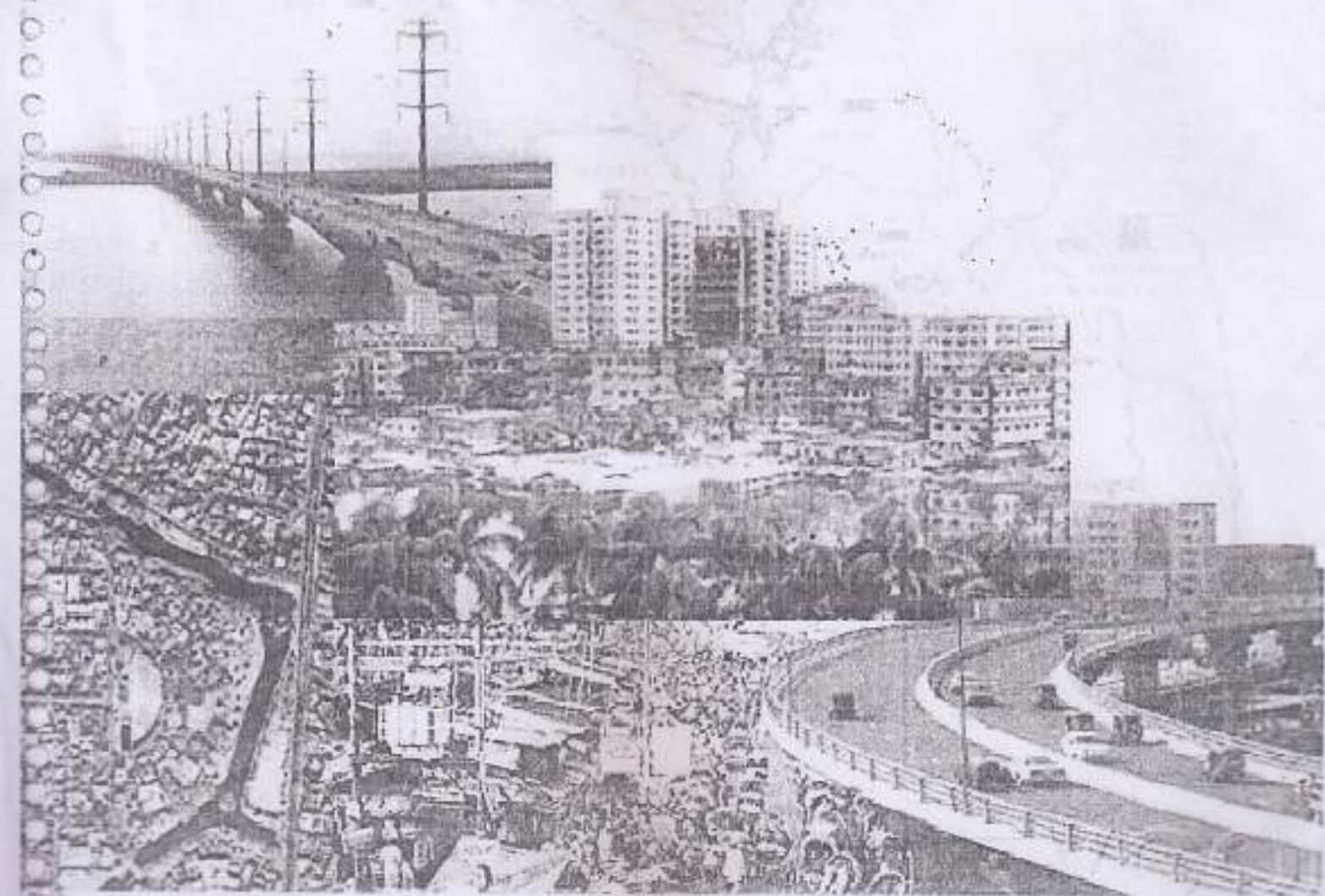


ADB TA NO. 4003-BAN
SUPPORTING URBAN GOVERNANCE REFORM

FINAL REPORT
ON
UPAZILA TOWN MASTER PLAN PACKAGE

JUNE 2006



ADB TA NO. 4003-BAN
SUPPORTING URBAN GOVERNANCE REFORM



FINAL REPORT
on
UPAZILA TOWN MASTER PLAN PACKAGE

JUNE 2006

Prepared by
Dr. Sarwar Jahan

Prepared for

Committee on Urban Local Governments
Ministry of Local Government, Rural
Development and Cooperatives
Local Government Division
Government of Bangladesh

And

Asian Development Bank
6 ADB Avenue
Mandaluyong City 0401
Metro Manila
Philippines

DISCLAIMER

Views expressed in this report are those of the author and do not necessarily represent that of the Government of Bangladesh or of the Asian Development Bank.

CONTENTS

	<i>Page #</i>
ABBREVIATIONS.....	iii
PREFACE.....	iv
EXECUTIVE SUMMARY.....	vi
 CHAPTER – 01: URBANIZATION, URBAN PLANNING AND NATIONAL DEVELOPMENT	
1.1.0 INTRODUCTION.....	01
1.2.0 URBANIZATION AND NATIONAL ECONOMIC GROWTH.....	01
1.3.0 ENVIRONMENTAL IMPACTS OF URBANIZATION.....	02
1.4.0 PLANNING OR SUSTAINABLE URBAN DEVELOPMENT.....	04
1.4.1 Traditional Approaches to Urban Planning.....	04
1.4.2 The Rio Summit and the Re-appraisal of Urban Planning Process.....	05
1.4.3 New Directions in Urban Development Planning.....	06
1.4.4 Innovative Urban Development Planning: Some Asian Examples.....	08
 CHAPTER – 02: URBAN PLANNING INSTITUTIONS AND ACTIVITIES IN BANGLADESH	
2.1.0 INTRODUCTION.....	13
2.2.0 INSTITUTIONS FOR URBAN PLANNING AND DEVELOPMENT.....	13
2.3.0 PLANNING ACTIVITIES AT LOCAL LEVEL.....	15
2.4.0 THE ROLE OF PAURASHAVAS IN SUSTAINABLE URBAN DEVELOPMENT.....	16
2.4.1 Macro-Economic Implications of Municipal Development.....	16
2.4.2 Planning for Sustainable Municipal Development.....	17
2.4.3 Local Resource Mobilization for Implementation of Plan.....	19
 CHAPTER – 03: UPAZILA TOWN MASTER PLAN PACKAGE	
3.1.0 BACKGROUND INFORMATION.....	23
3.2.0 OBJECTIVES.....	24
3.3.0 SCOPE OF SERVICES AND ACTIVITIES TO BE PERFORMED.....	25
3.4.0 REVIEW AND SUGGESTED MODIFICATION OF THE PROJECT.....	25
3.4.1 Approach to Planning.....	25
3.4.2 Goals and Objectives.....	26
3.4.3 The Terms of Reference for Plan Preparation.....	27
3.4.4 Consultation.....	27
 CHAPTER – 04: A PROPOSAL FOR DISTRICT CENTRE DEVELOPMENT PROGRAMME	
4.1.0 INTRODUCTION.....	28

4.2.0	DEVELOPING DISTRICT CENTRES	28
4.3.0	DISTRICT CENTRE DEVELOPMENT PROGRAMME.....	29
4.3.1	Structure Plan	29
4.3.2	Multi-Sectoral Investment Plan.....	29
4.4.0	FINANCIAL IMPLICATION OF THE PROGRAMME.....	30
CHAPTER – 05: SUGGESTED TERMS OF REFERENCE FOR UPAZILA TOWN MASTER PLAN PACKAGE		
5.1.0	PROJECT BACKGROUND	31
5.2.0	STRUCTURE PLAN	32
5.2.1	Assessment and Analyses.....	33
5.2.2	Information.....	33
5.3.0	MASTER PLAN/URBAN AREA PLAN	35
5.3.1	Land Use Plan	35
5.3.2	Transportation and Traffic Management Plan.....	47
5.3.3	Drainage and Environmental Management Plan.....	50
5.4.0	WARD ACTION PLAN.....	55
5.4.1	Types of Projects.....	55
5.4.2	Selection and Prioritization of Projects	56
5.4.3	Format for Project Preparation	57
5.4.4	Phasing of Implementation.....	58
5.5.0	SUBMISSION OF PROPOSAL	58
5.5.1	Technical Proposal	58
5.5.2	Financial Proposal	60
5.6.0	CONSULTATION AND LOCAL ADOPTION OF THE PLAN	60
5.6.1	Formation of Committees.....	60
5.6.2	Consultation with Stake Holders	61
5.6.3	Public Participation Workshops	62
5.6.4	Adoption of the Plan by PMPC.....	62
5.6.5	Adoption of the Plan by Paurashava	62
APPEDICES		
APPENDIX – 01: SUGGESTED CONTENTS OF VARIOUS PLANNING REPORTS.....		63
APPENDIX – 02: SUBMISSION OF REPORTS AND MAPS.....		68
APPENDIX – 03: DETAILS OF FIELD SURVEYS.....		72
APPENDIX – 04: PROJECT TEAM.....		76
APPENDIX – 05: FORMAT OF CURRICULUM VITAE OF PROFESSIONALS.....		80
APPENDIX – 06: HOUSEHOLD SURVEY QUESTIONNAIRE.....		83

ABBREVIATIONS

BDR	-	Bangladesh Rifles
BNCC	-	Bangladesh National Cadet Corps
BOOT	-	Build, Own, Operate and Transfer
CBD	-	Central Business District
CBO	-	Community Based Organisations
CDS	-	City Development Strategies
DCDP	-	District Centre Development Programme
DPHE	-	Department of Public Health Engineering
ESCAP	-	Economic and Social Commission for Asia and The Pacific
FAR	-	Floor Area Ration
GDP	-	Gross Domestic Product
GIS	-	Geographical Information System
GOB	-	Government of Bangladesh
GPS	-	Global Positioning System
IDP	-	Institutional Development Plan
IDSMT	-	Integrated Development of Small and Medium Towns
IUIDP	-	Integrate Urban Infrastructure Development Programme
MCP	-	Municipal-Community Partnership
MDF	-	Municipal Development Fund
MP	-	Master Plan
MSIP	-	Multi-Sector Investment Plan
NGO	-	Non-Governmental Organisation
NHA	-	National Housing Authority
PEDP	-	Physical and Environmental Development Plan
PMPC	-	Paurashava Master Plan Committee
PWD	-	Public Works Department
RCDP	-	Regional Centre Development Programme
RIP	-	Resource Improvement Plan
TDM	-	Transportation Demand Management Strategy
ToR	-	Terms of Reference
TSM	-	Transportation System Management Strategy
UAP	-	Urban Area Plan
UDA	-	Urban Development Authority
UDD	-	Urban Development Directorate
UDLE	-	Urban Development through Local Efforts
UNCHS	-	United Nations Centre for Regional Development
UNDP	-	United Nations Development Programme

PREFACE

The rate of urbanization in Bangladesh is quite high. The growth of urban population is much higher than that of national population of the country. Despite such rapid urbanization during the last few decades, very little attention has been given to the urban local bodies in terms of enhancing their capacity to deal with the emerging urban problems. Keeping this in view, the Asian Development Bank (ADB) took up the TA Project entitled "Supporting Urban Governance Reform" for providing the necessary technical and secretarial support to the Committee on Urban Local Governments (CULG) in formulating policies for strengthening urban local governments. Specific activities of the Committee included preparation of national urban sector policy, recommendation of measures for the improvement of Paurashava Financial Management System, formulation of proposals for reforming the Holding Tax System, Review and amendment of Paurashava Ordinance, 1977, and making recommendations for preparing Master Plans for future development of Upazila Towns.

The present report has been prepared to assist CULG in making recommendations for planned development of Upazila Towns as envisaged in the Upazila Towns Master Plan Package. In accordance with the provision of the TA (TA No 4003 - BAN) the consultant was appointed to carry out the following tasks:

- Review the government's long-term strategy for municipal development (covering Upazila Towns and Paurashavas) and make recommendations for preparing Master Plans for future development of these key urban centres.
- Review the proposal for the Upazila Towns Development Project prepared by LGED, and provide comments for consideration by LGED. Submit the revised paper for review by the Committee on Urban Local Governments (CULG) and incorporate the comments.
- Prepare a project proposal for consideration by ADB with a full set of terms of reference for consulting services required under the Upazila Towns Master Plan Package Preparation component of the Upazila Towns Development Project.
- Prepare a similar project proposal for ADB's consideration concerning key Paurashavas (district towns and larger category B Paurashavas).

- Visit Upazilla Towns and Paurashavas and ensure that the Master Plan will be developed in a participatory manner

To prepare the report the consultant carried out extensive review of planning activities both at home and abroad. Innovative planning practices in different cities of Asia gave valuable insights. Significant information could also be gathered through field visits to different Paurashavas including Kaliakoir, Mirsarai, Jhalakathi, Jhikargaccha, Saidpur, Nilphamari and Jessore. The consultant discussed the relevant issues with the Chairmen and Ward Commissioners of visited Paurashavas. Discussions were also held with other officials of the urban local bodies including, among others, the Secretary, Executive/Assistant Engineers and Accounts Officers.

The consultant would like to record the help received from the counter part staff and LGED Engineers in the Paurashava visited by the consultant. They not only provided help and support during field visit but also provided valuable comments about problems of planning and development in the Paurashava. The consultant nevertheless take full responsibility for the findings, conclusions and proposals as given in the report.

EXECUTIVE SUMMARY

INTRODUCTION

1. The phenomenal rate at which urbanization is occurring has made it extremely difficult to manage the urban areas. The deteriorating situation of housing and other infrastructure and worsening of quality of urban life due to air, water and noise pollution bear ample testimony to this fact. The cities and towns of the country numbering more than five hundred suffer from acute problems of deteriorating infrastructure in the form of poor housing, inadequate availability of electricity and drinking water, paucity of drainage and sewerage facilities, virtual breakdown of local public transport and pollution. Homeless population in most cities is on the rise and the slums and squatter settlements have become integral part of urban life in the country.

URBANIZATION, URBAN PLANNING AND NATIONAL DEVELOPMENT

2. It is a well-established maxim in much of the development literature that economic development and urbanization are closely related. However, this is not to say that urbanization inevitably leads to economic growth, but rather to stress that the two are closely associated, providing mutual, interacting stimulus to development. Urbanization has been an essential part of most nations' development towards a stronger and more stable economy over time and it has helped underpin improvements in living standards for a considerable proportion of the world's populations. Most of the world's largest economies have the world's largest cities which is further evidence of this link between economic wealth and cities.

3. Although rising levels of urbanization and rapid population growth in large cities have often been considered problematic, it is a fact that major cities generally have a significantly higher concentration of the nation's economic output than its population. Urban areas also account for a disproportionate higher share of national economic production and are the main sources of economic growth in most countries. This is also no exception for a developing country like Bangladesh where the urban dwellers constitute about 26 percent of the total population of the country, but their contribution to GDP is more than 45. National economic growth is thus closely correlated with urbanization.

4. Drastic changes in the physical, economic and social structure in the urban areas resulting from rapid urbanization, however, has been posing serious challenges for sustainable urban development. Management of urban development has been a difficult task due to shortage of

resources, inadequate capacity of local authorities and lack of proper regulating mechanisms. Urban environmental problems are of central concerns for policy makers since adverse environmental conditions resulting from inadequate waste management, poor drainage, air pollution, lack of access to safe water and sanitation, exposure to excessive noise levels, traffic congestion as well as inadequate health services, exact a heavy toll on the quality of life. The declining quality of the urban environment results in the poor health and safety of urban residents, particularly the urban poor. It also causes irreparable damage to natural ecosystems in cities and surrounding areas.

5. Policies to curb environmental deterioration resulting from rapid urbanization will have limited effect if focused narrowly on sectoral issues within transport, energy, or industry. Effective solutions must address broad issues, including transport demand, land use planning, industrial development and location and household income growth and distribution, all central to the urban development agenda.

6. In view of serious shortcomings within traditional master planning approach and pressing urban problems, a number of countries including Malaysia, Indonesia, Tanzania, China, Sri Lanka and the UK revised their urban planning process with a view to making them more effective. The need to reappraise the urban planning process was given added urgency by the social and environmental impacts of rapid urbanization and the heightened concern for sustainable development promoted by the action plan of the Rio Summit, Agenda 21. The Human Settlements chapter of Agenda 21 calls for adoption of innovative city planning strategies by all countries in accordance with their national plans, objectives and priorities to address environmental and social issues.

7. In order to address the shortcomings of traditional master planning and meet the needs of sustainable development, various countries have adopted new processes and approaches to urban planning (such as structure planning, local planning and action planning). As a response to the challenges posed by rapid urbanization, appropriate and effective steps are being taken in many cities and towns all over the world. There is a great variety of different responses, reflecting the great variety of local conditions. Many common lessons are also being learned increasingly. There are examples of innovative Structure Planning in Malaysia and Indonesia; Guided Land Development in Jakarta, Indonesia; Public-Private Partnership in Sri Lanka; Sustainable Public Transportation in Kunming, China; Improved Security for the Poor through regularization of Tenure in Bisakhapatnam in India and so on. This growing body of knowledge and information has been helping many city authorities in implementing sustainable urban development programmes.

URBAN PLANNING INSTITUTIONS AND ACTIVITIES

8. The role of modern town planning in addressing the problems resulting from rapid urban growth in the country has been far from satisfactory mainly because urban planning and administration have not received due attention despite continuous increase in urban population. At present urban development activities in Bangladesh are carried out mostly by central government organizations. There are at least eighteen main ministries and 42 organizations which are involved in the development of urban areas. National level agencies provide services to different urban areas including city corporations, paurashavas and other urban centres as part of their national responsibilities.

9. Other than the Master plans prepared for Dhaka, Chittagong and Khulna in 1959, 1961 and 1966 respectively there was no Master plan for any other urban centre until the national physical planning Project financed by UNDP/UNCHS was taken up by the government. One of the objectives of the project was to establish physical planning as a way of developing human settlements through the enactment of appropriate planning legislation. The whole project divided into two phases (1978-82 and 1982-85) was concerned with the formulation of an outline national physical plan, preparation of specific regional, settlement and growth centre plans, identification of development projects within the context of the plans as prepared and improvement of physical planning capacity of the nation.

10. Preparation of Master plans for urban centres received impetus after the upazilas were chosen as the appropriate level for administrative decentralization in 1982. The urban Development Directorate (UDD) was given the responsibility to prepare master Plans for the District and upazila towns. The UDD employed short-term consultants to prepare these plans. However, the UDD itself prepared two District and 40 Upazila town Master Plans. The local Government Engineering Department was also given the responsibility to prepare 10 District town plans and 6 Upazila town plans.

11. An important criticism that could be leveled against these plans is that the paurashavas were not involved directly and local situations were not given due consideration. Although paurashavas were empowered to prepare master plans within their jurisdictions, none of the plans were approved by paurashavas. Majority of the target population was not aware of the physical plan which indicates that their opinions and views did not receive any importance. In fact these plans were related from decision making process and separated from operating agencies. These

were prepared without creating the legal basis and proper environment for their implementation. Consequently none of these plans were implemented.

THE ROLE OF PAURASHAVAS IN SUSTAINABLE URBAN DEVELOPMENT

12. It has already been mentioned that urban development activities are currently dominated by national level agencies. An important problem that results from the domination of these agencies is the failure to adopt structures which reflect the socio-economic and cultural context of the locality. Consequently local inhabitants become less interested in the objectives of these organizations. These organizations are more concerned with administrative interests rather than local considerations. These are virtually independent of one another even though they may be under a single ministry. This leads to duplication of efforts and subdivision of responsibility so as to make no one unit wholly responsible for any area of development. It is no wonder, therefore, that the present institutional framework poses a major problem for planning urban development in the country.

