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URBAN PROBLEM IN BANGLADESH: RAJSHAHI CITY CONTEXT

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Abstract: Urbanization is taking place at a faster pace in the less developed countries of the world like Bangladesh. The implication of such urbanization are manifested in severe social, environmental & cultural vulnerabilities. Major environmental problems like disposal of garbage in nearby drains or low lands, discharge of waste water into open roadside drains, the concentration of hanging latrines in lower income settlements areas, annual flooding, noise, and domestication of cattle and poultry & Social crimes like ransacking, robbery, and toll evasion are the characteristics of nearly all urban centers including Rajshahi city of Bangladesh. The study has endeavored to analyze both the factual status and the perceptual pattern of the environmental quality of Rajshahi Metropolitan City. The factual data have been collected from various primary and secondary sources. Accurate and up-to-date information is needed to understand the manifestations and causes of poverty and how they vary between and within cities. This information can then be used to design policies and programs adapted to local circumstances

Introduction

The most serious urban problems in developing country like Bangladesh are environmental factors which pose a threat to people's health. Indeed these health threatening environmental problems are the main causes of ill-health, injuries, infections diseases, accidents and premature deaths of many residents mostly the urban poor. This is due in part to the fact that the residences of the poor are less well served by essential infrastructure and services since they less able to pay for these facilities, living in informal settlements which public service providing agencies usually do not serve well, and impelled to dwell in the city's unsafe sites, those which are most susceptible to natural disasters and human-induced hazards. The impact of urbanization in Bangladesh in overall environmental conditions have become the major concerns of policy issues. There is clear evidence that clean water

is in short supply, there are unhygienic sanitation condition, high incidence of diseases, along with violent crimes and social tensions in several towns and cities. These are most commonly seen in the metropolitan cities like Dhaka, Chittagong, Sylhet, Barisal, Khulna, Rajshahi etc.

Methodology

This study consists of both the primary and the secondary data. The primary data are collected through face to face interview. The researcher prepared a set of open ended research questionnaire. The interview is conducted personally from the city –dwellers. Sixty people from various areas are taken as sample. The researcher presented the collected data in a descriptive manner. The secondary data also has collected from various books, articles etc. Although the sample size is small, it is representative the presented study.

Environmental Quality Of Urban Areas In Bangladesh

In Bangladesh with its very rapid urban population growth and fast physical expansion of urban areas, urban administrative and management skills remain extremely unsatisfactory and inadequate. In some areas, the situation of urban management is said to be catastrophic.¹ The cities and towns of Bangladesh are already performing dismally as providers of municipal amenities. Financially dependent for the most part on central government grant, these local entities are very poorly positioned to meet the challenges of rapid urbanization and the rising demand for the services that the 1977 Municipal ordinance sets as their compulsory obligation. Required to invest in and to maintain the provision of water, sanitation, garbage disposal, road maintenance and drainage, public markets and slaughterhouses, as well as to plant trees and keep up graveyard and burning places, most municipalities are failing to meet their compulsory workload.² Consequently, the quality of urban living is falling as population pressures rise, whilst in many cases the level of municipal services is actually in decline. It is essential to ensure the expansion of the city's infrastructure and facilities for its growing population to provide a healthy and ecologically sustainable urban environment. However, the rapid growth of urban population has occurred in most low and middle-income countries without the required expansion of urban services and facilities.³ The contemporary characteristics of such urbanization include mass poverty, gross inequality, high unemployment, underemployment, overcrowded housing and a proliferation of slums and squatter settlements, deterioration in environmental conditions, highly inadequate supply of clean water, high incidence of diseases, overloaded public transport and increases in traffic jams, accident, violence, crime and social tensions. These features are characteristics of nearly all urban centre's in Bangladesh (Task Force Report, 1991). Serious problems of environmental degradation stemming from urbanization in Bangladesh need to be evaluated in terms of land use alteration, inadequate shelter, water, sanitation and other facilities in slums

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and other urban residential areas, and inequalities in access to basic services and degradation of the community ambient environment. The quality of the urban environment depends a great deal on the quality of essential infrastructure and its appropriate management. Utility services like sanitation, sewerage, drainage, drinking water supply, garbage disposal, electricity, gas and fuel for cooking are important physical infrastructure for maintaining urban environmental quality. Yet these urban environmental components are being continually strained due to population expansion. As the population grows the demand for different types of urban services and facilities also increases in absolute terms, the new urban population growth largely centres on Dhaka, Rajshahi and Chittagong. Both the cities share almost 45 percent of the total urban population in Bangladesh.⁴ It is important to mention that Dhaka is the capital and Rajshahi is an important divisional city in Bangladesh. An obvious impact of this increase in urban population has been the increased demand for land, housing and urban services in all urban areas especially in Dhaka and Chittagong.⁵ This indicates that urbanization prosperity in Bangladesh depends largely on achieving better urban management in Dhaka, Chittagong, Rajshahi, and Khulna etc.

Location Of Rajshahi District And Urban Area

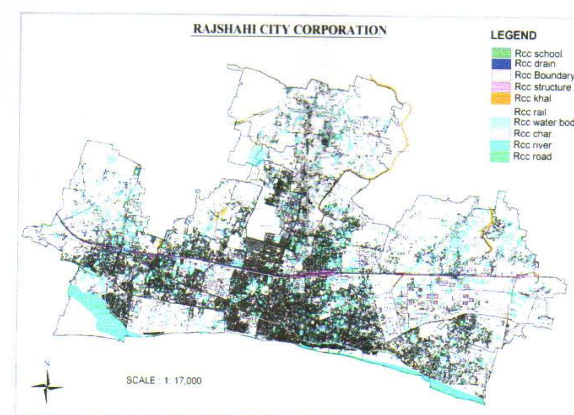
Rajshahi District (Zila), which covers an area of 2407 Km², of which 62 km² is river, is located in the north west of Bangladesh bordering India to the south.⁶ Rajshahi City Corporation (RCC), which was formed in 1987, covers an area of approximately 48 km² being bounded on the east, north and west by Paba Thana (subdivision of a district) and on the south by the Padma River.



Figure-1: Location of RCC within Rajshahi District*

* Source: BBS 2005b

Figure- 2: Rajshahi City Corporation Area*



*Source: RCC 2006

The data used in the 1994 Drainage plan suggested that agriculture and horticulture is the largest land use category in the RCC area, accounting for 31% of the land, followed by residential (26.2%), administrative and educational (14.6%), roads and embankments (11.3%), and commercial and industrial (1.7%); other uses account for 15.2% of the land area (Aqua consult 1994, p.24). A study by Development Design Consultants Limited for the Rajshahi Structure plan and Master plan recorded a much smaller area of 18.7% of agricultural land within the RCC area but also recorded a further 48.% in the extended urban area included in the plan.⁷

Population Statistics

In 2001 at the time of the last census, the population of Rajshahi Division was 24% of the population of Bangladesh making it the second most populous division after Dhaka (Table-1). Of these 15% lived in urban areas, slightly below the national average of 23% (BBS 2003, P. 13-14). There were approximately 6.6 million households in Rajshahi Division in the 2001 census and the gender balance was such that there are slightly more males (51%) than females (BBS 2003, p. 29).

Table-1: Adjusted population 2001*

Locality	All Area	Urban	Rural
Bangladesh	130029749	30459665	99570084
Rajshahi Division	31501479	4685924	26815555

*Source: BBS 2003, pp.13-14

Rajshahi Zila makes up 7% of the land area of Rajshahi Division, and is also home to 7% of the population (2286874) of the Division and 8% of the

households (BBS, 2003, pp. 12 and 28). The zila remains predominantly rural with 1443249 people (63%) residing in rural areas but there has been a significant change in the rural urban split since 1981. The majority of the urban population lives in RCC area. The problem with the change in the area of RCC before and after 2001, and the discrepancy between the figures provided by RCC and BBC, is that most publicly available figures, such as population and household numbers, arise from BBC data.

Environmental Conditions and Problems

In Rajshahi, urban authorities are supposed to provide infrastructure and service facilities like water, electricity, sanitation, paved roads and waste management to local residents. The citizen's fundamental right is access to basic infrastructure and service facilities in an urban area. However, the authorities which provide infrastructure and service facilities in developing cities are frequently alleged to perform inadequately.

Electricity Crisis

Electricity is the principal source of home lighting in *Rajshahi*. However, almost 98 percent respondents of all residential areas claimed that they were not receiving regular electricity supply from the PDB. The electricity crisis is a very serious and frequent household problem in Rajshahi. The respondents were asked how often in a day they faced electricity cut-off. The highest electricity cut-off (more than five times a day) was recorded in the middle (68.7%) and lower-income (62.2%) areas, compared to higher-income (48.3%) residential areas. The average minimum duration of each cut-off measured was typically half an hour; however, more than two-thirds of respondents in lower and middle-income and one-third of respondents in higher-income neighbourhoods claimed it took more than an hour to get power restored. Many respondents also claimed the power crisis (cut-off times and duration) had gone up during the night period, when it was actually required.

Water Shortage

The most serious problem in urban area of Rajshahi is that water containing large amount of iron. Sometimes water seems like orange juice due to iron. The piped water deficiency is a general household problem for all residential areas in Rajshahi. Water shortage is a very serious and frequent problem in the lower and middle-income compared to the higher-income residential areas. The proportions of dissatisfied respondents (sum of dissatisfied and highly dissatisfied responses) were higher from the lower (60%) and middle income (44.7%) than from the upper-income (21.7%) residential areas. Amin argues that the present available water supply in Rajshahi can meet the demand of about 33 percent of the city residents.⁸ The respondents from higher and middle-income residential areas largely believe that insufficient supply of water is the main cause of water shortage.

Water Pollution

Water sources in Rajshahi such as ponds, ditches and canals are seriously polluted, as these are blocked and their water rarely treated either by the local residents or by the city authority. A few local households could imagine its massive impacts on their health and local environment. This situation was found to be rather more serious in the older parts as well as in lower-income neighbourhoods, compared to the fringe areas. Besides dumping waste, the household wastewater and fecal materials of most of the unsanitary toilets ends up in these ponds and ditches. This polluted water caused dangerous diseases when water logging submerges the houses. It should be mentioned that coping with the severe water crisis many households in the lower-income areas use such water for washing utensils, bathing and different household activities.

Air Pollution

Air pollution was ranked as the second most serious citywide environmental problem in Rajshahi. The households of higher and middle-income residential areas who said air pollution was a citywide problem also said that it occurred on a very frequent basis. Urban air pollution from road transport is a growing concern in many developing country cities.⁹ The World Resources Institute (2006) claims that although urban air pollution is a problem worldwide, vehicle emissions are particularly high in developing countries due to the prevalence of fuel-inefficient technologies, high average vehicle age, poor vehicle maintenance, low-quality fuels, and severe traffic congestion. The Institute estimates that fossil fuel burned by motorized vehicles contributes 90 percent of urban air pollution. There are different types of para-transits such as tempo and taxi all over the city using unleaded petrol. At present Rajshahi city has 10,000 automobiles, a third of which do not have any fitness certificates. The failure to introduce filters in these diesel-driven old and unfit vehicles is one of the main reasons for acute air pollution in Rajshahi. Urban air pollution has become a worldwide public health problem, particularly in many large cities in the developing world. Harday have argued that there is difficulty in distinguishing between the health's impacts of ambient pollution from indoor air pollution. However, there are particular groups within the population who are most susceptible to air pollution, including people with asthma, those with existing lung diseases, the elderly, infants and pregnant women and their unborn babies.

Sanitation Problem

Households in lower-income neighbourhoods are seriously affected by the poor quality of sanitation system in Rajshahi. About 30% of households in lower-income neighbourhoods expressed their dissatisfaction in this regard. The most suitable sanitation system in Rajshahi is the household septic tank, mostly used by the households of upper and middle-income residential areas. However, many residents who use this system do not know where the

waste water finally ends up. Some poorer segments of people living in lower-income neighbourhoods generally use pit or bucket latrines as sanitary toilets. This temporary sanitation system is largely observed in the slums and squatter settlements, where residents often use unsanitary open and communal toilets. As many as 8-14 families share a single communal toilet. These toilets remain overloaded at all times by their frequent use and become out of order due to a lack of cleaning and maintenance.¹⁰ The pit/bucket and open toilets are mostly built outside the main houses and no water sources are kept inside the toilets for maintaining hygiene. Some households (5.6%) from lower-income residential areas also reported that they do not use any sanitation system. The waste water with faecal materials from unsanitary toilets generally discharges into drains, ponds, ditches, canals and other low-lying areas, which are never cleaned.

Noise Pollution

Noise Pollution at neighborhood level has proved to be a serious problem for the residents of higher-income residential areas in Rajshahi. Although one-third of households in middle and lower-income neighbourhoods claimed the noise produced by outdoor activities was frequent, it revealed they were not seriously affected by the exposure of noise pollution. The high density of living contributes noise pollution in rapidly developing urbanized areas. The horns used for motorized vehicles remain one of the major causes of noise pollution in the higher-income residential areas followed by construction activities. This study found that more than 40 percent of households in higher-income residential areas were using their own car for various purposes. Besides their own car, the higher-income people generally take motorized vehicles such as auto-rickshaws, private taxis, buses and other para-transits when they go to work, shopping, school, relative's house and days out. Apart from blowing car horns, the drivers of non-motorized and light vehicles also use horns, often for no clear reason. The Indian Forum for Prevention of Environmental and sound pollution identified the major sources of noise pollution as road traffic, aircrafts, railroads, construction, industry, noise in buildings and consumer products. The residents feel helpless to protect themselves from the outdoor noise. The noise creators are also sufferers but they may not be aware about the negative impacts of noise pollution. The major effect of neighborhood noise pollution as perceived by residents in all three types of residential area is disturbance to sleep. However, residents of middle and lower-income neighbourhoods claimed it also disturbs their children's studies and they suffer from hearing deficiency, too. The other health impact of noise pollution mostly perceived by the higher and middle-income households is annoyance through headache.

Dustiness

Dust produced outside which gets inside the home was explored as a prime source of indoor pollution. Dust pollution can give rise to respirator illnesses.

This problem was highly cited by the households of higher-income (21.7%) residential areas. It was mentioned earlier that, a higher-income planned residential area, was being developed without paved access roads. The residents of this area reported that they had to suffer tremendous dust inside their houses due to frequent vehicle movement on the unpaved roads carrying construction materials. They need to clean their interior side of the houses several times a day. The respondents from lower (10%) and middle-income (9.3%) residential areas claimed that dust produced by the transport plying the neighborhood unpaved kutcha and semi-pucca roads was a household level environmental problem. The household survey found that many households in middle-income neighbourhoods get used to closing their windows during the day due to fear of dust pollution.

