Abstract: The Paper attempts to find a relationship between the economic status of a people and the healthiness of their living environment. Khulna City’s urban poor is taken here as the case study for analysis. It is found that once trapped in poverty condition, it is very difficult for the poor to come out of it, and consequences are illiteracy, poor health and poor living environment and vice versa. This urban blight and poor urban environment contaminate the whole city. It is also found that indigenous social structure resists poverty conditions and that planning authorities should include the urban poor in their planning framework for a sustainable urban living environment.

Keywords: Urban poor; Environment; Poverty; House; Settlement

Introduction

Upon arrival in the cities, a few people find job in the formal sector while for majority it is a question of fending for themselves through informal network and illegal means, often in the face of indifference or even hostility. Most of these people live in below subsistence level and constitute larger section of urban population. In term of both physical form and organization every city provides two different urban scenes. The formal city built with legal sanction, official patronage and the informal larger sector, built illegally through dwellers’ own initiatives and characterized by deficient but gradually improving housing and service facilities. According to Rahman (1994) the gravest challenges facing the developing world today are widespread poverty and environmental deterioration. The two are linked; they reinforce each other in a tragic downward spiral, and mounting population exacerbates both.

Urban poor living in bustees or makeshift structures, doting the urban morphology, similar to all metropolitan cities in the south Asian region, is a significant feature in Khulna. Bustees seem to grow overnight into the habitation of countless squatters. They are the prime evidence of massive scarcity in the housing sector. They may be found from few units to clusters of thousands. Mostly single room units, are basically used for sleeping purposes, and thus produce very high densities in areas totally lacking in amenities (Mowla, 1999). Because of the housing shortage, economic backwardness, demand for cheap labour force and also due to some socio-political backings, they are ineradicable and so they continue to impede all efforts towards rational development (Payne 1979; Turner, 1979). It may be noted here that none of the planning frameworks adopted so far for Khulna directly addressed itself to dealing with the priority needs and problems of the working poor, who constitute the bulk of the population. The results are obvious – an unhealthy urban environment.
Backdrop of the Study

The rapid increase in urban population has made a tremendous claim on the already overutilised civic facilities and has already created a state of disequilibrium in the urban environment. A study in the Harvard University Population Centre (HUPC), quoted by Choguill (1980) has 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.

A very simple interaction between population and environment is that the high growth of population may lead to consumption of natural resources and degradation of ecosystem and environmental potential but this relationship could be further aggravated by a number of other social factors which include widespread poverty and unsustainable development efforts. Squatters or *bustees* areas are illegal settlements, generally on public or semi-public lands, such as on railway fallow areas, municipal roadsides or other vacant plots belonging to various institutions and organizations. These settlements characterized by the most rudimentary shelter, e.g. makeshift shacks of thatch, scrap etc, lack basic services.

It is observed during this study that indigenous quarters of the city are less susceptible to squatting⁵. Most of the squatter settlements or *bustees* are observed to be concentrated in the contemporary growth areas and on institutional lands. These are mostly observed in the vacant public properties (Das 1992)⁴. This correlation may be explained in terms of close social bondage of inhabitants in the indigenous areas that discourage unauthorised infiltration. Mowla (1990; 1996; 1997; 1999) drew similar conclusions in his studies. One of the powerful reasons for the existence of many *bustees* is political motivation and the protection of the area as the vote bank for future election. Although, the spatial set-up of *bustees* is beyond the preview of this paper, still in most cases their morphologies are worth noticing. They are the examples of least (perhaps none except Slum Improvement Project [SIP] areas) interference from any authority, therefore, reflects only the intuitions and past experiences of the inhabitants. It is amazing to see, though in a very crude way, their resemblance to the popular indigenous settlement morphology.

