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URBAN DEVELOPMENT DIRECTORATE
MINISTRY OF WORKS
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

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FINAL REPORT

LANDUSE/MASTER PLAN
ULLAPARA UPAZILA SHAHAR
SIRAJGONJ ZILA

JUNE, 1990

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Submitted by :

ENGINEERING SCIENCE LIMITED
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গণপ্রজাতন্ত্রী বাংলাদেশ সরকার,
উপজেলা পরিষদ কার্যালয়,
উল্লাপাড়া, সিরাজগঞ্জ।

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✓ প্রাপক :- পরিচালক,
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বিষয় :- উল্লাপাড়া উপজেলা শহরের ভূমি ব্যবহার পরিকল্পনার নক্যা প্রমুখন প্রসঙ্গে।

ইন্সিনিয়ারিং সাইন্স লিমিটেড কর্তৃক প্রস্তুতকৃত উল্লাপাড়া উপজেলা শহরের ভূমি
ব্যবহার পরিকল্পনার নক্যা খানায় আমাদের মতামতের প্রতিকলন থাকায় উহা এই শহরের
উন্নয়নের রূপরেখা স্ব হিসাবে বিবেচনা করা যাইতে পারে।

অতএব উক্ত নক্যা খানি এই শহরের ভূমি ব্যবহার পরিকল্পনার নক্যা হিসাবে গ্রহণ
করা যাইতে পারে।


চেয়ারম্যান,
উপজেলা পরিষদ,
উল্লাপাড়া, সিরাজগঞ্জ।

CONTENTS

Page Nr.

CHAPTER I	INTRODUCTION . . .	1
	1.0 Introduction . . .	1
CHAPTER II	THE UPAZILA IN ITS ZILA CONTEXT . . .	3
	2.0 Ullapara Upazila in the context of Sirajgonj Zila . . .	3
	2.1 Location and Physical Character- istics of the Upazila . . .	3
	2.2 Population and Settlement . . . Distribution	4
	2.3 Economic Performance and . . . Transport Linkages	7
	2.4 Social Infrastructure . . .	15
	2.5 Current Development Projects . . .	17
	2.6 Synthesis : Identification . . . of hierarchy of settlements in Ullapara upazila area	18
CHAPTER III	THE UPAZILA HEADQUARTERS . . .	21
	3.0 The Upazila Headquarters . . . and its sphere of influence	21
	3.1 Definition of sphere of . . . influence/attractiveness	21
	3.2 Definition of Study Area . . .	24
	3.3 Socio-Economic condition . . . of the Study Area	26
	3.4 Existing Land-use, facilities and utilization characteristics . . .	35
	3.5 Physical Opportunities and . . . Constraints	40

CONTENTS contd.

		Page Nr. -----
CHAPTER IV	FORECASTS . . .	42
	4.0 Forecasts of Population, Labour Force and Land Requirements	42
	4.1 Forecasts of Population, Household Structures and Density	42
	4.2 Forecasting of Labour Force . . . and Employment	47
	4.3 Land Requirements, Provision. . . Standards	51
CHAPTER V	LAND-USE PLAN/MASTER PLAN . . .	54
	5.0 Land-Use Plan . . .	54
	5.1 Approach, Concept and Planning Principle	54
	5.2 Plan Description . . .	54
CHAPTER VI	PROGRAMMING AND IMPLEMENTATION . . .	59
	6.0 Programming and Implementation	59
	6.1 Priority Actions, Cost Implications	59
	6.2 Phasing, Urban Deferred . . .	60
	6.3 Development Control . . .	61
	6.4 Monitoring and Review of the Land-Use Plan . . .	62

LIST OF TABLES

Table No.	Title	Page
1	Population distribution within the Zila and Upazila 1961-81	4
2	Percentage variation of Population in Zila and Upazila	4
3	Population distribution of Greater Pabna zila by age and sex in 1981	5
4	Population distribution of Upazila Ullapara by age and sex in 1981	5
5	Number of Mouzas and Villages, 1981	6
6	Life time net migrants by Ullapara Upazila and Zila Sirajgonj	6
7	Utilization of Land for Agriculture, 1980-81 and 1981-82	8
8	Area and Production of crops 1980-81 and 1981-82 in Sirajgonj Zila	8
9	Area and Production of Crops in Ullapara Upazila in 1980-81 and 1981-82	9
10	Position of Industries in Zila and study Upazila 1982	10
11	Composition of Population by Age & Sex, 1981	11
12	Annual average daily wage rate of workers by type in Pabna zila 1977-78 to 1981-82	12
13	Gross district product (Greater Pabna) at current prices from 1977-78 to 1981-82 in million taka	13
14	Transportation network, 1982	14
15	Transportation Services in Zila Sirajgonj and Ullapara Upazila, 1982	15
16	Social Infrastructure and Utilities, 1982	16
17	List of Development Projects, 1988-89	17
18	Grading of Important Settlements in 1981	19

Table No.	Title	Page No.
19	Ranges of weightages for classification of settlements in hierarchy	20
20	Catchment area determination survey	22
21	Sphere of Influence of Ullapara Upazila Shahar	23
22	Study Area of Upazila Shahar Ullapara	25
23	Population distribution by age and sex at Ullapara Upazila shahar area	26
24	Occupational Status of Population by sex at Study Area	27
25	Educational Status of Population by sex at Study Area	28
26	Extent of Income of households at Study Area	28
27	Distribution of households by sources of income in Study Area	29
28	Extent of expenditure of study households	30
29	Duration of settlements by H/H at Study Area	30
30	Causes of Immigration in Ullapara shahar	31
31	Accessibility to Communal Facilities at Study Area	32
32	Facilities for Source of Drinking Water of Households at Study Area	33
33	Facilities for human waste disposal of households at Study Area	33
34	Distribution of H/H according to bathing facilities at Study Area	34
35	Whether homestead subjected to flooding at Study Area	34
36	Existing situation of Land-use in Ullapara Shahar, 1989	35
37	Services and their Utilization, 1989	39

Table No.	Title	Page No.
38	Growth Rate of Population in Sphere of Influence	42
39	Population Forecasts in the Sphere of Influence on the basis of High, Medium and Low Rates	42
40	Household Size and growth of new households in Sphere of Influence	43
41	Density of Population in the Sphere of Influence 1985-2000 A.D.	43
42	Growth Rate of Population in Shahar Area	44
43	Forecasts of Population of Ullapara Shahar, 1985-2000 A.D. on the basis of High, Medium and Low Rates	45
44	Household Size and Growth of new households in Ullapara Shahar, 1985-2000 A.D.	45
45	Density of Population in the Shahar 1985-2000 AD	46
46	Aspects of Migration of Greater Pabna Zila	46
47	Existing Labour Force in the Sphere of Influence as of 1981	48
48	Forecasted Labour Force & Employment of the Sphere of Influence by 2000 A.D.	49
49	Existing Labour Force in the Ullapara Shahar, 1981	50
50	Forecasted Labour Force & Employment of the Ullapara Shahar Area by 2000 A.D.	51
51	Land Requirements of proposed Shahar Area of Ullapara Upazila upto the year 2000 A.D.	52

LIST OF MAPS

<u>Map No.</u>	<u>Title</u>
1	Zila Map of Sirajgonj
2	Upazila Map of Ullapara
3	Upazila Shahar Land-Use Plan
4	Town Service Centre Map

