=Feature = Development

The Impact of Slums on City Dwellers

UE to pressure on resources, their is a large scale migration of rural population to urban areas particularly in big cities. They are being pushed from the ru tal areas by increased land lessness and unemployment Disasters also play a part: roughly 20,000 people are made homeless each year through one natural hazard or another and they migrate to urban areas particularly in big cities. The consequence of this is the enormous growth of urban slums. In Dhaka city about 3000 slum population live per 100 decimal of land (CUS. 1989). In 1974 the floating population of Dhaka city was estimated at four hundred thousand and this figure will be increased to 2.7 million by the end of this century. As a result millions of low income group people take shelter in slums and squatter settle-

The problems plaguing large urban agglomentation include chronic housing shortages, omnipresent squatter settlements and slums; inadequate infrastructure and public services; wide-spread poverty. relatively high unemployment rates; environmental degradation and increase in delinquency and crimes. These problems, individually and collectively, contribute to lowering the quality of urban life. The settlements of the poor are extremely vulnerable to environmental pollution. The poor tend to locate near polluting industrial areas, public waste sites. Their proximity to unhygienic environment is perilous to their health. Moreover being constrained by availability of safe water within the vicinity of slum/squatter settlements, they often use contaminated water from road side drains, which carry human excerta from hanging latrines and wastes from bathing, kitchen and laundry for cleaning of utensils and washing clothes, endangering health of the slum dwellers in particular and the urban community in general (Afsar, 1992; Kabir, 1993).

The growing increase of migrants in cities, particularly if they are unemployed, has 'not only economic and social implications but also has major environmental implications. Most of the slums where migrants are forced to live in. lack in the most basic facilities such as clean water, sanitation facilities, food, fuel, housing, education and health care services. The housing condition of 'the slum dwellers is extremely poor. Most of them live in tiny thut which is a patch of work of 'polythène sheet, branches, hard board and thatch. Besides, a ·large majority of the slum dwellers do not have access to electricity (Howlader et al. 1994). They use "Kupi" or haricane for lightning. A large majority of women from the slum/squatter settlements use wood and kerosine oil for fueling. For this women and children collect fuel from wastes such as waste papers,

ITH dark brown

streaks of gray hair.

complexion

Debendranath is 40 years old.

Living in East Dolzol village

under Aditmari upazila of Lal-

monirhat district. Deben-

dranath was born in a self-suf-

ficient, small farmer family. As

a young boy he attended the

local primary school for five

years, and as the youngest of a

family of seven, he spent his

boyhood amidst love and care

but as he remembers, with the

passage of time, days became

harder and harder. After the

death of his father in 1974.

Debendranath continued to

live with three of his elder

brothers in a joint family

which ultimately broke up

mari is a fairly representative

area of northern Bangladesh.

Located about 12 kilometres

northwest of Lalmonirhat

town. Aditmari upazila is regu-

larly washed by the mighty

Teesta river and is very prone

Adoption

sure to the treadle pump

technology came when his

brother bought a second-hand

pumphead from a neighbour.

He bought his own pump in

1984 for Taka 335 (\$ 11) in-

cluding pumphead and instal-

lation while he himself pro-

vided the bamboo. Unfortu-

nately the pumphead was

stolen and later he bought a

second pump. In addition to

this, he is also sharing water

His farm

1.75 acres of paternal land.

Later he purchased 94 deci-

mals and then sold 44 deci-

mals. This gives him a farm of

2.25 acres including home-

stead. His farm is made up of

22 plots of high, medium and

low land, many of them adja-

Cropping intensity

pump has not increased crop-

ping intensity on Deben-

Adoption of the treadle

cent to one another.