Nature of the Problem

“The urban poor who are people in urban areas, cannot afford to meet the basic needs (including food/ nutrition-2122 calories, clothing, primary health care, education and shelter) requirements with their own income” (Islam 1994). Total urban poor population in the country considered at 50% of total population would be 11 million in 1990 and 40-50 million in 2025 (Islam, 1992. p. 131). Urban poor population by 2000 is projected to be 26 million of which hard core poor in Bangladesh will be 9 million (Rehman, 1994). According to a World Bank report, quoted in Quraishi (1998), there are 12.45 million urban poor, of which 6.97 million are hard core poor in Bangladesh. Whatever may be the actual population of urban poor in Bangladesh, it is clear that the situation is quite grave and demands immediate attention. Transport and communication system in Khulna is underdeveloped and about 50% of the household take their trip to the work places on foot, while almost 1/3 use rickshaws (Choudhury, 1999). It will not be out of place here to mention that in Dhaka, the top 30% of the household have ownership or usage control over 80% of residential land of the city (Islam, 1985-86). The situation is not much different in Khulna. A typical shack may have dimensions of 5’x7’(1.5m x 2.1m) to accommodate a family of up to 8 persons, making a density of population in such settlement to a extremely high of, 1500-2500 persons per acre (3706-4942 person/ha), or even higher. In the cities, overcrowding in poor settlements with lack of appropriate urban infrastructure and decent housing increases water and air pollution, thus resulting in severe environmental deterioration. According to Choudhury (1999) about 27% of the household in Khulna live in rented houses. Though house rents are about 200% less than in Dhaka, still people are in hardship due to the lack of an efficient transportation system and scarcity of cooking fuel.
Why Poverty?

NIUA (1988) posed some basic questions regarding the poverty, such as, is poverty a consequence of physical and ecological conditions of living in a particular setting or is it an socio-economic and political phenomenon? The main thrust of physical ecologist in explaining poverty is on demonstrating the interaction between population growth and pressure on resources and the environment. Uncontrolled exploitation of natural resources and population growth disturb the environmental equilibrium and create conditions in which human wants cannot be satisfied, thus leading to the emergence of poverty in the long run. Mostly poverty is created in the rural areas due to the limited opportunity of jobs, causing migration in search of livelihood. At local level, each human settlement can ecologically sustain only a certain level of population beyond which, accommodation of slums creates major distortion in the society.

Poverty is also sometimes termed as a product of tradition, because it is generally seen that even though there is an increase in the real income of the poor, they continue to live in poverty-stricken conditions. It is observed in Bangladesh that the economic advantage of birth exceeds the economic advantage of education by a far larger margin (Yaqub 2000, p. 10). It may be due to their lack of orientation to set priorities or their living habits and thus wasteful expenditure etc. Islam (1994, p. 112) identified some of the factors that explain both urban and rural (more rural) poverty in Bangladesh, that can be summarized as follows:

1. Historical factors: The country’s colonial background and its exploitation by colonial rules. Chomsky (1993) has explained how colonization has sucked the wealth of the nations and made them dependent on developed countries.
2. Environmental factor: Recurrence of natural hazards, (especially cyclones, floods, draughts and riverbank erosion) that pulls back the development efforts.
3. Resources and demographic factor: Limited natural resources and small size of the Country against a very large population. This fact gives rise to tremendous competition between the consumers of the limited resources. (Unfavourable and low land man ratio).
4. Dependence on foreign Aid and loans, drain of resources from the country (material, monetary and brain drain) Neo colonial exploitation through metropolitan capital, Multinational and foreign NGO’s. A vicious circle impeding real development.
5. Poor quality of human resources: Due mainly to the poor health, illiteracy and low skill. Huge amount of man-hour is lost due to illness or inefficiency of the work force.
6. Socio-economic political superstructure: Particularly the power structure, the oppressive and exploitive role of the ruling power elites, social expression in rural areas, and unequal resource structure.
7. Absence of popularly elected people’s government and lack of people’s participation in development activities.
8. Administrative and managerial weakness and widespread corruption.
9. Stagnation of productive forces and production overtime.
11. Lack of political awareness and organization of the poor (or for the poor)
12. Behavioral factors (both individual and societal behavior).

