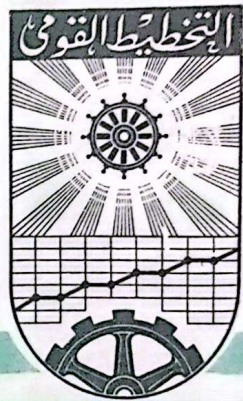


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Human Settlement
A Basic Issue In Regional Development
Strategy of Suez Canal Area

By
Dr. Sayed M. Abdel Maksoud

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A Basic Issue In Regional Development Strategy
Of Suez Canal Area

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A.R.E.

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"Egypt is the Gift of the Nile"

Egypt has a long history of urbanization. The early urban history of Egypt is unique in so far as the old cities of Memphis, Thebes and Heliopolis. The unifying element of Egypt is the River Nile. The Nile is 6500 Km long. It is the second longest river in the World. The River Nile has created a set of features encouraged man to create a complex social system "organization" to Carry out the different socio-economic activities required to sustain life, e.g. flood control, irrigation, and agriculture... etc. This permitted human settlement to transcend old patterns based on self-contained villages, i.e. large urban centers.

1. The Influence of the Nile on the pattern of cities:

Along the subsequent periods of history a distinct pattern of cities emerged in the Nile valley¹⁾; in Upper Egypt, lower Egypt and the Suez Canal Zone as a consequence of the River Nile, as follows:

1.1 In Upper Egypt:

The Nile valley, south of Aswan is a desert region. The Nile runs from the North of Aswan to Cairo through a valley whose width ranges from two to ten Km. It is widest at Kom Umbou City. There it is 15 Km. wide, Upper Egypt's

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- 1) Egypt is subdivided into three major geographical regions: the Nile valley, the Eastern Desert, and the Western Desert. The Nile valley is subdivided into
- a- Upper Egypt.
 - b. Lower Egypt, and
 - c- Suez Canal Zone.

cities born and developed on the edge of the valley. These cities grew at regular distances from one another, and because they drew on hinterlands of uniform area and productivity, they achieved nearly the same size and number of population. The following table shows cities with more than 100,000 inhabitants in Upper Egypt in the last three censuses of 1960, 1966, and 1976.

Upper Egypt's main cities with
population 100,000 and more in the last
three censuses

(000)			
Census Year			
City	1960	1966	1976
Assyut	127	154	214
Fayum	112	134	167
Aswan	63	128	144
Menia	100	113	146
Giza [⌘]	419	571	1.233

⌘ Giza City in Upper Egypt, on the Western bank of the River Nile adjacent to Cairo, and it is part of Cairo Great region.

1.2 In Lower Egypt:

25 Km. North of Cairo, the Nile forks into two main branches, Rosetta Branch and Damietta Branch. In between the two branches lies the Delta, the most fertile land in the world. In lower Egypt the influence of the Nile is so strong. The broad plateau of the Delta permitted the development of larger urban population centres at the nodal point of the transportation network.¹⁾ The major result of the influence of the Nile on the pattern of cities has been the growth of Cairo. The following table shows cities with population more than 100,00 inhabitants in lower Egypt in the last three censuses of 1960, 1966, and 1976.

Lower Egypt's main cities with population
100,000 and more in the last three
censuses

		(000)		
City	Census Year	1960	1966	1976
Cairo		3353	4220	5208
Alexandria		1516	1801	2319
Tanta		200	230	285
El-Mahalla El-Kobra		189	225	293
Mansoura		167	191	258
Shubra El-Khema		101	173	394
Zagazig		125	151	203
Damanhur		127	146	189

- 1) The Nile and the irrigation Canals network in the Delta represents the main transportation roats (in land water ways).

1.3 In Suez Canal Zone:

The Suez Canal zone extends from the Gulf of Suez to the Mediterranean Sea. It owes its existence to the opening of the Suez Canal in 1869, although there long had been a coastal settlement at Suez and a well travelled route to the east through Quantara. The canal provided a direct and much shorter shipping link between European and Mediterranean Countries to countries in the East. Suez Canal Zone is to be considered as one of the most important areas in Egypt. Its Locational advantage influencing the future development of Egypt. The location of the area is connecting the Mediterranean sea in the North with the Red Sea. in the south. The importance of the area became vital after the construction and opening of the Suez Canal. The Suez Canal Zone also is the Eastern entrance of Egypt. The main cities in the area are Port Said, in the North, Ismailia, and Suez in the South. The following table shows the population of the three cities in the last three censuses. 1960, 1966 and 1976.

City	Census Year		
	1960	1966	1976
Port Said	245	283	263
Ismailia	116	144	147
Suez	206	264	194

As a matter of fact, through the long history of Egypt, the location of population and development has been the Nile valley. While the national space area of Egypt is 1.002.000 sq. Km., only 34,500 sq. Km. (about 5%) is settled. The rest of the country's area is desert and the Egyptian population has remained within the confines of the 5%, i.e., the Nile Valley.

2. A Bird Eye View on population Growth:

The first population census in Egypt was carried out in 1897, Egypt's population amounted to 9.750.000. The latest census of 1976 has recorded a total of 38.228.180¹⁾ inhabitants. The average population density in the inhabited area is more than 1000 person/sq.Km. Egypt is one of the over populated countries. The following table shows number of total population and its distribution between urban and rural population in the different censuses from 1927 to 1976.

1) The total population inside the country at the enumeration night of 22/23 Nov. 1976 was 36.656.180, the remaining 1.450.000 were outside the country, and 147,000 were the number of population in Sinai still under Israeli occupation.

**Egypt's Population, Urban and Rural
in Census Year 1927 to 1976**

Census Year	Total Popula- tion (000)	Urban	Rural (%)	Total
1927	14.177	26.0	74.0	100.0
1937	15.920	28.0	72.0	100.0
1947	18.966	33.0	67.0	100.0
1960	26.085	37.4	62.6	100.0
1966	30.076	40.5	59.5	100.0
1976	38.228	43.9	56.1	100.0

From the table, a significant factor has been the growth of urban population. While the total population increased by 2.31%¹⁾ annually in the period from 1966 to 1976. Urban population increased by about 4%

The table shows that, about 44% of the total population are living today in urban centres (cities). The increase of urban population is due to the massive migration movements from rural to urban centres. The most significant is that by the year 2000 Egypt expects an additional 17 million²⁾ people to be live in cities. The following table shows the growth of urban population by the year 2000

- 1) The annual rate of population increase during 1960-66 was 2.54%, it decreased to 2.31% during 1966-76 due to family planning, socio-economic and demographic factors.
- 2) The project of the Five year plan 78-82, the first alternative assumes constant rate of population increase at 2.31% annually up till the year 2000.

Population Projection, total, Urban and rural%

From 1976 to 2000

	1976	1980	1985	1990	1995	2000
Total Pop. (000)	38.228	41.885	46.953	52.634	59.003	66.143
Urban (000)	16.782	18.429	21.833	25.791	28.911	33.071
%	44.0	44.0	46.5	49.0	49.0	50.0
Rural (000)	21.446	23.456	25.120	26.843	30.092	33.072
%	56.0	56.0	53.5	51.0	51.0	50.0

Population and urbanization trends by the year 2000 are very distressing. The main reasons are the following:

1. The migration movements are from rural areas to the urban cities, this is due to the different better opportunities in the urban economies of cities particularly Cairo and Alexandria. Moreover, Egypt has a limited supply of agricultural land for more horizontal expansion. In addition other problems associated with land reclamatin, e.g., the high cost of reclamation, availability of water for irrigation and problems of drainage. Also, programmes of improving the agricultural productivity of the existing land are so limited. Conseauently, Egypt in the near future will reach the stage in which rural population will be pushed out of the agricultural land because it

is unable to sustain them.

2. The growth of the existing cities in the Nile Valley by constructing new expanded human settlement schemes take place at the expense of agricultural land. It is worth mentioning that from 1952 to 1976 Egypt has reclaimed 912.000 Feddan from desert land. At the same time the area of agricultural land lost for urbanization and new human settlement amounted to $\frac{2}{3}$ of the area reclaimed.
3. As a result of the historical pattern of urbanization in Egypt the growth of both Cairo and Alexandria has far surpassed the growth of other cities, and it was found that rural migrants had by passed the small size cities and they are moving directly to Cairo and Alexandria.
4. As a matter of fact, Egypt has not a skewed distribution of cities according to size. The following table shows the distribution of opopulation of urban areas by city size in 1947, 1960, and 1966.

Distribution of Urban areas by City

Size in Egypt, 1974-1966

Size Class (000)	47		60		66	
	No. of Cities	Pop. %	No. of Cities	Pop. %	No. of Cities	Pop. %
1000 +	1	34.9	2	50.4	2	50.3
500 -	1	16.0	-	-	1	4.6
100 -	7	16.0	12	23.1	13	20.6
50 -	7	8.4	8	5.4	9	5.2
20 -	34	15.6	46	14.7	55	14.6
10 -	26	6.5	33	5.0	33	3.9
5 -	18	2.2	17	1.4	13	0.8
less than 5	5	0.3	3	0.1	1	-
Total	99	100.0	121	100.0	127	100.0

The aforementioned causes give Egypt a limited range of options. The long-term strategy lies in the development of the unpopulated desert. Egypt should break out the old age patterns which have tied her to the overpopulated Nile Valley and to start establishing new growth centres and human settlements in the empty 95% of the national space area. This has been expressed by president El Sadat in his Oct. Working paper when he referred to the need of "A New Map of Egypt" or the policy of new cities a way from the old settled areas.