Mosquito Problem

In Bangladesh, as in much of the tropical world, mosquitoes represent a major public health problem. In all the residential areas surveyed, the respondents who said mosquito menace is a problem claimed it was very frequent at the household level. A third of households in the lower and middle-income neighbourhoods claimed the problem was very serious. Drainage congestion and clogged drains in the residential areas has remained one of the major sources of mosquito's breeding ground in Rajshahi. Mosquito problem is also caused by open waste dumping in the households of lower and middle-income neighbourhoods. Some residents, in all types of residential area, also blamed the Rajshahi City Corporation, as it never uses mosquito-killing spraying in their neighbourhoods. The consequences of the mosquito problem are dramatic, with most of the respondents from all residential areas claiming it spreads fatal diseases. As the authority has failed to cope with the crisis with the so-called 'crash programme' every year, the citizens are bound to take some measures against the problem, which is expensive to them. The residents of higher and middle-income neighbourhoods want to eradicate mosquito from their households by any means since 'dengue' has recently emerged as a major health threat. and From June to December 2000 the total number of dengue patients recorded were 771 with 15 deaths.¹¹ The expensive mosquito killing spray as the primary crisis coping strategy is mostly used by the residents of upper income residential areas. By contrast, the residents of lower and middle-income neighbourhoods are largely dependent on less expensive smoke producing coils. An interesting outcome is that the residents of all surveyed residential areas are not habituated to using mosquito net as alternative crisis coping strategy, which is environmentally friendly.

Insects Problem

A few respondents in lower-income neighbourhoods experienced insect menace as a household level problem, despite the fact that different types of

insects such as blowflies, cockroaches and ants live and breed within or around the houses of lower –income neighbourhoods and can cause serious health problems. Hardoy have argued that these insects can be the cause some of fatal diseases including diarrhoea, which is revealed as a major cause of ill health and premature deaths in many developing cities. They can cause other diseases by carrying germs from open toilets and dumping grounds, clogged drains, ponds, ditches and canals, which all exist in the lower-income neighbourhoods. In fact, residents in lower-income neighbourhoods are habituated to this living environment but all citizens may be in danger of being exposed to germs transported by different insects. Some households in higher and middle-income residential areas reported that they mainly experienced cockroach menace at the household level. Coping with this problem, the householders in higher- income residential areas generally use insect killing spray that may cause indoor air pollution.

Narrow Access Road

Narrow access roads are a relatively serious problem for the residents of middle and lower-income neighbourhoods in Rajshahi city. Almost all the respondents from lower and middle- income neighbourhoods who said that narrow access roads are a problem claimed it was their 'everyday crisis'. The high population density and unplanned growth are the main causes of narrow access roads in Asian, African and Latin American cities. The household survey found that the older parts of Rajshahi city have narrower access roads than the newly developed areas.

Poor Cleaning and Maintenance Services

Poor cleaning and maintenance of neighbourhood roads and drains by the Rajshahi City Corporation was ranked as a severe problem for the middle and lower-income residential areas. Almost 47% and 40% of households of middle and lower-income neighbourhoods respectively claimed it was a serious problem. As the task is expected to be done regularly, they also experienced it as a very frequent problem. However, the services were generally felt to be better provided in the planned higher-income residential areas. Some households in all residential areas continued to leave waste on the roads and in drains rather than use some times distant waste collection points. However, households in lower and middle –income neighbourhoods claimed no/irregular garbage collection and cleaning by the RCC were the main reasons for unclean neighbourhood environment. The fact is that the total workforce engaged in cleaning, sweeping and waste collection is extremely inadequate in Rajshahi city. Having such a low number of workers means that the City Corporation cannot adequately provide neighbourhood cleaning activities, though service is better on the main roads, and in some commercial and residential areas. The effects of cleaning and maintenance of neighbourhood roads and drains are manifold. Although

the respondents of all residential areas believe that the major consequence is an unclean and unhealthy environment, the households which are less well served are seriously exposed to problems such as bad odour and environmental pollution, and infestation of flies and mosquitoes.

Lack of Parks and Playgrounds

A few respondents (3% of households of higher-1% of middle-and lower-income areas) experienced scarcity or no parks and playgrounds in the locality as a neighbourhood level problem. However, the professional and policymakers interviewed in the qualitative survey said it is a very serious problem, not only for children growing up but also for the total society.

Insecurity

Residents of Rajshahi city feel insecure mainly from thefts and hijacking in the residential neighbourhoods, the household survey reveals. Almost a quarter of the surveyed households of higher and middle and over 30% of lower-income neighbourhoods claimed that they experienced some sort of thefts or hijacking. However, insecurity from theft and hijacking is regarded as one of the major neighbourhood problems for the households of higher-income residential areas. Although not frequent, it has emerged as a serious problem for as many as 20% of households in these areas. In recent time, hijacking, robbery, violence, looting, murder, possession, use of illegal arms, illegal toll collection and organized kidnapping have generated a feeling of insecurity for many Rajshahi city residents. The Rajshahi Metropolitan police (RMP) recorded a total of 1,375 crime incidents including 22 cases of murder, 42 of robbery, 18 of abduction, 20 of rape, 76 of abuse on children and women, 57 of fire arm, 78 smuggling, 131 of theft, 21 of riot from January to June 2003.¹² Insecurity is viewed as a major city level environmental problem by more of the households of higher and lower-income neighbourhoods, compared to those of middle-income areas. Some of the households from all residential neighbourhoods perceived unemployment as one of the major causes of insecurity. Brennan has argued that unemployment which increases social inequality between the richest and poorest groups in an important factor in urban crime and violence in third world cities.¹³ The households in lower-income neighbourhoods said that an increasing number of youngsters/gangs/drug-users are associated with the city's hijacking and robbery.

Overcrowding

Overcrowding is a common problem to most of the households in slums and squatter settlements in Bangladesh. In Rajshahi, this problem was found in the households of lower (19%) as well as middle- income (8%) neighbourhoods. Several studies show that many infection, airborne, viral and bacterial diseases are associated with overcrowding, including fire hazards and other accidents. Although actual cause was unidentified, it is

believed that overcrowding and congestion of houses increased the number of deaths.

Conclusion

There is no denying of the fact that urbanization is the inevitable destiny of the human civilization. But, the way cities, both at home and abroad, are growing is not at all sustainable. Therefore it is imperative that government across the globe should fundamentally rethink policies and approaches towards managing urbanization before it is too late. To be true that we have ten, maybe fifteen years, to get on to a new track. After that the slum problem, environmental damage and urban insecurity will become so entrenched that they will dominate international relations for the rest of the century. Here in Bangladesh, one of the fastest urbanizing countries in the developing countries, living in urban areas is not at all a different experience than it is anywhere else in the world. In the city, electricity and water supply is not ensured, quality is a far cry. The poor are the worst sufferers and they are further exposed to diseases due to poor sanitation. Yet they cannot replace the unhygienic latrines, if any, in their shanties. Open dustbins on roadsides overflow with garbage. Roads and drain go under knee-deep water not only in monsoon but also after a sudden shower. The major citywide urban problems in Bangladesh include traffic congestion, air and noise pollution, water pollution etc. These are largely concentrated on the major intersections, or in commercial and industrial areas. Mismanagement and corruption are rather more serious factors than lack of road network and high volume of traffic in deteriorating such condition. Moreover, citizens are not well informed about the present statement of the city's pollution level. This situation confirms that government is reluctant to forecast the environmental condition due to insufficient knowledge and information of environmental degradation in relation to the public health risk. A social worker blamed the citizens and said that they do not know what their rights are. In this case, the major reasons are economic instability and political crisis, which help to create an atmosphere where environmental concerns cannot be seen as more important than economic benefit. On the other hand, the agencies involved in service providing activities are not well coordinated, which exacerbates several city level environmental problems. The most important one is an increasing presence of SPM/dust in the ambient air through construction and poor maintenance of roads by different authorities. The fact is that there is no co-ordination body in existence yet in any metropolitan cities in Bangladesh. There are many international and local agencies/NGOs/CBOs working for urban development in Rajshahi. But they neither have co-ordination with each other nor with the city authorities. The rationale behind this 'co-ordination' revolves around a concern with 'good local governance', which has recently taken centre-stage in development circles.¹⁴ The perception of alternative crisis coping strategies to cope with

the citywide environmental problems suggests that the poor in Rajshahi are less aware of city regional burdens compared with the rich. The poor are much more concerned about the household environmental burdens by which they are primarily threatened as a direct health risk. Government should take necessary action for improving their vulnerable situation.

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