Khulna’s Urban Poor and Their Living Environment

**Brief Overview:** A recent survey (Choudhury 1999) reveals that 28% of Khulna’s household live below poverty line. A Asian Development Bank report, quoted in Saha (1991) shows that Khulna City Corporation area accommodates a slum population of 54,000 occupying an area of 88 acres. They are distributed in 54 **bustees**. To assess the environmental conditions in the slum of Khulna
city, several bustees were surveyed. The slums/bustees are Sonadanga bustee in ward 17, Tootpara bustee in ward 18, Alam Nagar Bustee in ward 13, Rupsa bustee in ward 22 and No. 5 Terminal Ghat bustee in ward 21. It has been observed that the Environmental Awareness level among the urban poor depend on income level, type and level of education; availability of necessary physical infrastructure facility etc. Local Government Engineering Department (LGED) with the assistance of UNICEF undertook a SIP to improve the living condition of the slums located in 20 Municipalities of the country including that of Khulna. Under SIP, Khulna City Corporation (KCC) selected Sonadanga and Rupsa bustees. Though the project is long over, it could not create a desired impact on slum environment. It is because the approach was fragmented in nature and the improvement was not directed towards the root causes of the problem (Fig. 1).

![Fig. 1. Map of Khulna City showing ward no. 13,15,17,18,21 and 22](image)

**Magnitude of the Problem:** The high degree of over-crowding and lack of basic sanitary conditions in slum areas have been the finding of all the surveys conducted (Anwar, 1997; Khan, 1997; Rahman, 1998; Quraishi, 1998 and others). In 1998 open space for 850 thousand population was only 63 acres or 0.07 acre open space per 1000 person. In the Khulna Master Plan of 1961, recommended open space per 1000 person was 4 acres (Choudhury, 1999). Situation is naturally worse in the bustee areas. Overcrowding exists not only at the slum settlement level but also in dwelling units. The average size of the urban household in 1995/97 was 5.6 and the number of person per dwelling was 5.75. The Average area per person of a household in urban areas is 6.89 sq.m. as compared with 7.8 sq.m. in the rural areas. More than 50% of the household live in one room dwelling unit. The average income per household is Tk. 1500/- per month in 1997. About 31.11% Urban poor have a family income of less than Tk. 1500/- per month. Choudhury (1999) indicates that 12% of the Khulna’s population are absolutely unemployed, 1.5% self-employed and there is 2% child labour in the market. The average rent paid per household in the bustees is Tk. 200/- and 48% of the household are paying rents to mastans/musclemen or the landlords. Landlords do majority of eviction (57%) and the rest 22% is done by the mastans. Most of the dwellers do not feel secure, 30% mentioned the security conditions as poor. From the surveys it seems that the main environmental problem in the Khulna’s urban slums is sanitation problem. Disease spread very fast due to filthy and unhygienic living conditions. Most of the urban slums have no sanitary latrine. The latrine that some slums have doesn’t always provide adequate privacy. Another issue that came out of the study is that there are serious complaints regarding slums as being the hotbeds of sordid activities, according to many, breed crimes and offer sanctuary to criminals. The facts and figures that came out of the survey regarding the built environment are summarized below:
**The Built Environment:**

1. Slums have mostly come up on lands which were not suitable for development of shelters i.e. low-lying areas (water bodies), open space next to railway tracks, roadways, drainage etc. Many of the clusters are so over crowded that there is no further scope for any growth. They are located mainly in low-lying areas.

2. Building materials used for Ghars (Rooms/house) are bamboo, rags, thatched (shon/goal pata / etc), with, polythene sheets etc (90% of houses in the slums are made of bamboo, old tin sheets, polythene bags and other scrap materials. They are mostly single room enclosures. 12.5% use mud blocks as walling material, 72.5% use bamboo mat, while 10% use straw and the rest 5% are without any wall at all. As roofing material 90% of the houses use Goalpata an indigenous leaf available in the locality or collected from the Sundarbans. Floor is generally by mud.

