



# Chapter

# 1

**BACKGROUND**



## BACKGROUND

### 1.1 BACKGROUND OF THE PROJECT

Under the project, "Preparation of Structure Plan, Master Plan and Detailed Area Plan" Metropolitan Development and Plan Preparation and Management in Chittagong (BGD/88/052), the Chittagong Metropolitan Master Plan (CMMP) was prepared in 1992-95 by Chittagong Development Authority (CDA) with technical assistance and financial support from UNDP/UNCHS and GoB. It was approved by the government in 1999. The wider context of the area is shown in Figure-1.1 and Study Area is presented in Figure-1.2.

### 1.2 BACKGROUND OF THE DETAILED AREA PLAN

One of the objectives of the above project was to prepare a comprehensive set of Plans for development of Chittagong. Accordingly the Structure Plan (1995-2015) comprising of a set of policies under twelve sectors and the Outline Urban Area Plan (1995-2005) comprising of a broad framework for development promotion, control and coordination had been prepared.

The government has undertaken preparation of Detailed Area Plan (DAP) for Chittagong Metropolitan Master Plan (CMMP) on the basis of the Structure Plan and Urban Area Plan. Accordingly an area of about 1,30,000 acres (excluding restricted areas) has been considered for DAP preparation. A further 50,000 acres within the Structure Plan boundary has been identified for survey and mapping only. But in reality, due to accommodation of the fast growing areas and growth centres outside City Corporation area, the surveyed area and planning area are extended upto 1,90,233 acres or 297 Sq. mile (770 Sq. Km) and 1,70,702 acres or 267 Sq. mile (691 Sq. Km) respectively. Out of the total surveyed area, 3801 acres are restricted area. The policy should represent the recommendations made in the Structure Plan as policies and Urban Development Plan as guidelines.

This plan report contains the purpose and objective of DAP, the reviewing the previous higher level plans infrastructure, critical planning issues, development plan proposals, plan implementation, project plans and incorporation of development proposals in

response to the community desire, priorities and phasing of public sector action program.

### 1.3 OBJECTIVES OF THE DETAILED AREA PLAN

The main objective of DAP is to study each particular area in greater detail, formulate strategies for development and prepare detail guidance for land use, control and management. In doing so, it will fulfill the policies of the Structure Plan and Urban Development Plan recommendations and meet the broad objectives of the Plan.

Once the DAP's prepared the objective is make them be the guiding document for development by all concerned.

Considering that no updated physical survey maps or aerial photographs exist with CDA, a major part of the project is the production of base map of the project area indicting all existing physical features. These are recorded at mouza dag level, so that CDA and others can use it effectively.