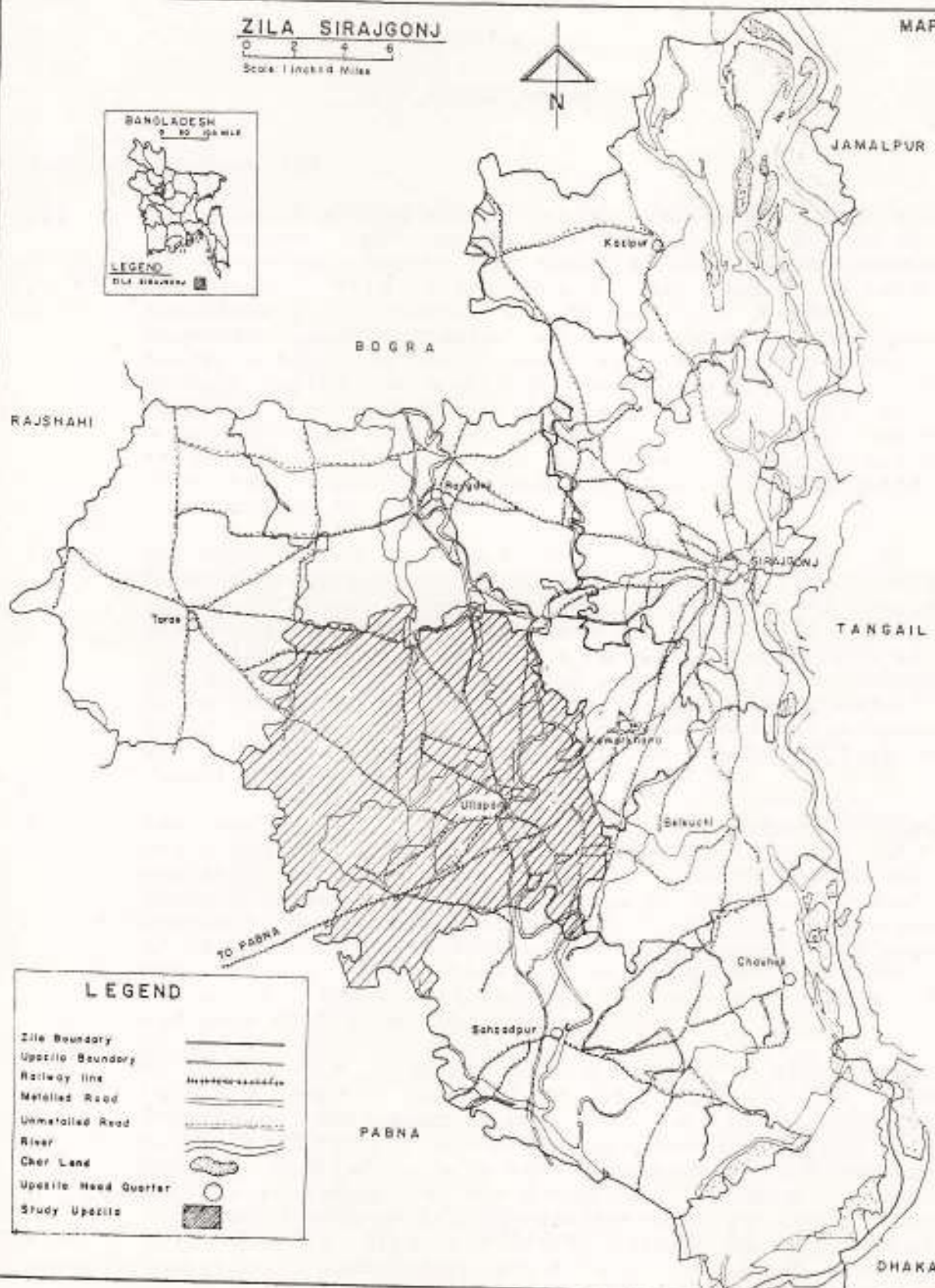
LIST OF DIAGRAM

<u>Diagram No.</u>	<u>Title</u>
1	Concept Plan for Upazila Town

ZILA SIRAJGONJ

0 2 4 6
Scale: 1 inch = 4 Miles

MAP: I



LEGEND

Zila Boundary	—————
Upazila Boundary	—————
Railway line	—————
Metalled Road	—————
Unmetalled Road	—————
River	~~~~~
Char Land	~~~~~
Upazila Head Quarter	○
Study Upazila	▨

CHAPTER - I

INTRODUCTION

1.0 INTRODUCTION

- 1.1 As per Contract Agreement signed with Urban Development Directorate (UDD) on 3rd April 1989, we have to submit four separate reports for Upazila town land-use/Master planning. This is fourth and final report and which is submitted in a series of those four reports. The proposed land-use/Master plan prepared on the basis of existing land-use trend and its forecasting upto the design period of 2000 A.D. have been submitted in this report. For this plan, forecasted population of the existing town and its sphere of influence has been considered. The existing land-use and socio-economic data has taken from secondary and primary sources are incorporated in this plan.
- 1.2 The Upazila town area was identified tentatively at the time of preparing the Inception Report. After collection of mouza maps, contour maps of WAPDA and initially examining the physical features and the spread of urban activities around the Upazila Parishad Complex and market areas, the selected Study Area appears to be a reasonable basis for existing situation of the land-use survey. The existing situation of Study Area in terms of population and land-uses have been presented in Chapter-III of this report.
- 1.3 The survey and assembled data have been presented to bring into focus the general trend of growth of the upazila and its impact on the growth centres of the upazila including the upazila shahar area. Although no economic model has prepared to illustrate the incidence of development in spatial context, a general overview on the impact of upazila-wide economic growth and demographic trend will feature as a basis for the land-use plan of the upazila shahar.
- 1.4 No remarkable resources are available in large scale at Ullapara except some kinds of agricultural crops. Industrial development has not yet been developed in significant rate. But the geographical position of this upazila indicates a bright opportunity of developing rapidly in industrial and commercial sectors. Because the major mode of transportation networks have connected this upazila with different cities of the country. Employment generation activities as one of the target

objectives of the Local Government Administration decentralisation ordinance of 1982 is expected to be adhered to by the upazila parishad in the longer term.

1.5 The subsequent chapters will be devoted to illustrate

- o The upazila in its zila context in terms of :
 - Population and settlement distribution.
 - Economic performance and transport linkages.
 - Social infrastructures.
 - Priority projects.
 - General identification of human settlement hierarchy.
- o The upazila headquarters describing the existing socio-economic conditions, its land-use pattern and physical growth of the area.
- o Forecasting of population and labour forces in town and its sphere of influence.
 - preparation of land-use/Master plan on the basis of forecasted demand of the design population.
- o Programming and implementation of the plan.

CHAPTER - II

THE UPAZILA IN ITS ZILA CONTEXT

2.0 ULLAPARA UPAZILA IN THE CONTEXT OF ZILA SIRAJGONJ

2.1 Location and Physical Characteristics of the Upazila

2.1.1 Locational aspects of the Upazila

Geographic Location :

Upazila Ullapara belongs to zila Sirajgonj. It is situated at a distance of 29 Km (18 miles) from the Zila headquarters. It is located roughly between 24°12' and 24°26' north latitude and 89°24' and 89°38' east longitude. It is bounded in the north by Raiganj Upazila, in the south by Shahjাদpur and Faridpur Upazila, in the east by Kamarkhanda and Belkuchi Upazila and in the west by Tarash Upazila. Map-1 has shown the geographical position of the study upazila in the Sirajgonj Zila Map.

Administrative and Functional location :

Administratively this is one of the nine upazilas of the newly reorganised Sirajgonj Zila. The Ullapara upazila was established as a Thana (Police Station) in 1813. With the development of transportation network through this region the upazila headquarter becomes an important commercial and trade center. Existing highway and railway passing through this upazila to connect different important towns of North Bengal with eastern part of Bangladesh has made this upazila prominent in transportation sector. Present upazila urban area and its headquarter is situated along the Sirajgonj-Bogra highway and about three miles north from Ullapara railway station.

2.2 Population and Settlement Distribution.

2.2.1 Population : Population within the Sirajgonj zila and Ullapara upazila is stated below in Table-1.

Table 1 : Population distribution within the zila and upazila 1961-81.

Upazila/Zila	Population		
	1961	1974	1981
Upazila Ullapara	1,76,192	2,58,351	3,10,946
Zila Sirajgonj	11,08,459	15,59,007	18,65,939
Upazila as % of Zila	15.9	16.6	16.67

Source : Pabna District Statistics, 1983
P-5, Table - 1.03, B.B.S.

The variation of population of the Sirajgonj zila and Ullapara upazila region is given in Table-2.

Table 2 : Percentage variation of population in zila and upazila.

Upazila/Zila	Variation of Population (in %)		
	1974 over 1961	1981 over 1974	1981 over 1961
Upazila Ullapara	45.63	20.36	76.48
Zila Sirajgonj	40.65	19.69	68.34

Source : B.B.S., ibid, P-5, Table - 1.03

The population distribution according to age and sex of the zila and upazila are given in Table 3 and 4 respectively.

Table 3 : Population distribution of zila Pabna
by age and sex 1981.

Age Group	Both Sex		Male		Female	
	Total	%	Total	%	Total	%
0 - 4	607938	17.8	307436	17.5	300502	18.0
5 - 9	583685	17.0	298854	17.0	284831	17.1
10-14	468784	13.7	251200	14.3	217584	13.1
15-19	327240	9.6	164984	9.4	162256	9.7
20-24	262090	7.7	122538	7.0	139552	8.4
25-29	243242	7.1	124378	7.1	118864	7.1
30-34	180945	5.3	90875	5.2	90070	5.4
35-39	158462	4.6	83950	4.8	74512	4.5
40-44	134213	3.9	68113	3.9	66100	4.0
45-49	102571	3.0	55496	3.2	47075	2.0
50-54	99734	2.9	51230	2.9	48504	2.9
55-59	62837	1.8	34834	2.0	28003	1.7
60-64	75319	2.2	38813	2.2	36506	2.2
65-69	35297	1.0	19608	1.1	15689	0.9
70+	81347	2.4	45330	2.6	36017	2.2
Total	3423704	100.0	1757639	100.0	1666065	100.0

Source : Bangladesh Population Census 1981, Pabna District 1984,
BBS, P-6

Table 4 : Population distribution of upazila Ullapara
by age and sex 1981.