3. 84% of the families live in one-room houses. The Average size of Room/Ghar is between 5 to 12 sq.m. In some of the bustees, more than 70% respondent lived in or below 5 sq.m houses.

4. The average number of persons in a ghar is 4 and about 50% of families have more than four members each. The density in these clusters is very high and there is hardly any open space. The circulation system is very poor. Lanes are zigzag and very narrow. It is very difficult to move through these streets. The ghars are built in such a way that sometimes it is difficult to identify an individual ghar.

5. 80.84% of the slum dwellers are illiterate or claimed to have studied upto class five. 65% heads of households in slums are illiterate. Only 18% school age children attend school.

6. The drainage pattern is irregular. There is hardly any storm water drain. Dirty water accumulates and stagnates by the side of drains causing inhuman conditions. Normally, the residents of ghars dig a small pit in front of their ghars for the purpose of dirty water collection. When these pits are filled with water, throwing the water on the street empties them.

7. Street light has been provided in some clusters but there is no domestic connections, because, apart from economic factors, the building materials used are subject to fire hazards. However, hooking of illegal connections is also not uncommon.

8. 64% of the houses are not adequately ventilated and 68% are not properly exposed to sunlight. About 65% of the household use electricity for lighting (single bulb) of which about 26% are illegal.

9. Ponds and hand pumps are a source of water. Most of the latrines were very badly mainlined and are too close to tanks or water body that are used for both bathing, cloth washing etc. over 80% slum dwellers use ponds for bathing. Tube wells are the main source of drinking water. Water supply is partially contaminated by salinity and arsenic (Choudhury 1999). Most of the slums are not properly drained as such they are water logged during rainy season. They are not free from stagnant dirty water even in dry seasons. These pollute their housing environment. Latrine waste is generally disposed off in the near by ponds and ditches which naturally create sanitation and hygienic problems. About 60% of the families in these slums have one or more members sick at one time.

10. Average health condition is alarming that is also affecting their earning capability. 30-40% are ill at one time. 60% of their children are chronically malnourished

11. Most of the huts do not incorporate sanitary facilities. Sewers are completely absent “lavatory blocks on the outskirts of the bustees cluster have been built but 90% of the dwellings are going for excavanging in the open areas”. However in Tootpara bustee 90% share latrines and 26% relieve themselves in drains, open spaces and on pavements.

12. There is no system of garbage collection and it is a common scene to see heaps of garbage and rubbish creating in-sanitary conditions. The organic portion of solid waste ferments and favors fly breeding. The garbage in refuse attracts rats and the pathogens may be conveyed to man through flies and dust. According to Choudhury (1999) The City generates about 380 tons of solid waste each day but collection efficiency of Khulna City Corporation is only 23% and in the bustee areas situation is worse. However this is not a unique problem of Khulna. Among the twelve severe urban problems as identified by the Mayors colloquium in New York in 1994, Solid waste management ranked third (Islam 1994). It may be mentioned here that in Brazil nearly 200,000 people collect various waste materials. Last year the city recycled 16% of its residential garbage, nearing 25% mark reached by Germany. Curitiba recycling
created 20,000 jobs, directly, including 4000 individual recyclers (Mowla, 97). Khulna dwellers may take lessons from this fact.

13. Around 65% household are deprived of reasonable ventilation due to compactness and low height. Nearly 70% households are not adequately protected against rain.

14. Large number ie 71% of household cook within their living rooms, thereby expose themselves to carbon-di-oxide and carbon-monoxide and a fair amount of this smoke affects health of the household. 72% use wood as fuel.

Conclusion

New Urbanists are highly critical of present fragmentation of our society and breaking of bonds of community. They emphasise that the ‘networks’ are no substitute for true community and also are of the view that the urban paradigm, which has dominated since post-war time (in western countries), can not sustain another generation of growth. Kunstler (1994) holds responsible for the entire problem in the urban environment to the auto and petroleum interests, the greed of developers, ignorance to urban poor and the short sightedness of civic officials.

In Khulna a huge amount of housing stock is unauthorized by current planning standards, which indicates irrelevance of building and planning by laws to the local Centex and also the inefficiency of the planning body KDA (Mowla, 1990, p. 46). As the formal public and private sector service agencies are unable to meet most of the urban services needs there is a strong case for them to support the initiatives and develop the resources of community based organizations or initiatives. It is also clear that alternatives to the government have to be sought to tackle the bustee problem. State or the professionals may assume the role of facilitators and people’s own initiatives be encouraged. It must be emphasized that in the bustees’ supports, such as affordable land, infrastructural services, legal profession and design expertise are absolutely essential.

In a nutshell, it may be said that the urban poor with their poverty must be accepted as a fact and therefore included in the planning framework for Khulna City. Physical Development also needs to follow ‘bottom up’ policy and includes social agendas, therefore, recognizing and mitigating the needs of the urban poor. Once the living environment of the urban poor is improved, the total urban environment will naturally undergo a healthy change.

Notes

1. Duality exists in many spheres of Khulna’s life e.g. dual education medium/system, dual traditions of planning, dual order of settlement pattern (ambivalent attitude toward imported architectural styles, modes of construction, use of space), dual authority controlling Khulna’s planning. It may also be observed in dual economy (formal and informal), mechanised and non-mechanised transports in the same roads and so on.

2. However, this is a case of negative thinking to look at a phenomenon. Within these bustees there is a strong community feeling and self help attitude. Communities are quite vibrant, their main problem is poverty. Payne, having experience in both developing and developed countries believes that despite their poverty, it may be that many of the residents of squatter and unauthorised settlements in TWCs have greater choice in housing and greater control over local environment than low-income (and perhaps some middle-income) families in western cities. He believes that the most socially and economically viable way of improvements and developments is to increase local control over it (Payne 1979: 99-110). Turner also asserted that unless housing is locally controlled and becomes an activity rather than a centrally administered commodity, resources - human and otherwise- will continue to be wasted [Turner 1979: 91-98]. He also criticised the conventional public participation concept in the spatial development process. He questioned that ‘are we concerned just to consult with people or, more practically, with their
representatives, in order to improve the details of what we design for them? Or are we seeking ways and means by which we can help people decide what they want for themselves, and how to get it? [Turner 1979:92].

3. However, main reason for deteriorating conditions can be attributed to their inability to enter into general planning framework of Khulna. Legal complicacies regarding ownership in many properties, deter the occupier to make large investments in maintenance is yet another factor for deteriorating conditions there.

4. More than 500 acres of public owned land designated for some use is lying vacant at Dhaka. If vacant lands owned by private industries and Institutional lands owned by railways, port authorities, Universities etc. are also taken into account, these figures would swell to much higher figure. (Das 1992:142.). It is assumed that Khulna’s case is not much different from Dhaka.

5. Besides huge amount of unauthorised constructions (without the approval of planning authority), there are cases of houses in illegal land, illegally occupied houses, subletting, institutional spaces, squatting etc. At one extreme, there is illegal occupation (squating) and at the other, fully legal occupation of the land but with one aspect of the house or plot or the wider sub-division not meeting official standards or perhaps even meeting official standards but not having received official approval.

References


Mowla, Q.A., 1990. Study of urban development opportunities for Lalbagh/Kotwali zone and urban design vision for the land to be vacated by Dhaka central jail located in the study area. Masters Dissertation (unpublished), Department of Architecture, Hong Kong University, 90 pp.


Quraishi, A.A.M., 1998. Poor’s accessibility to basic urban services. BURP Dissestation (unpublished), Urban and Rural Planning Discipline, Khulna University, Khulna, 60 pp.