Debendranath inherited

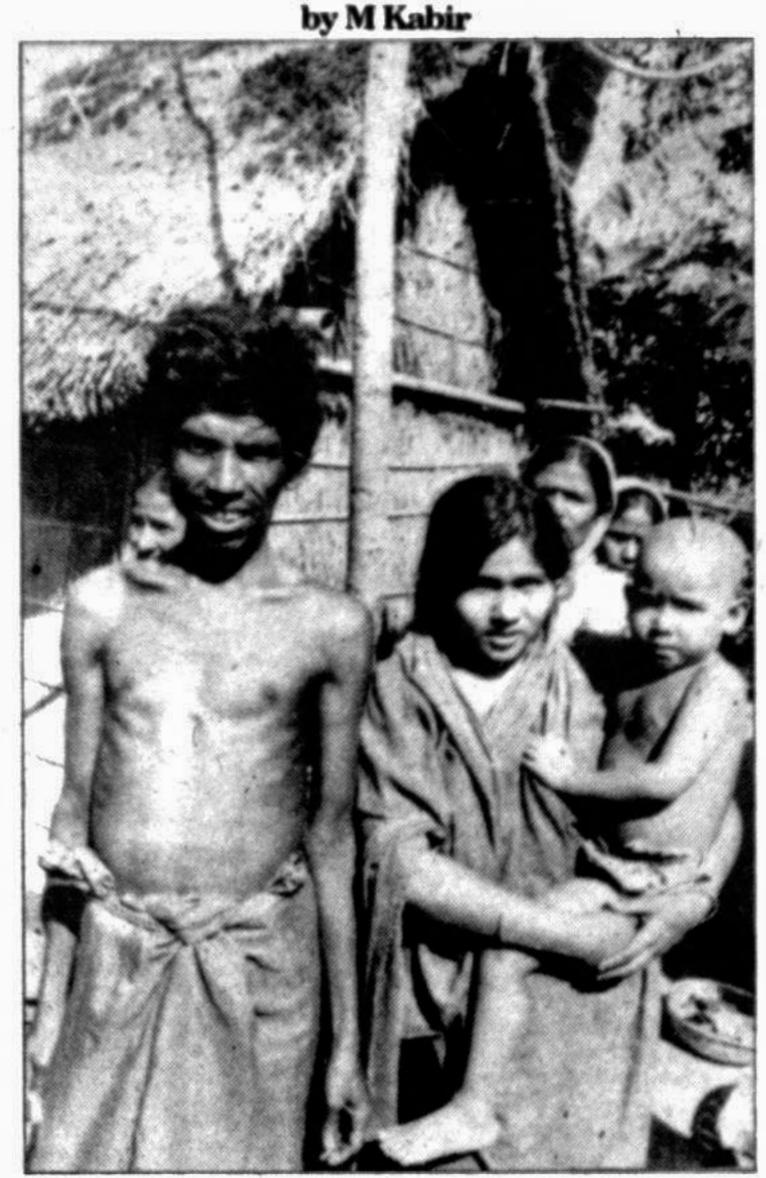
from his brother's pump.

Debendranath's first expo-

to flood and erosion.

Socio-economically, Adit-

eleven years later in 1985.



Increased migration putting greater pressure on the etty

leaves, hard boards, etc. One of the most pressing

issues for the urban poor is housing. Squatter settlements often spread to land without public infrastructure. These areas are intensely overcrowded. In Dhaka city slums there is only about 30 square feet per person. Located mostly in low lying areas often on ditches and marshy lands. In the slums, one room accommodation is most common which leads to overcrowding with average area of dwelling units of about 120 square feet for a family of average five members (Howlader et al. 1994). Slum women who work are characterized by irregular job with no fixed wage, work long hours with no job security. The maids have no holidays and are subjected to physical violence and sexual abuse at the work place. The garment factory workers are not totally immuned from these risk either. Labourforce participation by adolescent? girls, politicization of the mastaans in the in the urban areas, wife beating kidnapping and rape are different forms of vio-

lence on women in slum areas. Most of the slum dwellers rarely have access to safe water or sanitation. People defecate in ditches, rivers or elsewhere or use open latrines. Recent evidences suggest that a large majority of the slum dwellers use unhygienic latrines. Nonsanitary hanging type latrines

scattered over the pond, railway side, river, open space have been causing a great health hazard and spread discases. Health inevitably suffers. around one third of the people in sium communities are thought to be sick at any time (Howlader et al. 1994). Infant mortality rate in the rural areas was 100 deaths per thousand live births while for the poorest urban areas it was as high as 150 per thousand live births. Similarly, maternal mortality among the slum women are also higher.