Age Group	Both Sex		Male		Female	
	Total	%	Total	%	Total	%
0 - 4	56126	17.9	28142	17.5	27984	18.3
5 - 9	54158	17.3	27438	17.1	26720	17.5
10-14	41465	13.2	22296	13.9	19169	12.6
15-19	28782	9.2	14888	9.3	13894	9.1
20-24	24184	7.7	11013	6.9	13171	8.6
25-29	23310	7.4	12083	7.5	11227	7.4
30-34	16585	5.3	8253	5.1	8332	5.5
35-39	14746	4.7	7796	4.9	6950	4.6
40-44	12348	3.9	6333	3.9	6015	3.9
45-49	9742	3.1	5332	3.3	4410	2.9
50-54	8772	2.8	4616	2.9	4156	2.7
55-59	6105	1.9	3355	2.1	2750	1.8
60-64	6394	2.0	3294	2.1	3100	2.0
65-69	3348	1.1	1839	1.1	1509	1.0
70 +	7240	2.3	3967	2.5	3273	2.1
Total	313305	100.0	160645	100.0	152660	100.0

Source : ibid, P-154, BBS-1984.

- 2.2.2 Settlement Distribution : The settlement distribution in zila and upazila areas may be expressed in terms of statistical and geographic distributive patterns. Statistically the number of mouzas and villages are presented in Table-5.

Table 5 : Number of Mouzas and Villages, 1981.

Upazila/Zila	Urban Settlements	Rural Settlements	
		Mouzas	Villages
Upazila Ullapara	1 (Upazila Shahar)	258	422
Zila Sirajgonj	1 (Paurashava)	1460	2101

Source : Community tables of all thana and Pabna district statistics 1983, P-3 ; Table-1.01, BBS.

The mouzas are the original settlements and the villages, mohollas and wards grow over time within the mouzas as new settlements.

Geographic Distribution: The geographic distribution of the settlements has been influenced by the physiographic feature and soil condition of the area. In the low-lying areas of the upazila, villages are not in clustered form, they are scattered over raised areas and surrounded by plantations like bettle-nut, bamboo, pineapple, cane and bananas etc. In the areas of a little higher elevation the settlements have somewhat cluster formation. In newly formed char areas clustered settlement formed at the central areas of the island.

- 2.2.3 Migration : It is difficult to ascertain hard data on, in and out migration from the zila and upazila. The position regarding greater Pabna zila is presented in Table-6.

Table 6 : Life time net migrants by Ullapara upazila and zila Sirajgonj : 1961-1981.

Upazila/Zila	Net migrants in different years		
	1961	1974	1981
Upazila Ullapara	- 6351	- 9101	- 622
Greater Pabna Zila	- 70615	- 99166	- 6837

(+) indicates net in-migrants to the region.

(-) indicates net out-migrants from the region.

Source : Statistical year book 1984-85, P-136

2.3 Economic Performance and Transport Linkages :

- 2.3.1 Economic Performance : The economic performance of the upazila has been illustrated in this report in terms of agricultural and non-agricultural activities together with employment situation, income levels and per capita GDP. The given data have been assembled from the sources of the Bangladesh Bureau of Statistics (B.B.S.).

Agriculture : The following Tables 7, 8 and 9 indicate the situation of agriculture in the upazila compared with the zila Sirajgonj.

Table 7 : Utilisation of Land for Agriculture, 1980-81 & 1981-82

Upazila/Zila	Total Area (Acres)	1980 - 81			1981 - 82					
		Cropped Area (Acres)			Cropped Area (Acres)					
		Single	Double	Triple	Intensity	Single	Double	Triple	Intensity	
Ullapara	102400	46286	29170	20434	173.04	102400	42051	30739	17838	173.28
Sirajgonj	616960	219860	183596	58950	165.20	616960	262287	151489	61111	144.77

Source : BBS ; ibid ; pp -20, 21 ; Tables 3.04 and 3.05 (adopted).

Table 8 : Area and Production of Crops, 1980-81 and 1981-82 in Sirajgonj Zila.

Crops	1980 - 81		1981 - 82	
	Area in (thousand acre)	Quantity ('000 maunds)	Area in (thousand acre)	Quantity ('000 maunds)
	Single	Double	Triple	Intensity
1. Aus rice	204	1991	207	2001
2. Aman rice	316	3168	343	3400
3. Boro rice	13	357	17	366
4. Jute	45	159	20	370
5. Sugarcane	10	4639	10	6240
6. Wheat	55	1208	52	1199
7. Potato	5	280	5.3	340

Source : B.B.S. ; ibid, p -38, 39, 40, 41 and 42.

Table 9 : Area and Production of Crops, 1980-81 and 1981-82 in Upazila Ullapara

Crops	1980 - 81		1981 - 82	
	Area in (thousand acre)	Quantity (¹ 000 maunds)	Area in (thousand acre)	Quantity (¹ 000 maunds)
1. Aus rice	35	355	31	309
2. Aman rice	55	605	58	619
3. Boro rice	4.3	125	4.9	201
4. Jute	10.5	37	6.4	112
5. Sugarcane	1.3	681	1.5	713
6. Wheat	14	295	15.6	386
7. Potato	0.8	50	0.9	52

Source : B.B.S. ; *ibid*, P -38, 39, 40, 41 and 42.

Industries : Establishment of both the large and small industries are negligible in Pabna zila. From the source of industrial survey by Bangladesh Bureau of Statistics 1982-83 it was found only 0.87 percent of the major industries were available in Bangladesh. Number of industries in Sirajgonj zila was not different from the situation that of zila Pabna. Very insignificant number of agro-based industries are available in upazila Ullapara though production of some crops like, Jute, Sugarcane, Potatoes are relatively higher in this upazila. Among large industries in zila Sirajgonj, only one Jute mill and four Cotton Textile mills are present. On the basis of BBS survey report it has also been found that the large number of handloom industries (10672 Nos.) have occupied the higher position in industrial sector. About 40 percent of handloom industries employees of Bangladesh are serving in Pabna zila. It is true that the handloom products from greater Pabna have been familiar items in this subcontinent since early of 20th Century. So adequate industrial facilities and policies in this sector may initiate as one of the major issue of Industrial development of Pabna region.

Position of Industries in Zila Sirajgonj and Upazila Ullapara : The positions of the industries in Ullapara upazila and Sirajgonj zila in respect of their units, employees and investment cost etc. have been evolved in the Table-10.

Table 10 : Position of Industries in Zila & Study Upazila, 1982

Industries	No. of Units		Fixed Investment Cost (Taka in '000')		No. of Employees	
	Zila	Upazila	Zila	Upazila	Zila	Upazila
Cottage Mills	3661	919	59045	8018	10547	3169
Jute Mills	1	-	2522550	-	4027	-
Icecream-Factories	2	2 (small)	-	-	70	8
Biscuit/Confectionery	10	3	-	-	120	16
Food manufacturing	8	1	-	-	400	25
Brickfield	17	3	-	-	1200	90
Wooden/furnitures	4	1	-	-	49	12
Handloom	10672	30	-	-	160062	300

Source : ibid, P 66-72.

Employment, Underemployment : Data on employment and under-employment are not available for zila and upazilas. Bangladesh Bureau of Statistics have computed composition of population by age, sex and economically active parameters (i.e. 10 years and above) for the greater Pabna zila.

In this report the estimates of economically active population of the upazila and zila have been presented on the basis of the rates that of greater zila Pabna. Although the ratio of greater Pabna zila may not be applicable for the study upazila and zila Sirajgonj, yet it is a good way for the assumption.

Table-11 has shown the employment position in terms of existing labour force in the Study Area as computed from 1981 census.

Table 11 : Composition of population by age and sex, 1981.
(Based on greater Pabna zila)

Age Group	Population	Pabna zila(%)			Ullapara Upazila(%)		
		Male	Female	Total	Male	Female	Total
0 - 9		34.5	35.1	34.8	34.6	35.8	35.2
10 - 19		13.7	22.8	23.3	23.2	21.7	22.4
20 - 29		14.1	15.5	14.8	14.4	16.0	15.1
30 - 39		10.0	9.9	9.9	10.0	10.1	10.0
40 - 49		7.1	6.0	6.9	7.2	6.8	7.0
50 - 59		4.9	4.6	4.7	5.0	4.5	4.7
60 - 69		3.3	3.1	3.2	3.2	3.0	3.1
70 +		2.6	2.2	2.4	2.5	2.1	2.3

Source : Computed from Table - 3 and 4.

From the Table-11 it is easy to assume the figure of economically active and inactive population. In the context of rural economy we may assume that the population below the age of 19 and above the age of 60 would be considered as economically inactive population. So, 63.0 percent population may be considered as completely under employed in upazila. On the other hand out of 37.0 percent of economically active population 18.5 percent are female and naturally they are engaged in household activities. Therefore net 18.5 percent of population are active and may be directly contribute themselves in national economy. Unfortunately it is not yet true for our economy. According to the source of BBS it is also found that only about 45.0 percent population have been engaged in

services. By considering this figure of employment we may assume that 40.0 percent population of the upazila is engaged in employment and 60.0 percent in under-employment from any specific job.

