

Growing slums of Dhaka

Can we not do anything for them?

TANWIR NAWAZ

GROWTH of Slums in Dhaka Metropolitan Area (DMA) in the last ten years has been nothing less than immense and spectacular. Using 1996 as the base year, the slum population in DMA was 1.5 million in 3007 clusters out of a total DMA population of 5.5 million. In 2005 the slum population has grown to 3.4 million in 49996 clusters out of a total DMA population of 9.13 million. While the over all population in the same geographical area of 360 km² is growing at the rate of 4.5 percent to 5.0 percent, the slum population is growing at the rate of more than 10 percent year on year. The percentage of slum population within the overall population has also increased from 25 percent in 1996 to current 37.4 percent, occupying an area of only 4 percent of the total DMA area. These are some of the startling revelation and information that came out of a recent study called "Slums of Urban Bangladesh: Mapping and Census" prepared by the Centre for Urban Studies (CUS), Dhaka (for NIPORT, MEASURE and USAID).

10 million. Funnily enough, this slum population will be settled in 4 percent to 5 percent of the STP land only. The current densities are as reported in the CUS report in the range of 820 persons per acre as against city density of 66 persons per acre in general. By 2024 or earlier the slum densities will have to be in the range of more than 2000 per acre. Currently almost all slums are single storied. It will be nearly impossible to increase density of habitation on single storey structures. In future, the slums will have to be in multistoried structures.

Why do people come to Dhaka and other cities in Bangladesh? Bangladesh is urbanising fast. People are moving to places where there are or perceived to be jobs and opportunities. The cities are the new centres of jobs and opportunities. The bigger the centre, the stronger is the pull. Dhaka is the Primate City in Bangladesh accounting for over 30 percent of the total GDP. It is pulling rural migrants faster and larger than any other cities in Bangladesh. But the trend is there in Chittagong, Khulna and other centers as well.

Locations and tenure

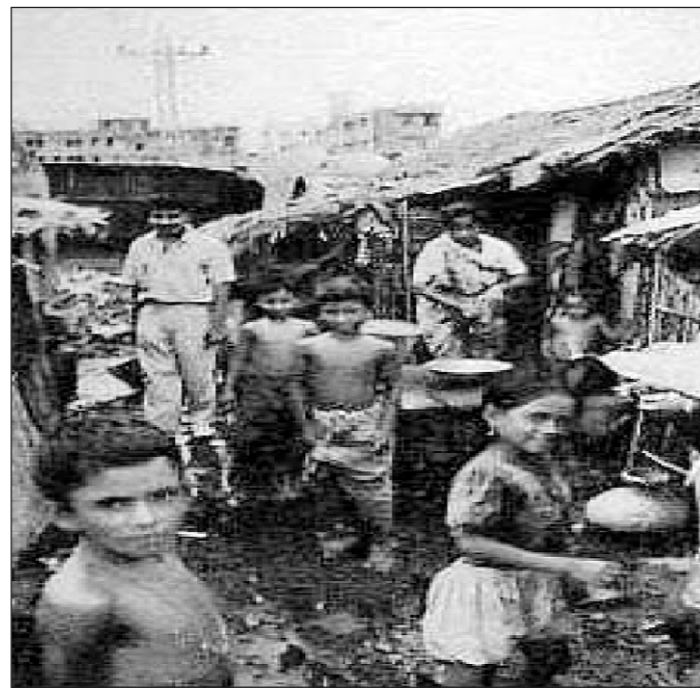
Another recent important report, Strategic Transport Plan (STP), Dhaka 2004-2024, projects a population of DMA at 19 million, while that of Greater Dhaka Area (including Naryanganj, Savar, Tongi and Gazipur) at 24 million in 2024. This implies that at the current rate of growth the slum population of Dhaka will exceed 8 million. It will comprise at least 44 percent of the DMA population. This is in line with the growth and slum population projection I made in 1999 (Thinking Rehabilitation Rationally, DHAKA CITY: A SUSTAINABLE SLUM REHABILITATION PROGRAM The Daily Star, Sept. 17, 1999, Tanwir Nawaz).

