



WATER, ENVIRONMENT AND MANAGEMENT

Transformation practice in low income housing

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INTRODUCTION

With an estimated population of about 110 millions (1990) living within an area of about 55,000 sq. miles, Bangladesh is one of the world's largest and most densely populated countries. It is also, by any method of reckoning, one of the poorest countries in the world. In fact, if the entire population of the world were placed in Australia, the density per sq. mile would approximately equal to that of Bangladesh (Choguill, 1980).

GROWTH OF URBAN POPULATION

Although Bangladesh is not described as highly urbanized in character, it has shown marked increased in the rate of urbanization particularly after the liberation of the country in 1971. Because of varied push factors like expensive landlessness (estimated to encompass 50 percent of the rural residents) (1), natural disasters, low agricultural productivity and urban pull factors like higher income and employment opportunities the urban population has increased significantly to 15.78% in 1981 (from 5.19 in 1961 and 8.8 in 1974) (2).

URBAN CONCENTRATION IN THE CAPITAL CITY

Dhaka, the capital city of Bangladesh, has experienced rapid population growth during the last two decades as a result of high rates of natural increase and massive in migration from all regions of the country. Dhaka's population increased with an annual growth rate of 8.96 during 1961-74 grew to 10.78 during 1974-81 (Islam, 1991). According to recent newsreport the population of the city is found to be increasing at the average rate of 200,000 per year (Dainik Bangla, 1987). The density of population in some parts of the old city is extremely high (Sutrapur and Kotwali police station areas, for example, accommodates more than 200,000 and 348,000 people per sq. mile respectively). The city had a population of 1,679,572 in 1974 increased to 3,458,602 in 1981 (3). Average household occupancy has increased from 5.5 in the sixties to over 8 persons in the later eighties.

Future population projections for the capital city are even more dissapointing. According to the 1984 assesment, Dhaka was the 31st largest city in the world in 1965 and is expected to be the 15th largest by the year 2000 AD (United Nations, 1987). It is expected that by that time

Dhaka's population will have reached 11.2 million.

The consequence of over crowding is already very distinct particularly in terms of deteriorating environmental conditions and acute housing shortage in the metropolis. The DMAIUDP report (4) in 1981 revealed that the total number of slumdweller in the city were between 700,000 and 750,000 which added to the population of squatters come around 850,000 or more; This represented about 30% of the urban population in 1980.

In a survey conducted in 1988 the Centre for Urban Studies found a total of 1,125 slums on 1340 acres of land, accomodating a total population of 878,000. CUS also estimated that about 2 million people (approximately 30 percent of the total population of 6 million) were staying over 1500 slums and squatter settlements.

According to world Bank social indicator data (5) about 85 percent of urban and rural residents were living below the poverty level in the country; 37% of Dhaka's population were staying in slums while 9% in squatter settlements. Household living in slums lack at least two or more of the essential services like water supply, sanitation, gas, electricity and accessibility. The environmental condition being exceedingly poor. In the low lying flood prone peripheral areas of the city bamboo made shelters are raised by the dwellers ((or owners) where, not only absence of essential service facilities also the environment is extremely unhygienic. Dhaka, as some observers believe has less squatter problems compared to other third world cities. It is mainly because people are mercilessly evacuated from time to time. Immigrants who have somehow found themselves squatting are brutally uprooted and their miseries are enhanced. As for example, in 1975, about 200,000 inner city squatters were evicted by the police and sent outside the main city.

HOUSING NEED AND EFFECTIVE DEMAND

In the early '70s there was a backlog of 47,195 housing units in Dhaka. In 1985, it was recognised by the planning commission of Bangladesh that during the next 15 years there will 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 household would be in the order of 42,000, 49,000 and 57,000 (average per year) for the period of 1980-1985, 1985-1990 and 1990-2000 respectively.

With the projected population growth rate the future appears to be very bleak. While Dhaka will have to house at least 11 million people by the end of the century, in other words means that we have to build two more cities nearly equal to the size of existing Dhaka. This is mainly because the city's highland are all utilized for urban development purpose and possibilities for further expansion are very low.