Income Levels : The Bangladesh Bureau of Statistics have assembled data on greater Pabna zila in terms of annual daily wage rate of workers by types and gross district product at current prices. Table-12 have been prepared on the basis of BBS sources, 1983.

Table 12 : Annual average daily wage rate of workers by type in Pabna zila from 1977-78 to 1981-82

Type	Skilled/Unskilled	1977-78	1978-79	1979-80	1980-81	1981-82
Land Farmer	Skilled	8.25	10.30	13.18	13.50	18.00
	Unskilled	5.00	6.88	5.75	8.50	14.00
Cotton Industry	Skilled	11.80	16.78	21.52	21.50	22.52
	Unskilled	7.80	12.67	15.37	15.37	15.37
Handloom Industry	Skilled	11.00	15.08	18.43	19.61	26.67
	Unskilled	5.50	6.34	6.33	7.41	20.33
Jute Industry	Skilled	-	8.08	-	20.00	-
	Unskilled	-	4.99	-	8.00	-
Bread Bis-cuit Factory	Skilled	8.00	8.08	9.00	11.58	19.45
	Unskilled	4.50	4.99	4.67	7.67	11.67
Match Factory	Skilled	-	-	-	-	14.00
	Unskilled	-	-	-	-	11.00
Machinery Workshop	Skilled	12.00	12.42	17.00	17.00	26.58
	Unskilled	8.00	8.17	10.00	10.00	18.50
Pottery	Skilled	11.00	13.27	17.00	17.00	23.65
	Unskilled	7.00	8.61	10.00	10.00	14.58
Oil Factory	Skilled	8.00	8.29	12.67	15.00	15.00
	Unskilled	6.00	6.17	9.07	11.00	11.00
Railway Labour	Skilled	6.00	6.60	6.68	6.67	20.00
	Unskilled	-	-	-	-	-
Book Binder	Skilled	8.00	8.80	12.31	14.50	15.00
	Unskilled	-	-	-	-	-
Compositor	Skilled	10.00	10.00	11.54	12.00	12.83
	Unskilled	-	-	-	-	-

Source : ibid, P -115, BBS- 1983.

Table 13 : Gross district product (Greater Pabna) at current prices from 1977-78 to 1981-82 in Million Taka

Sector	1977- 1978	1978- 1979	1979- 1980	1980- 1981	1981- 1982
Agriculture	2939	3305	3319	3855	4679
i) Crops	2471	2737	2655	3208	4004
ii) Forestry	2	9	9	11	12
iii) Livestock	184	383	476	456	466
iv) Fisheries	177	176	179	180	197
Mining & quarrying	-	-	-	-	-
Industry	260	321	389	463	511
i) Large Scale	116	168	203	242	267
ii) Small Scale	144	153	186	221	244
Construction	224	356	343	483	623
Power, gas, water & sanitary services	13	15	18	22	26
Transport, storage & communication	283	284	371	616	650
Trade services	417	505	623	682	780
Housing service	310	404	474	538	617
Public admn & defence	136	141	167	320	371
Banking & insurance	59	77	105	140	142
Professional & miscellaneous service	268	313	369	442	534
GDP at current market price	4909	5721	6178	7561	8933
Indirect Tax, net of subsidies (-)	282	351	408	529	543
GDP at current factor cost	4627	5370	5770	7032	8390
Population (in Million)	3.29	3.37	3.46	3.53	3.60
Per Capita GDP at factor cost (Taka)	1406	1593	1668	1992	2331

Source : ibid P-136 BBS-1983.

Although the income tables presented above may not reflect the position of the upazila and zila Sirajgonj, such levels of information, if assembled, may be of use in the analysis of household and macro-economic features.

2.3.2 Transport Linkages

The transport linkages have been described in this study in terms of (A) Transportation Network and (B) Transportation Services.

A. Transportation Network : Transportation networks in zila Sirajgonj had developed historically especially during the British period, when raw jute, tobacco etc. gradually became important trading commodities. At that time railway had developed in full swing to connect the eastern and western part of undivided Bengal. The natural barrier imposed by the river Jamuna had bound the railways upto Sirajgonj zila. To face this problems inland water ways have been using to connect the eastern part of the Bangladesh with Sirajgonj port. The role of the Sirajgonj port has been increasing consequently upon the economic growth. In recent years significant development in highway system of this region have influenced the transport as well as economic development of north Bengal. Map-1 has shown the railways, highways and waterways network of Sirajgonj zila.

However, the following Table-14 has shown the present position of rail, road and waterways transportation establishing physical linkages to the economic growth. It may be mentioned here that the intra-upazila and inter-upazila (zila-wide) transportation developments are seriously constrained due to peculiar physiographic conditions imposed by rivers, flood, low-lying areas, depressions etc.

Table 14 : Transportation Network, 1982

Mode of Transports	Zila Sirajgonj	Upazila Ullapara
I. Roads (miles)		
a) Pucca	108	32
b) Semi Pucca	92	14
c) Katcha	812	340
II. Railway Stations	10	4
III. Steamer/Launch St	13	-
IV. Bus Stoppage	8	1

Source : ibid, P -103 & 104, BBS - 1983.

Table-14, reveal that about 30 percent of pucca road of Sirajgonj zila remains in Ullapara upazila. Also out of 10 railway stations of Sirajgonj zila, 4 are situated in Ullapara. But in Ullapara upazila no launch and steamer stations are available. Therefore both rail and road transport system have been contribute a significant impact on regional development of Ullapara upazila.

B. Transportation Services : Table-15 has described the public services provided to upazila & zila in recent years.

Table 15 : Transportation Services in Zila Sirajgonj and Upazila Ullapara in 1982

Transportation Services	Zila	Upazila
1. Ghat/Stations etc.		
- Railway Station	10	4
- Launch/Steamer Station	13	-
- Bus Stoppage	8	1
2. Buses & Microbuses	34	1
3. Trucks	49	10
4. Auto-Rickshaw	2	-
5. Rickshaw	3049	620
6. Boats	2571	527
7. Bullock carts	7379	2500

Source : ibid, P -104, 105 and 106, BBS -1983.

From the table of transportation services of Ullapara upazila it is found that the service facilities are not satisfactory even its transportation network is considerably hopeful. Intra upazila services of study upazila is mainly depends on bullock carts, rickshaw and boats. Therefore existing transportation services of this upazila is in unsatisfactory condition.

2.4 Social Infrastructure

2.4.1 The existing social infrastructural services of Ullapara upazila and Sirajgonj zila is given in Table-16.

Table 16 : Social Infrastructure and Utilities, 1982

Category of Services	Sirajgonj Zila	Ullapara Upazila
1. Education		
a) Number of Primary Schools	899	142
- Teacher	4216	597
- Students	153680	31658
b) Secondary Schools	54 + 148	14 + 26
- Teacher	263 + 1421	88 + 190
- Students	6449 + 48678	1500 + 8525
c) Colleges	15	1
- Teacher	277	26
- Students	7755	970
d) Madrasahs	97	27
- Teacher	764	180
- Students	19977	5400
e) Gonosikhya Kendra	767	201
- Teacher	1753	402
- Students	23913	2500
2. Health		
a) Upazila Health Complex	10	2
- No. of Beds	181	12
b) Charitable Dispensary	18	3
c) Missionary Hospital	-	-
d) Other Health Centers	21	13
e) No. of qualified Doctors	469	52
f) Family Planning Clinics	37	7
g) No. of Family Planning Personnel	501	74
3. Trade Centers		
a) No. of Daily Bazar	83	15
b) Weekly/Bi-weekly Hats	158	29
4. Tubewells (for drinking)	33262	5000
5. Villages Electrified	200	101
6. Post Offices	147	25
7. Telegraph Offices	12	2
8. Dak-banglaw	13	2
9. Bank Branches	87	10
10. No. of Govt. Offices	276	41
11. Cinema Halls	14	2
12. Registered Clubs	72	5
13. Public Library	5	-
14. Orphanage	1	-
15. Sheba Asram	2	-

Source : Pabna District Statistics 1983, P - 85 to 95

2.5 Current Development Projects (Priority Projects)

- 2.5.1 After the establishment of upazila a lot of development activities have been undertaken in Ullapara. A list of important projects is given in Table-17.

Table 17 : List of Development Projects, 1988-89

Project	Duration	Estimated Cost (Tk)	Donor (if any)
Construction of pucca (R.C.C.) road at Mouza Jhikra	1989-90	Not yet fixed	Not yet settled
Construction of proposed Stadium at Ghosgati	1989-90	Not yet fixed	Not yet settled
Construction of a bridge at Barai Kheyaghat	1989-90	Not yet fixed	Not yet settled
Construction of a pucca road from Ullapara to Mohammadpur via Kaira Hat	1989-90	40,00,000	ADP (special grant from LGEB)

Source: Upazila Engineer, Ullapara Upazila Parishad, 1989.

