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UNIVERSITY OF ENGINEERING AND TECHNOLOGY**

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**PLANNING CITY-REGION : CASE OF DACCA**

**A THESIS**

Submitted to the Department of Physical Planning in  
partial fulfillment of the requirements for the degree  
of

**MASTER OF PHYSICAL PLANNING**

**BY**

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**Dacca, East Pakistan**

**1971**

THESIS

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By

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## ABSTRACT

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The study is focussed on the problems of the growing metropolis of Dacca and the recent trend in the emergence of new industrial centres within a short radius of the Dacca city. For the purpose of study three regions have been identified, namely, the Central City, the Metropolitan District and the City-Region. Pattern of growth in the city and in the region has been studied. The rapid and continuous population growth in the city has been creating severe land use conflict, while in the region most of the new industrial growth is taking place on the valuable and potential agricultural land. Industrial nucleus has already been formed and it is clear from the projected growth pattern that several centres in the region will experience tremendous growth upto 1990. Already a chaotic situation prevails and it is reasonable to assume that the situation will be much worse by 1990.

As an initial step toward approaching the problem, the goals and strategy have been formulated in the light of present crises. Then measures for solving these problems as well as evolving a compatible land uses both in the Metropolitan District and in the City-Region have been suggested through two separate plans. The planning and implementation responsibilities of the area like Dacca City-Region necessitate the creation of a Regional Planning Authority.

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শ্রী. বি. মাহমুদ

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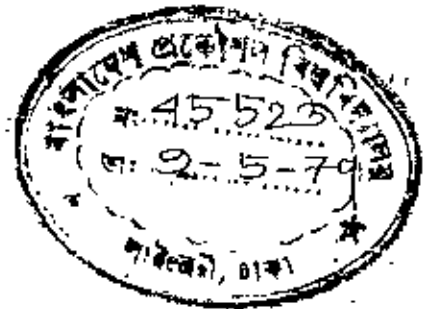
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CHAPTER - I

INTRODUCTION

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Dacca's growth is unique. It has witnessed a tremendous growth within a very short period. As a capital of East Pakistan it generates great power of attracting people and capital. Growth of industrial, commercial and administrative establishments have made possible the creation of a very wide urban base. Beside, the growth of numerous industrial estates in Tongi, Joydevpur, Ghorasal, Kanohan, etc, which are located around the city created a new spatial concept for Dacca. The city has become cultural, political, administrative and financial centre for the whole province. In response to all these a large number of residential, commercial and other land uses have sprung up. The city is spreading frontally and radially, incorporating the rural villages. The flight of capital, in-migration, increasing administrative machinery, expanding economy, growing industrial establishments, higher education, better medical facilities, etc, would create expanding job opportunity. Therefore, the rapid rate of urbanization is likely to continue.

Dacca performs wide range of services for its hinterland. Specialized establishments such as departmental store, medical college, university, technical institute, technical firms etc, located in Dacca City.



also high class dealers in furniture, jewellery and highly specialized functions like cinematography, publishing, financing, etc, are also performed by the city. The service areas of these functions extends not only over the Dacca's immediate hinterland but over the entire East Pakistan. As such, Dacca's zone of influence extends over the entire East Pakistan.

A zone around Dacca city, where intensity of inter-action and the degree of functional association is very high, can be identified on the map. Such a zone of influence known as city-region, may be used as a regional unit for physical planning purposes.

The problems associated with the present trend of urbanisation are numerous. Dacca is increasingly facing problems that are characteristics of growing metropolis. At present she is facing severe problems in housing, health, sanitation, employment, in-migration, traffic congestion, overcrowding, environmental deterioration, acute shortage of urban land, etc. The general tendency towards investment in and around Dacca City and continuous inflow of population pose serious problems for planners. The planning efforts at city scale alone cannot solve all these problems properly when factors like investment decision, policy goals and in-migration originate at outside the city.

Therefore, if we want to tackle the physical planning problems of the Dacca city and its region, we must approach through a regional planning framework. Study on this subject is not only important but urgently needed. Such a planning framework for the region will ensure the efficient and proper functioning of the city and efficient use of resources of the region. In other words, planning efforts are directed at achieving an optimum structure for the city-region. The present study is focussed on the Dacca City-Region. The problems of growth in the city and in the region, its resource base, and delimitation of the structure of the city-region have been considered. In chapter VI an attempt is made to show how a regional approach has been taken in the case of Dacca city-region. And finally, stress is given on the creation of a framework of planning organisation urgently needed to carry out the responsibility of preparation and implementation of regional plan for Dacca city-region.

## CHAPTER - II

### PATTERN OF GROWTH

Among the growing and developing towns and cities in East Pakistan Dacca is undoubtedly the oldest. Its existence is known to be from the 7th century A.D. It came to prominence at several times in history. "Its history may be divided into the following periods.

1. Pre-Mughal Dacca	....	Before 1608
2. Dacca under the Mughals	....	1608 - 1764
3. Dacca under the British	....	1764 - 1947
4. Dacca after partition	....	Since 1947" <sup>1</sup>

All these periods have contributed in their own way to the physical growth of the city. During first half of the 19th century the city size contracted. This is because of severe competition from Calcutta which was made the capital for British India. However, because of Dacca's strategic location in respect of river routes, central location and raw materials it began to grow but at a slower rate.

It was towards the end of the 19th century a new horizon began to unfold for Dacca. Narayanganj, one of the most important inland ports of East Pakistan, was connected by railway with Dacca in 1885 and Mymensingh in 1886, and this is for the first time Dacca's direct influence began to fall upon its surrounding region.

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<sup>1</sup>. N. Islam, High Class Residential Areas in Dacca City, reprint, the Oriental Geographer, Vol. VIII No.1, 1964, p.4

• Dacca city by the end of the 19th century was hemmed in between the Buriganga river and the railway line. The extension of the city to the east went upto the eastern fringes of Gaddaria and to the west upto Kewabganj<sup>2</sup>. Once again in 1905 Dacca became prominent by the partition of Bengal. A new province was created by joining East Bengal and Assam. Dacca was declared provincial capital. " The establishment of the capital of the new province of Eastern Bengal and Assam in Dacca in 1906 brought the development of the Civil Lines in Dacca Area beyond the city limits. The Civil Lines were not only the administrative centre but also the official residences of the administrative heads. The Europeans gradually moved from the river side to the new residential areas in Dacca<sup>3</sup>.

The impact of partition was tremendous on the growth of the city-region, Dacca city in particular. There have been unprecedented activities in spheres of public life, and the tempo of expansion and development was unique. Population of Dacca city and the surrounding industrial areas grew by leaps and bounds mainly due to the influx of migrants from India and areas within.

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2. *ibid.*, P.14

3. *ibid.*, P.20

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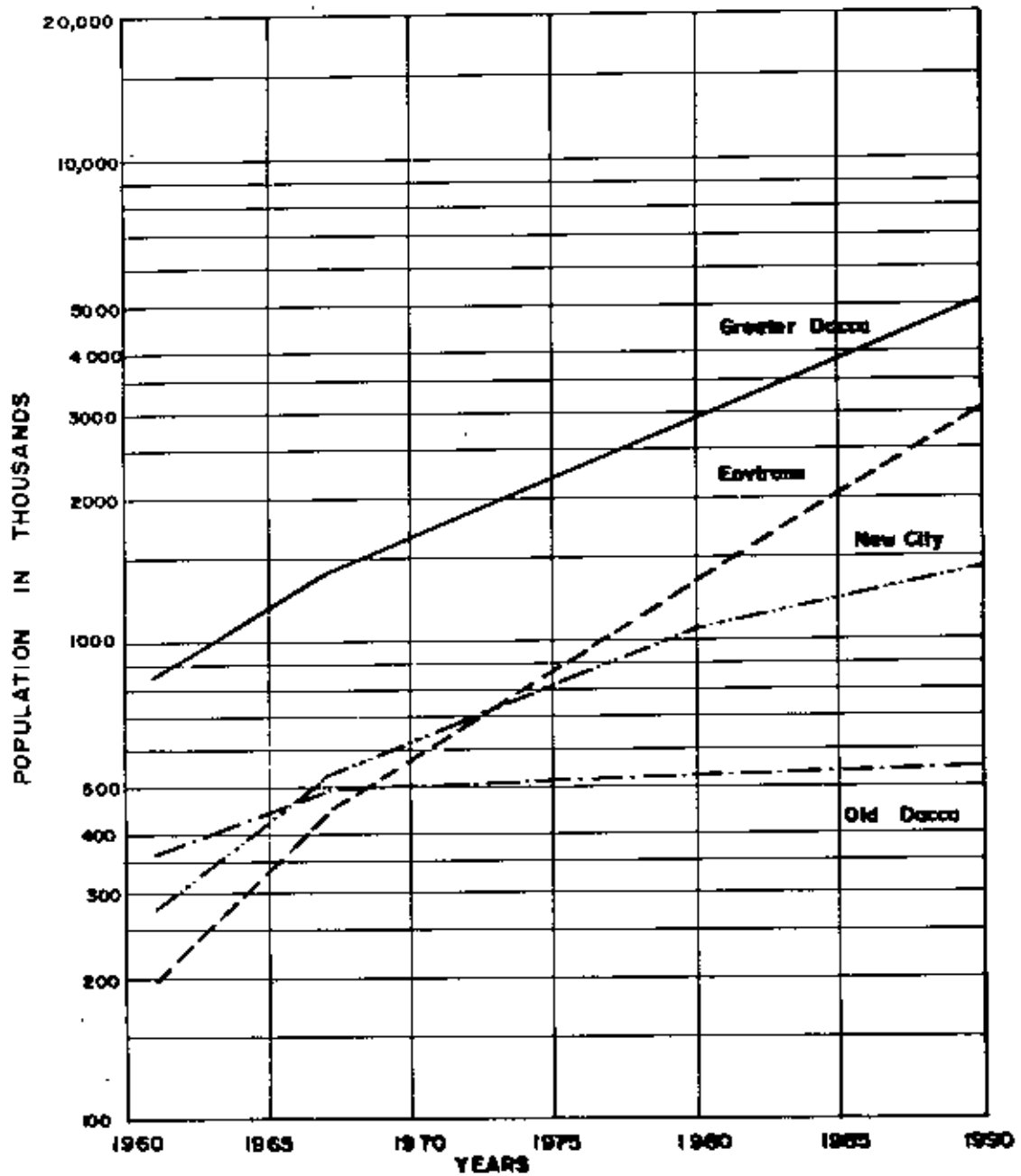
Population Growth: In the city proper, the growth took a new pattern. Independence brought influx of refugees across the border and crowning the city as a provincial capital, made her as the first order of city in the functional hierarchy. In 1951 the population of Dacca crossed over 500,000 and in 1961 the figure went over half a million and the projected population for 1971 is 9,15,225. In first two decades since independence the growth is unprecedented.

The old town, situated in the south of the former railway line was already compactly developed characterised by old and obsolete buildings and narrow roads. The major physical development took place on the north of the old town which today is known as new town. "Population within the zone of New Town in 1951 has increased by more than 150 percent since 1941, and by 1961 it rose over 200 percent. But in the old town the increase was only about 13 percent both in 1951 and 1961"<sup>4</sup> (see Table 1 and 11). It may be said that the old town has demonstratively reached what might be called a saturation point under present condition and is not going to absorb population growth in future if the present condition persists (Fig. 1). Most of the growth is taking place out side densely settled part of the old town. The places that absorbed this growth were Furenapaltan, Shantinagar, Motijheel, Magbazar, Razarbagh, Kausalapur, Tejgaon, Dharmendi and Rayerbazar.

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4. Akramuzzaman, Falik, Morphological study of the New Town of Dacca city, (unpublished M.A. Thesis, Deptt. of Geography Dacca University) F.40.

## PROJECTED URBAN POPULATION OF DACCA



SOURCE :- Amman & Whitney International Limited  
Dacca, Types and Postmaster Road. Volume I, Figure B.6-4

Figure - 1

In 1951 population density of these places were low and open land suitable for development was available in reasonable proximity to transportation lines.

In 1951 the new town occupied 62,729 persons against the population figure of 2,76,033 of the old town. By 1961 the population of the new town jumped to 1,94,706 whereas the old town recorded 3,62,005 (see table 1). In other words, the percentage of population of the new town in 1951 was 18 percent out of the total population of the Dacca city. But in 1961 the new town had 34 percent. Therefore, most of the present growth is being accommodated in different areas within the new town. This is also quite visible by the wide spread constructional activity in the new town.

Some idea can be obtained of the future population of Dacca city from the table IV. In 1980 the Old Town will record 5,20,000 population as against 10,43,000 people of the New Dacca. By 1990, as the projection indicates, the population figure for the New Dacca will reach 14,50,000. The total population of the entire city is supposed to reach 20,00,000.

TABLE - IPOPULATION OF DACCA CITY

Year	1901	1911	1921	1931	1941	1951	1961
New Town	14652	17182	18458	20460	26510	62729	194706
Old Town	89753	108551	119450	141462	213218	276033	362006
Total	104385	125733	137908	161922	239728	338762	556712

TABLE - II

PERCENTAGE OF POPULATION IN THE  
'NEW TOWN'  
(OUT OF TOTAL POPULATION IN THE DACCA CITY)

Year	1901	1911	1921	1931	1941	1951	1961
Percentage	14	13	13	12	11	18	34

TABLE - III

PERCENTAGE OF POPULATION INCREASE IN THE  
DACCA CITY

Year	1901	1911	1921	1931	1941	1951	1961
New Town	17.2	7.4	10.8	29.5	136.6	210.4	-
Old Town	—	12.09	11	11.8	15	13	13.11



TABLE - IV**ESTIMATED URBAN POPULATION GROWTH  
GREATER Dacca**

	1961	1967	1980	1990
Old Dacca	3,60,000	4,82,200	5,20,000	5,50,000
New Dacca	2,76,000	5,20,000	10,43,000	14,50,000
City Proper	6,36,000	9,48,200	15,63,000	20,00,000
Enviroms	1,93,000	4,20,000	13,28,000	30,00,000
Greater Dacca	8,29,000	13,74,000	28,91,000	50,00,000

Source : Amman and Whitney International Ltd. Engineering and Economic Feasibility Study for Dacca Bypass and Penetrator Road, Vol.I. P.8.50

Physical Growth: There were certain development in Furaha Palton, Topkhana and University area. Physical development in these were sparse and sporadic. There were some sort of planning for civil lines and University area but rest of them were developed by individual developers mostly for residential purposes. None of the efforts were made with due regard to any total planning.

The major development in the new town after partition is in the form of residential areas. These dormitory areas can be grouped into two categories i.e. planned residential areas which include Asimpura, Dhansondi, Mohammediyur, Gulshan, Firpur,

Bosani and Motijheel and unplanned residential areas that grow around the planned residential area. The distinguishing features between planned and unplanned development are quite visible. Planned areas are normally and comparatively less density areas and size of plots are regular. Gridiron is the dominant road pattern and construction of houses by bricks and mortar. In the unplanned areas the density is very high, road width are irregular and winding, sizes of plots are very irregular and construction varies from thatch house to brick masonry. Beside this residential use two other important land uses have sprung up in the new town - one in Tejgaon as industrial use and the other one in Motijheel as Commercial use. A large tract of land of the former Tejgaon Sara which is situated east of Mohammadpur housing estate has been occupied by the Second Capital.

Chronologically speaking, the first planned development after independence in the field of residential areas took place at Azimpura, Palasay and Motijheel as far back as 1950 mainly for the Government employees. In Azimpura and Motijheel development came in the form of 3 storied flat houses with 6 to 12 flats in each building.

Major part of Dhanmondi were developed as a residential area for higher income group people. Here the planning of the Government was in the form of layout of streets and sub-division of land into residential plots.

These plots are distributed to the individual for the purpose of constructing residential houses. The area has developed on 500 acres of land and is divided into blocks by numerous distributory roads under a rigid grid pattern.

Since the creation of Dacca Improvement Trust in 1956 it took the work on residential planning in Gulshan in the same line that of Dhansandi, i.e. land in Gulshan was acquired developed and divided then into residential plots. It is also a high class residential area. Soon after this, Barani was acquired for same purpose. Suitable topography above the flood level and proximity to the city are two major factors for their site selection. In fact, they developed as a residential suburbs. The development work on the "Uttara Township" is going on. It covers an area of 2,408 acres and is located six miles to the north of Dacca. DIT is also playing important role in the development of areas in different part of the city by providing shopping and road development programmes which includes provision of new roads, link roads and improvement of existing roads such as DIT avenue, roads on Motijheel Commercial area, Topkhana Road, Toinbee Circular Road, Green Road, Johnson Road etc.

Echamrapur and Mirpur areas developed also as a residential area to rehabilitate the refugees from India. All these were Governmental efforts. Private efforts in area-wide residential development is very shy. However, Pallavi housing estate by private effort is a significant step in this direction.

Beside the above mentioned planned residential areas, other areas in the new town were subject to haphazard development. As a result, the whole area of Siddeswari, Ekraill, Naya Paltan, Kamalapur, part of Tejgaon, Chandondi, Shajhanpur, Khilgaon, Damboo, etc. became a large residential area sheltering mostly middle class and upper middle class people. There is neither homogeneity nor unity in any point. Occupational segregation is not very clear but some sort of unity can be found in the distribution on the income criteria. Road layout does not belong to any particular type. Roads are winding narrow and short distant. Violation of building construction rules is wide spread. Drain and sewer are inadequate. Structure varies from thatch to concrete masonry. In times of high flood some areas are inundated.

All these development together with few industrial sites, within a very short time since partition of the sub-continent, gave Dacca a true metropolitan colour.

Growth in the City-Region

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Independence has brought a new impetus in the economic progress of the Dacca city-region. At partition, most of the industries were located in and around Calcutta. Calcutta was the main centre for economic opportunity for Bengal and Assam. Most of the raw jute grown in East Bengal (now East Pakistan) used to move to the jute mills located along the Hooghly river for the manufacture of jute goods. Best quality jute is grown in the Brahmaputra and Meghna valley, part of which is located within the Dacca city-region. Narayanganj in this area became a famous collecting, baling and processing centre of raw jute. Good number of banks and commercial houses were also established to finance the jute trade. Due to the partition all the jute mills fell to the Indian territory whereas the jute fields were in East Pakistan. Soon after partition India refused to purchase Pakistani jute. The urgency of the situation arising out of the partition forced the Government to adopt a policy of establishing jute mills in East Pakistan. As a consequent to this policy, Narayanganj was chosen for the location of mills primarily because Narayanganj had trade experience, financial assistance and above all it is located within the great jute belt of the world. Cheap transport and labour force were also available.

At partition, there were seven cotton and spinning mills in East Pakistan all of them were located in Narayanganj region. Beside these, large numbers of weavers were distributed over many villages in this locality specialising in handloom product. Apart from the seven cotton mills of the pre-partition era, thirteen new mills have been established at different places in the city-region. To-day the region has twenty mills out of the forty two mills of East Pakistan. The region has also a very high density of population particularly along the Meghna valley. Narayanganj was noted for as an important River port even long before partition.

