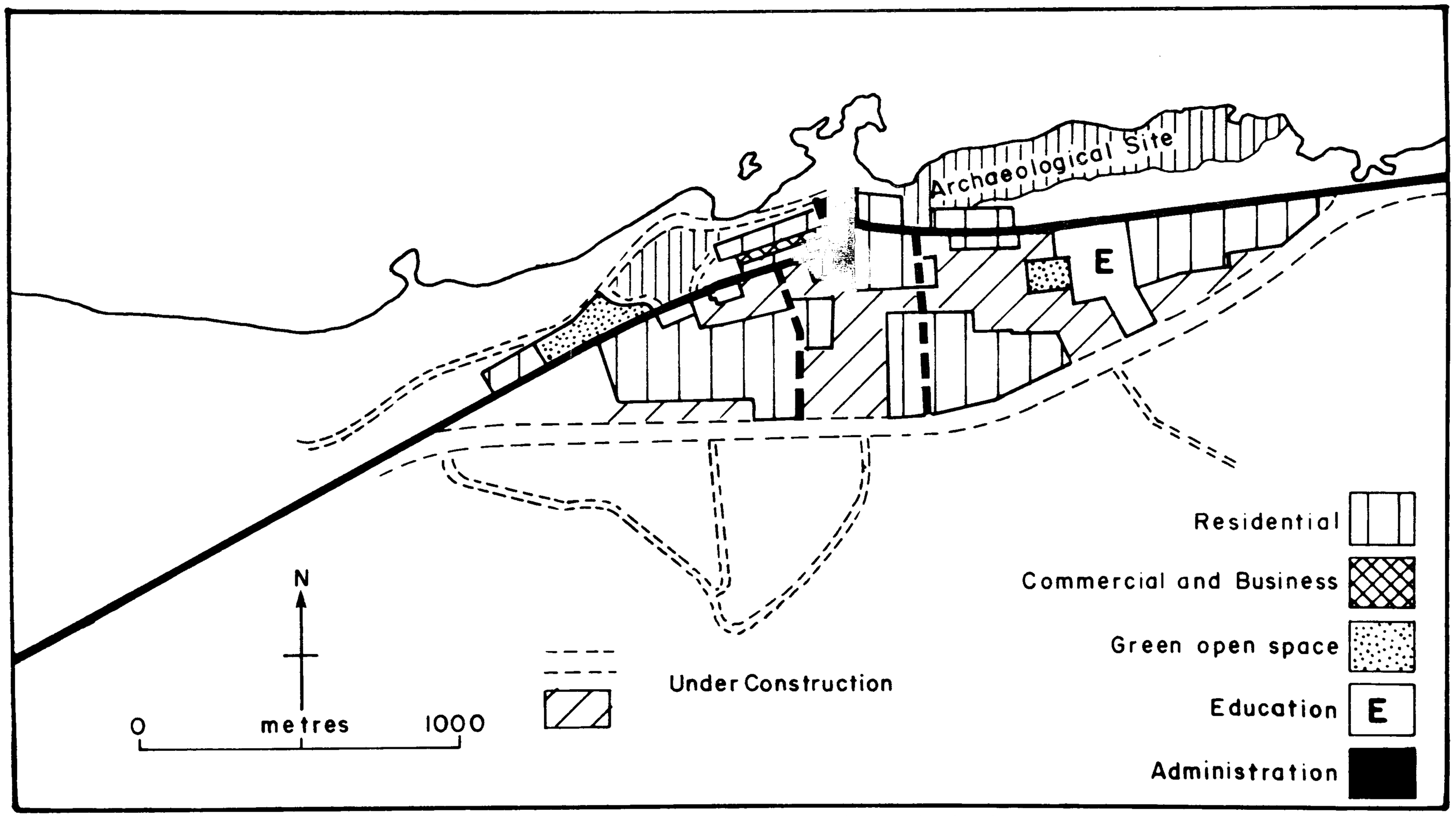
Fig 6-18 SOUSSA: Existing Landuse 1966 and Proposed Landuse 1988





Source Doxiadis Associates (1968) Soussa Final Report on the Master Plan, Tripoli p 338 & 119

Fig 6·19 SOUSSA: Existing landuse, 1978



Source: Doxiadis Associates (1979) Benghazi Region, Beida Subregion, Baladiyah of Shahat, Report 3 vol 4, Athens p 139

Table 6.19 Soussa - Land use Changes Between 1966 and 1978

Type of use	1966			1978		
	Area in ha.	% of Built up Area	% of Planned Area	Area in ha.	% of Built up Area	% of Planned Area
Residential	19.85	56.10	19.85	65.14	69.87	40.00
Commerce and Business	0.30	0.85	0.3	1.87	2.00	1.10
Government, Administration and Military	0.47	1.30	0.47	0.78	0.83	0.50
Education	5.81	16.40	5.80	8.65	9.27	5.30
Health	0.18	0.50	0.18	-	-	-
Social, cultural and Religious facilities	0.23	0.65	0.23	0.56	0.60	0.34
Industry and Warehousing	1.94	5.48	1.90	-	-	-
Green Open Space	3.34	9.40	3.30	9.32	10.0	5.7
Public Utilities	-	-	-	-	-	-
Road network	3.26	9.20	3.20	6.91	7.40	4.23
Total Built-up Area	35.38	100.0	35.0	93.23	100.0	57.00
Vacant	65.54		65.0	69.77		43.00
Total Area	100.92		100.0	163		100.0

Source: Compiled from Doxiadis Associates (1968) Soussa : Final Report on the Master Plan 1988. Tripoli p.13.
Doxiadis Associates (1979) Benghazi Region, Beida Subregion, Baladiyah of Shahat, Report 3 vol. 4 Athens, p.135.

Table 6.20 : Soussa - Proposed Land use, 1988

Type of Use	Area in ha.	% of the Total Area
Residential	70.00	31.98
Local Centres	3.05	1.39
Central Functions Zone	6.20	2.83
Institutions	5.34	2.44
Parks and sportsgrounds	8.54	3.90
Other green areas	16.50	7.54
Port Area	2.20	1.00
Industrial Area	2.50	1.15
Archaeological Area	17.50	8.00
Seaside Recreation	27.20	12.42
Main Roads	50.80	23.24
Cemeteries	2.70	1.23
Sewage Treatment Plant	6.30	2.88
Total	218.83	100.00

* Including areas to be developed between 1988 and 2000. Schools and local streets are also included.

Source : Doxiadis Associates (1968) Soussa : Final Report on the Master Plan 1988. Tripoli, p.125.

increase in the amount of land allocated to residential use, the proportion of the total built-up area devoted to residential use increased from 56.1 per cent in 1966 to 69.8 per cent in 1978. Residential land use as a proportion of the total planned area rose from 19.8 per cent in 1966 to 40 per cent in 1978.

4. The total amount of land allocated for commercial and business use rose from 0.30 ha in 1966 to 1.87 ha in 1978. The proportion of the total built-up area devoted to this use increased from 0.85 per cent in 1966 to 2 per cent in 1978. Commercial and business use as a proportion of the total planned area rose from 0.3 per cent in 1966 to 1.1 per cent in 1978.

5. The total amount of land allocated to Government and military use has increased from 0.47 ha in 1966 to only 0.78 ha in 1978.

6. The amount of land used by the education sector rose from 5.81 ha in 1966 to 8.65 ha in 1978. Although this category of land use has increased in absolute terms, its proportional share of the built-up area and the planned area has decreased because of the rapid expansion of the residential area.

7. The road network occupied 3.26 ha in 1966 and 6.91 ha in 1978. Although its share within the built-up area has decreased from 9.2 per cent in 1966 to 6.9 per cent in 1978, its share within the planned area has increased from 3.2 per cent in 1966 to 4.2 per cent in 1978.

8. The total amount of land used by health, industry and public utilities rose from 0.23 ha in 1966 to 0.56 ha in 1978.

9. Total area, that is the total built-up area plus vacant land, has increased from 100.92 ha in 1966 to 163 ha in 1978. This expansion has taken place at the expense of the agricultural land in the area.

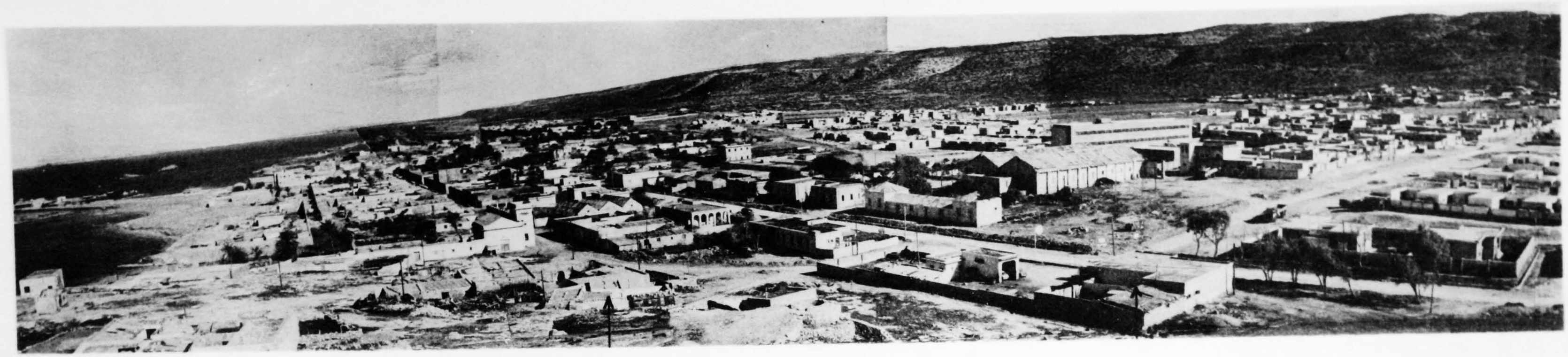
Soussa has been developed to the west and south of the ancient town on a narrow coastal plain. Modern development has taken place along the Shahat-Derna coastal road, which divides the town into two parts. (see Plate 6.11).

The southern part of Soussa was developed over the last decade according to the 1968 Master Plan, while the old town located along both sides of the coastal road, has remained relatively unchanged. A poorly maintained central square in the old town and a public garden surrounded by several administrative buildings constitute its civic centre. The main commercial centre is also located in the old settlement where a significant number of ruined, uninhabited houses are to be found. The new residential areas have developed to the south of the old town between the old Shahat-Derna road and the bypass built in the early 1980's. Not all of these areas had been totally built up by 1981. Some of the new dwellings (24 per cent) are two or three storey structures but the majority of the new houses are single storey structures.

With the exception of the northern part of the town where buildings are either in a bad condition or under demolition, its southern part, which contains mainly recent developments, is in good condition. 79 per cent of the dwelling units are in good condition and 21 per cent in a poor state of repair.(40) In addition to the commercial centre, a few shops and workshops are found in the old town close to the public square. A cinema and a carpentry workshop housed in an old church are located around the public square.

The town's new administrative buildings are located on the southern side of the coastal road, with the police station and court in its western part and the people's committee hall and the Baladiyah headquarters in its central section. Schools are distributed evenly within the town, with two schools for girls and three for boys. There is one clinic in

Plate 6.11



Panoramic View of Soussa



Source:- Doxiadis Associates (1979) Benghazi Region, Beida Subregion, Baladiyah of Shahat, Athens Report 3 vol.4.p.140.

the town but the inhabitants must travel to El Beida for hospital services. The only socio-cultural facilities in the town are the public library housed in an old building and an orphanage, both located on the public square, and the museum in the archaeological area to the north east of the town. The main mosque is located along the main axis of the town, the Shahat-Derna road. Soussa has no real industry except for a few workshops and a desalination plant located 4 kms west of the town. Most of the workshops deal mainly with car repairs and are concentrated in the old town.

The town urgently needs townscaping and the public square and the garden in the centre of the town should be preserved because of the special architectural value of some of the buildings surrounding it. The townscape elements are generally neglected. There has been little planting and landscaping and little coordination between the built and unbuilt space to make an attractive townscape.

The escarpment to the south and the sea to the north are the natural constraints to future expansion. The existing agricultural land south of the town and some distance to the west should be excluded and protected from urban encroachment. Within these constraints, from the existing built-up area towards the west, there is sufficient land to accommodate urban development to the year 2000 based on a projected population of 9,000 by that date. (41) But the construction of the new major coastal highway between Derna and Benghazi which will pass a little distance to the south of the town will be an important factor in the town's future growth and development. The town will grow as a transport centre. In addition to the development of a fishing industry the presence of important antiquities and the existence of beautiful beaches offer important opportunities to develop Soussa as a tourist centre and seaside resort. In recent years no effort has been made to exploit the

touristic potential of the town. Development of tourism presupposes the creation of the necessary tourist infrastructure such as hotels, facilities for sea sports, the beautification of the archaeological area and the creation of a small marina.

The new master plan being formulated by Doxiadis Associates should take into consideration these factors.

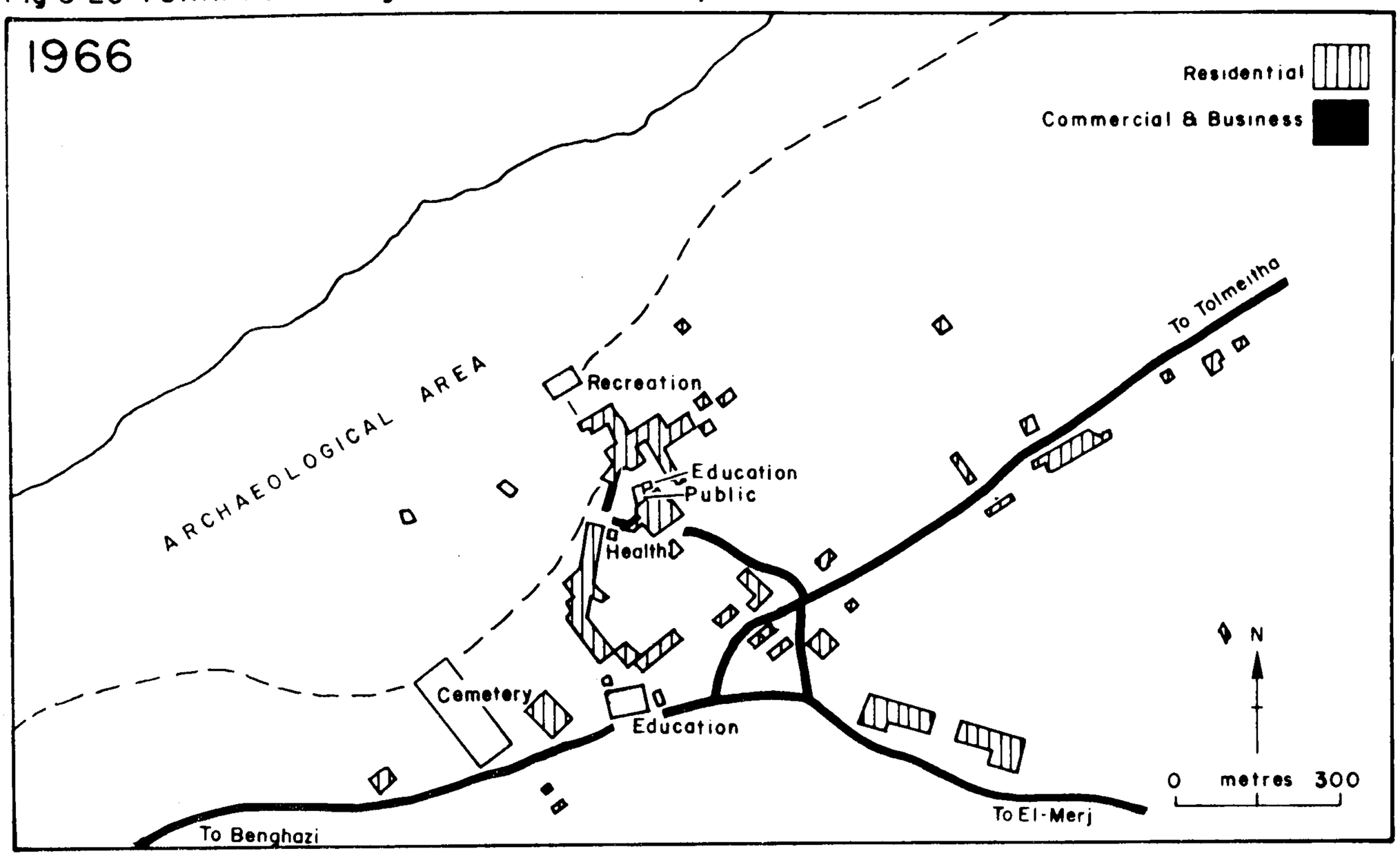
6.4.7 Tokrah

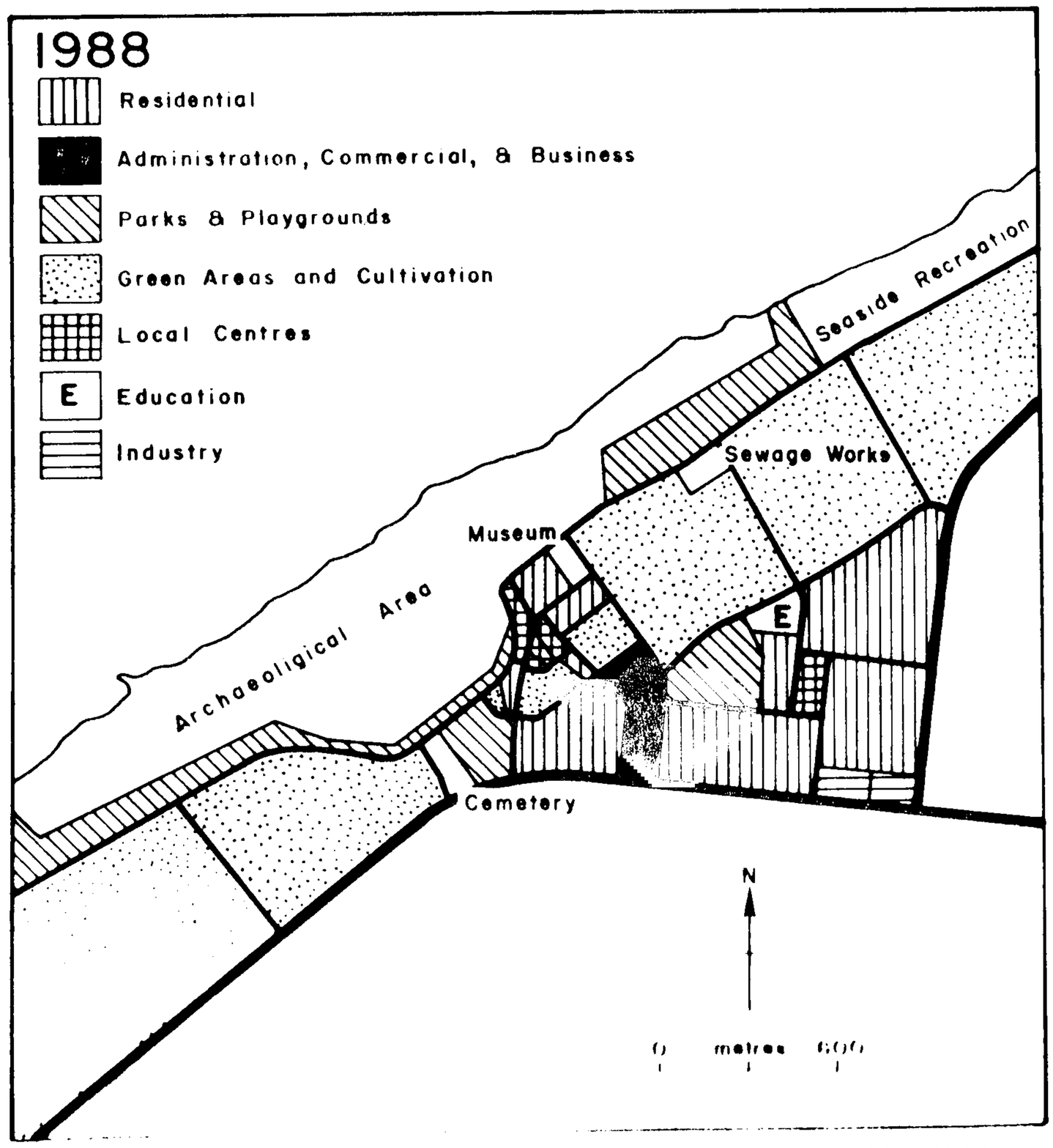
Tokrah, with 5,128 inhabitants in 1973, is located on the flat coastal plain at the intersection of the coastal highway with the regional road leading to Tolmeitha. The town is about 69 km north of Benghazi. Tokrah is located on the site of the ancient town of Teucheira but the modern settlement dates back only to the Turkish period. (42) In 1913 the town was occupied by the Italians. Since then, Tokrah developed steadily until the discovery of oil in Libya which accelerated the pace of urban growth.