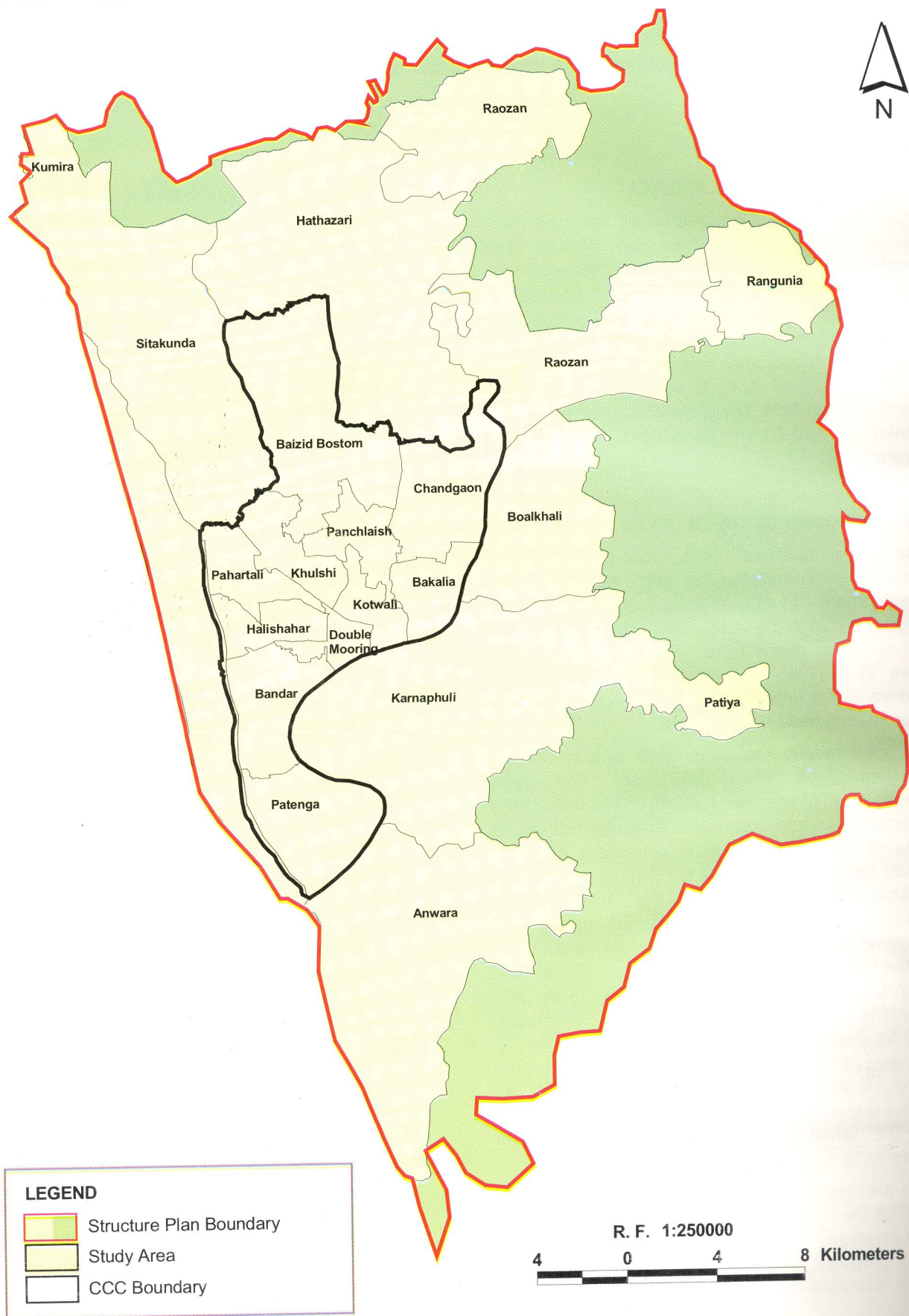
One of the objectives is to record all information in the Geographical Information System (GIS) based data and transfers this skill to CDA technical staff so that this information can be used for day-to-day decision-making. This database can also be updated continuously.

As per the TOR, extensive sample socio-economic survey has been conducted to ascertain the situation and recommend measures to meet present and future needs. Objectives as per the TOR are:

- a. Providing a basic urban design of good quality (functional and aesthetic quality and flexibility).
- b. Providing Land Use maps & information at mouza dag level (parcel) as a professional manner (hard & soft) for efficient updating, exchange, dissemination and decision support use.
- c. Providing a program for public sector action aiming at the implementation of the plan. Multi Sector Investment plan for better and efficient use by identifying the area based on priority, and integration within the DAP and its surrounding regions.
- d. Providing controls for private sector development in the DAP area.



Figure 1.1: Structure Plan Area and Study Area (Surveyed Area)



Source: Structure Plan and BBS Population Census - 2001 (Community Series)



- e. Providing clarity and security with regard to future development for inhabitants and investors. The targeted objectives & guideline of the development project could be to initiate and implement through participation.
- f. Providing guideline for development considering the opportunity and constraints of future development through govt., private and non-govt. initiatives.
- g. Providing planned development to ensure sustainable environment. Detailed Area Plan (DAP) should be undertaken with the co-operation of the development agencies. Each agency should co-operate co-ordinate & participate in the process of preparation of DAP for proper planning & development. DAP would be the guiding document for implementation by all concern. GIS based data, map & other information would be the resource, which could be updated as a when necessary.

#### 1.4 SCOPE OF DETAILED AREA PLAN (DAP)

On the basis of guidelines established in the Structure Plan and the Urban Development Plan, area specific development policies for upgrading, redevelopment, new area development, conservation and protection etc. have been provided in Detailed Area Plan. In formulating development proposals for the DAP's the following will need to be considered as per the TOR:

- a. The scope of Detailed Area Plan (DAP) is to formulate development proposal in such details as appropriate to the policies of the Structure Plan (SP) and the guidelines of Urban Development Plan (UDP).
- b. Allocating zones for residential as high, middle, low density (including the disadvantaged group) with indication of Floor Area Ratio (FAR), mixed residential and blocks for residential apartment where it is necessary
- c. Allocating zones for industrial uses like heavy industrial, light industrial and service industries including waste disposal/treatment plans (household, commercial, industrial, clinical). In all respect the environmental act, rules and guideline will have to be followed. Allocating zones for commercial uses like commercial blocks, shopping blocks, mixed use blocks with different categories (formal and informal) and standard where it is necessary.
- d. To identify the areas reserved for agriculture, flood flow, public/private open spaces, parks, play ground, play-lots and other recreational uses like green belts, retention pond, water front, natural reservoirs and historical monuments and structures.
- e. Identification of Hill and Hilly areas and necessary guideline for their conservation.
- f. The proposed Detailed Area Plan is expected to comprise of an integrated package of amenities and other uses like development of water bodies, open spaces, playground, and recreation and community services.
- g. Allocating the zones where public utilities, institutions and civic services will be established. Moreover the zone of urban deferred areas, for future development, expanded areas and areas for new development have been considered.
- h. To establish an integrated development plan for *primary, secondary and tertiary roads*. To design traffic circulation pattern and road intersections, drainage, storm water and sewerage line, water line, location of shallow and deep tube-well alignment of gas line, gas station and sub-station, alignment of electricity line, supply station and sub-station and alignment of telephone line.
- i. To ensure planning principles/standards, gross/net densities, guideline for future development and development control.
- j. To exercise control over architectural features, elevations frontage of buildings and structures including zoning regulation to regulate location, preservation of heritage, Floor Area Ratio (FAR) and type of buildings within each zone along with allowable deviations.
- k. To prepare environmental impact analysis for the component of all DAP proposals.
- l. To identify projects for private, public sector involvement along with analysis of Social Impact and Environmental Impact Assessment (EIA).
- m. Appropriate mapping, illustration along with report plays a vital role for decision-making process and communication among various stakeholders. Previous pilot survey and study revealed that



carefully designed viable methodology is the prerequisite for success of such project. So instead of Plane Table survey digital method with specified equipment like DGPS (establishing ground control Point), Total Station (physical feature survey) has been used. Work is done in professional manner.

## 1.5 CDA MASTER PLAN IN 1961

### 1.5.1 Strategies and Proposals

The first Master Plan for the development of Chittagong was prepared in 1961 when the city had a population of around 365,000 and the Municipality had a population of 1175,000 (East Pakistan Population Census 1961). The authors emphasized that the object of the Master Plan was to establish principles of development rather than to present a detailed, inflexible scheme. They recommended that the proposals should be worked out in detail before implementation, and that the Master Plan should be periodically reviewed. However, in the absence of an established planning mechanism no day-to-day planning activities were undertaken. Two detailed area plans carried out by Consultants were not acted upon.

The plan was based upon four strategic assumptions:

- a) that the port would continue to be important
- b) that the central business area should be retained
- c) that development of the low-lying area west of the Dhaka trunk road and southwards towards Patenga would continue and
- d) that the urban population, growth rate would be 2.25%.

All except the last of these assumptions have held good. The urban population growth rate has proved to be higher than assumed.

The plan covered transport, public buildings, population, housing, education, open spaces, coast protection, commerce, industry and public utilities. A network of new major roads was proposed and shown on a key plan. Other key plans showed residential area development proposals, open space proposals and industrial area proposals.

The chapter on coast protection reported that the Government proposed to build an embankment along the coast, 20ft high with slopes of 1 on 3 on the seaward side and 1 on 2 on the landward side; a

possible embankment continuation up the right bank of the Karnaphuli River was mentioned.

Hill cutting was considered, with the comments that steep slopes would lead to excessive erosion, which in turn would endanger the stability of residences and cause silting of water courses at the foot of the hills. The report concluded that prohibition of hill cutting would be impracticable, and recommended an orderly allocation of areas to be cut, with stringent control of development in hill areas in order to prevent any possible development areas becoming sterilized. It listed areas to be cut as Nasirabad, and then two areas to the southwest, between the Police Lines and Khulshi Road.

Road widths and provision of extra space for such things as pavements, car parking and trees were discussed but the desirability of leaving reserves for drainage channels was not mentioned.

Many proposals in the Master Plan have been implemented, including the intermediate ring road (CDA Avenue), the coastal bund, the Agrabad Commercial area, industrial at Fouzderhat, Nasirabad, Hathazari and Kalurghat, and residential areas at Agrabad and Haliashahar. Road schemes were not implemented including the inner and outer ring roads, the strand relief road and the east-west link road. A number of the areas zoned for housing, open space and industry have not been developed..

The report considered the possibility of developing on the left bank of the Karnaphuli. It argued that while land on the left bank was topographically ideal for development there were strong economic arguments against encouraging its development. It concluded that development on the left bank should not be encouraged "unless and until there is a prospect of the settlement here of some really large industrial enterprise" for which a suitable site could not be found on the right bank. The authors considered that such an enterprise would justify the initial provision of expansive public services, which then might form a nucleus for subsequent expansion of a satellite town to Chittagong.

### 1.5.2 Success and failures of CDA Master Plan 1961

Many of the peripheral areas proposed for development under the 1961 Master Plan have not



been developed, or have been only partially developed. Therefore, this study finds that many of the increases in population over the last 30 years must have occurred through of density within the existing urban area with only limited peripheral expansion of that area.

It appears that during this period the bulk of urban development has taken place in most directions away from the old town, other than on the left bank of the Karnaphuli River. To the south and west it has taken place in Agrabad and beyond to the Patenga peninsula, to the west and north-west along the Dhaka Trunk Road, and to the north along CDA Avenue and the Hathazari and Cox's Bazar roads. To the east development appears to have been inhibited to some extent by regular flooding of the low-lying land.

Apart from some notable exceptions such as CDA residential, commercial and industrial sites, the Export Processing Zone, the Port Trust Colony. Housing and Settlement Directorate sites. Military areas and some private residential developments, much of this development has taken place unplanned, many of the buildings being "kutcha" rather than "pucca." Outside the highest concentrations of development in the old town and along the main thoroughfares in the old uneven, leaving six-storey office blocks standing next to rural plots. The process of transition from rural to urban use appears to be slow, even in central parts of the city.

### **1.5.3 Reasons for Non-implementation of the Provision of 1961 Master Plan**

The identified major reasons for non-implementation of development proposals can be summarized as follows.

#### **i) Lack of Importance to Urban Planning and Management at Policy and Operational Level**

At policy level less importance was laid on urban planning and management. This attitude was reflected in allocation of fund for urban planning and development and restructuring and strengthening of urban planning institutions. Due to weak institutional support the implementation of plans and their timely amendment were hampered. The Town Planning Department of CDA

lacked manpower for undertaking plan based projects and other plan amendments activities. Failure to undertake these initiatives seriously affected plan implementation. The master plan was seen (and is applicable even now) as collections of development projects and not as a process.

#### **ii) Scarcity of Resources**

The emphasis in CDA is on revenue earning projects as it is supposed to be self financing. (Roads and development projects are financed by the government). As planning generates no revenue it is given low priority. It must be understood that planning and management achieves orderly growth and leads to accelerated growth. Thus the recurring expenses for effecting urban planning and management should be funded by the government both with the authority and the local government.

#### **iii) Rigidity of the Master Plan**

Master Plan is a rigid concept. In the absence of a planning authority and the formulation of local plans imposed rigidity regarding land uses and this limitation led to uses in contradiction of the plan and it gradually lost its usefulness. Failure to amend the plan proposals as an ongoing professional practice caused many of the plan proposals to turn obsolete over the time.

## **1.6 DEMARCATION OF STUDY AREA (SURVEYED AREA) AND PLANNING AREA FOR DETAILED AREA PLAN**

Physiographically Chittagong Metropolitan Area is different from most of the cities in Bangladesh. Its northern side is almost covered by hills. Western side is completely covered by Bay of Bengal. Remaining East and South sides are almost free land but situated on the other side of Karnaphuli River.

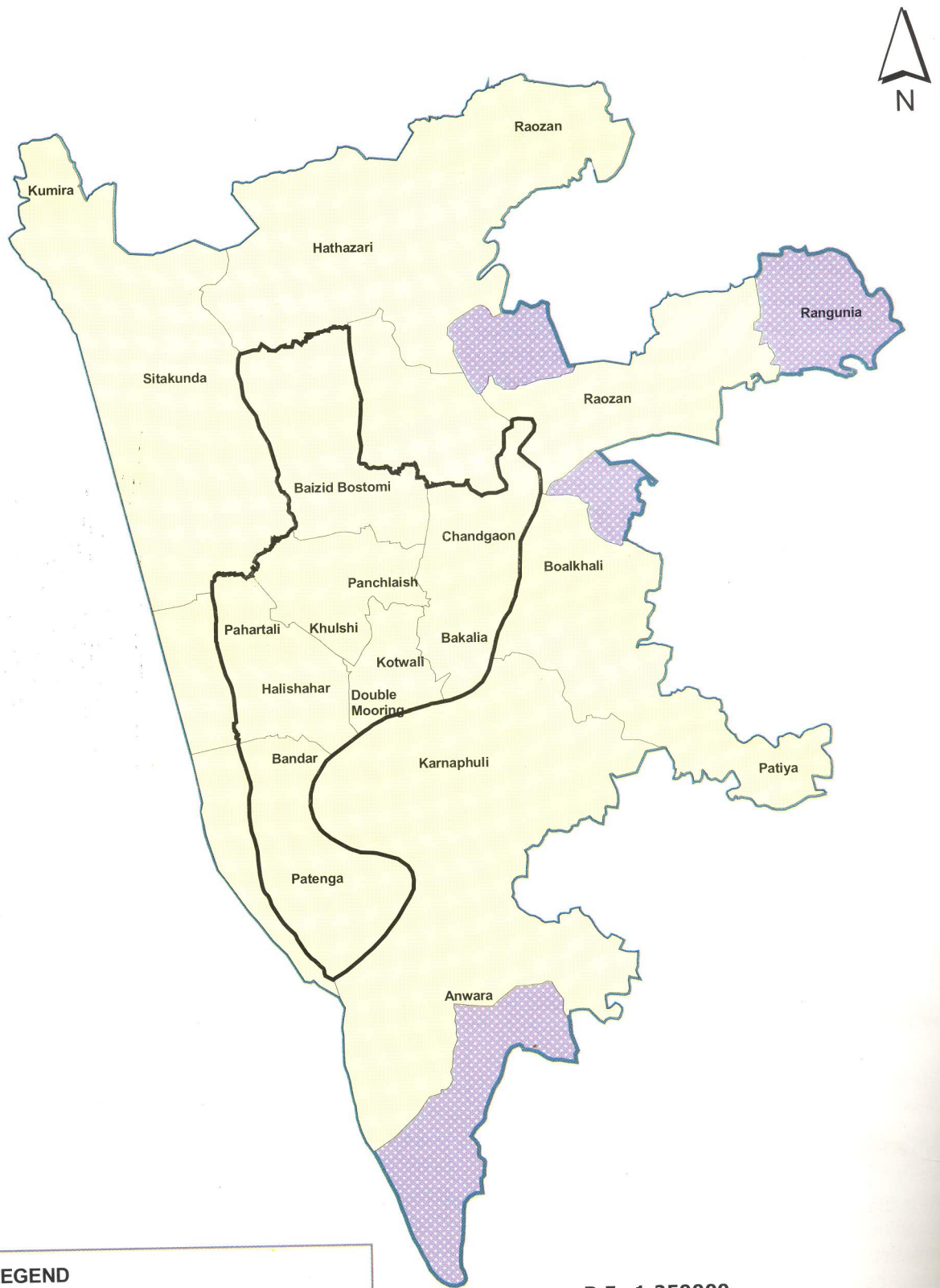
The existing City Corporation consists of 11 Thanas. These are::

1) Patenga, 2) Bandar, 3) Haliashahar, 4) Pahartali, 5) Double Mooring, 6) Kotwali, 7) Bakulia, 8) Khulshi, 9) Panchlaish, 10) Chandgaon, 11) Baizid Bostami




The Planning area has been delineated taking the total jurisdiction of Chittagong City Corporation area plus potential growth center of neighboring Thanas.



Figure 1.2: Planning Area and only Surveyed Area



**LEGEND**

	Planning Area	1,70,702 Acres
	Only Surveyed Area	19,531 Acres
		Total = 1,90,233 Acres
	CCC Boundary	

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So, during demarcation of planning area for detailed area plan, the urban development along both the sides of major inter-district road network, neighboring growth centers were given importance. The urban development along the Chittagong – Dhaka Road via Shitakundu, Rangamati Road via Rouzan, Khagrachari Road via Hathazari, Cox's bazar Road via Patiya and also Kaptai Road via Rangunia were considered.

At present, CDA control area is 1152 sq. km (445 sq. mile) as per 1995 Structure Plan. There are 12 growth centres out side of city corporation area, which are 1) Kumira, 2) Hathazari, 3) Gahira, 4) Rouzan, 5) Madunaghat, 6) Pahartali, 7) Kalurghat, 8) Boalkhali, 9) Patiya, 10) Shikalbaha, 11) Rangadia and 12) Anwara

Due to their growth and potentiality those growth centres were included in planning area. In order to accommodate the urban development along the major inter – district roads and neighboring growth centres were included in the Detailed Area Plan (DAP). Thus the Study Area (Surveyed Area) was delineated an area of 1,90,233 acres or 770 Sq. Km (297 Sq. mile) and out of which 1,70,702 acres or 691 Sq. Km. (267 Sq. mile) delineated for Detailed Area Plan (DAP). Considering this present and future growth/development trend within the Structure Plan period. The other remaining areas are mostly agriculture and some old homestead that will not be developed within 10 to 15 years.

### 1.7 DETAILED PLANNING ZONE (DPZ)

For the purpose of detailed area planning, the entire planning area (1,70,702 acres) has been sub-divided into 12 Detailed Planning Zones (DPZs), of which 6 DPZs fall within the Chittagong City Corporation Area and 6 DPZs fall out side of the Chittagong City corporation area. These DPZs are demarcated on the basis of geophysical character, existing land use and administrative boundaries such as ward boundaries within the City Corporation Area and Union boundaries outside City Corporation Area. These Detailed Planning Zones (DPZs) are:

#### Chittagong City Corporation Area

DPZ 1	Patenga – Halishahar
DPZ 2	Agrabad – Kattali

DPZ 3	Sadarghat – Chawkbazaar
DPZ 4	Bakalia – Chandgaon
DPZ 5	Lalkhan Bazar – Pahartali
DPZ 6	Panchlaish – Baizid

#### Outside City Corporation Area

DPZ 7	Silimpur – Kumira
DPZ 8	Hathazari – Raozan
DPZ 9	Kulgaon – Halda
DPZ 10	Madunaghat – CUET
DPZ 11	Boalkhali – Patiya
DPZ 12	Anwara – Karnaphuli

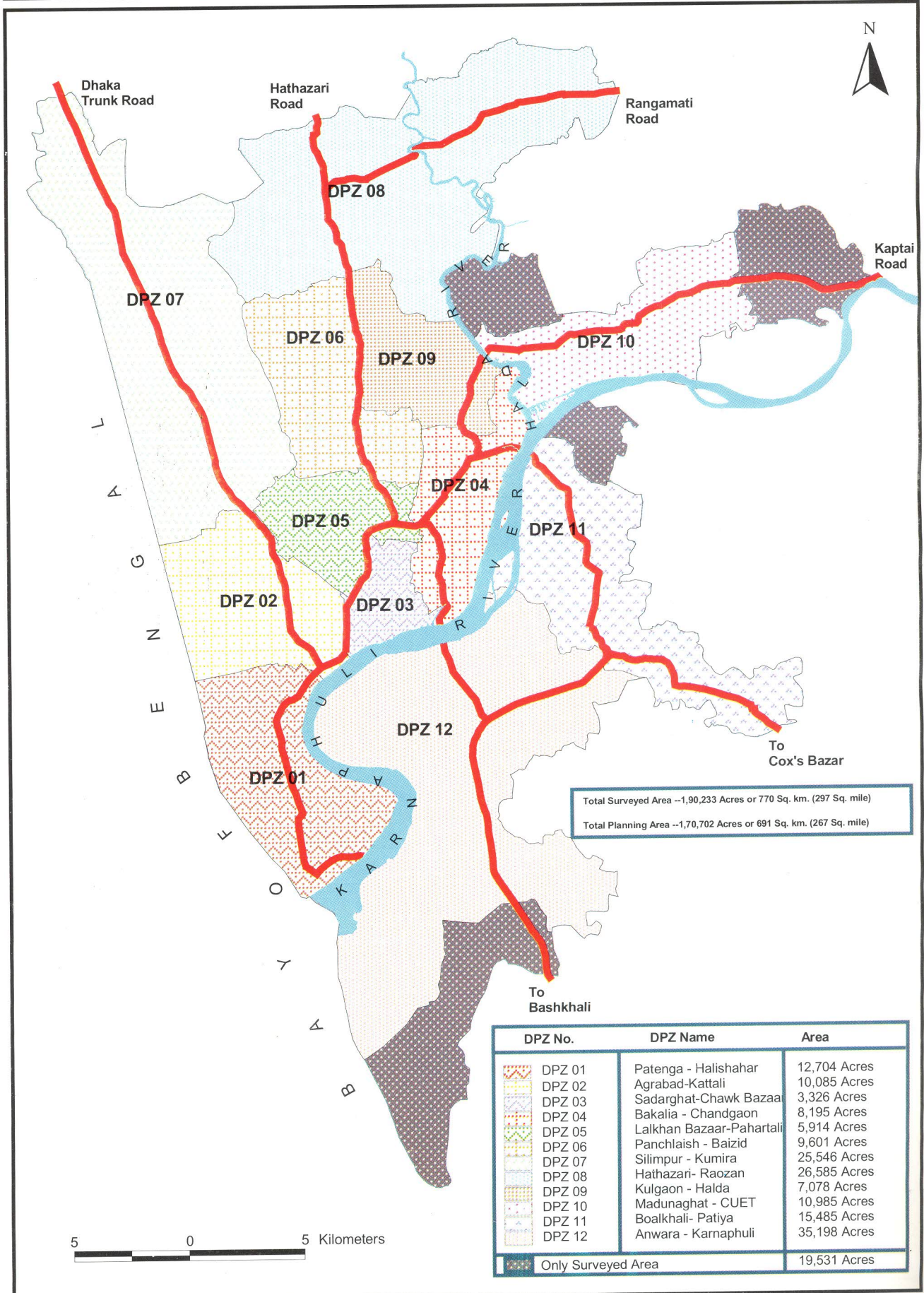
The above Detailed Planning Zones are shown in Figure no. 1.3

### 1.8 DEMOGRAPHY, SOCIO-ECONOMIC PROJECTIONS AND TARGETS

According to national population census 1991, the city had a population of about 20 lakh 23 thousand, making total study area population 28 lakh 32 thousand. Chittagong SMA Population (Table 1.3) contribution to national urban population increased from 10 percent in 1981 to 11 percent in 1991 and the actual increase was from 1.39 million to 2.34 million with an average annual increase of 95,000. Table 1.1 and Table 1.2 show the population of the city and the study area and contribution of Chittagong in the national urban population growth respectively. The working age population in the city was near 72%, while about 25% under aged. The literacy rate in the city according to 1991 census was 57.7%. The annual average growth rate from 1991 to 2015 is 4.58%



# Figure 1.3 Location of 12 DPZs within the Planning Area



Total Surveyed Area --1,90,233 Acres or 770 Sq. km. (297 Sq. mile)  
 Total Planning Area --1,70,702 Acres or 691 Sq. km. (267 Sq. mile)

DPZ No.	DPZ Name	Area
DPZ 01	Patenga - Halishahar	12,704 Acres
DPZ 02	Agrabad-Kattali	10,085 Acres
DPZ 03	Sadarghat-Chawk Bazaar	3,326 Acres
DPZ 04	Bakalia - Chandgaon	8,195 Acres
DPZ 05	Lalkhan Bazaar-Pahartali	5,914 Acres
DPZ 06	Panchlaish - Baizid	9,601 Acres
DPZ 07	Silimpur - Kumira	25,546 Acres
DPZ 08	Hathazari- Raozan	26,585 Acres
DPZ 09	Kulgaon - Halda	7,078 Acres
DPZ 10	Madunaghat - CUET	10,985 Acres
DPZ 11	Boalkhali- Patiya	15,485 Acres
DPZ 12	Anwara - Karnaphuli	35,198 Acres
Only Surveyed Area		19,531 Acres

5 0 5 Kilometers



**Table 1.1: Characteristics of the Existing Population (1991)**

	City Area	Outside City Area	Total Study Area
<b>Population</b>	1392860	1408248	2801108
<b>Sex:</b>			
Male	58.8%	51.9%	55.3%
Female	41.2%	48.1%	44.7%
<b>Age:</b>			
Over 60	3.4%	5.7%	4.5%
Between 10 and 59	71.8%	63.7%	67.8%
Under 10	24.8%	30.6%	27.7%
<b>Religious Group:</b>			
Muslim	87%	73.5%	82.6%
Hindu	11.1%	17.6%	14.4%
Buddhist	0.9%	3.0%	2.0%
Others	1.0%	0.9%	1.0%
<b>Literacy (for population aged over 7):</b>			
Literate	57.7%	-	-
Non literate	42.3%	-	-
<b>Economic Activity (for population aged over 10):</b>			
Working	51.5%	35.6%	43.8%
Not Working	48.5%	54.4%	56.2%
<b>Households</b>	252129	240924	493053
<b>Average Household Size (persons)</b>	5.5	5.8	5.7

Source: 1991 Census of Population (as enumerated).

Note: All definitions as given in the Census of Population

**Table 1.2: Chittagong Contribution of to Accommodate National Urban Population Growth**

Data Head	Year	
	1981	1991
<b>NATIONAL POPULATION</b>	89,900,000	109,900,000
<b>URBAN POPULATION</b>	17,0491,000	21,550,000
Percentage of National	15%	19.7%
<b>CHITTAGONG SMA</b>	1,391,000	2,343,000
Percentage of Urban	10.0%	11.0%

Source: National Population Census 1981, 1991



**Table 1.3: Population Projections for the City and the Study Area 1991-2015**

	POPULATION		
	1991	2001	2015
City Area	14,42,026	20,23,489	33,82,653
Outside City Area	6,39,507	8,08,687	10,84,586
Total Study Area	20,81,533	28,32,176	44,67,239
	POPULATION INCREASE		
	1991-2001	2001-2015	1991-2015
City Area	5,81,463	13,59,164	19,40,627
Outside City Area	1,69,180	2,75,899	4,45,079
Total Study Area	7,50,643	16,35,063	23,85,706
	AVERAGE ANNUAL POPULATION INCREASE		
	1991-2001	2001-2015	1991-2015
City Area	58,146	90,611	77,625
Outside City Area	16,918	18,393	17,803
Total Study Area	75,064	1,09,004	95,428

Source: Population data from the BBS Census of Population 1974, 1981, 1991 and 2001

### 1.9 AN OVERVIEW OF THE ECONOMIC ACTIVITIES IN THE STUDY AREA

As a port city, Chittagong has traditionally been a major centre for trade and commerce, a role enhanced by partition from India and later Liberation from Pakistan. The port has continued to grow and now handles about 8 million tons of cargo per annum.

Chittagong is strategic in other ways. It provides garrisons for the armed forces. It is a major railway centre for the 1meter gauge system, operating in the east of the country. It has an international airport. It houses major government offices and institutions. It is also the second centre of commerce and industry in Bangladesh.

Manufacturing industry began to emerge during the 1950's when the Nasirabad Industrial Area was developed. Other areas followed, at Kalurghat and Fouzderhat. The first heavy industry came to Chittagong in the 1960's with the building of an oil refinery, a cement clinker plant and a steel mill on the Patenga peninsula.

The War of Independence severely affected the

economy and output was cut in all sectors. Whilst agriculture recovered rapidly from this, manufacturing output climbed very slowly back to pre-war levels, reaching them only around 1980.

Details of the existing breakdown of employment in the City are given in Table-1.4

These figures suggest that the informal sector accounts for approximately one third of the total jobs available in the City. This is substantially lower than the figure often quoted for Dhaka of two thirds. In large measure this discrepancy is likely to be accounted for by differences in definition of informal jobs, rather than indicating a fundamental difference between the economies of the two cities. It confirms however the need for a greater understanding of the economy of both urban areas.

Of the manufacturing jobs, we have estimated the breakdown by type to be as set out in Table 1.5. Textiles and garments are overwhelmingly dominant, accounting for half the number of manufacturing jobs. Food, beverages and tobacco, wood and wooden products and metal products



**Table 1.4: Employment Structure**

Sector	No of Jobs City	No of Jobs SMA	Sources
Manufacturing	161,000	201,000	CNFEA (1986)
Wholesale, Retail and Trade	121,000	133,000	CNFEA (1986)
Financial, Insurance and Business Services	27,000	28,000	CNFEA (1986)
Community, Social & Personal Services	48,000	56,000	CNFEA (1986)
Public Administration, Defense & Police	20,000		Team
Utilities	3,000		Team
Agriculture	8,000		Pop. Census (1991)
Transport (incl. 80,000 Informal)	120,000		Transport Team
Rest of Informal/Floating Jobs	152,000		(Residual)
<b>Total</b>	<b>660,000</b>		<b>(Derived)</b>

\* CNFEA: Census of Non Farm Economic Activities

Source: Working Paper on the Economy.

each comprise between seven and twelve per cent.

An estimate was made in the Working Paper on the Economy, which some 450,000 jobs needed to be created in the City in the next 20 years to keep pace with the growth of the workforce, i.e an additional 22,500 jobs a year. For the study area as a whole the indication was that this could expect

to be some 55 to 60 per cent higher.

It stated that the overriding objective of the Authority should be to encourage the development of the economy of Chittagong, such that the populations have a greater chance of finding the employment and business opportunities they need.

**Table 1.5: Estimated Breakdown of Manufacturing Jobs**

Sector	% Manufacturing Jobs	No of Jobs City	No of Jobs SMA
Food, beverages and tobacco	9	20,000	17,000
Textiles and garments	57	92,000	114,000
Wood and wooden products	7	5,000	11,000
Paper, printing and publishing	2	4,000	5,000
Chemicals, rubber and plastics	4	7,000	9,000
Metallic mineral products	4	6,000	7,000
Basic metal industries	5	8,000	10,000
Metal products, machinery & equipment	12	19,000	24,000
Other manufacturing	2	3,000	4,000
<b>Total</b>	<b>100</b>	<b>164,000</b>	<b>201,000</b>

Source: Working Paper on the Economy.