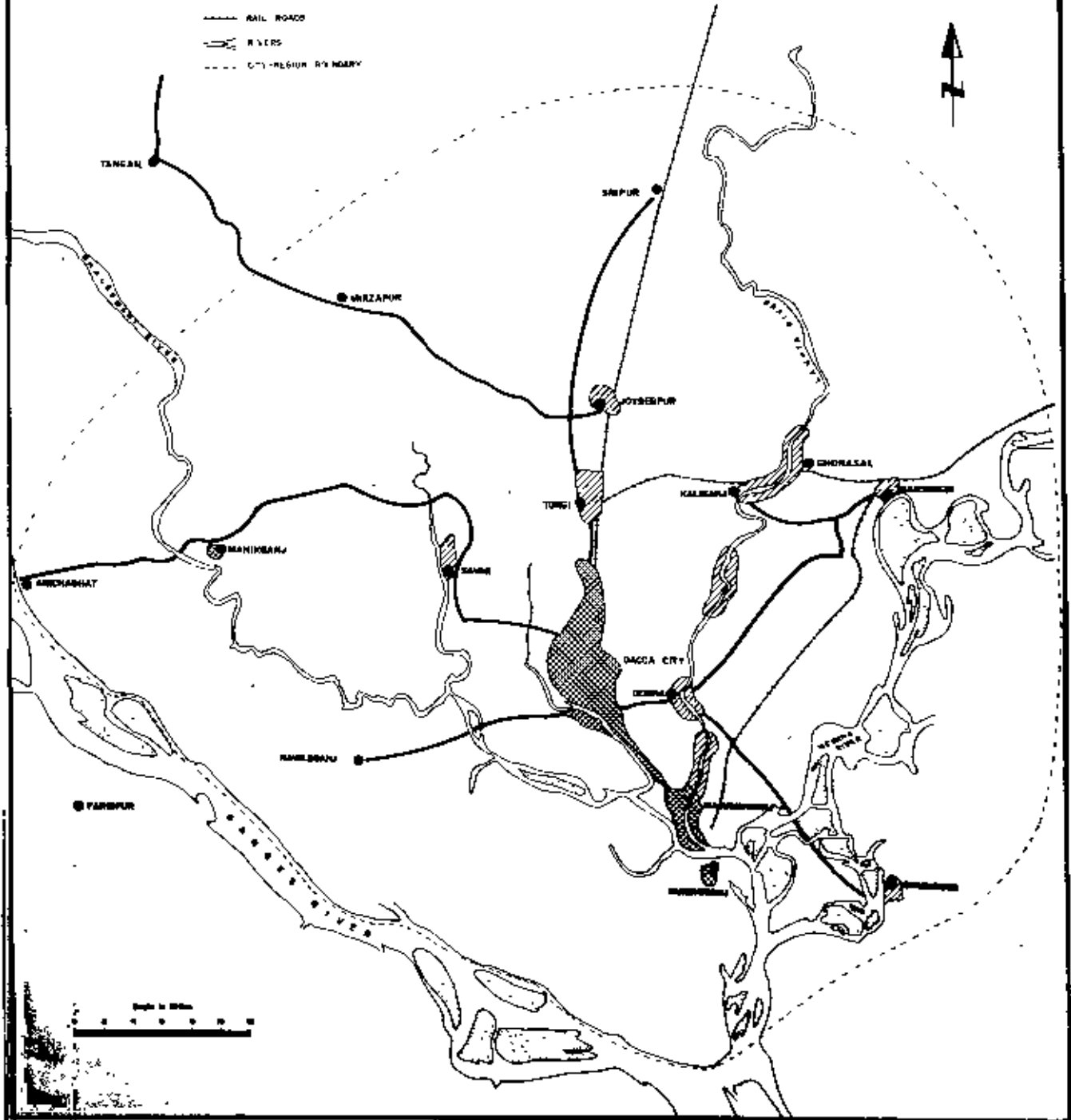
Jute is the main cash crop of East Pakistan around which the economy of the province revolves. Korean war has brought a great boom for the jute industry of the region. The availability of power, raw materials, cheap transport facility, cheap labour force, skill personnel, financial institution, large market and desire to remain near the Dacca Metropolis etc, dictate the location decision in favour of Dacca city-region. To-day several industrial centres have sprung up in the region such as Narayanganj-Dacca area, Ghorasal-Kaliganj industrial belt, Narainghdi, Fongi, Joydevpur and Kanchar (Fig. 2).

Narayanganj - Dacca Area : The centre is situated on the bank of the Lakhya and is about 10 miles from Dacca city. The growth of the areas as an important industrial centre since independence is very rapid and spectacular.

# DACCA CITY-REGION GROWTH AREAS

## LEGEND

-  URBAN AREAS
-  EMERGING INDUSTRIAL AND URBAN AREAS
-  COUNTRY SIDE
-  MAJOR ROAD
-  RAIL ROAD
-  RIVERS
-  CITY-REGION BOUNDARY



In 1961 the population of Narayanganj city which includes the Municipal area and Narayanganj industrial area, was 1,62,054. Narayanganj city recorded a very high rate of growth in the last four decades. In 1941 it had 56,007 persons. The figure went to 68,373 in 1951 which means 22.1 per cent increase over the 1941 figure (see table V). But most rapid growth recorded between 1951 and 1961. In this period there was record rise of 177.01 percent. The net increase was 93,681 persons for the same period. The population projection shows that Narayanganj city has reached 260,000 persons in 1970 and by 1980 it will cross 3 lacs (see table VI). The highest density in East Pakistan is recorded here when in 1961 it was 16,020 person per square mile whereas the figure for 1951 was 7897 persons per square mile (see table V)

This rapid growth in population is due to the great tempo of industrial development in and around Narayanganj town triggered by several advantages, as noted earlier. The physical growth took mainly along the Lakhya river in the form of industries. The growth has been taking place in the northern direction. Narayanganj-Damra area is specialised in textile industries particularly in the jute and cotton textile. Most of the textile mills are located along the Lakhya river. Unlike other river banks in the delta, the banks of the Lakhya is immune from normal flood. This gives the Lakhya a unique position as regard to the buildable land along the water frontage.



Harayanganj town is also the biggest hosiery manufacturing centre in the province, producing the bulk of the hosiery goods of all varieties, catering the needs of the whole province. This activity has provided a wide employment opportunity. To-day there are about nine jute mills in the Harayanganj-Demra industrial area (see appendix A) and Adamjee Jute Mill is by far the largest of all with an annual production of 1,00,000 tons of jute cloth and jute bags. The value of this production amounts to rupees 10 million. The value of the products from other jute and cotton mills runs to several million of rupees.

**Table - V**

Decennial change in population, 1941 to 1961

Also showing variation in number of persons, percent, area and density of Narayanganj city and Narayanganj Municipality.

	1941			1951			1961			Apprx Area Sq. mile	Person per square mile
	Populati-on	Vari-ation	Per-centage	Popula-tion	Vari-ation	Per-centage	Popu-lation	Vari-ation	Per-centage		
Narayanganj City	56,007	-	-	68,573	12,366	22.1	162,094	93,601	137.01	9.75	7897
Narayanganj Municipality	56,007	21,818	63.8	68,573	12,366	22.1	125,792	57,419	83.97	-	-

1941  
1951-1956-19620

Narayanganj city includes Narayanganj Municipality and Narayanganj Industrial Area.

Source : District Census report Dacca - PP. IV - 7,11

Ghorasal Industrial Belt : Industrial complex is fast coming up in the Ghorasal region. The belt is located along the up stream of the Lakhya. In the south it includes Kaliganj and runs north along the banks of the river Lakhya upto Palash on the north. This industrial belt is located about 28 miles north of Dacca.

Full independence, the area was not very prominent though there were one cotton mill (Nandial Cotton Mill) and one Sugar Mill (Dabbandhu Sugar Mill) established as far back as 1931<sup>5</sup>. Muelia Cotton Mill was established in 1952 by Pakistan Industrial Development Corporation (now EPIDC) for Spinning the Cotton which had great demand in the cottage and handloom industries of the province. The Industrial policy of the Government made a turning point for the region. Consequent to this industrial policy (as emphasized in the five year plans). Jute Mills were established between 1961 and 1970 ( see appendix B ). The discovery of gas in Titas area in Brahmanbaria will play a great role in the emergence of this region as a great industrial complex. Facing on natural gas, Ghorasal Thermal Project and Urea Fertiliser Factory will be completed soon.

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5. RIEVI, S.E.H. Gen. Ed. East Pakistan District Gazetteers, Dacca. (Govt. of East Pakistan. S & C.S. Department 1969) P.197.

It seems that the Ghorasal region has high potentiality for further growth. About 1080 acres of land has already been occupied by the different industries. The land value is already taken a very high trend. The price for high-land varies between Rs.10,000.00 to Rs.30,000.00 per bigha. To-day the industrial labourers constitute about 13,000 persons.

Tongi : Tongi is a railway junction located twelve miles north of Dacca city. According to 1961 population Census Tongi Union had 16,667 people but in the Tongi proper there were only 433 people. At present there are more than 25,000 people in the Tongi industrial area alone. Tongi will experience a very rapid growth in population. By 1980 population will be more than 3 lacs and by 1990 it will exceed more than 6 lacs (Fig. 3). In recent years, several industries have sprung up rapidly in the area. Cotton Textile is the dominant industry. There are nine cotton mills engaging about 6125 employees (see appendix C). Other important industries are tobacco, chemical, pharmaceuticals and light manufacturing. Total employees engaged in different industries are more than 11,000.

"This northern movement is no longer is an academic projection but is well under way with big commitments in the Tongi-Joydevpur area. The Dacca Improvement Trust (DIT) is developing an industrial estate which will have 800 acres eventually, of which 653 acres already have been acquired.

One phase of land development is nearly complete and the other is well under way. The East Pakistan Small Industries Corporation (EPPSIC) is developing an estate with 250 plots for small industries. To the south of the industrial estates DIT is developing the North Satellite Town, the first phase of which will have 5,300 plots for middle upper middle income people. Eventually the plan is to have 36,000 plots. Only approximate estimates are possible, but by 1980 it seems not unreasonable to project a population of about 4,00,000 people, an increase of 3,00,000 from current levels, in the Tongi Area<sup>6</sup>

Tongi's location near Dacca metropolis and better transport and communication connection with important places both by rail and road will make Tongi as an important industrial centre. The preference for industrial sites are generally the lands along the highway. The land value in this area have gone up several times. The industrial expansion is currently taking place on the highly potential agricultural land.

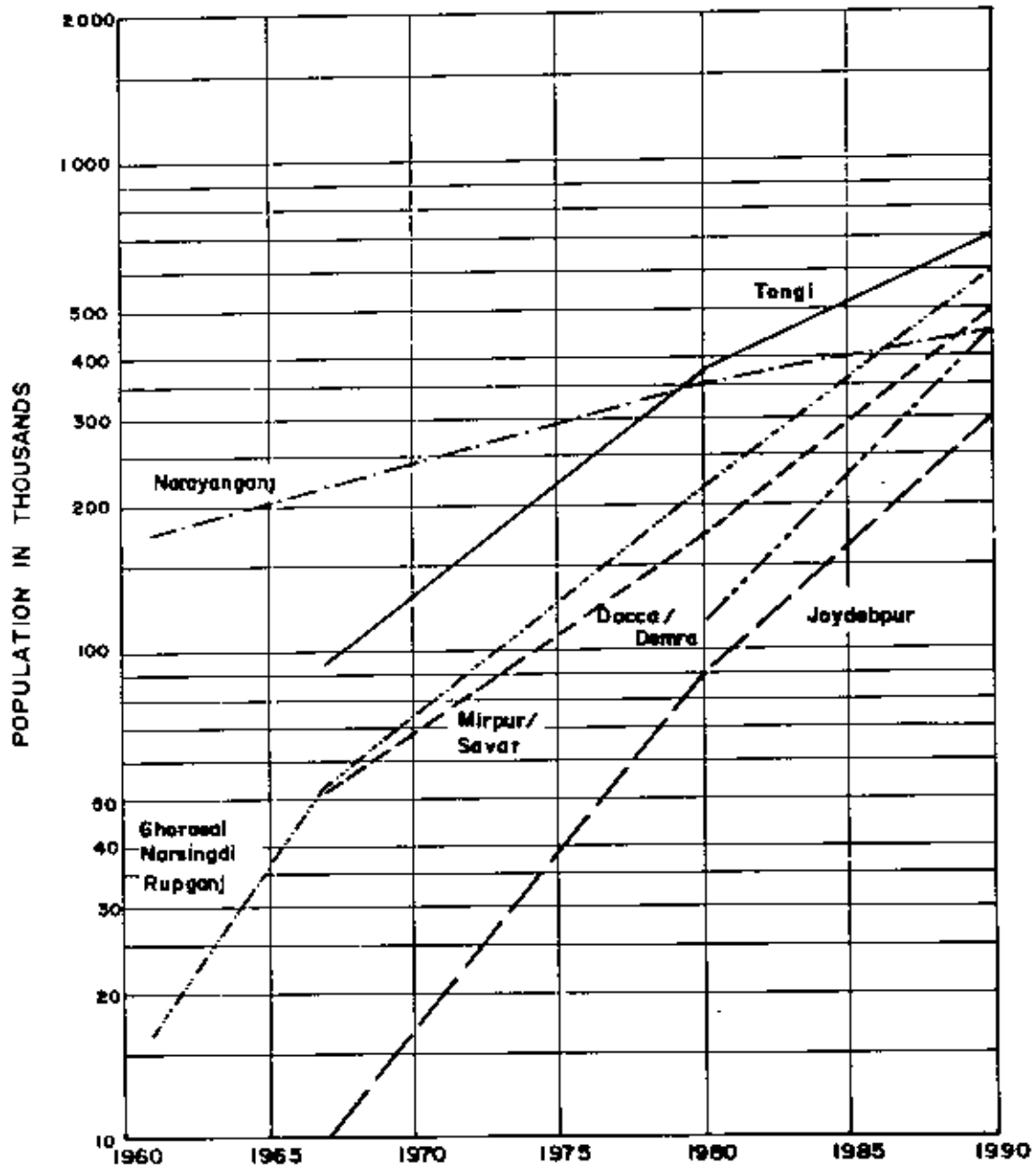
Kanchan : It is an emerging industrial centre located about nine miles from Dacca in the up stream of the Lakhya. The area is devoted mainly to jute manufacturing. By now several jute and cotton spinning mills have sprung up in and around Kanchan and few are under construction. One of the reasons for industrial location in Kanchan is the cheap water transportation which Lakhya generously provides.

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6. Assan - Whitney International Ltd., Engineering and Economic Feasibility study for Dacca Bypass and Penetration Road, Vol.1 P.E. 35

GOVERNMENT OF INDIA  
MINISTRY OF PLANNING

### PROJECTED URBAN POPULATION OF SELECTED AREA



SOURCE:- Amman & Whitney International Limited.

Dacca Bypass and Penetration Road. Volume I. Figure 8.6.4

Figure - 3

Barsingdi : Barsingdi is another growing centre in the city-region. Substantial growth has taken place between 1951 and 1961. The Urban population of the area has been estimated 15,000 and according to the estimate it reached 23,500 in 1967 (see table VI). The table estimate 55,000 people for 1990. The Jute Mills were established after 1961. It is also an important Jute Trading Centre.

Joydevpur : Another important emerging industrial centre in the city-region is Joydevpur. In 1967 Joydevpur has 10,000 population which will reach 90,000 in 1980 and in 1990 this town will accommodate 3,00,000 people (see table VI). It is making image on heavy industry. Industries such as East Pakistan Machine Tools Factory, Pakistan Diesel plant and Pakistan Ordnance Factory are of recent origin. A housing society is already there. This industrial centre is located six miles north of Tongi industrial area. Topography and environment provide excellent opportunity for the location of industries.

Table - VI  
URBAN POPULATION : ENVIRONS OF DACCA

	1961	1967	1900	1990
Tongi	....	94,000	3,78,000	7,00,000
Joydevpur	....	10,000	90,000	3,00,000
Mirpur	....	52,000	1,75,000	5,00,000
Savar	....	2,18,000	....	....
Karayanganj	1,76,500	1,76,500	3,53,100	4,50,000
Dacca - Debra	....	....	1,16,000	4,50,000
Shorupal	....	20,000	1,00,000	
Karsingdi	16,000	23,500	55,000	6,00,000
Kaliganj- Rupganj	....	10,000	61,000	

Source : Aman & Whitney, op. cit. p. B. 49

Growth in Relation to East Pakistan

Dacca takes the leading position among the urban centres of East Pakistan. She receives the major share of urban growth of the province. Due to Government's policy and due to the general wave of urbanisation there will be substantial growth in the urban population of the province. In 1965 East Pakistan had 3.9 millions urban population out of which Dacca Area alone had 1.1 million (see table VII).



In other word, more than 20 percent of the total urban population is found within the Dacca Area. The annual growth rate for whole of East Pakistan, as the table VII indicates, is about 7.6 millions whereas the annual growth rate for Dacca Area is more than 6 millions. Upto 1990 Dacca Area will continue to receive more than 20 percent of the total growth in urban population in East Pakistan.

Table - VII

URBAN POPULATION ESTIMATED

Year	East Pakistan in millions	Dacca Area	As % of E. Pakistan
1960	2.8	0.8	28.6
1965	3.9	1.1	28.2
1970	5.5	1.5	27.3
1975	7.9	2.1	26.6
1980	10.2	4.0	22.0
1985	10.2	4.00	22.0
1990	24.4	5.0	20.9
Annual Rate	7.6	6.3	....

Source : Aman & Whitney. Op. Cit., P. E. 25

Large industries like jute, cotton, etc. are located in the Dacca city-region. According to the Census of Manufactures for 1962-63 Dacca district had 72.5 thousand employees of large industries or 46% of the 157.5 thousand such employees in all of East Pakistan. At present the city-region has twenty cotton mills out of the forty two mills of East Pakistan.

"It will be difficult to implement the Government's policy to spread industrial and urban centres through out the province because the external economies of locating in Dacca are so great. Natural gas is now available only in Dacca. Its growth as the Second Capital, and presence of large Airport of International standard, reinforce the attraction to industry of Dacca"<sup>7</sup>.

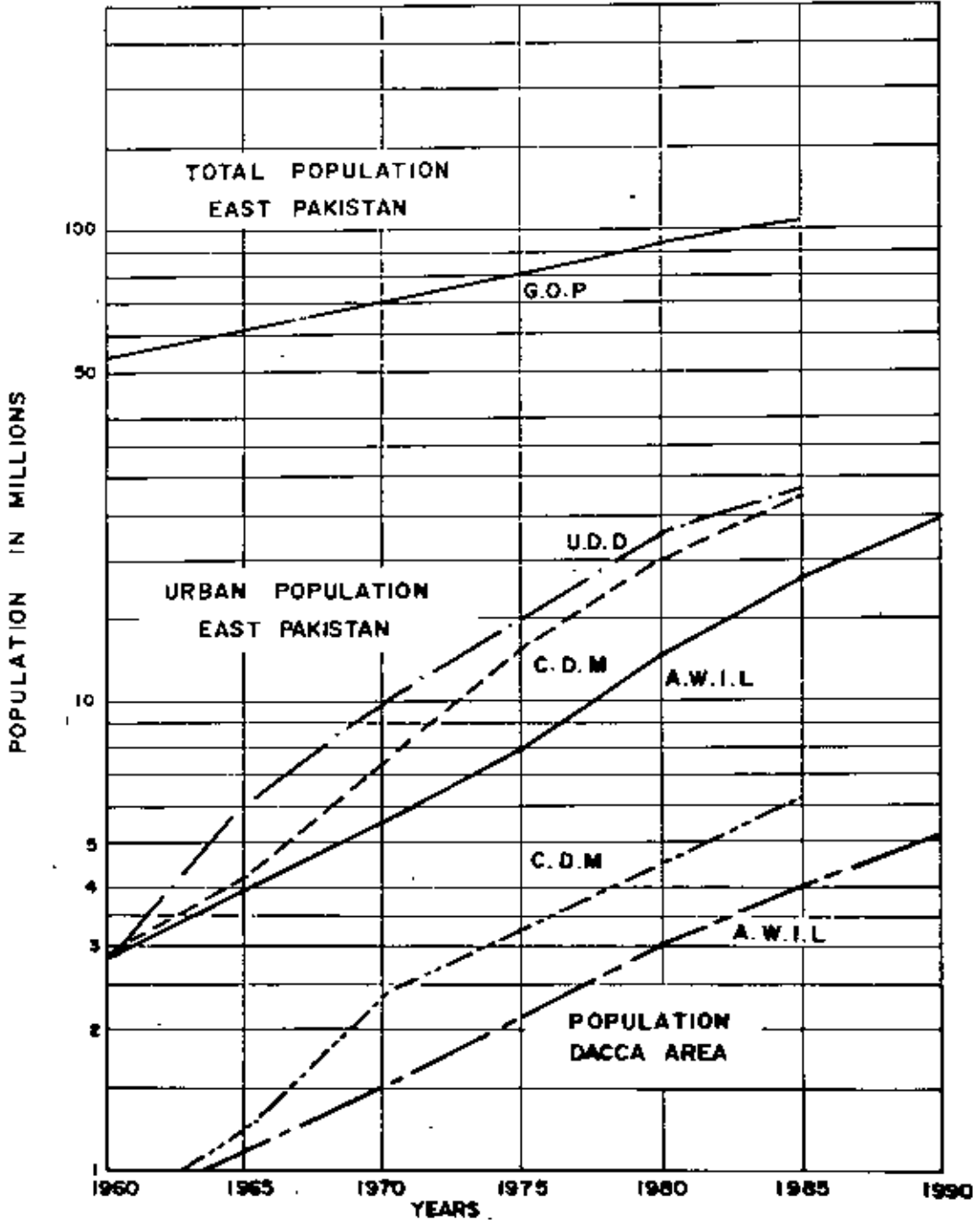
Dacca is a hub of transportation system of the province. It is favourably connected with the other important areas by road, rail, river and air. With the increasing mobility of workers, industry has a wide choice of location in a given region and is in a position to compare the attractions of several communities in terms not only of access to resources, labour and transportation but in terms of such factors as housing recreational amenities. Therefore, inspite of new growth centres in the province, as visualised in the Government policy, Dacca will continue to grow significantly in relation to the entire East Pakistan (Fig. 4).

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7. *Ibid.*, op. cit., P. A. 16

## POPULATION PROJECTIONS URBAN POPULATION OF EAST PAKISTAN AND DACCA AREA

U.D.D. - Urban Development Directorate.  
C.D.M. - Comp, Dresser & McKee.  
A.W.I.L. - Ammann & Whitney International Limited.



SOURCE :- Ammann & Whitney International Limited.  
Dacca System and Penetration Road, Volume I, Figure B.4.1

Figure-4

### Growth and its Planning Implication

The rapid growth of the city in population and area has great planning implication. City requires many more miles of roads, streets, sewer line, water line, electricity. Urban consumption in all respect increases. The supply of drinking water both in the old and new city has increased from four million of gallons to 18 million gallons per day and will further increase to more than 30 million gallons per day by the year 1971<sup>B</sup>.

Similarly problem is being created in the housing sector. On the basis of present rate of increase of population, the population of Dacca is estimated to reach 1.6 million in 1981. Incidentally this will be an increase of 10,50,000 over the population of Dacca in 1961. If we assume 5 persons per house then we would require about 2,25,000 dwelling houses by 1981 to accommodate the increased population. The horizontal expansion in this case will create extra pressure on the land.

This increase of population of 10,50,000 by 1981 will result in intense land use conflicts. In otherword, that would imply land requirement for residential areas, major highways at 10 acres per mile, transport and trucking terminals at 50 acres each, major industrial estates 200 acres each,

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B. Atiqullah, M & Khan, F.K. Growth of Dacca city. (department of Statistics University of Dacca) p.12

hospital at 50 acres each, open space at 10 acres for every 1,000 people, etc. The total gross land requirement for all land uses, considering the present standard i.e. 5,000 persons per square mile as the average density for urbanisation, would amount to 210 square miles. In other words, there would be rapid expansion of urban and industrial activities around Dacca and would pose a serious threat to the valuable agricultural land within a wide radius of the city.

Another important implication of the growth is found in the field of land speculation. Land speculators and other investment group are responsible for the increase of land value in different fringe areas of the city.

Table - VIII

AREA ESTIMATES IN SQUARE MILES

<u>Year</u>	<u>Area</u>
1961	36
1966	40
1971	45
1976	50
1981	55

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Source : Ibid, p. 29

From the table VIII, it is clear that by 1951 the city will occupy 55 square miles of area. But the question is on what areas this increase will be occurred. City's surrounding land in the eastern, southern and western are generally low and liable to annual flooding. Land suitable for development is to be found in the north. In course of time, the city will be reaching out in an elongated projection to the north in search of flood-free land. This trend has already been observed.

Since city is expanding only in the north, the present Central Business District will ultimately be left to one corner of the city. Consequently traffic congestion in some roads during two peak period ( i.e. 8 A.M. and 4 P.M.) will result. Commuting distance will also be increased. Generally due to lack of other suitable longitudinal routes, the main streets serve as a route both for internal, external and through traffic resulting in heavy congestion. "Analysis of physical growth patterns and trends for Dacca indicates an "expansive" pattern of growth as far as transportation and traffic are concerned. To anticipate these results, for the next 10 or 15 years, the city will be reaching out in an elongated projection to the north in search of flood-free land. This will accentuate the rise in transportation requirements."<sup>9</sup>

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9. Ammen & Whitney, op. cit., P. 23

Transportation requirements in the early stages of economic development tend to increase much more rapidly than economic output and income.<sup>10</sup> It is noted that there will be a growth in traffic 2.5 to 3 times as fast as output.<sup>11</sup> This will give an overall growth rate of 11.5 percent annually in transportation requirements for Dacca area.

TABLE II

Dacca Area Output and Transport Requirements  
( percent Annual Increase in each 5 - year )

Year	Output	Transport Requirements
1965	7.9	
1965	7.9	11.9
1970	8.1	12.1
1975	8.9	13.4
1980	9.4	14.1
1985	8.0	9.6
1990	7.2	8.5
Average 1965 - 1990	8.2	11.5

10. *ibid.*, p. B.32

11. *ibid.*, loc. cit.

\* Source : Amman & Whitney, op. cit. P. B.32

As the city continues to expand she will require, among other things, more and more of the following supply and disposal facilities.

1. Supply of electric power.
2. Water works and Sanitary Sewer facilities.
3. Supply of Gas.
4. Communication facilities.
5. Garbage disposal facilities.

From the present rate of growth of population and area it will be necessary to provide buildable land on which city can expand. It is already mentioned that a few areas in the north provide such land. Major hindrance to the physical growth for the city on other directions arise due to the non-availability of suitable land. In the case of Dacca area 10 feet above the Sea level may be regarded as safe from the danger of flood<sup>12</sup>. Most of the area in the east, south and west are lower than this height. As a result, possibility of growth is greatly reduced. Land fillings to the depth of 8 to 10 feet will be required before such land can be made suitable for urban expansion<sup>13</sup>. This land filling means higher cost to the land development. It is certain that private or individual developer will not be interested in such filling. In the north, where land is suitable for development and expansion but due to the Cantonment and Airport, the expansion of the city is handicapped in this direction also.

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12. Atiqullah, N and Khan, op. cit. p.39

13. Ibid. p.39



CHAPTER - IIIRESOURCE BASE OF THE CITY-REGION

Whenever we go for a regional planning we invariably do resource planning of the region. It is, therefore, necessary to list region's present resource and resource potentiality. Aerially seen a city-region is composed of several urban centres of different orders, vast rural background and transportation links. The urban centres by their own "Urban Economies" form distinct economic region. Some of these urban centres are often seen to be specialised in some respect. Some urban centres may be specialised in industry and manufacturing, some in service, some in education and cultural activities, etc. In all these cases dominant element is the population, and their order will depend upon the population strength. In the city-region a hierarchy of urban centres is a logical construction and should be viewed as one important aspect of the region's resource.

The vast rural background offers region's natural resources. It includes agriculture, soil, minerals, forest, water base resources such as rivers, lakes, hydro-electricity, fisheries, etc, and the human settlement. Some of these, however, depend upon the physical setting of the city-region.

An economy in isolation will not be able to grow further unless it is integrated functionally into national economy. The breaking down of regional isolation is done by means of transportation and communication. Transportation is often considered as the means of production and hence turned as resource. John Friedman writes; "Transportation is perhaps the most strategic of these resources, other resource are space, and community Organisation, where it unfolds the locational advantages of the city-region. Transportation influence both the structure and the efficient functioning of the city-region as a centre of economic development"<sup>1</sup>.

### Area

The total area of the city-region is slightly over 9,000 square miles<sup>2</sup> which includes entire district of Dacca, some part of Comilla District and few areas of Tangail district.<sup>3</sup> Physically the city-region falls into two groups higher undulating surface, dominated by pleistocene terrace that occurs in the central part of the city-region, and two flings of low lying areas dominated by the floodplain of Meghna in the east and Ganges in the south - west.

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1. Friedman. John : Regional Development and Planning Research Paper, MIT-Harvard joint centre for Urban studies, 1964.

2. Based on actual calculation.

3. Delimitation of the city-region has been discussed in chapter IV.

### Population

According to 1961 population census the total population of Dacca district was 50,95,745. The density in the city-region is about 1768 persons per square mile which is highest in West Pakistan. The percentage increase of population in Dacca district during the period between 1951 and 1961 is 25.1 percent. Out of the total population of 1961, 85 percent are distributed in the rural areas and only 15 percent concentrated in few urban centres. Further, out of the total civilian labour force of 15,06,810 there were 9,39,462 persons (now over one million) engaged in agriculture and in the same period 5,67,348 persons were employed in non-agricultural activities.

In 1961 the density in Dacca city was 15,788 persons per square mile, whereas the density of population for Narayanganj centre exceeds 16,000 persons per square mile. Dacca and Narayanganj are two important urban centres with population exceeding 1,00,000. The percentage of increase of urban population in these two centres during the period between 1951 to 1961 was 65.72 and 137.01 respectively. Percentage of increase of urban population in the preceding census was only 13.6 and 22.1 respectively. The most rapid growth has occurred in the fringe areas of Dacca and Narayanganj. In Dacca there was a record rise of 201.16 percent between 1951 and 1961. Narayanganj industrial area possessed 36,262 persons in 1961 whereas it was not even treated as urban centre in the Census of 1951.

These are the two important urban centre in the whole of city region where growth took place in a remarkable way. The rest of the urban centres in the region remain far behind Dacca and Narayanganj in population as well as in the economic field (see table X).

Table - X

Population According to 1961 census.

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Dacca City	=	5,56,712
Narayanganj	=	1,62,054
Barsingdi	=	14,757
Manikganj	=	11,676
Munshiganj	=	8,604
Tongi	=	433
Joydevpur	=	2,717
Savar	=	3,474

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In the next category are the rural market centres distributed almost evenly over the city-region.

Table XI reveals the position of non-agricultural labour force in the Dacca district and their distribution in the Dacca and Narayanganj city. The table also shows the composition of different occupational groups and their percentage distribution. Among the non-agricultural labour forces the highest percentage is found in the manufacturing and mechanical occupation followed by occupation in sales, shopping assistants and related fields. This is a general trend for Dacca and Narayanganj city also. The dominant occupation in the Narayanganj city is manufacturing which constitutes 44.22 percent, and in the next category is the sales and related occupation with 13.72 percent. But in the case of Dacca city non-manufacturing occupations such as professional, managerial, clerical, sales and shopping assistants together constitute the major occupation for the people.

Table - XI

NON-AGRICULTURAL LABOUR FORCE BY OCCUPATION, 1961

Occupational Groups	West Pakistan		Dacca City		Karachiganj City	
	No. Persons	Percent	No. Persons	Percent	No. persons	Percent
Professional, Technical	21,062	3.94	7,944	0.46	1,140	1.74
Managerial, Administrative Clerical	50,793	9.91	31,400	18.00	6,569	10.02
Sales, Shopping Assistant	1,01,300	18.98	32,831	19.00	8,954	13.72
Agriculture & Fishing	19,923	3.73	331	0.20	243	0.37
Transportation and Communication	30,071	5.63	13,000	7.14	3,761	5.76
Manufacturing & Mechanical	1,69,797	31.76	39,269	21.67	28,861	44.22
Construction and General Labour	59,832	11.20	23,160	12.20	7,462.	11.43
Service, Sport and Entertainment	49,348	9.29	27,314	15.00	6,778	10.38
Worker not Classifiable	21,009	3.95	7,580	4.00	974	1.40
Person looking for work	9,673	1.80	4,853	2.00	499	0.76
Others	....	.03	...	.03	...	.32

Source : Calculated and compiled from Census of Pakistan, Non-Agricultural Labour Force, Vol.5, p. 196.

১৯৬১ সালের  
জনগণনা

### AGE PROFILES, DACCA DISTRICT POPULATION, 1961

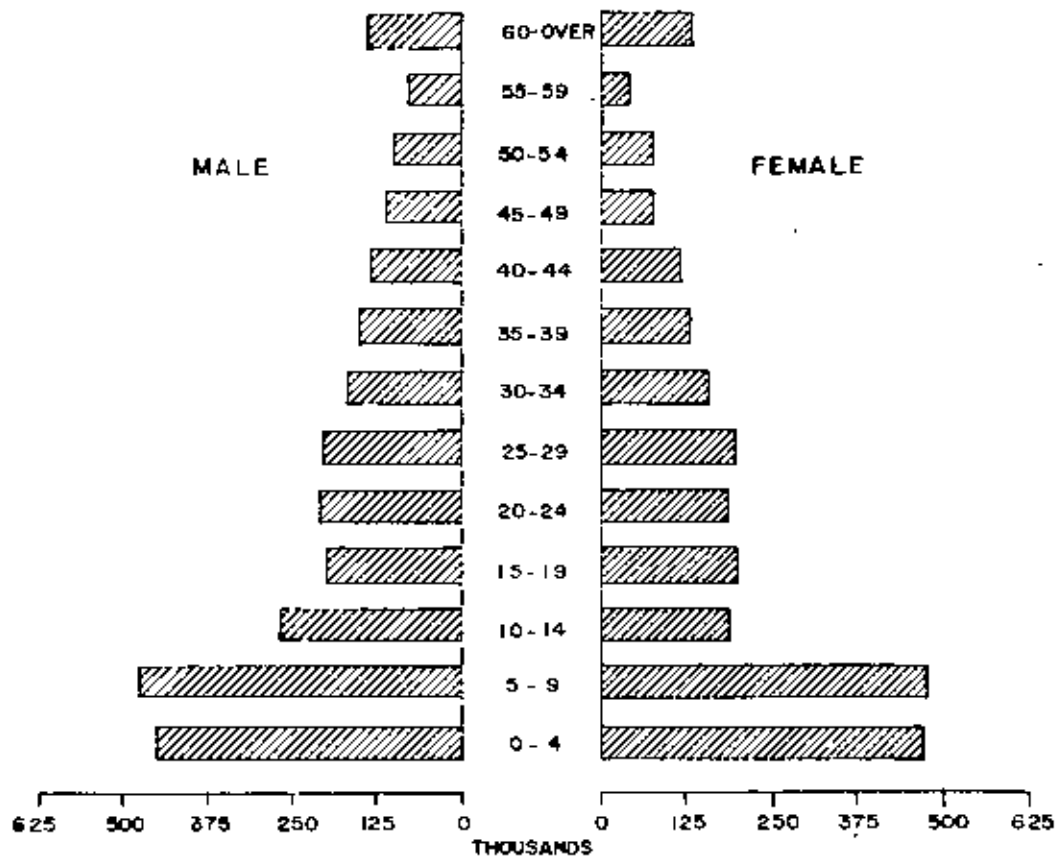


Figure - 4.A

In 1961, the proportion of children below working ages in Dacca District was very high and almost gradual decrease in the upper age groups (see Fig. 4A). This population composition has important demographic implication. By now they have gone to upper age groups and made important addition to the working population. It is, therefore, clear that significant increase has occurred in the man power in the city-region.

In the Dacca city there is preponderance of males over females (see Fig. 4.B). The proportion of children below working ages is also quite high. From planning point of view there will be increasing demand for jobs in the city. Unlike Dacca district the people in 20-29 age group predominate in the population composition. The age profiles of Dacca city clearly brings out the fact that there is a significant movement of working population from other areas to the city specially in the 15-39 age group. From the present trend of city's growth it can be assumed that such movement will continue and will effect the population composition in the city.



# AGE PROFILES, DACCA CITY POPULATION, 1961

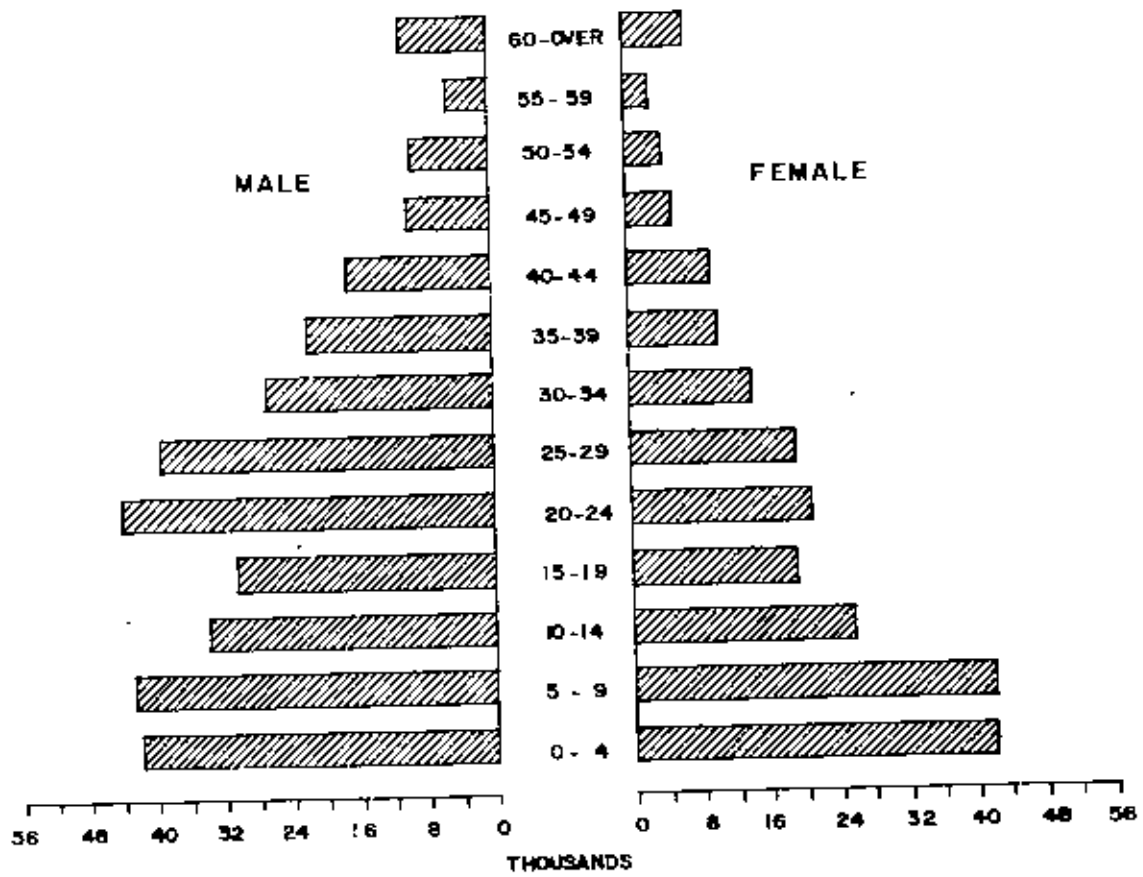


Figure - 4 B

## Transportation and Communication

### Waterways

East Pakistan is known as the "Land of Rivers". And almost all the areas are accessible by numerous waterways. Briefly speaking, East Pakistan possesses an intricate river system. This nature of the river system has not only made possible the development of inland waterways but also given heavy dependence on it. About 70 percent of the total traffic of the province is being carried by the inland waterways. Inland waterways not only provides excellent communication system but also responsible for the growth of important river ports of which Barayanganj in the city-region is the leading one. Important centres are Dacca, Panikganj, Mairangdi, Kaliganj, Ghorasal, etc, are located on the bank of rivers.

The site of Barayanganj in respect of inland waterways system is remarkable. It is well connected with important places through intricate pattern of water routes. The Meghna and Ganges alongwith their tributaries serve the eastern and southern areas of the city-region. The Sitalakhya comparatively narrow river has emerged as an important water channel because of the fact that the Lakhya is suitable and navigable throughout the year. Large number of jetties are found along the river.

Some of them are mechanised and well equipped with Cranes to handle the cargoes. Storage and Ware-house are now the typical scene along the river banks. This river is sufficiently deep to allow big barges, launches and coasters throughout the year. Recent growth of industries along the river frontage is notable. River Buriganga provides important waterways for connecting Dhaka Metropolis with the busy industrial area of Narayanganj. Intricate pattern of water channels have been responsible for the growth of quite a good number of marketing and collecting centres for the commodities like jute, rice and oil seeds.

The importance of water transportation in the present growth rate of Narayanganj and surrounding industrial area is highly visible. Water transportation plays the most vital and significant role in bringing the raw materials such as raw cotton, jute, oil seeds, etc, for the factories and mills located in these areas. Cotton and jute, the two leading commercial commodities, form the bulk cargoes and as such their movement on waterways is economical one. The processed goods are distributed by the same waterways which collected them.

In the year 1961-65 the total inland water transport tonnage was 20,36,640 tons out of which Narayanganj handled 6,34,440 tons amounting to about 35 percent of the total tonnage.

Out of this tonnage handled by Narayanganj, 50 percent constituted jute and jute products alone indicating the dominance of jute and its products in the trade of the port of Narayanganj.

### Railways

Waterways was for a long time only connecting links between the city-region and rest of the province of East Pakistan. The railroad era for the region began from the year 1885 when Dacca and Narayanganj was connected with the rest of the railway system. This has lately stimulated the commercial activities and provided opportunities for the quick despatch of commodities. It also made Narayanganj as a great transshipment centre. The northern areas of the city-region has no significant water channels to serve them. As such, the railway took the role of integrating the northern areas with the southern low country. Because of the topography Metre-Gauge was preferred over the Broad gauge. About 120 miles of rail tract are now available in the city-region.

Tongi in the metropolitan area is the important railway junction. From this place a branch runs north to connect the North Bengal areas and another branch runs towards east ultimately to connect the port of Chittagong.

This is a strategic outlet to the Sea. The new growth centres such as Tongi, Joydevpur, Kaliganj, Ghorasal and Narasingdi are located on this railway line. It is interesting to note that industries like cotton, machine-ries and jute getting importance in these centres (see appendix). The present direction of metropolitan growth is found along the railroad. Metropolitan district boundary has reached upto Joydevpur, which is about 22 miles from the Central city. Passenger movement on railway is very heavy. From the Railway Passenger flow Map of 1970 prepared by the Transport Planning Group, East Pakistan it can be noted that Dacca-Tongi section handle about 28.99 lacs of passenger surpassed only by Akhaura-Bhairab section (38.55 lacs). Tongi-Bhairab Bazar and Dacca-Marayanganj section also show the heavy passenger movement with 23.23 lacs and 20.22 lacs respectively. Considering the present high traffic density Government has provided Dacca - Tongi section of the railway with double tracks to relieve the existing pressure of passengers and cargoes.

A new railway link has been established between Narasingdi and Madanganj with 28.57 miles of metre-gauge line. Madanganj is an important commercial and industrial centre on the other side of river Lakhya opposite Marayanganj. It is expected that this facility would go long way in activating the economic activities for the eastern part of the city-region.

### Roads.

Physical set up has been a powerful constraint on the development of road transportation system to keep pace with the changing and growing needs of the people of the city-region. Various factors are included in this physical constraint. The rivers and the low lying nature of the landforms have heavily influenced the street and highway system not only in the city-region but over the entire province. Higher construction cost probably retarded the normal progress in the road development.

To-day as for the road transportation is concerned, the city-region is strategically linked with the rest of the province. All the important highways radiate from Dacca city. Dacca-Aricha highway links Faridpur, Barisal and other district of North Bengal with the city-region. It is also an important supply route for commodities like fish, vegetables, rice and other various items. The movement of passengers on this highway since its opening recording gradual increase, and with the construction of the road bridges at Mirpur, Koyrhat, Faraghat the highway will continue to play important role with greater efficiency. This is also a part of the Asian Highway..

Dacca-Chittagong, highway provides important over land out-let to the Sea at Chittagong. Movements of automobiles, buses, and trucks are steadily increasing in this route.

Other important highways are Dacca-Fyzensingh via Tangail, Dacca-Marsingdi and Dacca-Sripur. Metropolitan section of these highways and Dacca-Barayanganj via Demra and other few roads play the most vital role as a land based transportation in the Dacca Metropolitan District (DMD).

The following figures will indicate the type of transport and their numbers as registered in Dacca upto 31.12.1970.

Table - XII

<u>Type of Transport-</u>	<u>Total Number-<sup>4</sup></u>
Private Car	11,695
Bus	300
Trucks	3,530
Baby Taxi	3,836
Jeep	2,735
Motor Cycle	9,220

It is to be noted, however, that road transportation is getting increasing importance over rail and water transportation. This is of course, a present trend in the urbanisation process throughout the world. The combination of railway and trucking service has been stimulating commercial activities over the northern half of the city-region.

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4. Supplied by Police Directorate, Govt. of East Pakistan.

## Gas

Gas is now available in the Dacca city-region. The gas field from where the supply comes is located in Brahmanbaria in the neighbouring district of Comilla. The pipe line enters the region near Danlatakandi station. More than 70 miles of main line has been laid out in the region. The system will have the capacity of distributing nearly 600 million cubic feet of gas per day after catering to the requirement of the proposed plants for the production of fertilizers at Ghorasal and thermo-electric power plants at Ashuganj, Ghorasal and Siddhirganj. At present the pipe line connects the industrial centres of Marsingdi, Ghorasal, Debra, Narayanganj, Dacca, Tejgaon and Tongi. In Dacca the gas is used mainly for domestic purposes.

Gas is considered as an important and strategic resource. It will boost-up, at accelerating rate, the economic development of the region. Gas is now used in generating power and producing fertilizers. There is great scope for utilizing the gas in other fields. "The importance of natural gas, however, is not limited to its use as a fuel alone. Natural gas is also a treasure chest of large number of highly useful products. Pharmaceuticals, synthetic rubber, artificial fibres, fertilizers and industrial resins are only a few specimens of the valuable chemicals that this spectacular gas can breed."<sup>5</sup>

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5. Karam Siddique : East Pakistan and Natural Gas : Holiday : A special supplement on P.F.I.D.C. 1969, p. 67



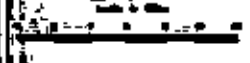
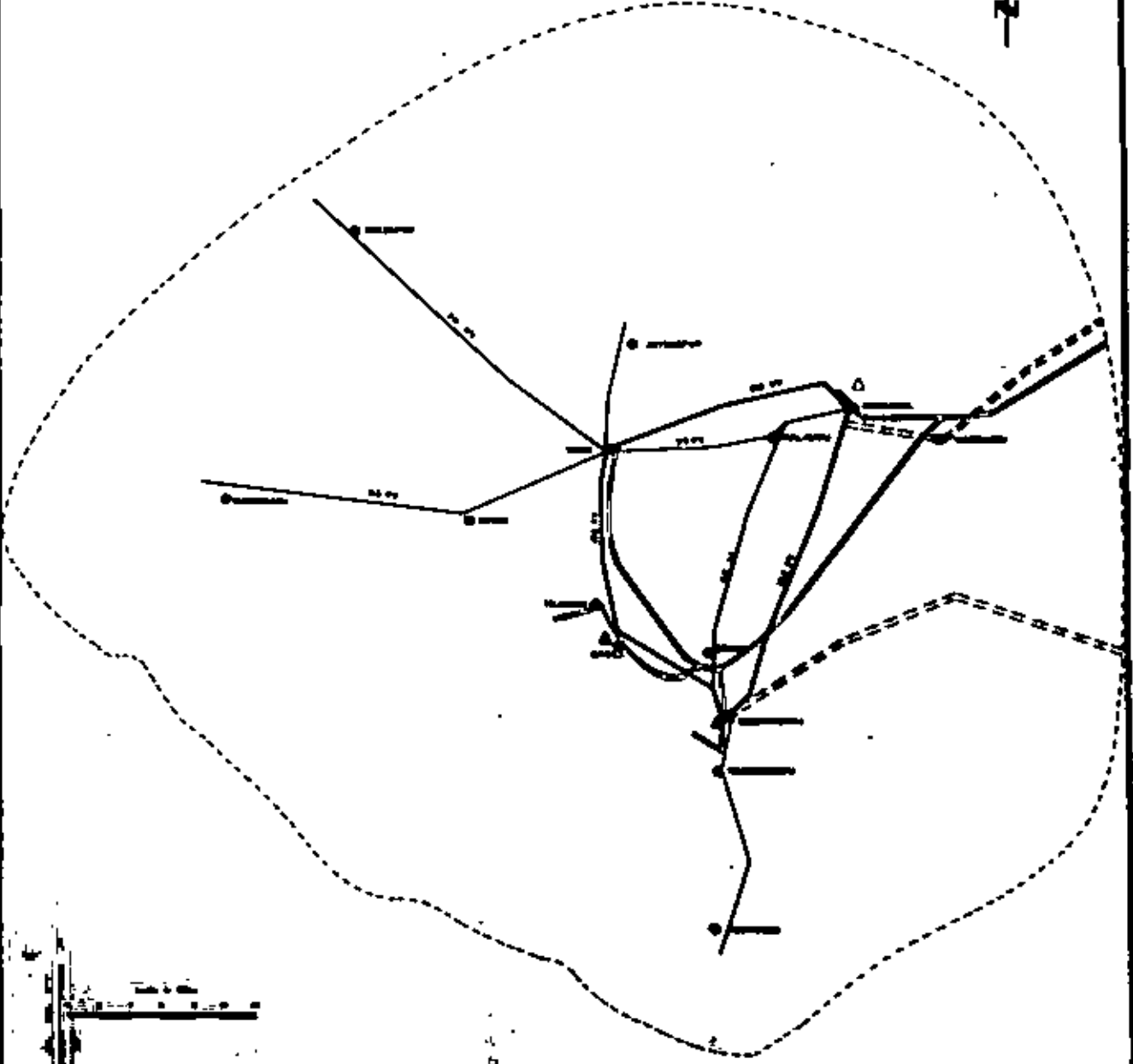
Power

Two power generating plants are located in the region, one in Dacca and another in Siddhirganj. Third thermo-electric power plant is under construction in Ghorasal area. Besides these, the region also receives supply of power from outside sources. Of these, the 132 Kv line comes from the Kaptai Hydroelectric power plant and also from Ashuganj. The distribution of power is done through grid system. The distribution system employs 132 Kv. and 66 Kv. and 33 Kv.

" In the Dacca area, bounded generally by Tongi, Harsingdi and Siddhirganj, large load will develop principally at Dacca, Doura, Tongi, Ghorasal and Harsingdi. Extensive industrial growth will especially take place in the general area between Tongi and Harsingdi. Major generating additions were therefore, provided at Siddhirganj, Tongi, and Ghorasal and 132 Kv. lines will radiate from this area to other parts of the system."

OMCCA CITY - REGION  
 DISTRIBUTION OF POWER AND GAS  
 1970

- LEGEND
-  66 KV LINE
  -  33 KV LINE
  -  15 KV LINE
  -  15 KV FEEDER LINE
  -  15 KV FEEDER LINE
  -  POWER PLANT
  -  TRANSFORMER



Soil, Agriculture, Fisheries etc.Soil.

Soil is perhaps the most important natural resource of the region. The soils of the region are made mostly of alluvial deposits. But some areas in the north where pleistocene deposit is known to occur. Three big rivers namely Ganges, Jamuna and Meghna have made some diversity in soil characteristics within the alluvial deposit of the region. The soils of the region are subject to the heavy monsoon rain. The quality and character of the soils of the pleistocene terrace is greatly influenced by the topography. This soil is notably different from the dominant alluvial soil of the region. Soils of this area is varied and often complex. Red clays occupy flat high land where brown, yellow brown, pale brown and grey are the typical ones. Whereas deeper lands (i.e. low land) have very dark grey clay soil. Important crops on these soils are Auspaddy, sugarcane, etc.

Top soil in the Arial beel areas are strongly acid when dry but become neutral when wet. The soils are flooded 10 to 20 ft. deep in the monsoon season. Broadcast Aman is the important crop on these soils. Intensive cultivation of Zero paddy is done through irrigation by small power pumps.

The major soils on the older flood plain are dark, grey, very plastic and non-calcareous clays. The important crops on the older flood-plain are rice and jute.

Diversity in the soil character and cropping has been brought about by the low ridges and some character of the floodplain. It should be noted that land is suited for Irri, Baro or Aus with Irrigation. Diversified cropping can be done by flood protection and pump drainage.

#### Agriculture

Agriculture has been the major economic base of the regions for centuries. The low flood-plain has made possible the extensive and intensive agricultures. The climate together with topography is highly favourable to the cultivation of varieties of crops. The mean annual rainfall exceeds 75 inches and most of this falls between June to September when average temperature is 78.20°F. The fertility of the soil is renewed almost every year by repeated floods. The pleistocene terrace in the north is not subject to normal flooding. Here agriculture is neither extensive nor intensive. As a result, the population density is comparatively lower than the southern region where population makes the highest density in the province.

Arable land is considered the most valuable asset. More than 75 percent of the population directly depends upon the agriculture for their livelihood. Therefore, agriculture remains a basic sector of the economic life of the region. Rice is the most important food crop in the region which is cultivated extensively. Out of the total crops areas of about 19,60,950 acres in the Dacca district alone, rice consumes 11,85,100 acres. Jute, next in importance, occupy about 1,80,000 acres under its cultivation. Pulses come about 71,640 acres.

Farming relating to jute becomes commercialized to meet the increasing needs of the industrial and urban development in the city-region. As an industrial crop jute plays the important role in the region export sector and earn huge sums of money for the region. It has been able to build quite a large service sector. It is expected that jute would continue to play its role in the economic development of the region. On the other hand, the farming of other crops is strictly of domestic type and the production is extremely limited in meeting the consumption requirements of the local population.

Agriculture is still remain at the subsistence level. The yield of rice and jute is about 12 and 20 maunds respectively to the acre whereas the gross density of population is 21 persons per acre.

There is some additional land in the northern part of the region which can be used to expand agriculture. However, this depends upon the new techniques to overcome the topographic disadvantages. Improved seeds, use of fertilizers, sophisticated implement, adequate irrigation and drainage, etc. would open the prospect for increased yield.

#### Fisheries

The fishing grounds are usually the rivers, khals and tanks. From the early time the fishing operation is associated with agriculture and a source of additional income. This is particularly true for the settlement along the big rivers. Aricha, Jaledia, Bhagyakul, Munchiganj, Barayanganj and Barahingali are important fish collecting and distributing centre.

#### Forest and Recreation Areas

Fortunately the region has forest area on the pleistocene terrace. These forest areas are located within 20 to 25 miles from the central city. From the economic point of view these forests do not contribute much to the development of the area as yet. However, there is great potentiality for developing the forest areas as regional recreational places. Several highways have crossed these forest areas.

CHAPTER - VIDELIMITING THE CITY-REGION

The purpose of this chapter is to delimit a region around Dacca metropolis where physical planning activities can be efficiently pursued because a regional approach must be made to solve the problems of this growing metropolis. Dacca Improvement Trust is responsible for the physical planning and implementation of projects for greater Dacca. "Its area of jurisdiction covers Narayanganj as well as Dacca and a considerable area around them, but by no means all the ground that will be urbanised in the next 20 years."<sup>1</sup> The city-region seems to be the ideal region for physical planning activities. Here an attempt will be made to delimit the city-region of Dacca metropolis.

Various attempts have been made to delimit the zone of influence of certain cities. Green delimited the zone of influence or "Urban hinterland" of England and Wales based on bus and transportation network. Smalley, delimited the urban field of Middlesbrough by news paper circulation and trade area. Professor George Chabot has studied the spheres of influence of the cities of France having more than 50,000 population. The zones of influence were mapped from variety of criteria.

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1. Asman and Whitney, O.P. cit., Vol.II P.P.B-2.

"The criteria of association listed and mapped are the daily journey to work, place of birth of the inhabitants of the city, in-migrants to the city, frequentation of the city markets, telephone connections, provisions of milk (milk sheds), range of multiple chain stores, banking connection, operating territory of salesman, distributor of newspapers, etc."<sup>2</sup> Every criteria mentioned has its suitability or non-suitability in the particular local setting and level of technological development. For instance, the newspaper circulation area of a capital city will not provide the correct picture regarding the frequency and intimacy of regional association. Retail distribution and wholesale distribution constitute two separate boundaries. For large urban centres wholesale distribution provides a measure for the wider field of their economic influence. Trade may be vice-versa i.e. region also supply the city with food, vegetables, silk, etc. The area of such supply also constitute its region. The daily journey to work i.e. commuting may be helpful criterion for delimiting the city settlement area, but unsuitable for delimiting the city-region as a whole.

Transportation network becomes important indice because it is a means by which regional association is established.

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2. Dickinson. R.E. The City-Region in Modern Europe.  
(London. Routledge & Kegan Paul Ltd.) P. 146.



The degree of association is reflected through the movement of population which is indirectly measured by the frequency of bus services, railway season tickets etc. For commuting and shopping purposes, the movement of people depends upon other factors such as time and cost of journey. The advent of private motor car has still further complicated the problem of the accurate delimitation of urban influence. As a solution to this problem, the researchers have been making use of isochrones. The size and the form of the city-region depends upon the network of transportation and communication routes which are itself closely connected with natural and spatial condition. The pattern and the denseness of this network may be a helpful guide in delimiting the boundary of the core area.

In practice several flow maps are drawn with the indices appropriate to the local setting to show the linkages between the nodal city and the region. These flow maps are then superimposed on each other to determine the boundary of the city-region. Since the relative influence exerted by various factors is not measurable quantitatively, the intuitive conclusion as well as value judgement by the researchers must be made.

Thus it is clear that there are indices which could be used not only for delimiting the city-region but also the components of the structure of the city-region such as the core area, city settlement area and city trade area.

### Delimiting Dacca City-Region

In selecting indices for the purpose of delimiting the city-region of Dacca, several considerations are to be made. Firstly, Dacca and its environment becomes the main centre of industrial and manufacturing activity for the entire East Pakistan even the consumer goods produced here have found their market not only over the surrounding areas but also over the entire East Pakistan. Therefore, selection of any consumer goods for the purpose of delimiting will be unwise or at least inherent with a risk of wrong decision.

Secondly, for the specialized education like University Education or other special education offered by several institutes and specialized medical services, Dacca caters the needs of entire province. As such, these functions are excluded from the delimitation consideration.

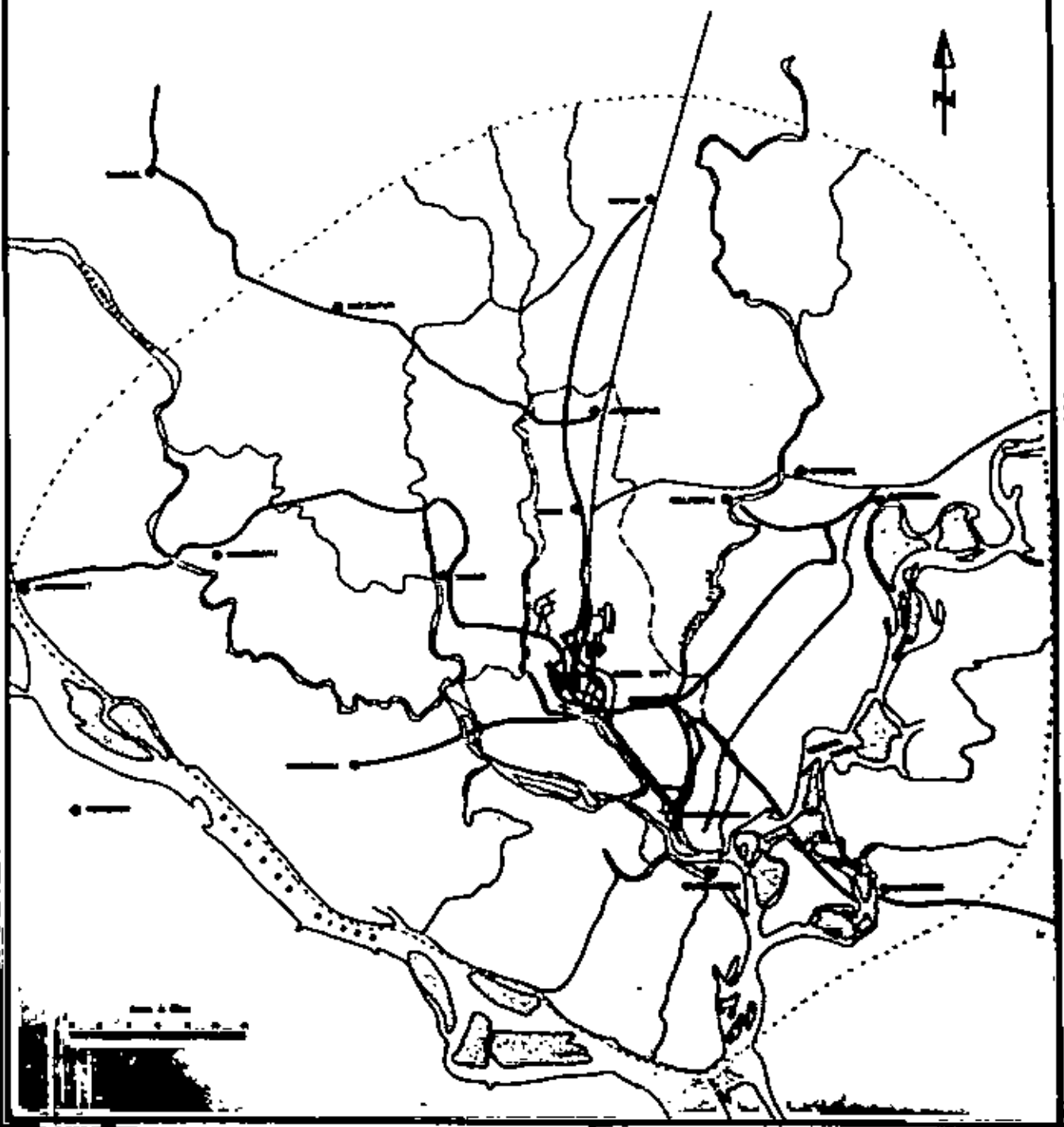
Thirdly, as a provincial capital its administrative zone encompasses the entire province and as a district headquarters its zone of influence extends over the entire district. But neither of the two give the true picture about the economic relation and degree of interdependence and interaction. However, in that circumstances it is yet possible to list certain suitable functions that can be used in delimitation work.

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# DACCA CITY-REGION

CONSERVATION LINES  
1970

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The author's present attempt in this respect may be termed as empirical-comparative method. Earlier work on the delimitation of the upland of greater Dacca has been taken as a base.<sup>3</sup> Further investigation and enquiries have been made to make it upto-date. In an attempt to delimit the upland of greater Dacca two way approach had been made by considering certain services offered by Dacca to its surrounding region and certain services received by Dacca from the region.<sup>4</sup> The former group of services include, retail trade, stationary, cloth, ice-cream, bakery, confectionary, goods, newspaper circulation (city edition), educational and medical facilities and the later group includes vegetables and fruits, milk egg and poultry and beef cattle and goat. There are no doubt good indices for delimiting the city-region of Dacca, but they fail at least to show the degree of regional association. One of the purposes of this chapter is to find out the structures of the city-region of Dacca needed for comprehensive planning. The degree of regional association, however, are able to convey the idea of different structures, and working approach can be made on it. The appropriate indices for this purpose include transportational net work, service frequency, journey time and cost of journey. Here attempt will be made to delimit these areas by the indices mentioned in the preceding paragraphs.

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3. Khan, Mubammad Hossain, Delimitation of Upland of Greater Dacca (unpublished M.A. Thesis, Deptt. of Geography, D.U. 1959)

4. *ibid.* p.16

### The Central Urban Tract

Since it is the compact built-up area its delimitation does not pose much difficulties. Functional association and accessibility in the core area is very high. The city's network of roads and streets expresses this association and accessibility of the different parts. Based on this, the Central Urban Tract of Dacca extends upto Buriganga river in the south. In the north it includes Tejgaon, Second capital area and Mohammadpur. In the east the boundary extends upto Motijheel, Kamalapur, Dayaganj and in the south-east upto Gendaria. Tikatola and Hayatbazar form the western boundary. Incidentally, this boundary approximately coincide with the present Municipal boundary (Fig. 0)

### The City Settlement Area

The city settlement area is equivalent to the Metropolitan District and as such the best indices in its delimitation are commuting distance and other indicator of social and economic association. The commuting distance is determined by the transportation facility in terms of accessibility, time and cost. Isochrone may provide the best possible means for determining the Metropolitan District boundary of Dacca (Fig. 5).

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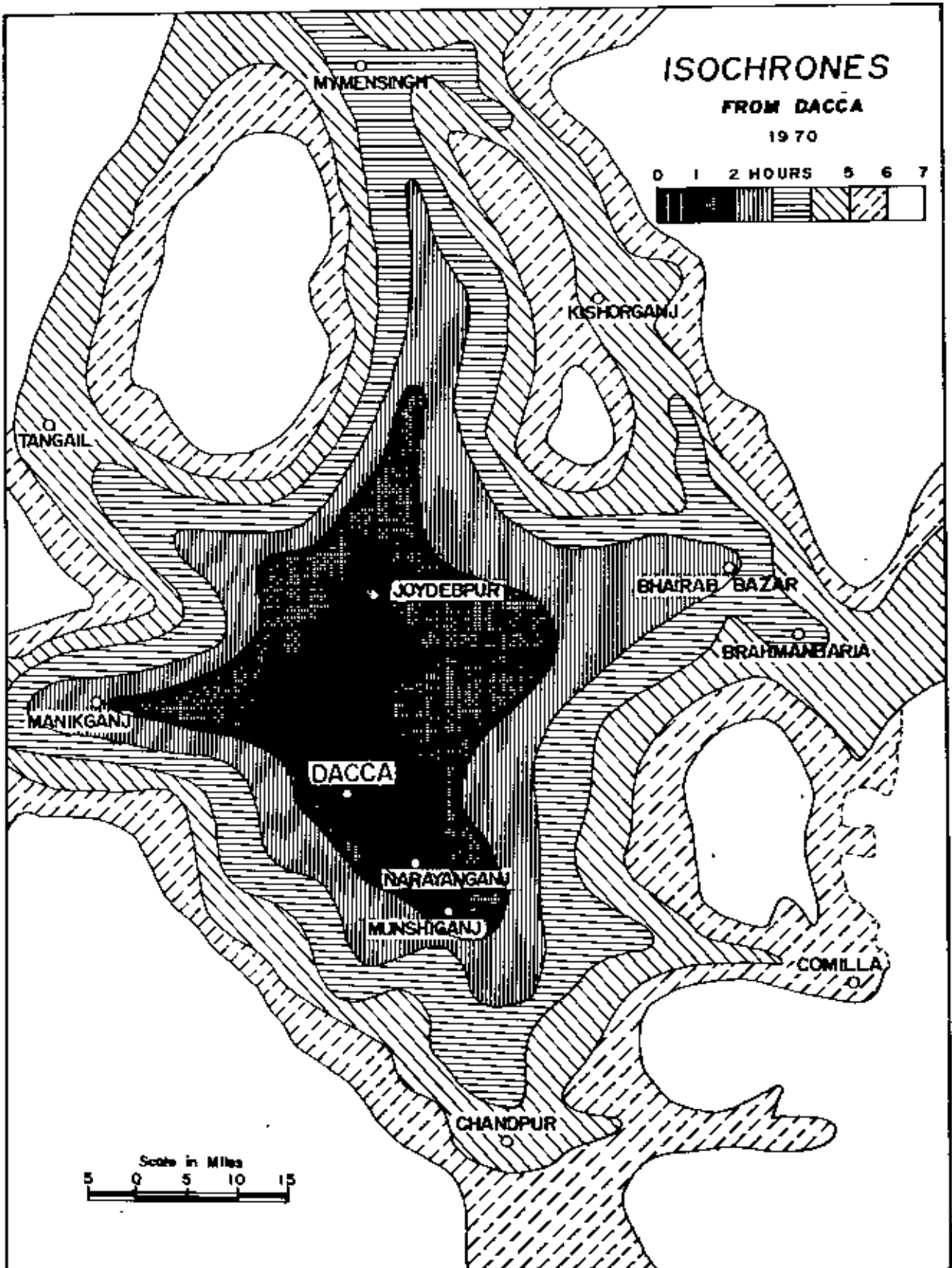


Figure -6

Railway season tickets have been considered for ascertaining the outer limit of the Metropolitan District, boundary and to convey some idea about the degree of association. Cost of journey have also been considered for both ascertaining the limit of Metropolitan District and degree of association. The major transportational systems such as roads, railway and water routes are available in the case of Dacca, and playing vital role in its growth and development (Fig. 5).

Based on isochrone map, railway season tickets and cost of journey, Dacca's Metropolitan District boundary has been delimited. It takes an elongated shape and the growth takes place parallel to the rail road. The southern limit reaches upto Munshiganj and in the north it extends upto Joydevpur (Fig. 7). Dacca Metropolitan District incorporates Dacca Municipality, Narayanganj Municipality, Munshiganj Town Committee, Gulshan Town Committee and important industrial centres like Fongl and Joydevpur.

#### The City Trade Area

Problems arises in selecting the indices for delimiting the limit of the city trade area of the centre like Dacca Metropolis. As mentioned earlier, Dacca is a provincial capital and primate city as such its trade area, in fact, extends over the entire province.

# DACCA METROPOLITAN DISTRICT

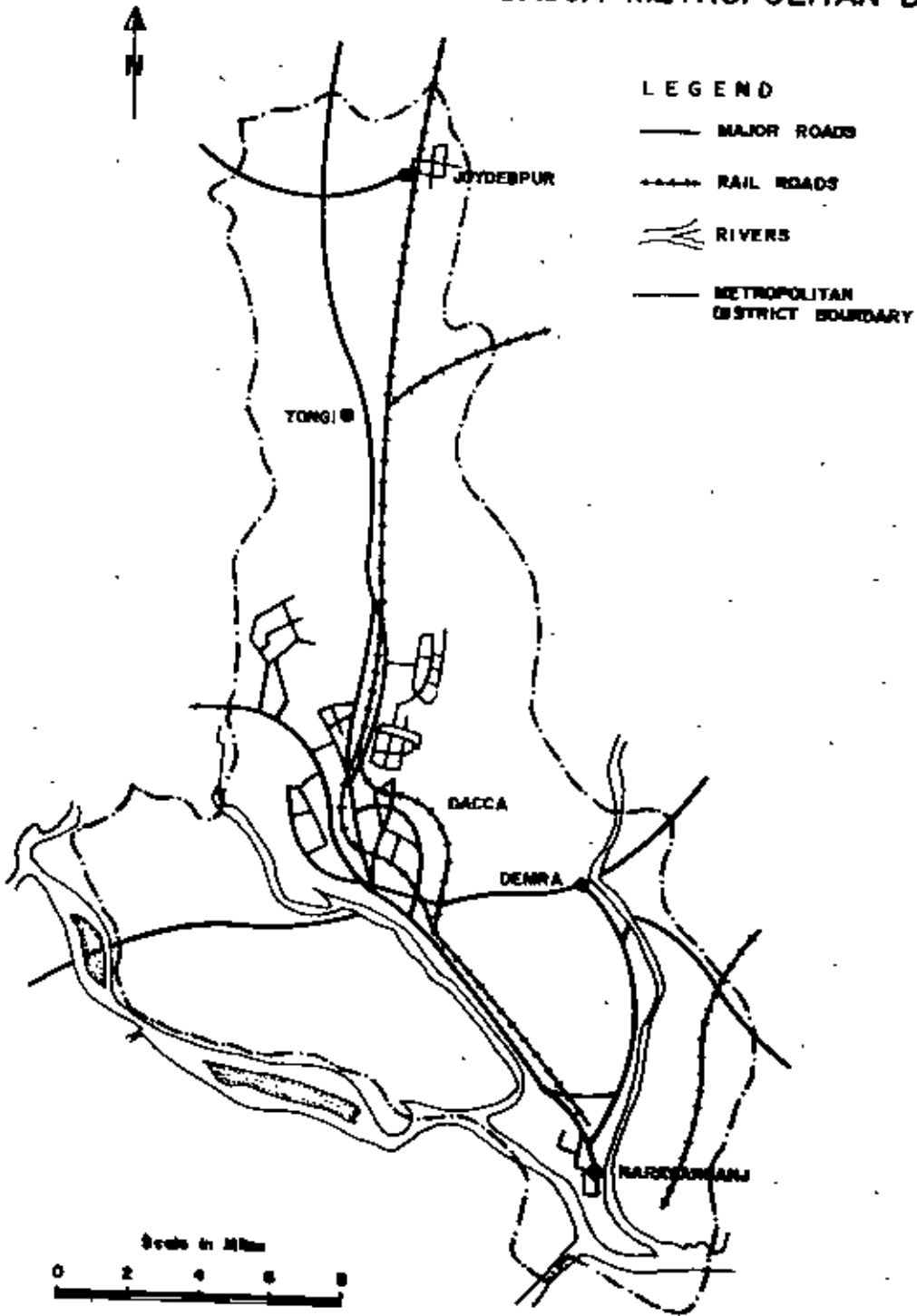


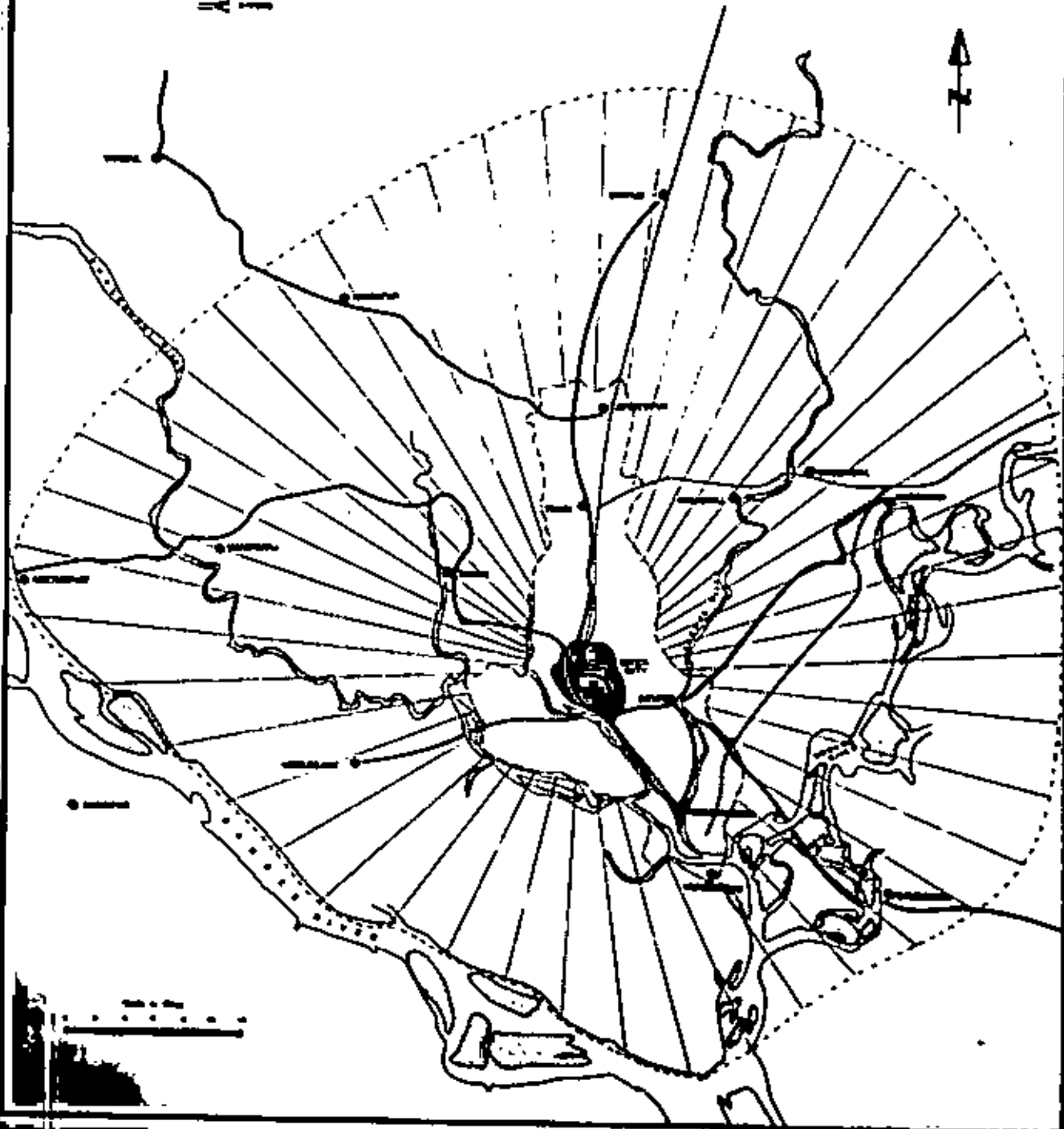
Figure - 7



For the purpose of delimitation author depends upon the earlier work. The opening of Baccu-Aricha highway has extended the city influences upto Aricha and therefore this area has been included in the city - region. Further, for the sake of convenience, the northern boundary of the city-region is being re-drawn and the limit includes upto Kacraid which is also the northern limit of the milk-shed area. The south-western boundary ends at the bank of the mighty Ganges or Padma River (Fig. 3).

# DACCA CITY-REGION STRUCTURES

- LEGEND
- 0-1000' (0-1000' RADIUS)
  - 1000-2000' (1000-2000' RADIUS)
  - ▨ 2000-3000' (2000-3000' RADIUS)
  - MAJOR ROAD
  - MINOR ROAD
  - RAILROAD



## CHAPTER - V

### THE GOALS AND THE PLANNING PROCESS

Planning always emerges in response to definite goals or objectives. The regional planning process should reflect such goals. Since the general nature of the problem of urbanisation and particularly of city-region are similar which most of the developed countries have faced, it is necessary to take cognisance of their experience in this regard. Canadian and American experience makes it possible to identify four main phases. It is earlier mentioned that city-region of Dacca is composed of Urban Tract or Dacca city, City Settlement Area or Metropolitan District and the Trade Area or City-Region. Goals at these levels essentially differ from each other which calls for different programme schedules. Goals themselves, however, depend upon the resource and problem of the space concern.

#### Phase One : A Strategy for Growth

The goals in the first phase emerge out in response to impending crises in the region's centre i.e. Dacca city in terms of the threatened or actual breakdown on community environment. To-day, more than 9,00,000 people are living in Dacca city and it is expected that more and more people will concentrate in future. Like many cities of the world, Dacca is experiencing many problems that relate to her community environment. The fantastic growth of the population about 65 percent between 1951 to 1961 is not matched by equal or reasonable growth in the city's area.

As a result, people are concentrating in the available areas. Density, therefore, is increasing. The very high density has resulted in the breakdown of the human environment.

The highest density is found in the old city. The quality of human environment in this part of the city is extremely low. The old town reminiscence of old days, has inherited mostly narrow roads, lanes, by-lanes such as Patuatoli, Islampur, Zindabazar lane, Orphanage road, Karinda road, etc. These roads and lanes are dirty, sometimes without any side drain. The drains, where available, are open and often flooded with human excretion. The old city is also characterised by high building density, construction, obsolete and deteriorated housing. The area suffers from extreme congestion arising out of aging building stocks and insufficient circulation pattern. The residential area in Lalbagh, Imamganj, Nughakotli, Baburbazar and Hasirabazar can be termed as slum. The situation in these areas has further deteriorated by the growth of temporary shelter shacks. People living in these areas are mostly poor. Every available space is being used intensively, either by residential or commercial purposes. The unauthorised and random construction has filled the areas in such a way that it requires a tremendous task even for small scale clearance.

Absence of or lack of enforcement of building codes resulted in the present condition of road system. They proved to be inefficient and obsolete for present level of transportation technology.

All the roads and lanes in the old town are characterized by extreme congestion and there is no parking space. Some roads and lanes are so narrow that they are unable to receive vehicular traffic.

Traffic condition in Nawabpur road, city's main thoroughfare, is deplorable. Extreme traffic congestion persists through out the day and sometimes even long after the dusk. To cross a distance of one and a half mile by car, for example, between Gulistan and Badarghat it takes 45 minutes to one hour. Continuous emission of smoke from the exhaust pipes of vehicles make the area smoky. Air pollution is wide spread. Business is suffering greatly because of these conditions. The flight of certain business such as crockery cloth and footwear have been recorded.

In the new town, on the other hand, many areas are gradually becoming congested with people and structure. Excepting few planned residential areas like Dharmoni, Gulshan, etc, the growth of housing and ancillary uses in other areas is taking place disregard of any total planning. Sub-division of land in these areas represents a chaotic pattern.

City's existing circulation pattern is gradually becoming inefficient and unable to handle the growing pressure.

"Moreover, there are a number of substantial bottlenecks which can rapidly get serious, and the entire system is vulnerable to rapid deterioration with only a moderate increase in volume. There are at least five evident bottlenecks now in the Central City. The Tikatoly Intersection directly affects Chittagong Highway traffic as it nests the Central City. Three stations, Nawabpur Road Crossing, Motijheel, and North-South and Topkhana Roads lie in the center of the business section. Two more affect the western and northern gateways to the city; New Market and Ekaton-Airport Road."<sup>1</sup>

Bottleneck in the traffic circulation in Motijheel Commercial area is readily visible. There is extreme shortage of parking space. A chaotic situation prevails during working hours i.e. between 8 A.M. to 5 P.M. Few attempts, however, been made by the D.I.T. to relieve some of the current circulation problems by opening new roads as North-South road, extension of the DIT Avenue and new Shahbagh road. "That projected traffic would create severe congestion inside the central business district (CBD) and at its entrances by about 1970. Total volume of motorized traffic in the CBD is estimated to raise from 3,73,000 PCR-miles daily in 1967 to 1,31,000 in 1980 and 1,688,000 in 1990 representing increases over 1967 of 200 percent and 350 percent respectively. By 1990 this situation would be much worse."<sup>2</sup> The circulation bottleneck in the central business district, the heart of the city, might force the area even to decline.

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1. Anson and Whitney, Ibid., Vol. 1 p. B-6

2. Ibid., p. B-8.

As for the community service is concerned it may be said that it is almost absent in the old town and inadequately provided in the new town. In the old town, for example, some parks such as Sirajud-Dula park and Buckland park have reached at the point of extinction by vandalism and encroachment.

Therefore, "the symptoms of this stage are traffic congestion, longer journeys to work, ribbon development along highway approaches, unarrested deterioration of housing in old areas, sub-standard municipal services in new areas, local and general disorder in land uses, water and air pollution, increasing demands for recreation areas despite loss of natural park land, rising taxes in the agricultural hinterland, increased external costs of industry, increasing per capita cost and deteriorating services of Government, inter-municipal bickering and decline in Civic moral" 3

All these are the characteristic symptom in the metropolitan district, not only of Canada and America, but also equally true for Dacca Metropolitan District. Friedman termed them as points of strangulation. Whenever points of strangulation appear the region begins to suffer adverse economic and social consequences. As a result growth rate tends to decline.

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3. Gertler, L.O. "Regional Planning and Development", Regional and Resource Planning in Canada, (Toronto. Holt, Rinehart and Winston of Canada. 1965) p. 27

Since the growth experience of the city-region depends upon the growth experience of the core region, any decline in the growth rate of the metropolitan district mean declining growth for the entire city-region as a whole. When this stage appears, i.e. in the first phase, the aim is to formulate a Strategy for growth. In other word, the first phase is synonymous with the growth strategy. The main elements of a strategy for core region development, as initiated by John Friedman, can be profitably used in the case of Dacca city also.

The elements of Strategy are :

First, formulate a medium-term regional capital budget.

Second, formulate a medium-term regional development map which expresses and modifies the budget.

Third, for planning and programming purposes, treat the region as a single economic sub-system.

Fourth, consider the location of all proposed public facilities jointly.

Fifth, to implement (1) through (5), create a planning programming staff for each core region in which economic development and urban design function will be linked.

Seventh, use the capital budget and development map as a control device for public investment in infra-structures.

Eighth, use the development map as a control device for private investment by adopting a rough grained zonal plan for major categories of land use.



If this strategy is allowed, specific strangulation points are capable of being overcome and an optimal development may be pursued.<sup>4</sup>

Stated generally, some of the main tools of the plan at this stage are the development schedule, urban renewal measures, sub-division control, and designation of major land uses.

#### Phase Two : Protection of Land.

The land beyond the Dacca city's corporate limit is also being subject to urban influence. The decentralization policies of the provincial government and partly due to the locational advantage, partly due to cheap prices of land and other factors are making Tongi, Joydevpur, Ghorasal, Kanchan, Daura, etc, as fast emerging urban areas in the region. It may be assumed that there will be new centres of growth in the Dacca city-region if present trend persists. The land values in Savar, Joydevpur, Ghorasal and Tongi have already shown upward trend. A large part of the land in these areas particularly in Savar and Joydevpur are owned by the people who live in the urban areas. In savar area, for example, about 80 to 90 percent of the land along the Dacca-Aricha highway is now in the hands of speculators (see Fig.9)

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4. Friedman, John. "Approaches to the Development of Regions," MIT - Harvard joint centre for Urban Studies 1964.

# SAVAR LAND SPECULATION.

PERCENTAGE OF LAND IN THE HANDS OF SPECULATORS  
1971

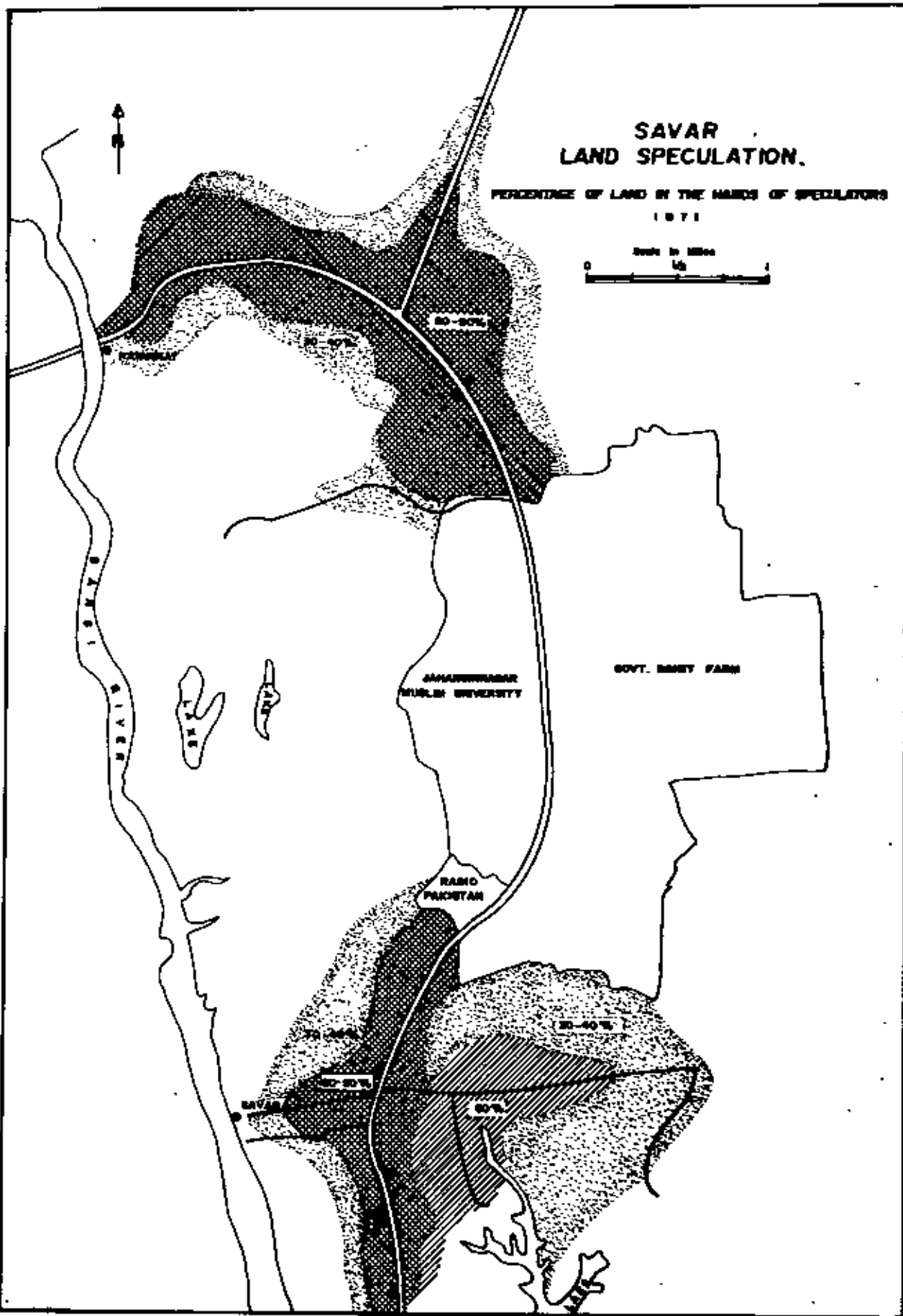


Figure - 8

Record also reveals that title of some plots have changed twice and thrice within a very short period. It is also recorded that large tract of land had been purchased under single title. All these clearly reveal the land speculation business in this area. There is great preference for housing societies in these areas.

Therefore, attention must be given in the city-region because this land is subject to the influence of urban speculation. As the city grows it demands more land for its functions. Generally, in an ideal condition growth takes place radially. The decentralisation policy of the government will push many of its functions to invade the surrounding agricultural land. Residential Satellites suburban industrial estates, regional recreational areas, etc, represents some of these functions.

Most adverse effect is unleashed by the mechanism of urban land speculation. Land speculation thrives on artificial values. It has often been found that the ratio between floating or speculative value and existing use value may be 30 or 40 to 1. The purchase of marginal or semi-marginal lands on speculation result in the retirement of some land from cultivation.

The growth of incompatible land use is often the end product of such speculation. In Savar incompatible land uses are emerging (See Fig.10). Industrial use and residential use, for example, emerging out side by side. The presence of large tract of Dairy Farms is another example. In the absence of zoning it is almost certain that more land will be covered by the incompatible land uses and also different uses will occupy land disproportionate to their uses. Such land are suffer from maximum requirement in standards, because the existing infra-structure is either inadequate or faulty. Governmental action in such areas are not forthcoming because government, in principle does not encourage such growth. Also because such growth that often takes place outside the jurisdiction of any planning agency or development authority of the Government.

Areas which lie within Savar and Joydebpur thanas and part of Tejgaon thana which have not yet been overwhelmed have about the highest potential for agricultural uses under irrigation of any land in East Pakistan ( See Fig. 11 ). "With tube-well irrigation, it is well suited for a wide range of crops, including sugar cane, oil seeds, wheat, maize, millet fodder crops, tobacco, rabi cotton, kharif and vegetable, as well as broadcast rice.

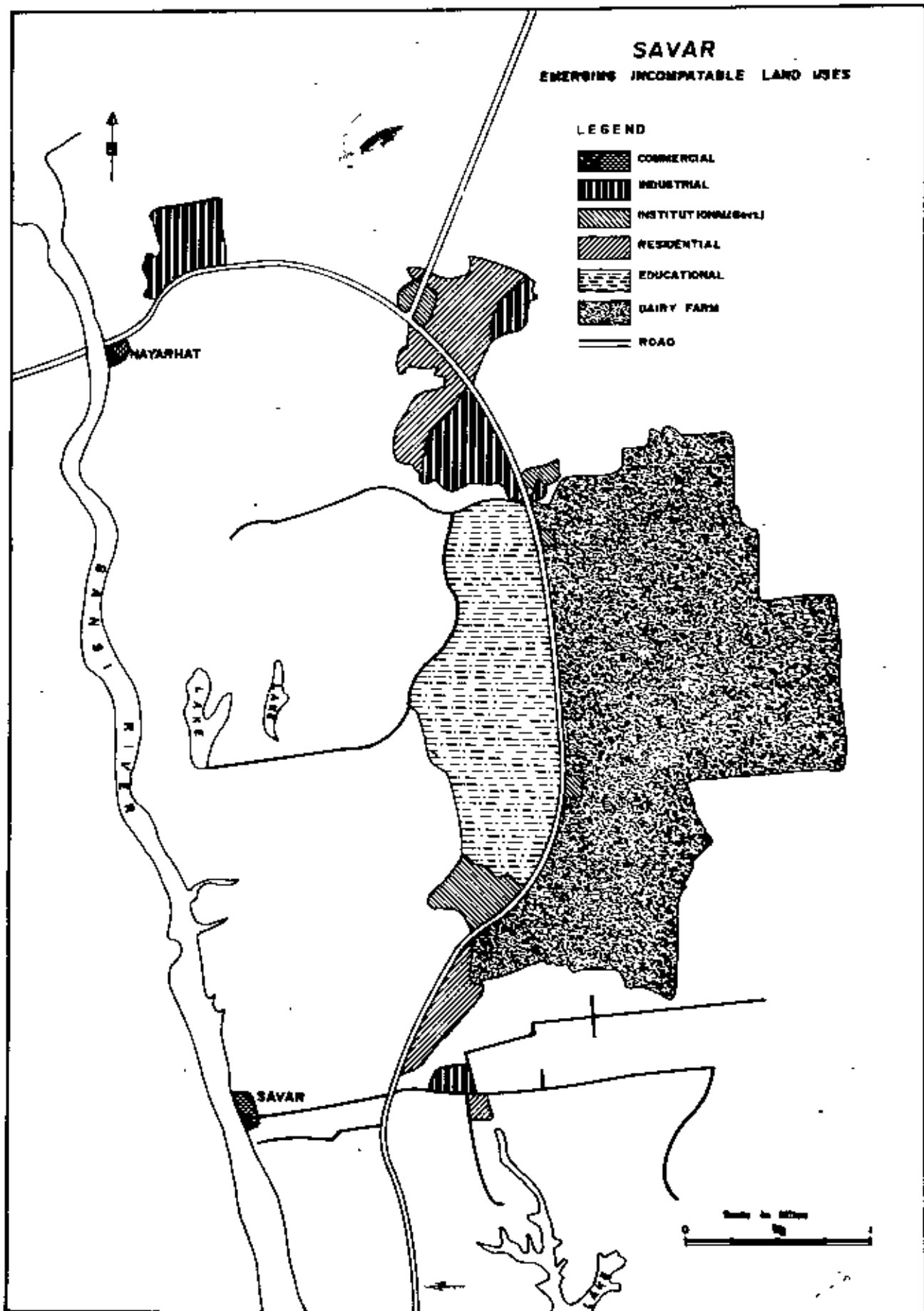


Figure - 10

Land with this capability for diversified agriculture is scarce in East Pakistan<sup>5</sup>. Also there is rapid spread of habitation within the flood - protected land of the Dacca-Karayanganj-Damra project area. The purpose of the D-K-D project is to develop the land for agricultural uses. The location of this project area on the fringes of both the Dacca and Karayanganj - Damra conurbation, the loss of this land to settlement and industry by unrestricted urban and industrial sprawl seems inevitable, sooner or later.

This phenomenon has been observed in the case of Savar, Joydevpur and some lands around the industrial estates of Tongi, Kanchan and Kaliganj. In Kanchan, Kaliganj and Haringdi the future expansion of industrial estates is possible only by incorporating the marginal agricultural land. Already substantial amount of valuable agricultural land have been eaten up by these industrial estates and have been made unusued by the disposal of industrial waste. The report on Zoning of Land for Agriculture and Urban Use in Dacca District writes; "The rapid expansion of urban and industrial development around Dacca poses serious threat to valuable agricultural land within a wide radius of the city, particularly in areas to the north and west. Already, considerable areas of level highland have been overwhelmed in the Mirpur, Mohamudpur, Cantonments, Kurmitala and Tongi areas, as well as areas of valuable floodplain land along the Buriganga and Sitakhyra rivers to the east of Dacca.

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5. Barner, H, Zoning of land for Agriculture and Urban use in Dacca District. (Dacca Directorate of soil survey. 1970) p.2

**POTENTIAL AGRICULTURAL LAND  
THREATENED WITH URBAN AND  
INDUSTRIAL ENCROACHMENT**

**LEGEND**

-  BUILT-UP AREAS
- HIGH POTENTIAL
-  WELL DRAINED
-  POORLY DRAINED
- MODERATE POTENTIAL
-  DEEPLY FLOODED
-  DEEPLY FLOODED BASIN

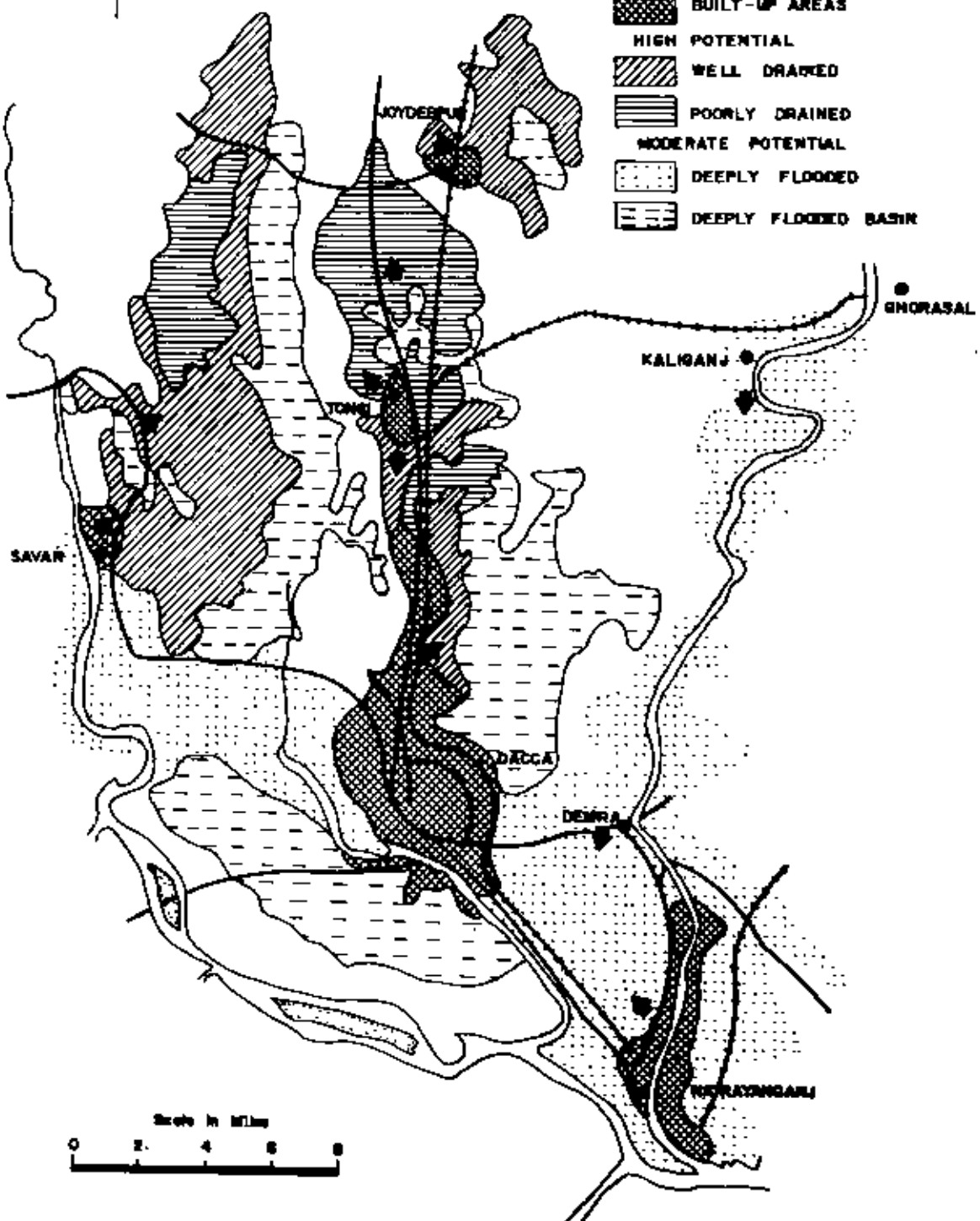


Figure - 11

It seems in-avoidable that further valuable land will be lost in the Barwar, Kashimpur and Fongi areas unless official land zoning regulation can be drawn up and enforced in the very near future<sup>6</sup>. This phenomenon results in the reduction of agricultural production.

The question then becomes, what should be the goals in the second phase? Stated generally, it is the protection of land. The goals in this phase do not mean the prohibition of development rather to guide and regulate the development in the proper and desirable manner that ensure the sustained growth and high livability environment. For this purpose we need a plan directing that development shall go here and there, this year, next year, and five year from now, reduces the sphere of speculative possibilities. This is achieved in the regional land use plan. "The intent is, variously, to maintain land values, provide for the collective needs of the future generations, preserve scenic beauty as well as sites having out-standing cultural values, prevent the encroachment of the city upon agricultural zones, save wilderness areas from despoilment, and help to guide regional settlement into desirable and life sustaining patterns"<sup>7</sup>.

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6. Ibid., p.1

7. Friedman, John. "Papers on Public Policy", Research and Education for Regional Area Development (C.S.A. Iowa State University, 1963) p. 217.



Rural zoning includes measures designed to secure the orderly development of land and water resources, to regulate the density of population, to improve highway condition, to foster conservation of soil and water resources, restrict unsightly development.

#### Phase Three : Economic Development.

The growth of industrial centres like Tongi, Ghorasal, Joydevpur, Daura reflect the on going economic development in the region. Rapid rate of increase of population in Dacca city and in surrounding industrial centres by migration from other areas and by natural increase calls for such action that guarantee the sustain growth. The growth of jute industries alone in the emerging industrial estates, in the long run of course, will not be able to provide a wide urban base required in future in response to the rapid population increase.

It has been observed that some parts in the city-region progress for economic development with accelerating speed while others, in spite of the potentiality in natural resources, remain backward. In the city-region, for example, a very high concentration of income is around two centres - Dacca and Narayanganj. The growth in the few centres such as Dacca, Narayanganj, Tongi, Ghorasal, etc, will make the region unbalanced in regard to the income, revenue and population.

It may be assumed that present migration destinations are these centres and continuation of the process may put these centres in a very difficult situation in regard to employment, housing, community facilities, utilities, etc. This condition is now fully reflected in Dacca and Narayanganj. Therefore, population crisis may recall attention to resources.

The goals in the third phase are dynamic in the sense that they meet the challenge and must demonstrate that the full economic potential of the region can be realized without wasting productive farm land and without incurring the private and social diseconomies of an efficient, ugly, or uninspiring community environment. Hence attempt is directed towards optimum resource use. A deep knowledge of the region's resource potentiality is a pre-requisite for any attempt in developing the region's resource. The optimum resource use and environment demands not only of high development efforts but at the same time should look into such uses arising out of the resource use.

Therefore, one of the goals is to strive for a balance or equilibrium in response to growth and change. Here the attempt is the economic development seeking to realize the region's potentiality for economic diversity in primary, secondary, and service industry and to achieve a balance between land uses, between housing and industry between urban and rural areas.

"Economic development and physical planning need to go hand-in-hand. An appropriate allocation of capital, achieved by the market mechanism or government or both, does not automatically produce an appropriate allocation of land. Physical development plans, created in a vacuum without relocation to investment, output, employment, and income may cause, serious economic dislocation. The regional plan can strategically link these elements"<sup>8</sup>.

#### Phase Four : Integration with Broader Level of Planning

The hinterland of Dacca-region constitutes an important economic region. There is concentration of entrepreneurs, technical skill and income in the city. As a capital the city is getting development and location priorities as well as priorities in other fields. The city-region of Dacca is variously associated with other areas of East Pakistan. Its migration hinterland is constituted by the entire province. Raw materials of industries and factories such as jute, cotton, etc, come from different areas of Pakistan. Chittagong and Chalna, provide important out let for the product of the Dacca city-region. The physical links with other areas are maintained by the intricate pattern of the river system as well as by highways and railroads. In fact, different areas have contributed greatly in its growth.

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8. Gertler, L.O. *Ibid.*, pp. 212, p.29

As a growing economic region it naturally comes under the attention of the National Planning Commission. Certain decision on economic development and progress of the region, taking the national interest into account, is formulated at the national level. As such, the fate of the city-region of Dacca is intricately tied up with the fate of the nation.

Since the purpose of the regional planning is economic progress and good part of their growth is shaped by outside forces, it is imperative that any regional plan for optimum resource development and community environment must be integrated with the broader levels of planning. The experience and knowledge suggest that it often neither possible nor economically desirable to have a self sufficient region. Also the regional development is the result of investment process.

The attempt in this phase is to overcome the strictly self-centered regional concept. One of the regional policy goals that it must be consistent with the dominant national aspiration. As such, it must also reflect the policy for national economic growth. It is, therefore, necessary that the regional plan must be integrated with national, provincial, state or different types of planning units.

Attention should be given to the interlocking network of urban-centered region in order to carry out large scale regional programmes. Sectoral allocation in the national and provincial planning must be translated into spatial allocation within the region in the optimum manner. Therefore, it is the regional plan where projects are materialised.

CHAPTER - VITHE REGIONAL PLAN.

The Plan should be truly regional. In the preceding chapter generalised goals have been stated which should constitute the guiding factors for working out detail plan. On the basis of the nature of problems and urgency, two separate plans are needed, one to deal with the problems of metropolitan district and the other the problems of city-region as a whole. Both the plans must be coordinated as well as integrated since they emerge out of a common aim of serving a community which has made possible the creation of a city-region. Two such plans are suggested to deal with the problems of Dacca. The relevant goals can be achieved through these plans. The plan should show the areas where action are needed. Detail and comprehensive survey dealing in local and regional level is very much essential in working out detail plans needed for such actions. Only then problem can be tackled directly and efficiently.

A Plan for Metropolitan District.

Two strategic centres in the metropolitan district are the metropolitan centre comprising - Central Business District, Tejgaon, industrial area, extensive service areas, residential areas etc, of Dacca city and also the industrial and commercial town of Narayanganj.

Beside these, two important emerging industrial centres are Tongi and Joydebpur. Their location is shown in the map. The problems in the metropolitan centre and town centre of Dharyanganj call for immediate attention. The metropolitan centre contains the major concentration of population of the metropolitan district and a large employment base. As a capital of East Pakistan and the hub for many specialized functions, its power of attraction is tremendous. It is the only major centre in the province capable of inducing large scale migration through employment opportunities. Since the inception of Pakistan the growth in the metropolis is continuing at a very high rate. It is very unfortunate that there has always been wide gap between the development rate and the growth rate. This has resulted in the accumulation of numerous problems of various nature.

#### The Essential Tasks.

Lack of planning or poor planning has saddled the city with many of their current problems and the mistakes are being repeated in many areas today. The problems, as stated generally, are traffic congestion, constriction, slums, insanitary condition and general deterioration of environmental condition.

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# DACCA METROPOLITAN DISTRICT

## EXISTING LAND USE

### LEGEND

-  INDUSTRIAL
-  COMMERCIAL
-  INSTITUTIONAL
-  RESIDENTIAL
-  AGRICULTURAL
-  CANTONMENT
-  AIR PORT
-  MAJOR ROADS
-  RAIL ROADS
-  RIVERS

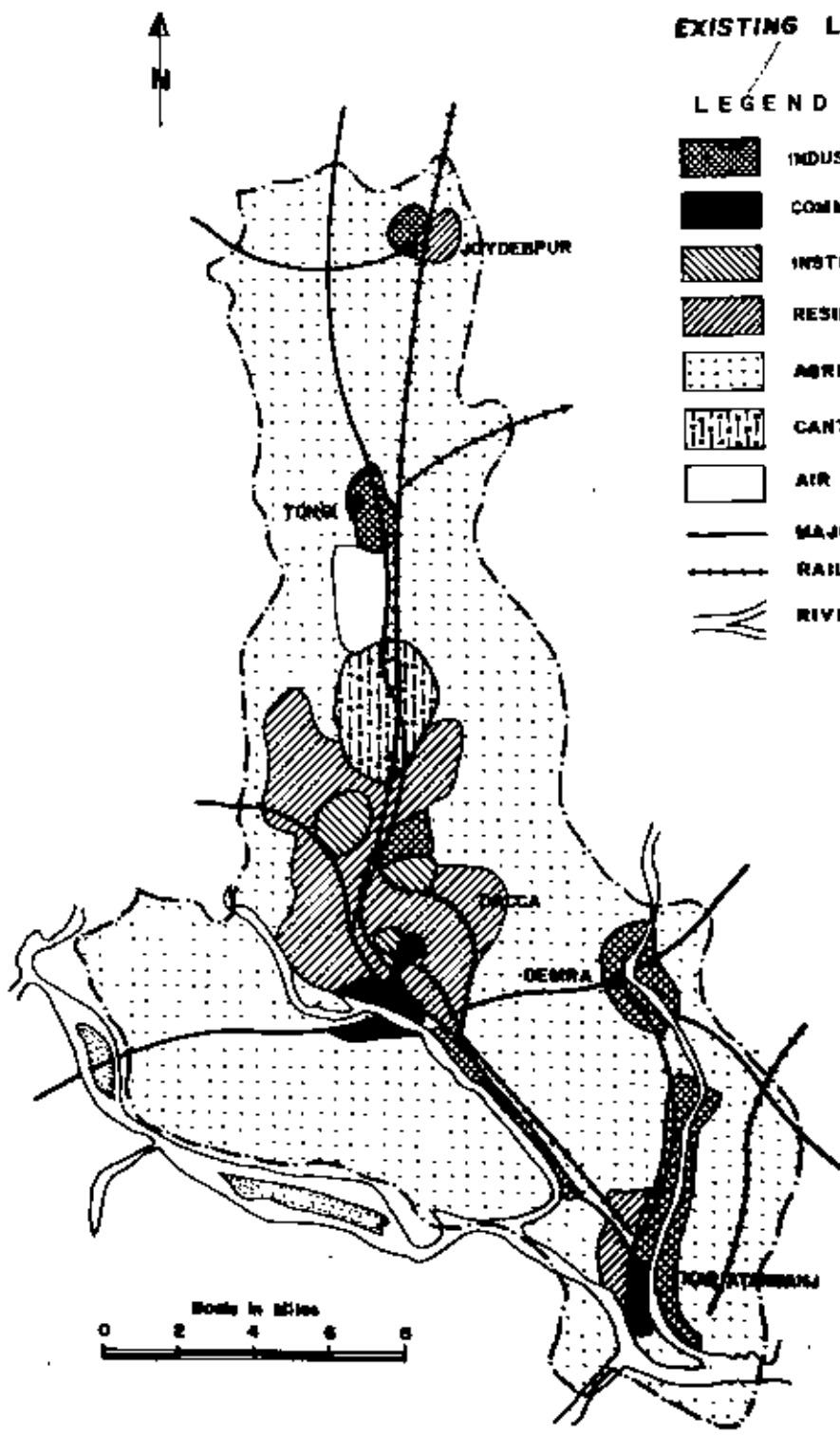


Figure - 12



It is most severe in the older part of the metropolis and the major efforts must be concentrated there. However, these occur in various forms and degrees throughout most of the Metropolitan District.

The essential tasks should be undertaken in:

Better use of the capacity of existing street system in the Metropolis. Slow moving traffic is allowed to use many of the street indiscriminately. Refuse and construction materials often spread out on the main streets. Pedestrian traffic is not controlled. Disorderly driving is not censured. In many cases the geometric design of the intersections and central reserves fail to channel traffic properly, generating confusion and congestion. The width of some roads are so narrow that they are unable to handle adequate traffic volume. In this regard special mention may be made of Nawabpur road, Potuatally road, Ialsapur road and some other city roads. Traffic in Motijheel Commercial area has almost reached to a strangulation point during the working hours. Efforts should be made to reduce the traffic congestion by removing encroachment widening pavements, restricting certain types of vehicles all together, or at certain time of day or providing relief road or marking the street one way and providing adequate parking areas.

Dacca city is facing acute housing problem. Deteriorated housing and growth of slums are two severe menace confronting by the metropolitan housing sector. Growth of bustees alongside the railway and in some areas in the new town has added additional problem. These bustees are characterized by highly insanitary condition. They have become the breeding place for vice and crime. The inhabitants of these bustees have neither *scary* or adequate employment opportunity to ameliorate their living condition. They are creating health hazard, social problem in the city. The growth normally takes place or invade on the city's vacant land. The poor migrants generally find their shelter in these bustees. The bustee improvement programme can perhaps solve their problem but does not give any assurance for control of such growth in future. Control or channelling the migration may be tackled in the regional plan by providing new growth centres. Recent housing activities by the private and individual in the newer part of the city, who have carried their own land development in a very individualistic fashion, have resulted in a chaotic pattern. The value of Sub-division control have never considered. As a result, roads are narrow, short distant and imperfectly connected with the main roads. In these areas serious difficulties are arisen at the time of providing community facilities such as water supply, electricity, gas and with the water disposal. Wide spread of violation of construction rules and unauthorised construction by the house owners have aggravated the problem.

To-day, the city is faced with a huge backlog of needs for appropriate housing with lower rents. No sincere attempts have so far been made for low cost housing. Land development in Dhamondi, Gulshan and Banani has been done for high class residential area. Mohammadpur and Mirpur housing estates came under the refugee rehabilitation scheme. Housing supply must consider the income and household pattern.

Physical change alone does not guarantee social achievement or betterment, but it can revive human aspiration in areas where it has been shunted by crushing problems. The improvement of the residential environment is a critical part of the city's renewal or revitalising programme. The magnitude of the problem is so vast; the needs among the household so varied and condition from neighbourhood to neighbourhood so different, that renewal action of a wide scope are required. These range from new housing construction to the conservation of neighbourhoods showing the first sign of deterioration. It is necessary to mention that adequate housing at appropriate levels of rent and space becomes a critical prerequisite for breaking the vicious circle of poverty. It is not enough simply to build more and more units of housing. Neighbourhood facilities and services must be provided and should be integrated efficiently in the housing programme.

The provision of adequate community services and facilities are essential to the regeneration of the old parts of the Dacca Metropolitan District. Community facilities and services include education, health, community development, recreation, police and fire protection. Lack of neighbourhood facilities are wide spread in the city. Not only there are unbalanced distribution of existing open space and parks but are gradually shrinking and some have reached at the point of extinction. This condition calls for immediate action. Initial efforts should be to improve the existing community services and facilities and to provide new ones where they are absent. Detail plan for these services and facilities should be prepared. The plan may be prepared by the agencies responsible for them but must be integrated at the higher level of planning for efficient location and proper distribution.

Health facilities and environmental sanitation in the densely populated areas of the metropolitan district namely in the Dacca City and Karsyanganj are highly inadequate. This condition is readily visible. Overcrowded wards have extra beds jammed in corridors and for every available inch of space there are long waiting lists of the sick.

There are 2118 hospital beds of all type now available in the Dacca Metropolitan district of this 2033 are found within the city. Here the figure comes about 2.2 beds per 1000 population. This figure loses its meaning when the fact reveals that the medical hinterland of the Dacca city covers the entire East Pakistan. Patients travel great distances into Dacca for medical treatment. Almost exclusive assembly of medical specialists and consultants are found in the city.

The provision of adequate water supply for household consumption and for industrial purposes, efficient system of Sewerage, proper drainage and refuse disposal are pre-requisite for the healthy growth of urbanisation.

It has become increasingly clear in many countries, particularly in Europe and United States that water supply and water disposal must be planned for and developed on a regional basis. Monsoon rain and flood cause service dislocation in the function of the existing drainage system. Large number of khals over and between the built-up areas are serving the purpose of storm drainage. These uncontrolled open khals become the source for wide spread area pollution from patches of filthy water that remain stagnant in them. Dacca city flood protection scheme should be made wider in scope so as to incorporate the entire metropolitan district in the scheme.

Water and Sewerage Authority (WASA) is responsible for water supply and Sewerage. Effort should be made for the extension of water line to the suburban and other built-up areas in the metropolitan district which will ensure safe water supply.

Another important task in the metropolitan district is to select new sites for the growth. An evolution of compatible land uses is the very aim in this direction. It has been experienced that poor class residential areas have sprung up or in process of growth in the very outlying areas of the city that resulted in the extra burden due to commuting expenses. This growth is certainly neither rational nor desirable. The growth of new centres, and activities structured around them should be encouraged. Since new growth is a time consuming phenomena a perspective plan should be adopted to guide such growth centres. Such plan, among other things include the provision of basic infra-structure needed to attract private investment.

In summary, the plan for metropolitan district should include the following actions :

1. Renewal.
2. Arresting the physical deterioration.
3. Conservation.
4. Better use of existing capacity.
5. Provision for new growth centres.

### A Plan for the City - Region.

To meet the policy goals and objectives, as mentioned earlier in Chapter V, such as land protection, optimum resource use and integration with broader level of planning, it is imperative to have a Regional Development Plan which will indicate the location of new towns, satellite towns, industrial estates, recreation areas, agriculture zones, broad density pattern, and the main transportation and servicing pattern. Stated briefly, the aim of such Regional Development Plan is to attain an optimum structure for the city-region based on functional hierarchy. The present attempt will be to prepare an advisory outline plan. Since the city-region is the consequent to the Central city or metropolis, it is indicative that the new growth centres should serve as a secondary centres for the central function of the Central city. These growth centres should provide essential central services to the areas surrounding them and should also provide additional employment opportunity in labour intensive processing and manufacturing plants.

#### Potential Growth Points.

The distribution of the urban centres or growth centres is often depends upon the character of the region. In this, the physical character appears as a prominent or primary factor followed by the human action.

However, there remains substantial scope for manipulating both. Trading centres of various ranks or size are distributed widely over the city-region, some are simply collecting centres and some are marketing centres. These together with new sites as would be selected in response to the present trend of economy, and on the basis of transportation and service demand, can be the starting point for preparation of Regional Development Map. In selecting the growth centres which may be on the virgin site or on partially developed sites, the major consideration would be to obtain the optimum structure for the entire city-region. Present mentionable important centres outside the Metropolitan District are Harwingdi, Kaliganj-Ohorasal, Sripur, Dharai, Manikganj, Aricha, Kanchan, Joydevpur and Baidya Bazar. Among these Harwingdi, Kaliganj and nearby areas growing as industrial estates, Sripur as lumbering centre, Manikganj as Sub-Divisional administrative centre, Aricha and Baidya bazar as fish and other commodity collecting and distributing centres. In recent years, Savar which is about 10 miles from Dacca Metropolis, growing as educational centre. This area, because of its proximity to the metropolis and also easy availability of buildable land, comparatively favourable terrain, etc, offer a potential site for urban development. The land value of this area is already under speculative strain. A substantial amount of land is now won by the absentee land lords.



Growth of housing societies, educational zones, factory industry, in this part of land, is without any total or integrated planning. The immediate tasks would be to bring this area under a planning ordinance and to guide physical growth by a master plan.

At present, employment opportunity is focused along the water frontage of the Sitalakhyā River, most of them as industrial job opportunity. It may be concluded that a very high density pattern would emerge along the river valley, majority of these people as non-farm population. In this regard we may mention that capability of a river of maintaining a high population density is higher than a land possessed by other physical character. The main economic strength of the area lies in jute. Most of the new industries developed here are jute mills.

The industries have already formed a nucleus for a strong industrial centres and new centre of urbanisation. However, the cost of filling the land would be the major physical constraint. Filling the land by dredger operation is recommended because in one operation two benefits are derived, filling the land in one hand and keeping the river navigable on the other hand.

### Transport and Service Facilities

Transportation system plays the most important part in the process of regional development and is one of the chief planning instruments. It is noted earlier that the metropolis is expanding in the north and several industrial and urban centres have sprung up within a wide radius of the city. Most of the new centres avail the central facilities at Dacca. Beside, the improvement scheme of Dacca-Chittagong Highway and the construction of road bridges, improved ferry facility, etc, have been contributing greatly in the growth of regional traffic in the city-region. The location of their routes and terminals has a profound impact on the development of city-region. Different communities or dispersed communities are being connected by transportation system. Transportation system within metropolitan district and over the city-region has slight different meaning. But together constitute the single system. Within the metropolitan district it is characterised by mass transit, ring road, penetrating road, etc, whereas outside it is characterised by highway, by-pass, link road and long distance routes. In the later case it is the regional network which link different urban centres, and on the metropolitan district this network becomes dense and closely spaced.

In brief, it should be the basic infra-structure not only for the development of the city-region but to attain the optimum structure for the region. Each new means of long distance transportation, as has been experienced in many regions, often effect the existing pattern of traffic movement. In the city-region we have road, rail, river and air transport facilities. Each of these has been contributing to the development of the region. River transport is still the major determinant of the industrial development. In this context mention may be made of the Sitalakhya river frontage. Cargo and traffic movement are also apparently heavier in the river routes.

Five highways merge at the metropolitan centre in a radial pattern. A large part of the hinterland specially in the north and in the west where role of river traffic is negligible, are served by road transportation. Due to radial pattern several areas are linked with the Central city but with great difficulty. Link roads are necessary to overcome this difficulty. Beside these, number of branch roads are also recommended to connect the interior part of the hinterland and to bring those areas directly under urban shadow, leaving no areas unserved. A detail traffic study for the whole city-region must be done before any regional road system is proposed.

The southern part of the city-region is marked with intricate pattern of water routes. Waterways contribute immensely in the development of the region. Water channels of this region are connected with the Ganges, Jamuna, Brahmaputra, Meghna system, thus linking the region virtually with the whole of East Pakistan. Waterways carry bulky non-perishable commodities at lower costs than those of other modes. There is considerable scope for the development of water transport. Planning problems relate to the efficiency of operation, mechanization of water vehicles, modernization of existing port facilities, provision of new ports at strategic points, etc. Special attention is needed in the case of Sitalakhya river. Growth of industry demands jetties, warehouse, anchorage and road facilities.

Traffic on railroad is already heavy. The expansion of the metropolis in the north requires more railroad facilities for the mass movement of people. The extension of railways in the western part of the city-region will be able to connect this area with the rest of the national railway system. Possibility of evolving a suburban railway system should be examined. The regional network for railroad should be dictated by the region's requirement. New International Airport is under construction near Fongi to facilitate the landing of largest transport Aircraft.

The location of the air port is almost at the middle of the city-region. It may be concluded that the advantage of each mode of movement rail, road, mass transit, river transport and Air transport should be utilised and the modes efficiently integrated.

Gas pipe line has also become an important element of planning for Dacca city-region. The natural gas has brought a new dimension for the city-region because industrial complexes based on natural gas can be located anywhere. Because of this advantage many economically backward areas can be pushed forward on the road of development. Construction of transmission and distribution facilities, however depend upon the allocation of power supply which again depend upon the population and development potentiality of the area.

#### Regional Recreation Areas.

Regional parks and recreation areas differ from the urban parks in magnitude and in activities. A wider variety of topography, flora, wild life and combination of land and water are usual sites for the recreation area. Demand for such areas are increasing because of "growing numbers of people and the growing ability of people to participate in leisure-time activities"<sup>1</sup>

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1. Brooks, Lippert, "Demand for Recreation Space in Canada".  
Ibid., pp. 214-215, p. 200

Dacca city-region possesses some topographic variety, river fronts and forest areas. In designating the recreation areas in the regional map, overriding consideration should be given on the natural aspect of the site as well as on the proper distribution and also on diverse activities. Generally speaking, hunting, fishing, hiking, riding, swimming, etc, are the major attraction for such areas. However, the human behaviour, age composition, social outlook, etc, dictate greatly the pattern of activities.

In recent years, people have started visiting sites like Chandra, Joydevpur, Briyur, Rajendrapur and Savar for purpose of outing and picnic. Rapid increase in the number of such visit shows the increasing demand for outdoor recreation space. Demand will grow immensely for popular all-day parks with nature trail, picnic areas and plenty of surrounding natural areas. These areas offer topographic variation with forest. They are potential sites for recreational development. At present, these areas remain in natural state. To derive maximum benefit from these areas it is necessary to develop them as perfect recreational areas which may include landscaping, afforestation, water frontage development, provision of nature trails, etc,

It may be concluded that this field has undergone very little systematic study.

In summary, the measures for planning city-region should include :

1. Preparation of Regional Development Map.
2. Identification of those urban regions as major growth points.
3. Provision of optimal transport network for the region, focussed on growth points.
4. Preparation of a Zonal Map showing regions general land uses.

CHAPTER - VIIREGIONAL PLANNING ORGANIZATIONThe Need for Regional Arrangement

Since City-region encompasses broad geographical areas and main concern of the plan is with the development of the region through the provision of regional infra-structure, the need for a planning organisation at a regional level is quite obvious. Many services ought to be provided regionally. Physical, economic and social characteristics of the region make several planning problems solution of which rest in different agencies. This leads to what we call 'divided responsibility'. Each authority performs their duties independently of each other in their best possible way yet this often fails to serve the interest of the community at large. Such independent work on the other hand, leads to a chaotic situation and instead of solving the problems they create multiple problems. This is particularly true in the case of growing cities and metropolis. Their zones of influence cover large area around them and they become increasingly dependent upon the wider hinterland.

To-day, a very dense population live in suburbs near every large city but not legally a part of it. Suburbs are, in fact, social and economic component of a single urban area and require all the services and community facilities as found within the city.



Also in the case of growing metropolis the arterial roads and  
and highways run across the area of several local Government.  
Bottle-necks and other difficulties in any of these roads in  
any part bound to affect the other part.

Inadequacy is reflected in the administrative,  
functional and financial field also. The administrative  
structure of local government does not have the capacity to  
prepare and to execute a project which is regional in character.  
They are often not capable of absorbing staff of qualified  
planners. In most of the local government administrative  
framework there is no provision of planning organization.  
In such a situation, therefore, geographically and adminis-  
tratively, functionally, and financially, the local government  
machinery is not equal to our tasks.

In the most urbanised areas of the world, there is  
growing recognition for an effective planning organisation  
at the metropolitan level. In many places governments have  
already provided legislative provision for a creation of  
metropolitan Government.

#### Scope and Function of Regional Planning Authority

In the preceding paragraphs the needs for a Regional  
Planning Authority has been stressed to meet the planning  
requirement of the city-region. The function of such Planning  
Authority is broader in scope.

City-region is one of the sub-regions within the national territory. Therefore, planning at the city-region level has to be closely integrated with planning at the national or provincial level as well as planning at the local level. As such, the planning function of such authority responsible for regional planning, should be to define the guide lines of regional growth within the context of national aspiration. To be effective the Regional Planning Authority among other things, must perform the following functions.

The Regional Planning Authority should have power to control the Sub-division of land, and to prepare and implement a comprehensive regional plan. Through such plan Authority can govern the regional aspect of land use, define the agricultural district and urban limits, generate and control the urban growth through major industry, highways, regional parks and through the location of new urban areas in the region.

To arrest the chaotic and unrelated growth the Planning Organisation needs authority to prepare and implement a preliminary regional plan to guide growth. Such a preliminary plan should be in force until the comprehensive regional plan is completed.

As a positive step in carrying out the comprehensive regional plan the preparation and maintenance of a capital budget is most essential.

It is an instrument by which planners can attain the desired growth rate in population and employment in the region mainly by the programme of public investment. In the words of John Friedman, "The budget will arrive at an integrated statement of all programs in utilities, transportation, communication, housing, industrial estates, education, health, and amenities required to sustain the projected level of demographic and economic growth and furnish preliminary estimates of total costs, together with the expected sources of financing."<sup>2</sup> In short, the sectoral programmes of the National Planning Commission must be integrated spatially in the comprehensive regional plan. Regional Planning Authority responsible for the preparation of comprehensive region plan can satisfactorily undertake these tasks.

Planning Authority should be entrusted with power to review or to revise the plans and programmes of the local Planning Organisation of public bodies to ensure the conformity to comprehensive regional plan adopted by the higher Government.

Beside these functions, Regional Planning Authority may be called upon to take the responsibilities related to the planning field in order to achieve high efficiency in the overall work. In addition, success in planning and implementation depends on the skill and accuracy with which comprehensive regional plan is prepared and kept upto-date.

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2. Friedman, John, op.cit.

No planning will be effective without a staff of qualified planners.

### Organizations for Physical Planning

#### Municipality

Generally, urban planning is the responsibility of the local Government such as Municipality or Town Committee. Preparation of Master Plan by Municipal Committee has been assigned by the Municipal Administration Ordinance, 1960. "A Municipal committee may, and if so required by the controlling authority, shall draw up a Master plan for the Municipality which shall, among other matters, provide for:

- a) a survey of the municipality including its history, statistics, public services and other prescribed particulars.
- b) development, expansion, and improvement of any area within the municipality.
- c) restrictions, regulations, and prohibitions to be imposed with regard to the development of sites, and erection and re-erection of buildings within the municipality<sup>3</sup>.

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3. Government of East Pakistan. The Municipal Administration Ordinance, 1960 (Government Press, Dacca Section.74. p 19)

The town planning responsibility rests on the Municipal Improvement Sub-Committee, which has no permanent character and the composition of members therein does not create any interest. Even the association of experts in the Sub-committee has not made obligatory. In this context it may be mentioned that planning is a continuous process and review and revision are essential elements in the plan administration. As such, existence of a permanent planning body is very vital.

#### Urban Development Directorate

When a Master Plan is prepared at the local level it is, however, to be approved by the Urban Development Directorate as per rule of the Government, "in order to avoid any conflict with the framework of provincial physical development plan or regional plan or Master Plan of any area as may be prepared by Directorates from time to time"<sup>4</sup>. The Urban Development Directorate has been created under the administrative control of the Works, Power and Irrigation Department of the Government of East Pakistan in 1965 to perform the following functions.

- 1) to advise the Government on matters of policy relating to urbanization, land-use, and land development.

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4. Government of East Pakistan. The East Pakistan Municipal Committee (Town Planning) Rules, 1968 (BD and LG Department, Dacca Gazette, Part I, 25th April 1968, Section XIII)

- ii) to prepare and co-ordinate regional plans, master plans and detailed layout and site plans for the existing as well as the new urban centres excluding the areas covered by the present town development authorities of Dacca, Chittagong and Khulna.
- iii) to undertake Socio-economic research and collection of data for determination of the location and pattern of future urban development.
- iv) to prepare programmes for urban development regarding selection of sites, acquisition of land, reclamation of land.
- v) to secure approval of programmes and plans and obtain necessary funds from the Government or any other agency approved by the Government.
- vi) to advise the existing urban development authorities on their operations at their request.

The duties and responsibilities of the Urban Development Directorate as mentioned above, are very wide in scope. The responsibility for physical planning of East Pakistan as such rests on the Urban Development Directorate excluding the areas belonging to the Dacca, Chittagong and Khulna Development Authorities. For instance, it performs duties at regional level as well as at local level i.e. from preparation of regional plan to preparation of a site plan. In fact, the Urban

Development Directorate is the most important physical planning Organisation in the Provincial set up dealing with urbanisation, land-use and land development.

### Dacca Improvement Trust

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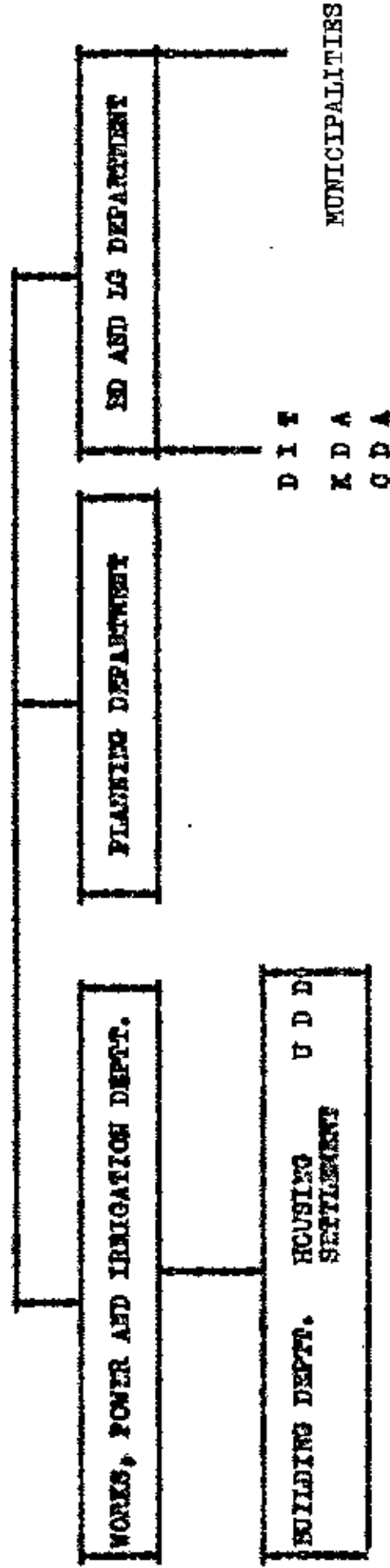
To tackle the physical development of growing cities such as Dacca, Chittagong and Khulna separate planning and development authorities have been created by the Government under 'The Town Improvement Act of 1953'. They are entrusted with power to prepare and to implement Master Plan of their respective areas in their jurisdiction. The need for a systematic planning, taking wide area around Dacca city, as a single area of planning jurisdiction, was recognised in this act. Consequent to this, Dacca Improvement Trust was created in 1956 for the development, improvement and expansion of the towns of Dacca and Narayanganj and certain areas in their vicinity, " by opening up congested areas, laying out or altering streets, providing open spaces for purpose of ventilation recreation, demolishing or constructing building, acquiring land for the said purposes and for re-housing of persons displaced by the execution of improvement schemes"<sup>5</sup>. The present jurisdiction of the DIT extends from south of Narayanganj to north of Tongi with the Sitalakhya and the Balu rivers in the east and the Dhaleswari and the Farag rivers in the south and the west, covering an area of about 250 square miles. The physical development of areas beyond this limit rests upon the several town committees.

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5. Government of East Pakistan, The Town Improvement Act, 1953 (Government Press, Dacca, 1967) p.1

**PLANNING ADMINISTRATIVE FRAMEWORK AT  
PROVINCIAL LEVEL.**

**Additional Chief Secretary,  
(Planning and Development)**





### Planning Department

Apart from the planning organisations, already mentioned, there is the Planning Department at the provincial level. The organisation of the Planning Department consists of two bodies, viz. (1) the Planning Board and (2) the Provincial Planning Authority. The entire Planning Department works as Secretariate of these two bodies. The Planning Department consists of 4 divisions and one Directorate, i.e. (a) Administrative Division, (b) Planning Division, (c) Project Division, (d) Foreign Aid Division and (e) Directorate of East Pakistan Bureau of Statistics.

The Planning Division is divided into a number of sectors headed by Deputy Chief Economists. The Physical Planning and Housing is one of the Sectors and is mainly concerned with land-use, transport and utilities, dwelling houses, public buildings and other social, cultural and economic facilities necessary for the pursuit of a happy community life. The main function is the examination and processing of schemes prepared by the various planning agencies and to follow up action for successful implementation of the plans, schemes and targets and to incorporate them in the five-year plan and in Annual Development Programmes. As such, the Planning Department does the job of integrating the plans of local and regional level with the national level.

From the provincial administrative framework it is seen that the administering department for physical planning is the Basic Democracies and Local Government. "This department is heavily over burdened with the complexities of local government and in relation to the Development Authorities and Improvement Trust, suffers the disadvantage of being wholly non-technical"<sup>6</sup>

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6. Chittagong Development Authority, Chittagong Region and Metropolitan Chittagong, Proposal for Development, p. 145.

CHAPTER - VIIISUMMARY AND CONCLUSION

Since the independence of Pakistan, Dacca city and its region is undergoing rapid change. To meet the new functions several land uses are emerging out in the city. The growth is taking place mostly in the new town, but in haphazard manner. From the very beginning this area is suffering from the absence of any total planning. However, certain piece meal planning has been provided by the Government in Dharmondi, Asimpuro, Kotijheel, Gulshan, etc. In the absence of total planning and zoning ordinance inacceptable land uses have sprung up in several areas within the city.

Beyond the city limit industries are concentrating at several centres such as Fangi, Narayanganj-Damra Ghorusal, Manchan, Joydepur, etc. In these areas potential agricultural land is being eaten up by the expanding industries. These areas are, in fact, directly under the metropolitan shadow of Dacca. Reciprocal influences are exerted by the centres and the metropolis. Therefore, problems, either in the city or in these centres must be solved at the regional level.

Population, transportation and agriculture have been playing significant role in the development of the city-region. Emerging growth centres are located at or along the line of transportation.

Several rivers and their channels are providing the cheapest means of communication and also establishing links with important areas. From the present trend it may be said that Lakhya, in future, may turn into an important industrial valley. Agriculture provides two important crops, like rice and jute. Jute is the cash crop and jute industries are based on them. Heavy dependence on jute is reflected by the rapid growth of Jute industries in the region.

Regional growth has brought several problems for the city and the region. In the metropolis it is the rapid deterioration of physical environment, and in the city-region it is the problems of protecting agricultural land, regulating the land use and developing the existing and potential resources to keep pace with the present rate of development. Planning processes are dictated by the nature of problems.

Planning is needed to solve these problems in the scientific lines. Stress is laid on the regional plans. Two regional plans are proposed - one for the Dacca Metropolitan District and the other for the City-Region. Planning actions required in the different areas are focussed in these regional plans. If we want to arrest the centralization of industrial and urban development, we will not only have to exploit natural advantages; we must deliberately create superior conditions of living in the smaller areas. This means housing, schools, recreation and cultural amenities.

For the purpose of planning and implementation of the proposals, efficient planning organisation at the regional level is essential.

The nature of planning problem in the Dacca City-region is varied. To achieve high efficiency in the field of planning and implementation establishment of a Regional Planning Authority with scope and functions as mentioned in chapter VII is urgently needed. One and only one technical organisation should be identified and made responsible for all physical planning at the city-region level. In this context it may be mentioned that the Urban Development Directorate could have been appropriate Organisation for the physical planning at the city-region level. But the Directorate is burdened with the provincial physical planning through number of regional plans and town improvement plans. The Directorate also suffers from the very limited number of qualified planners. Also the area covered by the DIT is remain outside the interest of the Directorate. In this circumstances several alternative approaches should be made.

However, for effective regional planning the Institution must recognise the city-region as the proper sphere of action and should educate the people of the region to plan effectively for themselves, through certain determined decision, which should not clash with the national or provincial policies and work. Farther, such institution must assure that they are planning, keeping in mind the province wide as well as regional trend and needs.

Finally, as we approach to the development of the City-region attention should be given to the interlocking network of city-regions. Such attention must focus on the large scale regional programmes in transportation, urban and resource development.

## APPENDIX - A

Main Industries in Narayndhari-Dacca Area.

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Sl. No.	Name of the Industries	Number of Looms	Employees
1.	Adanjee Jute Mills.	3,049	50,000
2.	Dawa Jute Mills.	112	-
3.	Karim Jute Mills.	250	1,500
4.	Latif Hussain Jute Mills.	500	3,000
5.	Dacca Jute Mills.	300	-
6.	Nisbat Jute Mills.	300	-
7.	Victory Jute Mills	366	-
8.	United Jute Mills.	250	1500
9.	Pak Jute Mills.	250	1,500
10.	Ahsan Durrani Textile	430	-
11.	Adanjee Cotton & Weaving Mills.	-	718
12.	Chittaranjan Cotton Mills.	596	1,671
13.	Dhakeswari Cotton Mills Ltd.	780	5,320
14.	Dhakeswari Cotton Mills	511	-
15.	Lumi Narayan Cotton Mills	306	225
16.	Dacca Cotton Mills	124	-
17.	Olympia Textile Mills.	-	325
18.	East Pakistan Textile Mills Ltd.	207	-
19.	Jute Baling and Processing Factory.	-	1,000

APPENDIX - B.Industries in and Around Ghorewal.

Sl. No.	Descriptions	Date of Establishment	Land in Acres	Loom/Spindles	Employment
1.	Cotton Mill	-	19	-	-
2.	Dashbhardu Sugar Mill	1932	10	-	550
3.	Muslim Cotton Mills	1952	07	-	-
4.	Murang Sugar Mill	-	-	-	-
5.	Pubali Jute Mill	-	40	250	1,500
6.	Janata Jute Mill	-	43	250	1,500
7.	Purbe Pak Jute Mill	-	60	250	1,500
8.	National Jute Mill	-	05	250	1,500
9.	Pak Jute Mill	1961	70	500	3,000
10.	Co-operative Jute Mill	-	61	280	1,500
11.	Fauji Chatkal	-	-	250	1,500
12.	Fauji Broad Loom Chatkal (under construction)	-	-	100	-
13.	Urea Fertiliser Factory	-	270	-	-
14.	Ghorewal Thermal Project (Under construction)	-	360	-	-
15.	NPVAPDA Powerhouse	-	360	-	-



APPENDIX - C.Main Industries in Total

Sl. No.	Name of Industries	Spindle/ Looms.	Employees
1.	Bishat Jute Mills Ltd.	-	1,627
2.	Ashraf Jute Mill (1962)	12,000	800
3.	Fine Cotton Mills (1962)	12,400	-
4.	Magbon Textile Mills	12,400/176	480
5.	Nones Textile Mills	15,700	1,510
6.	Olympia Textile Mills(1954)	25,440/317	1,452
7.	Guaderia Textile Mills(1963)	19,690/312	550
8.	Furat Textile Mills	25,200/430	1,000
9.	Bata Shoe Co. Ltd.	-	150
10.	Telephone Industries Corpn.	-	430
11.	Pakistan Pharmaceutical Industries Limited.	-	202
12.	Dacca Dyeing and Manufacturing Co, Ltd.	-	118
13.	Satrong Textile Mills Ltd.	-	333
14.	Kohinoor Battery & Manufac- turing Company.	-	510
15.	Kohinoor Tobacco Co. Ltd.	-	300
16.	Pakistan Ceramic Industries	-	396
17.	Dacca Tobacco Co. Ltd.	-	120
18.	Tobacco Industries Ltd.	-	150

APPENDIX - DFair Industries in Kanchar Area

Sl. No.	Descriptions	Land in Acres	Employment
1.	Ashraf Jute Mills	10	-
2.	East Pakistan Co-operative Cotton and Spinning Mills.	-	-
3.	East Pakistan Cotton & Spinning Mills.	-	-
4.	Gausia Jute Mills	4	-
5.	Gausia Cotton Mills	5	-
6.	Haborun Jute Mills	9	15,000
7.	Fazal Hassan Askari Jute Mills	-	-
8.	Battar Jute Mills	8	-
9.	Mashraki Jute Mill (Under construction)	12	-
10.	Elite Jute Mills (Under construction)	6	-

APPENDIX - BMain Industries in Harari

Sl. No.	Descriptions	Year	Land in Acres	Capacity of (looms)	Employment
1.	Alijan Jute Mills	1963	17	250	-
2.	United Jute Mills	1963	48	500	-
3.	Jaba Textile Mills (Under construction)	-	9	250	-
4.	Eastern Textile Industries	-	-	-	-

APPENDIX - F

Main Industries in JORDANIA

1. Pakistan Diesel Plant.
2. East Pakistan Machine Tools Factory.
3. Pakistan Ordnance Factory.

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