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%; it showed an increase of about 20% in the residential areas. The average price of land within the central city area is around Tk. 500,000/00 (or US\$ 12,500/00) only per 720 Sq. Ft. (equivalent to 1 'Khata' measured locally). It should be noted that the construction cost of a two-roomed semi-permanent structure of common size would not exceed 25% of the land cost. This phenomenon is effectively pricing out the lower income population from housing process.

As has been mentioned earlier that in this decade the requirement for housing is about 57,000 units for the metropolis per year. Considering all the projects at hand are materialised properly the Government agencies can not build more than a few thousands.

AFFORDABILITY SITUATION

One of the reasons for this low production rate is the cost of housing and the affordability of the people (particularly the lower income households) who need them. According to an urban household survey conducted in 1978-79, 80 percent of the urban households had income less than Tk. 1200/00 (US\$80/00) per month (6).

The per capita poverty threshold income level (equivalent to a recommended daily per capita intake of 2,122 calories) in 1984 was Tk. 300/00 (US\$ 10/00) or Tk. 1500/00 per household. This can be considered equivalent to Tk. 1800/00 approximately in 1986, which is also in conformity with other contemporary researches showing the lower income range in the metropolis on average remains within Tk. 2000/00 per month.

This income of the lower income group is such that they are unable to cope effectively with the essential demands for the existence of their life. Thus it appears to be irrational and unrealistic to realise a small percentage of their earning for housing investment, because that will certainly be demanded by other sectors responsible for

uplifting their condition in order to reach upto the level of subsistence. It should more appropriately be considered that with the existing source of their income the affordability prospect of this sector of population in housing tends towards nil. It is thus necessary to find some extra income sources which can effectively be utilised in their housing investment.

In the context of the above we are now opening the discussion about a project where the dwellers response in housing development can play a positive role not only in multiplying the stock but also economically contributory for them.

THE BASTUHARA PROJECT AT MIRPUR

At the end of 1974, approximately one eighth of the total population of Dhaka, most likely about 175,000 were living in squatter settlements along the old railway lines and footpaths. Officially they were called "Bastuhara" (or the shelterless) and by the year 1974 they were able to make the authorities quite concerned about their existence in the city. A scheme was undertaken to the north of Dhaka at a location in Mirpur, by the Ministry of Relief and Rehabilitation and later executed through the agencies of Housing and Settlement Directorate in 1973. The aim was to provide only a shelter for the shelterless (Bastuhara) population.

This provision of a shelter has been described as mere provision of a single room which is semi permanent in nature (7).

A total number of 4304 units were provided in different sections of Mirpur. As has been pointed out in the layout plan of Mirpur, section 4, northern district of section 7, some parts of section 9 are selected as the key locations of the project. Later the Government decided that some of these quarters should be allotted to class III and class IV government employees with two living rooms; thus a revised scheme was prepared to convert 1124 single tin-shed units to 562 quarters each having two habitable rooms.

The allotment and distribution of the rest 3180 units remained uncertain for long days. The initial provision included only a unit having no facilities of water supply, sanitation or electricity. Also they did not have any outline demarcating the boundary.

While the concerned authorities failed to comply with the situation effectively, some of the unoccupied units were taken over by local entrepreneurs and "mastans". The allotment

procedure lost its legal status and a larger no. of unregistered lower income sector gradually occupied the entire settlement (Ameen, 1987).

It took years for the housing office to complete the job of registration of the occupier households. After a long time of negotiation the authority later allowed them to stay on rental basis.

In an attempt to determine the response of the users in these units a field work was undertaken with 251 households in different sections of Mirpur. Out of them 194 were original allottees, paying rent (at the rate of Tk. 50/00 per month) to the housing authority. Rest of the households were found occupying the units as subrented tenants.

THE ORIGINAL PROVISION

The original provision of each unit consists of a habitable room of 17'-11" X 8'-9" (average) size and an adjacent verandah 8'-9" X 6'-2". Together totalling 247.5 sq. ft or 23 sq. m. Entrance to the unit is through a door adjacent to verandah. Among the 194 cases of original allottees who rented the units from the government 187 cases were identified to have made structural changes. This establishes that more than 96% of the households carried out alterations and extensions in some form or other.