2.6 Synthesis : Identification of hierarchy of settlements in the Upazila.

2.6.1 Criteria Adopted : This Upazila like all other upazilas of Bangladesh have predominant rural characteristics in terms of status of economic pursuit and development of human settlements. Most settlements in the Upazila have, however, varying degree of developments. Most of them do not have any other activities other than agriculture. Taking these settlements at the bottom line the upper level settlements are having expansion of services like hats, secondary schools, bank branches etc. These settlements at higher levels of those at the bottom line only have been classified to indicate the growth points which would perform the role of absorbing increment population and provide expanded services to the bottom line settlements. In order to identify the growth points and to classify them into levels in the hierarchy, initially such settlements have been identified as prominent places or hats and then these have been graded according to marking allocated per item of selected services. The Table-18 shows these settlements with grading.

2.6.2 Identification of Settlements Hierarchy : According to the criteria adopted (Ref: paragraph 2.6.1) important settlements rendering one or more number of socio-economic services in the rural area have been classified. Under each category a number of settlements have been grouped.

According to the marking in the Table 18, settlements are classified in terms of hierarchy by ranges of weightages allocable to each settlement. The ranges are shown in Table 19.

Table 19 : Ranges of weightage for classification of settlements in hierarchy

Ranges	Category in hierarchy
71 and above	A = Highest category
45 - 70	B = Upper middle category
30 - 44	C = Middle category
Upto 29	D = Lower category

According to Table-19, the following settlements emerge as A, B, C and D categories.

<u>Category</u>	<u>Name of Settlements</u>
Category A	Jhikra and Bakua.
Category B	Ghosgati, Purnimagati, Bhatiakauk, Patahari and Paschim Bamongao.
Category C	Pertetulia, Baraia, Bhutgachha, Magurdanga, Ratankauk, Enayetpur, Khaduli, Mohishakhola and Udhunia.
Category D	Srrikola, Ramkantapur, Chala, Purbo Dalua, Pukurpar, Nagraua, Kaliapara, Berahat, Khamarpara, Paikpara, Alidaha, Bera, Boalia, Hawra and Protab.

In course of time the settlements classified above may change their characteristics due to intensification of development.

CHAPTER III

THE UPAZILA HEADQUARTERS

3.0 THE UPAZILA HEADQUARTERS AND ITS SPHERE OF INFLUENCE

3.1 Definition of Sphere of influence/attractiveness

- 3.1.1 The sphere of influence of the Upazila Shahar is identifiable in respect of administrative and socio-economic context. In other words, the Upazila Shahar as an administrative centre has the whole of the Upazila as its catchment area, but as a growing urbanism it has economic linkage with areas around it and the areas may also include parts of other Upazilas. Recent sample survey for catchment area determination of the Upazila Ullapara has shown that most of the people very surround to this upazila shahar comes to this urban area for different services. Meanwhile people from other upazila areas also come here to have various specialised services. Table-20 has shown the percentage of sample population those are coming the Upazila Shahar area from the farthest and nearest points from upazila centre to avail urban services. But for the purpose of land-use planning for the Upazila Shahar, the immediate hinterland which consume all services of the Upazila Shahar except housing may be considered as the most appropriate sphere of influence. Because population base of this hinterland actually would influence requirement of land for services other than housing. The mouzas which are attracted towards other centres generally are excluded. The criteria for delineation of the boundary of the sphere of influence is to draw a line on map around the upazila shahar, the boundary line should be laid equidistant between the upazila shahar and the adjoining centres/hats. The boundaries are also to be adjusted in an elongated manner along roads. Based on this criteria the boundary and mouzas are shown on Map-2 and Table-21.

Table 20 : Table for catchment area determination survey

COMMUTING DISTANCES IN MILE TO AVAIL URBAN FACILITIES FROM UPAZILA HEADQUARTERS	NUMBER OF PERSONS	FREQUENCY
0 - 1	8	11.12
1 - 2	7	9.72
2 - 3	8	11.12
3 - 4	13	18.03
4 - 5	10	13.88
5 - 6	7	9.73
6 - 7	3	4.17
7 - 8	2	2.78
8 - 9	0	-
9 +	14	19.45
Total	72	100.00

Table 20 represent the attractiveness of the upazila shahar to its surrounding peoples. About 64 percent of the sample population commuting to the upazila sadar to avail specialized services from within 5 miles surrounding to the upazila centre. Therefore attractiveness of the upazila sadar is highly concentrated within 5 miles surrounding to upazila town area.

Table 21 : Sphere of Influence of Ullapara Upazila Shahar

Name of Mouza	: Total Area		: Involved Area		: Total Population		: Involved Population	
	: Acre	: Hectare	: Acre	: Hectare	: 1961	: 1974	: 1961	: 1974
Barahar (Part)	1019	412	134	54	2152	3100	283	407
Bhutgachha (Part)	125	50	42	17	225	354	75	118
Chala	274	110	274	110	537	799	537	799
Pertetulia	211	85	128	52	575	844	349	512
Magurdanga (Part)	297	120	245	99	490	836	404	690
Purba Dalua (Part)	498	201	77	31	959	1420	148	219
Purnimagati (Part)	608	246	70	28	1105	1782	127	205
Pukurpar (Part)	154	62	73	29	333	549	158	260
Nag Rauha (Part)	342	138	140	57	789	1125	323	460
Pang Rauha (Part)	137	55	128	52	120	159	112	148
Paschim Bhadrakhola (Part)	275	111	26	11	536	871	50	83
Kailapara (Part)	348	141	129	52	945	1274	350	472
Ratanakauk (Part)	93	37	38	16	383	734	156	300
Sripaigati (Part)	175	71	52	21	445	674	132	200
Singhagati (Part)	348	141	102	41	913	1405	267	412
Enayatpur (Part)	1054	426	563	227	2243	3142	1198	1678
Purbo Satbaria (Part)	580	234	256	104	1279	1778	564	785
Ramkantapur (Part)	577	233	427	173	1065	1715	802	1293
Teligonj Tetulia (Part)	583	236	147	59	1523	2154	384	543
Baraia	134	54	78	32	906	1189	527	692
Ghosgati	142	57	62	25	1155	1581	504	690
Bakhua	1180	477	515	208	3240	5414	2489	4152
Srikola	227	92	47	19	787	1084	163	224
Bhatiakaauk	562	227	227	92	1750	2374	707	833
Total	9943	4016	3980	1609	24455	36045	10809	16175
								19507

Source : BB, 1961, 1974 and 1981.

3.2 Definition of Study Area

3.2.1 Criteria for determination of the Study Area : There are several considerations for determination of the Study Area as follows :

- According to the general guideline of the National Implementation Committee Administration Reorganisation (NICAR) the Study Area should be located within a radius of one mile from the center of the Upazila Headquarters.
- The guidelines of the TOR suggests that an area should be defined for the Upazila Shahar which will be or likely to be densified to a sufficient level by which per capita investment cost would be reasonably at a lower level.

3.2.2 Bearing these two considerations in mind the Study Area has been determined in order to include the urban and semi-urban activities in and around the headquarters. In doing so conservation of agricultural land, natural barriers and transportation network have also been kept in view.

The spread of urban and semi-urban activities together with natural barriers are shown in Map-3. These aspects are also been examined in details during land use survey works. The Table-22 have shown the mouzas which are included in the upazila shahar study area partially or fully.

Table 22 : Study Area of Upazila Shahar - Ullapara

Name of Mouza	Total Area		Involved Area	Hectare	Population		Population Involved	Remarks
	Acre	Hectare			1961	1974		
Jhikra	256	103.5	256	103.5	2094	2708	2094	1961 1974 1981 3597
Srrikola	227	91.7	180	73.0	787	1084	630	867 1281 All population involved Most population involved
Partetulia	211	85.2	83	33.5	575	844	224	329 432 Involved
Ramkantapur	577	233.0	150	60.6	1065	1715	240	386 447 Population proportionate to involved acreage
Bankhua	1180	476.6	300	121.2	3240	5414	823	1376 1725
Ghosgati	142	57.0	80	32.3	1155	1581	650	890 1056
Baraia	134	54.0	56	22.6	906	1189	380	499 556
Batiakauak	562	227.0	25	10.1	1750	2374	77	105 123
Purbasetbaria	580	234.0	50	20.2	1279	1778	110	153 176
Total	3869	1562.0	1180	477.0	12851	18687	5228	7313 9393

Source : Original data is taken from census documents for Area & Population of 1961, 1974 and 1981 of BBS.