Its primary role is that of service centre to its local agricultural hinterland. It is the seat of a Baladiyah serving the villages of Daryanah, Sidi Khalifah, Bersis and Mabni. As the latter two settlements are closer to Tokrah than to other urban centres, they also use the town for services which can be supported by a town the size of Tokrah, whereas the inhabitants of Daryanah and Sidi Khalifah probably make use of Benghazi. For higher order facilities the inhabitants of Tokrah must travel to Benghazi. (43)

In 1968, Doxiadis Associates submitted the Master Plan for Tokrah which provided for the town's development until 1988 including areas for future expansion. Figure 6.20 shows existing land use in 1966, and the proposed land use for 1988, while Figure 6.21 shows existing land use in 1978. The Master Plan proposed that development takes place towards

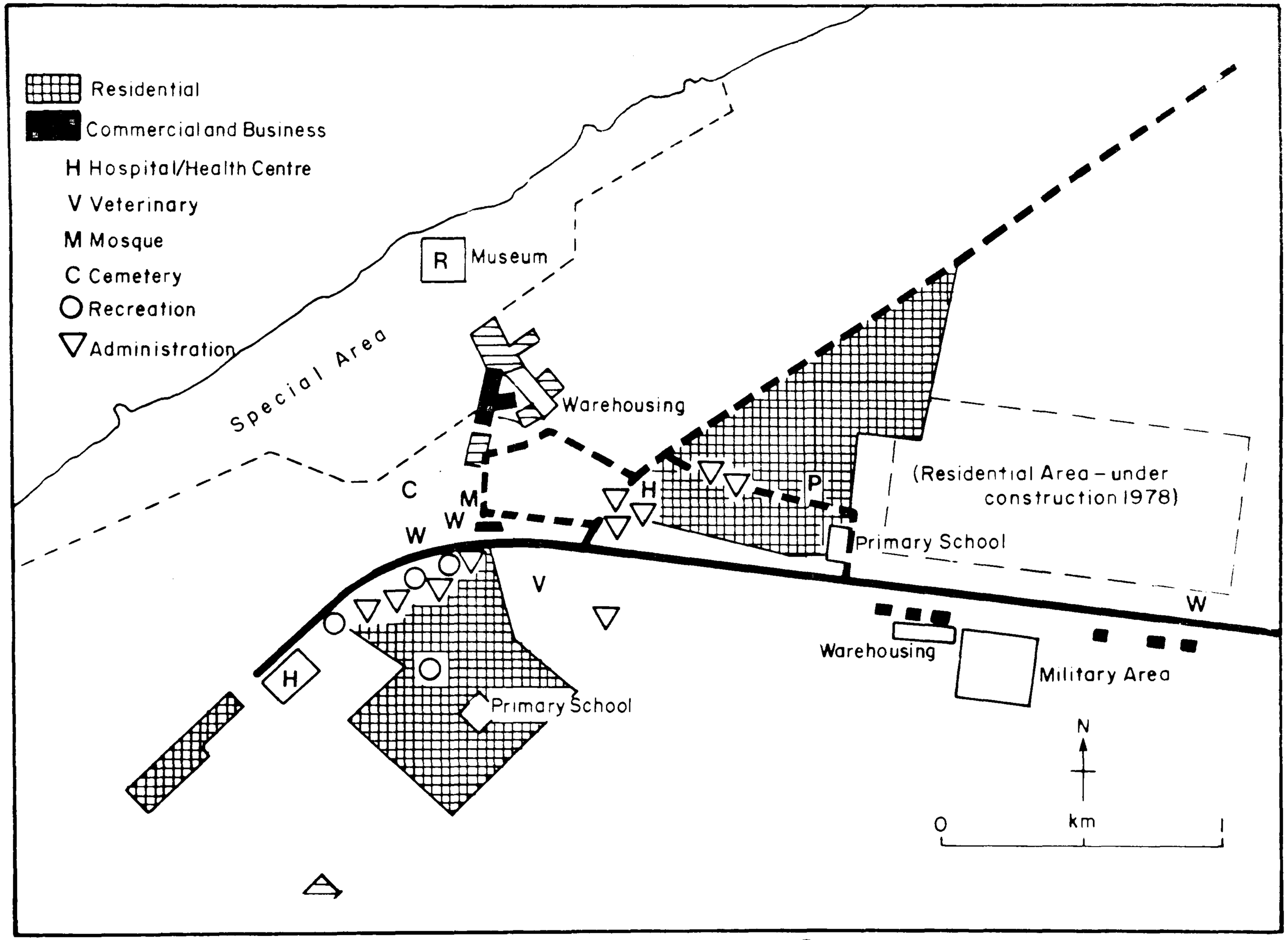
Fig 6·20 TOKRAH: Existing landuse 1966 and Proposed landuse 1988





Source Doxiadis Associates (1968) Tokrah Final Report on the Master Plan 1988, Tripoli p II A 109

Fig 6·21 TOKRAH: Existing landuse 1978



Source: Doxiadis Associates (1979) Benghazi Region, Benghazi Subregion, Baladiyah of Tokrah Report 5 vol 3 Athens p 35

the east, between the Benghazi-Beida highway in the south and the Tokrah-Tolmeitha coastal road in the north. Since 1968, there has been substantial development in this direction, in the form of two housing schemes and a number of privately sponsored residential developments, east of the present built-up area and north of the Benghazi-Beida highway. A large residential area has also developed south of the highway, outside the 1968 Master Plan limits. In addition a strip of restaurants and a military camp are located in the east on the southern side of the highway again outside the Master Plan limits. Table 6.21 shows land use in 1966 and 1978. The table illustrates the large physical expansion experienced by the town. Comparing figure 6.20 with figure 6.21 and analysing land use changes in table 6.21, the following facts can be noted:-

1. The total built-up area has increased from 10.52 ha in 1966 to 118.1 ha in 1978, and annual growth rate of 85 per cent.

2. The Master Plan proposed that the town should have 107.35 ha by 1988 (see table 6.22) including all uses. However, the actual built-up area in 1978 had already reached 118.1 ha.

3. The total amount of land allocated for residential use rose from 4.57 ha in 1966 to 72.8 ha in 1978. This represents an annual growth rate of 124 per cent. In addition to this absolute increase in the amount of land allocated to residential use, the proportion of the total built-up area devoted to residential use increased from 43.3 per cent in 1966 to 61.6 per cent in 1978. Residential use as a proportion of the total planned area rose from 10.7 per cent in 1966 to 19.2 per cent in 1978.

4. The importance of the town as a commercial centre can be illustrated by the fact that the total amount of land allocated

Table 6. 21

Tokrah - Land use Changes Between 1966 and 1978

Type of use	1966			1978		
	Area in ha.	% of Built up Area	% of Planned Area	Area in ha.	% of Built up Area	% of Planned Area
Residential	4.57	43.33	10.68	72.8	61.6	19.2
Commerce and Business	0.11	1.04	0.25	8.9	7.5	2.3
Government, Administration and Military	0.13	1.23	0.30	12.0	10.2	3.2
Education	0.32	3.05	0.75	3.0	2.5	0.8
Health	0.02	0.19	0.06	2.0	1.7	0.5
Social, cultural and Religious facilities	0.06	0.57	0.14	3.2	2.7	0.8
Industry and Warehousing	0.03	0.29	0.08	4.2	3.6	1.1
Green Open Space	1.25	11.89	2.92	1.9	1.6	0.5
Public Utilities	-	-	-	5.8	4.9	1.5
Road network	4.03	38.30	9.43	4.3	3.6	1.1
Total Built-up Area	10.52	100.0	24.60	118.1	100.0	31.1
Vacant	32.25		75.40	261.9		689
Total Area	42.77		100.0	380.0		100.0

Source: Compiled from Doxiadis Associates (1968) Tokrah : Final Report on the Master Plan 1988 Tripoli p.13.
Doxiadis Associates (1979) Benghazi Region, Benghazi Subregion, Baladiyah of Tokrah Athens Report 5 vol. 3 pp.33-36.

Table 6.22 Tokrah - Proposed Land use, 1988

Type of Use	Area in ha.	% of the Total Area
Residential	36.73	32.9
Residential - Commercial	5.92	5.6
Central Functions Zone	4.50	4.3
Local Centres	3.20	3.2
Museum	0.84	0.8
Preparatory-Secondary School	1.50	1.4
Parks and Playgrounds	9.98	9.7
Other Green Areas	5.66	5.3
Industrial and Warehousing	1.20	1.1
Cemetery	1.42	1.3
Main Roads	36.4	34.4
Total *	107.35	100.0

* Seaside Recreation and the Archaeological area are not included

Source: Doxiadis Associates (1968) Tokrah : Final Report on the Master Plan 1988, Tripoli, p.147.

to this use has increased from 0.11 ha in 1966 to 8.9 ha in 1978.

5. The total amount of land allocated for Government and military use has increased from 0.13 ha in 1966 to 12 ha in 1978. This is the result of the promotion of Tokrah to the headquarters of a Baladiyah in the early 1970's.

6. Educational use has increased from 0.32 ha in 1966 to 3 ha in 1978. Health use also has increased from 0.02 ha in 1966 to 2 ha in 1978. Social, cultural and religious use has increased from 0.06 ha in 1966 to 3.2 ha in 1978.

7. The total amount of land allocated to industrial use rose from 0.03 ha in 1966 to 4.2 ha in 1978. Land used by green open spaces, public utilities and road network has also increased.

8. The total area of the town (built-up area and vacant land) has increased from 42.77 ha in 1966 to 380 ha in 1978.

Tokrah comprises two distinct parts. One is the old town located about 400 metres northwest of the intersection of the highway linking Benghazi-El Beida with the Tolmeitha road. The other is the new town which has developed on both sides of the highway. In the old town there is the town centre which encloses a square. Residential areas lie north of this centre. The old fort, the archaeological site and the museum are located to the northwest of the old town. The new town has developed in response to the highway. Higher order facilities such as the hospital, the municipality, the shopping centre (Plate 6.12), restaurants and other public facilities have tended to locate along this road. Residential areas have developed a little way from these higher order activities.

There are three categories of houses in the town: (i) The old attached single-storey mudstone residences in the old town which comprise about 6 per cent of the housing in the town. (Plate 6.13). (ii) Attached

Plate 6.12

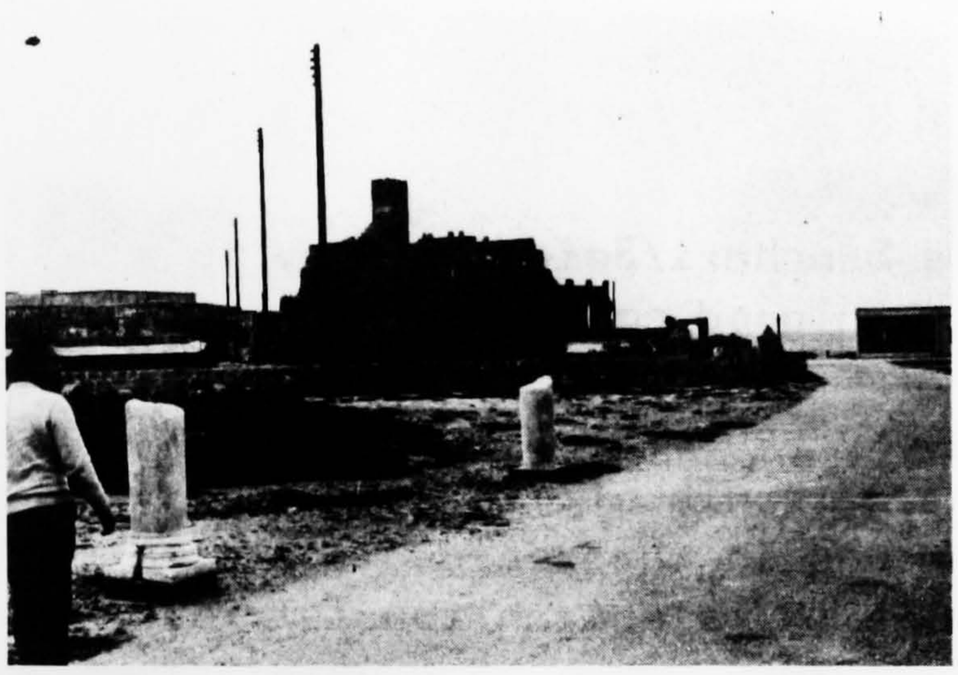
TOKRAH



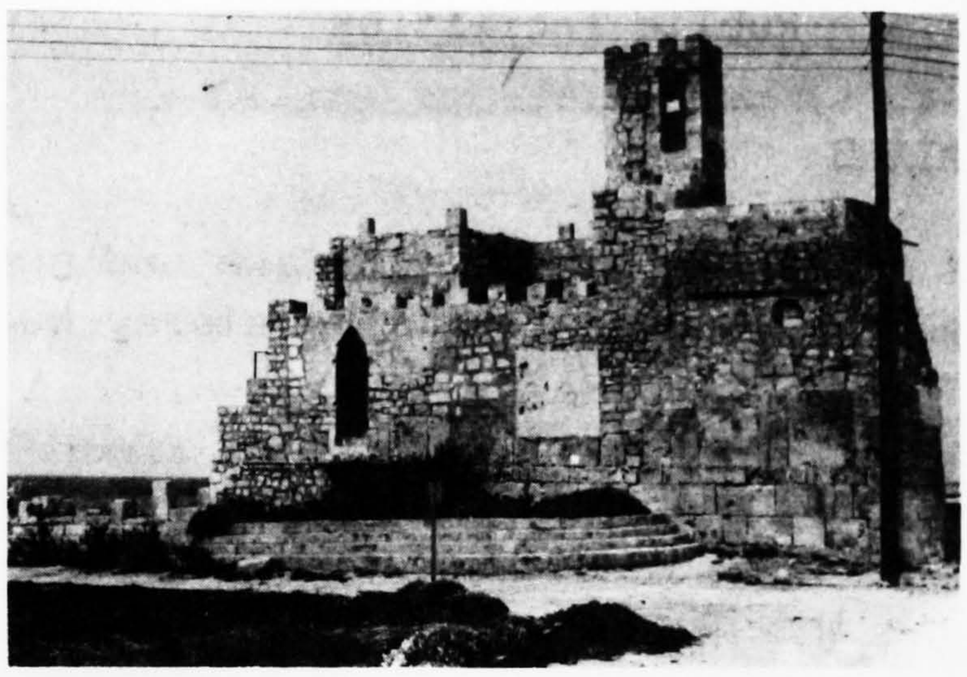
Old Shopping Centre



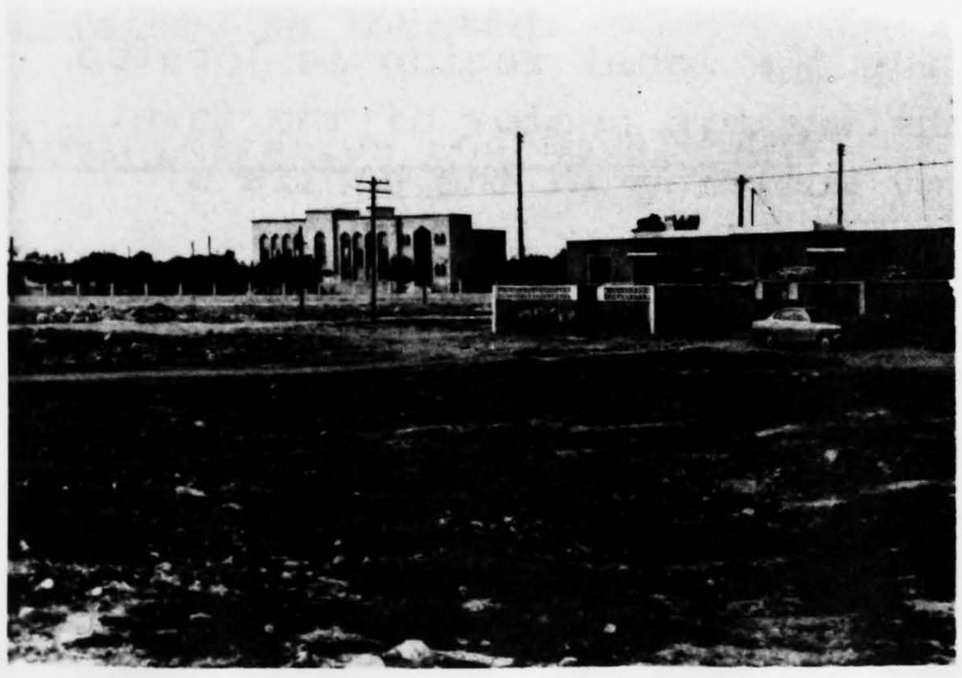
Old Shopping Centre



Old Fort in Archaelogical Area



Old Fort in Archaelogical Area



Baladiyah Office



Typical Primary and Preparatory School

Source :- Doxiadis Associates (1979) Benghazi Region, Benghazi Subregion Baladiyah of Tokrah, Athens, Report 5, vol.3.p.40.

Plate 6.13

TOKRAH



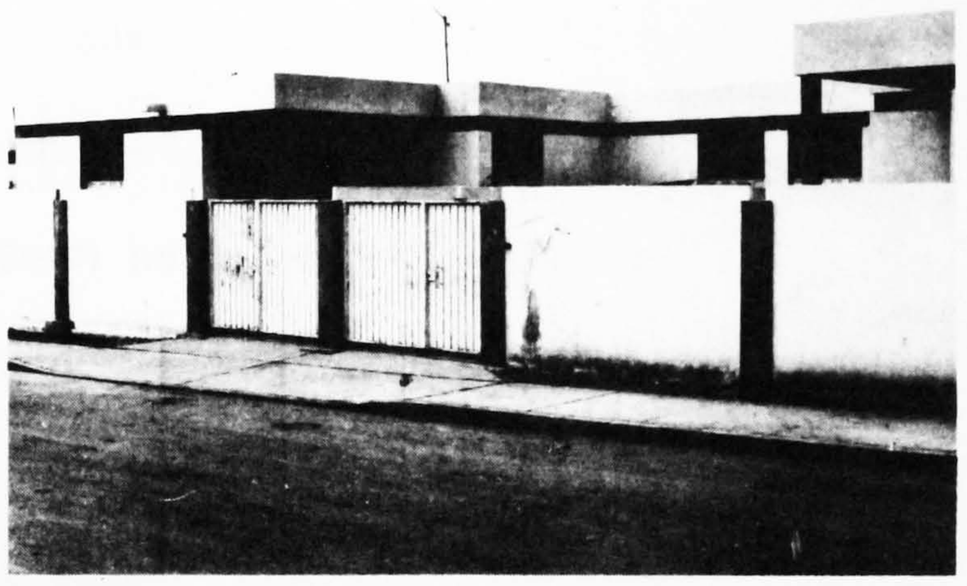
Old Mud/Stone Housing in Old Town



Old Mud/Stone Housing in Old Town



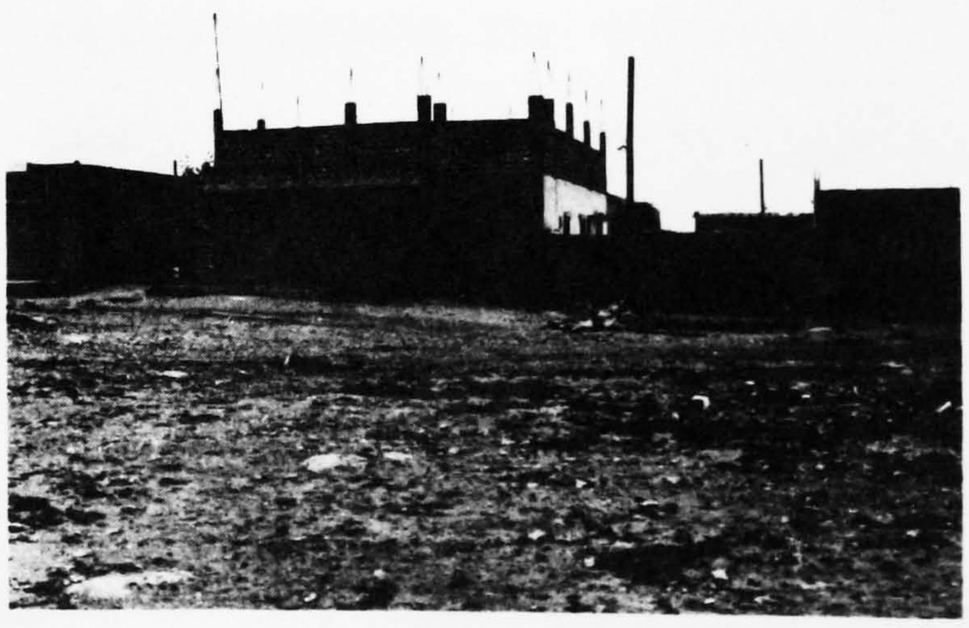
New Housing Corporation Scheme (1970 's)



New Housing Corporation Scheme (1970 's)



Privately Sponsored Housing Area



Privately Sponsored Housing Area

Source:- Doxiadis Associates (1979) Benghazi Region, Benghazi Subregion Baladiyah of Tokrah, Athens, Report 5 vol.3. p.46.

single-storey residences. All the housing corporation schemes which are grouped on the northern side of the highway fall into this type which comprises about 26 per cent of the housing in the town. (iii) Single detached residences with a mixture of one and two storeys. There are a number of privately sponsored residential areas which contain housing of this type. One has developed south of the old town, south of the highway, and another has been built between the housing corporation schemes and the Tokrah-Tolmeitha coastal road. About 65 per cent of the existing dwellings in Tokrah are of this type.(44) Most of the houses in Tokrah are in good condition but many of those in the old town are in a poor state of repair.

