

GROWTH POTENTIALS OF A PRE-MATURE MEGACITY : AN EVENT OF GRIM PORTENT

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ABSTRACT : The city of Dhaka has grown from a population of half a million to seven millions (appx.) in 35 years. The phenomenal growth of the metropolis is set against paucity of resources : land, financial and municipal- to provide housing, employment opportunities and infrastructure. Issues related to the inexorable growth of the city has always been inaccurately identified and miscalculated. Thus discrepancies are apparent in calculating the density of population with respect to the areas of the city. Allocation process, associated with the use of the resources have suffered from absence of well developed public policies, as well as from lack of sound empirical evidence on the outcome of such inappropriate use of the scarce resources available. One important aspect of inefficient resource use is the escalating conversion of low-lying peri-urban land or metropolitan fringe to urban use through private initiatives without any effective planning control. The public policy responsible for this process of development is both inefficient and inequitable. It is the purpose of this paper to analyze the nature and underlying causes of discrepancies and inequalities associated with this process. The components of a recently prepared Dhaka Metropolitan Development Plan Package is also examined and addressed accordingly.

KEY WORDS : Statistical discrepancies, Density, Area, Master plan.

INTRODUCTION

Now with a population of about 120 million, living in an area of 144,000 sq. km., Bangladesh represents one of the highest population densities in the world (about 2,100 per sq. mile from 1,957 in 1991 and 1,625 in 1981). Urban planners observed decades before that 'if the entire population of the world were placed in a country like Australia, the

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density per sq. mile would approximately equal to that of Bangladesh ((Choguill, 1980a). Assuming medium variant of declining fertility and mortality the country is expected to reach a population of 139.69 million by 2000 A.D. (BBS, 1993).

The four major cities- particularly Dhaka and Chittagong metropolitan areas- expose the tragic human side of looming crisis in basic facilities of urban life. Inadequate municipal services are struggling to provide for ever-growing urban populations. With a growth rate twice that of the national population, the urban population is expected to swell from 22 million in 1994 to more than 35 million by 2000.

POLITICAL ANTECEDENTS

Although as a city Dhaka, did not rise to prominence until 17th century, its history can be traced back to 1st millennium A.D. It has been claimed by some historians that there are records suggesting, "even as early as eleventh century, a thriving township existed in the same place and that around the late 11th century, Dhaka was (one of) the most populated city(ies) in the world" (Far, 1982). Islam Khan, the first Mughul Viceroy established the city in 1608 as the Mughul capital of Bengal. Interrupted by about two decades (from 1639 to 1660) Dhaka retained the status of a capital city until 1704, while emerging as a center of flourishing sea trade, attracting the English, French, Portuguese and other European traders. With the subsequent decline of the Muslin industry as the provincial capital was shifted to Murshidabad, Dhaka entered a period of decline. Brought under British control in the year 1765, Dhaka's importance further declined in 18th and 19th century as Calcutta forged ahead as the British capital of imperial India, thus producing it as merely the wreck of its ancient grandeur. After the partition of India in 1947, Dhaka as the capital of eastern province of then Pakistan passed through severe economic deprivation and exploitation which lead to a bloody liberation war. Suffering serious damage at the cost of millions of life it eventually emerged as a capital of a new nation in 1971.

At the end of 17th century, the population of the city reached its peak to the tune of half a million or more. This population gradually reduced to slightly more than fifty thousand in the next century, owing to

political decisions and successive natural calamities including famine and disasters. The 17th century population revived again only after 1961.

Table 1. Expansion of the city area : 1600-1974

Year A.D.	Period	Area (sq. mile)	Population
1600	Pre-Mughul	01	not available
1700	Mughul	50	C. 900,000
1800	British	08	C. 200,000
1867	British	08	051,636
1872	British	08	069,212
1881	British	08	080,358
1891	British	08	083,358
1901	British	10	104,385
1911	British	10	125,733
1921	British	12	137,908
1931	British	12	161,922
1941	British	12	239,928
1947	Pakistan	12	250,000
1951	Pakistan	15	338,762
1961	Pakistan	25.5	566,712
1974	Bangladesh	40	1,679,572

Source : Centre for Urban Studies.

: Urban Housing and Shelter Process in Bangladesh : - A study in Seven Cities. Population Growth of Dacca City.

BACKGROUND TO THE URBAN SECTOR

Substantial urban population growth has taken place in Bangladesh, both in absolute terms and of urban population as percentage of the total. According to statistics compiled by a number of survey groups in the United Nations, Bangladesh's urban growth rate is the highest in Asia and it is growing by an average of 5 per cent year. There are 23 million urban dwellers in Bangladesh making up 20 percent of the country's total population (Daily Star, 1994a).

During the 1980s, urban population grew at an average of 4.9 percent per annum, increasing by 750,000 people every year, while the

growth of urban population is likely to vary on average between 1 and 1.5 million per year. By the year 2001, the urban areas are likely to account for about 25% (or more) of the national population. Although the rate population increase remains relatively high (more than 2 percent per annum), the population growth rate of urban areas is, in actual terms, more than double this rate due to influx of migrants. Estimates prepared by the World Bank suggest that a national level of 144.1 million people could prevail by 2001, which would include 39.1 million people in urban areas.