3.3 Socio-Economic Conditions of the Study Area

To find out the existing socio-economic condition of the Ullapara upazila study area a random sampling method was adopted to survey the 5% household of the shahar area. The brief findings from socio-economic survey have been presented by this article in tabular form.

3.3.1 Demography of the Study Area

Table 23 : Population distribution by age and sex at Ullapara upazila shahar area.

Age Group	Sex	Male	Female	Total
Upto 9 yrs.	!	139	151	290
10 - 19 yrs.	!	131	125	256
20 - 29 yrs.	!	107	119	226
30 - 39 yrs.	!	100	62	162
40 - 49 yrs.	!	54	39	93
50 - 59 yrs.	!	28	17	45
60 - 69 yrs.	!	24	15	39
70 + yrs.	!	20	15	35
Total	!			
Household	!	603	543	1146

Source : Field Survey 1989.

Figures in the parenthesis indicates percentage.

Table-22 has already shown the general demographic situation of the Study Area (BBS, 1981). Recent survey has represented by Table-23 and indicates that out of total population of 1146 there are 603 males and 543 females. Male Female ratio is 1.11 which dominance of male population in the present status of urbanisation. Table-23 also shows that economically active population (i.e. between the age of 19 to 60) is 45.9 percent. Where the economically active population of the entire upazila was 37.0 percent in 1981. Therefore percentage of economically active population is significantly varied in upazila shahar area. Population upto age 19 is 47.6 percent of total population. It is expected that upto 2000 A.D. growth rate of population will continue to be accelerated the economically active population in shahar area.

Table 24 : Occupational status of population by sex
at study area

Sex	Male	Female	Total
Occupation			
Agriculture	61	-	61
Business	130	3	133
Service	78	4	82
Day Labour	12	2	14
House-wife	-	229	229
=====			
Total Population	281	238	519
=====			

Source: Field Survey 1989.

From Table-24, participation of female population in employment other than household work is minimum. Females are not found in agriculture and about 4.0 percent involved in different services other than household functions. Table-25 shows the educational situation of the male and females in study area. The situation is established by the low level of literacy among females. Out of 282 illiterates, 164 i.e. 58.16 percent are females, 9 females out of 65 persons are at or above graduate level. Out of 197 persons qualified in SSC/HSC level 66 are female.

Table 25 : Educational status of population by Sex at Study Area

Educa- tional Status	Sex : Male		: Female		: Both	
	Total	(%)	Total	(%)	Total	(%)
Child upto 4 yrs	72	11.94	75	13.81	147	12.83
Illiterate	118	19.58	164	30.20	282	24.61
Class I to V	125	20.73	132	24.32	257	22.42
Class VI to X	101	16.75	97	17.86	198	17.27
S.S.C. & H.S.C.	131	21.72	66	12.15	197	17.20
Degree or above	56	9.28	9	1.66	65	5.67
Total	603	100.00	543	100.00	1146	100.00

Source: Field Survey, 1989.

3.3.2 Income and Expenditure

Income and expenditural pattern of the population study are have try to reflect from the source of survey data. Table-26 is represents the household income of shahar area.

Table 26 : Extent of Income of H/H at study area

Income in Taka (per month)		Frequency	Percentage	
0 -	1,000	39	19.21	Low income group.
1,001 -	2,000	76	37.44	
2,001 -	3,000	41	20.20	
3,001 -	4,000	11	5.42	Mid income group.
4,001 -	5,000	18	8.86	
5,001 -	6,000	4	1.97	
6,001 -	7,000	1	0.50	High income group
7,001 -	8,000	5	2.46	
8,001 -	9,000	1	0.50	
9,001 -	10,000	1	0.50	
10,001 -	11,000	-	-	
11,001 -	12,000	-	-	
12,001 +		6	2.94	
Total Households		203	100.00	

According to Table-26, the maximum number of sample households are belongs from middle income groups (i.e. Tk 2001/- to Tk 5000/- per month). Insignificant percent 2.94 of households are found with income level above 12000/- per month. Side by side, sources of income and extend of expenditure have also identified in study area. Table-27 represents the sources of income of the study households.

Table 27 : Distribution of Sources of Income over earning population at study area

Source of Income	Frequency	Percentage
Have only Agricultural Income	20	7.49
Have Non-Agricultural Income only	108 (Service) 113 (Business)	40.28 42.16
Both agri. and non-agricultural income (Partly agri. and partly non-agri.)	27	10.07
=====		
Total Earning Population	268	100.00
=====		

Source: Field Survey, 1989.

As shown in Table-27, participation of labour force in agricultural activities are lowest 7.49% with highest participation in non-agricultural activities. But population earning both from cultivation and non-cultivating activities are significantly higher 10.07%. Also Table-28 reveal the pattern of expenditure at study area. The range of yearly expenditure is higher in middle income group. The middle income groups earning monthly Tk 2,000 to Tk 6,000 and represents about 34.5 percent of total households and same range of expenditure is found from about 47.8 percent of Household. Households spending upto Tk 2,000 per month are found about 45 percent.

Table 28 : Extent of Expenditure of Study Households

Monthly Expenditure (in Taka)	Frequency	Percentage	
0 - 1,000	21	10.34	Low income group
1,001 - 2,000	70	34.49	
2,001 - 3,000	49	24.14	Mid income group
3,001 - 4,000	27	13.30	
4,001 - 5,000	15	7.40	
5,001 - 6,000	6	2.96	
6,001 - 7,000	3	1.47	High income group
7,001 - 8,000	3	1.47	
8,001 - 9,000	2	0.98	
9,001 - 10,000	2	0.98	
10,001 - 11,000	-	-	
11,001 - 12,000	1	0.50	
12,001 +	4	1.97	
Total Households	203	100.00	

Source : Field Survey, 1989.

- 3.3.3 Migrational trend : The out come of river erosion in different upazilas of Sirajganj bound the affected people to spontaneous spreading in the nearby safer areas to survive through resettlements. The recent survey is not sufficient to reflect the picture of the migrational characteristics of the study area. It has try to visualize the existing migrational pattern of study area with the help of Table-29.

Table 29 : Duration of settlement by H/H at study area.

Extent of year of coming in present settlement place	Frequency	Percentage
Before 1 year	15	7.40
1 - 5 years	20	9.85
5 - 10 years	11	5.42
10 - 15 years	13	6.40
15 +	16	7.88
Inheritently settled	128	63.05
Total Households	203	100.00

Source : Field Survey, 1989.

From Table-29, it is found that 63.05 percent households have been living in the study area by inheritently. But 5.42 percent households have been settled in this area for the last 10 years and total 14.28 percent household have been living permanently at the study area for the last 15 years or above. Therefore total 36.95 percent households have immigrated in study area within last 15 years within last 15 years. With the help of Table-30 it may be assumed the major factors of immigration to this area. From Table-30, 38.67 percent households immigrated here after affected by river erosion.

Table 30 : Causes of immigration of households at study area

Factor of immigration	Frequency	Percentage
River erosion	29	38.67
Land-less (other than erosion)	10	13.33
Employment purpose	26	34.67
Attraction of Urban Services	3	4.00
Others	7	9.33
Total Immigrants	75	100.00

Source: Field Survey, 1989.

- 3.3.4 Composition of Services and Facilities : Accessibility to Communal Facilities for the upazila urban areas have give in Table-31. The commuting distance to avail different urban facilities are shown in this Table.

Table-32 represents the existing facilities for source of drinking water.

Table 31 : Accessibility to Communal Facilities at Study Area

Distance in Km	Main Road	Service Place	Primary School	High School	Bazar/ Hat	Hospital/ Clinic	Post Office	Bus/Train/ Launch Station
0.0 - 0.5	184	134	191	139	127	24	131	123
0.5 - 1.0	15	23	11	48	72	42	71	70
1.0 - 1.5	4	1	1	13	2	-	1	1
1.5 - 2.0	-	8	-	3	1	15	-	3
2.0 - 2.5	-	-	-	-	-	9	-	1
2.5 + above	-	37	-	-	1	113	-	5
Total	203	203	203	203	203	203	203	203

Source : Field Survey 1989

Table 32 : Facilities for source of Drinking Water of households at study area

Source	Frequency	Percentage
Well	15	7.40
Pond (Neighbour)	16	7.88
Pond (Own)	36	17.73
Tubewell (Neighbour)	58	28.57
Tubewell (Own)	78	38.42
River/Khal	-	-
Total	203	100.00

Source : Field Survey, 1989.

From Table-32, facilities for drinking water is insufficient in study area. Out of 203 sample households only 136 have access to tubewells and rest depend on ponds, rivers and kutcha wells etc. Waste disposal system have yet been developed in-scientifically. Only 37.93 percent households have been use pucca pit latrine and 49.75 percent have to do so by in-scientific way.

Table 33 : Facilities for human waste disposal of households at study area

Type	Frequency	Percentage
None	-	-
Kutcha pit latrine	90	44.33
Buccet Latrine	25	12.32
Pucca pit latrine	77	37.93
Others	11	5.42
Total	203	100.00

Source : Field Survey, 1989.