The main retail shopping centre is located in the old town. However, a new shopping centre has been built adjacent to the main highway. Since 1980 all retail activities in the town have been run and owned by the State with the exception of the restaurants which line the highway All the shops which were operating from garages of houses in the residential area were closed down at this time. The Municipality offices are centrally located in a complex of two buildings. Branches of central government offices are concentrated along the southern side of the highway. There are three schools in the town, one hospital serving the town and the surrounding area and two health centres. There is no manufacturing industry in the town but there are some car repair shops.

Unpaved roads constitute a high proportion of the road network in Tokrah and there is an urgent need to surface them. At present heavy inter-urban traffic passes through the centre of the town along the Benghazi-El Beida highway. This road represents a major problem for future urban development and the construction of a bypass is an urgent requirement. The townscape is unattractive. There are few good roads or pedestrian surfaces, no landscaping and little coordination between

built and the open space to form an attractive townscape. The town does not have a continuous and coherent built-up area. Large vacant spaces separate the different residential areas from one another, presenting problems for future planning. The old town centre should be redeveloped as the buildings are deteriorating and the whole area is in a poor state of repair.

A new Master Plan is being formulated by Doxiadis Associates on the assumption that the town will have a population of 21,000 by the year 2000. Although there are certain constraints limiting the future expansion of the town there is still sufficient land to accommodate urban development until the year 2000.

6.4.8 Jalu

Jalu (with 5,400 inhabitants in 1973) an oasis settlement, is located south of Ejdabiah near two other oases, Aujilah and Jkherrah on the road to Kufra. Jalu consists of four clusters : Erg, Laba, Rashdah and Sharef. The most important of these is Erg in which all the central functions of the settlement are gathered.

Jalu functions as an administrative centre being a seat for the Baladiyah which includes the two Fur´ Baladiyat of Aujilah and Jkherrah. The town provides social, cultural and religious services to the surrounding settlements as well as retailing services.

In 1966, Doxiadis Associates surveyed the settlement and found that it was an isolated oasis with no scheduled transport connection with other towns, no water supply network, no electricity and bad housing.(45) In 1968 a Master Plan was prepared by Doxiadis Associates for the development of the town until 1988 and they projected that Jalu's population would decline from 4,120 in 1968 to 3,560 inhabitants in 1988. They proposed that the town should have a total built-up area of 33.55 ha

only in 1988 (see Figure 6.22 and Table 6.23).

Since 1970, Jalu has experienced a rapid growth and expansion due to government investment in infrastructure such as housing projects, administrative buildings, schools, a clinic, the water supply network and electricity. This development is the result of the promotion of Jalu to be the seat of a Baladiyah as well as the construction of a paved highway linking Ejdabiah and Kufra. The physical development of the town is illustrated by reference to Figures 6.22 and 6.23 together with Table 6.24. Analysing physical changes in Table 6.24 one can note the following facts:-

1. The total built-up area of Jalu has increased from 14.74 ha in 1966 to 49.8 ha in 1979, an annual growth rate of 20 per cent.

2. The rapid physical development of Jalu was not foreseen by the Master Plan which proposed a total area of only 33.55 ha for the year 1988. In 1979 the actual built-up area was 49.8 ha.

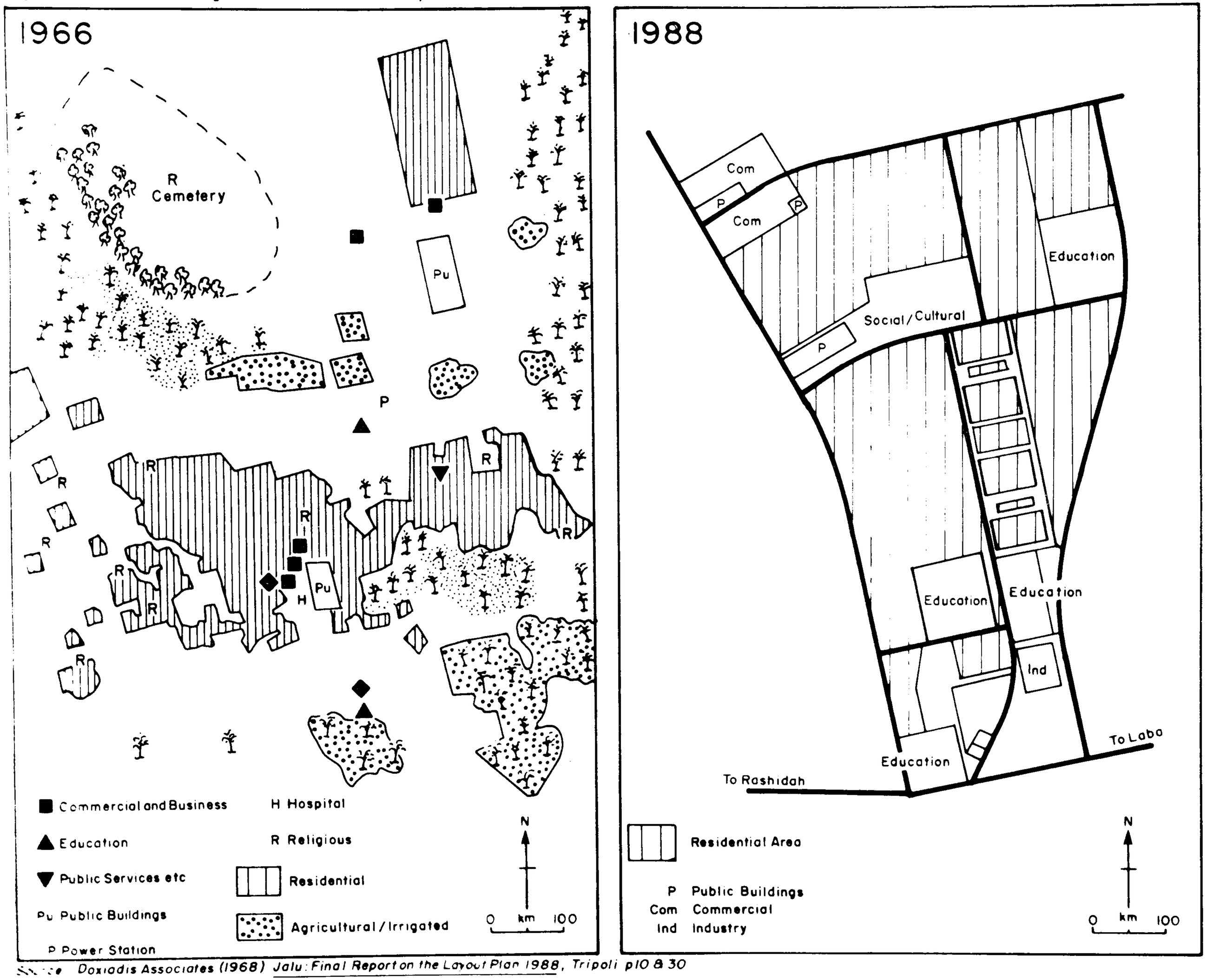
3. The total amount of land allocated for residential use rose from 11 ha in 1966 to 24.9 ha in 1979, an annual growth rate of 11 per cent.

4. The total amount of land allocated for commercial and business use rose from 0.4 ha in 1966 to 2 ha in 1979, an annual growth rate of 33 per cent.

5. The promotion of the town to be the seat for the Baladiyah has resulted in an increase in land used by the government and the military. This category of land use rose from 0.4 ha in 1966 to 3.9 ha in 1979, an annual growth rate of 73 per cent.

6. The amount of land used by the education sector rose from 0.11 ha in 1966 to 2.6 ha in 1978.

Fig 6·22 JALU: Existing landuse 1966 and Proposed landuse 1988



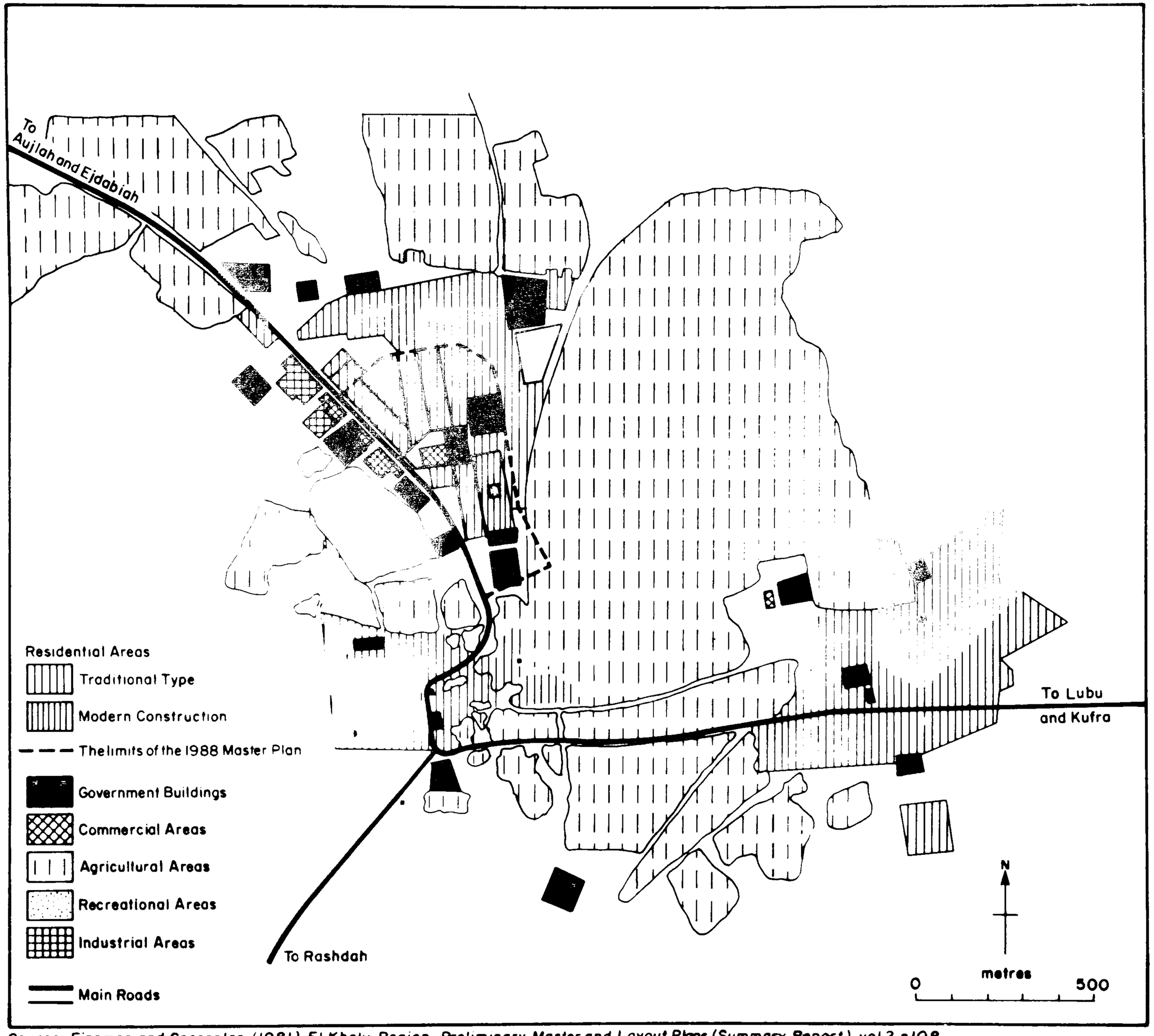
Source Doxiadis Associates (1968) Jalu: Final Report on the Layout Plan 1988, Tripoli p10 & 30

Table 6.23 Jalu - Proposed Land use, 1988

Type of Use	Area in ha	% of Total Area
Residential	12.24	36.50
Civic, Commercial and other Central Functions, including main square	1.86	5.60
Schools	2.42	7.20
Health Centre	0.59	1.70
Green and Open Spaces (parks, sportsground, etc.)	1.65	4.90
Special Functions	1.36	4.10
Cultivated Area	1.28	3.80
Roads, Local Squares and Local Gardens	12.15	36.20
Total	33.55	100.00

Source: Doxiadis Associates (1968) Jalu : Final Report on the Layout Plan 1988. Tripoli, p.37.

Fig 6·23 JALU: Existing landuse 1979



Source: Finnmap and Speerplan (1981) El Khalij Region - Preliminary Master and Layout Plans (Summary Report) vol 2 p108

Table 6. 24 Jalu - Land use Changes Between 1966 and 1979

Type of use	1966			1979		
	Area in ha.	% of Built up Area	% of Planned Area	Area in ha.	% of Built up Area	% of Planned Area
Residential	11.0	74.6	47.5	24.9	50.0	30.0
Commerce and Business	0.4	2.7	1.6	2.0	4.0	2.4
Government, Administration and Military	0.4	2.7	1.6	3.9	7.8	4.7
Education	0.11	0.7	0.6	2.6	5.2	3.1
Health	-	-	-	1.5	3.0	1.8
Social, cultural and Religious facilities	0.53	3.6	2.3	1.4	3.0	1.7
Industry and Warehousing	-	-	-	1.5	3.0	1.8
Green Open Space	2.1	14.3	9.1	6.3	12.6	7.6
Public Utilities	-	-	-	1.3	2.6	1.5
Road network	0.2	1.4	0.8	4.4	8.8	5.4
Total Built-up Area	14.74	100.0	63.5	49.8	100.0	60.0
Vacant	8.36		36.5	32.5		40.0
Total Area	23.1		100.0	82.3		100.0

Source: Compiled from Doxiadis Associates (1968) Jalu : Final Report on the Layout Plan 1988, Tripoli p.9.
Speerplan and Finnmap (1981) El Khalij Region, Existing Condition 1979 and Regional Potential, Tripoli p.255.

7. The road network occupied 0.2 ha in 1966 and 4.4 ha in 1979, an annual growth rate of 175 per cent.

8. The table also shows an increase in the amount of land allocated to health, social, cultural, religious and public utilities, warehousing and green open space.

9. The total area, that is the total built-up area, plus vacant land, has increased from 23.1 ha in 1966 to 82.3 ha in 1979.

The town developed around a Zawiyah (religious lodge) at the beginning of this century. During the Italian period the first administrative buildings, which exist even today, were constructed in Erg. At the centre of the old settlement lies a square where the police station, the post office and the courthouse are located, all housed in a large building originally constructed during the Italian period. The old market is located on the southernside of the square. The old residential areas are grouped around this square. New residential areas have developed to the north, southeast and southwest of the historic settlement (Fig. 6.23). In the late 1960's the route from Ejdabiah to Jalu was surfaced and the road was improved and extended to Kufra in the late 1970's. The road passes to the west of the old settlement and most of the new developments are related to this highway. These new residential areas have developed, one to the north of the old settlement, extending to the highway in the west, a second to the south of the old core and to the west of the road, and the third to the southeast of the old town on either side of the highway. Most of the modern schools and clinics are located in the new residential areas. The new administrative buildings and commercial areas, including a new shopping centre, have been constructed around the edges of the old settlement and especially along the western side of the highway. There is no manufacturing industry in the town but there are some car repair shops.

There are two categories of housing in the town : (i) the old attached single-storey mudstone residences, mainly in the old town, representing about 5 per cent of dwellings in the town. (ii) Attached single-storey residences located in the three new housing estates in the north, southeast and southwest. This type of dwelling represents 95 per cent of housing in the town. Most of the houses in Jalu are in good condition with the exception of dwellings in the historic core which are in a poor state of repair.

As can be seen from Figure 6.23 most of the urban expansion since 1968 has taken place outside the guidelines established by the master plan, and these new developments have resulted in a considerable degree of encroachment on very scarce agricultural land in this oasis. This unplanned urban expansion presents major problems for future growth.

The 1968 master plan projected a decline in total population by the year 1988. However, after the revolution in 1969 the El Khalij region in which Jalu is located was given top priority for development by the government. The road from Ejdabiah to Jalu was upgraded and surfaced and extended to Kufra which is the site of largescale agricultural developments. This factor accounts for the increase in population which was estimated at 10,000 in 1981.(46)

A new master plan is being formulated by Finnmap-Speerplan for the development of the town to the year 2000. They project a total population of 28,000 by that year and a built-up area of 337 ha. The El Khalij region continues to receive priority in government development efforts and the massive scheme to transport water by pipeline from the Sarir region, southeast of Jalu to the coastal zone may well have a positive impact on the future development of this town.

6.4.9 Sirte

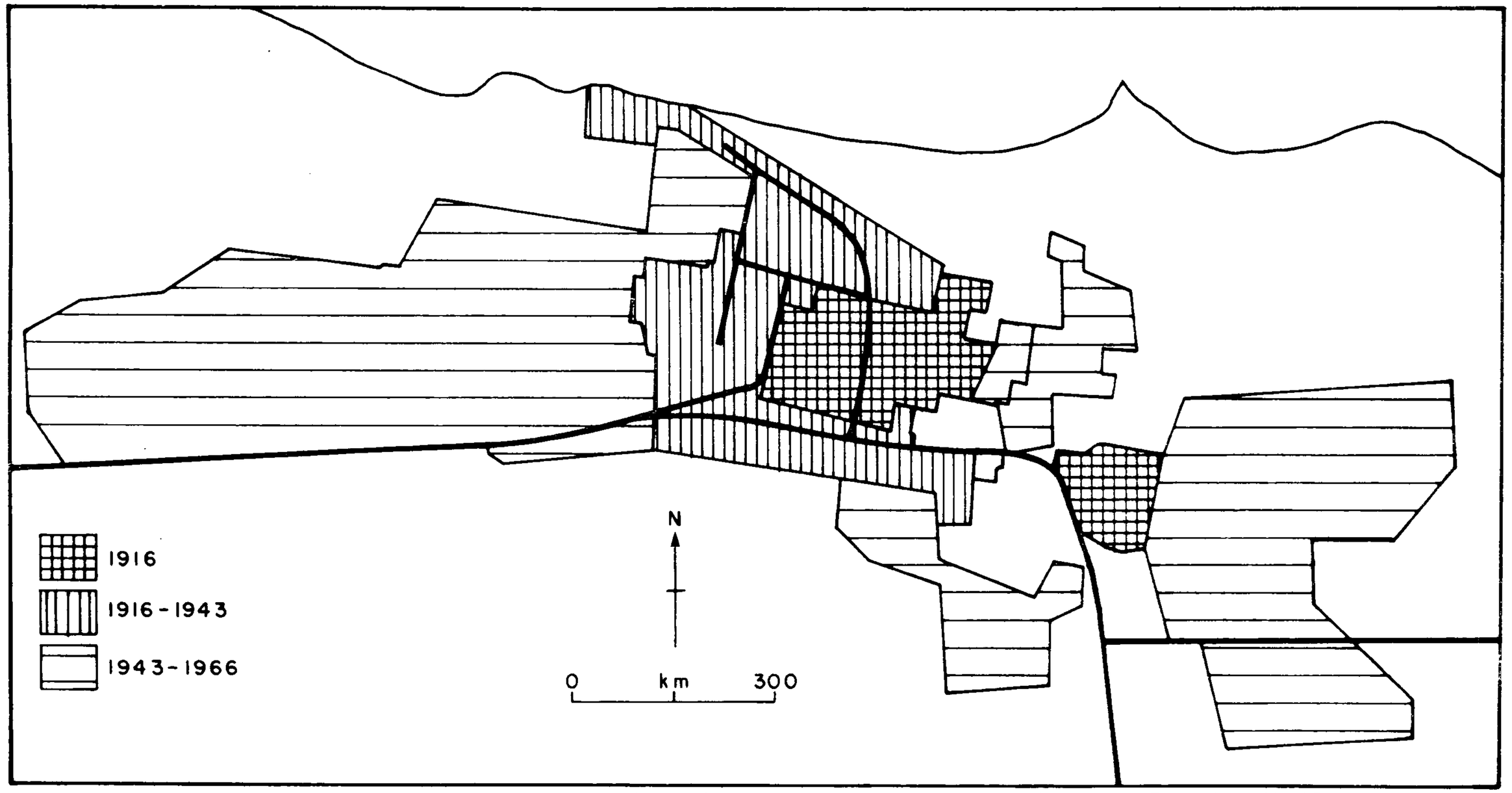
Sirte (with 16,713 inhabitants in 1973) is located on the Tripoli-Benghazi highway on the coast of the inhospitable El Khalij region along the Gulf of Sirte. It is about 470 and 250 km east of Tripoli and Misurata respectively and 410 and 570 km west of Ejdabiah and Benghazi respectively. The town is the largest settlement between Misurata and Ejdabiah. Sirte is the seat for the Baladiyah and controls the mahalat of Werfellah, El Geddadfa and El Ferjan It is an important military town, a market centre serving the surrounding settlements and the headquarters for some new agricultural projects in the area.

The town is located on the site of a Roman settlement and during the medieval period it was a flourishing urban centre known as Medinat Sultan. During the Italian period it experienced only modest expansion but growth was more rapid after the Second World War and during the first decade of independence (Fig. 6.24). Figure 6.25 shows existing land use in 1966.

In 1967 a Master Plan by McGaughy, Marshall, McMillan and Lucas (M.M.M.L) was prepared on the basis of a projected population of 9,000 inhabitants in 1988 (Fig. 6.25 and Table 6.25). Two basic principles were used in the plan : (i) The concept of a neighbourhood area which was considered as the most appropriate to the Libyan situation. (ii) The creation of a "central core" where the main community facilities would be located for the use of all the inhabitants.(47)

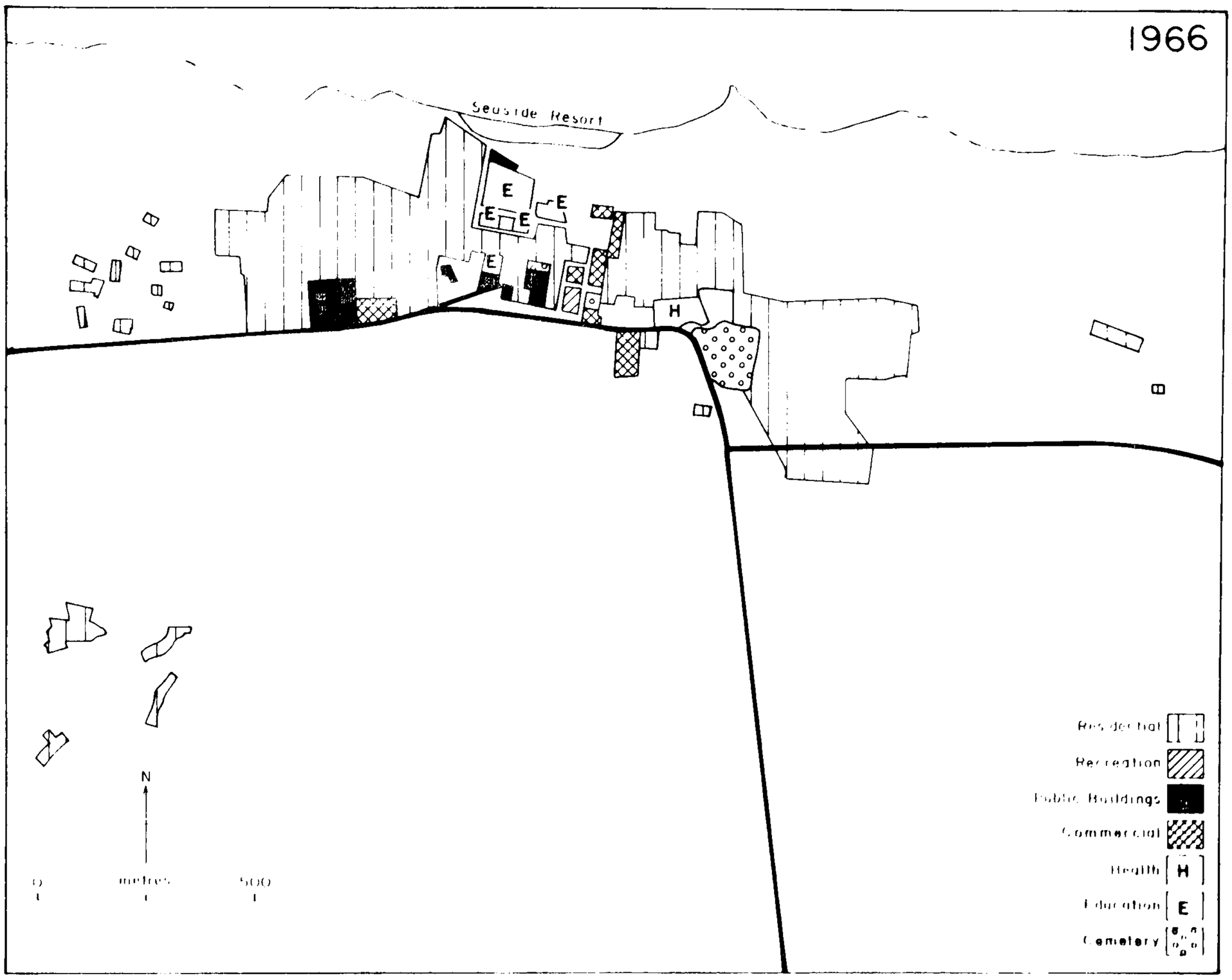
Only isolated sections of the 1967 Master Plan were actually implemented because the dramatic physical expansion of the town outpaced the guidlines established in the plan. By 1973 the population was already almost double that projected for 1988. By 1979 it was estimated that the town had a population of 22,000 inhabitants.(48) This rapid

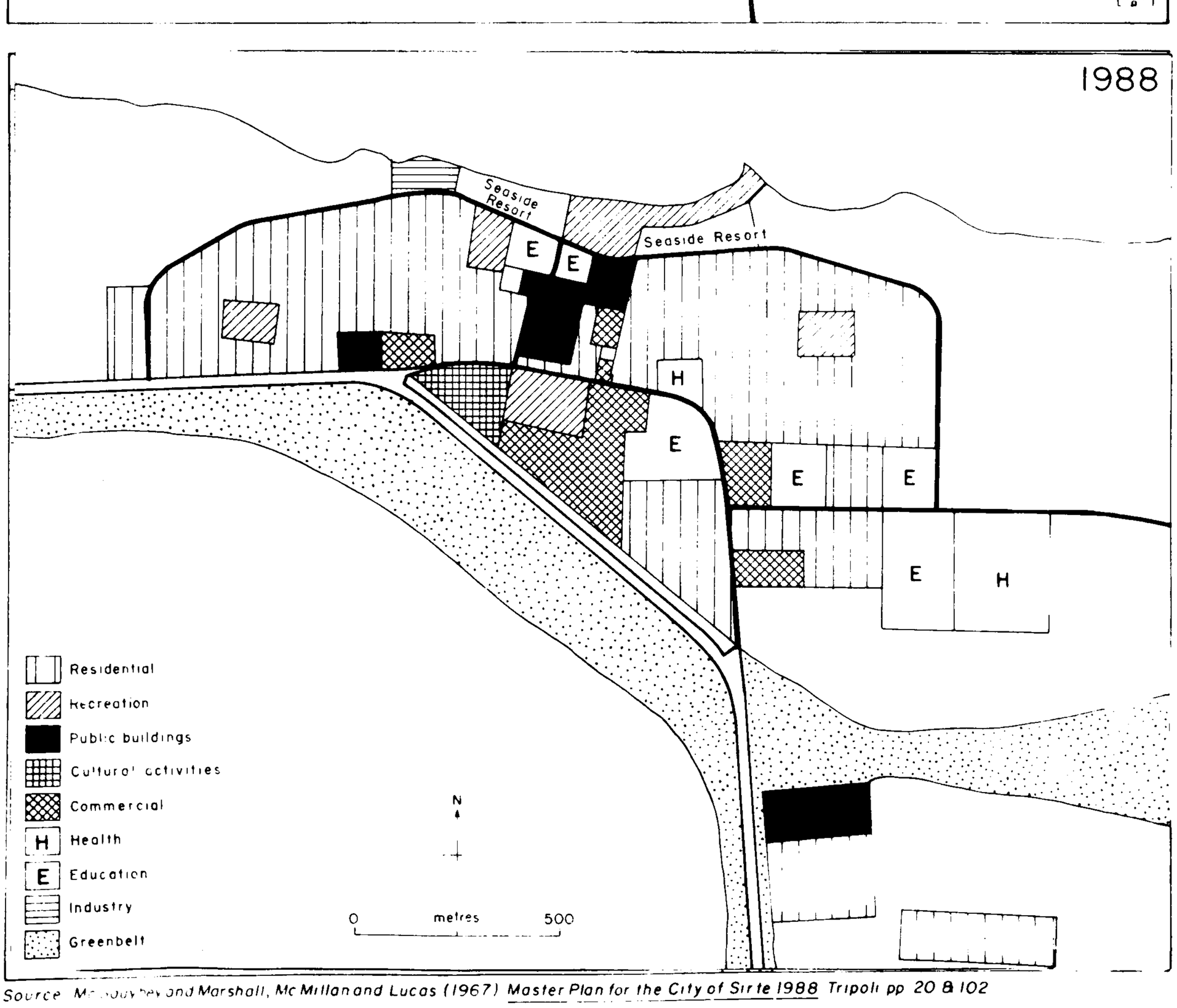
Fig 6·24 SIRTE: Historical Development 1916 - 1966



Source: Mc Gauyhey and Marshall, McMillan and Lucas (1967) Master Plan for the City of Sirte 1988 Tripoli pp 41 - 42

Fig 6·25 SIRTE: Existing landuse 1966 and Proposed landuse 1988





Source Ma[illegible]bey and Marshall, Mc Millan and Lucas (1967) Master Plan for the City of Sirte 1988 Tripoli pp 20 & 102

Table 6.25 Sirte - Proposed Landuse, 1988

Type of Use	Area in ha.	% of the Total Area
Residential	45.0	32.6
Industrial	4.1	3.4
Commercial	8.5	6.2
Public and Community facilities	38.4	27.8
Special*	4.0	3.0
Main Roads	38.1	27.0
Total	138.1	100.0

* Areas in special use are those of seaside resort areas.

Source: McGaughey, Marshall, McMillan and Lucas (1967) Master Plan for the City of Sirte 1988 Tripoli, p.106.

urban growth resulted from the new economic priorities established after the Revolution which designated the central coastal zone as a region for major development. Three major agricultural projects have been established in the surrounding region in the wadis Tlal, Jaref and Huneiwa.

Figures 6.25 and 6.26 and Table 6.26 allow us to analyse the major land use changes between 1966 and 1979.

1. The total built-up area has increased from 43.7 ha in 1966 to 207.5 ha in 1979, an annual growth rate of 31 per cent.

2. This rapid physical development of Sirte was not predicted by the 1967 Master Plan. The Master Plan proposed a total area (built-up land plus vacant land) of 138.1 ha in 1988. The actual built-up area in 1979 was 207.5 ha.

3. The total land allocated for residential use rose from 28.3 ha in 1966 to 131.3 ha in 1979, an annual growth of 30 per cent.

4. The total land allocated for commercial and business use rose from 1.4 ha in 1966 to 11.8 ha in 1979.

5. Little change has occurred in the amount of land used for administrative purposes; i.e. from 5.5 ha in 1966 to 5.7 ha in 1979. It is important to add that this figure does not include the military camps (see Figure 6.26) established in the town.

6. The total amount of land used by the educational sector rose from 0.8 ha in 1966 to 13.3 ha in 1979.

7. The table also shows the increase of land allocated for health, social, cultural and religious activities, industry and warehousing, green open space and public utilities and the road network.

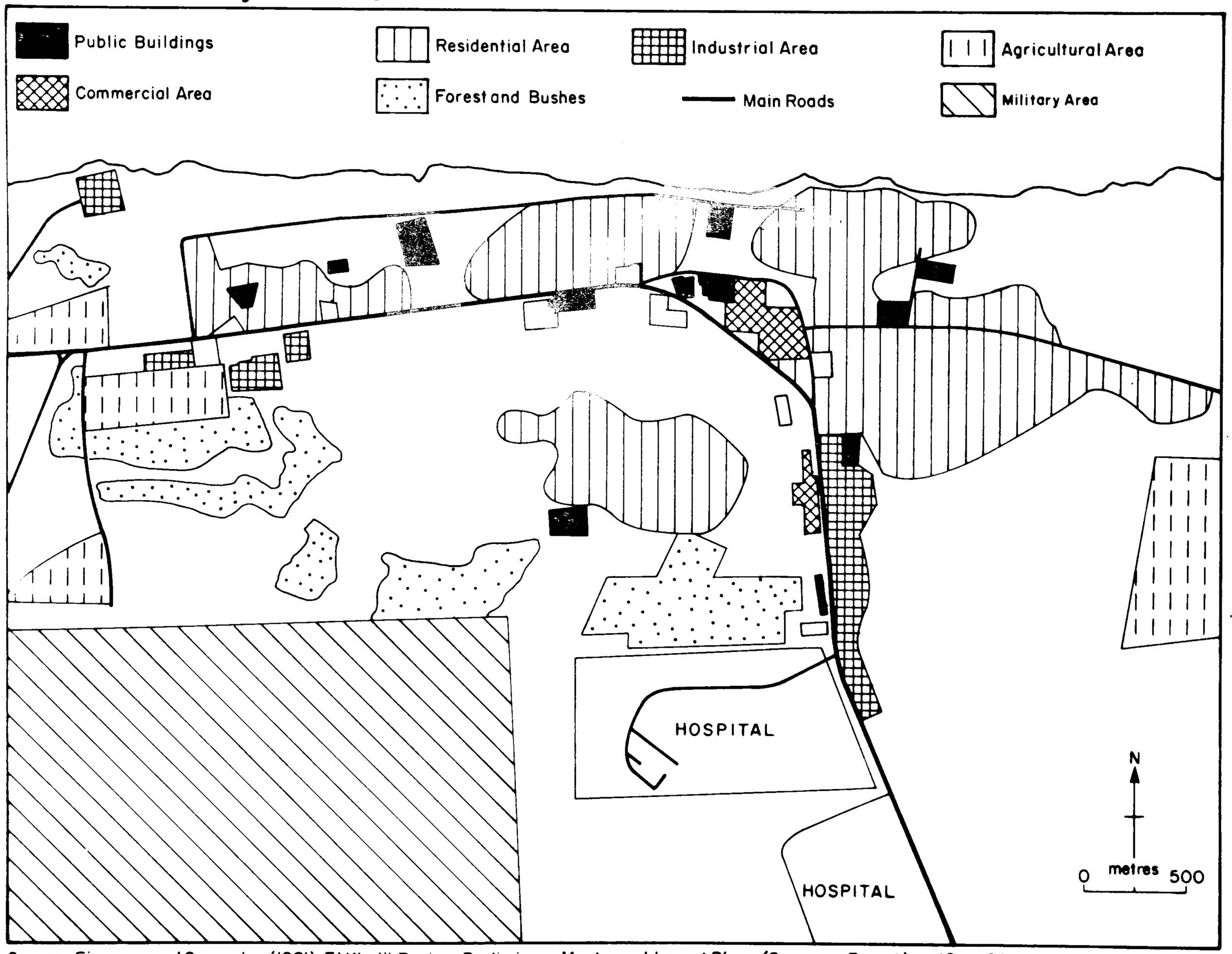
Table 6. 26

Sirte - Land use Changes Between 1966 and 1979

Type of use	1966			1979		
	Area in ha.	% of Built up Area	% of Planned Area	Area in ha.	% of Built up Area	% of Planned Area
Residential	28.3	64.75	35.41	131.3	63.27	28.17
Commerce and Business	1.4	3.20	1.75	11.8	5.68	2.53
Government, Administration and Military	5.5	12.58	6.88	5.7	2.74	1.22
Education	0.8	1.83	1.00	13.3	6.40	2.85
Health	-	-	-	2.7	1.30	0.57
Social, cultural and Religious facilities	-	-	-	1.9	0.91	0.40
Industry and Warehousing	0.1	0.22	0.12	4.8	2.31	1.03
Green Open Space	-	-	-	6.8	3.27	1.45
Public Utilities	-	-	-	7.9	3.80	1.69
Road network	7.6	17.39	9.51	21.3	10.26	4.57
Total Built-up Area	43.7	100.0	54.69	207.5	100.0	44.5
Vacant	36.2		45.30	259.2		55.5
Total Area	79.9		100.0	466.7		100.0

Source: Compiled from McGaughey, Marshall, McMillan and Lucas (1967) Master Plan for the City of Sirte 1988, Tripoli p.106, Speerplan and Finnmap (1981) El Khalij Region, Existing Condition 1979 and Regional Potential, Tripoli, p.243.

Fig 6·26 SIRTE: Existing landuse 1979



Source: Finnmap and Speerplan (1981) El Khalij Region - Preliminary Master and Layout Plans (Summary Report) vol2 p28

8. Total land (including built-up area and vacant land) rose from 79.9 ha in 1966 to 466.7 ha in 1979.

The 1967 plan envisaged a modern expansion of the built-up area between the old Tripoli-Benghazi highway and a small bypass to redirect heavy interurban traffic away from the town centre. In practice urban expansion has taken place south and east of the main highway and to the west of the existing settlement. Most of the new residential developments have occurred outside the guidelines of the Master Plan. Major new developments to the south of the highway include a large area allocated for military use, and two hospitals, while a new industrial zone has grown up along the eastern side of the highway containing bakeries, car repair workshops, carpenters, blacksmiths and agricultural machinery repair shops. The area between the old highway and the bypass has been developed for commercial use, as projected in the Master Plan. However not enough land was available in the town centre to accommodate the growth in administrative and commercial activities and buildings for these purposes have grown up along the highway.

Three distinct housing types may be identified:

(i) Traditional courtyard houses constructed of mud and stone, which survive at the centre of the old settlement, most of them in a reasonable state of repair.

(ii) Housing corporation schemes consisting of detached single-storey dwellings but in a number of different architectural styles (Plate 6.14).

(iii) Multi-storey blocks of flats located to the south of the highway (Plate 6.15).

Because of the rapid pace of urban growth, the existing built-up area lacks proper coordination and must present serious problems for

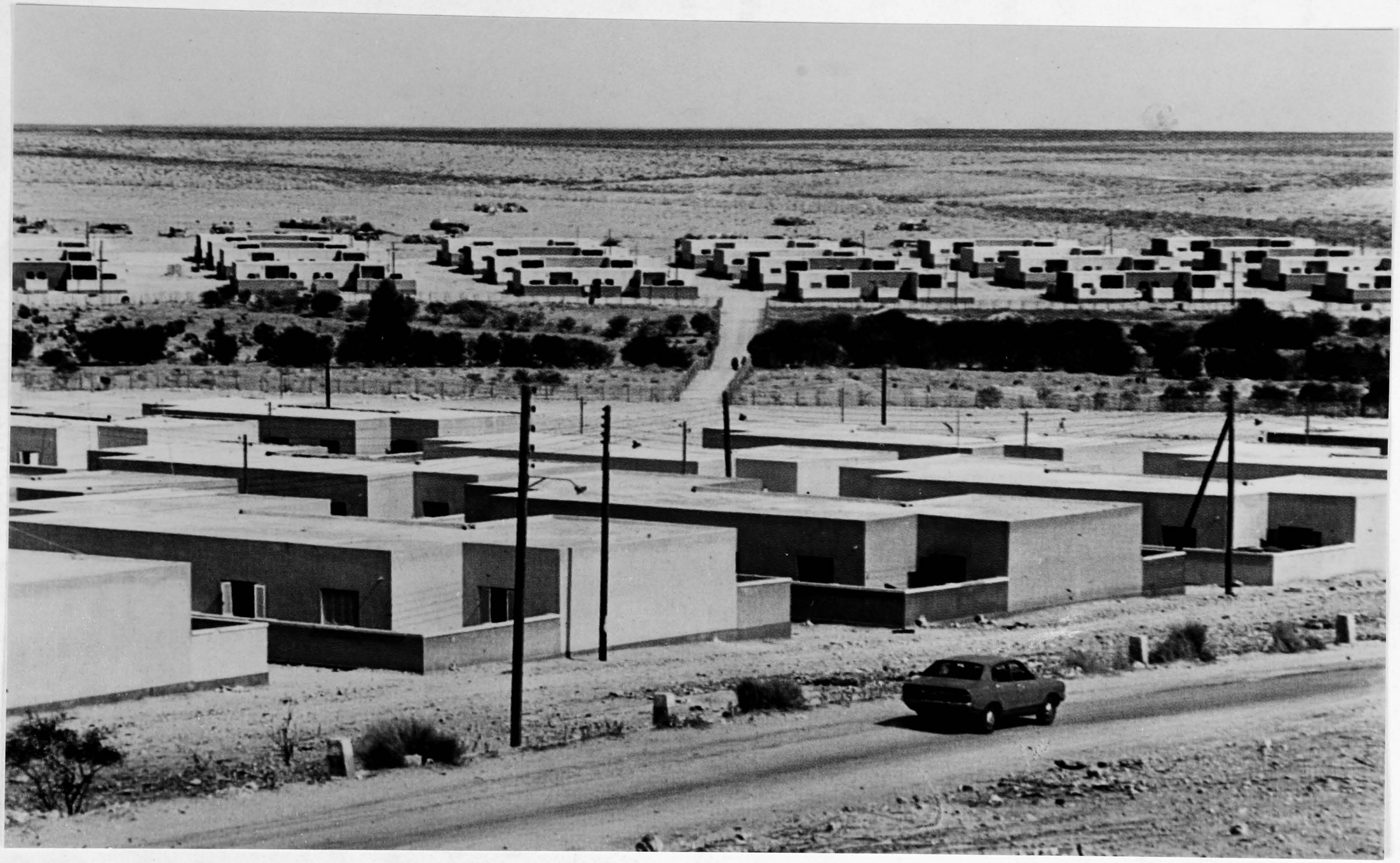
Plate 6.14



One type of housing in Sirte

Source:- General Board of Tourism and Fairs (1976) Souvenirs from Libyan Arab Republic, Tripoli.

Plate 6.15



Housing corporation scheme in the west of the old settlement (Sirte)

Source:- General Board of Tourism and Fairs (1976) Souvenirs from Libyan Arab Republic, Tripoli.

future urban planning e.g. the inadequate zoning of land use and poor landscaping of open spaces. There is an urgent need for a new bypass to redirect heavy inter-urban traffic to the outskirts of the town.

The NPPP in 1979 recommended that Sirte should be promoted to a subregional centre with a projected population of between 50,000 and 100,000. Sirte occupies an important position in the central coastal belt which is being given priority in current development strategy. Certain non-economic factors are also contributing to the growth of the town. A new Master Plan is being formulated by Finnmap-Speerplan based on a projected population of 80,000 by the year 2,000 when the total planned area will be 607.4 ha.(49)

6.5 CONCLUSION

Due to the state intervention profound functional changes have affected the small towns in Libya during the last two decades. These changes have resulted in the striking morphological transformation of the small towns.