Children are particularly at risk-exposed not only to disease but also to the stress and dangers of urban life. They might be street traders, for example, or garbage pickers or shoe shiners, but can also be involved in illegal activities such as begging or prostitution (Afsar, 1992). Most of them can be considered street children either because they spend mest of their time working on the streets or in some cases because they have been abandoned by their parents. Men, women and children from slums who help cleaning our environments, are the ones affected badly by unhygienic environmental conditions. Women and children are worst affected because of their direct contact with filth and wastes, in their living and working situation. Health haz-

women and children at health risk, but also endanger the urban environment in general.

In addition, as congestion increases, pollution from motorized transportation trends to increase. There are evidences that air pollution, congestion, social disturbances, crime and similar problems also increase disproportionately with city size. The need to dispose of solid wastes become common place problems of the slum dwellers.

Tuberculosis will be increasing among the urban poor as well as infectious diseases which spread easily in crowded and unhealthy housing conditions. Poor housing increases social stress and disruption, domestic abuse, rape. murder and drug use are more common (Chaudhury et al. 1993). Sexually transmitted disease is more likely to spread among the slum dwellers. Women whose health is adversely affected by their environment are much more likely to die as a result of child birth. Pregnancy doubles the risk of death from common diseases which are common among poorly housed and malnourished women. Malnutrition coupled with infections. high fertility and poor sanitary conditions put women in slum at higher risk during pregn ancy and child birth Fronczak, et al. 1993). Lack of access to safe water is inade quate among the slum dwellers. It also a major medium for disease transmission including typhoid, jaundice, cholera and diarrhoea. About 30-40 per cent of the slum dwellers suffer from water born and communicable disease (Alsar. 1992). Water borne diseases such as polimylities, malaria, yellow lever are just some of the more commonly known ones.

One major source of urban air pollution is the automobile Industries usually situated in or around cities also have an impact on the quality of the environment. Chemical contamination and disposal of toxic wastes are just two ele ments of the multifaceted problem of industrial pollution Because lack of proper housing facilities, most of the urban poor live in slums and is the major cause of environmental damage. Open flow of sewerage discharge has been creating health hazards to the slum dwellers. Due to clogging of underground pipes sewerage connections to most of the house are linked with road side drains. The wastes of industries are having commulative effects on the environ-

The problems of lack of safe shelter, threat eviction coupled with natural hazards such as floods, fire etc. are common in slum. The problems of the slum dwellers are so vast and complex as to seem almost insuperable. Slum settlements arise spontaneously because migrants are determined to survive as individuals and famiImplications for the

Future

The urban poor in Bangiadesh is estimated to be about 10 million. By the year 2005 it will be about 15 million. This rapid growth of poor urban population will have many social economic and environmental implications. The fastest growing section of the urban areas are slums. The common feature of slum is that they live in crowded slums and squatter settlements. Lower income group people are mainly employed in informal sectors. Poor families tend to have more children and they suffer from all kinds of pollution and health hazards.

In Dhaka city population growth would be even greater than expected. Dhaka currently has the second highest population growth rate in the world for a large city. Between 1961 and 1991, the population in Dhaka city has increased almost twelve times and could increase 10 times more in next 40 or 50 years to an unimaginable 60 million. Under high fertility scenario. Dhaka's population would be 20 million in the year 2020. more than three times its present size. Under the low fertility scenario. Dhaka's population would be 15 million in 2020. If the present situation continues, it is expected that at least half of the Dhaka city population will live in slum/ squatter settlements with little access to basic amenities. For the poor the main environmental priorities remain improved housing and provision of basic water and sanitation services at affordable costs. This will create many social and environmental haz ards to the city dwelfers Demand for housing would be 628000 under high fertility as sumption compared 300000 under low fertility assumption Similarly, the demand for water would be 454 million gal lon under high scenario as opposed to 351 million under

low scenario Environment and popula tion are interlinked and mutually dependent systems. The synergetic affects of these two systems have profound conse quences on development process at various levels (ESCAP 1994). The immediate need therefore, is the formulation of policies and programme from a holistic perspective. Rapid urbanization, particularly the growth of large cities, and the associated problems of urban slums, degraded environment, inattequate health services, unemployment and poverty have emerged among the key socio-economic issues of potentially important political implications in many developing countries (ILO, 1994), Lack of precise knowledge on the sources of environment of slums and squatter settlements, can not of course, be solved by human settlement and environmental policies alone, as they have their roots in poverty and the structures and process that create and maintain it.,