Table-34 also shows the bathing facilities of the study urban population.

Table 34 : Distribution of Households according to Bathing Facilities at Study Area

Type of Facilities	Frequency	Percentage
Pond (Neighbour)	21	10.34
Pond (Own)	32	15.76
River/Canal	-	-
Well	26	12.82
Tube Well	124	61.08
Tap Water	-	-
=====		
Total Households	203	100.00
=====		

Source : Field Survey 1989

Out of 203 households 15.76 percent households have to use own pond for bathing and other household functions. About 61.0 percent household avail tubewell facilities.

Table-35 represents the approximate figure of the affected households by the natural flood.

Table 35 : Whether Homestead subjected to flooding at Study Area

Reply	Frequency	Percentage
Yes	128	63.05
No	75	36.95
=====		
Total	203	100.00
=====		

Source : Field Survey, 1989

Out of 203 households about 63.0 percent are frequently affected by flood. During the last high flood in 1988 about 92.0 percent homesteads were affected.

3.4 Existing Land-use, facilities and utilization characteristics

3.4.1 Existing Land-use : Land-use survey of the study area has carried out recently with the help of C.S. map of 1" = 330' scale. The Table-36 and Map-3 shows the existing land-use pattern of study area.

Table 36 : Existing situation of Land-use in Ullapara Upazila shahar study area, 1989

Sl No	Land-uses	Symbol on Map	Area		Percentage of Total Study Area
			Acre	Hectare	
1	Agriculture		777.95	314.50	65.96
2	Commerce	1A	13.53	5.45	1.15
2.1	Industry	1B	9.60	3.88	0.81
3	Education	2	15.13	6.11	1.28
4	Health	3	1.00	0.40	0.08
5	Administrative Govt. Deptts.	4	21.17	8.55	1.79
6	Recreation (Open)	5	-	-	-
6.1	Recreation (Close)	5.C	1.00	0.40	0.08
7	Socio-cultural	6	1.10	0.44	0.09
8	Urban Services	7	1.85	0.75	0.16
9	Residential	8	232.95	94.21	19.74
10	Road Pucca		12.00	4.85	1.01
	Katcha/semipucca		20.00	8.08	1.69
11	Pond and Ditches		17.10	6.91	1.45
13	River or Channel		24.37	9.85	2.06
			31.25	12.62	2.65
Total			1180.00	477.00	100.00

Source : Land-use Survey, 1989.

It is found from Table-36, that utilization of land for Agriculture constitute the highest percentage 65.96% of the total area, followed by Residential uses 19.74%.

The existing land-use survey map shows that the study area is bi-furcated by the Sirajganj-Bogra highway. The existing development occur on both sides of this road, and the following pattern of development and Land-uses have developed over time.

A) Existing pattern of development

1. The township has been growing in the north-east and south-west alignment.
2. Existing major transportation system has bi-furcated the township.
3. Almost all the urban functions, viz, offices, banks, police and bus stations etc. are located at the north eastern zone of the town and that area is known as Jhikra also the eastern part of Bhankua mouza has occupied in the town.

B) Distributive pattern of existing land-uses

Residential Areas:

Residential areas are located in concentrated form mainly in mouza Jhikra and part of Bhakua. On the western and southern zone of the study area i.e. mouza Bhankua, Ghosgati the residential developments are scattered in agricultural fields. Out of 1180 acre of study area 232.95 acre is use for housing purpose. There is enough scope for raising the existing level of residential density.

Administrative Service:

Upazila Parishad is the principal administrative body for the upazila. Upazila parishad complex is situated near the Sirajganj-Bogra highway and in Mouza Jhikra. About 15.0 acre of area has been covered by upazila parishad complex. Different offices of governmental and non-governmental organization are located in Jhikra. About 6.17 acre of area also covered by different govt. and non-govt. organizations.

Education:

In Ullapara shahar, there are 5 Primary and 3 high schools are established. For the 9393 population of shahar only one College is present. This college is located on mouza Jhikra and Bakua.

Health:

There is one upazila health complex with 31 beds including family planning arrangements. That health complex is situated in Purnimagati mouza which is about 3 miles from upazila centre. There are 10 private dispensaries and 2 health care centers in town. The total permanent area under health and family planning centers is 1.00 acres in town.

Commerce:

The main commercial area is the Ullapara bazar which is located adjacent to the bus stoppage at mouza Jhikra. This bazar also expanded toward the southern direction along the Jhikra-Ghosgati road. There are some other shops, scattered here and there in the town. The total area under commercial use is 13.53 acre.

Industry:

There are significant progress in industrial development of upazila. About 200 Jute godowns, 20 Jute bailing machines, 30 Food godowns, 5 Tin factories, 5 Lather stores, 2 Ice factories, 30 Oil mills, 2 Twisting factories and 12 Light engineering workshops are present in town area. Total area covered by those enterprises are 9.60 acre.

Recreational Facilities:

Very limited recreation facilities are available here. There are four cinema halls near the bazar. A few play fields are located in the school compounds. No specified areas for park and play fields are available in the town. Now the total area for recreation facilities is 1.00 acre.

Socio-Culture:

These include the areas for mosque, mondir, community centre and graveyards. Most of the mosques are located in the mouza Jhikra, mondir at mouza Ghosgati. The largest graveyard is situated at mouza Jhikra. The total area covered by socio-cultural services is 1.10 acres.

Urban Services:

Urban services include post and telegraph, fire service, bus terminal, and banks. Most of the available facilities are found in the central part of the town. The total area for such services is 1.85 acres.

Road and Transportation:

The main transportation services are offered by the Bogra-Sirajganj highway passing through the town. There are secondary and access roads branching off radially to the left and right of the highway. Still now there are enough scope for development of local transport and communication system with the expansion of urban and residential functions in the town. The total area under road system of the town is 32.0 acre.

3.4.2 Urban facilities and their utilisation characteristics:

The facilities appeared to be under-developed and undeveloped. These mean some facilities are still not available or inadequate. The local Union Parishad is known to be the authority to provide Urban Services and their maintenances. But the income and expenditure are not balanced and in many cases, grants from central government are indispensable. The services, therefore, are subsidised for which expansion of services are severely constrained. But the pressure of population on services are increasing. This has not yet been closely examined in terms of potentials and problems of services provision by the authorities. The following Table shows the comparative position between the services and population.

Table 37 : Services and their utilisation, 1989

Name of Services	Present State of Utilisation	System for revenue collection
1. Residential	Residential density is 40 person per Acre.	Holding Tax has been collected by Union Parishad. Holding tax is assessed according to income from house and its owner. Union parishad assesses total tax for every mouza and distributes that total revenue over the individual households on the basis of their financial capability to pay the Tax.
2. Water Supply		
- Tubewell	Public Health Engg. Department has supplied so far 182 Tubewells in town areas. Now about 250 Tubewells are present in shahar area.	
- Tapped	Households at Upazila Parishad complex avail the Tap water facilities.	
- Sewarage	Public sewerage system is not available in this town.	
3. Electricity		
- Household Connection	900 Nos.	Charged as per REB rule.
- Industrial "	321 Nos.	"
- Commercial "	485 Nos.	"
- Street Light "	156 Nos.	"
4. Social Facilities		
- Public Library	1 No.	
- Bazar	2 Nos.	
- Play grounds	2 Nos.	
- Cinema Halls	3 Nos.	
- Cultural Academy	1 no.	

Source : Upazila Parishad, PHE office, REB office, U.P. office and Upazila Engineer.

It will appear from the Table-37, the water supply, sewerage and drainage systems are inadequate in the Upazila Shahar area.

3.5 Physical Opportunities and Constraints

The existing land-use survey map indicates some constraints of the physical growth of the township. Opportunities in a sense are for to seek.

3.5.1 Opportunities of Urban Growth:

The notable opportunity is the flood free land at least along the highway and its adjoining areas. This will ensure less costly ventures of earth filling.