Unfortunately physical expansion has been much greater than the original Master Plans had projected so that important sectors of the urban area of the small towns have developed without proper planning and outside the guidelines established by the Master Plans commissioned in the late 1960's. This presents some acute problems for urban planners preparing a new set of Master Plans for these towns.

In addition to the basic criticism of the plans which were outlined in Chapter three (see page 112) one could add the following points:-

(i) It can be seen that while some of the main recommendations concerning the planned structure and form of these towns as well as many of the specific land use and transport proposals have been implemented, there are many aspects of the original Master Plans which have not been carried out.

(ii) The Master Plans commissioned in the 1960's provided a good inventory of existing land use and provided clear guidelines for future expansion within the framework established by the population projections made at that time. However the lack of experienced planners and administrators in the Baladiyah and the absence of the necessary legislative measures governing urban development would have presented major constraints on the successful implementation of the original Master Plans. They proved incapable of dealing with the rapid physical expansion experienced by these towns during the 1970's.

(iii) All the Master Plans for the small towns have been prepared by foreign consultants from both the Western industrialised countries and the Eastern bloc. This policy has brought different planning philosophies and ideas to Libya's urban development but foreign consultants have often ignored environmental conditions and social and cultural values when preparing their recommendations.

(iv) To produce a rigid and fixed Master Plan for towns without taking into consideration the nature of growth and future expansion is a futile exercise. What is required is a set of flexible guidelines and alternatives that will allow the planning process to adjust to the changing pattern of urban growth. But to be effective this must be coordinated with a national spatial strategy in which the future role of each settlement is clearly determined.

To date Libya has failed to achieve the coordination of planning at the national and local levels and in many cases the pattern of growth of a town established in the Master Plan differs from that set out in the National Physical Perspective Plan.

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CHAPTER SEVEN

SELECTED PROBLEMS AFFECTING THE SMALL TOWNS

7.1 INTRODUCTION

The rapid urbanisation and expansion of the Libyan small towns have created severe problems. The problems vary according to local conditions and the particular stage of development of each town but few of these problems are unique to the small towns and most of them can be found in all urban centres in Libya including the two major cities. The aim of this chapter is to draw attention to some of these problems. Fieldwork and discussions with the residents of selected small towns revealed five major problems : water supply, sewage, the problem of deteriorating historic centres, housing, and urban encroachment on agriculture.

7.2 THE PROBLEM OF WATER

7.2.1 Water Supply

In an arid country like Libya, urban development has only been possible as the result of the tapping of groundwater supplies. Over the years towns and oasis settlements have evolved where groundwater existed.

Throughout the Middle East water provides a key which explains the distribution of towns and cities, for in the more arid parts permanent settlement was only possible where adequate and reliable water resources were to be found.[1] Concern with availability of water is usually marginal to development considerations but not in Libya. The desert climate and uncertain weather phenomena make the question of the availability of water vital to Libya's development strategy. It imposes basic limitations on agricultural expansion and places constraints on urban and industrial

development, imprisoning Libya within the tough grip of economic reality along every step of the way.(2)

Libya's main water resource is groundwater supplemented by desalinization of sea water. Hardly seven per cent of the country receives more than 100 mm of rainfall, which is the absolute minimum for marginal dry farming. The area for rainfed crops is basically limited to 9,400 km² in the Jabel Nefusa and Gefara Plain and 13,000 km² in Jabel Akhdar, where rainfall exceeds 250-300 mm. In addition, annual rainfall has been decreasing steadily in Libya over the past 30 years.(3) Libya's renewable groundwater resources are modest and her fossil water, though considerable, is limited.(4)

Groundwater in Libya falls into two zones. Firstly, the northern zone where the water is renewable in the coastal plains of Tripoli, Benghazi and near Misurata and secondly, the southern zone where there are substantial fossil water resources which have been dated to be between 6,000 and 30,000 years old. The quantification of Libya's groundwater is subject to different interpretations.(5) In view of the growing population of the country and the desire of the state to raise the standard of living, water is a major physical constraint. The availability, adequacy and convenience of the water supply are a good measure of the standard of living; without running water in the homes daily life remains arduous.(6) There is no doubt that the major physical constraint on the development process is the water supply which must be of good quality for human consumption and available in large quantities for agriculture. During the past few years the groundwater reservoirs in the coastal areas have been subject to overpumping, and as a result of the low rate of recharge, associated with the aridity of the climate, there is a tendency towards depletion of this resource.(7) Seawater intrusion of the aquifers has already caused a deterioration in water quality in some

areas where it has become unfit for both urban and agricultural use. Since 1965 the renewable water has been exploited so heavily in the area around Tripoli that the rate of use was estimated to be six times the rate of recharge in 1981.(8) The impact of agricultural, industrial and urban development on groundwater resources have been severe; by 1981 the water at points such as Bin Gashir and Suwani bin Yadim had been pumped to below sea level so that the gradient in the aquifer ran south away from the sea. The problem of sea water intrusion has already affected the wells six km inland which supply Tripoli city.(9)

Until recently agricultural demand for water has dwarfed domestic and industrial needs in nearly all parts of the Middle East. However, with the rapid growth of urban centres and the development of industries, new and large demands have been created.(10) Nowhere is this better illustrated than in Libya which is now facing a very serious water problem. Meeting the growing demand for water will only be possible by transferring water from the south, the extensive recycling of water and the construction of more desalination plants. As we have seen in the previous chapter, the populations of small towns are growing rapidly which means that the increased demand for water will place an even more severe burden on available water supplies.

In the Middle East, the level of access to piped water supplies by many urban residents is still unsatisfactory. This is especially true of the smaller towns which have not benefited to the same extent from the infrastructural investment that has often been concentrated in the capital cities and other major centres.(11)

The present water supply for Libya's small urban centres is unsatisfactory in quantity and quality; the underground water from aquifers, the existing desalination plants and wells is insufficient to meet existing needs and certainly inadequate for projected future demands.

The water quality in a large number of small towns is below acceptable international standards. The development of the water distribution networks, in general, is well advanced and adequate for current demands. However the water treatment plants will have to be enlarged to cope with future demand and in many cases the capacity of the water distribution networks will also have to be enlarged and expanded.

Precise records of water consumption in Libya are not available. The National Physical Perspective Plan estimated that the daily per capita water supply standard for all towns should be of the order of 250 litres. However, this figure does not include requirements for industrial and other non-domestic uses.(12)

Water supplied to a settlement can be classified according to its size and ultimate use as follows:

a) Domestic : This includes water supplied to houses and hotels for sanitary, culinary, drinking, washing and bathing purposes. The range of consumption varies according to the population size of the settlement and to the year of development.

b) Commercial and Public : This includes water provided to commercial plants, public buildings such as municipalities, hospitals, mosques, schools, as well as water used in public services such as flushing toilets, cleaning streets and fire protection. Such water use amounts to 10 per cent of the total per capita consumption regardless of the population size of the settlement.

c) Industrial : Water supplies to industrial plants.

d) Loss and waste : This water is sometimes classified as "unaccounted for" although the amount is approximately known. It is due to meter and pump slippage, unauthorized water connections and leaks in the mains. In a system that is 100 per cent metered and moderately well

maintained, the "unaccounted for" water can be about or below 10 per cent. (13)

Therefore, the total consumption in a settlement is the sum of the foregoing uses, plus the loss and waste. A survey by Doxiadis in 1980 estimated the proposed water consumption rate for the region of Benghazi to the year 2000. Table 7.1 shows the water consumption rates per category and population size. while Table 7.2 presents the percentage distribution of water consumption in various uses according to the category and size of population.

The projected "loss and waste" percentage shown in Table 7.2 is compatible with amounts observed in various water supply networks all over the world. However on present evidence it is unlikely that this low level of wastage will actually be achieved. Not all water used is actually metered (in many cases meters have been broken or bypassed) and distribution systems are poorly maintained. In reality losses may be as high as 25 per cent. The organisation of maintenance services and the effective metering of water use should be given top priority in order to improve present and future conditions. Minimisation of leakages should be considered a first step towards a successful water preservation programme.

Water problems are most acute in the Gefara Plain where there is the largest concentration of population in the country and the most intensive agricultural development, plus a very high concentration of industrial establishments. Table 7.3 illustrates the way water consumption has increased from 1948 to 1978. The net water consumption in 1948 was about 19 million m^3 per year. During 1953 this had increased to about 30 million m^3. By 1958, net water consumption increased to about 90 million per year. This figure rose to 361 million m^3 per year in 1973 and in 1978 had reached 483 million m^3 (14).

Table 7.1 : Water Consumption Rates (in lit/cap/day) Per Category and Population Size of Settlements

Category of Settlement	Population Size	Year			
		1985	1990	1995	2000
Regional Centre (large cities)	400,000-800,000	240	260	290	320
Urban Centres (Intermediate Towns)	50,000-200,000	205	225	245	270
Central Settlements (Small Towns	10,000- 30,000	175	195	210	230
	3,000- 10,000	150	165	180	200
	Up to 3,000	130	145	160	175
Remaining Settlements (Small Towns	2,500- 10,000	140	155	170	184
	Up to 2,500	120	130	145	160

Source: Doxiadis Associates (1980) Benghazi Region, Physical Development Plan, Development of Settlements, Athens Report 17, p.76.

Table 7.2 : Percentage Distribution of Water Consumption in Various Uses Per Category and Population Size of Settlements

Category of Settlement	Population Size	Domestic	Commercial & Public	Industrial	Loss & Waste	Total
Large Cities	400,000-800,000	60	10	20	10	100
Intermediate Towns	50,000-200,000	65	10	15	10	100
Small Towns	10,000- 30,000	70	10	10	10	100
	2,000- 10,000	75	10	5	10	100

Source: Doxiadis Associates (1980) Benghazi Region, Physical Development Plan, Development of Settlements, Athens, Report 17, p.78.

From 1953 to 1978, the reduction in usable water stored in the Gefara Plain groundwater basin totalled 4.1 billion cubic metres, or over 20 per cent of the total usable water stored in the system. Over 40 per cent of this reduction has occurred in the last five years.(15) As indicated by Latham, usable water in storage is now being reduced by the "dewatering" of the aquifers and by the invasion of sea water which endangers fresh water in storage. This is well illustrated in the eastern part of Tripoli where 15 municipal wells have been abandoned because of the intrusion of sea water and the quality from the remaining wells now exceeds 2,000 ppm salinity.(16)

Table 7.4 shows the future water use in the same area up to the year 2000. It has been estimated that in 1978 alone some 563 million cubic metres of water were being pumped from the region's aquifers and this amount is increasing every year.(17) At present 85 per cent of this water is being used for agriculture with urban and industrial use taking the remainder. However, it is expected that the consumption rate of the region's urban centres will increase faster than that of agriculture.

Underground water is the main source of supply for all small towns, but several of those located on the coast are able to supplement their underground supply with desalinated water. Table 7.5 shows the source of water supply in each town. It is clear from this table that water from wells forms the main source.

One of the main problems associated with urban growth is the shortage of water supply which is often overlooked in studies of urban development. Scarcity of water in Libya could impose absolute limits upon urban growth. The present water supply in almost all the small towns is limited and insufficient to meet the daily requirements of the population. In many cases the water available is brackish with high salinity which is above the maximum acceptable international standard

Table 7.3 : Water Use in the Gefara Plain 1948-1978 in Millions of cubic metres Per Year

Year	Agricultural Water Application	Urban Water Use	Total Water Use	Net Water Consumption
1948	12	12	24	19
1953	16	23	39	30
1958	80	25	105	90
1973	343	75	418	361
1978	463	95	563	483

Source : Latham, J.S. (1984) "A rationale for a "Green River" to supply the Gefara Plain of North West Libya" Unpublished paper presented to the Symposium On Libyan Development held on 15th and 16th of February at SOAS, University of London, London pp.14.

Table 7.4 : Future Water Use in Gefara Plain 1978-2000 in Millions of cubic metres Per Year

Year	Agricultural Water Application	Urban Water Use	Total Water Use	Net Water consumption
1978	463	95	563	483
1985	580	170	750	640
1990	685	250	935	790
2000	845	330	1175	990

Source: As quoted by Latham (1984) from Welsh, J.L. (1979) "Critical Water Problems of the Gefara Plain and suggested immediate Actions" FAO Report, Rome pp.16.

Table 7.5 Source of Water in the Small Towns

Small Towns	Source		
	Wells	Springs	Desalination
El Merj	W	+	
Zliten	W		X
Tarhuna	W	+	
El Khums	W		
Sirte	W		X
El Jmail	W		
Yefren	W	+	
El Garabulli	W		
Zwarah	W		X
Sabratah	W		
El Aziziah	W		
Brak	W	+	
Gherian	W		
Bani Walid	W		
El Abiar	W	+	
Beninah	W		
El Jof	W		
El Ajelat	W		
El Gubbah	W	+	
Shahat	W	+	
Ez Zahra	W		
Nalut	W		
El Bregah	W		X
Murzuq	W		
Jalu	W		
Hoon	W		
Mizdah	W		
Tokrah	W		
Waddan	W		
Gaminis	W		
Msaid	W		
Ghdams	W	+	
Tolmeitha	W	+	
Ubari	W		
Ghat	W		
Sorman	W		
Soussa	W	+	X

Source : As observed during fieldwork carried out in 1981.

of 1500 ppm. For example the average salinity of water in wells supplying the town of El Abiar is about 1,800 ppm. Therefore the quality of the water is bad, and the existing water works do not provide any treatment apart from chlorination which takes place in the pumping station. Tokrah provides a second example where the wells supplying the town are either dry or their water is very saline due to seawater infiltration; the existing water works do not provide any form of treatment. The town of M'said has two water network distribution systems, one for domestic needs and the second, using brackish water with high salinity of 3,000 ppm, for non-domestic purposes. All houses are connected to both systems. Other examples of high salinity can be found in small towns such as Sirte, Zliten, El Aziziah, El Garabulli, Sorman, Ez Zahra,El Ajelat, Sabratah and Zwarah. The problem is not only the shortage of water but also the quality of the water.

In most of the small towns all parts of the built-up area, even those quarters developed outside the guidelines established by the Master Plans, are connected to the municipal water distribution networks. However the capacity of these networks is not always sufficient for demand. Inadequate water resources and pumping facilities together with maintenance problems can lead to interruptions to the supply to individual dwellings. In some cases the different quarters of a town are supplied in rotation with the water supply only available for six hours a day. Unless new resources of water can be found and new techniques evolved for more efficient use of this scarce resource, the continued expansion of many small towns, together with rising per capita consumption of water, will merely aggravate these problems.

7.2.2 Future Requirements

Knowledge of the total water resources of Libya is not complete but what is certain is that there will be a growing deficit of water resources, especially in coastal areas, coupled with a growing demand for water from the thirsty cities and small towns. Also, requirements for water for urban and industrial use will increase dramatically. Table 7.6 projects the urban and industrial demand for water in a selected number of small towns, as well as for Tripoli and Benghazi for the years 1985 and 2000 as estimated by Italconsult in 1976. This illustrates the growing demand which Italconsult argued could only be met by the transfer of water from the south as well as by the increase in capacity and production of existing desalination plants and the construction of new ones. Doxiadis, in 1979, also estimated the daily demand for water. Table 7.7. shows the total average daily water supply needs in selected small towns. This shows the growing demand for water for both domestic and industrial uses. Water distribution facilities have also to be constructed; facilities such as pipes for the new networks, water treatment plant, storage facilities and meters. Table 7.8 shows the requirement for water distribution facilities in selected small towns and Table 7.9 those for additional water storage capacities.

7.2.3 Water Resource Diversification

The problem of water in Libya is not only supplying small towns and other urban centres with water for drinking purposes and industrial development but also in providing water for agriculture. The livelihood of several small towns depends directly or indirectly on agricultural activities in their hinterland so that if scarce water resources are diverted from the agricultural sector to supply urban consumers then such action could have serious consequences for their economies.

Table 7.6 Urban and Industrial Water Requirements for Selected Small Towns and For Tripoli and Benghazi for the Years 1985 and 2000 (10 m /year)

Urban Centre	1985	2000
Tripoli	70.5	111.3
Benghazi	35.0	54.7
Zliten	4.8	11.3
El Khums	6.6	14.7
El Garabulli	1.4	3.9
El Aziziah	2.9	7.0
El Ajelat	3.6	6.8
Zwarah	3.3	6.1
Gaminis	2.0	4.6
Tokrah	0.6	1.5
El Abiar	2.2	5.7
El Merj	5.2	12.3
El Gubbah	1.8	4.6
Msaid	0.7	1.5
El Bregah	2.3	9.1
Sirte	2.8	8.6
Ez Zahra	0.8	3.3
Sorman	1.3	2.8
Sabratah	0.6	1.4

Source : Italconsult (1976) Settlement Pattern Study, Rome (8 vols).

Table 7.7 : Total Average Daily Water Supply Needs in Selected Small Towns

(in cubic metres daily)

Small Towns	1985	1990	1995	2000
Beninah	686	883	1,139	1,480
Tokrah	1,425	2,632	3,675	4,830
El Abiar	3,857	4,863	5,781	6,900
Gaminis	690	822	976	1,200
El Merj	12,300	17,437	24,010	31,320
Tolmeitha	735	1,188	2,201	3,450
Shahat	1,260	2,012	2,845	4,370
Soussa	723	967	1,346	2,000
El Gubbah	1,154	1,401	1,692	2,000

Source: Doxiadis Associates (1980) Benghazi Region Physical Development Plan Development of Settlements, Athens, Report 17,p.197.

Table 7.8 : Requirements for Water Distribution Facilities in Selected Small Towns

(Number of new consumers/households)

Small Towns	1985	1990	1995	2000
Beninah	900	800	1,000	1,300
Tokrah	3,250	4,000	4,000	3,500
El Abiar	3,300	2,900	2,590	2,470
Gaminis	450	380	440	580
El Merj	17,500	17,500	20,500	18,000
Tolmeitha	2,100	2,300	3,280	4,520
Shahat	1,150	1,920	3,230	5,450
Soussa	660	1,040	1,620	2,520
El Gubbah	1,060	800	910	600
Msaid	1,800	-	-	-

Source: Doxiadis Associates (1980)Benghazi Region,Physical Development Plan, Development of Settlements, Athens, Repot 17, p.202.

Table 7.9 : Requirement for Additional Water Storage Capacities in Selected Small Towns

(in cubic metres)

Small towns	1985	1990	1995
Beninah	1,000	500	-
Tokrah	600	700	800
El Abiar	1,300	700	700
Gaminis	400	400	-
El Merj	4,500	1,000	1,000
Tolmeitha	600	400	800
Shahat	500	600	1,000
Soussa	-	300	600
El Gubbah	500	600	-
Msaid	550	200	-

Source: Doxiadis Associates (1980) Benghazi Region, Physical Development Plan, Development, Development of Settlements, Athens, Report 17,p.213.

Additional water resources will, therefore, be required in the foreseeable future and there is a range of technically feasible solutions available to meet this requirement. What is clear is that Libya's water problems must be tackled at the national scale. Of the variety of alternatives which have been put forward two are actually being implemented.