I estimated a slum population of 8.0 million out of 21 million in 2020 in the greater DMDP (Dhaka Metropolitan Development Plan 1995-2015) (1560 km²). The current estimate seems to exceed that in the DMA (360 km²).

No matter what, the trend is very clear that the population and the percentage of slum population in Dhaka Metropolitan Area (DMA) is growing much faster than the overall population and will continue to be in the foreseeable future. While DMA or the Greater Dhaka Area or the STP Area will be a huge Mega city in the range of 25 million the slum population in this area will exceed

Until the early nineteen nineties, majority of the slums were located on public lands. The percentages of slums on private lands were less. Things began to change in the nineties. The government started to evict many slums from public properties. Open private lands were still available. Private land owners started to rent out the lands to slum dwellers as the return on these lands were handsome because of extreme high densities. Thus to day in 2006, 77 percent of slums are on

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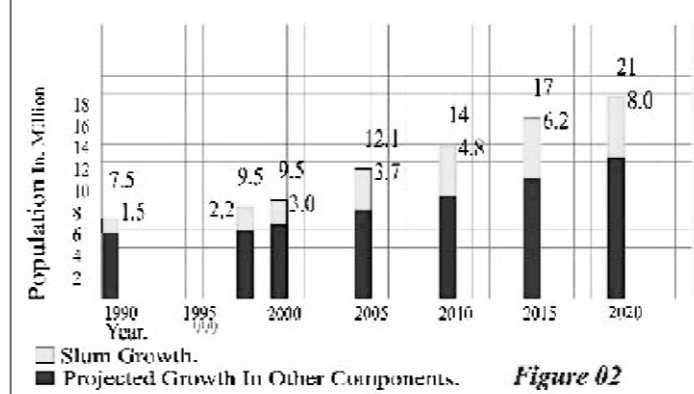


private lands. Most of these slums are in the inner city, close to places of work. However, I predict that this situation will change rather rapidly. The price of land in the inner city is rising much faster than outer and fringe areas. Private land owners like the private builders are only concerned with profits and returns. The day it will be more profitable to

develop than to rent out, the private land owners will start eviction. With rapid and faster increase in the prices of inner city lands, the day is not far off when we will begin to see evictions of and arsons in slums on private lands.

As more controlling and affluent sections of the society we have turned a blind eye to the coming problem. Nobody really wants to do anything meaningful. The civil society is too busy with other issues. The environmentalists are busy with something else. The government has higher priorities. So, in future where will these slum people go? The obvious answer is to more fringe areas under new private lands, mostly to the east of the current city, up to the Balu River, the day the river embankments are built. Some will also move to the fringes of the burgeoning industrial areas of Savar and Tongi.

The slum dwellers do not have tenure. They do not own the land they live on. The government does not have a policy of helping with land tenure for slum dwellers. Tenure and ownerships are directed only at the more affluent portions of the city population. Private builders only build for profit and have not catered



Graphical Growth Chart Of Population And Slum People In DMDP: (Dhaka Metropolitan Development Plan) Area.

to this huge and burgeoning part of the population. They will not do so in the future unless there is profit in it for them.

Yet, without tenure and ownership, the slum population will be transitory, moving from one area to other every five, ten or fifteen years. Without, tenure, slum dwellers do not get development assistance, as no agency seems to invest in physical infrastructures that may be removed in short future.

Yet again, this need not be so. As I stated in my 1999 paper on slum rehabilitation with tenure, there are ways to make slum people rehabilitated and given tenure. Before I explain again how this can be achieved, let me state some of the reasons why tenure or ownership is important. I quote from my earlier article (Sept. 17.1999) in The Daily Star the benefits of Tenure and Relocation and Rehabilitation Programme.