3.5.2 Constraints of Urban Growth:

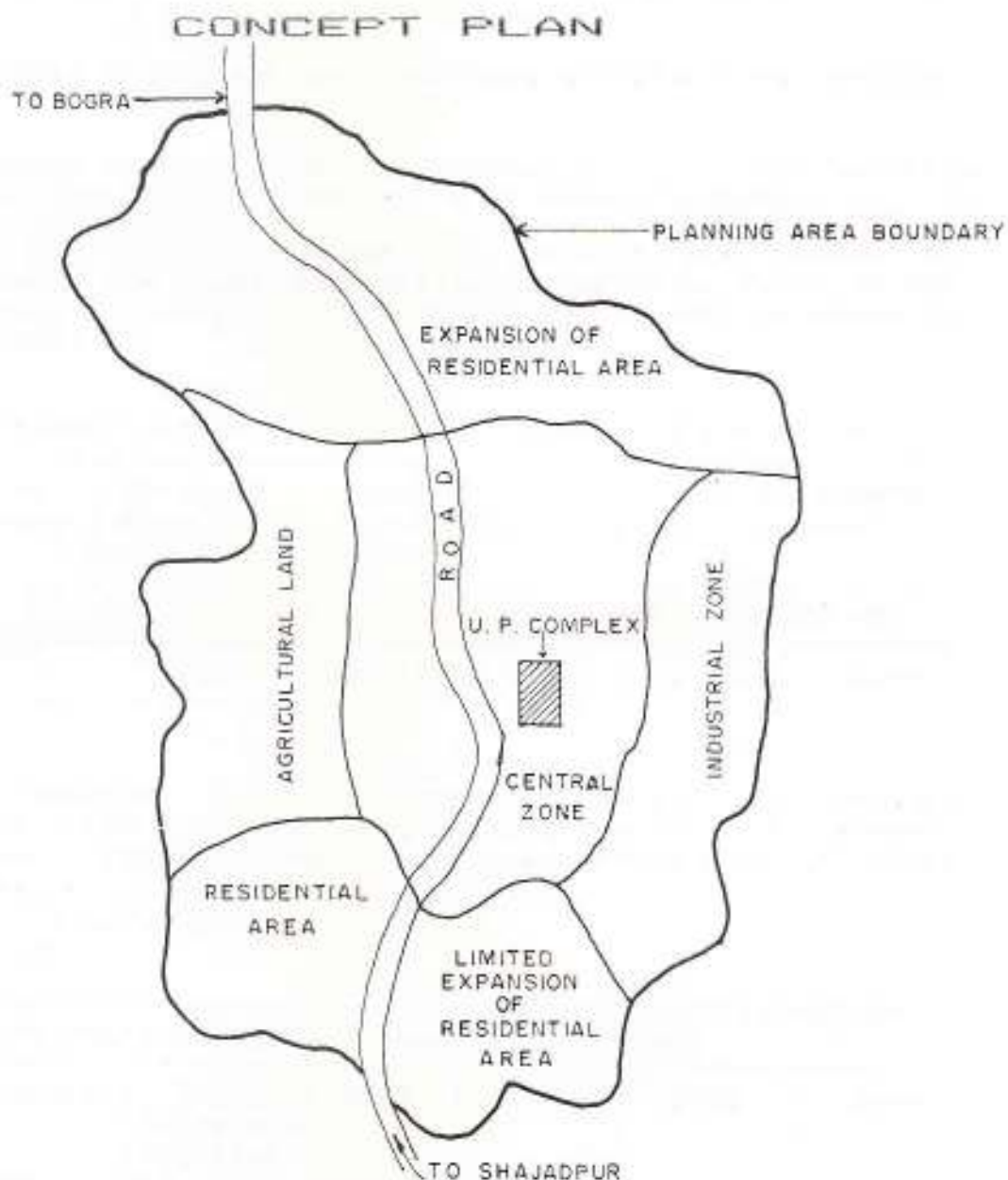
The existing land-use survey map shows that the growing urban area is elongated in a linear pattern spreading about 3 miles from the north-east to south-west. Under such situation transportation costs become an over burdening issue in the household expenditure pattern. This results in high public investment for infrastructure and services compared to the growth of population.

In order to tackle the situation efforts are generally made to increase urban expansion radially from the linear axis of growth. In the case of Ullapara Shahar this is hardly possible, because the base population in 1981 is only 9,393 and the future population is not likely to be enough for sufficient urban expansion to the east or to the west of the highway with reasonable level of density.

Another problem is the bi-furcation of the township by the nearby river and road. Under such circumstances, especially in a linear growth pattern, frequent crossing points become hazardous.

3.5.3 Concept Plan

Considering the problems and opportunities of urban growth a concept plan has been developed and this is shown in the following diagram :



The diagram strive to retain and densify the central zone with commercial, administrative and other urban functions. Residential expansion has been emphasised on the eastern and western part of the highway. Industrial development may be localised in the eastern part of Jhikra and also at the western zone of the Mouza Ramkantapur and Purbo Satbaria.

CHAPTER IV

FORECASTS

4.0 FORECASTS OF POPULATION, LABOUR FORCE & LAND REQUIREMENTS

4.1 Forecasts of Population, Household Structure and Density

4.1.1 Forecasts of Population, Household Structure and Density within the Sphere of Influence of Ullapara Shahar.

i) Population Forecasts : Within the sphere of influence the involved population increased from 10,809 in 1961 to 16,175 in 1974 and 19,507 in 1981 as shown in the Table-38.

Table 38 : Growth rate of population in sphere of influence

No. of Involved mouzas in sphere of influence	Involved Area (Acre)	Involved Population			Population growth rate in percent		
		1961	1974	1981	1961 -74	1974 -81	1961 -81
Twentyfour	3980	10809	16175	19507	3.14	2.71	2.99

From Table-38, the high growth rate is 3.14 percent medium rate is 2.99 percent and low is 2.71 percent. However, Table-39 shows the three projections on these rates.

Table 39 : Population Forecasts in the sphere of influence on the basis of High, Medium and Low Rates

Level of Projection:	1981 (base po- pulation)	1985	1990	1995	2000
High (3.14%)	19507	22075	25765	30072	35099
Medium (2.99%)	19507	21947	25430	29466	34142
Low (2.71%)	19507	21709	24814	28363	32420

ii) Forecasts on Household Structure : The household structure has been expressed in terms of average size of household. Other aspects like occupation and age group in the household have not been considered because agriculture is the most dominant source of employment and most people aged 10 yrs and over subsist on agricultural activities. Moreover, most households are mixed and extended families composed of father, mother, children, grand father, etc.

Table-40 represents the forecast of number of households and their new formations. The size of household is assumed to be gradually decreasing after 1985. The average household size was 6.82 in study mouzas (1981).

Table 40 : Household size and growth of new households in sphere of Influence (1985 - 2000 A.D.)

Parameters	1981 (base year)	1985	1990	1995	2000
Population	19507	21947	25430	29466	34142
Household size (average)	6.82	6.67	6.50	6.30	6.00
No. of households	2860	3290	3912	4677	5690
Formation of new households	-	430	622	765	1013

iii) Forecasts on Population Density : Population density in sphere of influence during design period has given in Table-41.

Table 41 : Density of Population in the Sphere of Influence 1985-2000 A.D. on the basis of medium projection rate.

Note : Total area = 4,033 acres or 1,629 hectare

Parameters	1981 (base year)	1985	1990	1995	2000
Population	19507	21947	25430	29466	34142
Density					
- per acre	4.84	5.44	6.31	7.31	8.46
- per hectare	11.97	13.47	15.61	18.08	20.96

4.1.2 Forecasts of Population, Household Structure and Density within Ullapara Shahar area

i) Population Forecasts : The population growth rate and its trend in Ullapara Shahar is given in Table-42. Where base population is 9,393.

Table 42 : Growth rate of population in Shahar area

Name of Mouza	Involved Area (Acre)	Involved Population			Population Growth Rate		
		1961	1974	1981	1961-74	1974-81	1961-81
Jhikra	256	2094	2708	3597	2.00	4.13	2.74
Srrikola (Part)	180	630	867	1281	2.50	5.74	3.61
Partetulia (Part)	83	224	329	432	3.00	3.96	3.34
Ramkantapur (Part)	150	240	386	447	3.72	2.11	3.16
Bankhua	300	823	1376	1725	4.03	3.28	3.76
Ghosgati	80	650	890	1056	2.45	2.47	2.46
Baraia	56	380	499	556	2.12	1.55	1.92
Bhatiakauak	25	77	105	123	2.41	2.30	2.37
Purbo Satbaria	50	110	153	176	2.57	2.02	2.37
Total	1180	5228	7313	9393	2.61	3.64	2.97

From the Table-42 the population growth rate is found 3.64 percent as highest rate and medium rate is 2.97 and low rate is 2.61 percent per year. In considering the Urbanization trend at Ullapara shahar we may adopted the growth rate as 3.00 percent. Considering these growth rate the forecasted population of the shahar area is given in Table-43.

Table 43 : Forecasts of Population of Ullapara Shahar, 1985-2000 A.D. on the basis of High, Medium and Low Rates.

Level of Projections	1981 (base yr)	1985	1990	1995	2000
High Projection (3.64%)	9,393	10,837	12,958	15,495	18,528
Medium Projection (3.00%)	9,393	10,572	12,256	14,208	16,470
Low Projection (2.61%)	9,393	10,412	11,843	13,471	15,323

ii) Forecasts on Household Structure : The structure of household has been expressed in terms of the average size of household. Age groups and occupation have not been considered because of the fact that most people (10 yrs and over) still pursue agriculture as the principal occupation. Table-44 gives the household size and number of household together with number of new household formation.

Table 44 : