

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

BOARD OF INVESTMENT
THE PEOPLE'S REPUBLIC OF BANGLADESH

**THE STUDY ON INDUSTRIAL DEVELOPMENT
OF
CHITTAGONG REGION
IN
THE PEOPLE'S REPUBLIC OF BANGLADESH**

FINAL REPORT

EXECUTIVE SUMMARY

September 1995

**PACIFIC CONSULTANTS INTERNATIONAL
NIPPON KOEI CO., LTD.**

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PREFACE

This is an Executive Summary of the Final Report of the Study on the Industrial Development of Chittagong Region in the People's Republic of Bangladesh conducted by the Japan International Cooperation Agency (JICA) over the period of August 1994 to August 1995.

The Final Report is composed of the two Main Texts, i.e. **Part 1: "Industrial Development Plan in Chittagong"** and **Part 2: "Implementation Plan for Chittagong Special Economic Zone Project"**.

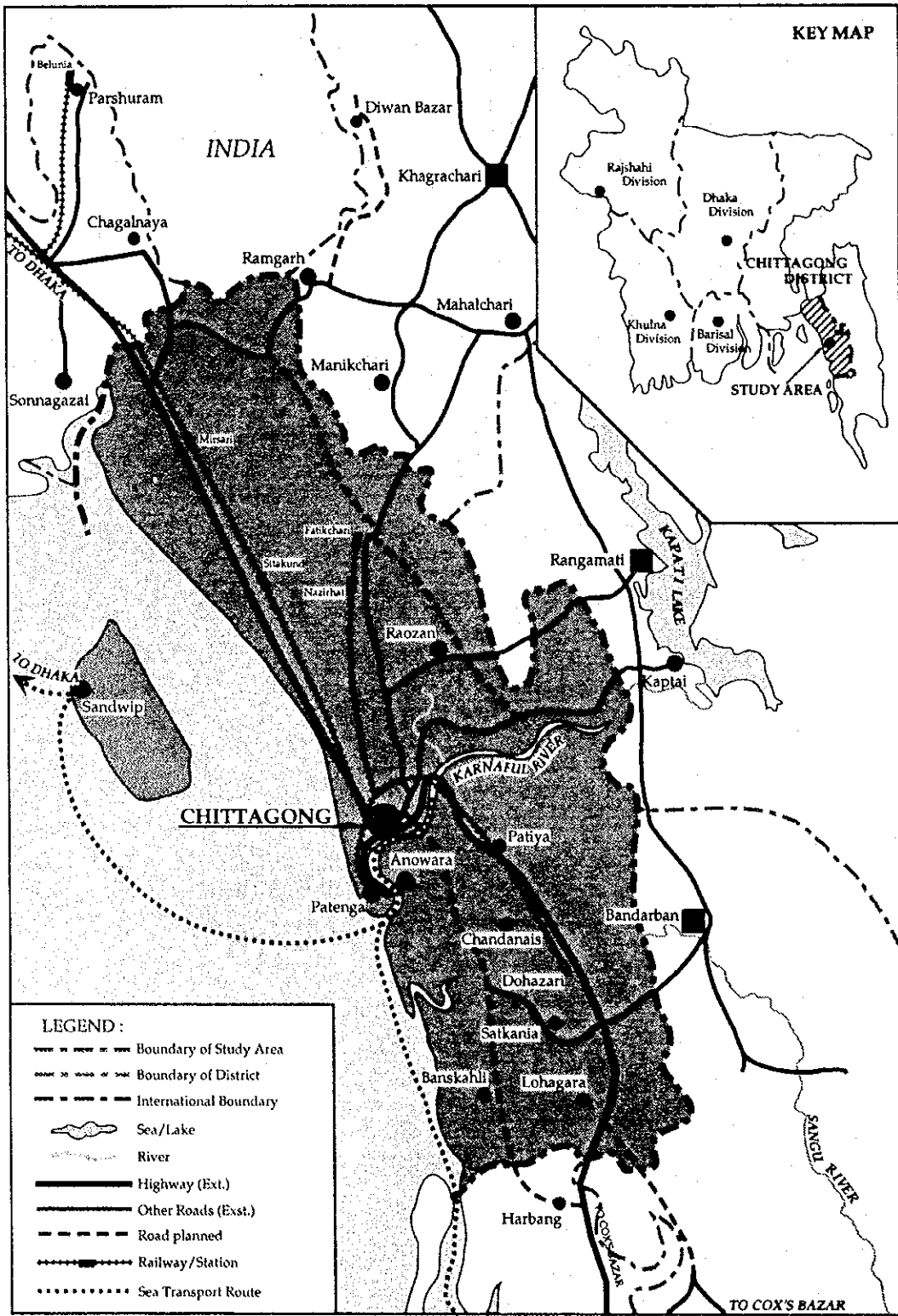
As a result of the Study, it is firmly believed that industrial development of Chittagong is of the prime importance and significance to improve the social and economic position of Bangladesh, and that the proposed Chittagong Special Economic Zone (SEZ) Project would be a strategic stimulator and starter for a fully-fledged industrialization programme for the country.

It is generally understood that industrialization is a key factor to boost per capita income and thus stabilize the national economy. Also, in the light of the relationship between industrialization in developing countries and "Foreign Direct Investment (FDI)" flowing from developed into developing countries, it can be rightly said that industrialization is an effective tool for equitable income distribution at an international scale. Bangladesh should, at any rate, win her reasonable share of this flow of FDI.

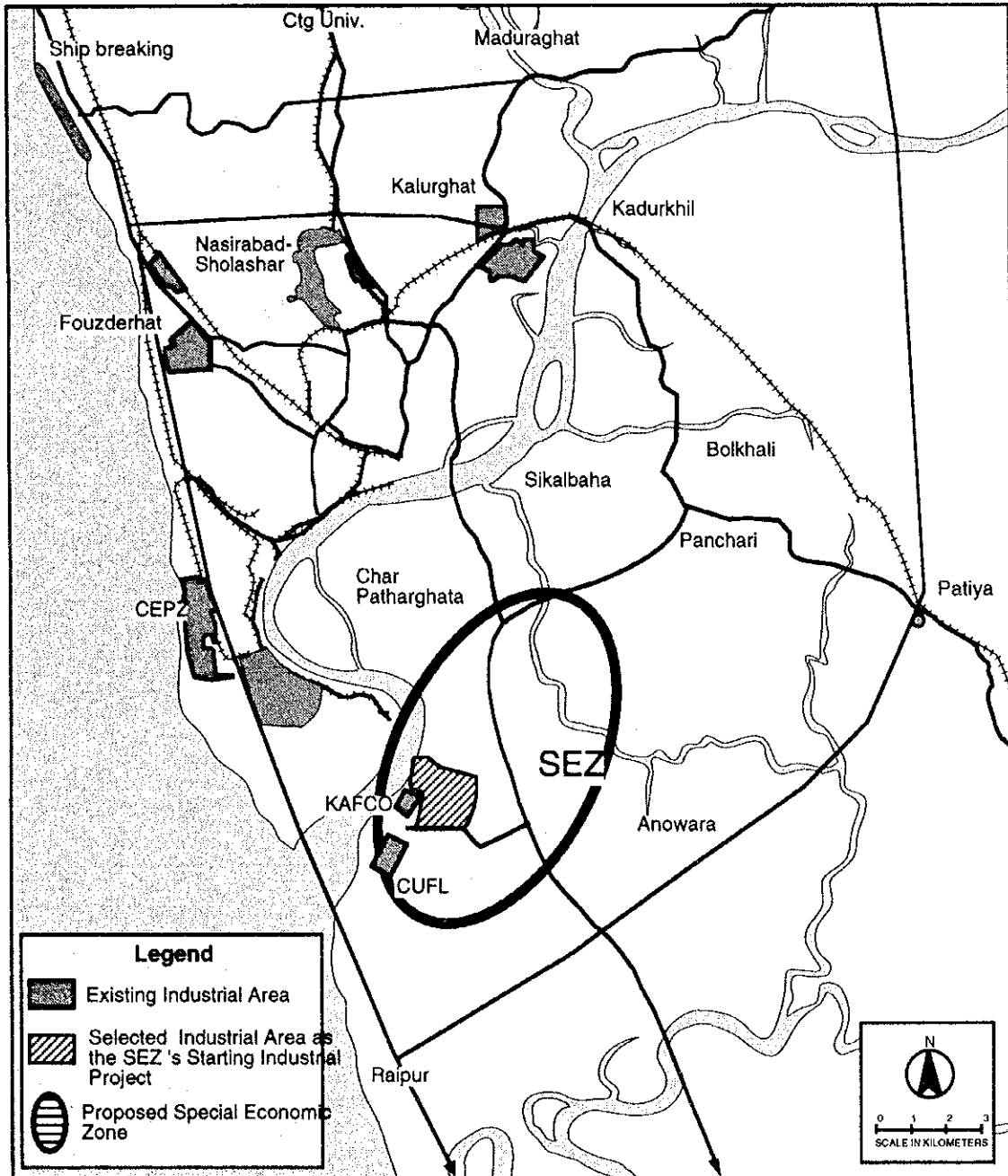
Bangladesh, as a latecomer to this fiercely competitive environment, should make strenuous efforts with creative and innovative concepts and approaches to lessen the gaps with forerunning neighbouring industrial economies.

It is sincerely hoped that the Final Report will be helpful for the Bangladeshi Government in formulating a consensus among the administration and orienting its efforts towards the successful preparation and implementation of relevant plans and projects.

August 1995, Tokyo



STUDY AREA MAP



**LOCATION OF THE PROPOSED SEZ
AND THE INDUSTRIAL ESTATE PROJECT**



PERSPECTIVE VIEWS OF SEZ

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Study Area Map

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PART 1

INDUSTRIAL DEVELOPMENT PLAN IN CHITTAGONG

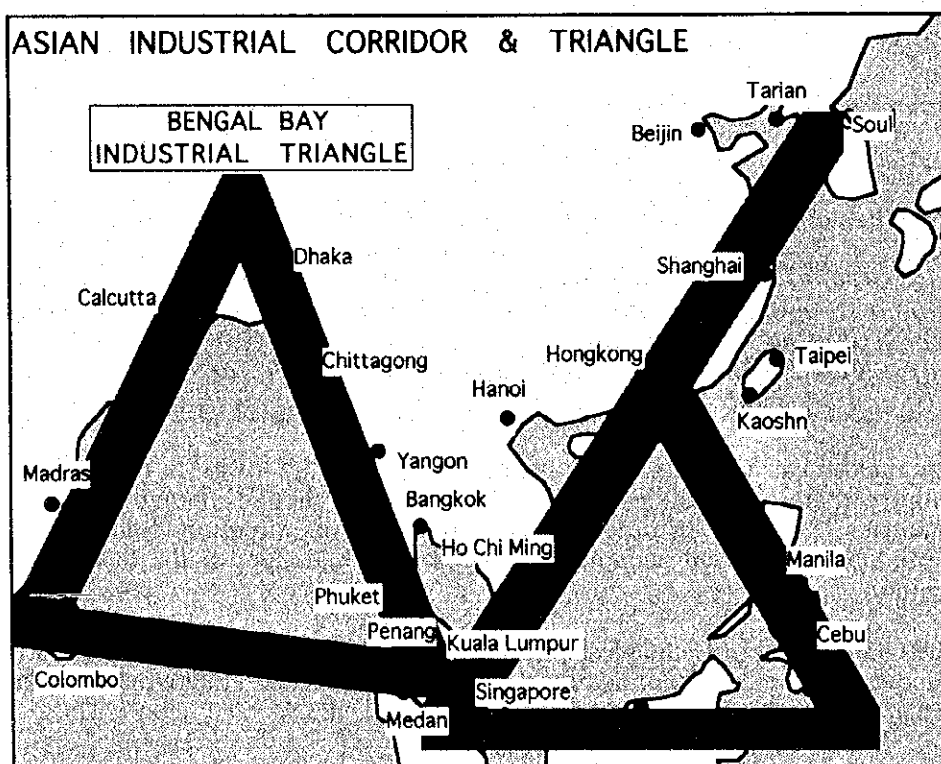
1.1 BACKGROUND OF THE STUDY

Under the circumstances where globalism is rapidly growing in many contexts, it is becoming a world-wide concern how Bangladesh, a country having so confined a land area with a huge population, should gain its development momentum and improve its economic and social stabilization, thus contributing towards the stabilization of the region surrounded by the Bay of Bengal. The JICA Study attempts to search for a possible solution to this end by studying the Industrial Development of Chittagong Region.

- Bangladesh has a per capita income ranking among the lowest in the world and the country therefore belongs to the group least privileged among less developed countries (LLDC). In order to break through this situation, Bangladesh faces formidable social and economic development challenges at the turn to the 21st century.
- The Government of Bangladesh will have to focus economic development efforts to achieve accelerated economic growth, generate productive employment, and attain a sustainable level of social and economic development.
- The Government should accelerate the pace of industrialization through promoting domestic and foreign investments, creating a more market driven economy, strengthening the roles of the private sector in overall economic and development activities, and improving the investment climate.
- In this context, the Chittagong District is one of the country's regional growth poles and an important industrial center, having the country's biggest port and an international airport, and furthermore, a suitable industrial location with an already existing EPZ.
- In effect, the industrial development in Chittagong is of national importance and significance, implying not merely developing the regional industrial base but building the national industrial base for the benefit of the whole country.
- **Figure 1.1** illustrates a concept of the Asian Industrial Corridors and Triangles. Located between the East Asia and the Indian Subcontinent, the region surrounded by the Bay of Bengal is conceived as a new trade and industrial triangle where potential development centers are accumulated including Calcutta, Madras, Chittagong, Colombo, and Yangon of Myanmar in the future. Also, the "land-locked" regions and countries such as the North Eastern India, Bhutan, and Nepal should be recognized as the important hinterland of Chittagong.

Part 1: Industrial Development Plan in Chittagong

Figure 1.1: ASIAN INDUSTRIAL CORRIDORS AND TRIANGLES



1.2 REVIEW OF THE BANGLADESH NATIONAL ECONOMY

Bangladesh should break out of the existing social and economic vicious circle caused by poverty, social unrest, and resultant sluggish economy, through reshaping the existing industrial structure by placing much more emphasis on the growth of the manufacturing sector, particularly induced by "Foreign Direct Investment (FDI)", in all those subsectors in which a minimum level of development momentum has not been achieved yet.

- The past annual growth trend of the primary sector over the 19 years period from FY1972/73 to FY1991/92, which has been recorded at a growth rate of 2.16%, has just only kept pace with the average annual population increase of 2.15%. This somewhat poor growth rate of the primary sector has hindered overall GDP, which still accounted for 36.9% in FY1991/92. Knowing inherent difficulties in enhancement of productivity in the primary sector that is mainly agriculture, the economic position of the country indicates serious performance problems, and that hints the necessity of changing the existing industrial structure.
- The manufacturing sector and services sector have grown at a rate of 5.04% and 5.00% respectively. This performance was above the compound GDP growth rate

Part 1: Industrial Development Plan in Chittagong

recorded at 3.79% over the period. However, given the compound population and GDP growth rates, the per capita GDP growth rate has been very modest with only some 1.60% over the period.

- The above real growth performance and structural data would indicate that:
 - No sustainable growth path has been achieved yet in such important subsectors as agriculture, manufacturing, transportation, storage and communications, and trade services;
 - The absolute size and relative importance of subsectors such as manufacturing, banking and insurance, and trade services, are somewhat too small for a country like Bangladesh having such a large population size and serious development challenges; and
 - Therefore, structural imbalance do exist, which will have to be removed promptly by encouraging growth potential mainly through policy adjustment measures.
- The growth performance sensitivity analyses made by the Study Team show the following results:
 - That future GDP real growth performance cannot be built around one GDP subsector alone such as manufacturing, to achieve a high and accelerated real GDP growth rate;
 - That accelerated real GDP growth will most likely have to be built around key GDP subsectors such as professional and miscellaneous services, agriculture, transport, storage and communications, and manufacturing; and
 - That for achieving high and accelerated growth at national, sector, and subsector levels, investment driven growth will have to be induced by achieving the growth resulting from overall productivity improvements.
- Out of the average share of 9.9% of total manufacturing in real GDP over the period from FY1984/85 to FY1991/92, the large scale manufacturing sector accounted on average for only some 5.6% of GDP, which implies that the small scale manufacturing sector is still extremely important as it produces 40% of the gross value of manufacturing output.
- Nevertheless, the following large scale manufacturing subsectors are of strategic importance to support accelerated manufacturing and GDP growth from a purely growth oriented perspective:
 - Textiles
 - Tobacco
 - Chemical and chemical products
 - Food manufacturing
 - Petroleum and coal products.
- However, there is a grave hole (or deficiency) in the existing manufacturing structure, which must be seriously addressed. This hole includes the following large scale manufacturing subsectors:
 - Basic metal industries
 - Metal products, excluding machinery
 - Machinery, excluding electrical
 - Electrical machinery and apparatus
 - Transport equipment.

Part 1: Industrial Development Plan in Chittagong

These engineering industries constitute the pillars of a more developed industrial structure in Bangladesh. The lack of these industries, in fact, implies that there is not yet any critical mass in key manufacturing product groups in Bangladesh.

- However, recent industrial production records indicate relatively healthier growth of durable consumer goods and goods for quality life style such as coloured TV, table fans, electric tubes, soft drinks, medicine, and soybean oil; whereas, critical negative growth exists in petroleum products, industrial chemicals, iron and steel, and transport equipment.

The growth of durable consumer goods would contribute a lot to the industrialization of Bangladesh as it would indicate the production of products such as refrigerators, washing machines, VTRs, and even assembling of cars in the future, even though it would heavily depend upon the growth of the domestic market which is dominated by the inequitable income distribution of the country. The negative growth of industrial goods suggests a lack of their international competitiveness, implying that appropriate industrial policies should be adopted to revitalize the subsectors.

- There still remains in Bangladesh a significant portion of the old socialism system. The public corporations (PCs) monopolize the production of sugar, soybean oil, paper including newsprint, fertilizer, basic chemical products, petroleum, cement, basic iron and steel products, electric motor, telephone set, assembly of trucks, bus and motor cycle, etc.

The PCs are not always inefficient as capital intensive production needs the economy of scale for supplying goods at a reasonable price, particularly in the circumstances where the private sector lacks enough capital at the initial stage of industrialization.

It has to be accepted, however, that monopolies go against market driven operations. Also, nationalized production or PCs would normally create such problems as low productivity, low morale of workers, slow response to users' needs, and less investment in R & D and production facilities.

Unfortunately, there are many PCs still classified "sick industries" in Bangladesh which can only accumulate further deficits with no profits. Addressing due attention to such problems, the Government may need, among other things, to accelerate the privatization of selected PCs and promote diversification and productivity of products produced by PCs.

1.3 REVIEW OF THE CHITTAGONG DISTRICT ECONOMY

Chittagong should be given priority consideration within the industrial development policy, taking into consideration its primary function as the national gateway having international port facilities and its inherited trade and industrial base functions, even though such intensive development efforts on a priority basis could create temporary regional disparities.

Industrial development in Chittagong requires innovative concepts and approaches to provide an attractive receptacle to induce foreign investments, and also requires massive investments to improve supporting infrastructure. Its successful implementation will be largely dependant on how it can be dealt with as a national project based on a consensus formulated within the administration.

Part 1: Industrial Development Plan in Chittagong

- An industrial development policy would involve a “trade-off” between “**intensive investment**” which pursues investment efficiency, and “**equitable investment**” which seeks regional balance over the country. However, from the aspect of making the best use of the limited resources, it would be wise to invest in an intensive approach in the regions with the best potential in the early stages of industrialization.
- In this context, the primary industrial link between Chittagong and Dhaka should be strategically strengthened first, followed by strengthening of the secondary links between Dhaka-Sylhet and Dhaka-Khulna, and then strengthening of the tertiary links between Sylhet and Khulna with other regional or district centers.
- The Chittagong District (CTGD) including Cox's Bazar is equivalent to a ten (10) percent economic region in Bangladesh and at the same time, the gateway of Bangladesh as far as the international sea communication is concerned. Industry in CTGD grew at an annual average rate of 5.5% which on its own corresponds to a share of 30.8% or if grouped along with Dhaka District to a share of 62.2% of the national total.
- In CTGD, there are approximately 2,300 industrial establishments with 450,000 workers, corresponding to 9.2% and 22.8% of the Bangladesh total respectively. In terms of workers, food and beverage industries, textiles and apparel, and leather products are to the fore, accounting for 7.4% and 9.1% of the national total respectively. In addition, industries such as metal products and machinery, basic metal products and chemicals are also prevalent in CTGD.
- Chittagong is the national production and export center, while heavily depending upon imported raw materials. Chittagong plays an important role of a transshipment hub with processing trade functions in Bangladesh.
- Bangladesh is a member country of the new World Trade Organization (WTO), which promotes the elimination of non-tariff barriers for trade, protection of intellectual rights, streamlining of trade-related investment procedures, and expansion of service trades. An open-market policy is imperative in line with the progressive globalization of the world economy or the so-called “border-less economy”.

Under such business circumstances, international competitiveness is crucial for survival of industries in CTGD, not only for export-oriented industries but also for those industries which are domestic market-oriented.

- In relation to the strength or weakness and internal problems of the existing industries in CTGD, the JICA Survey revealed a general confidence in the quality, design, and durability of their products on the whole; on the other hand, it highlights the weakness in the price of their products, technology and skills, product development, marketing, information for technology, and the raising of capital.

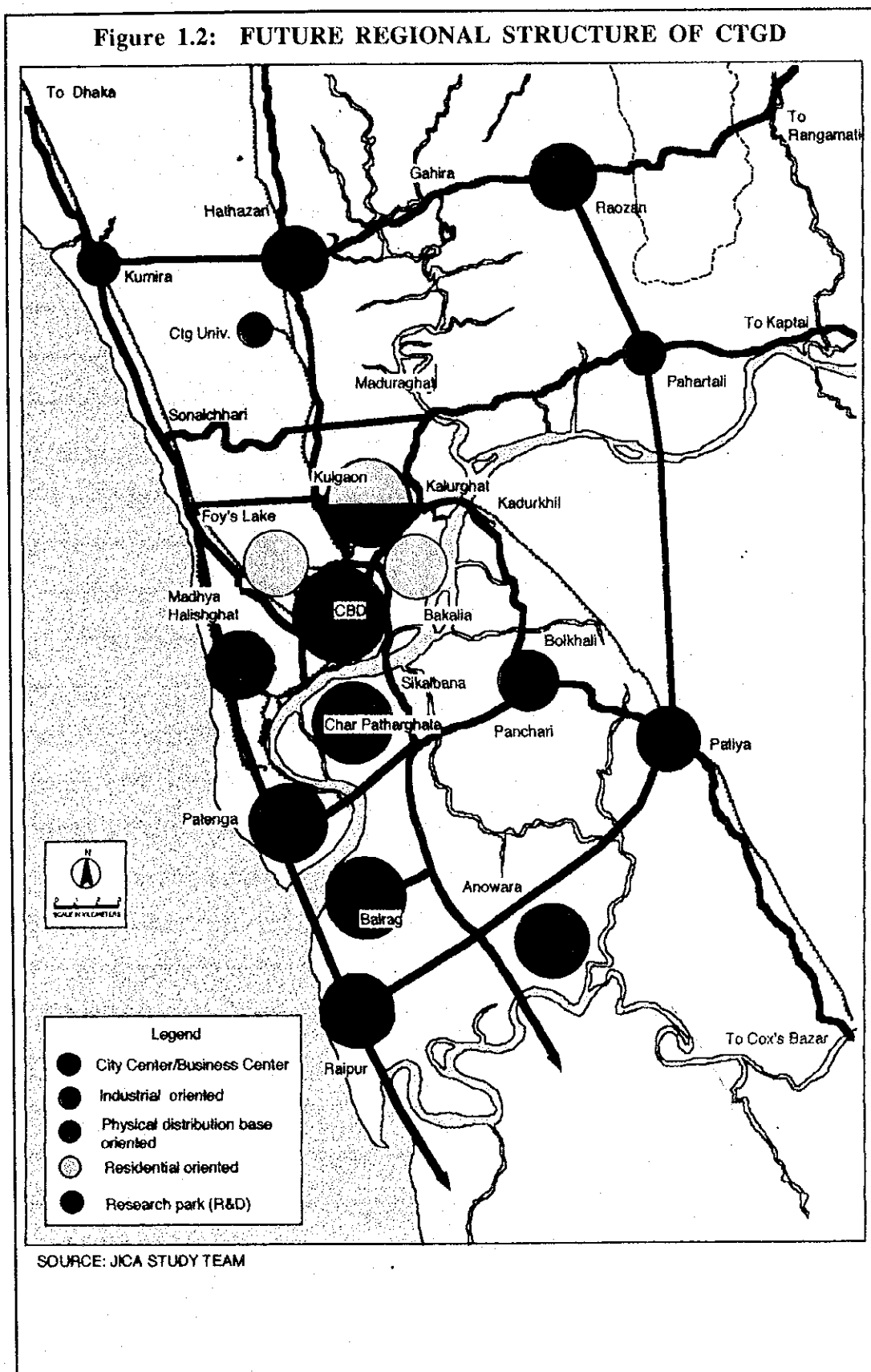
In CTGD, export industries which heavily depend upon imported raw materials, such as the garment industry, are in fact stronger than domestic industries like jute textiles which are solely based on local raw materials or indigenous resources. Theoretically, the latter should be stronger than the former, but the actual situation suggests the contrary due probably to the fact that local raw materials or indigenous resources are relatively costly or of low quality.

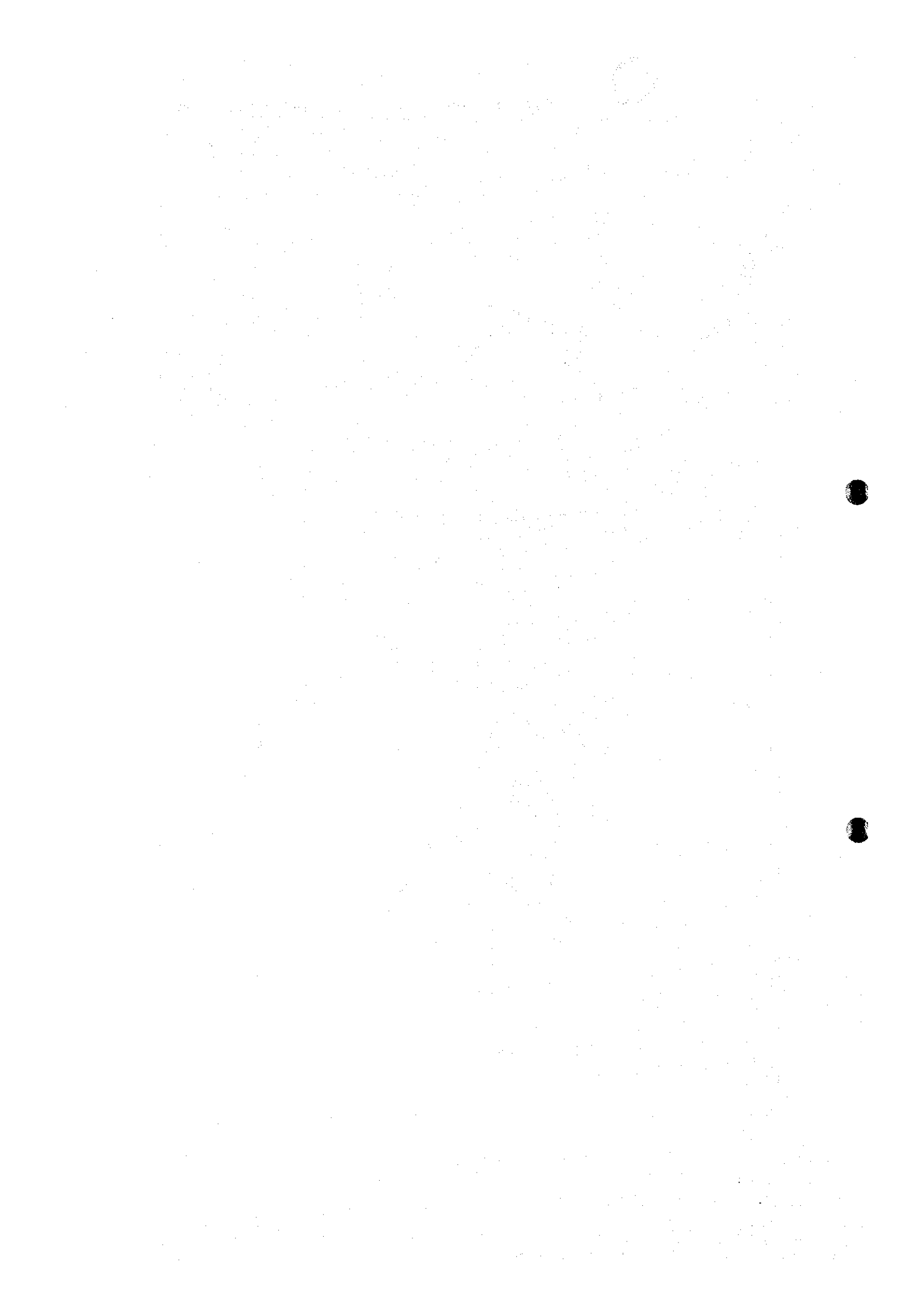
- Most of the existing industries are seriously facing internal problems of obsolete production facilities, lack of R & D staff, low production volumes, low rate of operations, lack of space for storage, pollution problems (particularly water and waste), and high wage rates.

Part 1: Industrial Development Plan in Chittagong

- External problems common to almost all existing industries in CTGD are lack of availability, high cost and unstable supply of local raw materials, unavailability and/or high cost of imported materials, limited domestic market demands, difficult access to commercial loans coupled with high interest rates, and lastly, but not least, political instability.
- Inadequate infrastructure is the most crucial constraint to comprehensive industrial development being achieved in CTGD. The following is an abridged analysis of the problems that exist or may exist in the supporting infrastructure sector.
 - The most important issue to be solved in the transportation sector is the improvement of the national road network, including Dhaka-Chittagong trunk road, the river crossing over the Jamuna, and in the CTGD, a ring road network along with additional river crossings over the Karnaphuli River.
 - Railways, under fierce competition from road transport, its share of passengers and goods decreasing, requires appropriate positioning of the railway transport system within the transportation sector as a whole in terms of its roles and functions.
 - The Chittagong port is a "river port" and hence its prospects are limited for future expansion. In the not too distant future, as industrial development begins to take off, the existing port faces serious problems due to its lack of handling capacity, which may result in the necessity for the construction of a new deep sea port.
 - In the globalization of the world economy, air network linking major regional nucleus cities is essential, and in this context, the expansion of the existing Chittagong airport is properly timed. However, again in the not too distant future, the existing airport will have serious problems resulting from its limited capacity for further expansion and its actual locational conditions may create environmental problems.
 - Sustainable development of the power sector will be required to meet the growing demand and for achieving reasonable economic development targets. The second unit of the Chittagong 210 MW power plant should be completed on schedule, additional 300-500 MW generation is required by the year 2010, and further 500-700 MW will be required by the Year 2020.
 - To meet the growing water demand for both domestic and industrial use, WASA should expedite the implementation of the expansion programme of the Mohara Treatment Plant. Also, the new industrial development on the south bank of the Karnaphuli River, will require a new water supply system.
 - To meet the upsurge in demand for telephones together with the qualitative improvement of the telecommunications services, it is estimated that the telephone facilities should increase at the level of 3.8% telephone density and 71,000 lines in the CTGD in the immediate future, which should be further increased at the level of 9.4% and 240,000 lines by the year 2010, and 23% and 710,000 lines by the year 2020 respectively.
- **Figure 1.2** indicates a preferred Regional Structure of Chittagong District. It may be explained as a city with two centers and seven satellite sub-centers. The two centers imply the existing Central Business District (CBD) on the Northern bank of the River and a new CBD to be created on the Southern bank of the River. Those centers and sub-centers will be efficiently linked with an improved radial-circumferential road network. From the town planning aspect, how to utilize the heretofore relatively underdeveloped Southern bank of the River in harmony with the already urbanized Northern bank of the River is a key issue and subject.

Figure 1.2: FUTURE REGIONAL STRUCTURE OF CTGD





1.4 ENVIRONMENTAL CONSERVATION AND PROTECTION

Development activities inevitably entail degradation of the environment. As the existing urbanization and industrialization already has resulted in gross water pollution seriously affecting the municipal sanitary environment, utmost care should be directed to the environmental management for the industrial development of CTGD.

- The main areas of environmental concerns in CTGD are as follow:
 - Water pollution in Chittagong City
 - Air pollution in Chittagong City
 - Forest destruction by shifting cultivation in the Chittagong Hill Tract
 - Forest destruction in the Sitakunda Hill Tract
 - Destruction of the natural mangrove forests in Chakaria Sunderban caused by shrimp farming
 - Forest destruction in Cox's Bazar Hill Tract.
- With recent industrialization and urbanization, discharge of huge quantity of untreated effluent, caused by the lack of a sewerage system and pollution control system, has resulted in gross water pollution in the canals and in the Karnaphuli River as well.
- With the onset of the industrial development plans and programmes, there are some activities which may cause adverse impacts on the environment. Such activities relate to the deforestation, reclamation, and landfill in the coastal zone arising from the construction of facilities and roads, and the generation of hazardous industrial waste and effluent. Also, possible environmental effects to the cultural heritage, habitants of specious fauna and flora, etc. should be given due consideration for preservation and conservation.

1.5 THE INVESTMENT DEMAND SURVEY

The lack of awareness of Bangladesh as an investment location in foreign markets was apparent from the overseas surveys, and confirms the urgent need for promotional strategies to be developed and implemented by the Government as soon as possible.

- Major findings of the survey in Bangladesh:
 - There exists a good investment demand potential provided that the adequate infrastructure, sound government policy, stable political and economic environments are created and sustained;
 - The main target markets were seen as the USA, Europe, Japan, Canada, and Hong Kong;
 - The five major services sought by respondents were, a) easy access to finance, b) market information and research, c) training facilities, d) venture capital, and e) recruiting assistance; and
 - The five major facilities desired to be provided within a new EPZ and/or an industrial estate were, a) customs clearance office, b) commercial center, c)

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security guards and facilities, d) government representative office, and e) post and telecommunication center.

- **Major findings of the surveys in south Korea, Singapore, and Thailand**

- The prime factors identified as most important in selecting a country for investment were the economic climate in the host country, access to a large domestic market, and political stability;
- The most important services were the quality of work force, provision of venture capital facilities, market information and research, and adequate infrastructure; and
- In connection with the provision of factory sites and buildings, the most important consideration was the sale (not lease) of factory sites.

- **Major findings of the survey in Japan**

- The principal factors that are taken into consideration in selecting a country for investment is to exploit opportunities in local markets, availability of low cost inputs, and consistent government attitude to foreign investment;
- The important infrastructure facilities identified as being most significant in a host country was electricity supply and telecommunications;
- In connection with factory sites and buildings, the most important consideration was the provision for the sale of factory sites; and
- The overall impression of Japanese investors of Bangladesh as an investment location was that there is little known about the country.

- Many issues and constraints were raised by the respondents in the Bangladesh survey; nevertheless, there was an overall positive outlook to further investment plans by the respondents. This situation should be followed up by the promotional agencies.

1.6 A DEVELOPMENT STRATEGY SCENARIO

In order to facilitate an intensive development policy where resources will be allocated to potential regions on a priority basis, institutional arrangements to designate and legislate a Special Industrial Development Region (SIDR) are essential, within which a Special Economic Zone (SEZ) should be put in place with attractive incentives for investment. Chittagong District should be designated as one of the SIDRs, and a national consensus on CIDP as a national project or a flagship investment should thus be formulated for initiation of the first SEZ project in Chittagong.

Industrial development in Chittagong should be properly integrated in the regional development plans so that on the one hand, it should be consistent with the regional development plans and programmes, and on the other hand, its cost should be reasonably shared by the regional and urban developments.

- The range of Bangladeshi strategic industrialization options is, in fact, narrow, taking into consideration the following constraining factors.

Part 1: Industrial Development Plan in Chittagong

- The lack of a "critical mass" almost across the whole of the manufacturing subsectors, which impedes the achievement of the economies of scale which would result in reducing unit cost and achieving productivity gains at an accelerated pace.
- The lack of appropriate backward and forward linkages in the manufacturing sector with less development potential.
- The limited natural resource base and the constrained financial capacity of the country.
- The relatively young "entrepreneurial base" of the country with only limited experience in the global market.
- The not yet completed transformation of the economy towards a more or less free market economy.

Figure 1.3 shows a Typical Industrial Development Path and Pattern. Bangladesh is in fact in the first and early phase of industrialisation as shown in the Figure.

- Major existing advantages are:
 - The existence of industrial cores or centers in the country, namely in Dhaka and in Chittagong.
 - The cheap labor force.
 - The harbour facilities in Chittagong.
 - The country's location between the South East and East Asia and the Indian Sub-continent.
- The proposed basic industrialization strategy rests on the following three major pillars as shown in **Figure 1.4**.
 - Accelerated and focused infrastructure development to support the industrialization process.
 - Accelerated deepening and strengthening of the linkages between the agricultural and manufacturing sectors (food production and food security are important in this context).
 - Accelerated development and growth of the manufacturing sector, particularly induced through "Foreign Direct Investment (FDI)" in all product groups, where the sector has not yet achieved a minimum level of development.
- Also shown in **Figure 1.4** is the proposed "reversed-Z-shaped" strategic approach that should be geared to:
 - Establish a "critical mass" (economic scale/minimum sizes, cluster effect, etc.) in the manufacturing sectors, for which there is a domestic natural resource base as well as a potential domestic market. (e.g. cement, garments, food processing, wood and furniture, etc.)
 - Improving the manufacturing capabilities in manufacturing sectors, in which there is already a basic "regional or global competitiveness". (e.g. fashion apparel, canning, etc.)

Figure 1.3: TYPICAL INDUSTRIAL PATH AND PATTERN

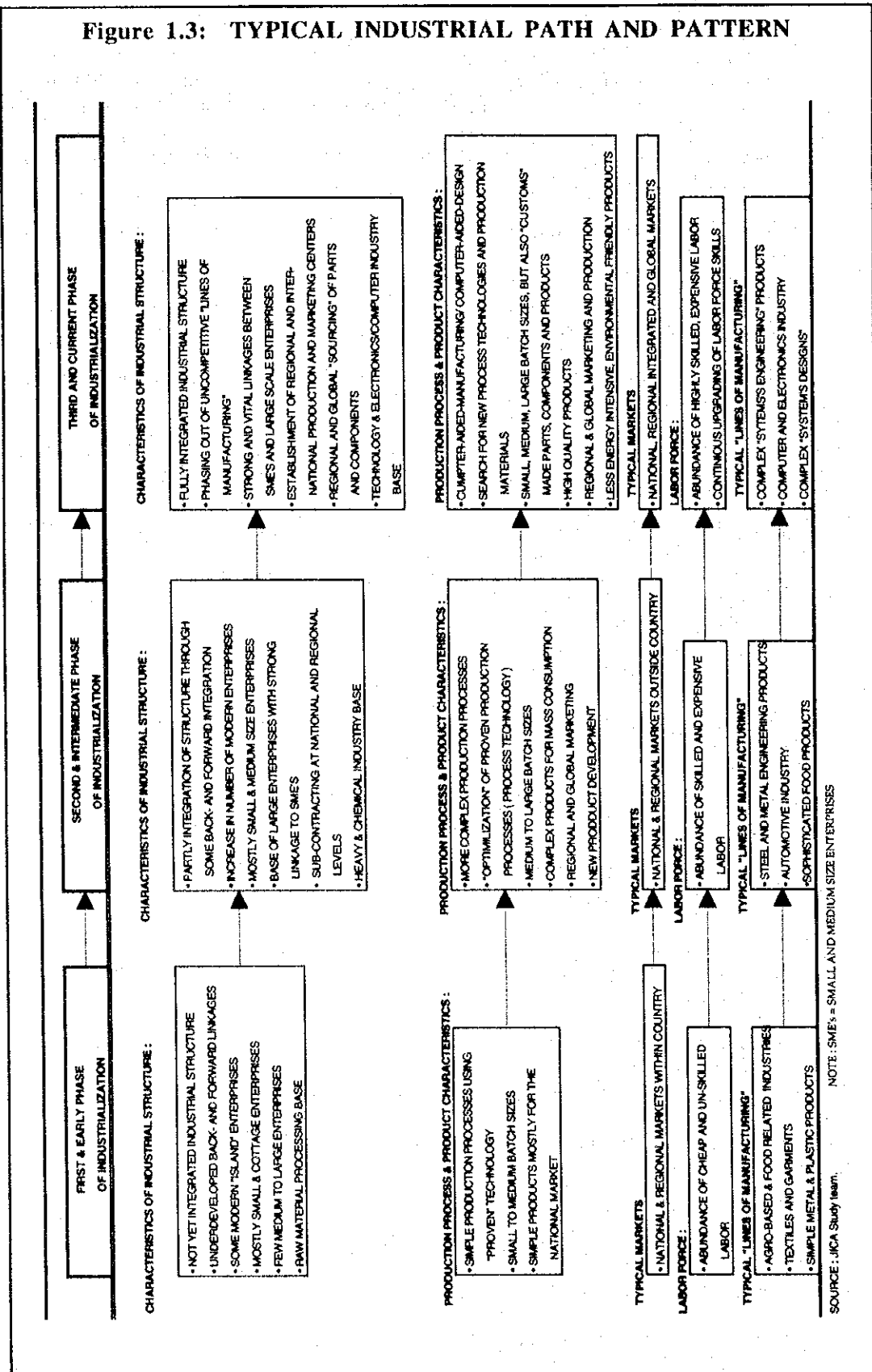
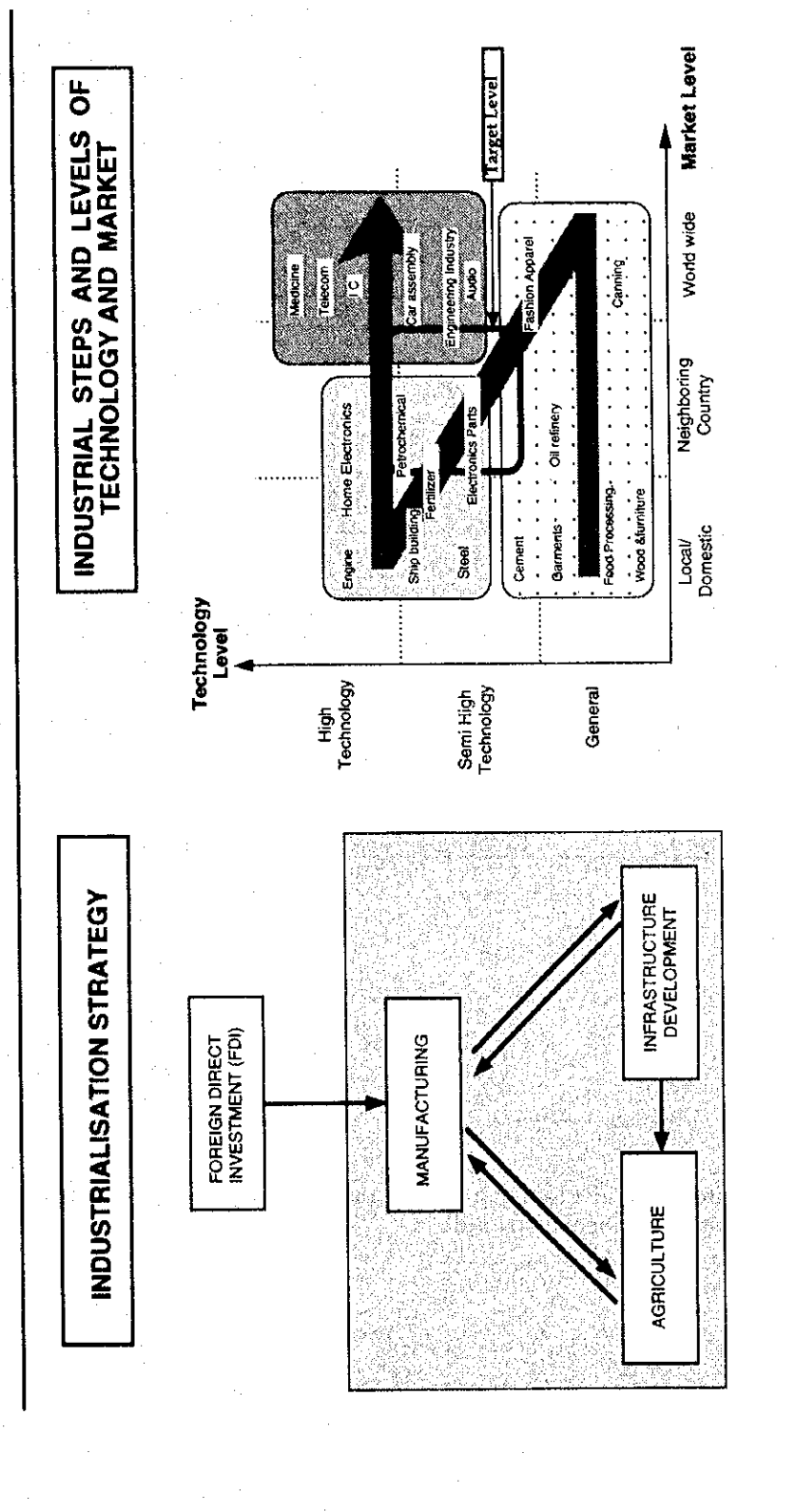


Figure 1.4: BANGLADESH INDUSTRIALIZATION STRATEGY



Source: JICA Study Team

Part 1: Industrial Development Plan in Chittagong

- Establishing, with the help of FDI, industrial cores in manufacturing sectors, where there is yet not enough local expertise available. (e.g. machinery and electrical parts, etc.)
- Deepen and broaden the industrial structure with a view to establishing a "critical manufacturing mass" not only in individual manufacturing subsectors but in the manufacturing sector as a whole. (e.g. engineering and assembling industries)
- The above strategy has to be transformed into operationalized strategic objectives and numerical targets. The three most important strategic objectives are:
 - To increase absolute per capita income at an accelerated rate;

Year	1995	2000	2010	2020
National				
Taka	5,063	6,224	9,440	15,546
%	100	138	201	332
CTGD				
Taka	10,736	14,252	26,177	54,961
%	100	133	244	512

At the national level, doubling the per capita income by the Year 2010 or within 15 years time, and at the Chittagong level, doubling the per capita income by the Year 2005 or within 10 years time.

- Promote structural change in the composition of GDP, reflecting an accelerated industrialization process in the country; and

Year	1995	2000	2010	2020
National				
Primary	35	31	25	18
Secondary	18	21	26	32
Tertiary	47	48	49	50
CTGD				
GDDP (Mil. Taka)	67,113	99,339	226,801	575,220
%	100	148	338	857
Manuf. (%)	32	39	53	64

- To focus intensive development efforts on a priority basis, even if this would imply temporary regional disparities.

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- According to the intensive investment approach in the regions with the best potential in the early stages of industrialization, it is recommended to designate the priority regions as "Special Industrial Development Regions (SIDR)", to which resources should be allocated on a priority basis. Apart from the mobilization of priority resources, various institutional incentives should be given to the SIDRs so that they should attract more FDI and promptly grow to the internationally acknowledged "Designated Economic Regions".

In Bangladesh, the following four regions would have the potential to be designated as SIDR:

- Dhaka Region
- Chittagong Region
- Sylhet Region
- Khulna Region.

- It is also recommended that within the SIDR area, a Special Economic Zone (SEZ) should be designated and legislation put in place in response to the following needs of the CTGD:
 - To make provision for the development to be as all embracing as possible, in terms of its applicability to the development of the Chittagong Region as a whole;
 - To accommodate as wide a range of activities as possible, with the overall objective of promoting both foreign and domestic investment in manufacturing, distribution and any other relevant activities;
 - To address and, insofar as possible, accommodate the interests of potential investors, whose strategic market interest may include the domestic Bangladeshi market; and
 - To contain a duty free area, bonded warehouse, business and commerce functions, banking organs, and other pertinent functions and facilities.

Part 1: Industrial Development Plan in Chittagong

- **Table 1.1** shows a Development Scenario for Chittagong, indicating the general development direction as well as the general physical expansion within the Chittagong Industrial Development Plan (CIDP).
- As indicated in the short-term Development Scenario, the formulation of a national consensus on CIDP as a national project or a flagship investment is of the primary importance for initiation of the actual implementation, followed by the institutional developments such as the designation and legislation for:
 - A Special Industrial Development Region (SIDR), and
 - A Special Economic Zone (SEZ).
- Upon formulation of the consensus, two ad hoc organizations need to be established, i.e. a Special Zone Development Committee, and a Special Task Force.

The Special Zone Development Committee should assume a policy decision making function, and the Special Task Force should assume substantial works for initiation of the first SEZ in Chittagong. The first and foremost important step towards realization of the SEZ in Chittagong is to establish an implementation body which is solely responsible for the entire implementation of the SEZ Project and probably for subsequent SEZs to be developed in CTGD. This implementation body is tentatively named the "Chittagong Development Company (CDC)".

- The industrial estate development within the SEZ should take the form of a development which is a much broader concept than the development of a mere industrial estate and/or an EPZ, having a variety of functions such as:
 - Export Processing Zone (EPZ)
 - General Industrial Estate (GIE)
 - Administration Center with Customs Office
 - Commerce and Business Center (trading house, distributing company, bank and insurance companies, forwarders, etc.)
 - Bonded warehouse
 - Exhibition and Convention Center
 - Manpower Training and Technology Development Center
 - Housing Accommodation
 - Amenity and Public Service Facilities

Institutionally, however, there is no need to separate EPZ and GIE as they are equally treated within the SEZ. The contexts merely indicate that EPZ may chiefly accommodate foreign and/or export-oriented industries, whereas GIE may chiefly accommodate local and/or local market-oriented industries.

- The BOI had proposed six (6) industrial sites located on the Southern bank of the Karnaphuli River for investigation by the JICA Study Team, and Chittagong City Corporation (CCC) had proposed an additional two (2) sites on the Northern bank of the river. **Figure 1.5** shows the locations of the existing and the proposed sites.

		SHORT-TERM	MID-TERM			LONG-TERM	
	Unit	1st 5 Year Plan 1995 - 2000	2nd 5 Year Plan 2001 - 2005	3rd 5 Year Plan 2006 - 2010	4th 5 Year Plan 2011 - 2015	5th 5 Year Plan 2016 - 2020	
Development Frame							
• Population	Thousand	6,970	7,771	8,664	9,529	10,466	
• Employment Manuf.	Thousand	302	433	622	893	1,283	
• CRDP	Mil. Taka	99,339	150,339	226,801	358,061	575,220	
• Manuf. GRDP	Mil. Taka	38,313	67,521	118,995	209,710	369,582	
• Per Capita Income	Taka	14,252	19,346	26,177	37,576	54,961	
Development Strategy and Goals		Preparatory Phase	Starting Growing Phase	Accelerated Growing Phase	Consummating Growing Phase	Maturing Phase for Subsequent "Take-off"	
		<ul style="list-style-type: none"> • Formulation of a consensus on CIDP as a national project • Legal, institutional, organizational arrangements • Initiation of a pilot project • Preparation for mobilization of public-sector investments 	<ul style="list-style-type: none"> • Attraction of as much FDI as possible • Inducement of increase in production • Solution of bottle-neck infrastructure • City planning guidance to create a new CBD in the south of the River 	<ul style="list-style-type: none"> • Improvement of infrastructure to be compatible with a full-fledged CIDP • Diversification of indigenous industries • Enhancement of the quality of products and resultant competitiveness for exportation 	<ul style="list-style-type: none"> • Provision of high-order infrastructure and amenity such as new airport, new port, tele-port, urban landscape, recreation/sports facilities, etc. • Transformation of industries towards more advanced and value-added structure 	<ul style="list-style-type: none"> • Provision of adequate operation and management of infrastructure • Preparation and initiation for the "next-generation" industrial development 	
Conceptual Development Target		Quantitative enlargement of production with cheap labor force and locally available resources	Diversification of products focusing on increase of export competitive products	Enhancement of quality of products with advancement of industrial structure	Augmentation of the ability of products development with R & D functions	Maintenance of quality and quantity production with ripple effects to other regions	
Requirements for Production Structure		<ul style="list-style-type: none"> • Supply of industrial raw materials • Evolving and Strengthening of indigenous industries • Stable supply of industrial energy 	<ul style="list-style-type: none"> • Development of processing industry • Introduction of assembling industry • Evolving and strengthening of export-oriented industry 	<ul style="list-style-type: none"> • Continuous growth of assembling industry • Introduction of advance technology industry • Accelerated growth of export-oriented industry 	<ul style="list-style-type: none"> • Continuous growth of advance technology industry • Development of R & D type industrial parks 	<ul style="list-style-type: none"> • Achievement of well-balanced industrial structure and its operation and management at then international level 	
Development of Industrial Estates		<ul style="list-style-type: none"> • Expansion of EPZ • Development of general industrial parks (GIP) 	<ul style="list-style-type: none"> • Enhancement of quality and quantity of EPZ and GIP to accommodate diversified industries 	<ul style="list-style-type: none"> • Development of water-front type industrial parks adjacent to port facilities • Establishment of physical distribution centers 	<ul style="list-style-type: none"> • Development of industrial parks with R & D functions 	<ul style="list-style-type: none"> • Development of "air-front" (adjacent to international airport) type industrial parks 	

Part 1: Industrial Development Plan in Chittagong

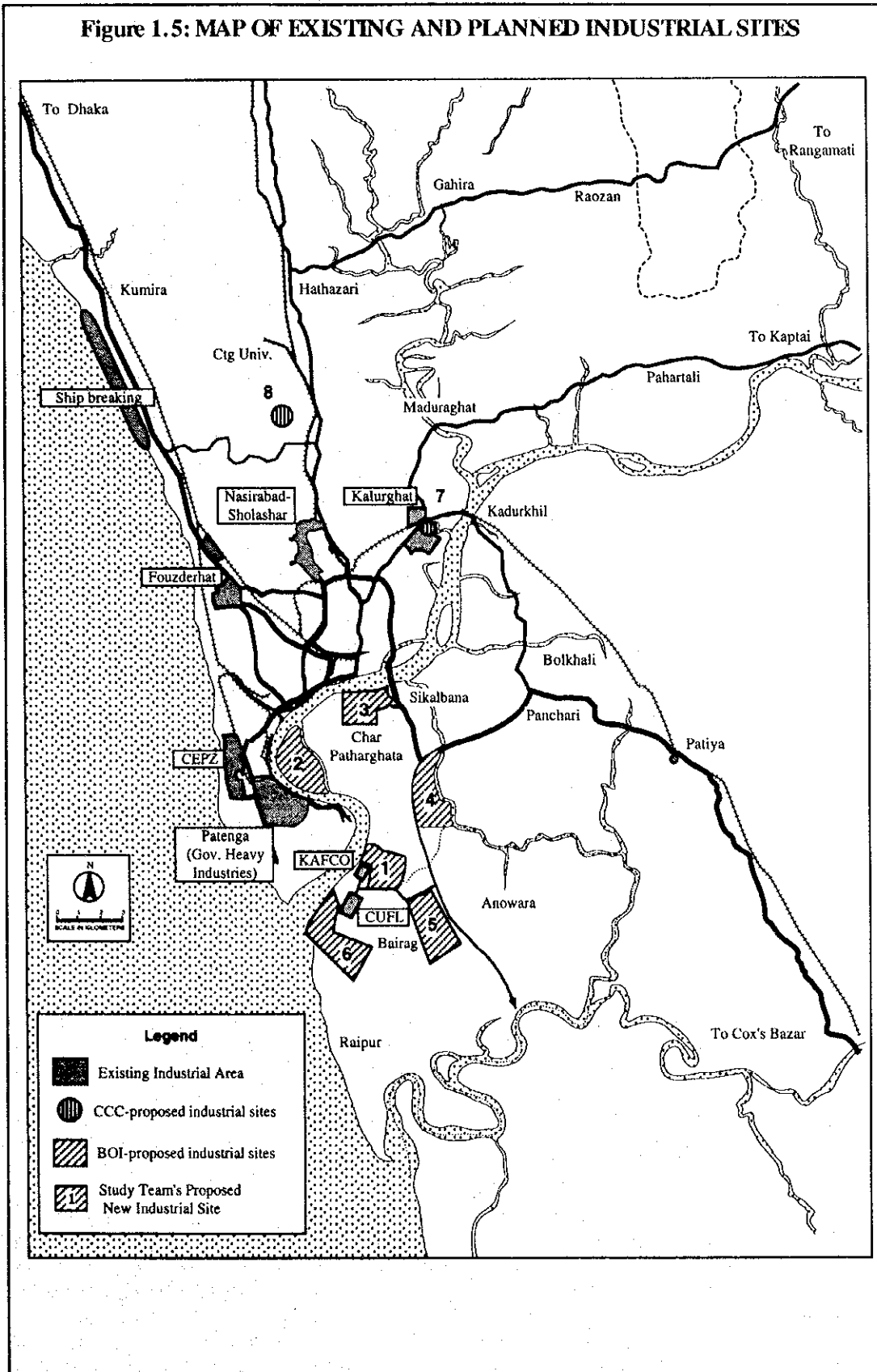
Table 1.1: DEVELOPMENT SCENARIO FOR CHITTAGONG

		SHORT-TERM	MID-TERM	LONG-TERM		
	Unit	1st 5 Year Plan 1995 - 2000	2nd 5 Year Plan 2001 - 2005	3rd 5 Year Plan 2006 - 2010	4th 5 Year Plan 2011 - 2015	5th 5 Year Plan 2016 - 2020
Policies for Inducement and Augmentation of Industries		<ul style="list-style-type: none"> • Inducement of FDI companies • Privatization and agglomeration of indigenous industries 	<ul style="list-style-type: none"> • Establishment of a regional technology center • Substantiation of vocational education 	<ul style="list-style-type: none"> • Introduction of advanced technology industries • Encouragement of technology oriented venture business 	<ul style="list-style-type: none"> • Encouragement of R & D related industries 	<ul style="list-style-type: none"> • Encouragement of locally-based creative venture business
Development of Major Urban Infrastructure		<ul style="list-style-type: none"> • New EPZ and GIP • Improvement of overall urban infrastructure focussing on solution of bottle-necks 	<ul style="list-style-type: none"> • New CBD in the south of the River • Inner Ring with a new crossing • Containerization of existing harbor • Projects for prevention of disasters 	<ul style="list-style-type: none"> • Outer ring with a new crossing • Exhibition and convention centers • New deep-sea port with handling capacity of ocean-going containers • Water-front physical distribution center 	<ul style="list-style-type: none"> • New airport in the south of the River • International logistics center • Regional highway and railway network 	<ul style="list-style-type: none"> • Establishment of proper operation and maintenance systems
Institutional Building		<ul style="list-style-type: none"> • Establishment of a Special Zone Development Committee * • Establishment of Chittagong Development Company (CDC) • Proclamation of Special Industrial Development Regions (SIDR) • Enactment of Special Economic Zone (SEZ) 	<p>*Note: This committee will be organized as inter-ministerial ad hoc committee specifically for assuming a policy making role for the SEZ development. Under the committee, a task force will be organized to assume substantial work for initiation and embarkation of the SEZ Project.</p>			
Environmental Improvement Plan and Programme		<ul style="list-style-type: none"> • Establishment of regional environmental monitoring systems • Establishment of regional environmental administration machinery 	<ul style="list-style-type: none"> • Enforcement of environmental conservation and protection laws and regulations 	<ul style="list-style-type: none"> • Sea water-front and river sides beautification and landscaping projects 		

1

1

Figure 1.5: MAP OF EXISTING AND PLANNED INDUSTRIAL SITES



Part 1: Industrial Development Plan in Chittagong

A strategic set of criteria was put in place for the selection of the site for the "First or Pioneer SEZ" in Chittagong as follows:

- The selection of the site should start the initiation process for the future comprehensive industrial development in CTGD and thus be located on the heretofore relatively undeveloped Southern bank of the River.
- The site should have a sufficient area for development of the SEZ concept which may require a magnitude of more than 500 hectare including its future expansion;
- The site should be such that it can have positive impacts on the development of infrastructure including a new crossing of the River which is of strategic importance;
- The site should encourage the creation of a new Central Business District (CBD) on the Southern bank of the River and act as a logistic center for the future development on the Southern bank of the River;
- The site should be such that it would contribute to or be associated with the existing industrial developments such as KAFCO and CUFL; and
- The site should be readily acquired without creating social problems and costly compensation, and be free from flooding and costly grading for land development.
- The site should be capable of having port facilities which will serve for transporting construction equipment and materials during the construction period, and thereafter for transporting raw materials and industrial products coming in and going out of the SEZ.

Although it is not finally decided, the relative merits of Site No.1 would suggest that it best meets the above criteria, and as such, it is recommended for the initiation of the First SEZ in CTGD. When future expansion is required, Site No. 5 and Site No. 4 will be developed probably in that order as additional SEZs and these sites should be collectively called and treated as the SEZ.

1.7 FOREIGN DIRECT INVESTMENT

Bangladesh should promote herself as a new industrialized economy in an attempt to induce massive Foreign Direct Investments (FDI), which requires drastic improvements in her investment climate whilst exhorting pro-active and reactive promotional efforts by the Government. And Chittagong should act as a regional nucleus city in the region surrounded by the Bay of Bengal, assuming the functions of a transshipment hub and a processing trade center as well.

Appropriate institutional arrangements is the key for the efficient and effective implementation of the SEZ project in Chittagong, and that should place strong emphasis on the establishment of an autonomous, independent implementation agency, that is, the Chittagong Development Company (CDC). CDC should be empowered with the functions for regulation, licensing, permission, and other administrative affairs, and vested with the responsibility for planing, implementation, and operation and management of the entire development cycle.

Part 1: Industrial Development Plan in Chittagong

- The lack of any overwhelming advantage in Bangladesh's current economic environment makes clear that the pro-active promotional role in the development of the Bangladesh economy is, without exaggeration, fundamental.
- It is therefore recommended that a new company "The Chittagong Development Company (CDC) responsible for the development of SEZs in Chittagong District should be established. The CDC should secure the development of the designated SEZ area with the following, but not necessarily limited to, functions:
 - To acquire, hold and manage land in the Zone area for its development by CDC or any other person or party authorized by CDC;
 - To prepare a planning scheme for the development of the land in the Zone area;
 - To develop or dispose any land in the Zone area or otherwise to secure the best use of any such land;
 - To encourage and promote investment in the Zone area; and
 - To provide such infrastructure and to carry out such facilities and services as may be required to attract investment.

1.8 SUPPORT MEASURES FOR EXISTING INDUSTRIES IN CTGD

Existing industries are expected to play an important role as a leading core for the industrial development and growth of the Chittagong District. In order to create a better environment to encourage existing industries, the Government should take a leading role in building institutional systems in coordination with the local business community in Chittagong.

The following are the supporting measures that need to be strengthened.

- **Raw materials supply and marketing:**
 - Extensive use of bonded warehouse
 - Effective use of foreign agencies for import promotion
 - Permission to market EPZ products into domestic market
 - Strengthening of wholesalers' functions
 - Strengthening of Export Promotion Bureau (EPB).
- **Finance and information:**
 - Strengthening of financing support functions of industrial associations
 - Extensive use of JETRO Overseas Investment Cooperation Scheme (JOIN)
 - Special incentives for localized domestic market industries
 - Establishment of Chittagong Investment Cooperation (CIC)
 - Development of information network system.
- **Manpower development:**
 - Strengthening of manpower training and relevant incentives
 - Training by the Bangladesh Standard and Testing Institute (BSTI)
 - Strengthening of manpower development functions of CCCI and other industrial associations

Part 1: Industrial Development Plan in Chittagong

- **R & D and Technology Transfer:**
 - Extension of Technical Advisory Programme
 - Institution building for expansion of technology exchange among enterprises
 - Linkage with public R & D institutes.
- **Modernization, strengthened and development of industrial estates:**
 - Strengthening of capital raising capacity to modernize production facilities.¹
 - Creation of incentives for pollution control
 - Development of industrial estates.
- **Integrated projects and programmes:**
 - Cluster development of small and cottage industries (SCIs) as a production center
 - Special modernization programme for specific industries²
 - Establishment of Chittagong Merchandise Mart (CMM).²

¹ An idea might be to grant incentives for factory relocation of existing industries. This could be applied in cases where an existing factory is sold and the business moves for modernization purposes to a new location. If tax on net income generated from the sale is exempt or reduced, funds for the relocation will be increased proportionately. In view of land use and town planning in CTGD, this idea is more suitable for relocation from an area, where factories are more densely populated.

² Transshipment hub and processing trade is interrelated to industry and commerce or wholesaling. The development of a CMM, wherein everything could be procured, would facilitate the development of industry and commerce in CTGD.

<p style="text-align: center;">PART 2</p> <p style="text-align: center;">IMPLEMENTATION PLAN FOR CHITTAGONG SPECIAL ECONOMIC ZONE PROJECT</p>

2.1 OUTLINE OF THE PROJECT

The overall short to medium term goal of the JICA Study is to advise on the establishment of a Special Economic Zone (SEZ) in Chittagong. The following is a preliminary Implementation Plan for the SEZ Project, which may serve as a basis for decision making process towards the initiation of the Project.

- Such a Zone will typically be managed by a dedicated Zone Company and will usually have a range of special incentives involving tax holidays, high standards of infrastructure, good international transport communications, streamlined procedures for customs clearance, streamlined bureaucracy for project approval, and permission for the operation of foreign currency accounts.
- As a result of the JICA Study, it is strongly recommended that the first SEZ Project should be initiated in Chittagong due to its various advantages as aforementioned. And a key feature of the approach towards realization of the SEZ Project is to formulate a consensus which grants it the status of a "national project" thus achieving orchestrated efforts of the Government along with the relevant private sector organizations.

2.2 SITE PLANNING AND INFRASTRUCTURE

The SEZ Development in Chittagong is to achieve the goals and objectives such as pioneering in industrialization, promoting appropriate industrial location, preparation of an adequate receptacle for attracting FDI, vitalization of regional economy, formation of a preferred urban structure, improvement of urban infrastructure, creation of employment, etc. Site planning and infrastructure need to be done taking these into consideration.

- An overall development frame is given in **Table 2.1**.

Part 1: Industrial Development Plan in Chittagong

Table 2.1: DEVELOPMENT FRAMEWORK OF CSEZ PROJECT

	Land (ha)	Employ- ment	GVA (000TK)	GAS (000QFT)	Electricity (KW)	Water (m3/D)
GRAND TOTAL	170.38	29,723	5,701,638	1,352,331	37,841	22,609
EPZ TOTAL	100.64	21,532	4,352,710	1,174,584	16,790	4,938
Textile/Light Industry	52.84	14,338	2,587,850	884,300	11,433	2,613
Electronics	20.88	5,709	1,462,109	4,453	3,628	856
Metal/Machinery	26.95	1,485	302,751	285,831	1,728	1,469
GIE TOTAL	69.73	8,191	1,348,928	177,747	21,051	17,670
Food Processisng	55.15	7,113	1,285,577	110,642	20,095	17,136
Wood Processing	10.90	710	39,256	59,512	623	284
Metal/Machinery	3.68	368	24,095	7,593	333	250

- Two alternatives were examined in terms of land use planning as shown in Figure 2.1.
 - Plan A, in which site is located over the southern half of the Site No. 1, assuming that the existing gas pipeline, water main pipeline, and private housing should be removed or relocated at the time of the site development.
 - Plan B, in which site is located in parallel to the water front, assuming that the existing gas pipeline, water main pipeline, and housing should remain as exist at present.

As a result, Plan A was adopted as shown in Figure 2.2, chiefly due to the reason that it will ensure more flexible land use for the development in the subsequent phase.

- One of the key factors to enable the successful implementation of the SEZ Project is to provide an exclusive port facility attached to the Zone. This requires to relocate the existing cement factory for access to the River, and the CPA's permission for the construction and operation of such port.

2.3 HUMAN RESOURCES DEVELOPMENT

Training needs and priorities can be examined under several categories corresponding to the groups involved. Three principal groups are identified in the context of Chittagong and the proposed Special Economic Zone, i.e. SEZ Licensed Projects, SEZ Development Company, and Liaison Agencies (e.g., Customs).

• SEZ Licensed Projects:

Projects coming to the SEZ will require business management skills in its prospective workforce. The SEZ Development Company will provide an opportunity and a possible mechanism for facilitating the development and funding of appropriate training inputs.

- **SEZ Development Company:**

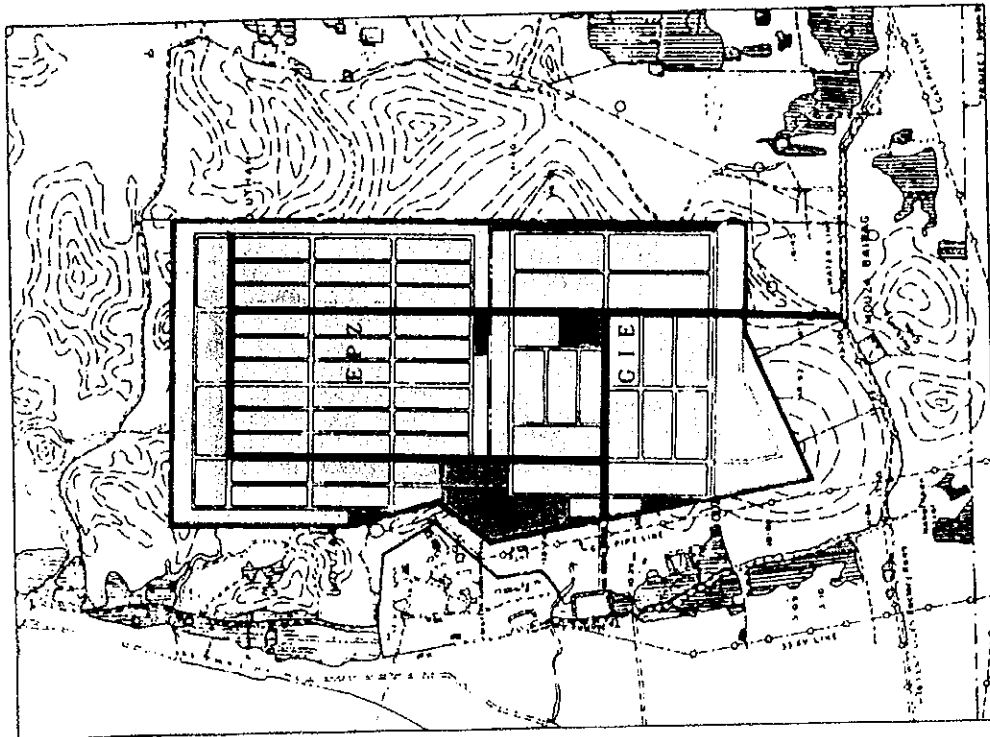
The SEZ Development Company itself may require broad-based training inputs, depending largely on how it is staffed. In the short-term, recruitment of key senior managers and/or professional consultants in conjunction with a programme of technical assistance would overcome the pressing need for the Company to be effectively functioning from the outset. In this context, a "Project (or Programme) Management Consultant" can be advantageously used for the proper management of the Project in its entire cycle.

- **Liaison Agencies:**

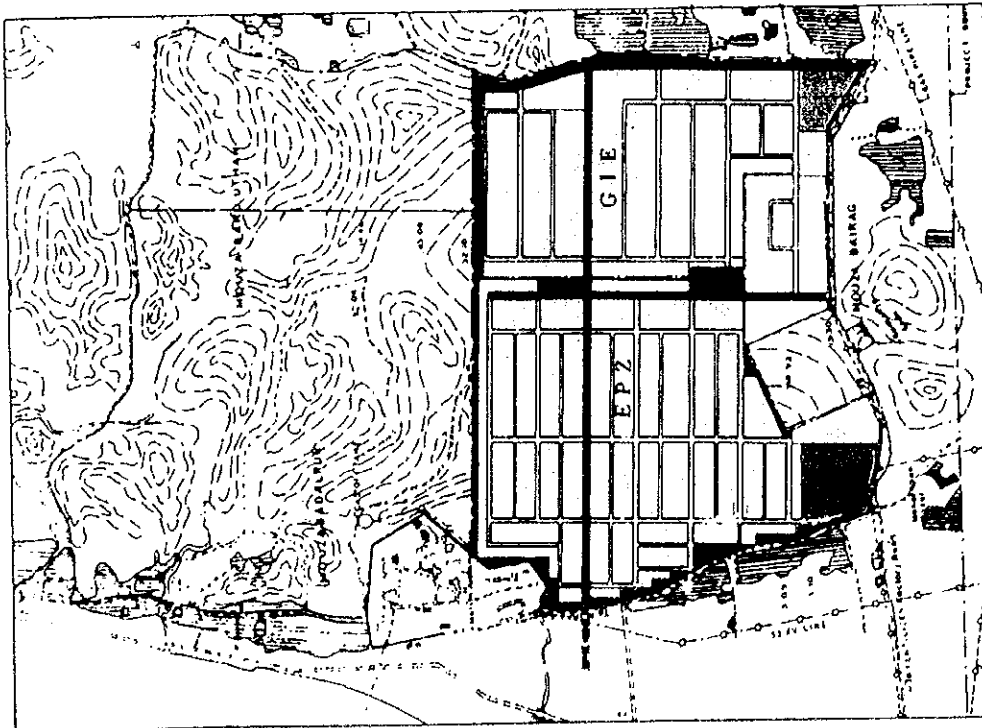
It will be a priority task for the SEZ Development Company as soon as possible after its creation to set up clear lines of communication between it and Liaison Agencies with which it will have to work and whose cooperation and assistance will be vital if the SEZ is to operate effectively. As part of this process, the training requirements of the agencies will need to be clearly identified and addressed.



Figure 2.1: ALTERNATIVE SITE PLANS



Plan B



Plan A

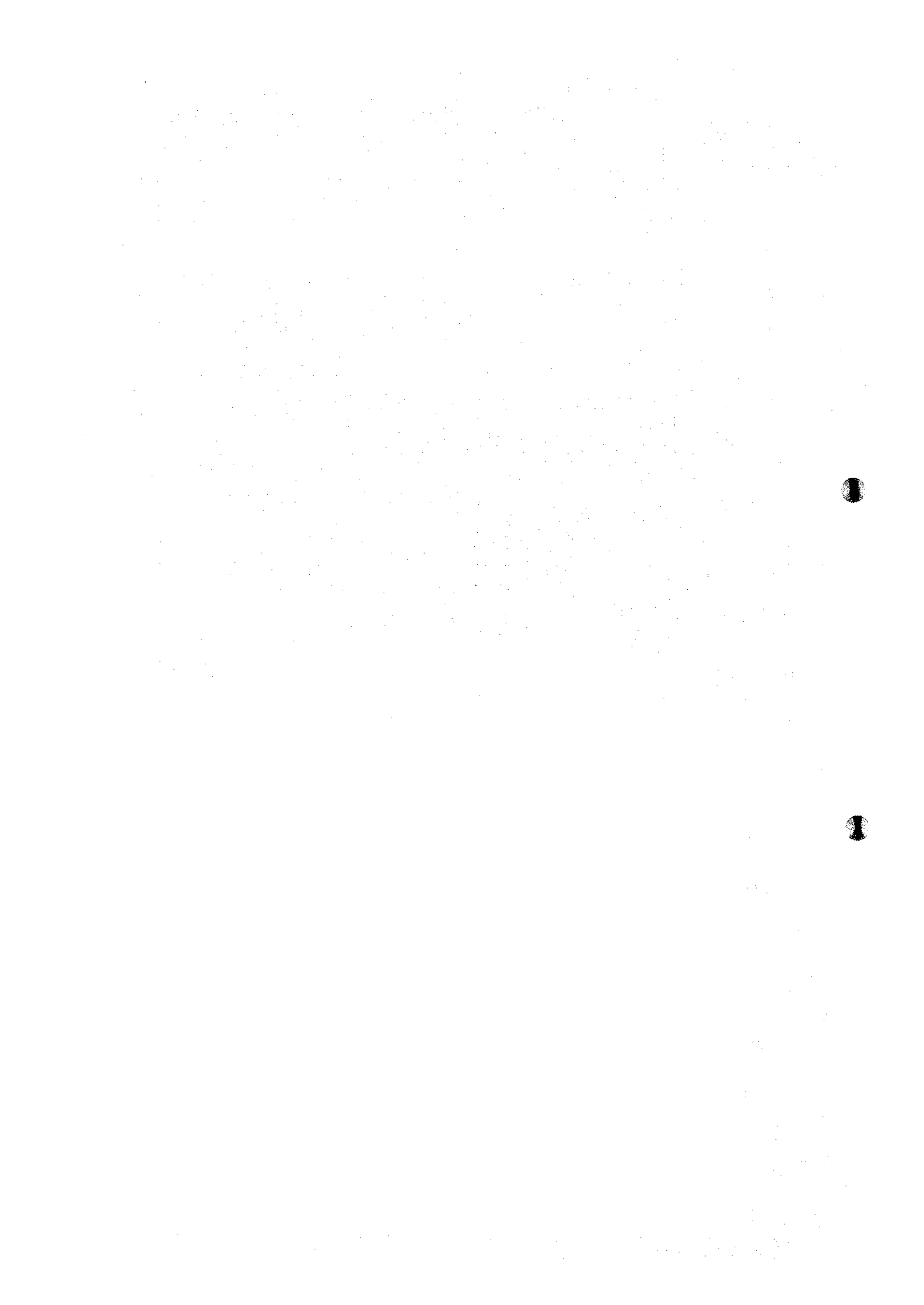




Table of Land Use

Land Use	Color	Area (ha)	Remark
Industrial Estate	[White Box]	172.1	EPZ 100.1ha GIE 71.1ha
Warehouse	[Black Box]	0.9	
Center	[Dark Grey Box]	2.0	
Housing	[Light Grey Box]	16.2	
Road	[White Box]	46.4	
Park	[White Box]	8.7	
Green	[Black Box]	17.2	
Utility	[Dark Grey Box]	12.2	Service Reservoir Waste treatment facility Waste treatment facility
Total		275.7	

Figure 2.2: ADOPTED SITE PLAN



Figure 2.2: ADOPTED SITE PLAN



2.4 INSTITUTIONAL ISSUES

Institutional review is based on research, surveys, and consultations conducted through the Study and addressed the following areas of key importance to the successful development of a SEZ, i.e. Customs, Banking and Finance Facilities, Taxation, Company Formation, and Government Guarantees.

- **Customs:**

The customs regime should not be a hindrance to legitimate traffic, where the promotion of such import-export activities is part of the Government's social and economic policy, customs controls should be a positive or enabling factor.

- **Banking and Finance:**

The financial sector is split into the normal type of structure of a Central Bank and the commercial banking both publicly and privately owned. The most urgent issue is the financial situation of the banks and the need to maximize competition and efficiency. All the banks suffer from similar problems with respect to their financial structure, medium-term strategy, operational systems, and staff skills.

- **Taxation:**

The tax system still remains complex and non neutral in spite of the introduction of reform measures. The tax concession package being sought for enterprises operating within the SEZ is to ensure that it is at least as competitive as the tax incentive package available in many competitor countries which would include:

- Profits Tax Exemption
- Tax Free Dividend Income
- Accelerated Depreciation
- Exemption of Local Property Tax
- Double Rent Allowance
- Double Tax Free Allowance for Training Schemes.

- **Company Formation:**

In order to minimize the requirements for forming a company which can be a deterrent to foreign investors, the SEZ Development Company would be directed and resourced to obtain the necessary permits for a new business and be empowered by statute to issue a certificate for the company formation.

- **Government Guarantees:**

Appropriate arrangements should be made by the Government in relation to such investors to ensure that the exemption, incentives, and concessions granted by the Government would be reasonably honoured.

2.5 INVESTMENT STRATEGY

Fundamental to the formulation of an investment strategy for the Chittagong SEZ is to inscribe the concept of competitiveness in the formulation process. In the case of Chittagong, it is critical that the appropriate concepts of competitive advantage are identified, and on this basis, to move forward and formulate development policies to implement the strategy.

- In recent years, there has been an upsurge in the pace of FDI into East and South-East Asia particularly China, Malaysia, Singapore, Thailand, Indonesia, and nearer India and Pakistan, and it is crucial that Chittagong begins to win its share of the investment flow. There are three different types of FDI typically involving different types of multi-national enterprises, i.e. Horizontal FDI, Vertical FDI, and Conglomerate FDI.
- Other than FDI, it is also important to acknowledge that intra-firm trading between foreign and local companies should be expanded, and for many more local indigenous companies to invest and expand their operations in the local economy.
- The competitive advantage of Chittagong needs to be reviewed in terms of its capacity to compete in international trade, which encompasses both trade in products and trade in assets.

2.6 BUSINESS STRATEGY FOR THE CHITTAGONG SEZ

The variety of the different international business involvement today demonstrates that the strategy which the Chittagong SEZ adopts, should encompass the concept of trade in its widest context, i.e. the idea of international trade for the SEZ should include both trade in products and trade in assets.

- Chittagong should become the home base for successful international competitors in an industry or industries. The future prosperity of Chittagong will be determined by it becoming the home base for many competitive firms.
- The SEZ should adopt an industrial cluster programme as the route to developing a number of successful international competitors in an industry or industries' cluster. Clustering is one of the most pronounced patterns in the process of geographical industrialization.
- The SEZ Development Company will need to be structured so as to act a catalyst in developing the industry clusters and in undertaking strategic planning for its future activities. It will also have a promotion/marketing function to encourage both overseas and domestic businesses to locate in the Zone, and from a day to day development point of view, it will be involved in management and employee training thus ensuring the adoption of best international management and work practices.

2.7 CHITTAGONG SEZ FRAMEWORK

A Special Economic Zone may be defined as a special economic development area with a high quality physical environment where machinery and raw materials can be imported, stored, processed, manufactured, and exported, with the benefits of a liberal regime, free of taxes, duties, and trade restrictions. Such a Zone will typically be managed by a dedicated Zone Company, and will usually have a range of special tax and other incentives to promote the economic development of an area by attracting domestic and foreign investment.

- **Establishment of the Zone Company:**

A dedicated Zone Company called the **Chittagong Development Company (CDC)** should be established by the Government as soon as possible with a statutory brief and with powers for the planning, development, and management of the SEZ in accordance with an approved planning scheme to be prepared by the Company and approved by the relevant Ministries. In line with the "Structural Adjustment Policy", it is strongly recommended that CDC should be established as a public/private joint venture company. The private sector should take the managerial responsibility, whereas the public sector should provide necessary financial and institutional supports to embark the SEZ Project. The public sector should gradually transfer its equity and influence to the private sector as the SEZ operations will be put on a right track.

- **Definition of the Zone Area:**

As shown in **Figure 1.5**, Site No. 1 is recommended as the site on which to develop the first SEZ in Chittagong. A key consideration in the definition of such an area must be the need to facilitate a focused and concentrated investment effort in the initial phase of the Zone development.

- **Planning and Development Framework:**

The key elements of the planning and development framework are set as follows:

- Preparation of Concept Plan
- Approval of Concept Plan
- Invitation of Development Proposals
- Selection of Preferred Proposals
- Signing of Development Agreement
- Commencement of Development.

- **Tax and Other Incentives:**

The principal incentives proposed are as follows:

- Rates Relief
- Capital Allowances for Commercial Development
- Double Rent Allowance against Trading Income
- Corporate Tax Exemption
- Employment Subsidy and Training Incentives.

- **SEZ Promotion and Marketing:**

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The marketing strategy has to be oriented to directing potential end users and investors to the reasons why locating in Chittagong SEZ should be considered. Initially, it will be necessary to improve and develop the image of Bangladesh as an attractive place to live, work and spend leisure time as a prerequisite of promoting and marketing Chittagong.

- **Development Methodology:**

CDC will be required to inform itself of the impact and consequences of the defined Zone Area and on the surrounding urban area in the following fields.

- Transportation and Movement
- Infrastructure and Utilities
- Urban Design and Architecture
- Site Conditions and Appraisal of Site Features.

- **Development Timescale:**

It should be an objective of the Chittagong Development Company to the first SEZ completely developed and functioning within a period of 3 years starting from the 1st of January 1997 (the first phase development agreement should be made by this date) and completed by the end of 1999. **Figure 2.3** shows the proposed Implementation Schedule.

- **Organization and Management:**

The principal objective must be to build an efficient and effective public service company, which is reasonably free of the traditional bureaucracy of the public sector and which will meet the statutory requirements of the legislation. The outline of a proposed Organization Management Structure is shown in **Figure 2.4**.

- **Partnership:**

It is envisaged that the SEZ would be based on a formalized comprehensive partnership between public and private sectors. This new type partnership instrument which, if based on an innovative approach on both sides, can, within the given Zone Area, bring under a single minded management the land use planning and the organization of public and private investment to produce a phased and balanced development of required industrial and commercial activities.

The initial investment however in the CDC will be undertaken by the Government due to the undeveloped nature of the private sector at present but its equity should be gradually transferred to the private sector as the company develops and matures.

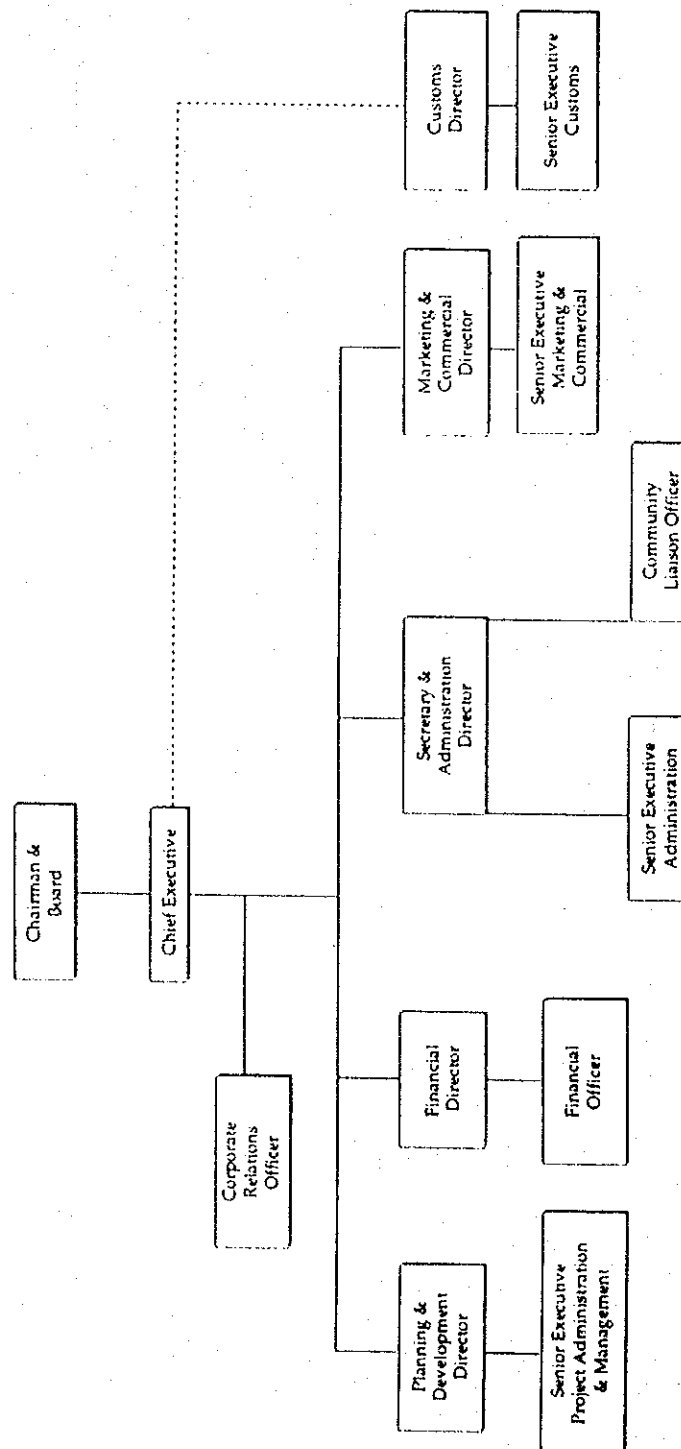
- **Community Support and Liaison:**

The SEZ should have the potential to transform completely the physical, economic, and social environment of the Chittagong sub-region. Therefore, from its outset, a comprehensive community support and liaison framework must be put in place to secure the people's involvement through the creation of a relevant support system.

Figure 2.3: PROPOSED IMPLEMENTATION SCHEDULE

Major Activity	1995	1996	1997	1998	1999	2000
Pre-development Arrangements						
- Formulation of consensus on initiation of CSEZP	■					
- Organisation of a Special Task Force		■				
- Organisation of a Special Zone Develop. Committee		■				
- Necessary legislation and legal adjustments		■				
- Establishment of Chittagong Develop. Company		■				
- Negotiations with prospective financing institutions		■				
- Environmental Impact Assessment		■				
Development						
- Procurement of Project Management Consultant		■				
- Preparation of Conceptual Plan		■				
- Approval of Conceptual Plan		■				
- Procurement of Detailed Design Consultant		■				
- Preparation of Detailed Design & Tender Documents		■				
- Procurement of Contractor			■			
- Construction			■			
Operation and Management						
- Sales promotion			■			
- Preparation of rules and regulations for O & M			■			
- Commencement of sale of EPZ and GIE			■			
- Operation and management of SEZ			■			

Figure 2.4: ORGANIZATION MANAGEMENT STRUCTURE



2.8 LEGISLATIVE PROPOSALS

SEZ legislation should be general in nature rather than Chittagong specific and should contain the following principal provisions, i.e. Area Designation of SEZs, Establishment of SEZ Companies, Powers of SEZ Companies, Organization and Management Structure of SEZ Companies, SEZ Planning and Development Framework, and SEZ Incentives.

- Set out in this Chapter is a suggested draft of SEZ legislation tailored to the particular circumstances of Bangladesh and regions of Bangladesh to which it is expected to apply.

2.9 COST AND FINANCIAL ANALYSIS

A development cost plan has been prepared identifying works to be carried out as proposed in the Phasing Plan. The works as outlined in Table 2.2 accord with the requirements of the proposed phased development programme.

It is of the prime importance that the Chittagong SEZ will confer benefits on the Bangladesh economy. Such benefits will be for the creation of employment opportunity, enhancement of value added production, inducement of ripple effects, earning foreign exchange, and so forth. Also, financial viability of the SEZ development is important to ensure its sustainable development.

- This cost plan is indicative only, and is based on a proposed development scenario which will need further review and refinement.
- Finance will be available for this type of project from multi-lateral and bi-lateral institutions, and finance can be provided by different methods by these institutions including loans, equity, guarantees, underwriting, and export credits.
- To advance negotiations on finance a number of key steps has to be taken as follows:
 - Finalize and enact the Zone legislation
 - Establish an independent Zone Company
 - Prepare marketing and promotional material summarizing the key features of the Zone concept
 - Appoint a Chief Executive and a Finance Director to the Zone company
 - Prepare a detailed Financial Plan for the Zone Company
 - Develop a Financing Programme and negotiate a deal with the selected institutions.
- **Employment**

Assuming that every one hectare of land devoted to sites leads to one hundred jobs, it is roughly calculated that the total additional employment capacity potential by the year 2005 is 30,000 jobs.

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Table 2.2: DEVELOPMENT COST PLAN

Type of Work	Unit	Quantity	Unit Price (000 USD)	Cost (mil. USD)	Remarks
Direct Cost					
Inside estate					
Earthwork	mil. m3	270	5.000	1.4	
Road work	m2	46,400	0.072	3.3	
Water supply work					
Raw water intake	Set	1		4.8	
Water distribution	Set	1		7.0	
Subtotal				11.8	
Sewage work					
Waste water treatment facilities	Set	1		15.9	
Pipeline	Set	1		2.4	
Subtotal				18.3	
Electrical work					
Power reception / distribution	Set	1		9.3	
Underground buried cable	Set	1		0.5	
Subtotal				9.7	
Waste disposal					
Land-fill yard	Set	1		0.2	
Land-fill equipment	Set	1		0.6	
Subtotal				0.7	
Park work	m2	87,000	0.002	0.1	
Building					
Center facilities	m2	18,000	0.227	4.1	
Standard factory	m2	36,000	0.122	4.4	
Warehouse	m2	8,000	0.081	0.7	
House	m2	40,000	0.122	4.9	
Dormitory	m2	27,000	0.122	3.3	
Subtotal				17.3	
Dismantlement / restoration work					
KAFCO water supply facilities	Set	1		1.2	
Gas pipeline	Set	1		0.1	
Subtotal				1.3	
Total (1)				64.0	
Outside estate					
Road work	m2	131,600	0.045	5.9	# 1
Electrical power work	km	20	15.000	0.3	# 2
Total (2)				6.2	
Total (3)				70.2	(1) + (2)
Indirect cost					
Expenses	Total (3)	5		3.5	
Engineering Fee	Total (3)	7		4.9	# 3
Contingency	Total (3)	5		3.5	
Total (4)				11.9	
Grand Total			Total (3) + (4)	82.2	

* However, no site cost is included.

* Site cost for 275.7 ha is as follows :

275.7 ha x 500,000 TK / ha = 137.5 million TK

1 : Widening of access road 1 = 4700m

2 : Transmission line drop

3 : Investigation / design / control, etc.

Part 1: Industrial Development Plan in Chittagong

- **Value Added**

Assuming that the gross output (per worker per annum) is expected to increase, the total value added over the period amounts to Tk.5,700 million in 2005. This figure is obtained by multiplying direct and indirect employment by the associated value added per worker and adding over the investment period.

- **Multiplier Effect**

Assuming that for every two jobs created within the Zone, one indirect job is created elsewhere in the economy, with the result that cumulative (direct plus indirect) employment over the period 1995 - 2005 amounts to 45,000 jobs.

- **Foreign Exchange Earnings**

Assuming that 70 percent of gross output is exported for the first year and 80 percent thereafter, net foreign exchange earnings could amount to some \$100 million over the period 1995 - 2005.

- **Financial Viability of the SEZ Project**

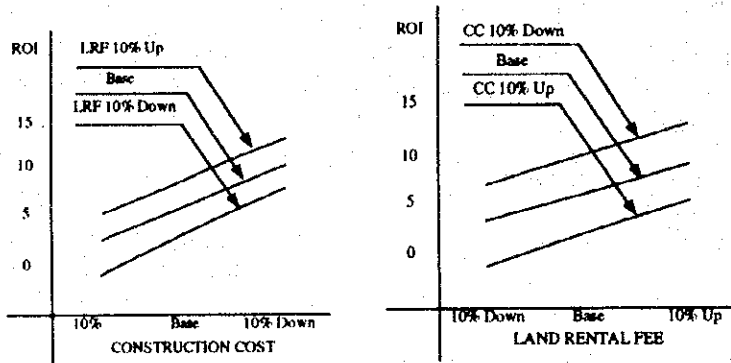
In the financial terms, a cash flow analysis revealed that the SEZ Project will bring about a return on investment (ROI) of 6.44% and a surplus amount of \$32.18 million at the end of the 14th year for the "base case" with the following conditions.

- Net development cost*	:	\$82.2 million
- Sales price of industrial estate	:	\$40 per sq.m
- Net surplus	:	\$32.2
- Project period	:	1997-2010 (14 years)
- Amount of equity	:	\$25.6
- Return on Investment (ROI)	:	6.44%
- Return on Equity (ROE)	:	2.76%

*Note: The net development cost includes a half of the cost for the industrial waste treatment facilities assuming that the remaining half should be subsidized by the Government as a pollution control programme.

- It can be said that the financial rate of return would not be so high as the Project can be implemented on a fully privatized basis, and hence, substantial financial assistance by the Government is considered essential and that may take the form of providing equity in kind (land ownership) and credit facilities to borrow concessionary loans from international lending agencies.
- Major reasons of the low rate of return are attributable to the relatively high construction cost for providing high standard facilities (particularly industrial waste treatment facilities) and rather limited salable or marketable land price taking into consideration the price competitive with neighbouring countries.
- **Figure 2.5** shows the results of a sensitivity analysis made by changing the cost and revenue factors centering around the base case. Either reducing the cost by 10% or increasing the sales price by 10% will result in the improvement of ROI to a range of 9-10%. It should be also noted that if all the cost for the industrial waste treatment facilities should be included, the sales price should be increased to \$61 per square meter to obtain the same level of ROI that is around 9%.

Figure 2.5: RESULT OF SENSITIVITY ANALYSIS



CONSTRUCTION COST	10% Down	7.43	10.27	13.23
		5.36	12.20	21.04
	Base= 82.2 mil. USD	3.67	6.44	9.13
		-3.12	2.76	9.31
	10% Up	-0.96	2.73	5.50
	n.a.	n.a.	-0.07	
	10% Down	Base= 40 USD/m2	10% Up	
	LAND RENTAL FEE			

Note : upper line ROI
lower line ROE

2.10 PRIORITY SECTORS FOR DEVELOPMENT

Prioritizing target industries is needed for a realistic industrialization process since each industry has its inherent structure or mechanism, although the success of prioritization will be greatly dependent on the existing industrial structure, economic conditions, and industrial policy of the country. It needs a long time to structure a full set of individual industrial subsectors.

- The proposed main subsectors to be located at the EPZ of the SEZ:
 - Textile and light industries (garments, caps, leather footwear, sports and athletic goods, toys, pens and other office goods, umbrellas, leather goods)
 - Electronics and electrics (electronic and electric components, other electrical apparatus and supplies like tape players)
 - Insulated wires and cables for machinery and equipment
 - Steel processing distribution centre (shearing and slitting)
 - Ship and boat building and repairing
 - Structural metal products
 - Other machinery industries including repair and maintenance services.
- The proposed main subsectors to be located at the GIE of the SEZ:
 - Food processing (agri-processing, fish processing and frozen shrimps, an industrial complex comprising edible vegetable oils, flour milling and animal feeding stuff, an integrated edible salt refinery complex by relocation)
 - Dairy products
 - Wood import-processing estate (wooden furniture and wood products) based on raw wood to be imported from Myanmar which abounds in forest resource
 - Metal products.

2.11 ENVIRONMENTAL CONSERVATION AND PROTECTION

Environmental Impact Assessment (EIA) will be required at the time of preparing a Conceptual Plan as indicated in Figure 2.4, in order to examine in more detail the possible impacts that may arise from the implementation of the SEZ Project. The EIA results should be properly incorporated in the Conceptual Plan.

The following are the principal work items for EIA.

- Social Environment
 - Resettlement
 - Right of common
 - Public facilities
 - Friction among inhabitants
 - Cultural heritage
- Natural Environment
 - Ground water
 - Environmentally vulnerable areas
- Environmental Pollution
 - Air pollution
 - Water pollution
 - Impacts under construction

Part 1: Industrial Development Plan in Chittagong

**APPENDIX:
LIST OF PROPOSED PROJECTS AND PROGRAMMES**

The following is a simple listing of the principal projects and programmes, the implementation of which is deemed necessary for fostering the industrial development in the Chittagong District. The projects and programmes include all the relevant activities in the pre-development, development, and post-development phases such as pre-feasibility and feasibility studies, basic and detailed design, construction, operation and maintenance and so forth.

- **Transportation Sector**
 - Trans. 01: Construction of New Crossing(s) over the Karnaphuli
 - Trans. 02: Improvement of Major Arterial Roads in Chittagong
 - Trans. 03: Modernization and/or Expansion of the Container Handling Facilities of the Chittagong Port
 - Trans. 04: A New Deep-Sea Port Development in Chittagong
- **Urban Infrastructure Sector**
 - Urbinf 01: Sewerage System Development in Chittagong
 - Urbinf 02: Water Supply System Development in Chittagong
 - Urbinf 03: Solid Waste Management in Chittagong
 - Urbinf 04: Flood Control Project in Chittagong
 - Urbinf 05: Development of a New Power Plant in Chittagong
 - Urbinf 06: Development of Telecommunication System in Chittagong
- **Urban Sector**
 - Urban 01: A New CBD Development on the South Bank of the Karnaphuli
 - Urban 02: A Large-Scale Urban Renewal of the Existing CBD in Chittagong
- **Environment Sector**
 - Envir. 01: Environmental Management Centre Development in Chittagong
- **Industrial Sector**
 - Ind. 01: Chittagong Industrial Technology Development Centre
 - Ind. 02: Development of Chittagong Merchandised Mart (CMM)
 - Ind. 03: Chittagong Special Economic Zone (CSEZ) Development (included in this Text)
 - Ind. 04: Special Modernization Programme for Specific Industries
 - Ind. 05: Cluster Development of Small and Cottage Industries (SCIs)
 - Ind. 06: Chittagong Manpower Training and Technology Extension Centre
- **Tourism Sector**
 - Tour. 01: Tourism Development at the Kaptai Lake
 - Tour. 02: Tourism Development at Cox's Bazar

The projects and programmes are all considered to be essential for the future industrial development in Chittagong. Among them, priority consideration should be given to the Trans.01 and Trans.04, taking into consideration their vital importance and nature of taking considerably long time for implementation.

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