13. It is now generally agreed that paurashavas should play the major role in guiding and controlling the growth of urban areas. The paurashava (Municipal) ordinance of 1977 gave the paurashavas wide responsibilities in such areas as town planning and development, public health and sanitation, water supply and sewage disposal, maintenance of public infrastructure and amenities.

14. In the area of urban planning, the Paurashava Ordinance empowered the paurashavas to prepare Master Plan for development, expansion, and improvement of any area within its jurisdiction and impose restrictions, regulations and prohibitions with regard to the development of sites, and the erection and re-erection of buildings. But due to lack of technical manpower and equipment, no paurashava has been able to prepare and implement a Master Plan yet. Immediate steps, therefore, should be taken to improve the institutional and technical capacities of the paurashavas. Capacity building of paurashavas need to focus on strengthening managerial, technical, financial and regulatory capabilities. Capacity building in urban planning and management should be given special attention.

UPAZILA TOWN MASTER PLAN PACKAGE

15. One of the main reasons for haphazard urban growth in Bangladesh is the lack of effective land use control mechanisms. Planning has been done for some big cities (Dhaka, Chittagong, Khulna and Rajshahi) while all other cities and towns are growing without any

approved plan. The people of the rural areas are migrating towards urban areas due to push factors such as river erosion, lack of employment opportunities etc. It is becoming extremely difficult to provide the swelling urban population with appropriate civic facilities due to lack of proper institutional arrangements. In this context, the government has been transforming important urban areas into Paurashavas to provide socio-economic and infrastructure facilities to the population and the process is continuing. However, it is not possible to develop these Paurashavas in a planned manner without preparing appropriate urban plans first. It is against this background that the present Master Plan Package has been formulated.

16. Scope of work for consultancy services under this project encompasses all aspects related to the preparation of Master Plan, Drainage Master Plan, Traffic Management plan and Detailed Area plans of the Upazila Towns. The activities that will have to be carried out for providing consultancy services will include mobilization, reconnaissance survey, field survey and collection of C.S/R.S maps, relevant reports, documents, statistics and information. All maps and plans will have to be produced through the application of GIS and a Master plan will have to be submitted consisting of a Land Use Plan, Transportation and Traffic Management Plan, Drainage and Environmental Management Plan, Utility Master Plan and Detailed Area Plan.

REVIEW AND SUGGESTED MODIFICATION OF THE PROJECT

17. Although the Upazila Town Master Plan Package reflects the worries of our planners and policy makers regarding the problems of unplanned growth, the project has not been formulated keeping in view the developments that took place during the last few decades in modern town planning. The package, therefore, suffers from a number of shortcomings which need to be addressed.

18. The Master plan Package provides for preparation of traditional Master Plans which quite often fail to accommodate changing needs of society and therefore become ineffective in guiding urban development in many cases. Unless urban plans are based on realistic appraisal of the area's economic potential, socio-economic situation and felt needs of the people, there is little chance that such plans will be effective. Modern approaches to urban planning, therefore, emphasizes preparation of plans at different levels. In order to make the plans of upazila towns more flexible, and adaptable to changing circumstances, three levels of planning activity are proposed: structure planning for providing higher level policy framework, urban area planning at the Paurashava level and action planning at the ward level.

19. The Terms of Reference (ToR) for the preparation of plans at different levels is extremely important since the quality of output resulting from planning activities would depend largely on what is contained in the ToR. The ToR should clearly state the requirements of the upazila town regarding what is expected in each plan (structure plan, urban Area plan/Master plan or Action Plan), how that has to be derived, in what format that has to be presented, when a certain activity has to be completed, what professional expertise are needed in the planning team etc. It is very important that consultants are provided with clear directions for easy monitoring of the plan making process by project supervisor/director. Since the ToR will be used for preparing plans of a large number of paurashavas (about 100 Paurashavas during phase I) it is important that local conditions are addressed properly. Such conditions may vary from one paurashava to another. The socio-economic and physical conditions of a paurashava located in the coastal region may vary quite significantly from those of a paurashava located in the central region. The ToR should be detailed enough to cover aspects that may vary from one paurashava to another.

20. Land use aspects need special attention as these are of central importance in any urban plan. The classification of land use should be such as to capture all the variations across paurashavas. A detailed classification is, therefore, suggested. Each class should be clearly defined and all the components of each class of land use should be clearly identified. Otherwise, a particular component of a particular category of land use in a paurashava may become a part of another category of land use in a different paurashava. The ToR should also specify details of activities that will have to be undertaken in connection with the land use plan, transportation and traffic management plan, and drainage and environmental management plan..

21. Consultation is an important component of the planning process. Through such consultation it is possible to gather information about the current activities and future programmes of various nation building departments which are working within the Paurashava. In this process it is also possible to form concrete ideas about problems and needs of localities and desires of the stake holders. Formal consultation sessions and consultation meetings with different actors of the development process will have to be arranged at different stages of the planning process

A PROPOSAL FOR DISTRICT TOWN DEVELOPMENT PROGRAM.

22. In view of the severe problem of concentrated migration and economic growth, efforts must be made to select new loci for concentration away from the main centers (i.e. Dhaka and Chittagong Metropolitan areas). Special emphasis, therefore, should be given to the development of the District towns and policies should be directed towards strengthening of economic base and allied infrastructure and services in these towns. Those productive activities best carried out at

these towns should be identified and types and scales of enterprises should be determined and means of accommodating them set forth. Special Attention should be paid to supporting services - housing, education etc. - again with a view to channeling those investments which are made at these towns in the most productive manner.

23. It is important to note that the District towns/centers are already established with some economic base and political character, situated on or accessible to transportation routes by rail, road or water and with access to adequate sources of electric power. These district centers can be used to relieve the pressures of population in the metropolitan centers but this would necessitate the creation through conscious efforts an environment comparable with that at the metropolitan center with external economies of complementary infrastructures, trained labor forces, amenities, industry tailored to local resources, productive agriculture and soon.

24. A development programme for the district centres should be taken up. The objective should be to reduce the gap or disparity between these centres and the capital city, Dhaka in terms of socio-economic opportunities and infrastructural development so that these centres can attract migrants who would otherwise choose the capital city as their destination. Formulation of the District Centre Development Programme (DCDP) would require preparation of a structure plan and a multi-sectoral investment plan for each District Centre. The plan sets out strategies for guiding the social, economic and physical development of the urban centre under consideration. The plan consists of written statements accompanied by illustrations and diagrams and provides the basis for the preparation of detailed local plans or multi-sectoral investment plans. It is a multi-year and multi-sectoral investment plan, showing what investment should take place across sectors, how this investment will be financed and the implications of investments for the operating and maintenance budgets of the local government and public agencies.

CHAPTER - 1

URBANIZATION, URBAN PLANNING AND NATIONAL DEVELOPMENT

1.1.0 INTRODUCTION

It is a well-established maxim in much of the development literature that economic development and urbanization are closely related. However, this is not to say that urbanization inevitably leads to economic growth, but rather to stress that the two are closely associated, providing mutual, interacting stimulus to development. Urbanization has been an essential part of most nations' development towards a stronger and more stable economy over time and it has helped underpin improvements in living standards for a considerable proportion of the world's populations. Most of the world's largest economies have the world's largest cities which is further evidence of this link between economic wealth and cities.

Cities and towns also have important roles in social transformation. They are centres of artistic, scientific and technological innovation of culture and education. Above all, the base of economic production and commercial advancements of the cities, provided through adequate provisions of infrastructures and supporting services, play the key role in promoting development. Urbanization with agglomeration of necessary manpower and factors of economic production are found to facilitate the process of economic growth of cities.

1.2.0 URBANIZATION AND NATIONAL ECONOMIC GROWTH

The rapid urbanization and high rate of population growth in the developing countries during the last few decades attracted the attention of social scientists and policy makers. On the basis of western experience urbanization is considered a process through which nations pass in their transition from agrarian to industrial society. A basic feature of this transition is the profound switch from agricultural to non-agricultural employment. One of the important economic characteristics of industrial society is the concentration of more and more economically active population in manufacturing and service sectors. Since both manufacturing and service activities have higher productivity, they absorb more man-power by paying higher wages and hence population agglomeration.

Although rising levels of urbanization and rapid population growth in large cities have often been considered problematic, it is a fact that major cities generally have a significantly higher concentration of the nation's economic output than its population as is evident from Table- 1.1. Urban areas also account for a disproportionate higher share of national economic production and are the main sources

of economic growth in most countries (The World Bank, 2000). This is also no exception for a developing country like Bangladesh where the urban dwellers constitute about 26 percent of the total population of the country, but their contribution to GDP is more than 45 percent (ADB, 2005). Table – 1.2 presents the sectoral breakdown of GDP of Bangladesh for 1999-2000 by urban and rural areas. In six out of eight sectors on which data have been presented, the urban share of total GDP is more than 50 percent and in case of industrial sector this share is as high as 71 percent.

National economic growth is thus closely correlated with urbanization. Agglomeration economies generated by urbanization facilitates increasing returns to land, labour and capital. Thus savings, investment, and wealth accumulation (through real estate, productive, and infrastructure assets) become concentrated in cities. Agglomeration economies and greater access to information and technology attract firms to large urban areas. Workers are also more productive in large urban areas because there are more opportunities to match skills to jobs and to use more developed technologies. Although large cities offer greatest attraction to the migrants, the majority of the urban population will continue to live in other urban places. Often small and medium sized, these cities and towns will generally continue to have locally, regionally or nationally oriented economies, even though international not just on economic influences will be substantial. For this reason attention should be focused on how they can best develop diversified and healthy economies within their national contexts.

Economic growth, however, is unsatisfactory if it is accompanied by continuing or increased inequity and poverty. Urban poverty is growing in scale and context; it is characterized not only by low income but also by poor living conditions and lack of access to opportunities and services. One major problem of macro-economic policies is that measures designed to encourage investment and achieve economic growth does not necessarily result in economic opportunities accessible to the poor and may exacerbate poverty, even while expanding the overall economy. The urban poor are especially vulnerable to economic shocks. They lack the access to services, safety nets, civil protections, and political representation enjoyed by upper-income groups. Urban living conditions, especially in large and fast-growing cities, are deteriorating relative to those in smaller towns. Some urban residents are now the worst off. These changes are raising questions regarding conventional views of urban advantage and creating a potential for increasing social problems.

1.3.0 ENVIRONMENTAL IMPACTS OF URBAN DEVELOPMENT

Towns and cities use natural resources quite heavily. Consequently urban development can have both positive and negative implications for the environment. The environmental problems of urban areas have direct and immediate implications for human health and safety, especially for the poor, and for business productivity. Urban environmental problems are of central concerns for policy makers since adverse environmental conditions resulting from inadequate waste management, poor drainage, air pollution, lack of access to safe water and sanitation, exposure to excessive noise levels, traffic congestion as well as inadequate health services, exact a heavy toll on the quality of life.

Table 1.1: Asian Cities by GDP, 1990

Megacity	Country GDP/capita (in US\$)	(City GDP/capita)/ (Country GDP/capita)	City GDP/capita (in US\$)	City GP (in US\$ billion)
Tokyo	25,430	1.40	35,600	890.1
Osaka	25,430	1.27	32,300	339.1
Seoul	5,400	1.13	6,080	66.9
Hong Kong	11,490	1.00	11,490	59.1
Singapore	11,160	1.00	11,160	34.6
Bangkok	1,420	3.45	4,900	34.8
Shanghai	370	3.66	1,350	18.0
Manila	730	1.92	1,400	12.5
Jakarta	570	2.15	1,230	11.3
Calcutta	350	2.50	875	9.4

Source: ADB(1999): Urban Sector Strategy

Table 1.2: Sector wise GDP Contribution by Urban and Rural Area in Bangladesh, 1999-2000

Sl No.	Main Activity/Sector	Sectorwise GDP Contribution				
		Total	Urban Area		Rural Area	
			Million Tk.	%	Million Tk.	%
1.	Agriculture	606773	66378	10.94	478746	78.90
2.	Industry	348371	248536	71.34	127673	36.65
3.	Water, Electricity & Gas	30722	21189	68.97	11527	37.52
4.	Construction	176218	98749	56.04	82648	46.90
5.	Transport & Communication	197434	108948	55.18	94121	47.67
6.	Hotel & Restaurant	14628	10483	71.66	5403	36.93
7.	Business	539903	261844	48.50	284253	52.65
8.	Services	373557	213296	57.10	173813	46.53
Total		2287606	1029423	45.00	1258183	55.00

Source: ADB(2005): TA Report on Supporting Urban Governance Reform

The declining quality of the urban environment results in the poor health and safety of urban residents, particularly the urban poor. It also causes irreparable damage to natural ecosystems in cities and surrounding areas.

Drastic changes in the physical, economic and social structure in the urban areas resulting from rapid urbanization has been posing serious challenges for sustainable urban development. Management of urban development has been a difficult task due to shortage of resources, inadequate capacity of local authorities and lack of proper regulating mechanisms. One of the major problems that the urban residents are facing is the lack of access to serviced land which is posing as an obstacle to their meaningful participation in the urban economy. The urban land market which directly affects the urban environment and quality of urban life suffers from many distortions due to lack of proper land development and management policies including lack of planning, slow provision of infrastructure and services, complex and expensive land transaction procedures and under regulation of private land, thus leading to unplanned or ribbon development of land in the urban periphery. Inadequate supply of serviced land in the market leads to land speculation which often prices the poor out of the formal land markets into the informal land markets which are characterized by slums and squatter settlements. Inadequate infrastructure and services lead to poor living conditions in these settlements which cause poor health and lower productivity thereby making it difficult for the poor to come out of the vicious cycle of poverty.

Policies to curb environmental deterioration resulting from rapid urbanization will have limited effect if focused narrowly on sectoral issues within transport, energy, or industry. Effective solutions must address broad issues, including transport demand, land use planning, industrial development and location and household income growth and distribution, all central to the urban development agenda.

1.4.0 PLANNING FOR SUSTAINABLE URBAN DEVELOPMENT

1.4.1 Traditional Approaches to Urban Planning:

Traditional Approaches to urban planning can be divided into two broad groups- the European tradition (i.e. master planning) influenced heavily by French and British practice grew out of concerns for public health and other urban concerns and involved an often centralized tradition of public urban intervention through strong land-use regulations and public sector investments, while the North American tradition (i.e. comprehensive planning) emphasized land use zoning and land sub-division regulations, in keeping with a tradition of private property rights and values. Such traditional approaches, even if they continue to be used in many countries, have been found to be inappropriate for meeting the needs of many cities which since 1960s have been characterized by rapid growth of a low income population which has overwhelmed the financial, human and institutional resources of the government, particularly at the city level.

Traditional master planning has often been ineffective because too much emphasis is put on plan making and too little on implementation. In addition, such master planning has paid little or no attention to the necessary resource allocation needs and financial feasibility of policies and programmes. Very few traditional master plans addressed the financial implications of the programmes and projects they recommended- either the actual costs involved or how they would be financed. Such plans fail to reflect the priorities, resource constraints and programmes of the agencies responsible for infrastructure provision. Even where plans attempt to coordinate the proposals of a range of infrastructure and other line agencies, there have often been problems because of the way, 'horizontal' planning systems relate poorly to 'vertical' systems of resource allocation.

Heavy reliance on rigid regulations using zoning, subdivision and building policies and standards in traditional master plans generate more costs than benefits to residents and businesses in the city. There is often a lack of effective regulations designed to address environmentally sensitive areas such as steep slopes, wetlands and earthquake-prone lands. Traditional planning approach has rarely concerned itself with the critical issue of impacts on low income households. Inappropriate regulations and standards have often reduced land availability for housing and businesses by imposing unnecessary costs and fuelling the growth of informal land markets. As a result, households and businesses are forced to move into the informal, unregulated land market, often settling in environmentally sensitive locations.

Traditional master plan has often been considered as an end in itself rather than just one component in the management of urban processes. Planners have often used a two-dimensional approach to land development, viewing it as a matter of zoning, networks and forecasts. Heavy reliance on technocratic process and too little attention paid to socio-economic and political processes often leads to the formulation of policies and programmes which are ignored or rejected by politicians and the community.

Although a lot of criticisms has been levelled against traditional master planning, the process of planning is widely acknowledged as very relevant. Urban planning with its built in land development regulations as a set of rules governing location of activities forms part of social and economic life of most countries.

1.4.2 The Rio Summit and the Need for Reappraisal of Urban Planning Process

In view of serious shortcomings within traditional approaches and pressing urban problems, a number of countries including Malaysia, Indonesia, Tanzania, China, Sri Lanka and the UK revised their urban planning process with a view to making them more effective (Devas, 1993). The need to reappraise the urban planning process was given added urgency by the social and environmental impacts of rapid urbanization and the heightened concern for sustainable development promoted by the action plan of the Rio Summit, Agenda 21. The Human Settlements chapter of Agenda 21 urges, among other things:

- The promotion of understanding among policy makers of the adverse consequences of unplanned settlements in environmentally vulnerable areas and of the appropriate national and local land use and settlements policies required for this purpose.
- The promotion of sustainable land use planning and management, with the objective of providing for the land requirements of human settlements development through environmentally sound physical planning and land-use.
- Adoption of innovative city planning strategies by all countries in accordance with their national plans, objectives and priorities to address environmental and social issues.
- Formulation and adoption of rules and regulations for environmentally sound urban development, and utilisation, housing and for the improved management of urban expansion.
- Ensuring rational and environmentally sound use of limited land resources through fiscal incentives and land use control measures.
- Encouragement of improved land management practices for dealing with potentially competing land requirements for agriculture, industry, transport, urban development, open spaces and other vital needs.

1.4.3 New Directions in Urban Development Planning

In order to address the shortcomings of traditional master planning and meet the needs of sustainable development, various countries have adopted new processes and approaches to urban planning which have the following advantages:

- Timely collection of relevant data: In many developing countries, data when they exist are collected and partly analyzed, but do not have a strong correlation to the final conclusions and recommendations of the development plan. The procedures suggest types of data most relevant to the process and methodologies for obtaining current data.
- More efficient planning process: Streamlined and therefore more efficient procedures at various levels of the planning activity, will reduce the amount of time to carry out the process and produce a greater number of completed plans.
- Greater flexibility: Such planning processes give more flexibility to professionals and officials in responding to constantly changing conditions in urban areas. Since plans will specify option

for development rather than single solution, local authorities will not be locked into uncompromising positions.

- Better integration: Such planning processes facilitate more integrated approaches to urban development. This integration can be technical (co-ordination of urban planning with ecological management, energy, transport and other key sectors), equitable (explicit impact on all income groups in both the household and commercial sectors), and institutional (both vertical and horizontal coordination of urban planning, sectoral investment, financial resources, cost recovery and administrative functions).
- Regular updating of plans: Once planning capacity has been established in a local authority, it will be possible to update the plans regularly to reflect urban growth and changing needs and priorities.

The current approaches to urban planning can be grouped under structure planning, local planning and action planning and are outlined below:

1.4.3.1 Structure Planning

The structure plan sets out strategies for guiding the social, economic and physical development of the urban area under consideration. The plan consists of written statements accompanied by illustrations and diagrams and provides the basis for the preparation of detailed local plans or multi-sectoral investment plans.

Structure planning is increasingly seen as a participatory approach to integrated urban development. The output of the process is not just a physical development plan for the city but a set of inter-related strategies for city development including land, infrastructure, finance and institutions. These strategies aim at enabling all public and private initiatives to promote economic growth, provide basic urban services and enhance the quality of the environment. At the city wide scale the process involves multi-sectoral coordination of spatial planning, sectoral investment plans, financial resources and constitutional frameworks to meet inter-sectoral city development objectives over a long time period of say 20 to 25 years.

1.4.3.2 Local Planning

Detailed plan for specific sections of urban area as identified in the structure plan can be prepared for rapid development or for special projects and improvements. Such plan should contain detailed information on the preferred development pattern, location and layouts of proposed roads, infrastructure, community facilities and land use zones. The width and location of streets and pedestrian ways as well as size and location of built areas, public facilities, industrial estates,

commercial areas should also be indicated. The proposals of the local plans should conform to the development goals and objectives of the structure plan while at the same time meeting local needs.

1.4.3.3 Action Planning

Action planning is generally defined as an implementation oriented process to solve problems at a local level. It has a short-term perspective, resolving issues in the most direct manner with a minimum of data collection. The problems to be remedied may be physical, social or economic and local community participation in decision making is a key to success.

The action plan examines, in the context of the structure plan or local plan, those items that might be implemented within five years and contains more detail on a more limited range of subjects than the structure plan or the local plan. It is prepared in consultation with local agencies and communities and consists of two parts, project selection and project evaluation. Project selection summarizes existing guidelines and lists the criteria used in selection before identifying priorities in each sector and proposing projects to address those priorities. Project evaluation (both qualitative and quantitative) looks at project which might be locally funded over the five year period, given budgetary and other constraints, and looks at projects which cannot be locally funded but which might be considered by national agencies operating locally and makes preliminary assessments of larger scale projects which would need larger investments.

1.4.4 Innovative Urban Development Planning: Some Asian Examples

As a response to the challenges posed by rapid urbanization, appropriate and effective steps are being taken in many cities and towns all over the world. There is a great variety of different responses, reflecting the great variety of local conditions. Many common lessons are also being learned and increasingly documented (CityNet, 1997; DPU, 2001; UNCHS, 1996; UNCHS, 2001). This growing body of knowledge and information has been helping many city authorities in implementing sustainable urban development programmes.

1.4.4.1 Structure Planning in Malaysia and Indonesia

Malaysia is one of the few countries which first replaced the previous system of map based rigid plans (prepared under the town Board Enactment) by the system of structure planning (Devas and Rakodi, 1993). The first structure plan was for Kuala Lumpur and this was approved in 1984. The structure planning system in Malaysia has considerable advantages over the previous system; it is much more comprehensive in terms of its consideration of the various factors which influence development; it is much more flexible to allow for changing circumstances; it is much better able to respond to community needs and aspirations; and it distinguishes between the broad goals and strategies on the one hand and the detailed physical development involved in local plans on the other.

In Indonesia also such structure planning approach began to be used in early 1980s. The structure plan prepared for Jakarta city region during that time aimed to ensure linkages between the different issues involved, i.e. economic objectives, urban growth dynamics, inter and intra-sectoral choices, financial resources, the role of community and implementation capabilities. The plan emphasized the formulation of policies, plans and sectoral investment programmes according to income groups, i.e. giving the opportunity for a more rigorous assessment of poverty impact.

1.4.4.2 Guided Land Development in Jakarta, Indonesia

An innovative approach to land development in the face of rapid urbanization is the guided land development approach. Such an approach was first applied for land development in Jakarta, Indonesia in the early 1980s which incorporated elements of public/private co-ordination in land development with an emphasis on encouraging the legal participation of low-income groups in urban development. The programme included the construction of roads to induce growth into preferred urban expansion areas, the incremental introduction of essential urban services into these areas starting with land drainage and at a later stage water supply mains, and the creation of an administrative, planning and financial structure to ensure an effective joint public/ private management and implementation of such growth. The physical aims of the programme were to provide a large supply of ordered and planned land so that the private market could help meet the city's projected housing needs for some 250,000 new residents annually.

1.4.4.3 Public-Private Partnership in Sri Lanka

In the face of resource constraints, public/private sector partnerships for urban development are being given increasing emphasis in recent years. In Sri Lanka, the urban Development Authority (UDA) has been involved in large and small commercial, industrial and residential development projects for many years, usually in partnership with private sector interests. In such partnership arrangements, UDAs role is as follows:

- UDA take the lead role as a catalyst in promoting commercial and industrial projects which are analyzed to give satisfactory social, economic, financial and environmental returns. It has the legal authority to undertake land assembly and acquisition.
- UDA has intensive but limited involvement (say 5 years) in the planning, design, funding arrangements and implementation of projects.
- UDA coordinates the roles of the many infrastructure, service and other sectoral agencies having an interest in the project.

1.4.4.4 Sustainable Public Transportation in Kunming, China

Rapid urbanization has also given rise to serious transportation problems in many cities of the developing countries. One such city is Kunming in China. The city has been experiencing rapid economic and physical growth since the early 1990s. This has been accompanied by increasing traffic problems and air pollution resulting from motor vehicles. The number of vehicles on the roads has risen very rapidly and this has put great strain on the transport network.

In most cities the response to increasing vehicle numbers and consequent traffic problems has been to undertake massive road building explicitly to accommodate private cars. In Kunming, a quite different approach has been adopted, on a pilot basis but with considerable success. A 15-Km bus line was constructed together with bus shelters and platforms and pedestrian walkways to run from the city centre to the airport and the site of a horticultural exposition. Despite the relatively small scale of the bus-line, it has had a significant impact: the speed of buses has increased by 68 percent in the corridor, car numbers have dropped; and emissions and noise have decreased.

1.4.4.5 Community Resource Mobilization for Infrastructure Development in Pakistan

The development of a city and the fight against poverty cannot be financed by the municipal budget alone. Resources from local stakeholders must be mobilized. Mobilization of community resources can go a long way to improve the environmental conditions of the low income settlements. The success of the PLUS programme of UNDP in Pakistan indicates that the urban poor themselves can pay for their own infrastructure improvement.

The PLUS programme in Pakistan works in three cities (Faisalabad, Multan and Gujranwala) to facilitate social mobilization within poor communities, helping local people to organize themselves for self-help initiatives aimed at local sewerage provision. The programme also supports implementation of the work in an appropriate but low-cost manner, by providing technical assistance directly or through suitably experienced NGOs and by training local masons and workmen. These interventions are based on 100 percent community financing and are thus not dependent on external funding which demonstrates that the poor can and will pay for local improvements which they consider priorities provided that the work is properly and expeditiously completed and at a price considered reasonable.

1.4.4.6 Improved Security for the Poor through regularization of Tenure in Bisakhapatnam in India

An important factor for the mobilization of community resources for infrastructural improvement of informal settlements is the access to security of tenure for the urban poor. The Indian city of Visakhapatnam offers a promising example of how the poor can be provided with improved security through regularization of tenure (Banerjee, 2002). During the last twenty years, an integrated and inter-

sectoral approach to informal settlements has been implemented, including tenure regularization, house improvements, infrastructure installation and other health, education and training programmes. Tenure regularization is achieved by the issue of pattas. Those occupying state government land for more than five years are eligible. Poor families are given freehold pattas without any charges, while others have to pay the market price. Squatter on municipal land are issued with possession slips which may later be replaced with pattas issued by the state government revenue department. By 1989, 58 percent of the slum dwellers had been granted some form of patta, greatly increasing their security and this facilitated provision of basic infrastructure to over 90 percent of slum dwellers.

1.4.4.7 Integrated Urban Infrastructure Development in Asian Cities

The importance of urban infrastructure in promoting sustainable urban development can hardly be over-emphasized. It is increasingly realized that integrated urban infrastructure development is a necessary strategy to govern our cities better and create better foundation for economic development and extend basic services for the urban poor. In view of the challenges of providing land, housing and infrastructure which are needed to cope with the urban future and to avert the suffering of the urban poor, a number of Asian cities took up integrated urban infrastructure development programmes (Sing et al, 1996). The objectives were to integrate the supply of environmental infrastructure and services in a better way and to reach higher levels of efficiency and assured sustainability.

Most of the initiatives taken by different countries have some common characteristics and address similar types of issues. For example, the Integrated Development of small and Medium Towns (IDSMT) of India, Integrated Urban Infrastructure Development Programme (IUIDP) of Indonesia, Urban Development through Local Efforts (UDLE) of Nepal, Regional Cities Development Programme (RCDP) in Thailand, all try to improve urban infrastructure. Considerable work has been done in these countries to conceptualize, design, implement and evaluate these programmes and schemes. Other countries can learn valuable lessons from these experiences for formulating and implementing integrated urban development programmes.

1.4.4.8 City Development Strategy (CDS) for Reducing Urban Poverty

Another innovative approach to urban development planning is the city Development Strategy (CDS) which is currently being practiced in some Asian cities (Calicut of India, Da Nang of Vietnam; and Caloocan, Quezon City and Taguig of Philippines) with assistance from the Asia Development Bank (ADB). It is a participatory planning process that represents the collective vision of its stakeholders for the future development of their city (ADB, 2004). A CDS combines strategic and corporate planning for a city and represents the statement of rules for making decisions on the development of a city and outlines what is expected, who is responsible for implementation, and what resources are needed to achieve the goals. The technique thus "encourages the people living and working in towns and cities to

devise their own strategic approaches to meet their basic economic and social development needs, and to create an urban governance system that responds to needs and is accountable for outcomes”.

There are many other innovative approaches to sustainable urban development such as urban Agriculture in Cuba, the Safer cities programme in Tanzania, Community Development Fund in Thailand, Good Urban Governance in Action in Peru, etc. All these innovative approaches point to the need for addressing all aspects of sustainability within the context of opportunities and challenges posed by massive urbanization. In order to make urban development sustainable, it will be necessary to learn from the innovative experiences some of which have been outlined above and to develop and operationalize new ideas and approaches to address the problems faced by our cities and towns.

References:

- Asian Development Bank (2004): *City Development Strategies to Reduce Poverty*, Asian Development Bank, Manila.
- Banerjee, B. (2002): “Security of Tenure in Indian Cities”. In Durand-Lesserve, A. and Royston, L. (eds.) *Holding Their Ground: Secure Land Tenure for the Urban Poor in Developing countries*, Earthscan, London.
- City Net (1997): *Effective Participatory Urban Management*, CityNet, Yokohama.
- Davis, Nick and Rakodi, C. (1993): *Managing Fast Growing Cities: New Approaches to Urban Planning in the Developing World*, Longman, Harlow.
- DPU (2001): *Implementing the Habitat Agenda: In Search of Urban Sustainability*, Development Planning Unit, University College London, London.
- Sing, Kulwant et al. (1996): *Integrated Urban Infrastructure Development in Asia*, Oxford and IBH publishing Co. Pvt. Ltd., New Delhi 110001.
- UNCHS (2001): *Cities in a Globalizing World: Global Report on Human Settlements 2001*, Earthscan, London.
- UNCHS (1996): *An Urbanizing World: Global Report on Human Settlements, 1996*, Oxford University Press, New York.
- UNCHS/UNDP/World Bank (1994): *Multi-Sectoral Investment Planning*, Urban Management Programme.
- World Bank (2000): *Cities in Transition: A Strategic View of Urban and Local Government Issues*, The World Bank, Washington.

CHAPTER-2

URBAN PLANNING INSTITUTIONS AND ACTIVITIES IN BANGLADESH

2.1.0 INTRODUCTION

Bangladesh has experienced an enormous increase in its urban population during the last few decades. Urban population as a percentage of total population increased from about 5.2 percent in 1974 to about 23% in 2001. The trend is still continuing and it is estimated that 38.2% of the total population will live in urban areas in 2020 (Rouf, 1999). The phenomenal rate at which urbanization is occurring has made it extremely difficult to manage the urban areas. The deteriorating situation of housing and other infrastructure and worsening of quality of urban life due to air, water and noise pollution bear ample testimony to this fact. The cities and towns of the country numbering more than five hundred suffer from acute problems of deteriorating infrastructure in the form of poor housing, inadequate availability of electricity and drinking water, paucity of drainage and sewerage facilities, virtual breakdown of local public transport and pollution. Homeless population in most cities is on the rise and the slums and squatter settlements have become integral part of urban life in the country.

The role of modern town planning in addressing the problems resulting from rapid urban growth in the country has been far from satisfactory mainly because urban planning and administration have not received due attention despite continuous increase in urban population. The number of urban centres in the country has increased dramatically since the 1961 census. Growth of these centres in most cases has been haphazard and this could largely be related to the lack of proper planning organization at the local level. Urban development in Bangladesh is presently the result of a process-influenced more by the activities of the central government departments than by local government institutions.

2.2.0 INSTITUTIONS FOR URBAN PLANNING AND DEVELOPMENT

At present urban development activities in Bangladesh are carried out mostly by central government organizations. There are at least eighteen main ministries and 42 organizations which are involved in the development of urban areas. National level agencies provide services to different urban areas including city corporations, paurashavas and other urban centres as part of their national responsibilities. Some of the important national agencies are Urban Development Directorate (UDD), National Housing Authority (NHA) and the Public Works Department (PWD) under the Ministry of Works, the Department of public Health Engineering (DPHE) and the Local Government Engineering

Department under the Ministry of Local Government, Rural Development and Cooperatives, the Roads and Highways Department under the ministry of Communication, the Directorate of Environment under the Ministry of Environment and Forest and the power Development Board under the Ministry of Energy and Mineral Resources. Other Ministries such as the Ministries of Commerce, Education, Finance, Agriculture, Youth and Sports, and Water Resources Development are also actively involved in the process of urban development mainly through their regional and local level agencies (Mohit, 1992).

It is thus obvious that urban development activities in Bangladesh are dominated by national sectoral agencies. In the absence of proper institutional and legal framework to guide and control physical development in urban areas, urban development in most cases has been haphazard. The involvement of multiple organizations in the urban development process results in uncoordinated and overlapping activities (Alam, 1979). Major urban functions are divided among various ministries but their activities are not coordinated at the local level. While Planning Commission is responsible for allocating government expenditure, it does not coordinate below the national level. It does not even take into account the approved city master plan in the process of approval of the projects submitted by different utility and/or infrastructure providing parastatals. Consequently, unplanned investments at local levels retard desired growth and invite further problems to encounter (Khan, 2001; Hashem and Haque, 2005).

At the local level, paurashavas were originally created for planning and management of urban areas. Later on separate planning and development organizations were created for the cities of Dhaka, Chittagong, Khulna and Rajshahi. The development authorities in these cities are authorized to undertake local urban planning as well as infrastructure and site development activities for housing, commercial and industrial use. The authorities are also empowered to exert development control functions. The effectiveness of these authorities, however, is generally limited by such factors as inadequate management and financial system, multiplicity of institutions with urban development function within their jurisdictions, uncoordinated development, lack of integration with other agencies, inadequate manpower and lack of public participation (Khatun, 1984, Rahman, 1990).

Lack of any initiative on the part of successive governments to address the institutional weaknesses has led to marked deterioration in many areas of urban management, especially in larger cities. Until recently, a total lack of co-ordination was evident in many ways (Siddiqui, et.al, 2004). The most common example of lack of co-ordination is, of course, the constant digging and filling of the city roads by various agencies at different times of the year, causing immediate suffering to the people. Evidence of serious management problems of the city can also be found in frequent breakdowns in essential services such as supply of water, gas and electricity; disposal of waste and control of traffic. In the face of ever-growing demands of the people, the municipal government and the single purpose government organizations have failed to deliver the minimum services and facilities to its residents.

The efforts of NGOs, CBOs and private sector organizations are also highly limited and fragmented (Siddiqui, et.al, 2000 and 2004).

The challenge of urban management will obviously differ with the size and complexity of each city. While bigger cities suffer from functional fragmentation and uncoordinated management, smaller municipal bodies typically suffer from extremely poor capacities and lack of technical support. Unless concrete steps are taken by the government to enhance the weak administrative and institutional capacities of municipalities and city corporations, it is unlikely that significant improvement in the quality of life in urban areas can be achieved.

2.3.0 PLANNING ACTIVITIES AT LOCAL LEVEL

Other than the Master plans prepared for Dhaka, Chittagong and Khulna in 1959, 1961 and 1966 respectively (Minopreo, Spencely and Macfarlane, 1960, 1961 and 1966) there was no Master plan for any other urban centre until the national physical planning Project financed by UNDP/UNCHS was taken up by the government. One of the objectives of the project was to establish physical planning as a way of developing human settlements through the enactment of appropriate planning legislation (ESCAP, 1983). The whole project divided into two phases (1978-82 and 1982-85) was concerned with the formulation of an outline national physical plan, preparation of specific regional, settlement and growth centre plans, identification of development projects within the context of the plans as prepared and improvement of physical planning capacity of the nation.

During phase I of the project outlines of land use plans of five district towns, namely, Jessore, Bogra, Mymensing, Comilla and Barisal were prepared as a basis for the Asian Development Bank's pre-feasibility study on the development of water supply systems. Structure plans of five District Towns namely, Narsingdi, Sylhet, Rangpur, Rajbari and Jhenaidah were prepared during phase II. These plans set out development policies and priorities related to economic, social and physical goals. Because of flexibility to demographic and socio-economic changes, these plans provide an example of the type of planning that should be undertaken in Bangladesh.

Preparation of Master plans for urban centres received impetus after the upazilas were chosen as the appropriate level for administrative decentralization in 1982. The urban Development Directorate (UDD) was given the responsibility to prepare master Plans for the District and upazila towns. The UDD employed short-term consultants to prepare these plans. However, the UDD itself prepared two District and 40 Upazila town Master Plans. The local Government Engineering Department was also given the responsibility to prepare 10 District town plans and 6 Upazila town plans.

An important criticism that could be leveled against these plans is that the paurashavas were not involved directly and local situations were not given due consideration. Although paurashavas were

empowered to prepare master plans within their jurisdictions, none of the plans were approved by paurashavas. Majority of the target population was not aware of the physical plan which indicates that their opinions and views did not receive any importance. In fact these plans were related from decision making process and separated from operating agencies. These were prepared without creating the legal basis and proper environment for their implementation. Consequently none of these plans were implemented.

2.4.0 THE ROLE OF PAURASHAVAS (MUNICIPALITIES) IN SUSTAINABLE URBAN DEVELOPMENT

It has already been mentioned that urban development activities are currently dominated by national level agencies. An important problem that results from the domination of these agencies is the failure to adopt structures which reflect the socio-economic and cultural context of the locality. Consequently local inhabitants become less interested in the objectives of these organizations. These organizations are more concerned with administrative interests rather than local considerations. These are virtually independent of one another even though they may be under a single ministry. This leads to duplication of efforts and subdivision of responsibility so as to make no one unit wholly responsible for any area of development. It is no wonder, therefore, that the present institutional framework poses a major problem for planning urban development in the country.

In view of the problems as discussed above it is now generally agreed that paurashavas should play the major role in guiding and controlling the growth of urban areas. The paurashava (Municipal) ordinance of 1977 gave the paurashavas wide responsibilities in such areas as town planning and development, public health and sanitation, water supply and sewage disposal, maintenance of public infrastructure and amenities. But the administrative, financial and technical capabilities of the paurashavas were not wide and strong enough to meet the challenge. Consequently, the paurashavas have become more concerned with such activities as sanitation and solid waste removal and maintenance functions while most other responsibilities have been taken over by other agencies.

2.1.1 Macro-Economic Implications of Municipal Development

During the last few decades, Bangladesh economy has been going through profound structural changes with the agriculture sector losing its dominance in GDP. During these decades agriculture's contribution to GDP declined while that of urban based manufacturing and service activities increased. The importance of the urban sector and its contribution to GDP has been steadily increasing. In 1971 it was responsible for 25 percent of GDP; in 2000 it accounted for more than 45 percent at current prices.

Municipalities have an important role to play in the overall supply of public goods and services to their communities, which has significant macro-economic linkages and effects. Municipalities may also play a role in the labour market through expenditure on wages and salaries. They are also the centres

with higher-skilled workforce, which is critical for the growth of the economy, particularly in the manufacturing and service sectors. Municipalities have significant potential to influence the overall performance of the Bangladesh economy. Through expenditures on infrastructure investment, municipalities complement and enhance the productivity of private sector investment, as well as influence the productive capacity of other sectors. Municipalities, for example, facilitates marketing of agricultural products through building roads and markets while manufacturing activities largely benefit from supply of water arranged by them.

In Bangladesh, however, municipalities depend largely on central government for their revenues. The Government's expenditure outlays on municipalities include specific transfers for capital investment identified in the ADP, block grants to the local government to finance unspecified investment expenditures and revenue budget transfers to finance recurrent expenditures, mainly salary subventions for municipal employees. Municipal expenditures represent a small share of all public expenditures and an extremely low share of GDP. Only a few Paurashavas seem able to generate significant amounts of revenue but they have little incentive to do so.

Paurashavas, however, have crucial role and responsibilities in addressing emerging problems and issues resulting from rapid urbanization. As the sphere of government closest to the people, local governments can best understand and reflect local needs and priorities. They also have a critical role to play in raising awareness of the challenges of urbanization for sustainable development and taking up local actions to improve the quality of urban life. There is, therefore, no alternative to strengthening local governments for sustainable urban development. The national government will thus need to undertake a variety of specific reforms including decentralization and empowerment of local authorities to enable them to engage in broad-based participatory planning, develop partnerships and combine public resources with those of the private and community sectors to improve local economic opportunities and living environment.

2.4.2 Planning for Sustainable Municipal Development

One of the main reasons for haphazard urban growth in Bangladesh is the lack of proper planning. In the area of urban planning, the Paurashava Ordinance empowered the paurashavas to prepare Master Plan for development, expansion, and improvement of any area within its jurisdiction and impose restrictions, regulations and prohibitions with regard to the development of sites, and the erection and re-erection of buildings. But due to lack of technical manpower and equipment, no paurashava has been able to prepare and implement a Master Plan yet. Immediate steps, therefore, should be taken to improve the institutional and technical capacities of the paurashavas. Capacity building of paurashavas need to focus on strengthening managerial, technical, financial and regulatory capabilities. Capacity building in urban planning and management should be given special attention.

In view of the shortcoming of the traditional master plans, structure plans are more appropriate for Paurashavas. In particular, the structure plan is more dynamic and highlights the critical issues related to city growth. It also involves public participation and includes some practical actions, including prioritization of infrastructure, which are necessary to influence development towards the defined objectives. Structure planning, therefore, should be used as the appropriated planning tool for promoting land use patterns in the desired direction. Important aspects of a structure plan are discussed below.

2.4.2.1 Structure Plan

The structure plan should be a guide for the physical development of a Paurashava with particular attention to land use, location of investment projects and other issues related to physical development. A coordinated package consisting of a physical plan, institutional plan and financial plan will serve as the guiding framework for both public and private sector action over the medium term (10 to 15 years). The package should consist of the following:

Physical Plan which consists of

- Structure plans showing broad spatial proposals and land use;
- Written statement describing spatial proposals and land use, and outlining social, economic and environmental policies;
- Sector specific plans, diagrams and explanations; and
- Development standards and systems for development control.

Institutional Plan which describes

- Division of responsibilities among government agencies, the private sector and people's organizations;
- Procedures for coordinating activities and chain of command; and
- Staff development programmes and training requirements.

Financial Plan which includes

- Projections of resources from national, local and sectoral sources; and
- Procedures for financial planning and revenue enhancement.

The highest priority projects have to be implemented in the first phase and implementation schedules and budgets have to be prepared accordingly. Administrative responsibilities should be clearly defined to ensure efficient management of the implementation process. Progress on implementation will have to be evaluated so as to provide feedback for later phase and for updating the plan.

2.4.2.2 Local Plan

Detailed plan for specific sections of the urban area as identified in the structure plan can be prepared for rapid development or for special projects and improvements. Such plan should contain detailed information on the preferred development pattern, location and layouts of proposed roads, infrastructure, community facilities and land use zones. The proposals of the local plan should conform to the development goals and objectives of the structure plan while at the same time meeting local needs. The implementation plan should contain information on estimated costs of the projects with a schedule for construction and financing. Administrative responsibilities should also be clearly defined for proper implementation of the plan.

2.4.3 Local Resource Mobilization for Implementation of Plans

Resource base of Paurashavas is extremely weak although these are the most appropriate authorities to finance infrastructure investments. In fact, the benefits of most urban infrastructure are obtained at local level. In terms of efficiency, Paurashavas are most suitable to set local priorities and develop local infrastructure facilities, but this is not possible, given the current state of local government revenues. Consequently, they have to depend on central government grant to pay for their infrastructure development. By increasing revenues the urban local bodies can strengthen their resource base, reduce dependence on central government and thus enhance their autonomy. There are a number of ways to mobilize local resources some of which are discussed below:

2.4.3.1 Local revenues

Paurashavas depend mostly on intergovernmental transfers for infrastructure investments which often fall short of requirements. Local government finances, therefore, need to be strengthened and made less dependent on central government grants. Emphasis should be placed on local-level resource mobilization through improved assessment and collection practices, improved local administration techniques, more effective budgeting systems, as well as more efficient infrastructure investment planning and programming, and operation and maintenance improvements. Also decentralization of responsibilities for infrastructure investments should be accompanied by steps to strengthen revenue generating capabilities.

2.4.3.2 Borrowing

The long service life of infrastructure investments such as water and sewer systems and roads, justifies shifting part of the burden to future generation of users who will benefit from current investments as well as contemporary users. Borrowing, therefore, could be an important funding source. Local governments, however, have limited ability to borrow because of inadequate own-source revenues for debt repayment. One possibility for providing local governments a borrowing option is the use of infrastructure development bank. The creation of 'Municipal Development Fund' (MDF) is a right step

in this direction. It should be gradually transformed into an Infrastructure Development Bank with activities guided by market forces. It should also have guidelines on creditworthiness of the borrowing local government.

2.4.3.3 Private sector involvement

Effective partnerships between local governments and the private sector can generate considerable benefits. Private companies, informal sector enterprises, CBOs, and NGOs can provide urban services, mobilize finance (or voluntary labour), introduce innovative technologies and undertake land development activities. For involving private sector in urban development and management activities supportive legal framework should be developed and institutional setting should be ensured. Private sector actors with whom partnership arrangements can be made include the following:

Community-based organizations (CBOs): These organizations are formed when neighbourhood residents get organized and join forces to improve local security, housing quality, basic utilities, social services and neighbourhood environment. Municipal-community partnership (MCP) has now emerged as an innovative institutional model. MCPs are particularly suitable for delivering specific goods and services, e.g. sanitation, refuse collection, roads and environmental maintenance, social housing etc. MCPs should be developed as part of an overall municipal strategy.

Non-governmental Organization (NGOs): Unlike CBOs, Non-governmental organizations usually originate outside of the communities with which they work. NGOs may be understood as a "third system" between the public and private, concentrating their support at the community level while at the same time mediating between the community and the government. NGOs are effective agents for building local awareness, for mobilizing community action, enabling access to credit, strengthening CBOs etc. In the context of vast needs, limited capacity and constrained financial resources, the local governments should recognize the role of NGOs as partners in urban development and management activities.

Private Enterprises: These range from informal workers and small-scale enterprises to large-scale business firms who may be entrusted with the task of operating or developing whole segments of an infrastructure such as waste collection, water supply, supply of electricity or telecommunication facility. Private enterprises may also be contracted to fulfill specific functions such as bill collection and facility maintenance. Infrastructure financing through private sector can be done by concession arrangements. Concession arrangements involve building, owning, and operating facilities through long-term contractual agreements, such as build, own operate, and transfer (BOOT) or build, own and operate (BOO). BOOT involves private sector participation in building, owning, operating, and after a specified number of years, transferring infrastructure. In case of BOO, however, the private sector does not eventually transfer ownership of facilities

The provision and maintenance of urban infrastructure and services as well as monitoring and enforcement should mainly be the responsibility of urban local governments and this level of government is more intimately linked to urban life. Currently too many agencies are involved in regulating the functioning and development of cities and towns and providing services to citizens. Until the paurashavbas take over many of these functions, there is a need for strong coordinating mechanism through which urban problems would be properly addressed. Steps therefore, should be taken to strengthen the capacity and capability of paurashavas to interact effectively with urban citizens and meet their needs. They should be provided with competent professional staff and adequately designed authority to control and monitor development activities within their jurisdiction.

REFERENCES

- Alam, K. (1979): "Proposal for an Integrated Development Planning Organization for the Dhaka Metropolitan Area", Unpublished Master's Thesis Submitted to the Department of Urban and Regional Planning, Bangladesh University of Engineering and Technology, Dhaka.
- ESCAP (1983): *Study and Review of Human Settlement Situation in Asia and the Pacific*, Volume 2: United Nations, New York.
- Hashem, M. and Haque, Q. M. F. (2005): "Institutional Aspects of Structure Plan Process in Bangladesh", in *Millenium Development Goals and the City*, Bangladesh Institute of Planners and the Centre for Urban Studies, Dhaka.
- Khan, S. A. (2001): "Urban Governance: An Issue for Planned Urbanization", in *Nagar Shaily*, vol. 2, No. 1, October (Department of Urban and Regional Planning, BUET, Dhaka)
- Khatun, N. (1984): "The Role of Metropolitan Agencies in Urban Planning: A Case Study of Dhaka", Unpublished Master's Thesis Submitted to the Department of Urban and Regional Planning, Bangladesh University of Engineering and Technology, Dhaka.
- Minoprio and Spencely and P.W. Macfarlane (1960): "Report on the Master Plan for Ducca", Dhaka Improvement Trust, Dhaka.
- Mohit, M.A. (1992): "Institutional Arrangements for Development of Dhaka Metropolitan Area: Problems and Issues" in N. Islam and A. I. Chowdhury (eds.), *Urban Land Management in Bangladesh*, Ministry of Land, Government of Bangladesh.
- Rahman, N. (1990): "A Study of the Problems of Urban Development at the Peripheral Areas of Dhaka City: A Case Study of Rampura", Unpublished Master's Thesis Submitted to the Department of Urban and Regional Planning, Bangladesh University of Engineering and Technology, Dhaka.

Rouf, M.A. (1999): "An Econometric Analysis of the Patterns of Urbanization in Bangladesh", Unpublished Master's Thesis Submitted to the Department of Urban and Regional Planning, Bangladesh University of Engineering and Technology, Dhaka.

Siddiqui, Kamal *et.al* (2000): *Overcoming The Governance Crisis in Dhaka City*, The University Press Limited, Dhaka

Siddiqui, Kamal *et.al* (2004): *Megacity Governance in South Asia: A Comparative Study*, The University Press Limited, Dhaka

CHAPTER -3

UPAZILA TOWN MASTER PLAN PACKAGE

3.1.0 BACKGROUND INFORMATION

At present the total number of Pourashavas in Bangladesh is around 307. But due to the constraint of resources and lack of institutional capability these Pourashavas are facing difficulty to ensure provision of required civic facilities to their population. The predicament of 'C' class Pourashavas created at Upazila level is especially acute. It is of utmost urgency to increase civic facilities and employment opportunities in all the Upazila Towns of the country to lessen the tremendous population pressure in 'A' and 'B' class Pourashavas as well as in the city corporation areas. Out of 307 Pourashavas in the country there are 84 'A' class, 56 'B' class and 167 'C' class Pourashavas. At present 9 'A' class, 31 'B' class and 167 'C' class Pourashavas are situated at Upazila level. As a result, they are suffering from lack of skilled human resources and on the other hand, due to lack of experience and other constraints it is hardly possible to generate local resource.

Although at present the relatively important Pourashavas of the country have been included in various urban development projects, almost all the Upazila level Pourashavas have been kept outside the purview of these projects and thus outside the mainstream of development. In the Upazila Towns, which have not been declared as Pourashavas, it has not been possible to provide the civic amenities at all. Considering these factors the present project has been prepared to address the need assessment for promoting civil amenities through planned development of Upazila towns irrespective of whether or not those are declared as Pourashavas.

At present the main and secondary drains and natural streams in the Upazila Towns do not function as an integrated drainage system due partly to silting up and damage to the canal walls and other structures, but mainly due to their unplanned and deficient construction and lack of maintenance. The condition of many of the natural and man made ponds in the Upazila towns are deteriorating rapidly and many have become stagnant. Encroachment on drainage reservations causes inundation to many areas, including houses and roads, during heavy storms. There is hardly any roadside drain. If any, the roadside drains are inadequate due to insufficient capacities and incorrect gradients. Therefore, these Upazila towns require the preparation of a storm water drainage master plan, which will prioritize the worst affected areas and prepare detailed designs for the first stage of the implementation.

Traffic and transportation problems in urban areas in Bangladesh have been continuously increasing as the development and management of road network has not been commensurate with the increasing demand for its usage. Traffic congestion, delay, accidents, pedestrian and parking difficulties, air and noise pollution are among the problems. Traffic congestion is one of the most important and critical problems now being identified in the urban areas. The situation has been steadily deteriorating over

time, over large areas and for longer periods of the day. It is, therefore, high time to examine the options to alleviate this chronic problem and take safety measure to improve traffic conditions, reduce congestion and delay, ease traffic flow, improve safety and reduce noise and air pollution.

It is against this background that planned development of Upazila towns is of utmost importance. Keeping this objective in view, the project has been formulated to prepare master plans with the assistance of the Government in order to assess infrastructure and other civic facilities, undertake plan and investment in accordance with the demand of the population, ensure operation and maintenance of the existing infrastructure along with those facilities proposed to be built up under the future investment programme and, above all, to suggest improvement of the management ability of the Pourashavas/Upazila Town Authority so that their revenue earning capability is enhanced with a view to building up the Pourashavas/Upazila Town Authority as self-sustaining local government institutions. The project will also suggest construction of roads and bridges/culverts, drainage facilities, streetlights, markets, bus stands, solid waste management, sanitation, water supply and other such infrastructure facilities. During the 1st phase of the project 100 Pourashavas will be taken to implement infrastructure development schemes with the assistance of GOB and Phase by phase all Upazila level Pourashavas will be covered for infrastructure development.

3.2.0 OBJECTIVES

The objectives of the preparation of Master Plan package of the Upazila Towns are as follows:

- (a) To bring about significant improvement in the quality of life of urban population through provision of government services and facilities in a planned way.
- (b) To facilitate public and private sector's development of the upazila town
- (c) Prepare a multi-sector investment plan through participatory process for better living standards by identifying area based priority-drainage master plan, transportation and traffic management plan, other need specific plan as per requirement.
- (d) Provide controls for private sector development, clarity and security with regard to future development
- (e) To provide guideline for development considering the opportunities and constraints of future development of upazila town.
- (f) To provide planned development in order to ensure sustainable environment. The Master plan should be undertaken with cooperation from other development agencies. The Master Plan would be a guiding document for implementation by all concerned.

3.3.0 SCOPE OF SERVICES AND ACTIVITIES TO BE PERFORMED

Scope of work for consultancy services under this project encompasses all aspects related to the preparation of Master Plan, Drainage Master Plan, Traffic Management plan and Detailed Area plans of the Upazila Towns. The activities that will have to be carried out for providing consultancy services will include mobilization, reconnaissance survey, field survey and collection of C.S/R.S maps, relevant reports, documents, statistics and information. All maps and plans will have to be produced through the application of GIS and a land use Master plan will have to be submitted consisting of the following action areas:

- (a) Land Use Development Plan indicating details of physical development of the area.
- (b) Transportation Master Plan indicating the improvement of transportation sector.
- (c) Drainage Master Plan indicating the development of the drainage system within the specific area.
- (d) Utility Master Plan indicating the development of utility facilities such as gas, electricity, water supply etc.
- (e) A detailed area plan indicating detailed layout design of specific places of importance.

3.4.0 REVIEW AND SUGGESTED MODIFICATION OF THE PROJECT

In view of the importance of planned urbanization in the country, the project could be considered as a step in the right direction. The towns and cities of the country have been plagued with numerous problems resulting from unplanned growth. It is of crucial importance to prepare plans for these cities and towns and steer their growth in accordance with those plans. Although the Upazila Town Master Plan Package reflects the worries of our planners and policy makers regarding the problems of unplanned growth, the project has not been formulated keeping in view the developments that took place during the last few decades in modern town planning. The package, therefore, suffers from a number of shortcomings which need to be addressed.

3.4.1 Approach to Planning

The Master plan Package provides for preparation of traditional Master Plans which quite often fail to accommodate changing needs of society and therefore become ineffective in guiding urban development in many cases. Unless urban plans are based on realistic appraisal of the area's economic potential, socio-economic situation and felt needs of the people, there is little chance that such plans will be effective. Modern approaches to urban planning, therefore, emphasizes preparation of plans at different levels. In order to make the plans of upazila towns more flexible, and adaptable to changing circumstances, three levels of planning activity are proposed: structure planning for providing higher

level policy framework, urban area planning at the Paurashava level and action planning at the ward level.

3.4.1.1 Structure Plan

These are also variously labeled as guide plans, framework plans and indicative plans. Maps and accompanying texts are "broad brush", i.e. more generalized than conventional Master Plans, indicating broad directions of urban growth. They identify those areas where growth and change are such that more detailed local and action plans are required.

3.4.1.2 Urban Area plan/Master Plan

Such plan is prepared for managing and promoting development over medium term following the broad guidelines set by the longer term structure plan. The urban area plan or master plan should contain detailed information on the preferred development pattern, location and layouts of proposed roads infrastructure, community facilities and land use zones. The proposals of the urban area plan/master plan should conform to the development goals and objectives of the structure plan while at the same time meeting local needs. This plan will consist of the following component plans:

- a. Land use plan (covering land use, housing, utilities etc.)
- b. Transportation and traffic management plan
- c. Drainage and environmental management plan

3.4.1.3 Action Plan

This plan is a separate document covering the first five year period of the urban area plan. It examines in the context of the UAP/MP, those items that might be implemented in this period and thus contains more detail on a more limited range of subjects than the UAP/MP. In short, the action plan identifies priorities in different sectors and proposes projects to address these priorities on the basis of selected or agreed criteria.

3.4.2 Goals and Objectives

Formulation of goals and objectives is an important part of the planning process. Goals and objectives should be stated in clear terms so that appropriate proposals can be formulated to fulfill the goals and objectives. The Master Plan Package sets out overall objectives in general terms and does not specify the objectives of the component plans. Goals and objectives of each type of plan should be clearly specified.

3.4.3 The Terms of Reference for Plan Preparation

The Terms of Reference (ToR) for the preparation of plans at different levels is extremely important since the quality of output resulting from planning activities would depend largely on what is contained in the ToR. The ToR should clearly state the requirements of the upazila town regarding what is expected in each plan (structure plan, urban Area plan/Master plan or Action Plan), how that has to be derived, in what format that has to be presented, when a certain activity has to be completed, what professional expertise are needed in the planning team etc. It is very important that consultants are provided with clear directions for easy monitoring of the plan making process by project supervisor/director. Since the ToR will be used for preparing plans of a large number of paurashavas (about 100 Paurashavas during phase I) it is important that local conditions are addressed properly. Such conditions may vary from one paurashava to another. The socio-economic and physical conditions of a paurashava located in the coastal region may vary quite significantly from those of a paurashava located in the central region. The ToR should be detailed enough to cover aspects that may vary from one paurashava to another.

Land use aspects need special attention as these are of central importance in any urban plan. The classification of land use should be such as to capture all the variations across paurashavas. A detailed classification is, therefore, suggested. Each class should be clearly defined and all the components of each class of land use should be clearly identified. Otherwise, a particular component of a particular category of land use in a paurashava may become a part of another category of land use in a different paurashava. The ToR should also specify details of activities that will have to be undertaken in connection with the land use plan, transportation and traffic management plan, and drainage and environmental management plan.

3.4.4 Consultation

Consultation is an important component of the planning process. Through such consultation it is possible to gather information about the current activities and future programmes of various nation building departments which are working within the Paurashava. In this process it is also possible to form concrete ideas about problems and needs of localities and desires of the stake holders. Formal consultation sessions and consultation meetings with different actors of the development process will have to be arranged at different stages of the planning process

CHAPTER - 4

A PROPOSAL FOR DISTRICT CENTRE DEVELOPMENT PROGRAM

4.1.0 INTRODUCTION

One of the significant features of urbanization in Bangladesh is the predominance of a few metropolitan centers resulting in an uneven distribution of urban population in the country. A large proportion of the urban population is concentrated in Dhaka, Chittagong and Khulna Metropolitan areas. These metropolitan areas are strained to the breaking point by the sheer numbers of existing and incremental population and their combined needs and demands. Questions are raised regarding the costs of providing infrastructure and services in these cities compared with those in small and intermediate cities and also about the negative externalities. Special importance, therefore, should be attached to the spatial distribution and hierarchy of urban centres. More specifically, urban centres of different sizes should be more evenly spaced so that functional interrelationships exist among them both horizontally and vertically. Growth of small and medium sized towns should be facilitated while steps should be taken to slow-down the growth of metropolitan areas, especially, Dhaka Metropolitan Area.

4.2.0 DEVELOPING DISTRICT CENTRES

In view of the severe problem of concentrated migration and economic growth, efforts must be made to select new loci for concentration away from the main centers (i.e. Dhaka and Chittagong Metropolitan areas). Special emphasis, therefore, should be given to the development of the District towns and policies should be directed towards strengthening of economic base and allied infrastructure and services in these towns. Those productive activities best carried out at these towns should be identified and types and scales of enterprises should be determined and means of accommodating them set forth. Special Attention should be paid to supporting services - housing, education etc. - again with a view to channeling those investments which are made at these towns in the most productive manner. It is important to note that the District towns/centers are already established with some economic base and political character, situated on or accessible to transportation routes by rail, road or water and with access to adequate sources of electric power. These district centers can be used to relieve the pressures of population in the metropolitan centers but this would necessitate the creation through conscious efforts an environment comparable with that at the metropolitan center with external economies of complementary infrastructures, trained labor forces, amenities, industry tailored to local resources, productive agriculture and soon.

4.3.0 DISTRICT CENTRE DEVELOPMENT PROGRAMME

A development programme for the district centres should be taken up. The objective should be to reduce the gap or disparity between these centres and the capital city, Dhaka in terms of socio-economic opportunities and infrastructural development so that these centres can attract migrants who would otherwise choose the capital city as their destination. Formulation of the District Centre Development Programme (DCDP) would require preparation of a structure plan and a multi-sectoral investment plan for each District Centre.

4.3.1 Structure Plan

The plan sets out strategies for guiding the social, economic and physical development of the urban centre under consideration. The plan consists of written statements accompanied by illustrations and diagrams and provides the basis for the preparation of detailed local plans or multi-sectoral investment plans.

4.3.2 Multi-Sectoral Investment Plan (MSIP)

It is a multi-year and multi-sectoral investment plan, showing what investment should take place across sectors, how this investment will be financed and the implications of investments for the operating and maintenance budgets of the local government and public agencies. Multi-sectoral investment plan should be built around the following component plans.

4.3.2.1 Physical and Environmental Development Plan (PEDP)

The plan is developed on the basis of physical and environmental analyses and sets out phased programmes for the extension and improvement of infrastructure and services such as transportation, water supply, waste management, utilities, public housing, urban renewal, socio-economic facilities, etc. The plan should also contain detailed information on the preferred development pattern, showing location of roads, infrastructure, community facilities and land use zones. An important element of any physical and environmental development plan is a phased programme for urban expansion of the city. Where appropriate, PEDP should give recommendations for land development schemes such as guided land development, site and services, and land pooling. As regards environmental aspects, the plan may designate areas with special environmental characteristics, the conservation or protection of which requires special policies/ regulations to restrict or control land use and development. These may include areas of special ecological value, areas prone to environmental damage or soil erosion, areas prone to flooding, buffer areas adjacent to sewage treatment works or solid waste disposal sites, green belts etc. While designating such areas, the question of resettlement or compensation is of utmost importance and should be given serious attention.

4.3.2.2 Resource Improvement Plan (RIP)

The objective of RIP is to mobilize local resources as much as possible to pay for local urban infrastructure development, and operation and maintenance. This will increase local autonomy and reduce expenditure burdens on central government budgets. The RIP contains mechanisms designed to improve the revenue generation capacity of local government relative to existing performance. The plan should give emphasis on increasing revenues from national and local sources, both public and private, and identify new funding sources from international organizations and potential donors at home and abroad. In addition to the measures for improving assessment and collection of tax revenues, the RIP should give particular attention to:

- User fees and service charges;
- Community self-help contribution to building or operation and maintenance of certain infrastructure components;
- Private sector financing of profitable infrastructure components;
- Borrowing from national/local source; and
- International (bilateral/multilateral) loan finance.

4.3.2.3 Institutional Development Plan (IDP)

The preparation and implementation of MSIP require the involvement of all the organizations and institutions which operate in the urban centre in connection with the development and/or operation and maintenance of infrastructure and services in the centre as well as its socio-economic development. The cooperation and integration of all the efforts of participating organizations including the local government, public sector agencies, private sector actors, non-governmental organizations and the community is needed in order to maximize efficiency and effectiveness of MSIP. The local government should be the lead agency for planning exercise and should be assigned with the task of inter-agency coordination. The IDP should outline measures for strengthening local organizations and describe methods for achieving coordination and integration of various local agencies for the implementation of MSIP.

4.4.0 Financial Implication of the Programme

It is obvious that implementation of such a programme will require considerable amount of financial resources. Even if we include only the district headquarters, a total of 64 district centres will have to be developed. Integrated development of these centres would involve investment on various types of urban infrastructure which may include but not limited to:

- Drinking water supply
- Sewerage, human waste and sanitation
- Drainage and flood control
- Solid waste management
- Urban roads
- Neighbourhood improvement program
- guided land development and sites and services programmes
- Urban renewal, resettlement
- public housing
- Industrial estates
- Market infrastructure improvement
- Transport terminals
- Social infrastructure such as education, health, recreation etc.
- Provision of electricity, telephone, telecommunication etc.
- Graveyards, cemeteries etc.

It will be necessary to carry out an in-depth analysis of the financial resources that will be required. Within the context of the multi-sector investment plan clarification will be needed regarding the sources of finance that will be accessible to cover non-recoverable costs (i.e. direct subsidies from central government) and which service sectors will have the potential to be (partly or fully) self-financing. The integration of resources will require a pooling of:

- Expected user fees and service charges
- Other local revenues which can be fed into urban infrastructure development
- Private sector financing of certain profitable infrastructure components
- Community self-help contributions to building or operation and maintenance of certain infrastructure components
- Central government grants/subsidies
- Local /National loan finance
- International (bilateral/multilateral) loan finance

The development programme may be implemented over a period of say 15 years divided into three five-year programmes. The five-year programmes will need to be broken down into annual MSIP budgets for the local government budgeting process. The different components of finance for different types of infrastructure will have to be identified in order to establish financing plans and budgets for the annual and five-year programmes with particular attention given to the following aspects of each project: (a) source/sources of finance, (b) type of finance (i.e. loans, subsidies or direct income) and (c) percentage of estimated project cost covered by different source/sources and finance type.

CHAPTER -5

SUGGESTED TERMS OF REFERENCE FOR UPAZILA TOWN MASTER PLAN PACKAGE

5.1.0 PROJECT BACKGROUND

One of the main reasons for haphazard urban growth in Bangladesh is the lack of effective land use control mechanisms. Planning has been done for some big cities (Dhaka, Chittagong, Khulna and Rajshahi) while all other cities and towns are growing without any approved plan. The people of the rural areas are migrating towards urban areas due to push factors such as river erosion, lack of employment opportunities etc. It is becoming extremely difficult to provide the swelling urban population with appropriate civic facilities due to lack of proper institutional arrangements. In this context, the government has been transforming important urban areas into Paurashavas to provide socio-economic and infrastructure facilities to the population and the process is continuing. However, it is not possible to develop these Paurashavas in a planned manner without preparing appropriate urban plans first. It is against this background that the present Master Plan Package has been formulated.

The Master Plan Package provides for Planning of the Paurashava towns at three levels. At the first level a structure plan will have to be prepared developing framework for development activities within the Paurashava. At the second level, that is, Paurashava level a master plan/urban area plan consisting of a land use plan, a transportation and traffic management plan and a drainage and environmental management plan will have to be prepared following the strategies and policies set out in the structure plan. A ward/local action plan proposing specific projects for implementation during the first five years of the plan period will have to be prepared on the basis of the master plan.

5.2.0 STRUCTURE PLAN

The structure plan should set out in broad terms the general policies and proposals of strategic importance for the development and use of land in the area, taking account of national policies. The structure plan should not contain detailed policies or site specific proposals to be used for development control (which are matters for Master Plan / Urban Area Plan), but should concentrate on providing a strategic framework within which detailed policies can then be framed in the Master Plan. The structure plan should include policies on:

- the conservation and improvement of the natural and built environment;

- the economy of the area, including major industrial, business, retail and other employment – generating and wealth-creating development;
- the level, location and distribution of housing provision;
- a transport and land-use strategy and the provision of strategic transport facilities including highways, railways, and other infrastructure requirements;
- waste treatment and disposal, land reclamation and reuse;
- tourism, leisure, sports and recreation, community facilities; and
- environmental hazards and their management.

5.2.1 ASSESSMENT AND ANALYSES

For formulating strategies and policies various assessments should be conducted to determine and evaluate the opportunities and constraints that may exist within the paurashava. In particular attention should focus on :

- Major physical development issues facing the paurashava.
- Opportunities for and constraints in future physical extensions of the paurashava.
- The rate and direction of past and future urban growth in the Paurashava.
- The amount of land (for housing and different types of activities) that will be needed for future extensions and the suitable areas for such extensions.
- Measures for steering future growth of the paurashava in desirable directions.
- Environmentally sensitive areas and their protection.
- Investment priorities that will make the town functionally efficient and strengthen its economy.
- Institutional changes that will improve the delivery of services, operation and maintenance of facilities and physical planning and implementation.

5.2.2 INFORMATION

Basic data needed for structure planning include the following:

Population data

- Present population estimates
- Population growth rates
- Population by age and sex groups
- Population projection for 20 years
- Size of the households
- Population by categories of employment

Economic activities

- Economically active and non-active population
- Data on economic activities by sectors, including the informal sector
- Sources of employment, unemployment and under employment
- Medium and long-term investments planned by the private sector
- Natural resources

Land Use

- General categories and areas
- Ownership and status of land
- Vacant land available for development
- Existing land regulation

Infrastructure Assessment

- Data on existing infrastructure
- Types of services available
- Areas and populations served
- Problems resulting from inadequacy of infrastructure systems and services
- Projection of infrastructure needed

Community Facilities

- Existing facilities by number and size
- Deficiencies
- Projected needs

Environmental Data

- Topography
- Drainage Pattern
- Location and size of environmentally sensitive areas
- Location and size of environmentally affected areas..

5.3.0 MASTER PLAN/URBAN AREA PLAN

Master Plan/Urban Area Plan or Multi-sector Investment Plan is prepared for managing and promoting development over medium term on the basis of the strategies set by the longer-term structure plan. Basically the Master Plan/UAP will be an interpretation of the structure plan over the medium term (10 to 15 years). The coverage of the Master Plan/UAP will be existing urban areas and their immediate surroundings with the purpose of providing development guidance in these areas where most of the urban development activities are expected to take place over the next 20 years. Delineation of the Master Plan Area should be based on the basis of the urban growth area as identified in the Structure Plan It will contain more details about specific programmes and policies that require to be implemented over the medium term. The Master Plan/UAP/MSIP will consist of the following plans:

- Land Use plan
- Transportation and traffic Management plan
- Drainage and Environmental Management Plan

5.3.1 LAND USE PLAN

The land use plan is the principal component of the Master plan/Urban Area Plan. The plan must consider the allocation of land for residence, business, industry, municipal facilities public and private recreation, major institutional facilities, mixed uses, open space and natural and fragile areas. Optimum intensities and standards of development must be established for each use classification and location, based upon current development, natural land characteristics, and projected municipal services and facilities.

Allocations of land use must consider impacts on surface and ground water resources, wetlands, coastal features, and other sensitive and fragile natural resources. Judgements must be made on the ability of various existing and new land use controls to properly protect these natural resources.

The characteristics, trends and projections of population and employment will be essential input to the allocation of land areas for use. The plan should show how the projections have been used to determine amounts of land needed for residential, industrial, and other purposes. These quantitative relationships carry over to other components of the plan in that certain facilities and services (utilities, transportation, recreation areas etc.) are needed to support the land allocation to each use.

5.3.1.1 Land Use Planning Goals and Objectives

Goals

To have an attractive, functional, economically vital community with a balance of different types of land uses.

Objectives

Achieve a balance between jobs and housing

The plan will provide for balancing the amount of land available for future employment uses with the current and projected housing land required.

Efficient Development Patterns

The plan will encourage efficient development throughout the town so as to ensure distribution and general location of land use densities to coincide with growth projections and availability of public services.

Mixed-use Development

Facilities development that combines multiple uses in single buildings or integrated sites.

Neighbourhood liveability

Facilitate development of stable, multi-use neighbourhoods that contain a compatible mix of housing, jobs, stores, and open and public spaces in a well-planned, safe pedestrian environment.

Human Scale and accessible development

Facilitate development that is human scale and encourage pedestrian use and human interaction.

Compatible uses

Facilitate development that minimizes adverse impacts to adjacent areas, particularly neighbourhoods.

Complementary uses

Locate complementary land uses near to one another to maximize opportunities for people to work or shop nearer to where they live.

Integrated area planning

Promote cohesive integrated planning of areas and sites through use of subarea planning or planned unit developments.

Archaeological and historic resources

Protect and preserve cultural, historic and archaeological resource. Promote preservation, restoration, rehabilitation and re-use of historically or architecturally significant older buildings.

Preservation of open space and environmentally sensitive areas

Preservation and enhancement of significant open space including environmentally sensitive areas such as wetlands, fish and wildlife habitat, areas prone to flooding or geological hazards, and stream corridors.

5.3.1.2 Land use plan components

5.3.1.2.1 Designation of Land Use

One of the objectives of land use plan is to designate appropriate areas for residential, commercial, industrial, parks and open space, and various types of community and public facilities that will be mutually supportive, equitably distributed and will accommodate the projected need for reasonable development opportunities in each sector. Following is the classification of land use that may be used as a guide for designating appropriate areas for different types of land uses in the paurashava depending upon its size and its socio-economic and physical characteristics.

a) Residential Land Use

The objective is to designate sufficient area within the town to accommodate the projected need for residential living opportunities with an array of densities and building intensities capable of providing a full range of housing options in a harmonious manner.

Types of Residential Land Use

Low density Residential: This designation is intended primarily for low-density, single family, detached residential dwellings and vacant land with constraints to development at higher densities. Areas where availability of utilities and public facilities and where sensitivity to the natural environment or natural hazards indicate reduced sensitivity, are appropriate for such type of low-density development. Commercial development in such areas should be limited to only neighbourhood retail facilities.

Medium – Density Residential: This designation is intended primarily for medium density detached and attached residential dwellings, including existing developed areas and vacant lands suited to single or multi-family structures and necessary supporting facilities and utilities. Appropriate locations would be near institutional uses and as buffer areas separating higher density residential and commercial activities from lower density residential areas.

High-Density Residential: This designation is suited to intense residential activity in multi-family configurations and other uses that can be integrated into this designation without being unduly detrimental to its residential character. Lands suited to this designation would be close to shopping and employment centres and areas adjacent to commercial uses to serve as buffer between non-residential activities and lower density residential areas.

b) Commercial Land Use

The objective is to designate sufficient land within the town's planning area to accommodate the projected need for commercial opportunities, promote economic diversification and to provide the goods and services needed within the planning area.

Types of commercial land uses:

The future land use designations would include the following categories of commercial uses, which vary in intensity by function and location.

Neighbourhood Commercial: Such uses include convenience retail and service establishments relying upon frequent purchases and having small trade areas. These uses are compatible with, and may be located in, residential areas.

Community Commercial: Areas for commercial activities to meet retail shopping and service needs of the community. Accommodates clusters of retail, financial, professional service business and entertainment activities that attract shoppers from an area significantly larger than a neighbourhood.

Arterial Commercial: Land uses such as restaurants and service stations as well as wholesale and retail activities located on arterial streets.

Central Business District (CBD)/Town Centre: This area provides for a variety of employment opportunities in a well designed and pedestrian-friendly commercial core. CBD should be provided with public facilities and public open spaces, pedestrian friendly circulation, retail stores and services, offices, community services, entertainment facilities and residential dwelling units in conjunction with an appropriate Commercial / office use.

c) Industrial Land Use

The objective is to designate areas to provide for a variety of industrial and public utility land use including quasi industrial parks, light industrial and general industrial activities.

Types industrial land uses:

The future land use map should include one or more of the following categories of land uses depending on the characteristics of the town:

Quasi-industrial areas: Such areas provide for a mixture of whole sale and warehousing activities, as well as some limited office and retail land uses.

Light industrial: This designation is suited to lighter or service oriented activities. Typical activities include, but not limited to, the production of handcrafted goods, electronics equipment, components related to instrumentation and measuring devices, bio-medical and telecommunications technologies,

computer parts and software, optical and photographic equipment and processing and packaging activities which are non-offensive and do not involve processes which generate significant levels of heat, noise odours and /or particulate, and do not involve chemicals or other substances which pose a threat to health and safety.

General Industrial: Such areas are suitable for a wide range of industrial activities involving significant mechanical and chemical processes or large amount metal transfer. Typical activities include but are not limited to paper and textile milling, wood processing and the production of prefabricated structural products; the manufacture of soaps and detergents; rubber processing and the manufacture of rubber products; the production of vehicles; machinery and fabricated metal products; electroplating; cement making and the production of concrete; gypsum and related products; and the production of chemical products; perfumes and pharmaceuticals; and the production of paving and roofing materials.

d) Open Space

The objective is to develop a high-quality, diversified park, recreation and open space system that benefits citizens of various incomes and physical abilities.

Types of open space:

The future land use map may include following types of open space depending on the size and characteristics of the Paurashava Town:

Parks: This category may include

- Regional park serving the town and adjoining areas and emphasising an outdoor setting and usually having facilities for activities such as picnicking, swimming etc.
- Urban park serving the town and emphasizing passive recreation. This may also have picnic and zoo areas.
- Community park which emphasizes active recreation and should be within three miles of the area it serves.
- Neighbourhood parks which are designed to be within the neighbourhood (or within half to one kilometre radius of the area they serve) and are related to the neighbourhood character.
- Pocket parks are areas which satisfy special needs - a place for relaxation in a dense urban area; a spot for a specific recreational activity; an outdoor urban space; or they simply afford verbal pleasure.

Play- Grounds : This may include

- Stadium
- Playing-fields. Community and neighbourhood parks may also include playing fields. Playing fields of the schools belong to this category.

- Play-lot, usually designed for small children.