(i) Desalinated sea water

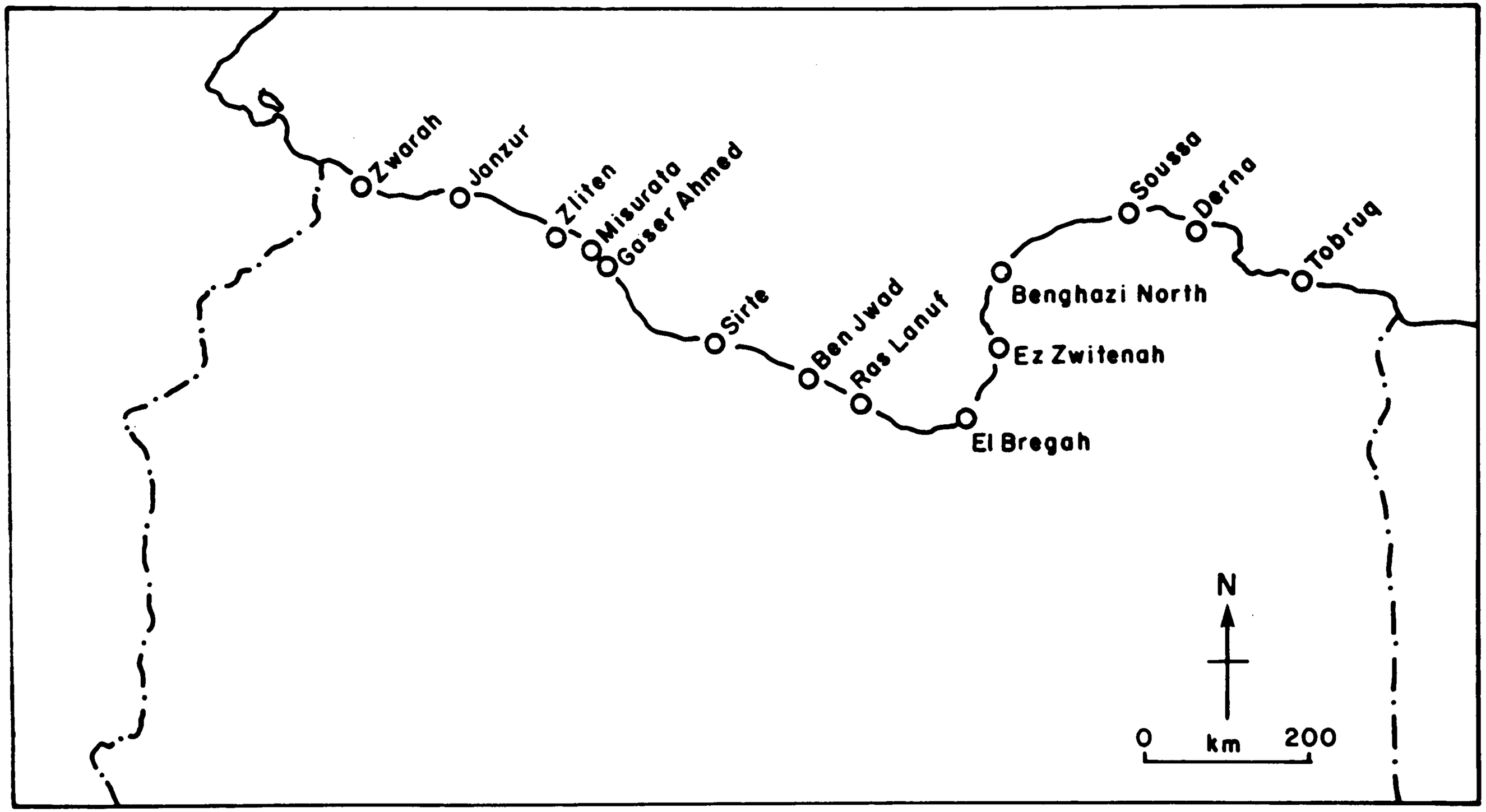
There is no doubt that desalinated sea water is an almost inexhaustible source of fresh water. But there are two serious limitations. Firstly, the cost per unit volume is high and secondly, it requires a high level of technological infrastructure. At present there are at least 14 desalination plants in Libya (see Figure 7.1). There are plans to increase the number of plants and the capacity and production of existing plants.(18)

The capacity and production of desalination plants in Libya has increased rapidly since 1975. Nevertheless these plants contribute only a small proportion of Libya's total requirement. For example in the Tripoli region they cover only 6.5 per cent of the actual needs of the towns and industries.(19) The National Physical Perspective Plan has proposed the installation of nine large desalination plants with a total productive capacity of the order of 13 million cubic metres per day in the year 2000. It is proposed to connect these plants with a regional water pipeline network serving all settlements.(20) The construction of large desalination plants should reduce the cost of the water produced but it will still be expensive and will only be used for domestic and industrial purposes.(21)

(ii) The man-made river

Libya's water resources are by no means negligible but by their nature they are limited. The fossil water in the south has scarcely been touched and it is this resource which will provide water for all users

Fig 7·1 DISTRIBUTION OF DESALINISATION PLANTS IN LIBYA, 1984



Compiled from different sources

in the years to the end of the century.(22) As indicated by Allan, it is difficult to give reliable figures for the levels at which water extraction could be sustained but it seems likely that the south will be able to yield water at the rate of three billion cubic metres yearly for up to 50 years.(23) The discovery of a huge quantity of good quality water in Libya has added a new dimension to water utilisation in the country. Two questions arise with respect to the exploitation of this resource : firstly, whether the water is best exploited in the south rather than in the more densely populated and physically better endowed north? Secondly, whether, given the high cost of raising and using water for agriculture, it might best be developed for urban and industrial purposes in the north? With the limited success of agricultural development projects in the south and increasing shortage of underground water in the north, coupled with the population growth, the State has decided to tap the desert's water for agricultural, industrial and domestic use in the coastal regions.

Table 7.10 summarizes the groundwater utilisation and resources in 1975. It shows the estimated groundwater use and the planned additional extractions up to 1985, while Figure 7.2 shows four alternative solutions suggested by Italconsult for transporting water to the coastal regions. The third alternative was selected and developed in more detail by Italconsult as can be seen on Figure 7.3. This strategy is now being implemented.

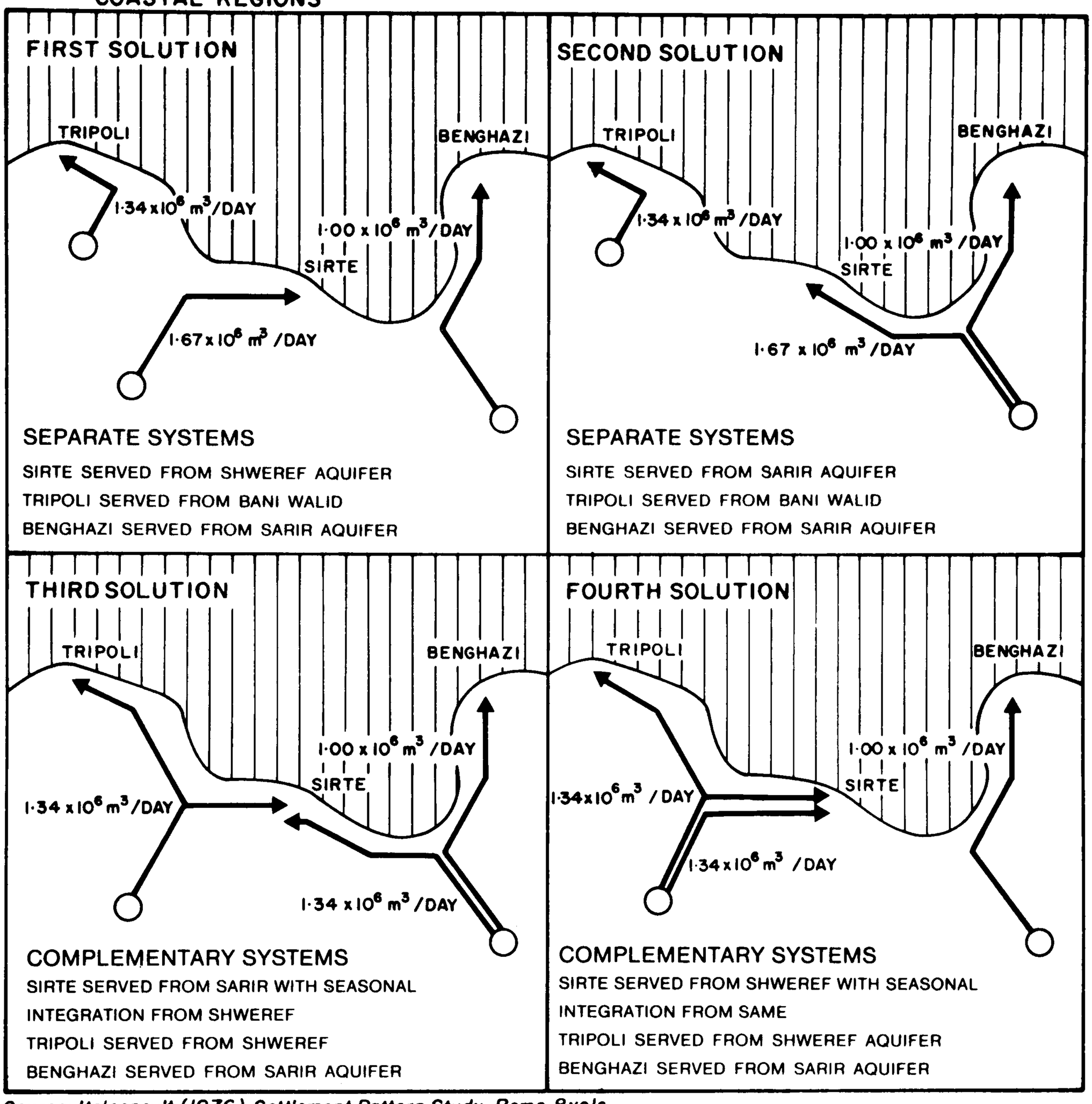
It was reported that on the 6th November 1983, the Libyan Government had signed a $3,300 million contract with South Korean's Dong Ah Construction Industrial Company to lay a massive man-made "river" from the Sahara desert to the Mediterranean coastal regions.(24) The contract is to build 2,000 kms of pipeline to carry 4 million cubic metres of water a day from Tazerbo and Sarir to the small town of El Bregah and from El Bregah to Benghazi in the north east and Sirte in

Table 7.10 : Libya, largescale groundwater utilization and resources 1975

Groundwater Basin	Estimated present groundwater use 10 m /year	Planned additional extractions(1975-85) 10 m /year	Quantity of groundwater resources
Fezzar Sub-Basin	200	470	Not yet defined but very considerable
Homra Sub-Basin	20	70	Not yet defined but promising; requires investigations
Misurata Sub-Basin	180	59	220 x $10^6 m^3$/year
Gefara Basin	377		157 x $10^6 m^3$/year
Gefara Basin	515	80	504 x $10^6 m^3$/year
Kufra Basin	140	140	Not yet defined but very considerable
Calanscio Basin	10(Agriculture) 100(Oil field injections)	1300(Agriculture 100(Oil field injections)	In course of definition apparently considerable
Western Desert Basin	Negligible in Libya (70 in Siwa Oases	Nil	No reliable information available, promising prospects
Jabel Akhdar Basin	30	Not yet defined	126 x $10^6 m^3$/year
Totals	1195 to 1057	2219	

Source: Italconsult (1976) Settlement Pattern Study (El Khalij Region), Rome p.80.

Fig 7·2 THE FOUR ALTERNATIVE SOLUTIONS FOR TRANSPORTING WATER TO THE COASTAL REGIONS



SEPARATE SYSTEMS

SIRTE SERVED FROM SHWEREF AQUIFER
TRIPOLI SERVED FROM BANI WALID
BENGHAZI SERVED FROM SARIR AQUIFER

SEPARATE SYSTEMS

SIRTE SERVED FROM SARIR AQUIFER
TRIPOLI SERVED FROM BANI WALID
BENGHAZI SERVED FROM SARIR AQUIFER

COMPLEMENTARY SYSTEMS

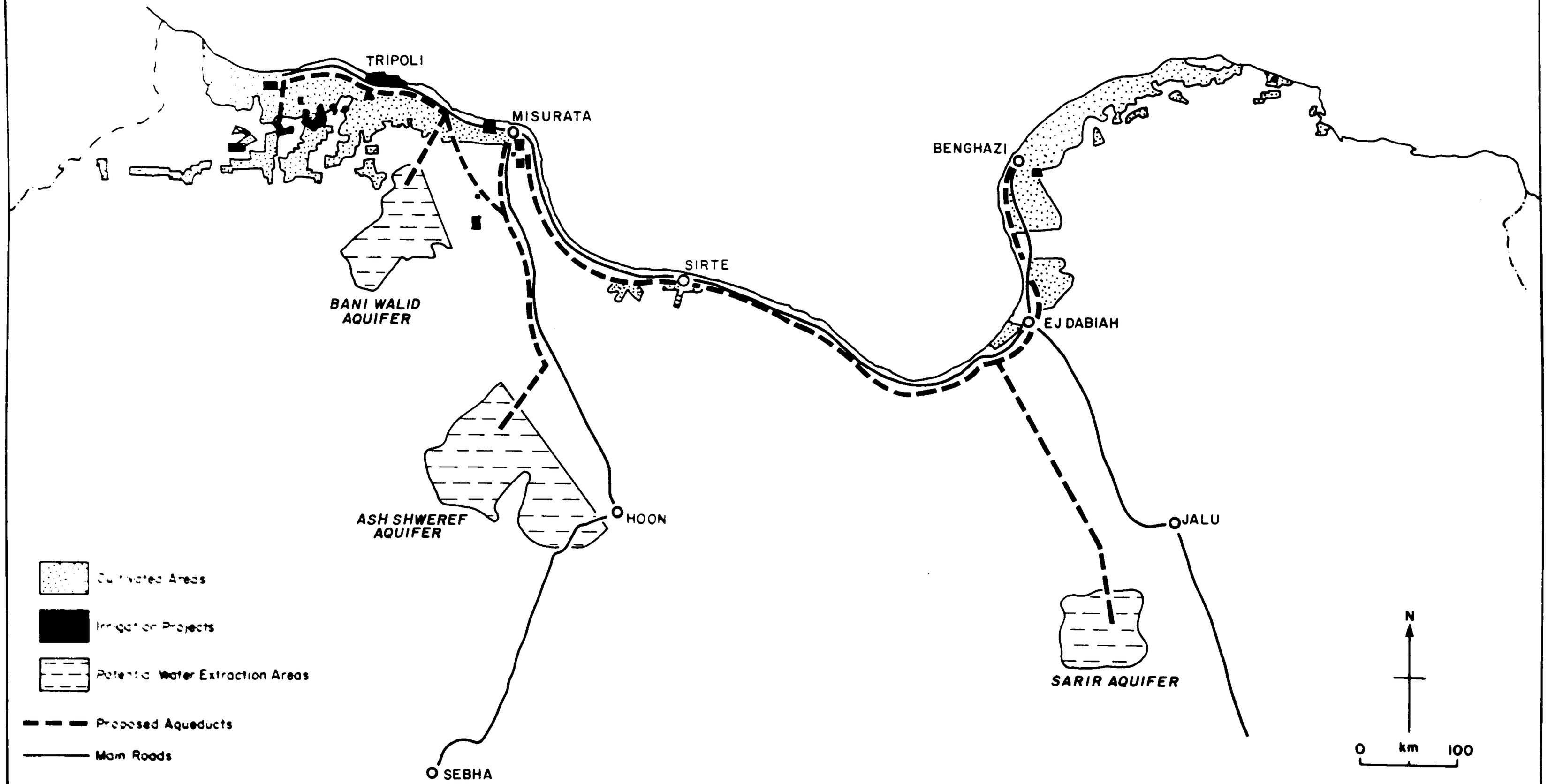
SIRTE SERVED FROM SARIR WITH SEASONAL INTEGRATION FROM SHWEREF
TRIPOLI SERVED FROM SHWEREF
BENGHAZI SERVED FROM SARIR AQUIFER

COMPLEMENTARY SYSTEMS

SIRTE SERVED FROM SHWEREF WITH SEASONAL INTEGRATION FROM SAME
TRIPOLI SERVED FROM SHWEREF AQUIFER
BENGHAZI SERVED FROM SARIR AQUIFER

Source: Italconsult (1976) Settlement Pattern Study, Rome 8vols

Fig 7·3 WATER TRANSPORT TO COASTAL AREA (proposed integrated system)



Source: Italconsult (1976) Settlement Pattern Study, Rome 8 vols

the west. The water will be gathered from 270 wells around Tazerbo and Sarir. Submersible pumps will push the water uphill until the highest point along the pipeline is reached about 300 metres above sea level. The water will then flow north by gravity, with pressure being boosted by a pumping station 60 kilometres south of the coast.(25) Two factories at Sarir and El Bregah will be built by Dong Ah to produce the four metre diameter pipes needed for the work. Over the six year contract period the South Korean firm will have an average of about 8,000 workers, for whom it will build special accommodation facilities. The small town of El Bregah and the new town of Sarir will be the key centres for these activities. The next phase of the project to build the 400 km pipeline from Hasawna to Tripoli is expected to begin some time in 1985.(26) The government has no alternative but to go ahead with the project despite the current economic difficulties. Recycling of waste water, transporting water by undersea pipeline and other ambitious alternatives need a lot more investigation before these methods could be considered as realistic alternatives.

Lastly, water as the most important element of the natural conditions is one of the principal factors determining socio-economic development. The limited availability of water is the main barrier to economic growth and spatial development. Renewable water in the north has been seriously mismanaged in some coastal areas and the remaining resources have to be approached in a particularly careful manner so that returns to available water resources are maximised. It is agriculture which takes the largest share of water consumption. The problem is so acute in areas such as the Gefara Plain that many people argue that all irrigated farming should cease there(27) and suggestions have been made for an agricultural strategy which is low in water use and which maximises the effectiveness of each cubic metre pumped.(28) Water

exploitation and consumption should be controlled by competent administrative authorities able to enforce the qualitative and quantitative protection to prevent wastage and to carry out an active policy in this field. There is a need for water pricing to reflect the true value of water. At present (1984) the consumers pay 20 dirhams per cubic metre and companies and contractors pay 50 dirhams per cubic metre consumed. The price of water per cubic metre should be increased. In particular there is a need to enforce existing legislation regulating water use.

Over the last two decades, the state has been faced with the twin problems of a rapidly rising urban population and, as a result of increasing standards of living, a marked growth in the per capita domestic consumption of water. The result has been a desperate struggle to obtain new sources of water to meet the ever growing demand. Inevitably it has meant that the water has had to be transported over even greater distances towards the growing urban centres. The cost is very high and therefore it should not be wasted on non-viable economic projects. Transporting water from the south is essential and investment in this project is inevitable if the familiar way of life for the majority of Libya's people, living as they do in coastal areas, is to be sustained.(29)

As argued by Allan, part of the investment in the pipelines could be considered as an insurance policy with respect to assured water supplies for Libya's coastal cities.(30) The most appropriate use for the water is to go to urban areas where the returns to water will be better than in agriculture. The Libyan small towns, like other urban centres, can expect to witness continuous population growth and this will be reflected in the need for a continuing water supply and expansion of water distribution networks and associated facilities.

The man-made river project is planned to supply water for both agricultural and urban and industrial consumption. Given the rising

demand for water from urban centres, this scheme may not be able to satisfy the growing needs of Libya's towns and cities unless all the water is made available to the urban centres. Moreover this ambitious scheme will reinforce the importance of the coastal zone and the two subsidiary development axes. It remains to be seen whether small towns lying outside these axes will also benefit from the scheme.

7.3 THE PROBLEMS OF SEWAGE

Perhaps the greatest problem facing the towns and cities in the Middle East at the present time is the provision of adequate sewage and treatment systems. Although water supply has always played a big role in urban development, the disposal of human waste has been almost totally neglected.(31) This is also true of Libya to a certain extent. The development of sewage networks in the country is lagging behind the development of water supply facilities. The problems of sewage are not unique to the small towns but can also be found in almost all Libya's urban centres, including parts of the two major cities which are not yet connected to the main urban networks. Many small towns are not yet provided with integrated sewage networks connected to purification plants which are necessary not only for health reasons, but also to ensure that waste water can be recycled for use by agriculture.

At the present there are four types of sewage facilities in operation in the small towns:

(i) Soakaway pits: This type can be found in the old quarters of towns; they are usually inside the house mostly in the courtyard.

(ii) Septic tanks: This is the most common type of waste disposal found in the small towns. Septic tanks have been installed in the majority of houses built since the 1960's and in some traditional houses that have been modernised. The tanks are usually located immediately outside the dwelling and they are emptied on request by the municipality. A charge

is made by the municipality for this service. The crude sewage collected by the municipality trucks is finally discharged outside the town or into the sea. Although an improvement on the soakaway pits, septic tanks are unhygenic because they involve no treatment of the crude sewage; moreover there is no recycling of waste water. Examples are also known of leakage from septic tanks to underground water supplies which are used for domestic consumption.

(iii) Communal septic tanks: all the new housing estates built by the government are equipped with a number of large septic tanks, each serving a block of 10 dwellings.

(iv) Integrated networks connected to purification plants: this type can be found only in the small towns of El Merj and El Khums. El Merj, for example, a new town, has a sewage system constructed in accordance with the 1964 Master Plan. The system has been planned to serve an ultimate population of 45,000. The morphology of the town facilitates the flow of sewage by gravity, thus reducing the operating cost. The treatment works are based on biological treatment by an activated sludge process. However even with such integrated networks problems are still encountered. During fieldwork carried out in 1981 it was observed that the purification plant was not operating efficiently due to the lack of regular maintenance. The morphology also facilitates the natural discharge of storm water by gravity into nearby wadis. The run-off is collected by suitably spaced interceptors which convey the storm water to pipe collectors or open drains discharging into the wadis. Only the town centre and part of the northwestern area of the town have a combined system for the collection of both storm water and sewage. All the Master Plans prepared for the small towns during the 1960's recommended the construction of separate sewage and drainage systems to be completed by the year 1978.In the course of fieldwork carried out in 1981 the

author found that, with the exception of El Merj and El Khums, work on the sewage and drainage networks had not even begun and septic tanks, together with soakaway pits, continued to be utilised for waste disposal.

The rapid development of Libya's small towns with a simultaneous rise in the standard of household equipment has resulted, in the last two decades, in the growth of water demand and an increase in the volume of sewage to be disposed of. The sewage facilities in most small towns are inadequate for the collection of increased quantities of sewage and pressure on existing facilities is growing. Table 7.11 shows the future average sewage flow in selected small towns projected by Doxiadis to the year 2000. This points to the urgent need for the construction of an integrated sewage network and a separate drainage system in every small town. In the inventory reports published by several consultants, it is indicated that all the new generation of Master Plans commissioned in the late 1970's will recommend the construction of separate sewage and drainage systems for all settlements with more than 2,500 inhabitants by the year 2000, while individual or grouped septic tanks with sand filters will be provided for all settlements with less than 2,500 inhabitants.(32)

A separate sewage network and drainage system is strongly recommended by the consultants because it is argued that in the case of a combined system infrequent rainfall would result in low flow conditions for long periods of time with subsequent deposition and decomposition of solids rich in organic matter, leading in turn to problems in the purification process and drainage to the system.

The cost of providing the small towns with separate sewage and drainage systems will be very expensive. Until the new master plans are published no financial estimates are available but some indication of the scale of investment required can be acquired from figures published

Table 7.11 : Future Average Sewage Flows in Selected Small Towns

(in cubic metres per day)

Small Towns	1985	1990	1995	2000
Beninah	550	710	910	1,200
Tokrah	1,200	2,100	2,900	3,900
El Abiar	3,100	3,900	4,600	5,500
Gaminis	550	650	780	960
El Merj	8,600	12,200	16,800	21,900
Tolmeitha	590	950	1,800	2,800
Shahat	1,000	1,600	2,300	3,500
Soussa	580	770	1,100	1,600
El Gubbah	920	1,100	1,400	1,600
Msaid	450	500	550	600

Source: Doxiadis Associates (1980) Benghazi Region, Physical Development Plan, Development of Settlements, Athens, Report 17, p.245.

by the World Health Organisation. In the early 1970's they made estimates of the likely costs of improving sewage facilities in certain Middle Eastern countries. Table 7.12 shows the cost of meeting sewage disposal targets suggested by W.H.O. for the year 1980 with the assumption that 40 per cent of the urban population are connected to the public sewage systems, 60 per cent of the urban population are provided with household systems and 25 per cent of the rural population are provided with adequate sewage facilities.(33) At today's prices the cost of carrying out these plans could well have doubled.

Because of the scarcity of water in Libya, treated sewage effluents could be used for beneficial purposes such as irrigation, or fish farming. This suggests the need for a coordination between water supply and waste water policies.

7.4 THE PROBLEMS OF DETERIORATING HISTORIC CENTRES

A consequence of modernisation and the gradual Westernisation of all Libya's settlements is that the traditional buildings and neighbourhood complexes are being lost at an alarming rate. Whilst this erosion is undesirable from a cultural and conservationist viewpoint, it is also becoming apparent that problems are also being created of an environmental and social nature. There was a sharp break in the continuum of the evolutionary processes of urban development and rejection of the architectural heritage of the past as modernisation became synonymous with Westernisation (see Plates 7.1 and 7.2) The impact on the historic centres of the small towns has been profound. However they have varied in both time and space while the process began in the coastal cities of Tripoli, Benghazi and Derna with the Italian occupation in 1911, it did not reach the small towns of the interior until the early 1960's.

Table 7.12 Costs to Meet Sewage Disposal Targets Suggested by the World Health Organisation for 1980 in the Middle East

Country	Population to be served 1980 (000)	Increase over 1970 (000)	Cost (million U S dollars)
Libya	1,952	700	40.4
Algeria	13,296	12,336	161.0
Iran	24,128	7,184	534.5
Iraq	9,357	3,270	240.9
Morocco	12,828	8,174	51.1
Saudi Arabia	4,138	2,488	58.2
Tunisia	4,870	1,714	63.6

Source: Beaumont, P. (1980) "Urban Water Problems" in Lawless, R and Blake, G (eds) The Changing Middle Eastern City, Croom Helm. London, p.242.

Plate 7.1



(A) New private housing area in Hoon



(B) One of the old quarters of Brak in urgent need of redevelopment.

Source: Stuart Watkins of Finnmap Oy.

Plate 7.2



(A) New Government built residential area in Ubari.



(B) El Medina El Qadimah - part of the town of Ghat.

Source :- Stuart Watkins of Finnmap Oy.

The steady deterioration of historic centres is aggravated by the continuous misunderstanding of the historical and cultural significance of such centres; an inspiration to future generations attempting to understand the richness of their national heritage.(34) The eagerness for development and the urgency felt to satisfy immediate needs makes the historic centres of the Libyan towns particularly vulnerable. The preservation of the cultural and urban heritage of a nation is important for its well-balanced cultural and social development. Eradication of the national heritage deprives individuals and communities of their own roots as a source of inspiration.(35)

The government's role, once confined almost exclusively to that of tax collecting, conscription and keeping of the peace, has now changed to that of major investor in health and welfare services, educational facilities, infrastructure and industrial and agricultural development programmes.(36) The development and construction boom to try to meet the pressing needs for adequate housing, and schools has contributed greatly to the continuing destruction of the urban cultural heritage.

Zarrugh argued that:

> "Although thousands of housing units and scores of schools and hospitals have been built and the standard of living in the traditional sense has risen considerably, it is obvious to the observer that a loss in the intangible 'quality of life' is accompanying these changes. This is demonstrated by the numerous urban environmental problems that keep hammering at the fine texture of the traditional urban social and cultural fabric of the human settlements in Libya." (37)

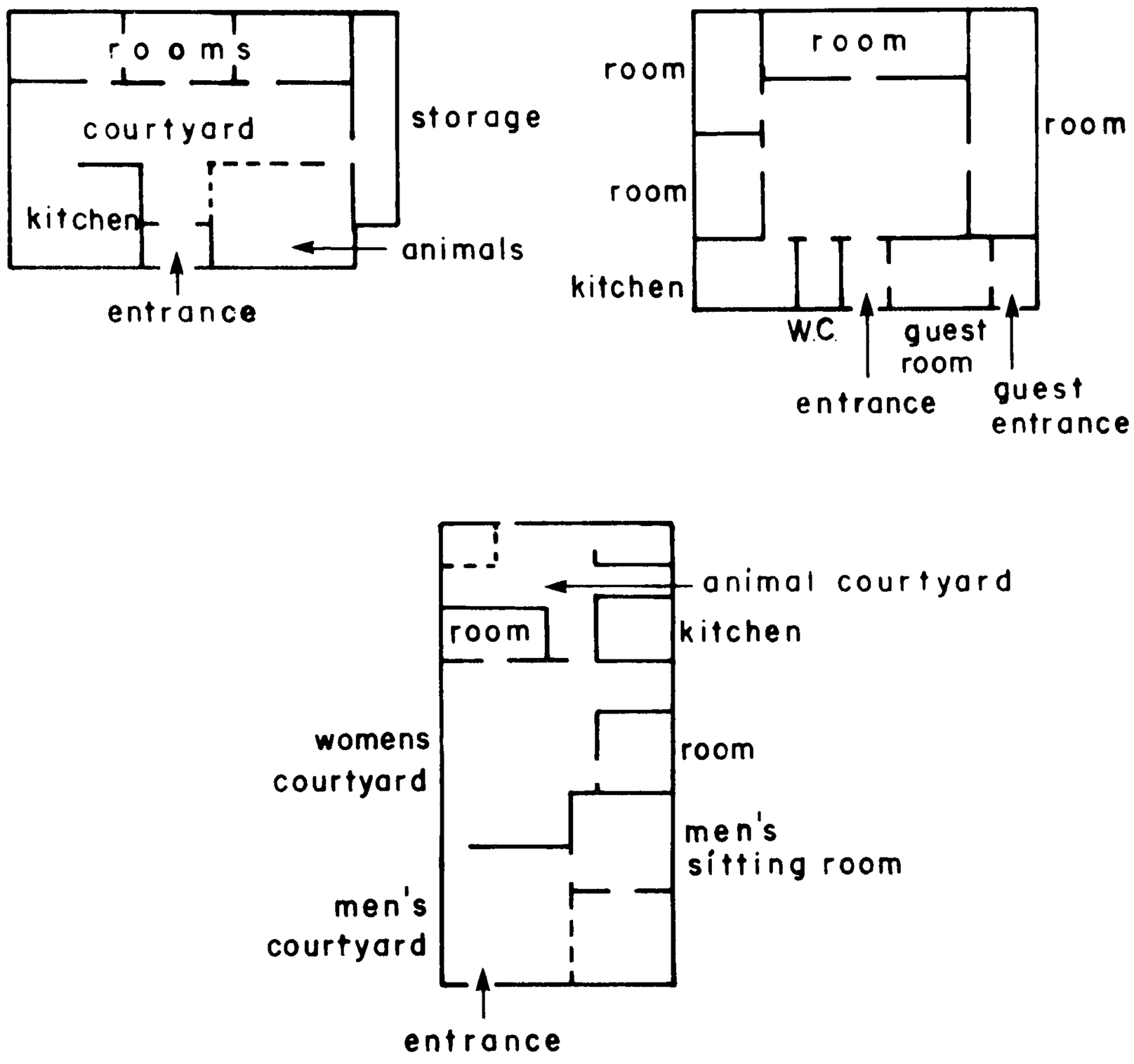
Private speculation is another threat to the historic towns. The search for more profits on the part of speculators make them insensitive to the values attached to old structures. Owners and land developers often motivated by dreams of profitable high rise buildings or modern structures, usually fight measures intended for historic preservation.

Only recently has preservation of historic towns and quarters become an important issue in Libya. It started with the increasing concern with the old town of Tripoli (Medina) after the approval of Tripoli's Master Plan in 1970 and the realisation of its disastrous implications. Study of existing Libyan architecture especially in small towns has come to be ignored very often in the great rush for modernisation. Nearly all towns in the country were traditionally built on the site of an oasis and surrounded by a wall that enclosed the entire town. Entrances to them were few and very narrow. Land use was very compact with few large open spaces. This form, developed over literally thousands of years, is found not only in Libya, but throughout North Africa and the Middle East and is quite clearly the predominant archetype. It has proved to be an effective answer to the problem of building a comfortable human settlement in an arid environment. The exterior wall resists the encroachment of sand, reduces the effect of dusty desert winds and gives the town a definite boundary, psychologically important to the inhabitants.

At the level of the individual dwelling, by far the most common type is that of the courtyard house, usually sharing common walls with neighbouring houses on three sides and with a doorway to the street on the fourth side. These houses usually have one or two storeys with the rooms opening onto an interior courtyard. Figure 7.4 shows the main types of traditional houses in the small towns.

The closely compacted houses serve as barriers to sun and sand and as spheres of family privacy. Family life is oriented towards the open courtyard in the interior of the house. The courtyards are proportional in size to the height of the walls so that there is shade within them at most hours of the day.(38) The house is entered through a corridor which turns or opens on to the court on the side so that a casual visitor cannot see through to the central area of the house. There is a room for receiving male visitors (marboaa) in this corridor. The remaining rooms

Fig.7·4 TYPE OF HOUSES IN OLD QUARTERS OF SMALL TOWNS



Source: Yachiyo and Kisho Kurokawa (1980) Preliminary Planning Alternatives for Sarir New Town, Tokyo

open onto the courtyard. In each old quarter of the small towns there is at least one mosque centrally located and generally with an attached Quranic school, together with, in some cases, a Zawia and a bazaar.

Zliten is the site of the tomb of the venerated Sidi Abd Es-Salam El Asmari (Plate 7.3) and is considered one of the holy towns of Libya. After the death of Sidi Abd Es-Salam in 1573 the town became a religious centre with Quranic schools and zawiyas. The mosque, dating from the fifteenth century, consists of stepped platforms one above the other covered by several series of cupolas and flanked by a fine conical minaret. All these structures have experienced extensive reconstruction in recent years and much of the rebuilding is not in keeping with the traditional architecture. As yet there are no plans for the preservation of the historic fabric of this small town.

Another common feature of these towns is the government palace (kasr), a large enclosed fortress for protection of the townspeople against invaders. Today these palaces are often in ruins. One palace which was still in active use until recently was the Kasr of El Merj. It was 55 yards square, built of stone and clay mortar with round turrets at the corners but in 1963 it was destroyed by an earthquake (Plate 7.4). The fonduk or nozol, used as a resting place for caravans and travellers, is another feature of these settlements. A range of building materials are utilized, including mud, stone, brick, wood and metal depending on their availability in the local environment. The following case studies will describe in more detail the architectural heritage in selected small towns.

1. Ghdams (Plate 7.5)

The small town of Ghdams is the most westerly town in Libya. The town has been an important trade centre in previous centuries as it lies at the focal point of ancient transportation routes. The town dates

Plate 7.3



Sidi Abdussalam Mosque in the Small
town of Zliten

Source:- General Board of Tourism and Fairs (1976)
Souvenirs from Libyan Arab Republic, Tripoli.

Plate 7.4



The Turkish Castle in El Merj damaged beyond repair in 1963.

Source:- Buru, M.M. (1965) El Merj Plain : A Geographical Study, Unpublished Ph.D. thesis, Department of Geography, University of Durham.

Plate 7.5



The oasis of Ghdams : one of the important
oases in the Libyan desert

Source:- General Board of Tourism and Fairs (197b) Souvenirs from Libyan Arab Republic, Tripoli.

back more than 2000 years. Continuously lived in and thriving for centuries, its recorded history began in 20 B.C. when it became incorporated in the Roman Empire.(39) The walled town has a simple but compact physical structure with areas of open space at a minimum to provide a maximum amount of shade for the inhabitants. Much of the street network is roofed to give protection from the heat. Traditionally these dark but cool alleyways, lined with large irregular benches of earth and plaster for pedestrians to sit on, were used only by the male inhabitants while their womenfolk used the rooftops to move from one part of the town to another.

Houses do not have courtyards and the windows open on to the street. The exterior facade of most of the houses has been neglected but their interiors are well maintained and decorated with a maze of corridors leading to the main family rooms. Doors and roofing are made of halved palm trunks with a mixture of mud and straw applied to the exterior surface of the roof for insulation.(40)

The old town, with an area of about a half square mile divided into seven quarters, is now surrounded and dwarfed by modern developments. Although there has been no large scale demolition of the traditional fabric, the gradual encroachment of new developments and the reconstruction of individual houses within the old town is bringing about a substantial restructuring of the historic core. The Master Plan produced in the late 1960's made no recommendation for the preservation of the traditional quarters and measures are urgently required to preserve and protect the unique architectural heritage represented here. (Plate 7.6).

2. Murzuq

Until the middle of the nineteenth century, this small oases town was a very important centre on one of the major Saharan caravan trade routes. Although its commercial role has declined with the decline of

Plate 7.6



Examples of roofless terrace room provide for the circulation of fresh air during summer nights in the small town of Ghdams

Source:- El Maghribi, T. et al (1980) Shadows and Lights from Socialist People's Libyan Arab Jamahiriya. Government Publication, Tripoli.

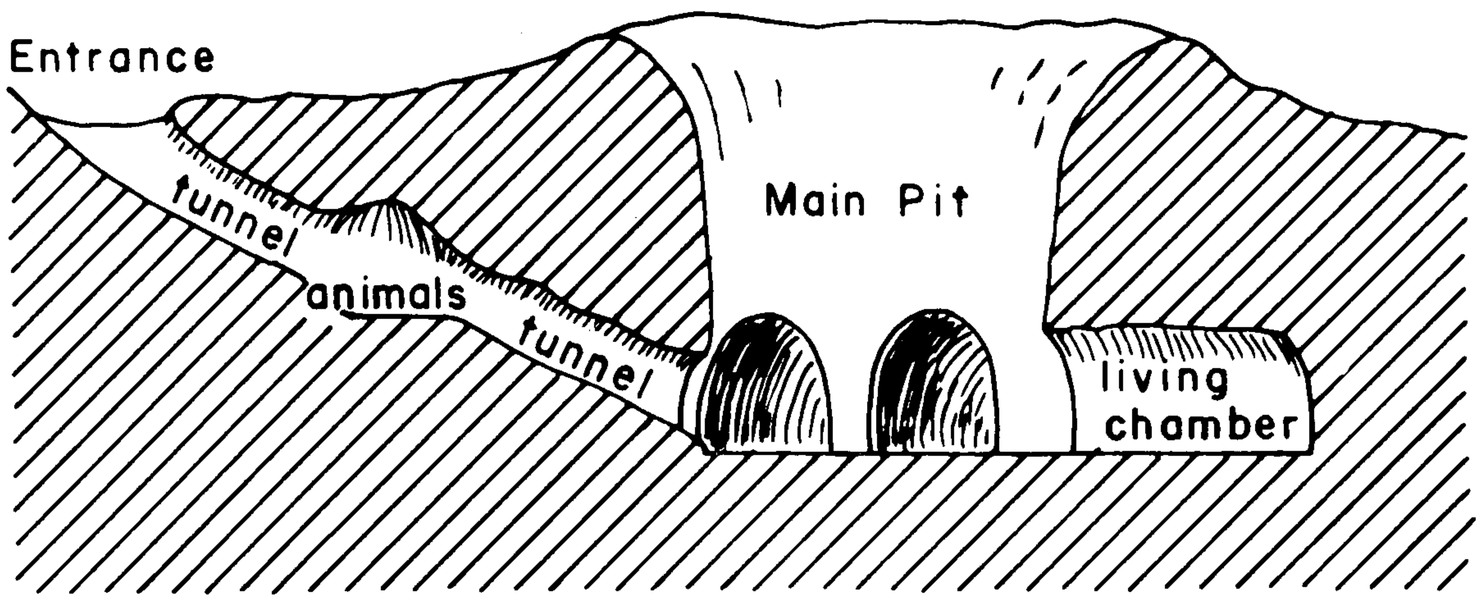
caravan trade, Murzuq has developed new functions in the last two decades including administration and services for the surrounding settlements. The Medina was rebuilt in the last century on two sides of a wide road leading towards the Turkish castle located at its western end. The castle is the most remarkable architectural feature of Murzuq with much of the town characterised by small-scale development. Today the walls, which surround an approximately square area, are in a poor state of repair, while beyond the south wall traces of former defences including three gates can still be seen. Houses are made of earth and therefore normally have to be rebuilt. The town is facing rapid change and the modern quarters now cover a much greater area than the old core which is being steadily encroached upon by new constructions. The majority of dwellings in the old core are in a poor state of repair.

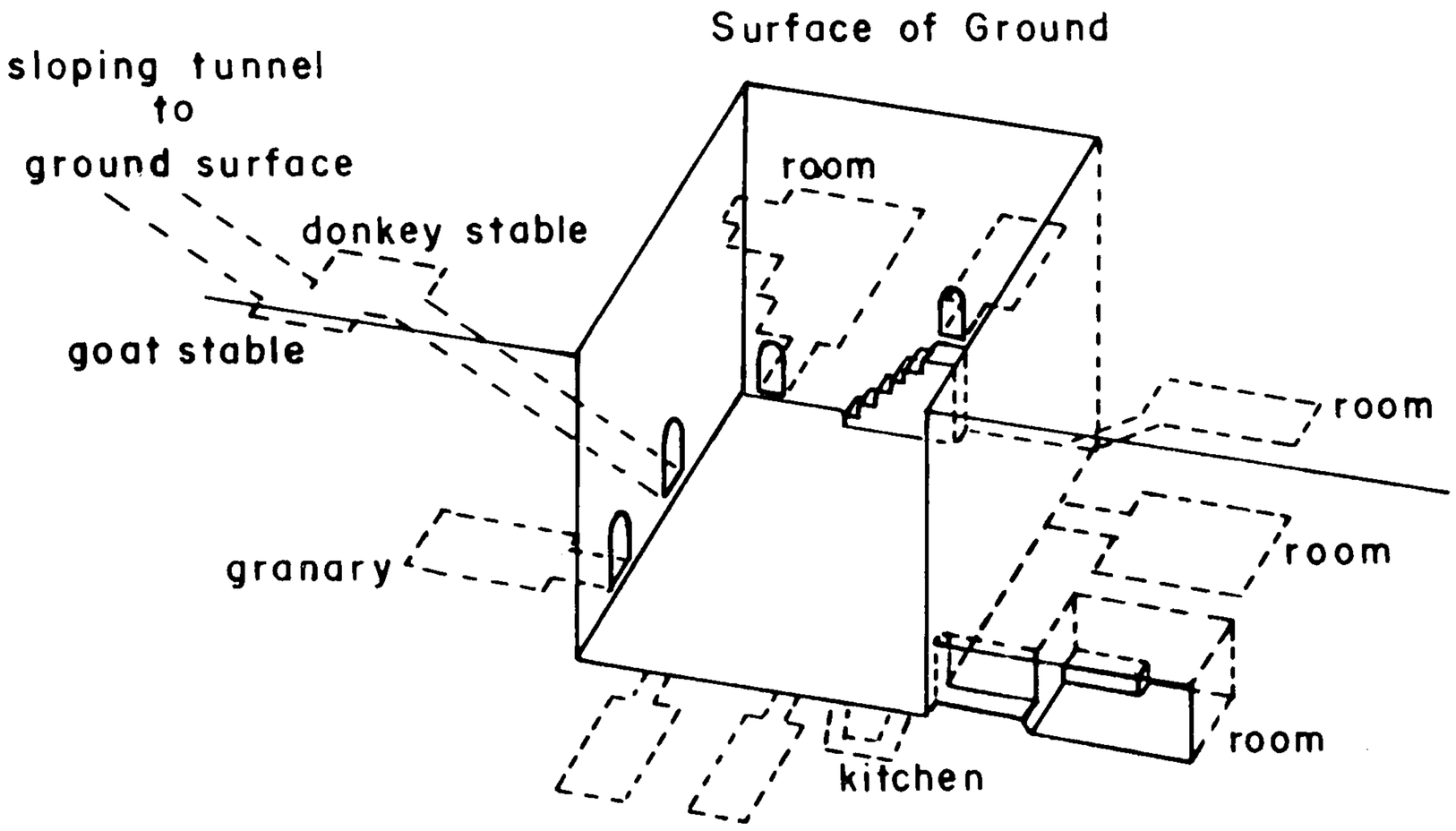
The 1969 Master Plan recommended a block-by-block reconstruction of the old town and suggested that the inhabitants should be evacuated during the period of reconstruction. As a first measure, a detailed inventory and architectural rehabilitation project were proposed in order to quantify the problem in terms of amount of repair or reconstruction needed. The Plan also recommended that the old Turkish castle should be developed as a tourist centre.(41) By 1981 none of these recommendations had actually been carried out.

3. Gherian

The small mountain town of Gherian contains one of the most interesting features of the country's architectural heritage, the troglodyte or underground dwellings (Figure 7.5). Most of these dwellings have long since been abandoned by their inhabitants, but some are still used for storage purposes. The entrance tunnel leads to a main door made of olive wood. The rooms have no windows and only a single doorway but they were constructed in such a way as to allow plenty of diffused

Fig 7·5 TYPE OF DWELLING IN GHERIAN





Source: Zarrugh, S. M. (1976) The Preservation of the People's Cultural and Urban Heritage in Libya: An Evaluation of the current situation and Recommended Framework for Action, with Emphasis on the Old City of Tripoli, unpublished Master of Urban Planning thesis - School of Urban Planning and Landscape Architecture Michigan State University

light. These underground dwellings protected their inhabitants from both the cold winter winds and the hot summer ghibli. During the first half of the twentieth century some traditional style courtyard houses were built and the old underground dwellings abandoned. This process has accelerated since 1960 and in addition to the appearance of extensive modern quarters, some houses in the old town have been rebuilt or modified to meet the new demands of the inhabitants

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With the absence of any national cultural policy the old parts of the small towns face a complex number of problems common to many historic cities in the Middle East including deterioration, misuse of historic buildings, insanitary conditions and decline of its functions and neglect. The problems of the old quarters have been neglected and few attempts have been made to incorporate and integrate them in the plans for urban expansion and development. The Master Plans and Layout Plans produced in the 1960's paid little attention to the preservation of the historic quarters of the small towns. Some have expressed appreciation for the values inherent in these old quarters and yet many of the specific proposals incorporated in these plans are bringing about their destruction.

Economic changes in the old towns have been accompanied by a breakdown in social organization and the emergence of new social patterns. Wealthy upper and middle-class families were among the first to desert the old parts of the towns for houses in the modern suburbs. They often retain ownership of the old houses which are rented out to newcomers. Indeed, the old quarters have become reception areas for a large number of poor migrants from the rural areas and for non-Libyan workers, a process which has contributed to the deterioration of the physical fabric.

One cannot help drawing parallels with the Tunis medina which has evoked different and contradictory perceptions and proposals for intervention among urban planners. For some it has been regarded as a casualty in the thoughtless drive for modernization, for others an obstacle to such progress. Demolition has been proposed as one solution, preservation in the interests of economic development and international tourism another.(42) Lawless concluded by saying:

> "all too often planners have sought to remodel the historic centre in the image of one or another of current planning ideologies, planning the past should begin not with revitalisation schemes but with the recognition of the medina's actual vitality." (43)

To sum up the argument one could outline the following points:

1. The picture to date is gloomy. Destruction of the historic fabric in the small towns continues.

2. The body responsible for development, construction, utilities etc. is the Municipality and its lack of concern or awareness over the importance of the old towns' historic and cultural heritage can be seen in the absence of any effort to improve the substandard conditions of the historic quarters.

3. The combination of Westernisation, the sense of cultural inferiority and too rapid and haphazard modernisation is destroying much which is of value, not only culturally but functionally. (44)

4. There is also the problem of urban designs. A simple example is the adoption of building codes which demand Western-style houses and villas with open space external to the home. This forbids freedom in design which may incorporate elements of the courtyard housing concept uniquely suited to the climate, culture and social interaction patterns of Libyans. Fieldwork

observation in several small towns has shown that most of the recent buildings are not designed to suit the local environment in each town.

5. Conservation planning must avoid simply the static preservation of a past architectural pattern and the fossilisation of life styles. A conservation area should not be a dead area.(45)

6. Conservation policies are urgently required, not only to maintain the essential quality of the historic towns through urban form, height of buildings, character and scale, but which also encourage change and modernisation, providing facilities necessary to improve the lives of the inhabitants.

7. There is a need for government commitment to formulate and implement a national cultural policy to conserve the urban heritage of the country. Zarrugh has suggested that such a policy should meet the following objectives:

" a. Define clearly and scientifically the components of the urban heritage.

b. Establish a legal framework to provide for the safeguarding, planning and restoration of these areas.

c. Establish an administrative framework to carry out the policies and programmes of the preservation plans.

d. Provide public funds to meet the cost of the preservation and presentation programmes.

e. Define a sequence of technical procedures.

f. Consider the inter-relationship of urban form and social patterns as an essential aspect of the urban cultural heritage to be preserved.

g. Study the needs of the inhabitants of protected areas to give rehabilitation a social objective.

h. Integrate the planning for protected areas into the master and development plans of towns." (46)

Last, but not least, an administrative and legal framework will be required to meet these objectives that would have the scope and authority to implement the plans.

The NPPP, published in 1979, has emphasised the importance of such historic centres and has recommended that the new generation of Master Plans now being prepared should take into consideration the conservation of old quarters. Although they have lost many of their commercial functions due to the nationalisation programmes, and have been demoted to low income residential areas, the development of certain craft industries still permitted to exist under private ownership could help to revitalise them.

7.5 THE PROBLEMS OF HOUSING

Rapid development and population growth in the small towns, accompanied by increasing rural to urban migration and the massive expansion of towns, is placing an ever increasing strain on the existing housing stock. This problem is not only confined to Libya, but it is a phenomenon which can be found in all of the Middle East. In most Middle Eastern cities, the cost of land has risen enormously, resulting in tremendous overcrowding or site redevelopment at much higher densities, or both. In many rural areas, in contrast, traditional houses and settlements are being abandoned, as traditional methods of agriculture are replaced by capital intensive agro-business or industrial developments.

In Libya it is the State and its associated agencies that either directly or indirectly are responsible for house construction, and it is the State which is ultimately responsible for finding solutions to the problems that have emerged in this sector. In sharp contrast to neighbouring Algeria where successive governments devoted little investment to housing during the first two decades following independence, in Libya housing has been accorded top priority since the early 1960's. In quantitative terms therefore Libya has achieved a considerable measure of success in providing new housing for the growing urban population either by state controlled construction of housing estates or indirectly

by providing low income loans and grants for private construction. Thus, whereas Algeria now suffers from acute housing shortages with overcrowded tenements and burgeoning squatter settlements, in Libya housing provision for the vast majority of urban dwellers, rich and poor, is in the conventional sector with the non-conventional sector accounting for a small minority both in the major cities and in the small towns.(47)

Nevertheless while active state participation has ensured the provision of basic housing for Libya's rapidly growing population, a high degree of centralised control and the need to produce fast solutions to the heavy demand for new housing have brought their own problems. Essayed (1981) has summarised the situation regarding government housing, which is the dominant sector in the small towns, as follows:

> "Most, if not all, projects fail to a greater or lesser extent to respond to the needs of the user, particularly where large families are involved. The essential requirements of adequate space are rarely considered. The traditions, culture and social background of the residents are not taken into account. Climate and local building materials are disregarded. In spite of their existence, legislation, sound housing policy and standards are ignored. Complementary community facilities and public services are hardly provided. Houses are haphazardly merged while essential maintenance and repairs are neglected. In most cases the economics and costs of housing projects are inadequately considered and financing systems and procedures are not entirely successful." (48)

In order to respond to the massive increase in demand for housing, the government has been forced to depend on foreign consultants and construction companies. The result has been a high importation of Western technology, planning, design and constructional expertise and in its wake foreign educational and social values to create an "instant urban environment" that is far removed from the socio-cultural values of the inhabitants.

Interviews with residents in selected small towns revealed the following criticisms of current housing conditions :

1. The need for more privacy in the d sign of houses.
2. Dissatisfaction with the physical arrangement of the internal space of the housing unit.
3. The need for maintenance and repair.
4. The need for playgrounds in housing estates.
5. Bad location in terms of accessibility and terms of environmental quality.
6. Social problems created by locating people from different social backgrounds together.

The available evidence suggests that the majority of small towns will continue to experience rapid population growth to the year 2000 placing heavy demands on the housing market. Table 7.13 gives some indication of the scale of housing required to the year 2000 based on the Italconsult projections in 1976. It remains to be seen whether the government will have sufficient funds to meet these demands alone and without the participation of the private sector, and whether in the future housing will be given priority in investment programmes over investment in the productive sectors of the economy. In housing, as in so many other areas, the future depends on state policies and priorities.

7.6 THE PROBLEM OF URBAN ENCROACHMENT ON AGRICULTURAL LAND

The physical expansion of those small towns situated in the main agricultural areas has resulted in a significant loss of scarce cultivable land in many cases damaging the basis of the urban economy of these settlements. Urban land encroachment was neither a policy issue nor a problem until recently. Misrati has indicated that Libya is somehow caught between two opposing and conflicting trends; on the one hand the stated national policy is to maximise conservation of agricultural land in order to maximise agricultural production to achieve the highest level of food self-sufficiency; but on the other hand the rapid urban

Table 7.13 : Housing Requirements for Selected Small Towns 1980-2000 as Estimated by Italconsult in 1976

Small Towns	Standard dwelling units 1973	Allocated Public Housing - dwelling units 1973-1980	Additional dwelling units required 1973-1980	Additional dwelling units required 1980-1985	Additional dwelling units required 1985-1990	Additional dwelling units required 1990-2000
Zliten	2,870	990	1,280	2,080	3,630	5,140
El Khoms	2,300	1,150	130	1,170	2,250	3,350
El Garabulli	590	235	1,140	1,010	1,770	2,690
El Azizian	810	675	1,930	1,300	2,500	3,730
Sorman	1,750	460	720	690	1,530	1,770
Ez Zarra	810	250	270	800	1,680	3,730
El Ajelat	1,310	450	-	210	670	500
Sabratar	420	505	430	370	760	670
Zwarar	2,260	325	590	750	1,210	800
El Bregar	270	3,555	-	1,550	5,690	7,040
Sirte	1,540	700	2,280	1,970	3,950	6,200
Sharat	1,100	305	200	620	1,270	1,360
El Gubbar	590	780	120	610	1,050	1,490
El Merj	4,470	2,055	420	1,960	3,740	4,400
Gamiris	600	210	570	730	920	1,220
El Abiar	730	860	1,310	1,050	1,940	2,410

Source : Italconsult (1976) Settlement Pattern Study, Rome 8 vols.

growth has parallelled the socio-economic transformation and had encroached upon this limited and fragile agricultural land. (49) In addition, the fact that Libya is facing a rapid and continuous depletion of its limited underground water resources has aggravated the problem. About 1.13 per cent of the total area of the country lies within or above the 250 mm rainfall limit which is considered to be sufficient to sustain a permanent agri ulture, therefore any loss of this potential land is a very serious problem indeed. Urban growt is concentrated in the most advantageous parts of the country in terms of agricultural land and with the increase in the standard of living this has brought with it an increase in per capita requirement of urban land.(50)

To support the argument Table 7.14 illustrates the fact that the total urban land area has increased from about 9,670 ha in 1966 to 35,100 ha in 1978 in agricultural areas receiving more than 150 mm of rainfall. The Table also shows that the highest conversion of land was in rainfall zones above 300 mm where the cities of Tripoli, El Beida Derna and the small towns of El Merj, Soussa, El Abiar, Shahat, Zliten, El Garabulli, El Aziziah and Gherian are situated. On the basis of Misrati's calculation during the 1966-1978 period the urban population in the rainfall zones increased by 129 per cent, the urban land by 263 per cent, while the gross urban density fell from 73 to 46 inhabitants per hectare.(51)

Libya, as one of the developing countries, has a very high average annual rate of urban land expansion - about 11.5 per cent for the period 1966-1978, while some of the advanced industrialised countries such as the United Kingdom experienced a much slower rate of expansion; about 2.9 per cent for the period 1960-1970.(52)

Residential use is the major consumer of land followed by public services and roads. Industrial use does not as yet make heavy demands

Table 7.14 : Urban Land in Rainfall Zones in Libya

Rainfall Zones		Urban Land in ha		Percentage of urban over total area	
Rainfall in mm	Area in ha	1966	1978	1966	1978
1) 500+	133,000	731	2,610	0.6	2.0
2) 400-500	267,000	136	306	0.05	0.1
3) 300-400	652,000	4,400	19,054	0.7	2.9
4) 200-300	1,860,000	4,032	11,547	0.02	0.06
5) 150-200	1,400,000	328	1,581	0.02	0.1
Total	4,312,000	9,667	35,098	0.2	0.8

Note: The table includes all developed urban land for settlements which have Master or Layout Plans regardless of their population size.

Source: Misrati, A.A.M. (1983) "Land conversion to urban use; Its impact and character in Libya" Ekistics, 300 p.186.

on land with the exception of rapidly industrialising centres such as El Bregah where the new industrial zone does not encroach on agricultural land. Table 7.15 shows the per capita consumption of urban land in selected small towns which can be compared with the figures for Tripoli and Benghazi and three intermediate towns. It can be seen that the per capita consumption of land in some small towns, for example Soussa, El Abiar, El Merj and Ghdams is higher than in the two major cities.

In the future the problem of urban encroachment on agricultural land is likely to become even more serious with continued urban expansion and the demand by urban dwellers for bigger and better houses and a wide range of facilities and amenities as their standard of living increases. The NPPP has recommended that major developments in the future - industrial, agricultural and urban - should be concentrated in the coastal zone where the main agricultural areas are located. This is bound to give rise to serious conflicts in land allocation. In spite of the government's commitment to the goal of self sufficiency in foodstuffs, in practice it is the urban/industrial option which is given priority. A partial solution to the problem of urban encroachment on agricultural land could be achieved by greater emphasis on vertical as opposed to horizontal expansion but this would merely aggravate existing socio-economic problems of adaptation to urban life.

7.7 CONCLUSION

Due to the intervention by the State, profound functional changes have affected the small towns in Libya during the last two decades. Striking morphological changes have occurred and have completely transformed the physical layout of these towns. The rapidity of such changes has created several urgent problems. The present water supply for Libya's urban centres, both large and small, is unsatisfactory in

Table 7.15 : Actual Land Consumption in Selected Small Towns and Other Urban Centres in Libya in 1978

Small Towns and other urban centres	Square metres per person (approximately)
Soussa	186.5
El Abiar	124.7
Tolmeitha	53.6
Beninah	39.9
Shahat	140.4
Tokrah	147.6
El Gubbah	55.5
Gherian	193.3
El Merj	173.1
Zliten	104.9
Bani Walid	165.5
El Jof	142.2
Ghdams	208.5
Nalut	137.3
Tripoli	108.3
Benghazi	115.6
Derna	150.3
Ez Zawiyah	110.5
El Beida	170.3
Average	131

Source: Computed from the Master and Layout Plans and estimated population for the year 1978 (dividing the built-up area in 1978 by population).

quantity and quality. In addition, the capacities of existing water networks are small and cannot meet the present and future demands. The growth, even the very existence, of these small towns depends on water; a shortage of water would almost certainly restrain their development.

With few exceptions, the small towns are not yet provided with integrated sewage networks and the widespread use of septic tanks represents a danger to health. The problems of water and sewage highlight the weaknesses inherent in the implementation of the master plans produced in the 1960's and present a serious challenge to the new generation of master plans now being prepared. Massive expansion and redevelopment, much of it outside the framework established by the Master Plans, is threatening traditional buildings in the historic centres of the small towns which are being lost at an alarming rate. The picture is gloomy at the present time and the destruction of the historic fabric of the small towns appears inevitable. While Libya has avoided the serious housing shortages that characterise many Middle Eastern countries and its achievements in house construction have been considerable, the new "instant urban environments" that have been created in recent years have often been in conflict with the socio-economic values of their inhabitants. Finally urban encroachment on agricultural land is destroying a vitally important and scarce resource and this trend must be brought under control as quickly as possible. It demands government intervention at the national and local levels and the implementation of effective spatial planning policies.

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CHAPTER EIGHT

CONCLUSION

Small towns in Libya provide striking evidence of the extent to which urban centres can change and develop in a short period of time.

Libya's immense oil revenues have touched every aspect of the life and development of the small towns and have resulted in extensive changes in their functions, populations and morphologies.

In bringing about these changes, the State has played a dominant role. Since oil was discovered in the late 1950's and exports began in the early 1960's the Libyan State has received growing oil revenues which rose dramatically after the oil price increase in 1974. Rising oil revenues have made available massive funds for economic and social development programmes. Direct State involvement in these programmes and in the direction of the Libyan economy has grown with the creation and rapid expansion of the public sector and the nationalisation programmes carried out since the late 1970's. Since the early 1980's most private sector activities have been abolished so that almost all areas of economic activity are now under direct State control. It is the State which stimulates industrial, agricultural and urban developments, builds infrastructures and establishes welfare programmes.

Oil wealth has transformed Libya from a poor and backward society in which the majority of the inhabitants were nomadic or semi-nomadic to a country experiencing rapid urbanisation. During the 1960's and 1970's the rate of urban growth was among the highest in the world. It seems certain that the level of urbanisation will continue to rise in the future. Although estimates vary, most observers agree that by 1973 over half the population could be classified as urban. Attir

has suggested that by 1980 some 81 per cent of the population were urban.(1) Indeed, Libya appears to be experiencing a transformation towards the urbanisation of the whole society.

The National Physical Perspective Plan (NPPP), which established the major guidelines for spatial planning and development in Libya to the year 2000, recommends a certain restructuring of the urban system. Tripoli and Benghazi will continue to dominate the system. However, the intermediate towns of Misurata, Ez Zawiyah and Sebha are promoted to first rank cities with projected populations of over 100,000 by the year 2000. The other intermediate towns, with the exception of Tobruq, are to remain second rank centres with 50-100,000 inhabitants. Eight small towns have been selected for development as second rank centres and a further nine small towns are promoted to third rank centres. Almost all the small towns selected for development as second and third rank centres lie on the primary coastal axis.

A major weakness in this strategy is the fact that no limitations are placed on the growth of Tripoli and Benghazi even though foreign planning consultants have indicated that such limitations on the pace of their development appear to be a planning necessity.(2)

The selection of certain towns for development as second and third rank centres is a positive step leading to the concentration of investment in a limited number of small towns rather than the uncoordinated pattern of growth that has characterised the small towns in the past. Nevertheless, on the basis of the ability of small towns to absorb new projects, there are some surprising omissions from the NPPP list, most notably the new town of El Merj.

The success of this strategy for selective development of the small towns depends on the Government's ability to achieve a high level

of coordination between sectoral and spatial planning, and between the national spatial strategy and planning at the level of the baladiyah. Unfortunately the Government has failed to achieve even a measure of planning coordination in the past, with, for example, the recommendations for growth set out in the Master Plans for the small towns often differing substantially from those incorporated in the NPPF. In the absence of effective planning structures success in the future is far from assured and the long-established trend towards polarisation of population on the two major cities seems likely to continue.

The physical expansion of the small towns has been much greater than the 1960's Master Plans had projected. Thus, important sectors of the urban area of the small towns have developed outside the guidelines of the plans and outside the formal planning process. As a result acute problems now face the planners responsible for the preparation of the new Master Plans to the year 2000. What is required is a set of flexible alternatives and guidelines that will allow the planning process to adjust to the changing pattern of urban growth. But to be effective this must be coordinated with a "national spatial strategy" in which the future role of each settlement is clearly determined. The physical expansion of the small towns has also resulted in the loss of valuable farmland and the designated future growth of any settlement must take into account urban encroachment on scarce agricultural land. The fact that most of the small towns selected for development as second and third rank centres lie in the coastal zone where the country's main agricultural areas are found makes this a particularly difficult problem to resolve.

The traditional architecture and settlement structure of the small towns, which evolved naturally over centuries in response to

local climatic and topographical conditions and the social and religious traditions of the inhabitants, are increasingly at risk. The pressures of modern development and the superficial attraction of the materialistic culture and life style of the West, threaten traditional values, reduce privacy and weaken social and family cohesion. In a very short space of time the small towns have expanded rapidly creating "instant urban environments" designed and executed by foreign consultants and companies. Unfortunately it will take much longer to resolve the problems of social adaptation and adjustment for their inhabitants.

State intervention has transformed the small towns and it has also made them almost totally dependent on the Central Government for their survival and future development. Unlike small towns in the United States which can draw on local resources as well as the Federal Government, in Libya the financial contribution of the local authorities, the baladiyat, is negligible. They have experienced rapid growth but have weak, subsidised economies, especially vulnerable to changes in national goals and policies and in the current level of revenues from oil production. Since 1980 oil revenues have declined significantly, falling from US$ 22,000 million in 1980 to an estimated US$ 10,000 million in 1983.[3] This has resulted in a sharp cut in capital expenditure, domestic stringency and delays on payments to foreign creditors. In the future the Government may be forced to be even more selective in the pattern of investment, a policy which could well favour Tripoli and Benghazi at the expense of other settlements, especially the small towns. The rapid expansion of the small towns during the 1960's and 1970's took place during a period of rising oil revenues when the Libyan State acquired unprecedented wealth. The maintenance of installed infrastructures let alone the expansion of

these settlements will be costly. They may not survive in a period of declining oil revenues and economic stringency. The period which saw the rapid development of the small towns may be just another episode in the long evolution of the Libyan settlement.

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