The writer is a Professor of the Deput of Statistics at Jahangir nagar University.

estimated he hired in about 15

days' labour to help irrigate his

cannot simply because the schools do not exist. RDRS is among those working to provide basic education for the children of the poor in northern Bangladesh. In its working area covering six districts and 6 million people, it estimates there are at least 300,000 school-age children who are not attending primary school. The area needs about 1.300 primary schools to meet

many poor children in northern Bangladesh.

Some children must start

work at an early age to help

support their families. Others

who would like to go to school

the demand. That demand is growing steadily as parents and their children begin to realize the benefits of education. Over the years. RDRS has helped build or reconstruct over 400 primary schools. Since proper permanent schools can be costly, it is now participating in a nationwide government programme to help develop cheaper ways of teaching the children Non-formal primary schools give children between 8-10 years three years of basic schooling by using very basic school shelters and voluntary teachers - until 1993, RDRS ran only 26 of them using its

own limited resources. Since January 1993, primary school has become a real istic option for many more poor children in the area. In partnership with Government RDRS will build and run 450 non-formal primary schools over the next three years. That will mean 13,500 more chil dren who could not attend before now have the chance of schooling usually for the first time in their lives.

Every one of these low-cost primary schools will have only 30 students. Since many fewer girls have the chance of educa tion they are given priority in these schools - at least two thirds of the students should be girls. Female teachers are also given preference.

The local community helped build the schools and also. through a voluntary school board, to run them. The schools are built where there is no other primary school

'School's In'

by A M Ahmed

within 2 kilometers or in very inaccessible places. To keep costs low, the buildings are very basic - using concrete pillars and un or clay-tile roofs. To saleguard students' health, each school will have a tube-well to supply safe drinking water, and a latrine. .

Dhekiarum School, Kurigram

One of the first of this new wave of primary schools was in the village of Dhekiarum in Ulipur Thana of Kurigram District. As in other villages, the land for the school has been donated by a local farmer. Abdul Hakim owns only 3.5 acres himself but, recognizing the need in his village, was happy to sign an agreement to give almost half an acre for the new

Dhekiarum also now has a teacher - 32 year old Mahbuba who lives in the village with her husband and daughter. Mahbuba is quite well qualified - having advanced as far as higher secondary school with a total of 12 years education. She will also receive training from RDRS and basic teaching ma-

Education of children is one of the best ways of bringing about development for poor children and poor countries. In northern Bangladesh, many children will benefit from this new programme to provide primary education cheaply and simply. School is 'in' for more poor Bangladeshi children.



Getting ready for school

Political Clouds Obscure the Summit View

by Daniel Nelson

Final preparations are underway of another huge UN conference - the World Summit for Social Development. As usual, reports Gemini News Service, it is not clear whether the get-together will be no more than a talking-shop or whether it will lead to changes in policy and practice.

HE forthcoming UN "Social Summit" initially looked as though it would fail by trying to be all things to all people. Now it is in danger of failing by being nothing to anyone.

The UN Children's Fund started the fashion for summitry with its Children's Summit is 1990. In 1992 the Earth Summit in Rio de Janeiro focused on environ-(with development tacked on at the insistence of developing countries). Last year the family planners had their day with a World Population Conference in Cairo.

Children, environment, population — they are fairly clear issues. So is next

Family

Funding to come from

such as military

The mechanism:

Industrialised countries to allocate

20% of foreign aid (up from 7%) to

social sectors

social spending

cuts in other expenditure,

planning

services

worldwide

Within 10 years every nation would have

reached the basic threshold of development'

earmark 20% of budgets (up from 13% now) to

September's world women's conference in Beijing. But social development? What exactly is it supposed to be

During the first preparatory meetings it was evident the diplomats and bureaucrats responsible for drawing up the conference declaration were themselves not clear.

"There is such a mixed bag of issues under the umbrella of 'social development'," says Martin Khor of the Malaysiabased Third World Network, "that the Summit process seemed in danger of collapsing under the heavy weight."

Among the major topics. organisers considered tackling poverty, national and interna-

Universal primary

malnutrition

healthcare; halving of

maternal mortality and

moderate mainutrition;

Basic education

adult illiteracy

Developing countries to

for all; halving of

The cost:

\$30-40bn

elimination of severe

tional inequity, labour rights, health and homelessness and welfare issues, such as the rights of children, the elderly and the disabled. The focus has been nar-

rowed down by identifying three core issues: climinating poverty, reducing unemployment and strengthening social integration.

The problem is that there is no agreement on how to deal with them.

Many developing countries and non-government organisations argue that the answers must include debt relief and the adoption of more socially acceptable policies by the World Bank and International Monetary Fund (IMF).

Major industrialised countries, on the other hand, say that a UN conference is not the place deal with such financial concerns.

They insist that financial decisions be taken in "one dollar, one vote organisation, such as the IMF - which they control -- rather than in "one country, one vote organisations," such as the UN where they are outnumbered

by developing countries. UN Under-Secretary-General Nitin Desai says that the conference's draft declaration goes further than any previous UN document towards advocating a softening of the harsh social effects of World Bank structural adjustment programmes.

But that is not saying much - certainly not enough for pressure-group leaders such as Khor and the international

charity Oxfam. Another controversial proposal for finding cash is the "20:20 formula," under which developing countries would agree to spend 20 per cent of their budgets on social sectors finstead of 13 per cent at present), and industrialised countries would earmark 20 per cent of their aid budgets for the social sector, rather than

the current 7 per cent. The idea has the advantage that no extra money would be required. Instead, additional money for health and education could be released by cuts in areas such as defence and debt relief.

Its disadvantage is that both developing and industrialised countries resist any policy which tries to tell them how to spend. So the proposal may not make it into the declara-

But even assuming anything worthwhile is agreed in the Summit process, there is another potentially fatal flaw: fol low-up

The danger - which dogs all major UN conferences - is clear: without agreement on how decisions are to implemented, they won't be

While on the resource is sue (such as debt relief) there are differences of opinion, on the issue of follow-up there appears to be no opinion. commented Chilean Ambas sador Juan Somavia, who provided the inspiration of the

Summit.

Prosperity through the Treadle Pump

ard arising out of unhygienic

environment, not only put

A Case Study from Aditmari Upazila: Debendranath

dranath's farm. Only one of the 11 irrigated plots was previously fallow in the rabi season. All the others were irrigated by water from a large pond. Instead, the main impact of the pump in the rabi season has been to make irrigation more efficient, increase crop yields, and allow a greater variety of crops to be grown.

Today. Debendranath grows wheat and tobacco on his medium land. Before adopting

wheat have risen substantially. Tobacco now yields 2.1 t/ha compared to 0.5 or 0.7 t/ha before adopting the pump.

Wheat yields have reportedly risen from under 1 t/ha to 2.4

Cropping patterns

The main cropping pattern of Debendranath's irrigated land is Aus-T-Aman-tobacco. Seedbeds for China Aus are prepared in the first week of



A new means to a better life

Photo-credit - The Treadle Pump-Manual Irrigation for Small Farmers in Bangladesh.

the treadle pump, the land grew pulses in the rabi season Wheat or tobacco, which is an important cash crop, was too costly to irrigate. Water had to be lifted from a pond using a bucket and pole, channelled 275m to a smaller pond near the homestead, then lifted out again for irrigation. Irrigation by treadle pump is much more efficient an allows the cultivation of higher value crops. In the rabi season, Debendranath grows tobacco, vegetables, and wheat. Yields of tobacco and

Falgun (15 Feb-15 March) and the seedlings transplanted in the third week. The rice is harvested in mid-June to mid-July. In the Aman season, Debendranath transplants BR11 in the month of Asar (15 June-15 July) and harvests from mid-October to early November. Tobacco is the planted after the harvest of T Aman and harvested in early February.

New crops The treadle pump has also

permitted the introduction of new crops. Wheat can now be grown on medium land Debendranath also grows an astonishing variety of vegetables (cabbage, cauliflower, tomato, potato, carrot, spinach, aroid, kangkong). Of these, cabbage has the advantage of being harvested gradually, a few plants at a time, providing a convenient source of cash when needed. The most important change, however, has been the introduction of modern Aus rice. Before adopting the treadle pump. Debendranath grew a direct

Debendranath

The treadle pump has made it possible to grow a transplanted, modern variety (BR1) which yields 4 t/ha.

seeded, local Aus ('Palashi')

rice which yielded 1.5-2.0

Labour use

Although Debendranath's

wife and eldest son help him operate the treadle pump, he often has to rely on hired labour. Demand for pump labour is highest in the Aus season when Debendranath hires in about 20-25 days of labour. In the rabi season, the pump is operated mainly by family labour. Debendranath

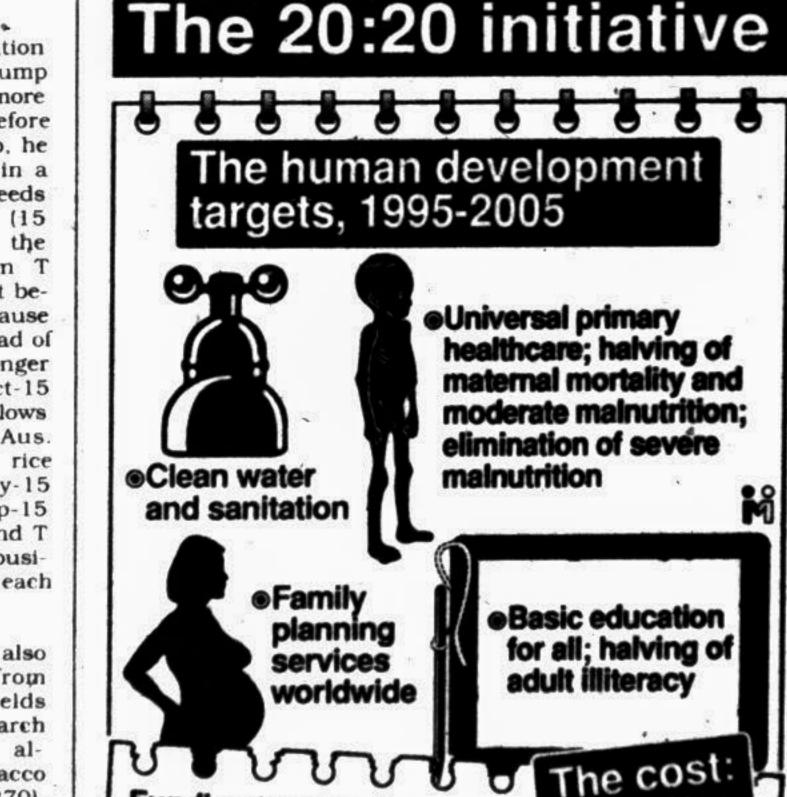
tobacco, but this labour also helped with other crop operations besides irrigation. Compared with Boro rice, rabi crops need relatively little ir-Income By allowing the cultivation

of MV Aus, the treadle pump has made Debendranath more self-sufficient in rice. Before adopting the treadle pump, he bought rice four months in a year. Now he no longer needs to buy rice in Boishak (15 April-15 May) because of the higher yields of modern T Aman (this, he says, is not because of the pump but because he now grows BR11 instead of IR8). Similarly, he no longer buys rice in Kartik (15 Oct-15 Nov) because the pump allows him to grow modern Aus. Debendranath now buys rice only in Joistho (15 May-15 June) and Aswin (15 Sep-15 Oct), or before the Aus and T Aman harvests. As a side business, he sells a little rice each season in the local bazars.

increased his income from cash crops. Tobacco yields have increased and in March 1988 Debendranath had already sold 77 kg of tobacco earning Taka 8,520 (\$ 270). Income from vegetables is more difficult to estimate. Roughly, Debendranath earns about Taka 3,000 (\$ 95) from rabi vegetables; half of this from cabbage. A significant portion of the produce is also consumed by Debendranath's

Taken from The Treadle Pump-Irrigation for Small Farmers in Bangladesh by

Alaistair Orr, A S M Nazrul Islam, Gugnar Barnes.



The treadle pump has also family.