Natural and undeveloped resource Areas: This may include:

- Lands that preserve wild life habitat and fragile ecosystems such as wooded areas, ravines, etc.
- Lands that preserve unique scenic features such as wooded views from urbanized areas.
- Lands that contain potential recreational value for passive uses such as picnicking, walking, jogging, bicycling, bird watching or simply resting.
- Areas that can be integrated with existing or proposed community parks.

e) Institutional Uses

The plan should provide for appropriate siting of various institutions so as to accommodate the needs of the areas' residents. Institutional uses would include:

- Educational institutions such as kinder gartents; primary, secondary and higher secondary schools; colleges and university; madrashas; Technical and vocational institutions
- Research and training institution
- Social welfare organization
- Health care facilities such as hospitals clinics, dispensaries etc
- Public libraries
- Museums and art galleries
- Orphanage

f) Community Facilities:

The plan should ensure that the community facilities are properly distributed throughout the town so that the people of the town are adequately served. Community facilities should include the following:

- Community centre
- Cinema Halls
- Theatres
- Town Hall
- Gymnasium
- Mosque
- Temple (Mondir)
- Church

g) Public Services and Utilities

The plan should provide the residents with adequate public services and utilities in convenient/appropriate locations, to permit the delivery of services to meet the needs of all ramps and localities. Following services and utilities are included in this category:

- Postal services
- Fire Services
- Sewerage treatment / disposal area
- Waste disposal area
- Water supply (Treatment point/intake point set)
- Power station
- Grave yard
- Cemetery
- Cremation area

h) Communication and Transport:

The plan should ensure that communication and transport facilities are properly located so as to accommodate the needs of the town's residents. This category would include the following:

- Radio Station
- Telephone exchange building
- Railway (Including right of way)
- Railway station
- Bus, truck, taxi terminal
- Rickshaw / Tempo stand
- Launch / Boat / Steamer Terminals
- Air fields
- Biman / Other airline Office

i) Public Administration and Defence:

This category includes the following:

- Government / Semi-government office / Court Building
- Prison (Jail Khana)
- Lands and building belonging to
 - Armed forces
 - BDR
 - Police
 - Ansar
 - BNCC

j) Roads

The plan should provide for safe and efficient roadway transportation facilities capable of accommodating motorised and non-motorised needs of the town. Streets in a town should be classified in the following way :

- **Arterial streets:** intended to provide important access within the town and provide important link to other road classification.
- **Collector streets:** connect residential neighbourhoods with community centres and facilities as well as provide access to the arterial streets
- **Access streets:** have a variety of functions to perform with the principal purpose to provide vehicular and pedestrian access to property abutting the public right of way.

k) Agricultural use

Mainly existing use consisting of

- Cropland
- Orchard
- Horticulture
- Sericulture
- Panbora
- Dairy Farm
- Poultry Farm
- Pisciculture Farm

l) Water Bodies

Water bodies include river, khal, ponds/tanks/ditches and various other water reservoirs. The plan should give special emphasis on the preservation of water bodies, especially rivers and khals.

o) Wet land

Includes mainly the beel areas, marshes, swamps and similar areas. Protection of the critical wetlands should be the objective of the plan.

p) Vacant land

Buildable urban land still lying unused. Such lands are likely to be reduced during the planning period.

q) Brick field

An area where brick is produced. Reduction of such area is desirable.

r) Railway land

Existing land use which will remain unchanged or reduce depending on the policy of the Railway authority.

s) Urban Reserve

Areas earmarked for future urban development. No permanent development will be initiated in the area until the phase of development during which such land is intended to be developed. But the owners of the land should be allowed to use their land for agriculture and temporary dwellings.

t) Mixed Use

An area where no single land use is overwhelmingly dominant and may contain various types of uses such as

- presidential
- commercial
- institutional
- public administration
- community facilities
- public services and utilities
- communication and transport
- parks and play grounds

u) Rural Homestead

Mainly existing land use consisting of dwelling units, kitchen, latrine, out-house, kitchen garden, cow-shed, courtyard etc.

v) Shoreline (in case of coastal paurashavas)

5.3.1.3 Housing

Housing is an important component of land use plan. It concerns the immediate environment in which residents live and raise their families. The primary goal of the housing component should be to meet the current and future need for housing in the Paurashava. More specifically, the housing component must

- inventory and analyse existing housing stock, including its age, condition, type, location, occupancy and cost (rent and sales) using the most recently available data;
- identify, based upon demographic and socio-economic analysis and projections used in the plan, and market conditions and trends, the unmet housing needs of the existing and future

population, giving attention to all segments of the housing market (renters, homeowners, low and moderate income, large families, the homeless and special needs persons and groups). Particular attention should be given to the relationship of needs to costs (affordability) from the housing stock inventory and analysis. Most recent data should be utilised.

- Establish goals and policies that will
 - upgrade deteriorating and substandard housing
 - provide new housing opportunities geared to the needs of all segments of the population including homeless and slum dwellers.
- Identify resources and actions designed to achieve housing goals and implement housing policies including
 - agencies responsible for housing
 - public and private resources to be utilised in achievement of housing goals.
 - sites for housing development (locations and types, that is, diverse range of needed housing)
 - financial strategies to be developed for housing
 - innovations to encourage achievement of housing goals.

5.3.1.4 Community Facilities and services

This component should provide an inventory of existing and forecasted needs for facilities and services used by the public such as educational facilities, health care facilities, community centres etc.. This part of the land use plan should cover the entire range of community facilities and requires the following steps in planning:

- An inventory of existing community facilities and services, appropriately mapped. This should include all publicly operated facilities and services plus quasi – public and private facilities that provide services to the people.
- A general analysis of the effectiveness of each such facility and service, noting any deficiencies in quality and quantity of services provided.
- A forecast of current and future needs for such facilities and services, based largely upon projections of land usage and population change. The forecast should be based upon generally accepted standards of need.
- Specification of policies and actions designed to accomplish the following:
 - eliminate current deficiencies and provide improvements in services and facilities

- provide for expansion of facilities and services to satisfy the projected needs of future land development and population change.
- initiate new types of facilities and services in accordance with projection of need.

While the range of facilities and services of each paurashava will be based upon its peculiar characteristics, certain facilities and services will be common to most paurashavas, such as educational institutions (primary, secondary and higher secondary levels), health care facilities, public libraries, community centre, religious institution (such as mosque), postal services, fire services, graveyard etc.

5.3.1.5 Utilities

The utilities here are defined as integrated facility systems that serve the public by means of a network of wires or pipes and ancillary structures. Included are systems for the delivery of natural gas, electricity, and telecommunications services, water systems and sewage disposal.

In this part of the land use plan, the utilities would include electricity, natural gas, and telecommunications. The water and waste disposal systems would be covered in the Drainage and Environment management plan.

The goal of the utilities component of the plan is to ensure that utilities including electricity, natural gas, and telecommunication transmission are available or can be provided to serve the projected population growth within the planning area in a manner which is fiscally and environmentally responsible, aesthetically acceptable and safe for near-by residents. In this context locational aspects of the utilities should be planned in such a way as to (a) maximize the efficiency of services (b) minimise their costs and (c) minimise their impacts upon natural environment.

The utilities component should contain:

- an inventory and capacity analysis of existing utility facilities.
- an assessment of the need for new and / or expanded utilities to serve growth in the existing paurashava and potential urban growth area around the paurashava over the next 15 years as anticipated in the land use plan; and
- policies to ensure the timely and efficient provision and maintenance of utility facilities.

In case of proposed facilities, the plan should provide

- an overview of the location of the proposed facilities;
- their service areas;
- their capacity; and
- regulatory concerns on each utility as it relates to planning for future system expansion.

5.3.1.6 Zoning and land Development Regulations

Zoning is a legal device for implementing local land use plans. A paurashava should be divided into number of zones so as to set apart different areas in the Paurashava for specific purposes. There is no standard rule for the determination of the number of zones that should be provided for a given paurashava. It is necessary to examine existing and proposed development with some care and then to devise appropriate categories to take care of most land uses in the paurashava. In general, the smaller paurashavas should have a fewer number of zones than larger paurashavas. Zoning should prevent encroachment of one zone upon another adjacent to it. For instance, the industrial area should be located away from the residential area.. This zoning should ensure that the land uses of a paurashava are situated in relation to one another providing adequate space for each type of development.

The land use plan of the paurashava town should be the basis for the determination of

- the area to be allocated to each type of zone
- the type of land suited to particular types of development.
- the best physical arrangements for the various zones and
- the general location for particular zones.

When the paurashava has been benefit unto various zones an the basis of the land use plan, the next step is to draft suitable regulation with respect to

- the height and bulk of buildings and other structures
- the area of a lot which may be occupied and the size of required open spaces
- the density of population
- the use of buildings and land for trade, industry, residence or other purpose

A list of permitted, accessory and conditional use (of land) for each zone should be specified in the regulation

Height regulation may vary by zones, usually with the highest constriction permitted in the central area (town centre)

Bulk limits primarily refer to horizontal regulation, such as building set backs.

Density refers to the number of units or people allowed per parcel and it is controlled through such techniques as plot sizes, yard sizes, set back, floor area ratios (FAR) etc.

The land development regulation should not be too rigid and should be adaptable to changing circumstances.

5.3.2 TRANSPORTATION AND TRAFFIC MANAGEMENT PLAN

This plan shall consist of the inventory and analysis of existing and proposed circulation systems, street patterns and any other modes of transportation in the paurashava in co-ordination with the land use plan. The focus of local concern will be municipal streets and roads, pedestrian circulation, local marine facilities, local bicycle paths, parking and other facilities providing or supporting the transportation of people and goods within the Paurashava. This focus will also include associated land uses such as terminals, stations and other shipping facilities.

4.3.2.1 Goal and Objectives

The goal of the plan for the transportation system should be to provide a balanced transportation system that meets the needs of the community by accommodating the movement of people, goods, and services at an optimum level of safety, economy and efficiency. More, specific objectives of the plan would be to:

- Facilitate mobility for all residents within the paurashava, including elderly and persons with disabilities by providing a accessible and affordable multimodal transportation system.
- Classify streets and arterial to reflect their desired use. Classification should be based on present and future traffic volumes and the type of land uses along the streets.
- Provide reasonably direct connections between various sections of the paurashava for local traffic.
- Develop all streets and roads in scale with intended land use.
- Reserve adequate rights of way to meet future needs.
- Locate thoroughfares and major routes so as to reduce conflicts between external traffic and local traffic, but at the same time do not disrupt or divide the logical pattern of development in the paurashava.
- Classify streets and arterials to reflect their desired functional use. The functional classification system should be based, in part on present and future traffic volumes and by the type of land uses abutting the streets and arterials.
- Adopt design standards for arterials and local streets that are based on the functional classification of the facility and the projected land uses they are intended to serve.
- Develop facilities for the safe and efficient movement of pedestrian and bicycle traffic with consideration for both modes of travel as a means of alternative transportation as well as for recreational purposes.

- Recognize that travel by rickshaw is and for the foreseeable future may continue to be the dominant mode of transportation, and therefore, provide facilities for rickshaws within residential areas and to/from commercial, schools and other public facilities.
- Develop a transportation grid that provides good connections to surrounding land uses and activity centres and allows for multiple circulation routes to/from each location.
- Employ traffic management measures to improve efficiency of the network.
- Protect and enhance neighbourhoods with an active programme that focuses on safety, safe routes to school, traffic calming, education, and enforcement
- Develop strategies to improve smooth traffic flows in areas experiencing extreme congestion by employing strategies that better accommodate various modes of travel including automobiles, transit, rickshaws, bicycles and pedestrians.
- Introduce traffic calming measures as part of a traffic management strategy for the paurashava.
- Ensure a reasonable availability of parking spaces in areas with a known parking demand

5.3.2.2 Inventory and Analysis of Existing and Proposed Circulation Systems

As a minimum the inventory of the circulation systems should cover streets and roads including highways arranged by functional classification (arterial, collector local) as well as water ways and their capacities, conditions and average daily traffic. More specifically, the inventory and analyses should cover the following aspects of roads and waterways:

5.3.2.2.1 Transportation Infrastructure and Facilities

Road

- Road network by functional classification
- Physical condition of roads
- Geometry of major road intersections
- Truck routes and their loading/unloading areas.
- Bus routes and terminals
- Traffic control devices such as traffic signals, stop lights, caution lights, pedestrian signals, rail crossing signals, and other facilities designed to facilitate traffic flow and safety.

- Parking (garages, surface lots and curb parking).

Water Ways

- Location of existing ghats and terminals
- Physical condition and facilities
- Ferry route
- Inter-modal transfer facilities

5.3.2.2.2 Transportation Fleets and Services

Road

- Number of motorised vehicles by their types
- Number of buses by routes
- Forms of public transportation, their service condition, fare level etc.
- Number of trucks, condition, ownership
- Number of taxicab, fare level, extent of service
- Number of auto-rickshaws, fare level, extent of service
- Number of rickshaws and fare levels
- Number of all other types of NMVs.

Waterways

- Number, types, condition, and capacity of ferries and various other types of water transport operating in the planning area.
- Types and frequency of services
- Types and costs of goods carried

5.3.2.2.3 Volume and Movement Patterns, and Levels of Service

Volume and movement patterns of people and goods, and levels of service (that is efficiency of use of the existing infrastructure) will have to be assessed with respect to the following aspects using separate methodologies for roads and waterways:

- Volume of traffic along major corridors by type.
- Traffic movement by type of day
- Person trips by time and mode
- Commodity carried by goods vehicles by type
- Congestion points
- Locations characterised by inadequate capacity
- Capacities and journey times by modes
- Modal split for goods and passenger traffic
- Conditions and facilities for non-motorised transportations including bicycles and pedestrians
- Facilities for loading/unloading of goods

A series of volume and O-D surveys will have to be carried out within the planning areas.

5.3.2.3 Proposed Transportation Improvements

Utilising the inventory and analyses of the circulation systems, and projections of land development in the land use plan, the needs for changed, improved or expanded circulation facilities should be assessed and on that basis policies and actions should be developed and incorporated in the transportation plan. In addition to the roadway facility improvements, transit, ferry, pedestrian, bicycle, and transportation demand management strategies are also to be identified in the plan.

5.3.3. DRAINAGE AND ENVIRONMENTAL MANAGEMENT PLAN

This plan should address the major environmental issues facing a paurashava. From environmental management perspective it is important that critical areas, natural resource lands and the environment be protected. In addition, environmental infrastructure such as water supply, storm drainage sanitary sewer and solid waste management facilities that are required to mitigate negative environmental consequences resulting from individual and collective human activities, should be properly planned

and implemented. Proper management of existing infrastructure and services is also of crucial importance. This plan should cover the following environmental features and issues where applicable:

Natural Resources

- Forests and natural vegetation
- Streams and water bodies
- Wetlands
- Shorelines
- Aquifers
- Water quality
- Air quality

Environmental hazards

- Flood hazard
- Severe storm hazard (cyclone, storm surge etc.)
- Earthquake hazard
- Steep slopes, land slides
- River bank erosion
- Human induced risks (such as fire hazard)

Environmental infrastructure

- Drainage system
- Water supply system
- Sewerage and sanitation
- Solid waste management

5.3.3.1 Planning Objectives

The main objective of the environmental management plan should be to protect and enhance the environment. Specific objectives with respect to natural resources, environmental hazards and environmental infrastructure should be the following:

Natural Resources

- Protect, sustain and provide for healthy and diverse ecosystems.
- Protect natural stream channels for their hydraulic, ecological and aesthetic functions
- Regulate development to protect the functions and values associated with wetland areas.
- Preserve the natural character, resources, and ecology of the water and shorelines while balancing public access and recreational opportunities.
- Identify and protect critical recharge areas for aquifers used for potable water.
- Define and protect fish and critical wildlife habitat conservation areas.
- Select locations for development which contribute to conserving the use of natural resources and avoid harm to areas of environmental importance.

Environmental hazards

- Reduce exposure of the town and its residents to floods, erosions, land slides, cyclonic storm surge and earthquake to protect public and private property and save lives.

Environmental infrastructure

- Ensure that utilities including water supply, sewage disposal and storm water facilities can be provided to support current and future development.
- Provide solid waste facilities and programmes that are efficient, and which utilize recycling to the maximum extent possible.
- Maintain, enhance and protect natural drainage systems to protect water quality, reduce public costs and prevent environmental degradation.
- Design utilities with sufficient capacity to meet anticipated land use intensity.
- Minimize adverse environmental, aesthetic and fiscal impacts associated with the siting, development and operation of utility services and facilities (storm water, water supply, sewage disposal and solid waste facilities).

5.3.3.2 Assessment and Analyses

Various assessments and analyses will have to be conducted to determine the existing situation with respect to various components of the environmental management plan and formulate planning proposals regarding each of the components. Attention should be focussed on the following aspects:

Natural Resources

Existing situation : Assessment of the existing situation with respect to the following aspects.

- Climate
- Topography
- Geology and soils
- Ground and surface water
- Flood plains, wetlands and shorelines (coastal areas)
- Plant fish and wildlife
 - Terrestrial flora and fauna
 - Aquatic flora and fauna

Designation of environmentally sensitive areas: Analyses of existing situation should lead to

- Designation of areas with special environmental characteristics such as areas of special ecological value, wildlife reserves, forest resources etc.. Such areas may be termed as conservation areas.

- Designation of special areas where land use or built development should be controlled for reasons of health, safety or resource conservation. These might include buffer areas or watershed management areas which may be termed as protection areas
- Designation of green areas such as green belts, park land etc.

Environmental Assessment of Proposed Developments: Proposed developments should be assessed in terms of:

- Ecological aspects such as
 - Fisheries
 - Aquatic weeds
 - Wetland
 - Bushes/trees
 - Animals
 - Species diversity
 - Endangered species
- Physico-chemical aspects such as
 - Erosion and siltation
 - Flooding
 - Drainage congestion
 - Air pollution
 - Noise pollution
 - Solid waste
 - Water pollution
- Human interest related aspects such as
 - Loss of agricultural land
 - Resettlement
 - Service facilities
 - Health and nutrition
 - Navigation
 - Transport
 - Employment
 - Land ownership pattern
 - Landscape
 - Industrial activities

Environmental Hazards

Assessment of environmental hazards should cover the following aspects:

Hazard identification: Identification is the process of estimating

- The area at risk from the hazard
- The intensity of the hazard that can be expected in specific areas of the Paurashava
- The probability of occurrence of the hazard

Vulnerability Assessment: Vulnerability assessment is the second step of hazard assessment. It is an inventory of the property within the area affected by the hazard. The amount of property within the risk area, as well as the type and value of structures in those properties, should be calculated to provide a working estimate for potential losses.

Risk analysis: Risk analysis is the third and most advanced phase of the hazard assessment. A risk analysis for the paurashava should include two components:

- The life and value of property that may incur losses from an event (defined through the vulnerability assessment); and
- The number and type of events expected to occur over time.

Within the broad components of a risk analysis it is possible to predict the severity of damage from a range of events.

Environmental Infrastructure

Location of all existing environmental infrastructures should be mapped and system capacity of each type of infrastructure should be assessed. More specifically, assessment and analyses should consist of

- An inventory and capacity analysis of existing environmental infrastructures.
- An assessment of the need for new and/or expanded facilities to serve growth in the Paurashava and potential urban growth area over the next 20 years as anticipated in the land use plan.

Information should be collected and analyzed by various components of each type of environmental infrastructure as shown below:

- Main Components of Drainage System
 1. Plot drains (open channels or pipes)
 2. Tertiary collector drains
 3. Storage ponds and tanks
 4. Secondary collector drains
 5. Primary drains (Large open channels which form the 'spine' of the drainage network)
 6. Receiving water (This is where the drained water is finally disposed of, usually a stream, river, pond, lake or the sea)
- Main Components of piped Water Supply system
 1. Production facilities (intakes, water treatment works, tube-wells).

2. Bulk supply mains (required where the source is remote from the supply area).
3. Service reservoir storage facilities
4. Primary or trunk mains
5. Secondary mains
6. Tertiary or service mains
7. House and stand post connections

- Main Components of Sewerage System

1. House sewers
2. Tertiary collector sewers
3. Secondary collector sewers
4. Primary sewers
5. Waste water treatment
6. Receiving water (usually a stream, river, pond, lake or sea)

- Main Components of Solid Waste Management System

1. Household or communal storage
2. Primary collection
3. Transfer
4. Haulage
5. Disposal

5.4.0 WARD ACTION PLAN

The Ward action plan is a separate component covering first five year period of the Master plan. It examines, in the context of the Master plan, those items that might be implemented in this period and thus contains more detail on these items. The plan should be prepared in consultation with ward committees, local agencies and paurashava officials. The action plan should consist of (but not limited to) the following:

- Project selection and prioritisation
- Cost estimate and sources of finance
- Phasing of implementation
- Implementing authorities/agencies etc.

5.4.1 TYPES OF PROJECTS

Projects may be selected from the following sectors for inclusion in the action plan:

- Land development

- Land pooling/readjustment
- Guided land development
- Slum improvement/upgrading
- Low-cost housing
 - New construction/upgrading of old ones
- Environmental infrastructure
 - Water supply
 - Sanitation
 - Sewerage
 - Solid waste management
- utilities
 - electricity
 - gas
 - telecommunication
- Transport
 - Ponds
 - Walkways
 - Terminals/ghats/stands etc.
 - Bridges/culverts etc.
- Flood control and drainage
 - Storm drainage
 - Retention pond
 - embankment
- Community facilities
 - Educational/training facilities
 - Religions centres
 - Community centres
 - Markets/shops
 - Recreational facilities etc.
- Employment generation/Poverty reduction
 - Public sector
 - Private sector

5.4.2 SELECTION AND PRIORITISATION OF PROJECTS

Based on the Master Plan and an assessment of the infrastructure and services in various wards which need to be provided, increased or improved, a list of the most important projects to be considered over the next five years, should be prepared. This list should include the sources of financing for the

projects, the budget impact of construction costs, the operating and maintenance costs, and the priorities to be assigned.

Projects from different sectors should be prioritised according to at least two different dimensions:

- First, since all investments compete with one another for limited capital resources, they should be ranked in terms of priorities within the budget constraints
- Second, since many projects complement one another in function, they should be planned and implemented as a package.

Among the different steps to be taken in order to simplify the prioritisation process, any active project with multi-year funding should be given the highest priority to assure necessary funds to continue implementation. While selecting a project, following criteria should be given due consideration:

- It is important to the goals and objectives of the structure plan and Master plan.
- It provides the best alternative in terms of capital and operating costs and the maximum response to the expressed needs.
- It is compatible with on-going projects
- It provides a measurable contribution to economic development and employment generation in the paurashava.
- It is affordable for the local authority and/or the beneficiaries to operate and maintain.
- It has a high level of cost recovery and future revenue generation.
- It provides a level of benefit to low income target groups
- It has either a negligible or a positive environmental impact

5.4.3 FORMAT FOR PROJECT PREPARATION

For preparing a project the following format should be used:

1. Name and location of the project
2. Description of the project
3. Objective of the project
4. Implementing agency
5. Feasibility analyses
 - Project cost
 - Project benefit
6. Source of finance
7. Land requirement
8. Impact assessment

9. Project period
10. Catchment area of the project
11. Integration with higher level plans

5.4.4 PHASING OF IMPLEMENTATION

Phasing of implementation of all the selected projects should be summarized by sectors in the form of a table as shown below

Sector (such as Transportation)					
Project Name	Year	Location	Responsible Agency	Amount in Taka	Funding source

5.5.0 SUBMISSION OF PROPOSAL

The proposal for consultancy services should be prepared in the light of the TOR and should be submitted in two separate envelopes: Technical proposal and Financing proposal. Financial proposals of the firms submitting technically qualified proposals would only be evaluated.

Six sets of technical proposals and six sets of financial proposals should be submitted in separate envelopes. The envelopes must be sealed and marked: "Technical proposal" / "Financial Proposal". The original and duplicate sets of proposals should be mentioned at the top of the envelopes. Name, address, telephone No., Fax No., E-mail address of the firms submitting the proposal should clearly be marked on the envelope.

5.5.1 TECHNICAL PROPOSAL FOR PROPOSED PROJECT.

5.5.1.1 General Approach and Methodology

General approach and Methodology should be stated by the consultant including the following items;

- Methodology of base map preparation (using ArcGIS)
- Methodology of carrying out physical feature survey.
- Methodology of GPS survey.

- Methodology of land use map preparation
- Methodology of Data base preparation (must be compatible to use in ArcGIS).
- Methodology of edge matching of Mouza maps (Considering maximum accuracy of previous work experience).
- Methodology of Socio-economic survey and study.
- Methodology of Planning Approach.
- Methodology of Local Action Plan preparation.

5.5.1.2 Work Program

Work program should be inclusive of the following items:

- Bar-Chart and Network diagram of the principal activities indicating those on a critical path and the probable timing of the assignment of each time of services to be accomplished.
- A Manning Schedule in a Bar-Chart naming the Key personnel (both full time and part time).

5.5.1.3 Project Team

Preparation of plans would require inputs from experts of various disciplines. A list of the experts whose inputs will be required is given in appendix-04 along with required qualifications and experience as well as their respective duties and responsibilities.

Name, age, qualification, employment records and detailed professional experience of each expert and other key personnel must be submitted in the form of C.V. as per Format A of Appendix-02.

List of professionals in proposed project team for carrying out the required consulting services should be submitted in the Format B of Appendix-02.

5.5.1.4 Background information of the Firm

The background Information of the firm should be stated including the following items.

- Year of Establishment
- Registration number of the firm including submission of photocopy of the registration certificate.
- Capacity of the firm (indicating professionals in different disciplines)
- Existing office space of the firm.

- Logistic facilities (including modern technologies like GPS)
- GIS facilities (specifying equipments, experts, assistants etc.).
- Survey Instruments
- VAT, Income Tax Certificate (attested copies to be enclosed).

5.5.1.5 List of Work Experience in similar nature of projects

A list of major projects of similar type executed by the firm during the last 10 years as per Format C in Appendix -02.

5.5.2. FINANCIAL PROPOSAL

The financial proposal shall indicate the following information and cost breakdown stated in Bangladeshi currency (Taka).

1. Number of personnel to be assigned to the project (component wise).
2. Total cost for the project (component wise along with cost per acre).

5.6.0 CONSULTATION AND LOCAL ADOPTION OF THE PLANS

5.6.1 FORMATION OF COMMITTEES

The Plans for the Paurashava town will be prepared by the consultants under the direct supervision of the Paurashava Officials. For supervision of the Planning activities and getting public input for the formulation of planning proposals, the Paurashava will form the following Committees:

1. **Paurashava Master Plan Committee (PMPC):** This Committee which will be formed by the Paurashava will consist of members representing the Paurashava, central government agencies, the local community and the civil society. The number of members will be fixed by the Paurashava. The Paurashava Town Planner/Engineer will act as the member secretary while the chairman will be appointed by the Paurashava from among the members of the Committee.
2. **Ward Committee:** Each ward will have a Committee of which the concerned Ward Commissioner will be the Chairperson. The Membership in the Committee shall cover the broadest possible range of interests represented in the ward. The Paurashava will appoint the members in consultation with the Ward Commissioner.

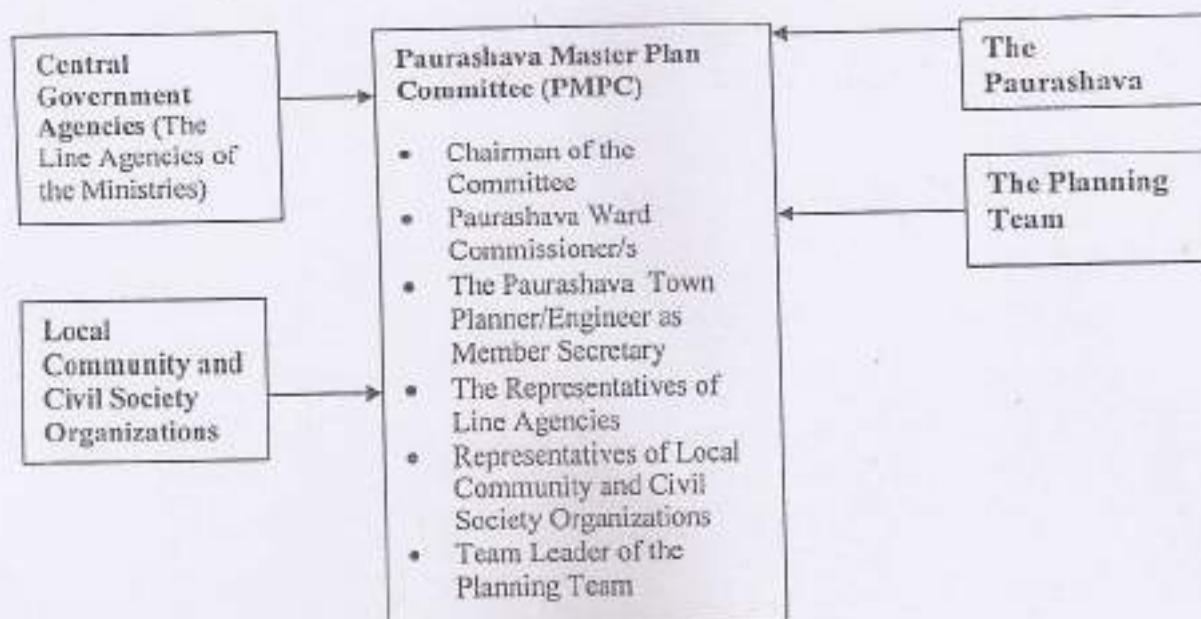
5.6.2 CONSULTATION WITH STAKE HOLDERS

Consultation is an important component of the planning process. Through such consultation it is possible to gather information about the current activities and future programmes of the central government agencies which are working within the Paurashava. In this process it is also possible to form concrete ideas about problems and needs of localities and desires of the stake holders. Formal consultation sessions and consultation meetings with different actors of the development process will have to be arranged by the consultants at different stages of the planning process. Following persons and organizations should be involved in the process:

- member/s of Parliament
- local Administration
- central government agencies
- trade bodies
- professional organizations
- non-governmental organizations
- civil society organizations
- community based organizations
- private developers

Such meetings should be held both at the Paurashava and ward levels and the members of the PMPC and ward committees should be invited to such meetings

Composition of Paurashava Master Plan Committee



5.6.3 PUBLIC PARTICIPATION WORKSHOPS

A series of workshops can form the cornerstone of public participation efforts. Such workshops can be organized in the following manner:

1. Scheduled at regular intervals
2. Public notification by posted notices and other means as deemed appropriate
3. Special notice to concerned officials of government agencies
4. Sessions opened with a general presentation by the consultant on the subjects selected for discussions
5. Response to questions and solicitation of comments, recommendations, ideas and objections from attendees

Summary records should be kept of discussions, comments, and questions for use in the ensuing work on the plans. These workshops should be held both at the Paurashava and ward levels and should be convened by the Paurashava Master Plan Committee (PMPC) and Ward Committees. Paurashava level workshops will be organized jointly by the consultant and the PMPC while the Ward level workshop will be organized jointly by the consultant and the concerned ward committee. The number of workshops will be fixed by the Project Director in consultation with the consultant.

5.6.4 ADOPTION OF THE PLANS BY PMPC

After submission of the drafts of Structure Plan, Master Plan and Local Action Plan to the PMPC by the consultants, the PMPC will convene workshops, one for the structure plan (at the end of 8th month) after its submission, and the other for the Master Plan and Local Action Plan (at the end of 11th month) after their submission for discussion and review of the proposals contained in the plans. All discussions, recommendations and objections derived from the workshops must be reviewed with their possible effect on the plans. Appropriate changes/modifications should then be introduced in the plans and a second draft of each plan should be submitted to the PMPC for approval. If the PMPC approve the draft of each plan as submitted after its modification, it will then forward the plans to the Paurashava for final approval.

5.6.5 ADOPTION OF THE PLANS BY PAURASHAVA

When the PMPC submit the plan/s to the Paurashava, the Paurashava may adopt the plan/s or send the plan/s back to the PMPC if there is any suggestion for modification or change by the Paurashava. The PMPC will then have the plan/s changed/modified by the consultants in accordance with the suggestion of the Paurashava. The modified plan/s will then be submitted to the Paurashava for adoption. The plans (Structure Plan, Master Plan, Local Action Plan) will become final after being adopted by the Paurashava.

APPENDIX - 01

SUGGESTED CONTENTS OF VARIOUS REPORTS

A. SUGGESTED CONTENT OF THE STRUCTURE PLAN REPORT

The structure plan should be presented in both written and graphic form. The written documentation is as important as the physical plan. The structure plan should be presented following the content as suggested below:

Section 1: Introduction

- Background of the project
- Objectives of the Structure Plan
- Structure Plan Area and Planning period

Section 2: Critical Planning Issues

- Existing Development Pattern

Description of the Paurashava's administrative, economic, social, physical and environmental characteristics; growth pattern of the Paurashava; functional linkages and hierarchy in the national and regional context; catchment area; population; land use and urban services; agencies responsible for different sectoral activities, etc. (These descriptions should be supported by necessary maps, diagrams and tables).

- Identification of urban growth area

Based on analyses of patterns and trends of development, and projection of population, land use and economic activities for next 20 years, urban growth area should be determined. This may be larger than the Paurashava area and include immediate hinterland.

- Development problems of the Paurashava

Identification and description of physical, socio-economic and environmental problems.

Section 3: Higher Level Plans and policies

Discussion of relevant portions of national plan and relevant national policies such as land use policy, housing policy, environment policy, coastal management policy and different laws and regulations related to urban development.

Section 4: Urban Land Development Strategies

Policies and strategies with particular attention to:

- Optimization of existing urban land resources (Densification, infill development, fringe area development etc.).
- Planned new area development
- Areas for conservation and protection

Section 5: Strategies and policies for sectoral Development.

- **Socio-economic sectors**
(Population, economic development and employment generation, housing and slum improvement, social and community facilities, tourism and recreation facilities etc.)
- **Infrastructure sectors**
(Transport, utilities, flood control and drainage etc.)
- **Environment**
(Natural resources, environmental hazards, air and water quality, sanitation etc.)

Section 6: Implementation Issues

Institutional strengthening of paurashavas, capacity building, resource mobilization etc.

B. SUGGESTED CONTENT OF THE LAND USE PLAN REPORT

Following is the suggested content of the land use plan report. This content will need to be expanded and broken down into sub-categories on the basis of Paurasahava characteristics, collected information and results of analyses.

Section 1: Introduction

- Defining Planning Area
- Land Use Planning Goals and objectives
- Relation with the Structure Plan
- Methodology and Approach to Planning

Section 2: Current and Projected Land Use

- Classification of Existing Land Use
- Overview of Existing Land Use Pattern
- Housing and Residential Land Development (Trends and Projections)
- Industrial and Commercial Land (Present Use and Future Need)
- Institutions, Community Facilities and Public Services (Present Situation and Future Requirements)
- Utilities (Electricity, Gas and Telephone), Communications and Transport (including roads) (Existing condition and Projected Need)

- Other Land Uses such as agriculture, rural homestead, water body, wetland, vacant land, brick field etc. (Present and Future Scenarios)

Section 3: Future Land Use Proposals

- Designation of Future Land Use
- Zoning
- Land Development Regulations

C. SUGGESTED CONTENT OF TRANSPORTATION AND TRAFFIC MANAGEMENT PLAN REPORT

Following is the suggested content of transportation and traffic management plan. This content will need to be expanded and broken down into sub-categories on the basis of Paurasahava characteristics, collected information and results of analyses.

Section 1: Introduction

- Goals and Objectives
- Methodology and Approach to Planning

Section 2: Existing Conditions and Deficiencies

- Roadway Characteristics and Functional Classification
- Traffic Volumes
- Level of Service (degree of traffic congestion and delay)
- Facilities for Pedestrians
- Existing Deficiencies
 - Roadway capacity deficiencies
 - Operational, safety, and other deficiencies

Section 3: Future Conditions and Deficiencies

- Travel Demand Forecasting for next 20 years
- Transportation Network Considered
- Future Traffic Volumes and Level of Service

Section 4: Proposed Transportation Developments / Improvements

- Roadway Development / Improvement Options
- Waterway Development / Improvement Options (if applicable)
- Development of Facilities for Pedestrians, Bicycles and Rickshaws
- Parking and Terminal Facilities

Section 5: Transportation System Management Strategy (TSM)

(TSM refers to strategies that improve facility operations, traffic flow, or safety without adding lanes to increase capacity)

Section 6: Transportation Demand Management Strategies (TDM)

(The goal of any TDM is to reduce the amount of vehicle on roadways if capacity cannot be increased)

Section 7: Traffic Calming

(The purpose of traffic calming is to reduce the speed and volume of traffic to acceptable level)

D. SUGGESTED CONTENT OF DRAINAGE AND ENVIRONMENTAL MANAGEMENT PLAN REPORT

Following is the suggested content of drainage and environmental management plan report. This content will need to be expanded and broken down into sub-categories on the basis of Paurasahava characteristics, collected information and results of analyses.

Section 1: Natural Resources

- Existing situation
- Designation of Environmentally sensitive areas.
- Policies for environmentally sensitive areas
- Environmental assessment of developments (as proposed in the Master Plan)
- Mitigation and abutment measures

Section 2: Environmental Hazards

- Hazard identification and mapping
- vulnerability assessment
- Risk analysis
- Mitigation measures

- Structural measures

- Non-structural measures

(Major hazards affecting the paurashava should be considered and policies formulated accordingly)

Section 3: Environmental Infrastructure

(This section should be repeated for each type of infrastructure such as drainage, water supply, sewerage, solid waste management)

- Existing situation

(should include mapping of the location of existing (if any) primary, secondary and tertiary infrastructure and localities needing development /improvement/ up-gradation.)

- Existing demands on infrastructure
- Capacity of existing infrastructure
(Estimated capacity with respect to
Drainage: Channels, Canals
Water: Pipelines, pumping stations, storage reservoirs
Sewerage: Sewers, pumping stations)
- New demands on infrastructure
- Identification of capacity short-falls
- Identification of missing links (if any)
- Proposals for developments/improvements

E. SUGGESTED CONTENT OF WARD ACTION PLAN REPORT

Following is the suggested content of Ward Action Plan. This content will need to be expanded and broken down into sub-categories on the basis of Paurasahava characteristics, collected information and results of analyses.

Section 1: Existing Condition

Review of existing situation of the ward with respect to land use, community facilities, public services, utilities, infrastructure etc.

Section 2: Problems and Opportunities

Discussion of problems needing immediate attention and scope of development

Section 3: Current Investment Programme

Discussion of current investment programmes of various nation building departments, private organizations and the Paurashava itself.

Section 4: Selection and Prioritization of Projects

Section 5: Cost Estimates and Sources of Finance

Section 6: Phasing of Implementation

APPENDIX - 02

SUBMISSION OF REPORTS AND MAPS

a. List of Reports

Following is the list of reports to be submitted:

1. Inception Report

Language: English

Date of submission : End of first month

Number of copies: 25

2. Report I : Study Area Report with Map

This report will include information on the number of mauzas within the study area, number of sheets (30" x 40") that will be required to cover the study area in the scale of 1"=330' and enlarged scale of 1"=165', methodology followed in the preparation of base map, review of the work plan, time schedule etc.

Language : English

Date of submission : End of third month.

Number of copies : 25

3. Report II : Survey Reports

Volume 1 : Topographic and physical Features survey

Volume 2 : Socio-Economic Survey

Volume 3 : Land Use survey

Language : English

Date of submission : End of fifth month

Number of copies : 25

4. Report III : Interim Report (Draft Structure plan)

Language English

Date of submission : End of seventh month

Number of copies : 25

5. Report IV : Draft Master plan and Local Action Plan with Report

Language : English

Date of submission : End of tenth month

Number of copies : 25

6. Report V : Final structure plan and Master Plan (consisting of Land Use and Utilities Plan, Transportation and Traffic Management Plan, Drainage and Environmental Management Plan, and Local Action Plan).