We observed response of the dwellers in making alterations and extensions incorporating indoor as well as outdoor spaces of diversified character. A maximum response of more than 72% was identified with the construction of rooms additional to the main structure. About 141 additional rooms were made from 194 units occupied by the originally allocated residents. This is mainly due to two reasons.

1. Responding to the demand for more spaces (with the increase in the household size.)
2. Income generating motivation by subrenting the rooms extended.

EXTENSION OF ROOMS IN RELATION TO HOUSEHOLD SIZE

Further observations made through cross-tabulations reveal that most of the rooms (about 69%) have been extended by the households comprising 5, 6 or 7 members. Again these are households who were found subletting one of their rooms. Despite the need for more rooms to accommodate their own members, the households offered the extra rooms for subrent. The

propensity for making extensions is high not because of responding to their own space requirement but mostly to increase their income by subrenting the rooms. The additional earnings help them to increase their ability to afford housing as well as to improve their economic solvency. At the same time, subrenting room(s) at the cost of their own need would also mean the possibility of adding another room in future as the income starts to increase.

EXTENSION OF ROOMS PER HOUSEHOLD

The analysis is made with the extension of two categories:

- (a) Extra no. of rooms constructed by the dwellers additional to the units.
- (b) No. Of rooms added through the alterations and extensions of verandahs.

It is observed from the list of cases for the construction of rooms that 93 households were responsible for the construction of an extra 141 rooms; among which 62 had made extensions by one room and 32 by more than one room.

These numbers only include the rooms additional to the main structure. Through the comparison with another list of cases for walling up the verandahs, 55 cases were isolated out of 93 who altered the verandahs into rooms; these are rooms in addition to the number of rooms mentioned above. This makes a total no of $(141+55)=196$ extra rooms provided by the same 93 households, which shows the average rate of extension is 2.1 rooms per household with the type of extensions of category (a).

Simultaneously there are also households who have only converted the verandahs into rooms by providing the walls around it these cases are treated separately. 71 verandahs were converted to rooms by 71 individual households in type (b). Added to the above figure it shows a total of $(196+71)=267$ extra rooms made by $(93+71)=164$ households, making the average number of extension of rooms to 1.62 per household in Mirpur.

Extension of rooms is particularly important because it motivated the households into income generation activities significantly. We have observed this particular component as having the highest priority in structural changes made by the dwellers.

Considering an average rent of Tk. 181/87 per room this amounts to a total of Tk 300.00 per month, by all means this is a substantial

additional earning made by households mostly having their income in group 4.5.6.

CONCLUSION

A number of conclusions would seem to follow from the observations made with respect to the response of the dwellers/users of this settlement. In one sense what emerges is the added constraints imposed by poverty of this particular target group of a poor country like Bangladesh in comparison with the richer third world countries. While this particular section of population is unable to carry out their own shelter process, it is essential therefore to increase their investment potentials in housing through providing proper incentives for generating additional income sources upon which the foundation of their shelter process can be laid and flourished. As most of the dwellers are found to develop their units incrementally thus providing access to similar other households in the shelter process and also increasing their earning through rental performance.

Although this is true that the phenomenon would result in high density unplanned growth of the settlement but the problem should be viewed in the context of the extent of the crisis prevailing in the metropolis now. Households living in slum or similar conditions are found able to manage within a highly reduced amount of space (on average not exceeding 100 Sq. Ft.) without any noticeable degree of dissatisfaction; one of the reasons being that there is absolutely no chance to get a better alternative than the existing one and secondly, if evicted they will almost certainly be on the street.

At the same time, however, much of the impetus for change should come from the central government which must develop a comprehensive housing and settlement policy. In an absence of an effective housing policy no comprehensive measure can be undertaken. Also it should be noted that piecemeal development of isolated projects would not bring any better result. The problems should be viewed in an undistorted perspective considering the fate of not a few hundred shelterless urban poor but of teeming millions.

Unless, the solutions to the housing problems of Bangladesh seem exceedingly remote.

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