"Benefits of relocation and rehabilitation programme

- Potential comprehensive relocation of the existing slums will bring huge benefit to the City as a whole and improve the living and the urban environment immensely.
- Rehabilitation of slum dwellers in new settlements will allow for better governance.
- Urban land management of the city will be much more feasible

under the new plans.

- Proper open space planning and environmental management and sustainable developments of the City would become feasible.
- In the new settlements the allocated slum dwellers will have legal tenure of land and thereby benefit from future development programmes.
- NGOs and other donor and assisting agencies can provide financial and other help knowing that the residents have security of tenure.
- The current existing land occupied by the slums will be cleared and returned to the private and public owners in phases.
- The residents will be legal owners of the property, and will have a

stake in its development. The money paid towards amortisation will go towards their legal ownership of the property. Therefore, they will have a stake in its development.

- The government will benefit from the utility services being provided to the residents, as the money now paid will go to the government treasury instead of being illegally siphoned by the criminal elements.
- Provisions for various slum's either by the public sector or NGO's would be eminently feasible.
- Health care and reproductive system training and facilities easier provided.
- Education and vocational training.
- Small commercial enterprises.
- The residents being the legal owners will not allow unauthorised miscreants to prey upon them.
- The illegal dealings in drugs and prostitution etc will decrease dramatically because of pride and security of legal ownership.
- Community building will become feasible. Currently there is no community in the slums. People live in fear of eviction, of criminals, rent seekers and other miscreants. It will be possible for them to live in the knowledge of security and the protection of the law of the land.

Let me explain how land tenure can be achieved by slum dwellers. When public agencies like RAJUK develop land, they make a reasonable profit. That is why they are more interested in land development than planning and development controls. When this developed land is passed on to private hands in lease the allottees gain a huge wind fall as they buy the land at less than market prices. When these allottees then hand over the land to the builders and developers, then again both the allottees and developers make wind fall

profits. The basic idea is to catch a part of these publicly generated wind fall profits and pass it on to the slum dwellers for them to have ownership and tenure. The way to do it will be when RAJUK or other developing public agencies develop land for lease, they will retain at least one third of the land for development from leasing to general public. Also, to recoup the cost of one third retained land, the development agencies will sell the two third part of the land at fifty percent higher prices (say at Tk 3.0 lakh per katha (1.65 decimals) instead of Tk 2.0 lakh). This will allow the public development agency to pass on this one third part of the developed land to Slum Cooperatives (and not to individuals) for development at nominal costs under closely stipulated conditions. With this newly allotted land as collateral the Slum Cooperatives will then be able to develop and allocate new housing to their shareholders on long term tenure or rental basis.

I have worked out definitive schemes that will allow a family of six-person household size to own a walk up apartment of 400 sqft and pay off the mortgages in fifteen years with no more than Tk 1500 per month. This is within range of 30 percent of slum dwellers to day. With rising income this will be more and more feasible in the future. But somebody has to take the lead. No body I know is doing it now.

In conclusion I do not see the growth of slums in large developing cities in a negative way. People are moving to the cities in search of jobs and opportunities and this indirectly testifies to the vitalities of growing large cities. These people provide vital services to the economic and urban life of the city and the nation. We must find ways that their lives can be made more meaningful and they also will have hopes and means of advancing to the mainstream.

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Professionals Groups: Engineers, Planners, Architects etc.

Private Sector: Builders/Developers

Civil Society, NGOs, Donors



Possible Areas For Proposed Relocation Of Rehabilitation In DMDP Area

Isn't Bangladesh a trash of water?