Language : English

Date of submission : End of twelfth month

Number of copies : 25

b. List of Maps and Plans

1. **Base Map**
Scale : 1" = 165'
Number of copies : Draft – 5, Final 25
2. **Physical features survey**
Scale : 1" = 165'
Number of copies : Draft – 5, Final 25
3. **Land use Survey**
Scale : 1" = 165'
Number of copies : Draft – 5, Final 25
4. **Topographic Survey**
Scale : 1" = 165'
Number of copies : Draft – 5, Final 25
5. **Socio-Economic Survey**
Scale : 1" = 165'
Number of copies : Draft – 5, Final 25
6. **Field Survey (original survey markings)**
Scale : 1" = 165'
Number of copies : Draft – 5, Final 25
7. **Utilities (Road net work, gas/electricity/water supply, Drainage/river/ Khal)**
Scale : 1" = 165'
Number of copies : Draft – 5, Final 25
8. **Structure Plan**
Scale : 1" = 330'
Number of copies : Draft – 5, Final 25
9. **Land Use Plan**
Scale : 1" = 165'
Number of copies : Draft – 5, Final 25
10. **Transportation and Traffic Management Plan**
Scale : 1" = 165'
Number of copies : Draft – 5, Final 25
11. **Drainage and Environmental management Plan**
Scale : 1" = 165'
Number of copies : Draft – 5, Final 25
12. **Ward Action Plan (Selected Projects in separate layers)**
Scale : 1" = 1000'
Number of copies : Draft – 5, Final 25

c. List of Thematic Maps

Following is the list of thematic maps to be produced in layers:

1. Drainage and flood protection : Storm water, rain water, inlet, out let, cost, revenue, maintenance
2. Water Supply: source, distribution line and installations (primary secondary, tertiary), cost, revenue, maintenance.
3. Electricity: Source, distribution line and installation (primary, secondary, tertiary), cost revenue and maintenance.
4. Gas : source, distribution line and installation (primary, secondary, tertiary), cost revenue and maintenance.
5. Telephone, television, radio, electronic mail (line facilities).
6. Sewerage: source, distribution line and installation (primary, secondary, tertiary).
7. Solid Waste : household, industrial, clinical waste collection, dumping, treatment and sludge disposal
8. Transport net work : circulation, passenger and goods movement (motorized, non-motorized, walkways, station, stoppage, waiting and parking facilities).
9. Heritage, open space conservation and maintenance
10. Land level: buildable land, land fill, topographic map with 5 colour
11. Recreation (open, close)
12. Special area (military, flood prone, prone to soil erosion, earthquake prone, hazardous industry).
13. Social infrastructure (education, health care, community use, religious, bank, post office, police station/line, fire brigade, assembly place etc.)
14. Land ownership (private, khas, govt. acquired etc.)
15. Commitment area (govt. /private for development work)
16. Land value
17. Government establishments
18. Administrative boundary.

d. Map size.

1. Mouza map

Sheet size 30" x 40" with scale 1 : 1980

2. Survey maps

Sheet size 30" x 40" with scale 1 : 1980

3. Base map

Sheet size 30" x 40" with 1 : 1980

4. **Structure plan**
Sheet size 30" x 40" with 1 : 3960
5. **Master Plan**
Sheet size 30" x 40" with 1 : 1980

APPENDIX – 03

DETAILS OF FIELD SURVEYS

Physical Features Survey

Base maps should be prepared on RS maps (Mouza map) at 1"=165 (1:1980) with the following features.

- River (indicate direction of flow and width)
- Khal (indicate direction and width).
- Drainage channels (indicate direction of flow and width).
- Ponds, tanks, ditches.
- Marshlands / Flood prone areas (identify and locate land liable to flooding during monsoon).
- Building/ structures (Pucca, semi-pucca, kutchha and number of storeys).
- Railway line and ROW (indicate alignment and junction points).
- Railway stations (indicate the place and area)
- Bus/truck, Launch/steamer terminals(indicate the place and area).
- Flood works (embankments, pump stations, sluice gates etc, with location, condition).
- Bridges/ culverts (indicate location, length, width, type of structure, condition etc.)
- Utility mains and ROW (Electricity, gas, telephone)
- Utility substations (electric and water supply, waste disposal and treatment, gas, telephone etc.)
- Deep tube-well stations (Paurashava, DPHE and other deep tube-well stations and output)
- Mouza, Union/Ward, Paurashava, Thana boundary (Administrative boundaries).

Physical Infrastructure Survey

Physical infrastructure survey will cover the following

- All existing structures with position and dimension
- Alignment and crest levels (not exceeding 500 m) of roads, embankments, dykes and other drainage divides.
- Alignment of rivers, lakes, canals and drainage channels.
- Outlie of bazars, water bodies, swamps etc.

- Identification of bridges, culverts on the road, their dimension, condition of abutments, deck and wing walls.
- Type, size, depth, inlet and outlet location of drain and canal along with flow direction, place of encroachment.
- Type of sewer system, size, type and location of sewerage line, location of bins, identification of any other sewerage system.
- Identification of the exposed water supply system, location of overhead water tank and its capacity, catchment area of overhead tank.
- Identification, location and capacity of electric substation, telephone exchange, gas supply substation etc. treatment plant, waste disposal facilities.

c. **Topographic Survey**

The topographic survey will cover the following features:

- Land levels/spot levels at 50m intervals in general cases, with denser intervals for undulations for generating the contours.

d. **Land Use Survey**

Utilizing the base map (physical features survey overlay on survey map), the land use map will have to be prepared indicating the broad categories of land use. The characteristics of each land use area will have to be fully described in the survey report. The land use map should be prepared on base map indicating the items as shown below:

Land Use

(Details about sub-categories can be obtained in the scope of services for land use plan)

1. Residential
2. Commercial
3. Industrial
4. Open space
5. Institutions
6. Community Facilities
7. Public Services and utilities
8. Communication and Transport
9. Public Administration and Defense

10. Roads
11. Agricultural use
12. Water Bodies
13. Wetland
14. Vacant land
15. Brick field
16. Railway land
17. Urban Reserve
18. Mixed Use
19. Rural Homestead
20. Shoreline

e. Traffic and Transportation Survey

The consultant should carry out an inventory of the circulation system (roads and waterways) by functional classification and their capacities, conditions and average daily traffic, following the guidelines as given in the scope of services for transportation and traffic management plan of the TOR.

A series of volume and O-D surveys will have to be carried out within the planning area. Survey of traffic volumes will have to be carried out at selected check points between 7 and 9 a.m. and between 4 and 6 p.m. one on specific day (Sunday to Wednesday). A pedestrian count should also be conducted as part of the survey activity.

The consultant will summarize the result of the data collected and identify the major transportation problems of the paurashava along with the factors responsible for such problems.

f. Socio-Economic Survey

Socio-economic survey should be conducted to collect information including (but not limited to) the following:

- Demographic information (age, sex, growth rate, household size, migration etc.)
- Socio-economic status of the population (Educational status, occupational patterns, income levels, land ownership patterns etc.)
- Formal and informal economic activities.
- Land and housing (Land value, housing type and condition, slum and squatter settlements etc.).

75

APPENDIX – 04
PROJECT TEAM

The project team of the consultant should be constituted as follows:

1. Team Leader

Qualification: Ph.D/Master's Degree in urban and Regional Planning or equivalent

Experience : At least 15 years experience in urban planning and development. The person must have extensive experience in project management, institutional and urban policy development, and the administration of large multi-disciplinary teams.

Responsibility: (i) To lead the team of experts for the preparation of the structure plan, Master Plan and Local Action Plan and prepare work program in consultation with the Project Director. (ii) To function in liaison with the Paurashava officials and other involved agencies in public and private sectors and NGOs (iii) To ensure the technical quality of the project, supervise the substantive inputs of the experts and co-ordinate the technical and administrative inputs of the consulting firm/Consultants together with the PD. (iv) Any other related jobs.

2. Deputy Team Leader

Qualification: Master's Degree in Urban & Regional planning or equivalent.

Experience : Minimum 10 years experience in urban physical planning and management, preferably at municipal level. The candidate must have extensive experience in project management, institutional and urban policy development and the administration of large multi-disciplinary teams.

Responsibility: (i) To work under the overall guidance of the Team Leader and in close collaboration with the Project Director as well as the involved local agencies. (ii) To assist the Team Leader in the preparation of Structure Plan, Master Plan and Local Action Plan (iii) Any other related jobs.

3. Urban Planner-2 Persons.

Qualification : Bachelor's/Master's Degree in Urban and Regional planning.

Responsibility: (i) To prepare and compile base maps and other maps in different layers which need to be incorporated into the GIS (ii) To supervise survey activities (iii) To collect all basic information regarding plan preparation, carry out relevant studies and prepare reports (iv) Any other planning tasks assigned by the Team Leader as per TOR.

4. **Demographer/ Statistician**

Qualification : Master's Degree in Statistics / Demography..

Experience : Fifteen years progressive experience in demography/statistics. At least five years experience of working in cities is preferable.

Responsibility: (i) To review and analyze demographic variables. (ii) To undertake works of assessment and forecasting of future demographic trends. (iii) To carryout all other statistical assignments pertaining to planning.

5. **Urban Development Economist**

Qualification : Master's Degree in Economics/Finance.

Experience : Fifteen years progressive experience in urban financial forecasting/ management. Five years experience in urban economics/urban financial management is preferable.

Responsibility: (i) To review and analyze economic growth variables of the city and forecast future trends. (ii) To prepare multi-sectoral investment program. (iii) To conduct feasibility studies of urban development project (iv) Any other assignment pertaining to urban finance.

6. **Municipal Engineer**

Qualification : Bachelor's Degree in Civil Engineering

Experience : Ten to fifteen years experience as municipal Engineer

Responsibility: (i) To prepare inventory of all types of utilities (electricity, gas, telecommunications etc.) and environmental infrastructure (sewerage, waste disposal, water supply, drainage etc.) (ii) To identify projects and conduct surveys and prepare design and cost estimation of these utilities and infrastructure (iii) To carry out any other activities as directed by the team leader.

7. **Transport Planning Expert**

Qualification: Bachelor's / Masters' Degree in Transportation Planning/Traffic Engineering..

Experience: Fifteen years experience in urban and regional transportation planning.

Responsibility : (i) To carry out the transport and traffic studies (ii) To prepare project proposals and detailed designs of integrated transport network of the study area.

8. **Hydrologist**

Qualification: Bachelor's Degree in Civil Engineering with experience in Hydrology or Water Resource Engineering.

Experience: At least fifteen year progressive experience in water resource planning of medium/large cities.

Responsibility : To review and study existing water resource and drainage system with particular emphasis on sewerage system. (ii) To do detail planning and design of sewerage and drainage and other physical infrastructure based on anticipated growth and as per recommendation of the planners. (iii) To carry out flood/disaster risk analysis and formulate flood/disaster mitigation measures (iv) All other hydrology related tasks assigned by the Team Leader as per TOR.

9. **Civil Engineer**

Qualification: Bachelor's Degree in Civil Engineering with post graduate qualifications in soil and foundation.

Experience: Fifteen years progressive experience in the fields.

Responsibility : (i) To analyze land use and topographical survey results including general infrastructure and soil (ii) To prepare foundation design criteria, drainage and flood control works. (iii) Any other works assigned by consultant's Team Leader.

10. **Architect Planner**

Qualification: Bachelor's Degree in Architecture and having Master Degree in Urban and Regional Planning.

Experience: Ten years experience in Urban Planning/Urban Design/Site Planning/Development Control/Environmental Protection will be preferred.

Responsibility : (i) To assist consultants in the preparation of Urban Design, Site Planning, application of Building Codes and assist in revision of existing development control rules. (ii) To formulate architectural standards with emphasis on façade, land scalping and high rise apartments. (iii) To assist consultants in formulating recommendation policy for environmental protection. (iv) To receive on the job training and perform tasks assigned on aspects determined jointly by RDA's Project Director Project Manager and Consultants.

Environmental Analyst

Qualification: Master's Degree in Environmental Engineering/Bachelor's Degree in Civil Engineering with emphasis on environmental aspects.

Experience: At least fifteen years of working experience.

Responsibility : (i) To analyze environmental aspects of the area and ecological matters. (ii) To assist consultant in the preparation of environmental planning (iii) To carryout any other relevant tasks relating to the project as may be assigned by RDA's project Director and Project Manager.

GIS Specialist

Qualification: Bachelor's/Master's Degree in Urban Planning/Geography/Civil Engineering or related field with specialisation in GIS or Post-Graduate Degree/Diploma in GIS

Experience: 5 years working experience as GIS specialist in national and international agencies in urban planning and related field and have considerable knowledge in compilation of basic data for use in GIS at the plot level and should be well conversant with spatial analysis, design and preparation of data using GIS software as proposed.

Responsibilities: (i) To supervise GPS survey, data processing and all other digital map production (ii) To perform spatial analysis, networking and 3D analysis

APPENDIX - 05

FORMAT - A

FORMAT OF CURRICULUM VITAE OF PROFESSIONALS

1. Proposed Position :
2. Name :
3. Date of birth :
4. Nationality :
5. Education (The years in which various Qualifications were obtained must be stated) :
6. Training :
7. Language and Degree of Proficiency :
8. Membership of Professional Societies :
9. Overseas Work Experience (if any) :
10. Employment Record

Name of Employers	Service Duration		Position Held	Description of Duties	Details of Tasks Assigned
	From	To			

11. Certification

I, the undersigned, certify that, to the best of my knowledge and belief, this Bio-data correctly describes myself, my qualifications and experience relevant to the proposed assignment-I understand that any false information may lead to my disqualification or dismissal, if employed.

Date:

Signature

Name in full

12. Employees Reference regarding appointment (Employer)

FORMAT - B

FORMAT OF THE PROPOSED PROJECT TEAM

Sl. No.	Name	Age in Years	Qualification	Proposed Position in the Team (Mention Full time or Part time)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

N.B: Last Academic Certificate of the Project Team Members and One Copy of PP size photo must be furnished with the C.V.

FORMAT – C

**FORMAT FOR THE MAJOR EXPERIENCE IN SIMILAR PROJECTS
COMPLETED DURING LAST 10(TEN) YEARS.**

Name of the Project	Name of the client	Cost of the Project	Project Duration

N.B. Similar project means preparation of Urban plan/Rural Plan/Land Use Plan/Master Plan/infrastructure plan etc.

APPENDIX - 06

HOUSEHOLD SURVEY QUESTIONNAIRE

SOCIO-ECONOMIC DATA COLLECTION

- A. IDENTIFICATION :
1. Serial No. :
 2. Date of interview :
 3. Name of interviewer :
 4. Name of interviewee :
 5. Name of Mouza :
 6. Para/Road/Union/Ward/Village :
 7. Holding No./House No. :

- B. Socio-Economic Environment :
1. Name of Household Head :
 2. Religion of Head :

Religion

1 = Muslim

4 = Christian

2 = Hindu

5 = Others

3 = Buddhist

3. Information about household members

Sl. No	Age	Sex	Relationship with Household Head	Marital Status	Education	Occupation		Monthly Income in Tk.
						Main	Secondary	
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Code:

Marital Status

- 1 = Single
- 2 = Married
- 3 = Widow/Widower

Education

- 1. Illiterate
- 2. Primary
- 3. Secondary
- 4. Higher Secondary
- 5. Graduate
- 6. Postgraduate

Sex

- 1 = Male
- 2 = Female

Occupation

- 1. Agriculture
- 2. Labour
- 3. Govt. Job
- 4. Private Job
- 5. Business
- 6. Unemployed
- 7. Housewife
- 8. Other(mention)

4. House ownership/Tenure

- 1. Inherited
- 2. Purchased
- 3. Rented house
- 4. Govt. Quarter
- 5. Allowed to stay without rent
- 6. Other

5. Type of structure/holding and use

Structure Type

1. Pucca
2. Semi-pucca
3. Kutcha

Type

Use

Use Type

1. Residential
2. Commercial
3. Mixed
4. Agricultural
5. Fallow

6. Amount of land and current market value

Amount

Decimal Katha Bigha

Habitable land

--	--	--

Low Land

--	--	--

Medium high Land

--	--	--

High Land

--	--	--

Total land

--	--	--

Price/value

Decimal Katha Bigha

--	--	--

--	--	--

--	--	--

--	--	--

Total price

--	--	--

7. Available facilities and service quality

Facilities code

- 1 = Electricity
- 2 = Water (supply)
- 3 = Gas
- 4 = Sewerage
- 5 = Waste disposal

Facility

Service quality

Service Quality Code

1= Good, 2= Moderate, 3= Bad

8. Monthly Expenditure (in Taka)

1. House Rent	
2. Food	
3. Transport	
4. Education	
5. Electricity/Gas/Fuel/Water etc.	
6. Health (Medical)	
7. Recreation	
8. Other	
Total Exp.	

9 Monthly Saving/Loan

	Saving	Loan
1. At hand		
2. Bank/Pension account		
3. Other		
Total		

10. Length of stay in the holding/House

1. Upto 5 years	
2. 6 to 10 years	
3. 11 to 20 years	
4. More than 20 years	
5. Since birth	

11. Reasons for coming to this town (from rural area/other town)

- 1 = Service/Transfer
2 = Better education
3 = Business/Commerce
4 = For security reasons
5 = Long-term treatment
6 = Attracted by facility of urban life
7 = Home town (living since birth)
8 = Other (mention)

12. Do you have any plan to move to any other town in the near future?

Yes = 1 No = 2

If yes, Where

Why

13. Condition and width of the road beside / in front of the house/holding

Condition

Width in feet

Condition code:

1. Pucca 2. Semi-pucca 3. Kutchra

14. Distance of the main road from the house

Distance in feet

15. Condition of the drain beside the house

1 = Pucca

2 = Kutchra

3 = No drain

16. House Sewer :

1=Pucca, 2=Kutchra, 3=None

17. Toilet : 1=Sanitary, 2=Non-sanitary, 3=None

18. Pollution : 1= Water, 2= Air, 3= Sound, 4= Other

--	--	--	--

19. Distance of work place from House (in Km.)

--

Mode of Transport

--

- 1 = Walking, 2 = Bicycle
3 = Bus, 4 = Other

20. Where do your children go to school

Son/Daughter	Location	Distance	Transport mode

Mode of Transport

- 2 = Walking, 2 = Bicycle
3 = Bus, 4 = Other

21. Do you have any transport problem?

Yes=1,

No=2

If yes 1. Narrow road

2. Roads are flooded and damaged time to time

3. Traffic congestion most of the time

4. Absence of town bus service

5. Others

22. Is it possible to widen the roads?

Yes=1,

No=2

23. If possible, would you donate land for widening the road beside /in front of your house.

Yes=1,

No=2

(If the town is affected by flood)

24. When was the town severely flooded last _____

25. Was your house affected by the flood? Yes=1, No=2

If yes, what was the water level?

(a) upto the plinth level

(b) _____ feet above the plinth level

26. Nature of damage suffered

1. Death of family members
2. Injury to family members
3. Damage to property
4. Loss of Job
5. Loss of income from business
6. Crop loss
7. Other damage

--	--	--	--	--	--	--	--

27. In case of death or injury

Number of family member died _____

Number of family member injured _____

28. In case of property (house /furniture/other belonging) damage

Amount in Taka _____

29. In case of loss of job

Amount in Taka _____

30. In case of loss of business income

Amount in Taka _____

31. In case of crop loss

Amount in Taka _____

32. Other loss : Amount in Taka _____

33. Nature of recovery

Recovery code

1. Fully 2. Partially 3. Not at all

34. Availability of facilities in the town:

Facilities	If available	Distance	Service quality
Medical hospital/Clinic			
Community centre			
Shopping centre			
Dustbin			
Police box			
Park/play-ground			
Bank			
Post office			
Fire brigade			
School-primary/Higher secondary			
Kutchi bazar			
Bus stand			
Library			
Graveyard/cremation area			
Mosque/Temple			

Facility Code

1= Available

2= Not available

Service quality Code:

1. Good 2. Moderate 3= Bad

Distance Code:

1= 1 km

2= 2 km

3= 3 km

4= 4 km and above

35. What are the major problems in your locality (In order of priority)

a)

b)

c)

36. Are you willing to participate actively in the development of your locality?

Yes = 1

No = 2

If yes, how?

1. Donating land

2. Donating money

3. Giving labour

4. Giving advice

5. Other

37. Do you have any opinion about current planning activities?

If yes, What?