But the continuing rapid growth of Cairo and Alexandria, the increasing congestion, and the growing costs and difficulties of providing a decent life for the average urban dweller within the context of these crowded urban centres lend certain urgency to the actual implementation of a medium-term policy of moving outside the crowded Nile Valley. The early investigations of establishing new urban centres away from the Nile valley have been the emphasis on the reconstruction and further development of the three main cities of the Suez Canal Zone.

The main arguments supporting the strategy of development in Suez Canal Zone stem from the need for restoring normal life in the area and repairing the extensive damage suffered by the Canal three main cities. Also, the political objective of making a basic commitment to peace in this strategic area. Moreover, the Suez Canal region is an area where two of the three cities can readily expand at reasonable cost and without encroachment on agricultural land. The area also has a number of locational advantages, as mentioned before. Therefore the region is a logical place (location) to start in the implementation of the policy of moving outside the crowded Nile Valley. It is expected that the population of the area to rise from 850.000 to more than 3.000.000 at the year 2000. Moreover, development will take place in other development regions (such as the North West Coast) and in new cities, e.g. The Tenth of Ramadan City, and Sadat City, etc., but the need for rapid development of large scale urban centres outside the narrow valley of the Nile points to the advantage of ex-

panding the Suez Canal Zone cities.

3. Regional Development Strategy of Suez Canal Region.

3.1 The Setting

Since June 1967 war, the Arab Republic of Egypt has been forced by different external factors and events to differ major developmental and planning efforts, responding to the more crucial and immediate requirements of the national defence.

After Oct. 1973 War, and victory the Egyptian Government declared her intention and decided to re-open the Suez Canal and to restore normal life to the region and its population for the benefit of the country and for the resumption of the different international activities related to the Canal-Water way.

The devastation suffered by the large prosperous cities and towns of the Suez Canal Region as a result of June 1967 war led to the evacuation and dispersion of the population to other Governorates of the country.

Houses, factories and utilities "human settlements" were badly damaged. Many buildings in the cities, and almost all houses in the smaller towns and villages were damaged beyond repair and have been cleared and must be replaced. A great Part of the utilities were destroyed and others were reduced to minimal capacities. The effects of the destruction of the war concentrated in Suez Canal Zone.

Urgency was the over-riding theme of the Government in the reconstruction and development of the suez Canal region. The Government is proceeding rigorously to rebuild and develop the region as soon as possible with maximum overlap between future planning for sustained growth and development of the region and the related reconstruction activities urgently needed.

Regional development strategy has been identified in the following to steps to be carried out concurrently:

A. To restore normal life to the region at the earliest
Possible date

B. To develop a comprehensive regional plan for the Suez Canal Zone over a span of 25 years.

Regarding the task of restoring normal life to the suez canal region, the efforts which have been achieved are as follows:

- The badly war-damaged cities of the Suez Canal have been restored to a state where most of the residents have been able to resettle in their former localities More than 50.000 housing units, which were partially damaged have been restored. More than 22,000 new housing units had been constructed by November 1976.

1) The Canal was re-opened in June, 1975.

- 215 schools were restored. More than 20 new schools had been constructed by Nov. 1976.
- More than 40 hospitals, 400 governmental buildings, which were partially destroyed during the war have been repaired and all major clubs in the Suez Canal Zone which were damaged have been restored.
- Water supply networks, filters, clarifiers, elevated and ground reservoirs and pumping stations have been repaired and some networks have been renewed. New water supply distribution networks required for the new housing areas and public buildings have been constructed and connected to the existing networks.
- Sewerage networks have been replaced, Pumping stations have been provided with the necessary new equipment. New sewerage networks required for new housing areas (settlement) and public building have been constructed and connected to the existing.
- Electric generating units, main transformer stations and cables have been repaired. Networks have been consolidated and renewed.

- Internal roads have been repaired and paved, work on doubling and expanding 400 km of regional highway network linking Cairo and Ismailia, Cairo and Suez, Ismailia and Port Said and Ismailia and Suez are in the final stages of construction.
- Work on the construction of 66 km of a new railway line linking Port Said and Ismailia is being carried out

From the aforementioned efforts of restoring normal life to the Suez Canal Zone, it is so clear that human settlement is a basic issue in the reconstruction efforts.

3.2 Regional Development strategy

Long-term regional development is conceived as a part of a broad national strategy to draw a "New Map of Egypt". The national strategy's broad goals are:

- to increase the rate of economic development
- to modernise the society

Regional planning as an effective approach to achieve the broad goals of regional development strategy must be seen as an on going process to achieve these ends .

From the national broad goals announced by the Egyptian Government, the following goals have been decided to be achieved by

regional planning in the Suez Canal region:

- To better the standard of living of the Egyptian people by providing in this critical area expanded employment at decent wages in an environment that is healthful, efficient and pleasant.
- To strengthen the economic condition of the nation.
- To strengthen the defence capacity of Egypt to the East.
- To develop an integrated and mutually supportive urban rural environment that will expand opportunities for social and economic betterment, strengthen the nation, and enhance the dignity of the individual man.

In order to achieve the aforementioned goals, a comprehensive regional development plan of the region to the year 2000 has been designed,.

3.3. The Regional Plan for Development of the Suez Canal Zone 1976-2000

Stemming from the national objective of rapid growth through industrialization, the prime goal for the suez canal regional plan is the attainment of high rate of economic development. A second regional goal is to absorb population from the over crowded rural areas of Egypt and to divert population growth from the densely populated cities of Cairo and Alexandria and the urban areas of the

Nile Delta. A related goal is to assist in ending or slowing down the encroachment on Egypt's limited agricultural lands by providing areas in the Suez Canal region for major urban development that can take place on large areas not suitable for agricultural development. Other goals distinguish land reclamation, stimulating the exploitation of the adjoining coastal areas and to promote stable rural and urban settlement in Sinai.

The mentioned goals have identify the emphasis which have been given to the issue of human settlement, particularly the first and second goals, as a basic component part of the regional development strategy and its plan.

To achieve these basic goals six functions were identified for the regional development plan: Social development, economic growth, use of the environment, development of infrastructure, administration, and finance and investment. It is worth mentioning that, the plan embraces national social policies and programmes and adds the social emphasis that is needed to cope with rapid urbanization. Thus health, education and housing programmes (Human settlements) are recommended. The regional plan incorporates a development structure for a total population of 3.112.000 in the year 2000 compared with 892.000 in 1976.

4. Human settlement, A Basic Issue of the Regional Development plan of Suez Canal Zone.

Human settlements have been given high Priority on the regional development plan of the region as it has been stressed in the regional development strategy. For this purpose, a comprehensive Master plans for development over the years 1976-2000 of the areas of influence of each of the three sub-regional centres of the Suez Canal Zone, namely Port Said, Ismailia, and Suez have been designed.

4.1. Master Plan For Development of Port Said Area
1976-2000

Port said city, at the North entrance of the Suez Canal. The city is one of the major urban centres in the country. It is a comparatively recent settlement having been established in 1859. Its total surface area from the Mediterranean coast south-wards, is 480 sq.km. About 42% of that area is water and about 58% is developed for urban or rural settlement. The Master plan of port said incorporates a development structure for a total population of about 800,000 in the year 2000 in comparison with 283,000 in 1976.

The future economic growth of Port said is dependent upon the successful exploitation of its location and full

utilization of its resources. The major opportunities exist in the creation of free zone, manufacturing industries including shipyard, the development of the port, agriculture, fishing and tourism.

Port said Master plan has been designed with main emphasis on human settlement, the following plan objectives indicate these emphasis as follows:-

- The development of the city reflects the anticipated mobility of the population.
- The creation of an urban form to reflect the wide range of economic resources of the population.
- The achievement of a living environment that is in harmony with, and exploits, the natural features of the area and its climatic conditions.

The accepted solution for human settlement in the Master plan is a strategy of natural expansion that follows the pattern of recent urban development to the south of the existing urban parts of the city. Industry and free zone areas with their functional relationship to the port are located between the port and the urban area. Also, transportation lines are approaching the city from the South west and serving the port and the industrial areas. Expansion of urban areas (settlement) follows a north east to south west axis, which

enable it to forge immediate links with the industrial areas at all stages of development. Major recreation facilities are located to the periphery of the urban areas.

The main features of Port Said Master plan are:

- The free zone and industrial development
- The port.
- Tourism and recreation areas.
- Transportation.
- Agriculture and fishing.
- Shipbuilding and repair.
- Social and community services
- Engineering services.

In the following Part a brief note on the important element of the aforementioned features that form the human settlement in Port Said:

- Port Said has a comparative advantage for future development, much emphasis have been laid on the development of the free zone and industries that offer the best prospects to create employment. The analysis of the prospects for industries showed that a long-term average annual job creation target of between 500 and 1000 is reasonable if there is the necessary investment. This target could be increased if more industries

have to be encouraged to locate in the free zone. It has been projected also, that employment in other industries in the Five year plan 1978-1982 and the growth of employment in industrial workshops and small enterprises will grow at 6.5% per annum

Pollutive industries, industries requiring large areas of land, industries generating large numbers of employees and industries generating significant vehicular traffic have been located on estates away from and to the south west of the human settlement (urban core) in proximity to the regional road and rail links. Also, small enterprises not in accordance with the mentioned industries are located within the urban core. The total area required for industrial estates amounts to 952¹⁾ feddans providing for 37000 jobs.

- The site of new port has been decided to the south of the city to the west of the Suez Canal. It is intended on a north east to south western axis in order to permit expansion to take place without interfering with the urban settlement expansion of the city.
- The urban core of the city contains a high proportion of residential development providing accomodation for over half million people. Small scale commercial, industrial, service, and trade activities serving population are distributed along the pedestrain streets and serve the adjacent areas at a local level. The urban core comprises medium to

1) One hector equals to 2.38 feddans, and one feddan equals to 4200 sq. metres.

high density development up to 700 persons per hector in a compact urban area of approximately 1000 hectors (23800 feddans)

Settlement development within the core is zoned vertically with varying functions and activities tending to take place on different floor levels of the buildings. The core contains a high proportion of jobs in the city, approximately 37% of the total employment, of which a high percentage will be in the service sectors.

- Tourism development is proposed at the north eastern tip of port said city and comprises high quality hotels and apartment accomodation with associated casinos and entertainment facilities, e.g. restaurants and shop development together with an expanding commercial and industrial development. These are located on the Mediterranean shores, that are the most attractive areas. Port said is to be considered as an alternative to further development of tourism activity in the over-built and congested city of Alexandria.
- Formal recreation facilities are located on the periphery of the urban core. Small informal recreation facilities are sited at a local or community level within the urban core dispersed throughout the pedestrain street network.
- The transportation network serving the human settlement has been designed to achieve two main purposes:

- a. the port and industrial areas.
- b. the urban Core.

For the first purpose, the provision of good communication links to the hinterland of the country are essential. For the second, the urban system of movement is based on the provision of a hierarchy of roads and streets as follows:

- 1- At the top end of the hierarchy , the arterial roads extend around the urban Core of the city.
- 2- Distributors and service roads penetrate, from arterials, into the heart of the urban areas.
- 3- Pedestrian and cycle movement have been designed on a street system that allows continuous cross city journeys.

Also, a bus system of public transport has been proposed on system of circuits covering all parts of the urban area. The transport system has been designed to have a capacity for expansion.

- Finally, the human settlement issue has emphasized the social and community services, particularly hospitals and schools. The aim of the settlement plan is to maintain a high standard of these social services wherever possible and to extend the range of them to all levels of population, with particular concentration at the

community level. The location of these facilities has been sited in an integrated manner within the settlement(living areas) of the city.

Water supply, sewerage system, and electricity supply have been involved and their locations properly included in the Mater Plan.

4.2 Master Plan For Development of Suez 1976-2000

Suez is located at the southern end of the Suez Canal and is adjoined with a small community, i.e. Port Tawfic. Only 8% of the total area of Suez is developed for urban or rural purposes.

The Master plan for the development of Suez area incorponates a development structure for a total population of 1.060.000 in the year 2000 in comparison with 194000 in 1976.

A research programme had been carried out to develop a human settlement structure which combined the qualities of flexibility of buildings, operational efficiency especially in terms of journeys and services, e.g. water supply, sanitation, and environment quality. The research aims to define a type of urban structure which could grow out of the existing city of Suez and finally integrate this into the new greatly enlarged urban area. This type of urban development relates well to the present and potential agricultural land.

The main features of the plan are:

- Industry and free zones

- Harbour facilities
- Housing
- Transportation
- Utilities
- Community facilities

On the assumption that, the average household size is expected to be reduced to four persons, and in the light of the need to replace war-damaged houses, about 250,000 new dwellings will be needed in Suez over the next 25 years.

The plan has a central spine containing the major commercial centre and subsidiary centres, and also parks, hospitals, etc. On each side of the spine lies housing areas which contain shopping centres, small industrial enterprises as well as small parks, mosques, schools and other community buildings,. Estates of light manufacturing industry are concentrating outside these areas. The principal industrial estate (larger industrial enterprises) lies to the south of the city. Also, the main servicing centres for the city such as the power station and sewage plant lie outside the housing areas. Within the housing areas many residents will walk or cycle to work and a local bus system crossing the spine can carry workers to the light industries locations.

Access to adjoining areas north or south of the housing areas are by a fast bus system. Public transport will play a major role in Suez. A network of routes will connect the residential areas, industrial estates and main centres. Transport infrastructure has been designed for the future growth of Suez to a one million population.

With the rapid population growth many community facilities such as schools, hospitals and other facilities have been proposed. The locations of these facilities have been decided to ensure convenience to users and grouped carefully with respect to the transport system.

The human settlement with regard to other community services has been designed to offer a hierarchy of commercial centres, with a new city centre, five district centres and smaller local concentration of shops and other commercial activities.

Recreation facilities, e.g. new sports stadium, museums, and a country club are proposed in the plan.

4.3 Master plan For Development of Ismailia Area 1976-2000

Ismailia is the capital of Suez Canal region. It is located on the western bank of the Canal, in midway between Port said and Suez. Ismailia also is the head quarters of the Suez Canal Authority. It has a large district of substantial homes on landscaped grounds

situated on treelined street and landscaped public parks.

The master plan for development of Ismailia area incorporates a development structure for a total population of 1.254.000 in the year 2000 compared with 345.000 in 1976.

The main features of the plan are:

- Agriculture expansion
- Hierarchy of area settlement
- Ismailia city
- Regional transportation.

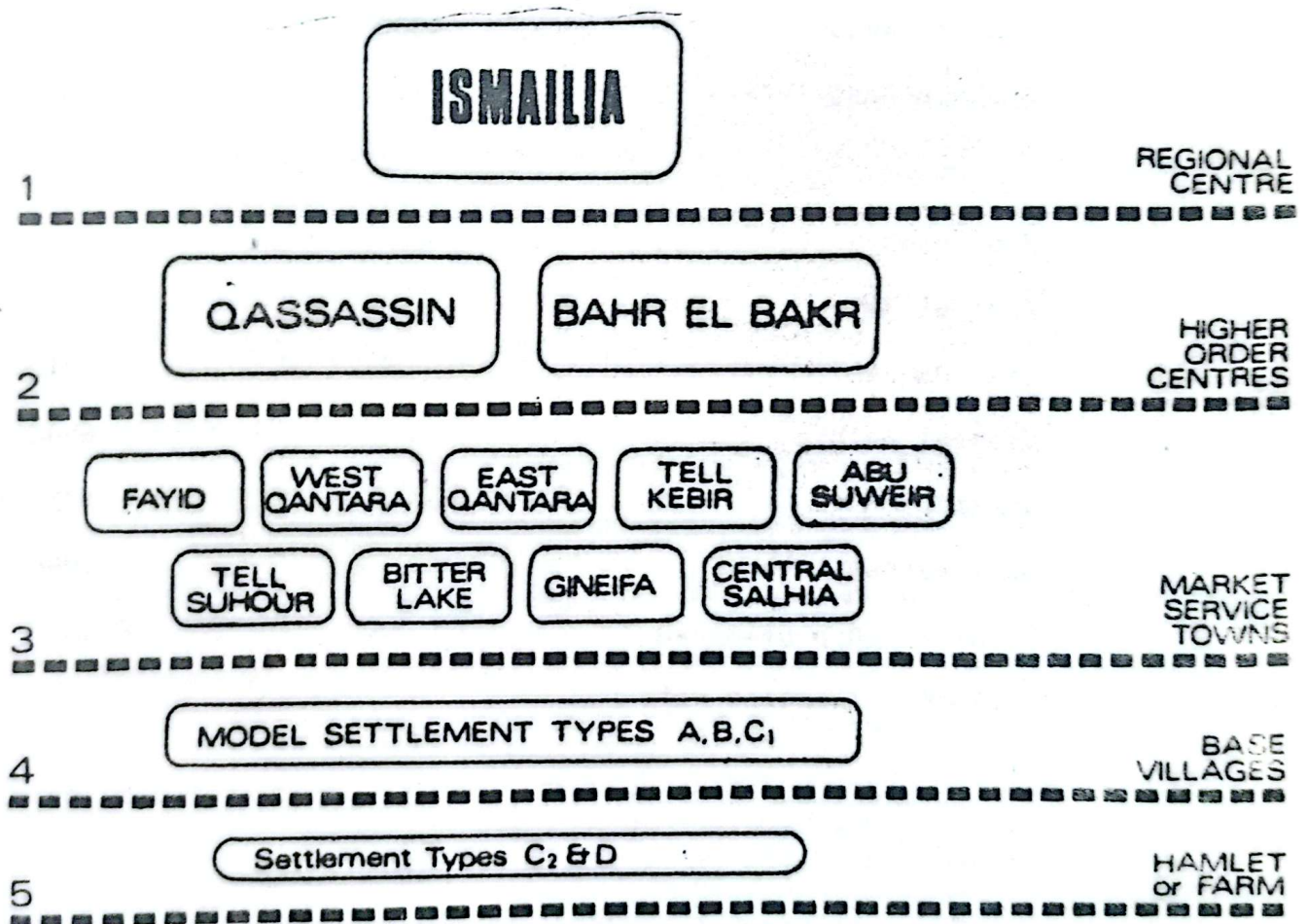
The agricultural expansion includes about 500.000 feddan of land have been identified as of being brought under cultivation. The total cost is calculated at about 226 Million pounds, with an average of L.E. 500 per feddan at present prices. This area will increase the cultivable area of Egypt by about 7 to 8%.

On the basis of land reclamation programme in Ismailia, the area is suitable for the expansion of existing towns and villages and the creation of new ones. Expansions of settlement are as follows in both the existing and new towns, expressed in terms of population in 1978 and the year 2000.

	Population 1978	Population 2000
1. Existing towns		
Qassassin	10340	47620
Tell Kebir	10350	29420
Abn Suweir	6030	20210
Fayid	11300	25450
Qantora west	4000	12660
Qantora East	500	22600
2. New towns		
Bahr el Bakr		28640
Tell Suhour		3910
Central Salhia		6440
Gineifa		4370
East Bitter lake		6840
Total urban population	43.000	211000
(excluding Ismailia city)		

In addition to a new small town proposed at Tanis, outside the study area of the plan.

The settlement hierarchy of the area will be as follows:



Hierarchy of Area Settlement

In so far as Ismailia city is concerned, the city population was 143.000 in 1967, and it is planned to expand it to about 600.000 by the year 2000. Due to its traditional character as a service centre, the principal activities of the city would be administrative, professional, financial, and commercial activities. Employment in these activities have been projected to reach 46.000 by the year 2000. It has been also identified that Ismailia is suitable for light industry, including industries depending on agriculture with high proportion of female employment. Manufacture employment should reach 23.000 by the year 2000. Indirect employment as municipal services, transport, professions, shopkeepers and so on should reach about 100.000, i.e. total employment in the city would be some 170.000 by the year 2000, representing a city population of about 600.000.

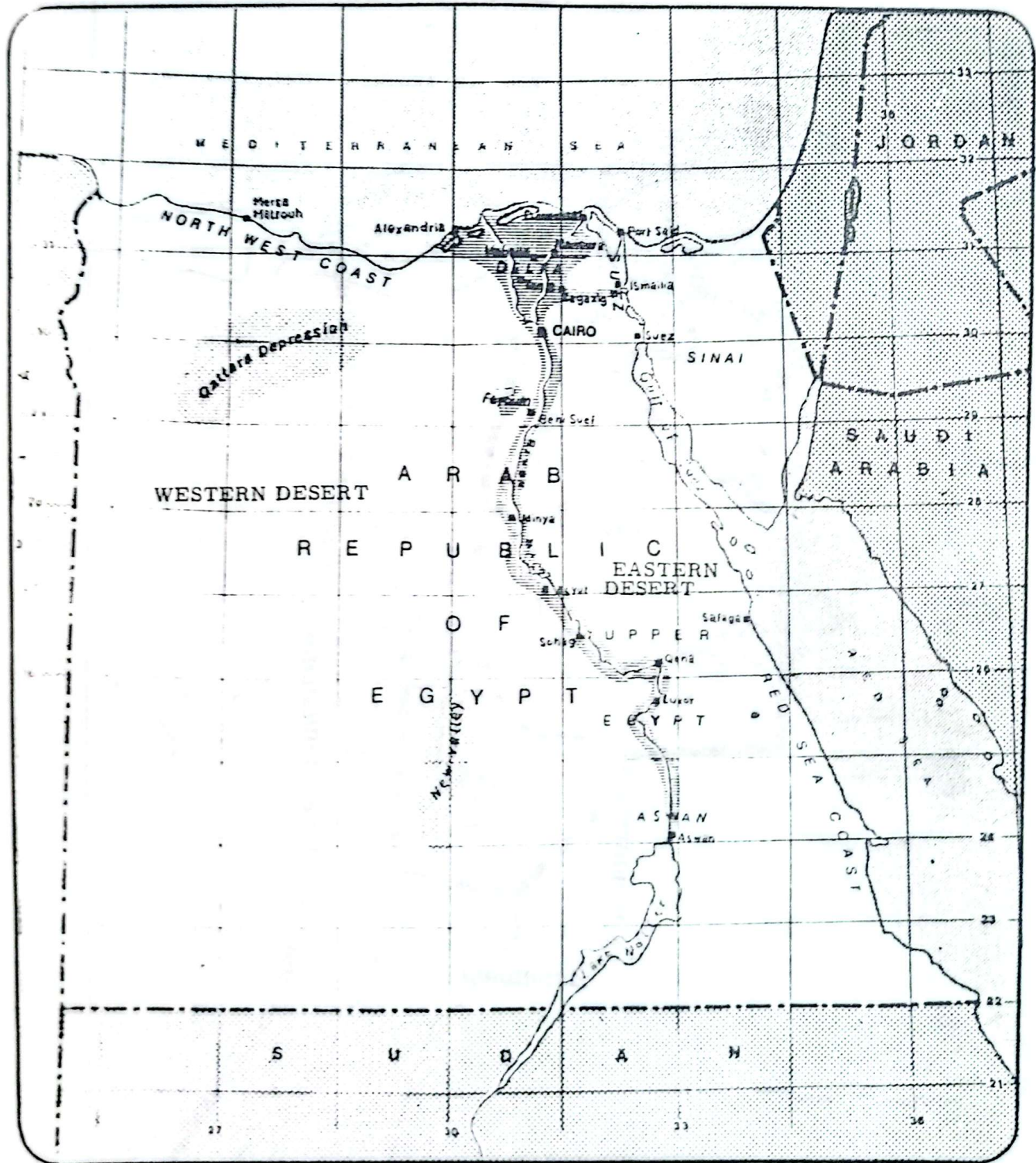
Human settlement (expanded city) has been planned as follows:

- A regional centre will be constructed as a westward extension to the present central area.
- The main development will be north and south of the regional centre, A smaller development is also proposed to the west.

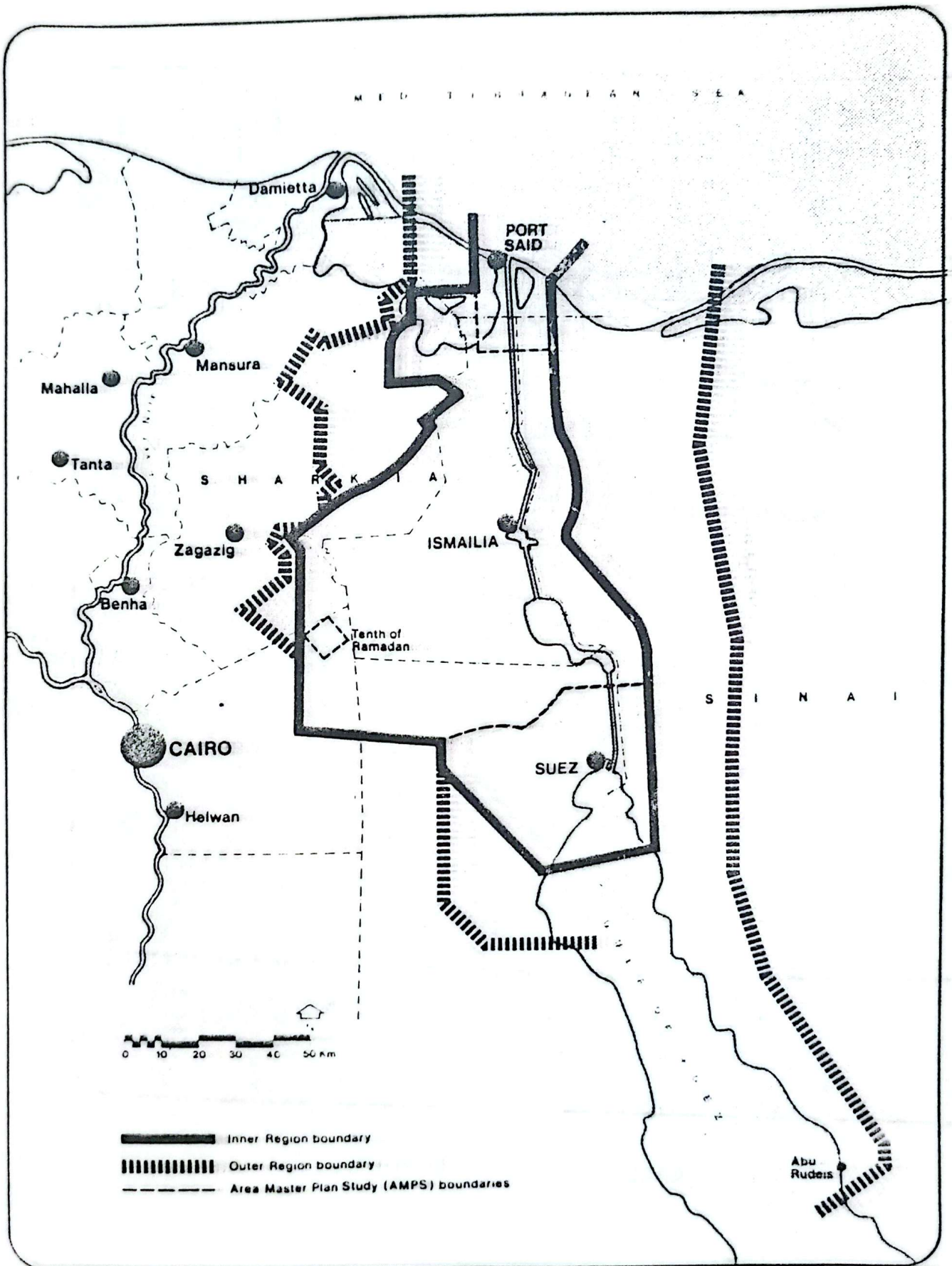
- A smaller centre will be created in the neighbourhood of Nifisha, and five minor centres nearer the periphery.
- Manufacturing area are designed away from the regional centre and residential zones (to the west).
- An effective urban transport system related to the regional system has been proposed.
- Housing will be planned in such a way as to provide the diversity of standards needed in the city of varied activities.
- , The city should be provided with a good standard of education, social services, recreation, water, sewerage, power and other utilities, in addition to a good telecommunication system.

References

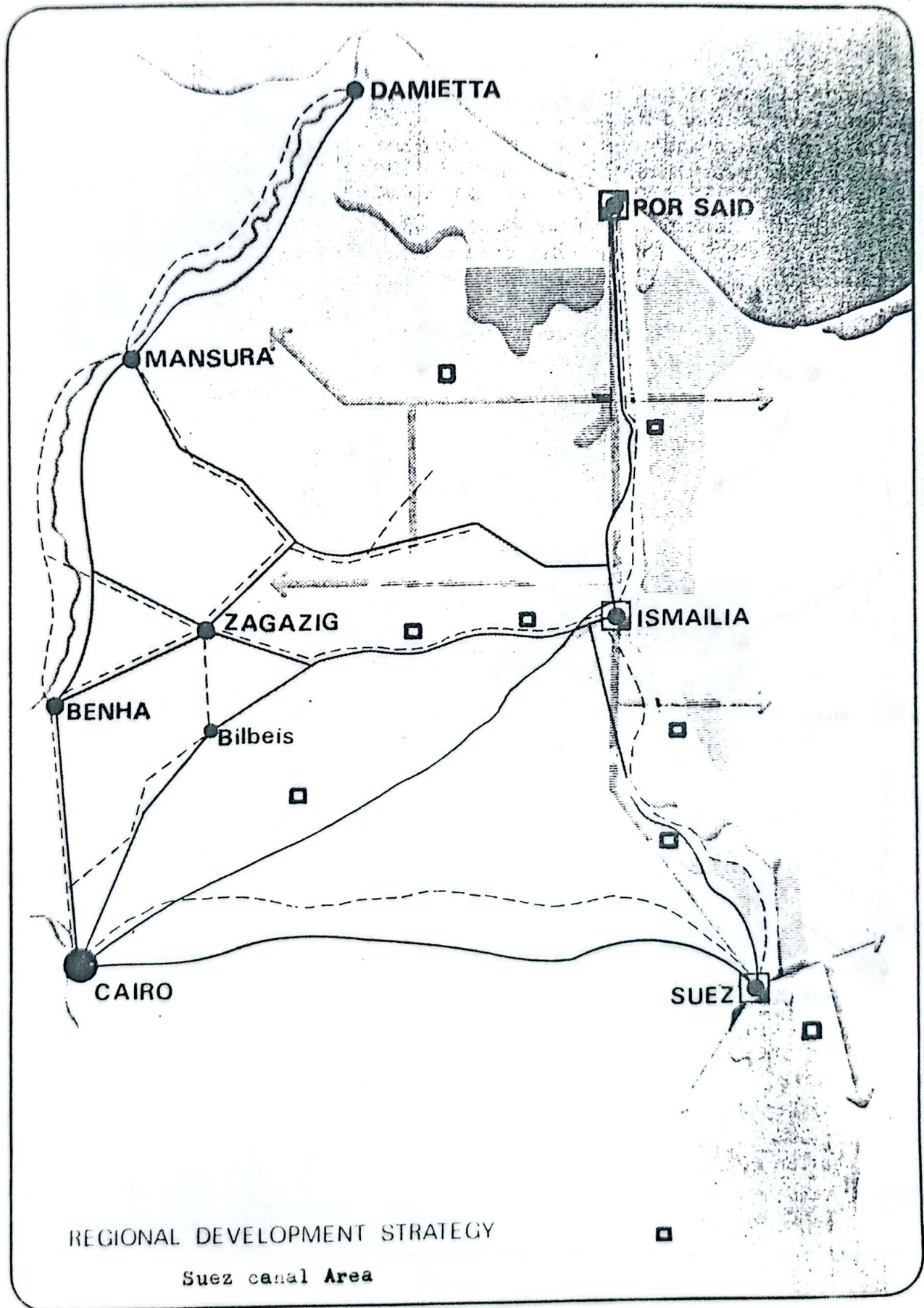
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ARAB REPUBLIC OF EGYPT



INNER AND OUTER REGIONAL BOUNDARIES OF SUEZ CANAL ZONE

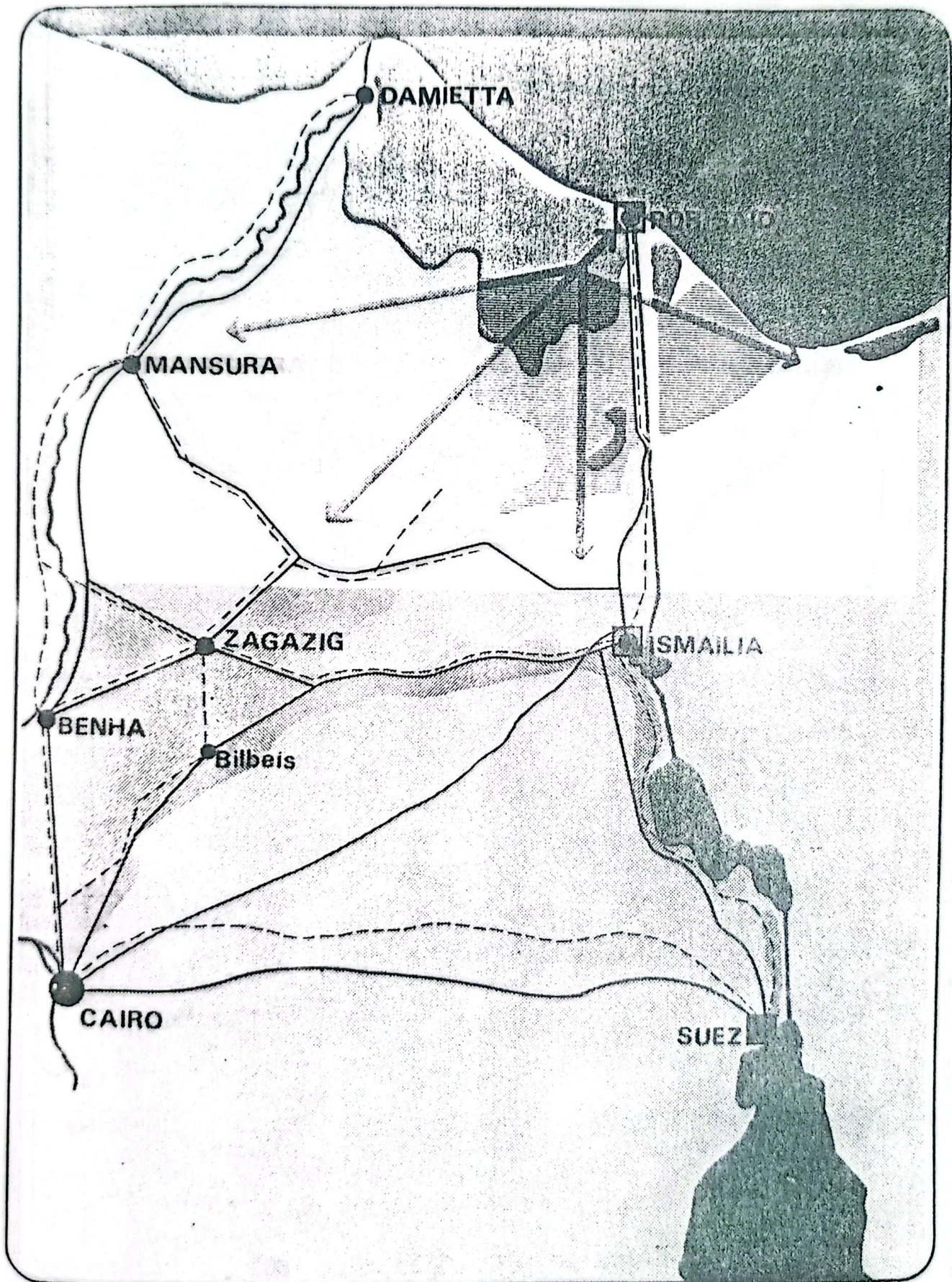


Existing Agricultural Land

● Existing Urban Centres

— Existing Highways

--- Existing Railways



PORT SAID DEVELOPMENT STRATEGY

Existing Agricultural Land

Proposed Land Reclamation

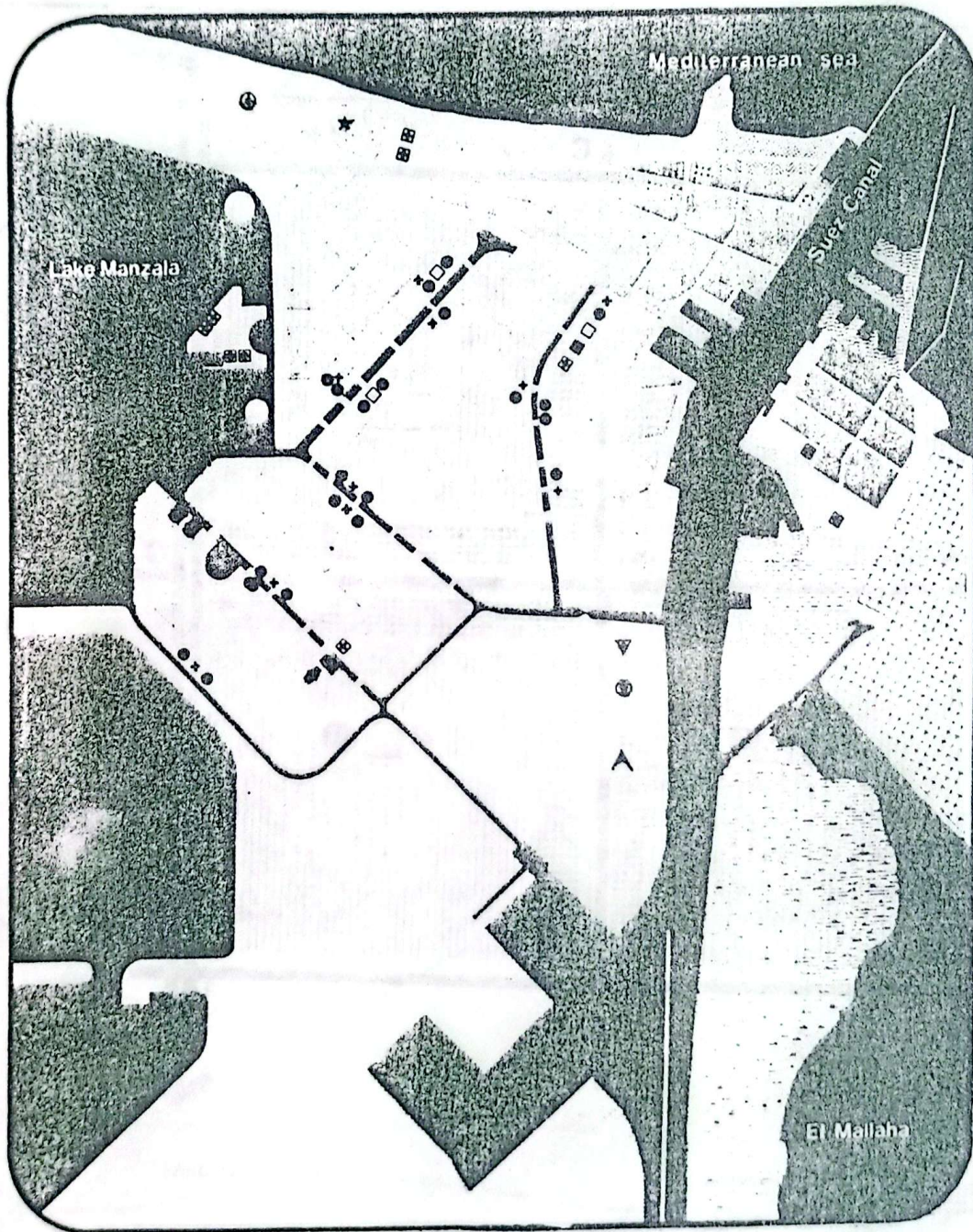
● Existing Urban Centres

■ Proposed Urban Centres

— Existing Highways

- - - Existing Railways

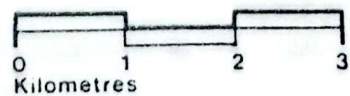
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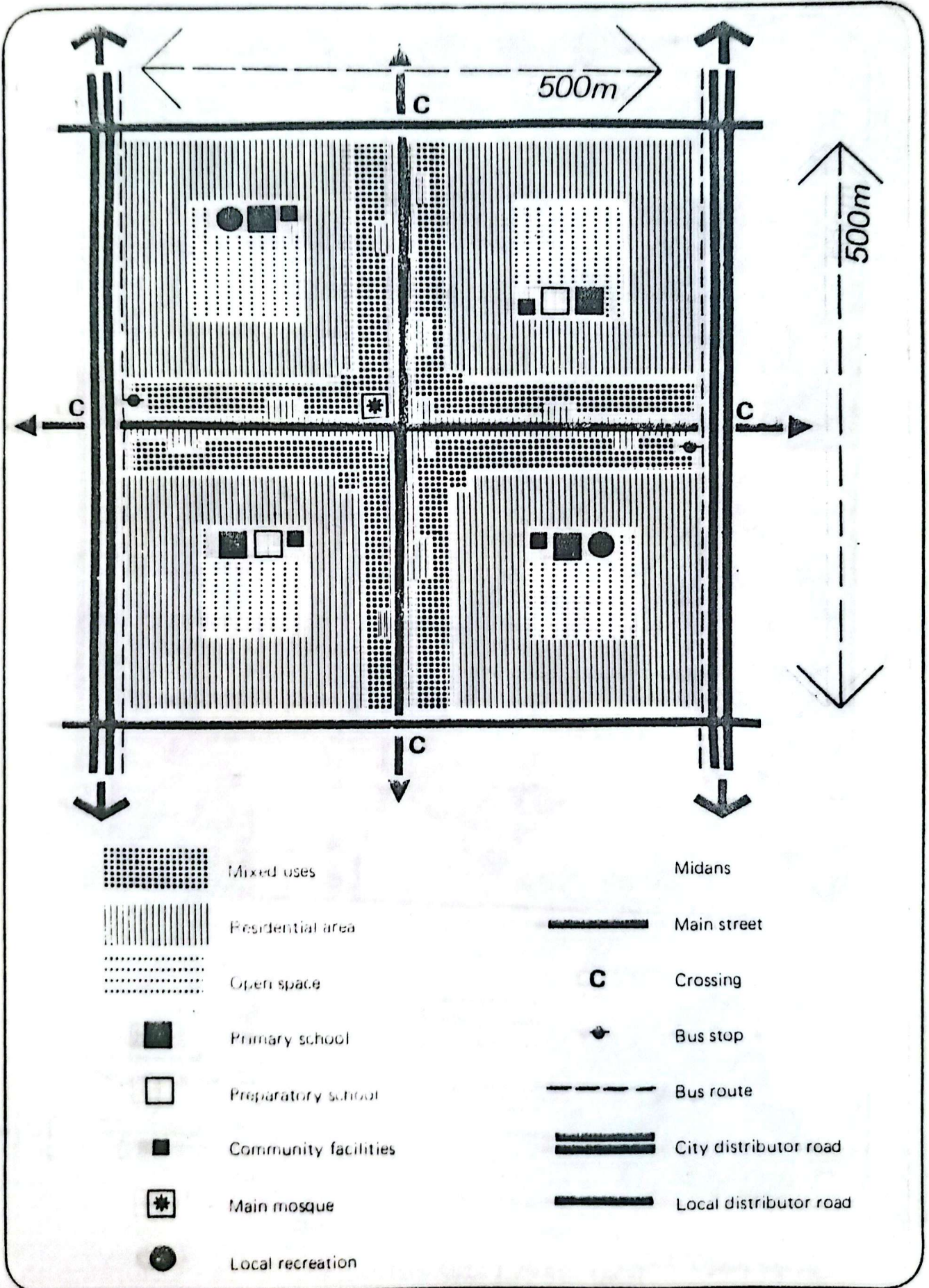
- Development
- City with industrial and commercial uses
- Residential and administrative (area post 2000)
- Old city
- Port
- Marine and fishing port
- Port area with industrial uses
- Industrial area
- Water supply and sewage
- Marine and fishing port
- Land reserved for heavy industry, defence, port expansion, etc.
- Port area

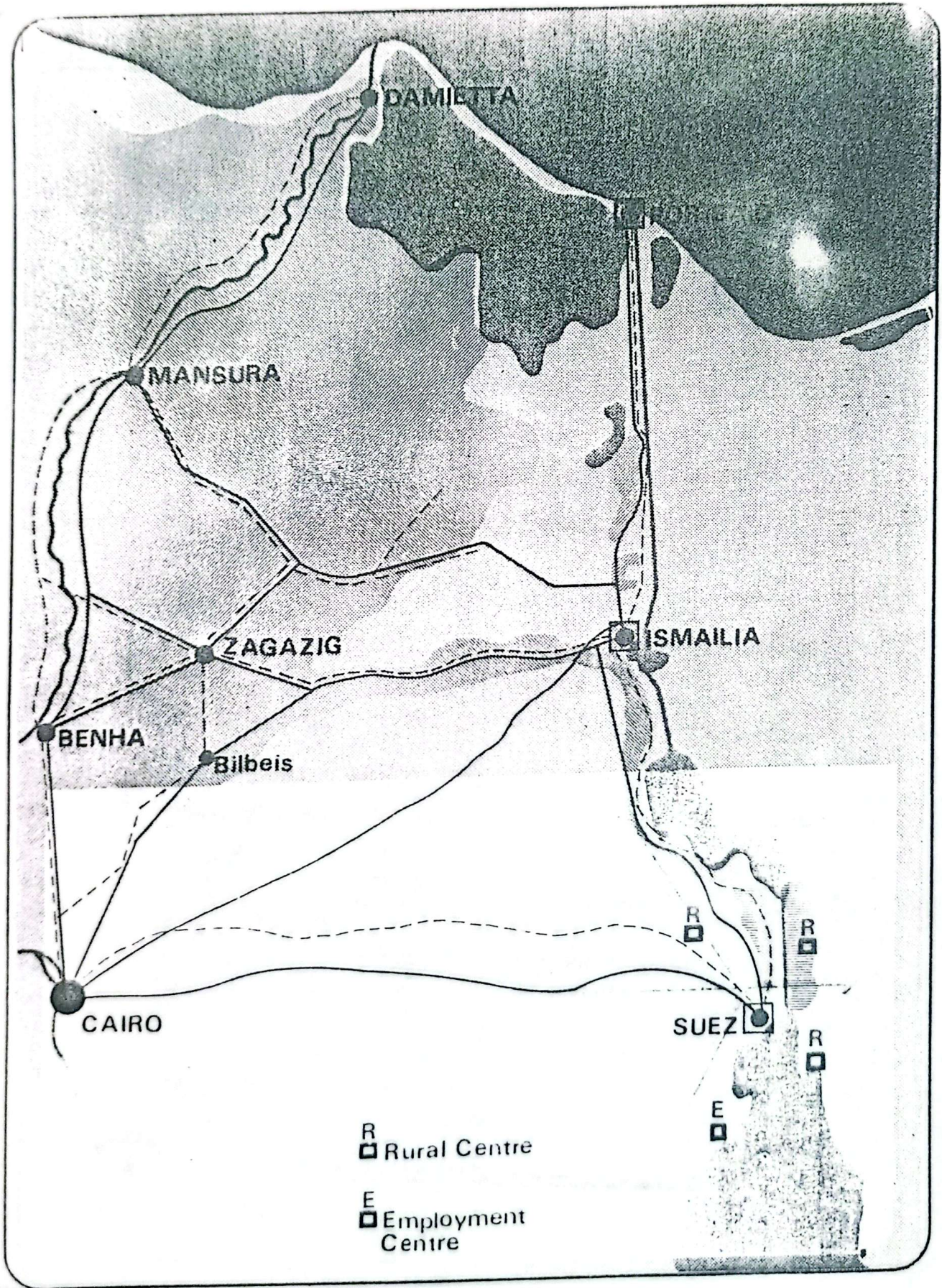
- Water related industries
- Port area
- Reserve for port expansion
- Transport undertakings
- Port administration and maintenance
- Marginal land
- Agriculture
- Prison
- Cemetery
- District sports centre
- Hospital/Polyclinic
- Secondary school, higher education

- Sewage treatment works
- Water works
- Main electricity substation
- Shipyard
- Fishing harbours
- Railway passenger terminal
- Transport interchange



PORT SAID LAND USE PLAN





SUEZ DEVELOPMENT STRATEGY

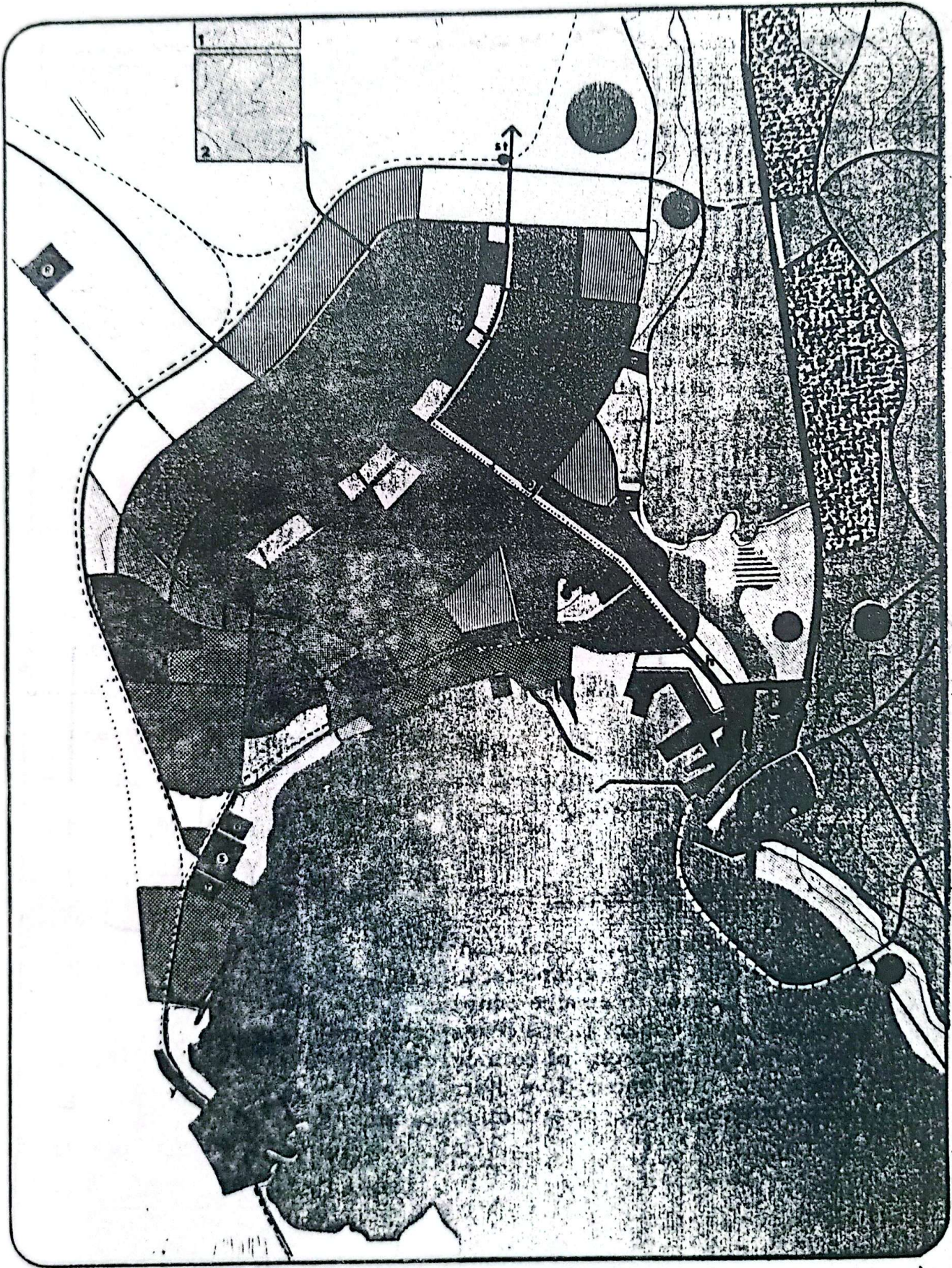
Existing Agricultural Land
Proposed Land Reclamation

● Existing Urban Centres
■ Proposed Urban Centres

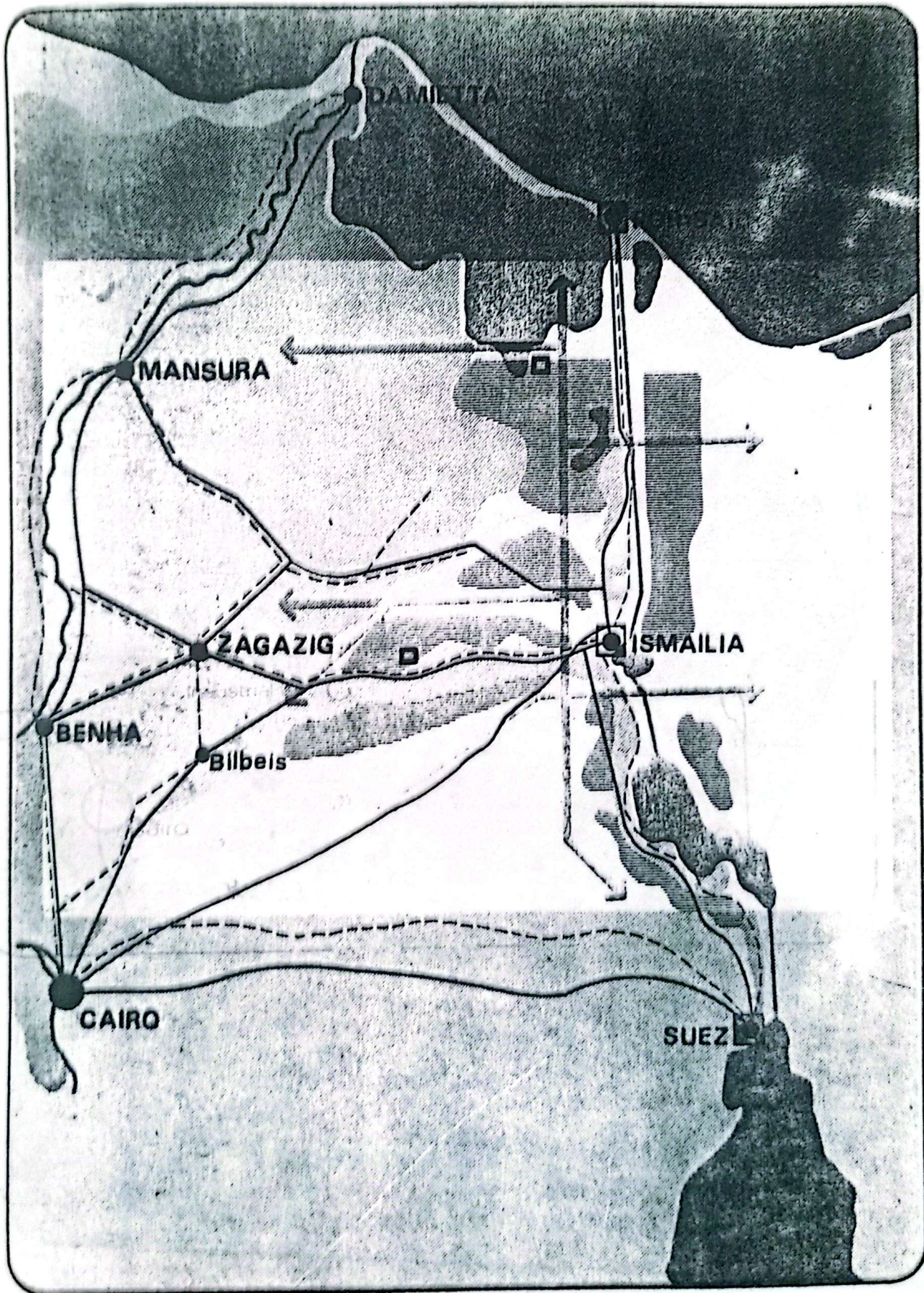
— Existing Highways
--- Existing Railways
Proposed Transportation-
Communication

Residential Areas	 Water Treatment Plant
 Light Industry	 Primary Roads
 Heavy Industry	 Future Rapid Transit Route
 Ports	 Railways
 Free Zones	 Railway Station
 Central Business District	 University
 District Centre	 Refuse Disposal
 Sewage Plant	 Coastal Recreation
 Power Station	 Cemeteries
Urban Open Space and Agriculture	 Military Airport





SUEZ LAND USE PLAN



ISMAILIA DEVELOPMENT STRATEGY

Existing Agricultural Land

Proposed Land Reclamation

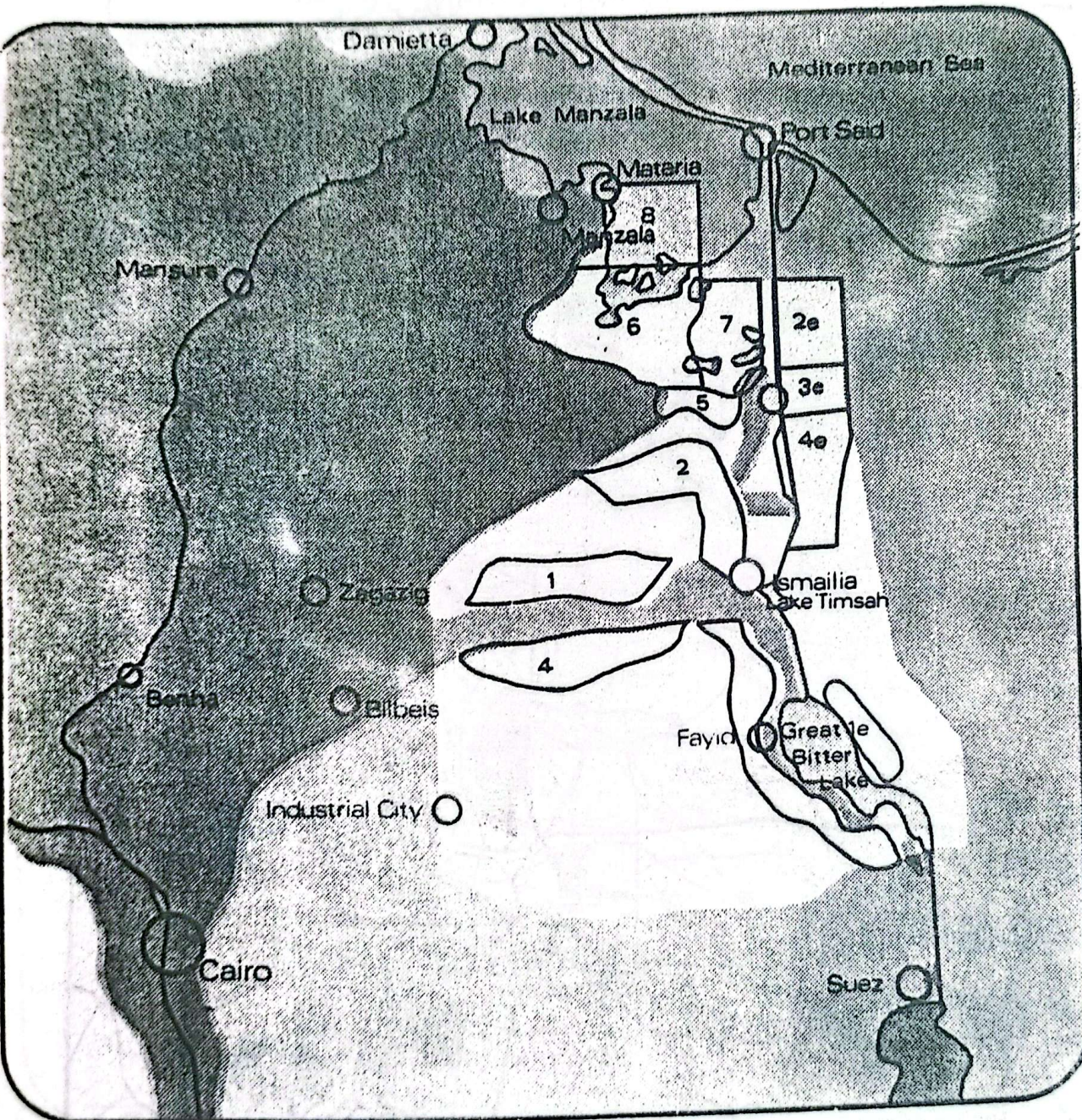
● Existing Urban Centres

■ Proposed Urban Centres

— Existing Highways

- - - Existing Railways

Proposed



EXISTING SETTLEMENT & PROPOSED RECLAMATION ZONES

Ismailia



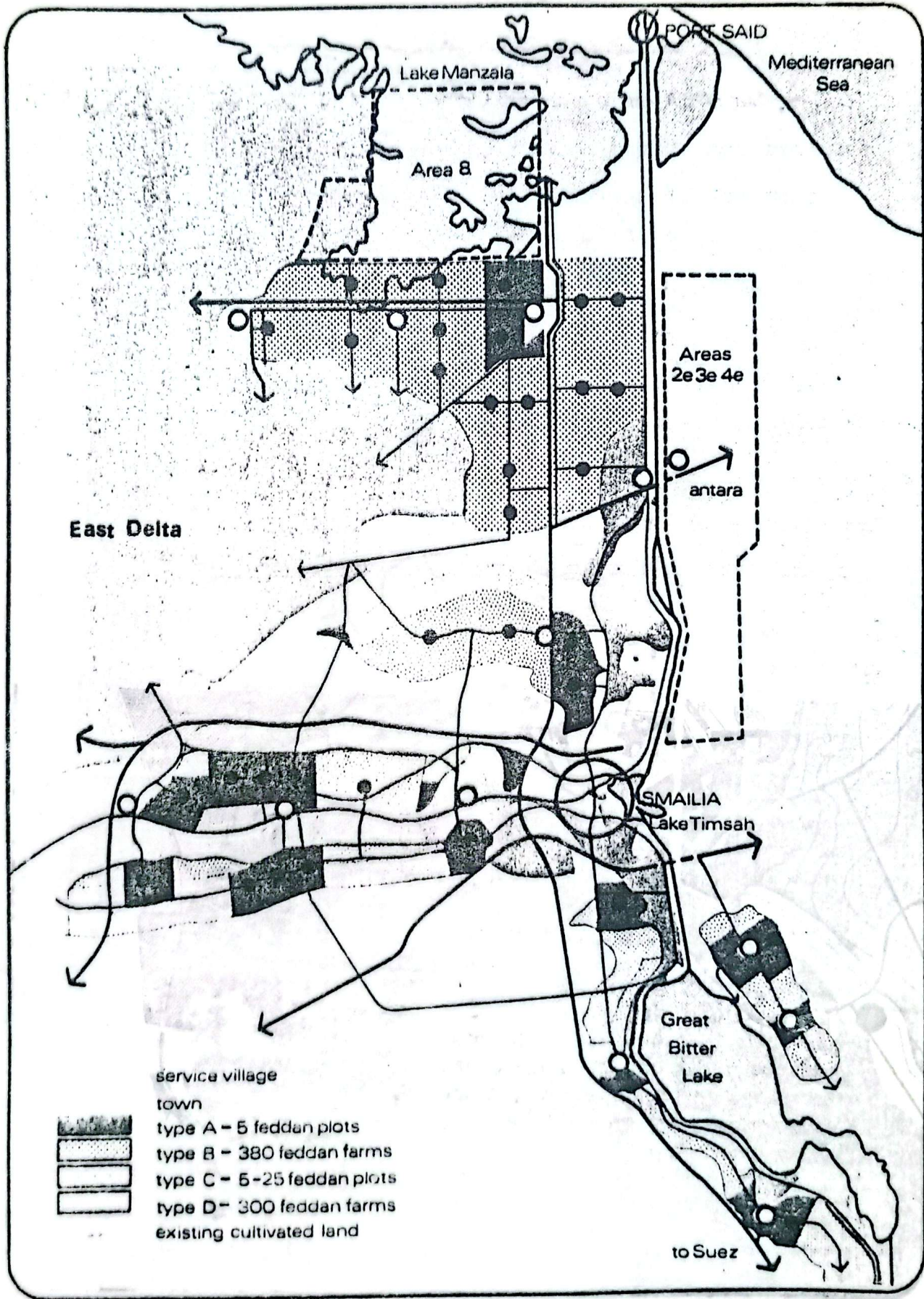
north

1:1,000,000

0 10 20 50
km

2 agricultural reclamation zone

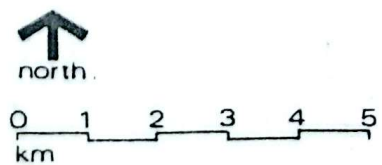
existing cultivated land



ISMAILIA AREA LAND USE PLAN



- General urban area
- Education
- Tourism
- Industry
- Agriculture
- Cemetery
- Central area
- Rapid transit



ISMAILIA CITY LAND USE PLAN