MD. SAEEDUR RAHMAN

THE dynamic and interactive systems of the atmosphere, hydrosphere and biosphere extend throughout the earth and the nexus between the living societies grows strong. Nothing portrays these interlinks better than water. Water in its cycle being reused from the oceans and land surface; through the atmosphere and then, as precipitation, it feeds surface run off in rivers and the constant movement of groundwater back to the oceans. Every drop of moisture in such process is in itself a tiny life fulfilling its function and running the cycle. According to the Quoran "water is the source of life", to the Bible "God is spoken of as the fountain of living waters" and, to the Bhagavat Geeta "I am the taste of living waters"; all these leave no question unanswered as to relationship between water and life. Life belongs to the earth; the earth does not belong to life. Each person as such has a role to play in rehabilitating the environment. So has each community. The water cycle in its motion puts each individual downstream of some other else. This earth is thus viewed as a single, complex and integrated system run by water.

Bangladesh located on the northern tip of the Bay of Bengal at the lowest reach of the fluvial system bordering India and Myanmar is hydraulically porous by 57(60?) trans-boundary rivers at its 25 administrative districts. The south is open to the sea. The land occupies the deltaic plain of the Ganges-Brahmaputra-Meghna river system criss-crossed by a labyrinth of 230 rivers. These rivers and canals are seasonally flushed by the Ganges, Brahmaputra and Meghna. The Meghna from northeast joining the Ganges-Brahmaputra system constitutes 93 percent of Bangladesh's total inflow and, the rest 7 percent is generated within the country chiefly from annual average rainfall of 2300 mm. The Ganges, Brahmaputra and Meghna (GBM) rivers system discharge fluctuates between dry and wet season by ratio more than 1:10. The annual sediment discharge known to be

the highest in the world ranges between 0.5 billion and 1.8 billion tons. The length of the intricate river network that carries the sediment laden flow to the sea is 24,000 Km. or less. The above hydro-dynamics in conjunction with astronomical tidal forces, varying from less than two meter to as high as more than 6 meter, resulting backward effect has not only been complicated but in simultaneous made nation's physical environment more prone to hazards by water pollution.

Pollution enters into the water bodies through industrial liquid waste and household hazardous waste and refuse disposal; wash off and soil erosion from agricultural lands carrying mainly fertilizers, herbicides and pesticides; and run off from city streets, horticultural, gardening and commercial activities in the urban environment. Contamination of water is the starting event in the environmental decadence process. Water in its cyclic movement continuously brings connection to this phenomenon in maintaining the ecological balance.

By next 20 years forty percent of the national population will drift into urban centers. Roughly there are 525 urban centers including 255 municipalities and six city corporations. There is not much information on how much waste those urban population generate every day. The Dhaka city however produces 16,382 tons of solid wastes every day which with increasing population will rise by 2025 up to 47,064 tons per day. In Bangladesh out of the 720 industrial units in Chittagong on the south-east only 20 per cent treat their effluents before disposal into water. In Khulna on the south-west, 300 large industrial units that discharge 10 million gallons of liquid wastes each year enter into nation's waters with little or no treatment. An estimated 1800 tons of pesticides enter into the water bodies annually. Use of pesticides has increased fourfold and fertilizer consumption in farming has risen closely by 400 per cent between 1975 and 2005. Approximately 400,000 tons of oil a year is spilled into Bay of Bengal of

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which 6,000 tons is contributed by Bangladesh. Spillage of crude oil residue and wastewater effluent from land based refineries amount to about 50,000 tons per year.

Compared to Bangladesh the land surface of India (3,287,782 sq. km.) is 22 times greater. Similarly proportionate is the disposal of wastes into water bodies. Eighty percent of the 14 perennial rivers in India are polluted with sewage. The generation of wastewater in India during 1981 was estimated to be 74,529 million liters a day. The facilities to treat waste water are not adequate in any city in India. Presently, only about 10 percent of the waste water generated is treated; the rest is discharged into the water bodies eventually entering

through the hydraulic pores into Bangladesh at downstream. More than 70 percent water use in India is ambient to agricultural purposes. Run-off from the agricultural fields, as it contains fertilizers and pesticides, draining into rivers eventually flows downstream. Disposal of obsolete computers is another recent threat to water pollution. It has been estimated that the amount of e-waste landing in India would be 20,000 kilos a day. India has nearly two million computers in the pipeline for recycling. The acid treatment and burning also contaminates water through effluents and other form of disposal.

E-waste is the speedily growing waste streams around the world

triggered by the exponential growth of personal computers and by their rapid rate of obsolescence. Without recycling, this will result in the ejection of 550 million kilos of lead, 900,000 kilos of cadmium and 180,000 kilos of mercury in the global environment. By 2005, 315 million computers worldwide were ready for disposal. Lead, cadmium, mercury and other substances like chromium, plastic and flame retardant materials in computers are hazardous substances. E-waste is the century's new threat to environment.

Agricultural fertilizers and pesticides, industrial effluents, and household wastewater that are discharged without treatment into surface water may also leak into

sub-surface water. Toxic substances entering the lakes and lagoons, streams, rivers, oceans, and other water bodies are either dissolved or lie suspended or deposited on the bed adversely affecting the aquatic ecosystems. Pollutants can also seep down and affect the groundwater. Polluted water is unsuitable for drinking, recreation, agriculture, and industry. It diminishes the aesthetic quality of lakes and rivers. More seriously, contaminated water reduces reproductive ability of aqua-lives. Eventually, it is a hazard to human health. None can escape the adverse impacts of water pollution. Industrial effluents, agricultural runoff, dumping of toxic wastes thus entering into groundwater, rivers,

and other water bodies, and through the food chain, ends up in our households.

Bangladesh has its national policy on water pollution prevention and ecosystem conservation. The Environment Policy 1992, Environment law 1995 and, Environment Preservation Rules 1997 are the legislations in place for restoration of environment. But all these could as yet make little or no effect on the deteriorating environment. Because monitoring the water quality is extremely weak. Trans-boundary movement of hazardous wastes is seen emerging as a critical issue, which countries in this region have not been able to adequately address. Although seven out of nine countries in South Asia have signed the Basle Convention, the region lacks a common approach to the import of hazardous wastes. It is clear that the institutional and regulatory capacity of the countries in this region for surveillance on the import of hazardous wastes is limited.

Among the institutional mechanisms for regional cooperation on the environment, the most significant one is South Asia Cooperative Environment Programme (SACEP), established in 1982 under the aegis of the United Nations. The SACEP is responsible for the implementation of a regional project resulting from the SAARC meeting of environmental ministers held in Male, Maldives, in October 1997. The Male Declaration enunciated a need for a regional environmental action plan and adopted a common position. The absence, however, of a formal affiliation with SAARC limits SACEP's ability to mobilize resources and to implement regional actions.

Infrastructure development and environmental damages together have gone so far by such extent that reversal is no more possible; and wise neither. In the process of developing and managing the nation's water resources targeting agricultural production, 14,000 km of zigzag embankment, 13,000 appurtenant structures and 3,500 km of snaking drainage channels including huge irrigation canals built as of now over a period of more

than 50 years impacting the hydraulics of streams has culminated in disruption of its ecological equilibrium. As a consequence, the balancing process of ecology has been terminated worsening further the dimensions of the environment. The natural drainage canals have been strangled to death leading to eventual disconnection with the broader hydrologic characteristics of the region as a whole and as such converted into smaller isolated units. Only route out is the mitigation.

Efforts may therefore concentrate on resuscitation of the natural streams integrating it with consumptive and non-consumptive use of water. In doing so, first develop a dynamic digitized elevation map of the country's land surface; secondly carry out mathematical modeling of round the year flow patterns of water and, thirdly rearticulate the hydrologic characteristics of the basin in totality with a view to washing the nation's land mass bi-directionally with particular reference to drainage, diversion and detention. Based on hydrologic approach derived from the model the hydraulic infrastructures in place may be relocated in regional context for maintaining the balanced ecology by the nature itself within the nature. On default lives in Bangladesh will continue to grow in a trash of water severely polluted by wastes of all forms from home and abroad.

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