THE METROPOLITAN MORASS

Being the capital city, Dhaka has experienced rapid population growth because of natural increase and massive in-migration from all regions of the country. Dhaka's population increased with an annual growth rate of 10.78 during 1974-'81 (Islam, 1991). According to news reports, population of the city in the early '90s was found to be increasing at the average rate of 250,000 per year.

While Dhaka was 31st largest city in the world as per 1984 assessment, future population projection for the city is even more disappointing. As revealed by the UNFPA in 1993, Dhaka would be one of the 20 most populous cities in the world by the turn of the century. The population of Dhaka, projected as the 17th megacity, will stand at 12.2 million at that time. And recently, according to the State of World Population Report of the United Nation Population Fund "with about 19 million residents, Dhaka will be the ninth megacity in the world by the year 2015." (Independent, 1996).

This is not necessarily a bad news, as some experts believe that, since, the cities remain centres for economic growth and social development. But this is also true, that in developing countries some 600 million or today's 1.7 billion urban residents do not have the means to meet their basic needs for shelter, water and health.

Shelter

In Dhaka, similarly, the consequences of overcrowding is severe. In the early '70s there was a backlog of 47,195 housing units in Dhaka. In 1985, it was recognized by the Planning Commission that during the next 15 years there would be a need for 300,000 new housing units per year.

The DMAIUDP report in 1981 revealed that, rounded to the nearest thousands the number of new households would be in the order of 42,000, 49,000 and 57,000 (average per year) for the period of 1980-'85, 1985-'90 and 1990--2000 respectively for the city of Dhaka only (Shankland, 1981).

With the projected population growth rate, the future appears to be very bleak. Housing shortage in the country stood at over 3.97 million units at the end of 1992. The shortage was 3.10 million units in the previous year. Considering the size of population, the country needs at least 3.97 million more housing units - 1.70 million in urban centres and 2.27 million in rural areas - to provide shelter for the homeless population (UDD, 1992).

Water

In other terms, Dhaka's population are severely deprived of the basic civic amenities. The Water and Sewerage Authority (WASA) is able to supply only half a cup of water, amounting 130.4 million gallons against a daily requirement of 260 gallons (in other words 70 crore litre water a day against the demand of 128.50 crore litre). There are 1,34,524 subscribers of Dhaka WASA and revenue collection of the organisation on an average per month is to the tune of Tk. 6.6 crore. According to the sources from the relevant Ministry in 1994, Dhaka WASA was to supply additional 50 crore litre of water by 1998 with the completion of 1st phase work of Sayedabad water treatment plant and with the BMRE (balancing, modernising, renovation and expansion) of Chandnight water treatment plant (Daily Star, 1994b).

Sanitation

Although the sanitation coverage is claimed to have achieved 33% , executives of Village Sanitation Project referred to only 6% achievement in comparison with 71% in Thailand, 70% in Sri Lanka, 59% in Bhutan as per report of 1990 (Hoque A M S; report published in the Daily Star, October 18, 1994).

Commonly, complains are against the slums/squatters who contribute substaintlly to the deterioration of the sanitation scenario of the city, but an efficient sanitation system is yet to be established. In the city, only 15 to 18 percent of its area comes under the purview of the WASA sewerage system. Only half of the city's population can afford the

facility of sanitary toilets. Its floating population, slum dwellers are beyond the pale of this facility. According to City Corporation sources, the total number of people using city roads is no less than 2 millions. For such a large number of road users, the total number of existing public toilets in the city is only 51.

THE URBAN POOR

The urban poor, most of them migrants, drawn to Dhaka or chittagong in the desperate hope of building a life which they find not possible in their own village, are immediately trapped in this metropolitan morass.

An interim report on the Urban Poverty Reduction Project, claimed at improving the condition of the urban poor in Dhaka city, revealed that around half of the urban poor within the metropolitan area are concentrated in more than 2700 densely populated and environmentally hazardous slums and squatter settlements. The 1996 Asian Development Bank study of urban poverty found 55 percent of population below the poverty line with 32 percent below the hard-core poverty line : "given Dhaka's estimated population today of 9.3 million people, this could mean at least five million people are below the poverty line" (Prince, 1996).

AREA OF THE CITY : STATISTICAL DISCREPENCIES

The Dhaka urban agglomeration (otherwise referred to as Dhaka, or Dhaka city) is an area that runs along the bank of the Burhiganga river and extends northwards upto Tongi. When established, Dhaka was hemmed between the Dholai Khal and Burhiganga and stretched for 4.5 miles along the river with a population of 200,000 excluding the Europeans and visitors (Manrique, 1640). Although incredible, some other studies also suggest that, the population of Dhaka increased to about 1 million in 1700 (Taifoor, 1952), which was roughly double the population it had in 1961. The continuous decline in its population started from 1764 and reached the lowest magnitude in 1867 to 51,636. After 1947, when Dhaka was formed capital of East Pakistan, the urban limits stood approximately at 28.0 sq. miles (1951) and 35.0 sq. miles (1961), with population 335,928 and 550,143 respectively. While experiencing rapid population growth, as a result of high rates of natural increase and massive in migration from all regions of the country, Dhaka encounters

serious constraints regarding its physical growth. It is generally observed that the urban area of Dhaka was around 45 sq. miles in 1971 and 50 sq. miles in 1976. An extensive on urban development later in 1980 illustrated that the city's area was only 52 sq. miles at the time (Shankland, 1981).

Serious controversy is apparent in describing the densities of the city, mainly derived from the inaccuracy in determining Dhaka's area. Many of the Government publications and agencies frequently describe Dhaka's area covering from 150 sq. to 650 sq. miles, which in actual terms, leading to inappropriate planning decisions associated with future projections. We are attempting to define them :

Actual Built-up Area

A common city map of Dhaka can identify the major built-up areas quite clearly. Total area covered in this type of map would not exceed about 80 sq. miles. It should be noted here that these areas include not only the major built up areas but also a significant amount of uninhabitable low lying areas. Particularly, areas across Burhiganga and the adjoining areas along the bank of Turag at north I went forms significant proportion of the frame, eliminating which the actual built up area would be reduced to around 70 sq. miles only. While this is hard reality about the physical existence of the city area, nevertheless, diversified figures and statistical discrepancies are distinctly evident in defining the same, Fig. 1.

Police Station Area

While the district of Dhaka is controlled through nineteen police stations, each of them has it's own administrative area. Some of the areas, as a whole, are located within the city limits. Among these are, most notably, Kotwali and Sutrapur. As the table indicates below, Kotawali police station area, covering 0.8 sq. mile (with a population of 204,000 in 1984 and 210,000 in 1991) now represents probably one of the highest population densities in the world. This is followed by Sutrapur, with 1.1 sq. mile in 1984 (1.5 sq. m. in 1991), shows population concentration of 348,000 in 1984 and 204,988 in 1991.

It is also useful to note that in the same table, some of the police station areas adjacent to the peripheries or fringes of the city, for example Cantonment, Gulshan, and Mirpur with 14 (11.5), 32 (20) and

23 sq. miles respectively, occupies very large areas, (altogether about 70 sq. miles) and thus appears to be quite out of proportion to the actual built up area of the city.

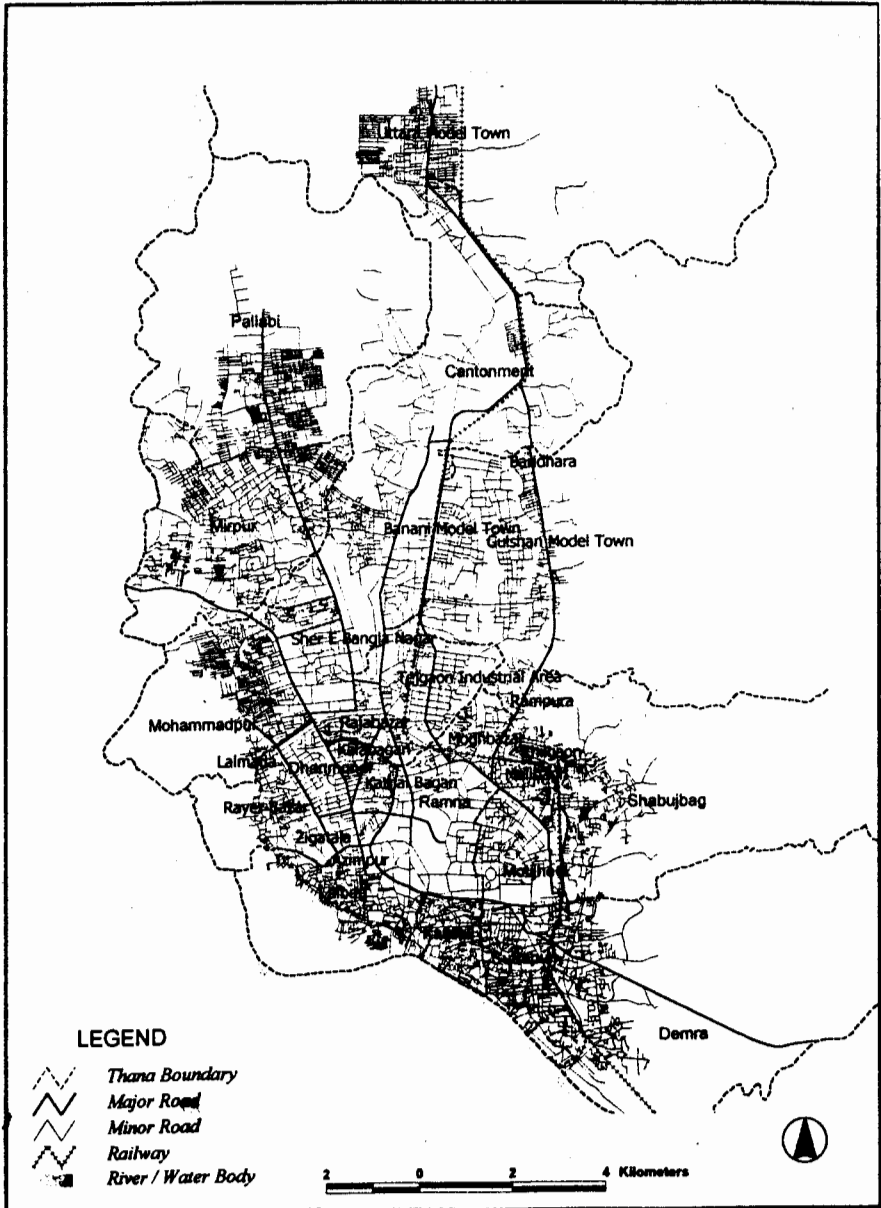
It is therefore obvious that much larger areas are included in the PS areas beyond the city boundary, which obviously included larger population areas as well.

Table 2. Population Density

Police Station	Area	1984	1991	1984	1991
Cantonment	14.4				
	11.5	120,000	190,472	08,571	16,562
Dhanmondi	02.3				
	03.8	106,000	201,529	53,000	53,033
Gulshan	32.0				
	20.8	242,000	281,337	07,563	13,525
Kotwali	00.8				
	00.8	204,000	210,504	255,000	263,130
Lalbag	03.0				
	03.5	345,000	401,387	115,000	114,682
Mirpur	23.0				
	23.0	373,000	641,630	16,217	27,897
Md.pur	04.5				
	04.6	262,000	316,203	52,400	68,740
Motijheel	03.5				
	02.0	394,000	223,676	98,500	116,838
Ramna	02.6				
	03.0	125,000	195,167	41,667	65,055
Sutrapur	01.1				
	01.5	348,000	307,483	348,000	204,988
Tejgaon	02.2				
	03.5	210,000	220,012	105,000	62,860
Uttara	142	unavailable	108,077	unavailable	7,719

Sources : (i) Bangladesh Bureau of Statistics. Statistical Pocket book of Bangladesh 1994, Table 3.04.

(ii) Statistical Pocket Book of Bangladesh 1984-'85.



Source : DMDP Urban Area Plan, 1995-2005, Vol.:I. BGD/88/052

Fig. 1. Dhaka city map.

Rajuk (DIT) Area

Immediately after partition, in order to transfer the town planning the urban development responsibilities, a number of autonomous bodies and urban improvement trusts were set up, which was followed by the execution of Town Improvement act in 1953, closely modelled on the Calcutta Improvement Trust Act of 1911, eventually resulting in the creation of the Dhaka Improvement Trust (DIT) in 1956. Dhaka Improvement Trust took the responsibility of preparing a master plan immediately after it was formed in 1956, when the urban area in use was only 20 sq. miles. Projected for a period of 20 years, the master plan also entrusted the Trust to take control over an area of 240 sq. miles, ultimately increasing the same to 320 sq. miles. During the middle of 1987, the Trust was finally reformed under a new name of Rajdhani Unnayan Katripakha or RajUK through the amendment of a town improvement bill on 30th June, 1987, eventually increasing the area under its jurisdiction to 1,528 sq. km. or, 590 sq. miles.

Metropolitan Area

The Dhaka Metropolitan area (DMA) extends over 414.4 sq. kms. and is comprised of 12 thanas - Cantonment, Demra, Dhanmondi, Gulshan, Kotwali, Lalbag, Mirpur, Mohammadpur, Motijheel, Ramna, Sutrapur and Tejgaon- eight of which are located within the administrative jurisdiction of the Dhaka Municipal Corporation (DMA). The entire Metropolitan Area is located with the Dhaka Sadar subdivision, an area of 1,600.6 sq. kms, which is located in turn, within the larger Dhaka district, an area of 7,459 sq. kms, which constitutes about one fifth of the total geographical area of Bangladesh (United Nations, 1987).

Statistical Metropolitan Area

This area by which Dhaka is often described as in fact is extended far beyond the present urban outline and in most cases does not comply at all, with the actual existing urban build up area and therefore can not be considered to be the area of the city. As the Bureau of Statistics describes: "For the convenience of conducting censuses and surveys and dissemination information of the compact urban area, the concept of

Statistical Metropolitan Area (SMA) was introduced in 1981, by the Bangladesh Bureau of Statistics in connection with the 1981 population census of Bangladesh.." (BBS, 1985).

The Dhaka SMA -- an area of 1,120.8 sq. kms which includes the entire Dhaka Metropolitan area plus all of Tongi, Narayanganj and Siddhirganj thanas as well as those parts of Bandar, Fatullah and Keraniganj thanas that have been characteristics -- was created only for statistical purposes. Dhaka SMA is located within a specified area of Dhaka Sadar, Gazipur and Narayanganj subdivisions (Shankland, 1981)

Municipal/City Corporation Area

The Dhaka Municipality consisted of the areas served by the police stations of Cantonment, Demra (P), Dhanmandi, Gulshan(P), Kotwali, Lalbagh, Mirpur (P), Mohammadpur, Motijheel, Ramna, Sutrapur and Tejgaon. Only parts of the area served by the police stations of Demra, Gulshan and Mirpur were included in the municipality. The municipality has now been renamed as Dhaka City Corporation to cover an area of 132.54 sq. miles.

It is therefore apparent that there have always been ambiguities in definite the city's area, varying from 60 sq. miles to 600 sq. miles as per the official requirements framed by different institutions and organizations.

THE DENSITY QUESTION

While some visitors may argue that Dhaka, when compared to other developing cities appears to be less built-up, is in actual terms, the result of a superficial and incomplete observation of city's physical growth. Dhaka, unlike other cities of the developing nations could not, in actual fact, grow in accordance with the growth of population. "Bangladesh has not been typical when compared with other large developing countries in that its prime city, Dhaka, has not grown to the dominant size that some of the capital cities of the region have " (Shankland, 1981).

In the context of the above discussion, therefore, in order to get the correct picture of the city's density, the future should refer to the actual built-up and habitable areas of the city, where most of the population is crammed; and thus it is consistent to address the issue through the ward area and the population the wards hold.

From the very beginning the city's establishment, urban agglomeration occurred around the oldest part of the city covering the areas of Sutrapur, Kotwali and Lalbag -- extremely congested in character due to private commercial activities overlapped with residential uses from the very ancient time. Characterized by their narrow alleyways, choked with vehicular traffic and pedestrians, each of Sutrapur and Kotwali area covered 1.2 sq. mile (3.1 sq. km.), containing in the early eighties, about 204,000 and 348,000 people respectively. Density of these areas very high when compared with that of Gulshan (7,563 per sq.mile) or Cantonment (8,571 per sq. mile), occupied by higher income urban elites and the armed forces respectively.

RESTRICTED PHYSICAL GROWTH

There is acute shortage of available land for development in or around Dhaka. This is not only because of malfunction in the operation of land market, but also because of the real physical limitations of the availability of existing land.

While, Dhaka's physical growth has always been restricted and in recent years it has reached the point of saturation. The city's peri-urban growth pattern is not similar to that of some other cities (for example Lusaka or London), which grow consistently in all of the cardinal directions surrounding the major built up area of the central region. Dhaka's growth has always been restricted by the river at its south and by low-lying lands adjacent to the rivers at its west and east, which resulted in city's growth along the northern routes in an irregularly elongated manner. Consequently, the major urban centers are not equidistant from all the peripheral points.

Land

As a result, land values are increasing at an extraordinary high rate. During the period between 1978 and 1983, the rate of annual increase of land values in Dhaka's CBD was more than 32%, showing an increase of about 20% in the residential areas. The average price of land within the central city area is around Tk. 600,000/00 (or US \$ 12,000/00) approximately per 720 sq. ft (equivalent to 1 'katha' measured locally).

The 1991 census reveals an upsurge of density with the increase in city's population from 3.5 million (3,440,147) in 1981 to 6.5 million (6,487,459) in 1991 (BBS, 1993).

It is certain that, Dhaka and most other large cities are likely to bear the burnt of enormous growth of this urban population unless this can be contained by effective future policies regarding their control. A study in the Harvard University Population Center (HUPC) in the early eighties suggested that, even if there is a drastic decline in the fertility rate, the number of urban residents will increase by ten-fold by 2003. This is equivalent to adding 29 cities the size of Dhaka over the next 24 years' (Choguill, 1980b).

Table 3. Forecast for Urban Land Requirements in Four Metropolitan Cities During 1990s.

Urban Area (Metropolitan Cities)	Share of Urban Growth in the 1980s	Estimate of Potential Annual Taka up of Urban Land in '90s
Dhaka	24.5%	920 ha / year
Chittagong	06.0%	220 ha / year
Khulna	02.1%	080 ha / year
Rajshahi	02.4%	090 ha / year
Sub-Total	35.0%	1,310 ha / year
Main Urban Centres	65.0%	2,440 ha / year
Balance of Urban	100.0%	3,750 ha / year
Total Urban		

Source : BBS, 1991. Statistical Year Book, Bangladesh. Cited in Bangladesh Urban & Shelter sector Review. BGD 92 008 June, 1993. Table 8. (UNDP, 1993)

About 25 per cent of the projected urban land growth is likely to be accounted for in Dhaka (920 ha annually) and about 6 per cent in Chittagong (220 ha annually) (Table : 3 above). In view of the industrial, commercial and Governmental base of Dhaka and to a lesser extent in Chittagong, the forecast of possible land conversion for these two cities could even be higher than the broad estimate suggests.

DHAKA CANTONMENT & ABANDONED AIRPORT

The Cantonment area associated with the old airport forms the longest stretch of suitable peri-urban high lands located at the north; starting from the Tejgaon the area is extended upto new airport at Kurmitola covering not less than 3,500 acres. Virtually, no such activities to perform in this close proximity of the city this entire area could be included in the future urban development purpose, while relocating the administration and barracks apart.

Similarly the old airport area, located in the heart of the city and occupying about 530 acres of flood free high land and another 250 acres occupied by the Bangladesh Rifles (BDR) is also remaining out of any urban development use. The previous military regime eventually declared the abandoned airport as a parade ground, intended to be used only twice a year, while none ever mentioned about the BDR. No effective policy has been undertaken to relocate the para-military agency elsewhere. Being located within the city core, these areas is of high value for urban development purpose.

BURHIGANGA BRIDGE : DARK HORIZON

Due to the river at its south, expansion of the city could not take place on the other side of the river particularly in Zinjira and Keraniganj. Daily at least about quarter of a million people cross the river by boats from the surrounding areas for daily business in the city. A new horizon in the communication infrastructure with the people across the river could be opened with the completion of the BD-Chaina friendship bridge (appx. 850 meter long), constructed in 1989 (with an approximate cost of Tk. 108 crore); but it failed to do so as the location was very far from the commuting points along the river.

With a view to reaping greater benefits from communications with the southern sides of the river, construction of second bridge at Babubazar, has recently been undertaken, the consequences of which are yet to visualize.

FLOOD PROTECTION EMBANKMENT

Major floods on Dhaka metropolitan area were recorded in 1954, 1955, 1958, 1970, 1974, 1980, 1984, 1987 and 1988. During the 1988

flood, a large part of the urban area, which is usually safe from floods, was submerged by flooding from the surrounding rivers. While a large part of the greater Dhaka were submerged during the flood; the unsubmerged area was only 56 sq. km, according to the JICA study report (JICA, 1990).

In order to protect the Greater Dhaka from flooding, a committee was established and it was decided (Phase I), to construct an embankment from the Tongi Railway Bridge to Shirnir Teak; further to Satmasjid Road along the Turag river, with five sluice gates. The other components would include another embankment around Dhaka International Airport, raising roads and the flood wall along the Burhiganga river (from the bridge to Kellar More), clearing of khals, repair and restoration of the sewerage system within the city etc. On completion of the works of phase I, the major parts of Dhaka city would be enclosed by embankments and thus are likely to become flood free.

Important parts of the proposed phase 1, like the construction of embankments have been accomplished under the supervision of various agencies like RAJUK, DWASA etc. But other features like repair and restoration of the sewerage system associated with the clearing of the canals etc. are not yet considered. The pumping stations and sluice gates appears not to be working efficiently as most of the time of the year the inner side of the embankment are submerged. A ring road along the embankment could easily connect the downtown business areas so that buses and wagons might evade the inner city avenues and help reduce the traffic congestion effectively. Thus, the million Tk. 3767.3 million scheme, including Tk. 2386.4 million for embankment and 262.5 million for flood wall along with Tk. 621.1, 497.3 million for sluice gate and others, even after five years scheme, even after five years of its construction is yet to demonstrate any positive result on the well being of the city dwellers.

DHAKA METROPOLITAN DEVELOPMENT PLAN PACKAGE

Overview of Project Proposals

During the British colonial times Patrick Geddes had a go at making a plan for Dhaka, which was never adopted or no efforts were made for implementing the same. Adhoc decisions were made mainly by

bureaucratic quarters. By which police line, civil line, administrative zones, commercial zones etc. were laid out. Buckland Bund is also such project. The first comprehensive master plan was made by an expatriate firm Minupria & Macfarlane in 1958. It had definite land use pattern, zoning, ware bodies, flood prone and build able zones. According to that plan the Fulbaria Railway station was shifted to Kamalapur; Tejgaon airport was shifted to Kurmitola. Tejgaon industrial area and Gulshan residential area are also results of that plan. Major responsibility of DIT (now RAJUK) was to maintain and take care of that plan. At that stage, it could not envisage the subsequent growth of the city let alone foreseeing the possibility of its becoming the national capital and primate city. Due to unusual growth, increase of population and changes in socio-political conditions Rajuk failed to fulfill their task. The implementation process is marked more by breach and deviation than adherence to the plan.

RAJUK had made efforts to develop new areas for residential, administrative and commercial areas. It has also made some changes in land use pattern and chalk out detailed structure plans which could never be implemented. Again, adhoc decisions from bureaucratic quarters and natural forces determined the growth of the city. As a result, sub centres like Karwn Bazar, Sher-e-Bangla Nagar appeared. RAJUK being the plan approving authority made efforts to maintain some discipline in the vast sprawling growth.

By now the 'master plan' concept became out of fashion and it was almost impossible to bring vast unplanned developments under any sort of rigid control. The term strategy plan became in vogue. In 1981, with Asian Development Bank assistance an expatriate firm Shankland Cox Partnership and others undertook the project 'Dhaka Metropolitan Area Integrated Urban Development Project' (DMAIUDP) at a cost of one crore taka. It is noticeable that the efforts are no more being considered plans to be implemented. They were being called projects more in the nature of studies, possibly to enlighten the decision makers whoever they are. The said firm did an excellent study and considered nine options and recommended the most sensible one. They realized that flooding and drainage are major problems of the city. With scanty resources it is not possible to make low areas flood free. High land in the north are buildable and growth should take place in that direction in more of a

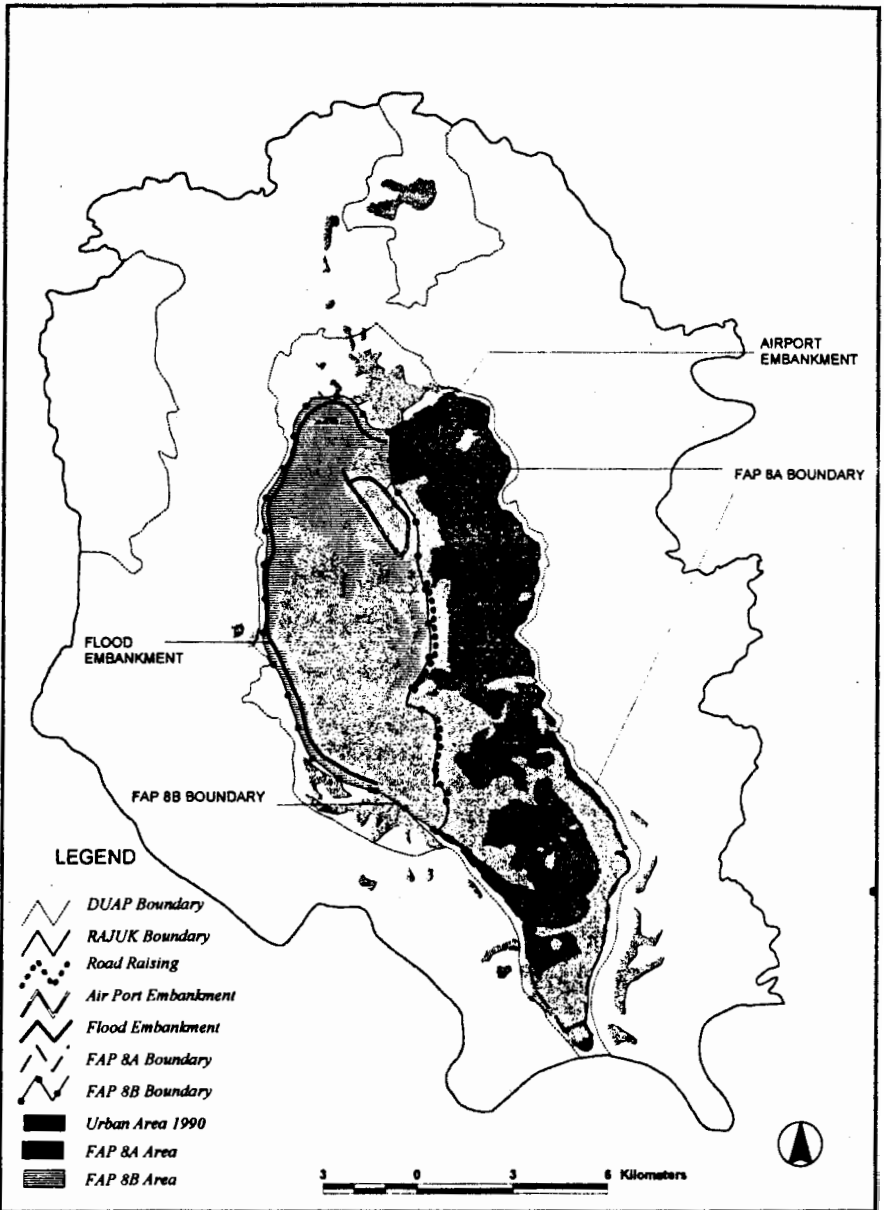
linear pattern. They suggested a north-south corridor (mass-transit) with branches towards Savar, ultimately to Aricha. They also suggested institutional re-arrangements. The strategy plan was for twenty years upto 2001.

The strategy plan, whose recommendations are still valid was never taken seriously and the reports only served the purpose of superficial reference work.

In 1995, another expatriate group Mott Macdonald in association with Culpin Planning Ltd. and others undertook the project : Dhaka Metropolitan Development Plan (DMDP) at an approximate cost of Taka fifteen crore. The plan was dished out as structure plan and has four major components : a) Strategic Growth Options b) Structure Plan c) Urban Area Plan and d) Detailed Plan.

On growth proposals, the same options as was done in 1981 was considered, but changed the recommendations. They assumed that with the implementation of FAP 8A and FAP 8B vast area including present low areas will be flood free and new peripheral expansion will take place on the east and west, northern expansion being mainly for the richer group of population following existing trend of growth. It was earlier disclosed that BWDB would include all of FAP 8A priority components (as given in the JICA 8A Study) in its short term capital programme and JICA was expected to determine the available funding sources, but several discrepancies are apparent regarding the procurement of its fund and implementation potentials. As mentioned earlier that the population of the city increases approximately by 250,000 each year, thus, delaying in execution of any project by two to four years for example, would result in further influx of about a half or a million more people.

It was further learnt that the ADB also showed interest in the construction of an Eastern bypass that would allow easier transport goods from 'the north to Chittagong port by road and enhance the feasibility of the Jamuna bridge. As this road had to be constructed on an embankment to protect it from being flooded, a combination with the FAP 8A proposals might be expected'. (Fig. 2)



Source : DMDP Urban Area Plan, 1995-2005, Vol.I. BGD/88/052

Prepared by: Arc. Tech. 0/12 Bacc. A. Lohani,
Dhaka. Tel: 912214

Fig. 2. Locations of FAP 8A, FAP 8B and Adjoining Areas for Future Urban Use.

If this was executed as proposed, a substantial amount of flood protected land of approximately 7000 ha would become available, adjacent to the existing urban core. Although the option demanded serious precautionary measures, should the embankment breach or fail to perform accordingly when it is overtopped, secure design and high perfection of implementation of the embankment work in conjunction with an early warning system could be considered in its future operation.

For transportation plan they have adopted the results of a study done by the Planning Commission. The strategy plan and the Structure Plan are mainly policy statements. The Area Plan is also extension of same policy statements without their physical expression. 26 strategy planning zones have been mentioned which are difficult to be distinctly outlined, as they are not done in conjunction with 'mouza maps'. The task of detailed area plans were left out to be done by local planners. In this regard, Nabi (1995), in his evaluation report comments: "DMDP project did not try to identify and discuss what are the existing major problems of Dhaka and what problems are likely to be severe in future, and also did not try to identify the causes and effects of those problems. As such DMDP project is not addressed to the solution of existing and future problems of Dhaka Metropolitan City" (Nabi, 1995).

Things that were needed to be included in the area plan are : a) Landuse proposal (Plan) b) Transportation proposal (plan) c) Utility services proposal (plan) d) plan for community facilities. In addition to these, further required are : i) Updated base map ii) Survey analysis iii) Detailed plan and iv) Implementation guidelines.

Whatever the quality of the project documents (DMDP), there is nobody to take responsibility of follow its outlines. The project was sponsored by the Ministry of Public Works and Housing in collaboration with RAJUK. But RAJUK seems not to be seriously involved in the plan; they are busy with development of Yusufganj (Purbachal) high land close to Dhaka which unfortunately have been ignored by the strategy plan. So appears that, this is going to be another project, a rather nice document, to adorn the shelves of the professionals.

Epilogue

Dhaka has exhausted all avenues of growth. It is a city of inconveniences. It has floods, water logging, power failure, traffic congestion, political disturbances, hartal, vandalism and many other odds. Even then Dhaka has a rich vibrant cultural life. Despite all difficulties, Dhaka has a mystic attraction of a nostalgic emotion, belongs to its own.

Ms Whitmire, former mayor of the city of Houston while addressing last year stated Dhaka, "still a manageable city, compared to other cities in the developed countries" (Whitmire, 1996). As such, Dhaka might be a beautiful city, particularly to those who have spent a vital part of their life in this city. Dhaka is a traditional city. Like most other traditional cities, Dhaka is beautiful for its lush green nature, for its carved serpentine roads, sunshine and water bodies, for its old and new buildings, parks and plaza.

Most of the city dwellers have the strong feeling that both of its beauties and quality of life are on serious decline. Effective decisions, a few of which have been indicated before, are to be realized to halt this downtrend before it is too late. Calcutta, grown infamous for its filth, recently, is cleaning up and rediscovering some of its old grace. Calcutta now, also serves as a promising example of how a "city of dreadful nights", as a Bengali poet once described it, can tidy up and turn itself around. 'The price of city's greatness is an uneasy balance between vitality and chaos, health and disease, enterprise and corruption, art and inequity'.

The Far Eastern Economic Review once observed Dhaka's ill equipped and overcrowded, sprawling maze of shanty town slums, narrow dusty streets and low highrise offices and flats as "a town planner's nightmare" (Far, 1987). "If a place as bad off as Calcutta can awaken from its nightmare, the leaders of destitute cities around the world can pay attention and take notes" (Mazumdar, 1997)

In Bangladesh, the growth potential goes unrealised, not because of shortage of funds, but largely because of inappropriate policies, inefficient allocation of resources and high unawareness; this is accentuated with weak institutions. Policy reforms and institutional

strengthening are therefore viewed as critical catalyst in the process of change. Unless, the solutions to the traffic, pollution, overcrowding and disease which are blighting in many of Asia's choking cities like Dhaka seem exceedingly remote.

REFERENCES

- Bangladesh Bureau of Statistics (1985). Bangladesh Population Census, 1981. Dhaka SMA. p. XXIX.
- Bangladesh Bureau of Statistics (1993). Statistical Year Book. Fourteenth Edition. Ministry of Planning.
- Choguill C. L. (1980a). An analysis of squatter resettlement in Bangladesh, TRP 23, University of Sheffield.
- Choguill, C.L. (1980b), (1980), An analysis of Implementation in Dacca : Past and Future. TRP 17. University of Sheffield.
- Daily Star (1994a) May 27, 1994.
- Daily Star (1994b) LGRD and Co-operative Minister, while answering a supplementary question at the Parliament. Daily Star, June 15, 1994.
- Far Eastern Economic Review (1982). All Asia Guide. 12th edition. p. 33.
- The Far Eastern Economic Review (1987). No. Place Like Home : Dhaka faces upto its chronic housing shortage. Vol. 137, no : 32. p.51.
- Independent (1996) Sadik, Nafis, on the eve of launching the State of World population Report 1996, reported in the Independent, June 3, 1996.
- Islam, Nazrul (1991). 'Bangladesher Grihayan Poristhiti'. Seminar paper presented at the Housing and Building Research Institute on World Habitat Day, October 7, 1993.
- Japan International Cooperation Agency (1990). Greater Dhaka Protection Project. Bangladesh FAP 8A. Preliminary Review Report. p. 3.
- Mazumdar, Sudip (1997). Calcutta's Glow. Newsweek. Executive ed. Peter McGrath.
- Nabi, Mahbubun A S M (1995). Review of DMDP Project Reports, Unpublished review paper presented in the National Seminar on Dhaka Metropolitan Development Plan held on 3, 4 & 5 December, 1995. NEC Conference Room, Planning Commission, Dhaka.

Price Susana and Islam (1996). Press conference, on the eve of a workshop by the organizers of the Urban Poverty Reduction Project at the National Press Club, September, 15, 1996.

Shankland Cox Partnership and others (1981). Dhaka Metropolitan Area Integrated Urban Development Report. Report prepared for the Govt. of Bangladesh sponsored by the Asian Development Bank.

UNDP, UNCHS & GOB (1993). Bangladesh Urban & Shelter Sector Review. BGD 008.

United Nations (1987) Department of International Economics and Social affairs, Population Growth and Policies in Mega Cities. Dhaka. Population Policy Paper no. 8. Published by the United Nations. New York.

Whitmire, Kathryn J (1996). Speaker on "How to manage a big city" addressing the city's elected commissioners and other officials at the mayor's office; repor printed in the Independent, May 25, 1996.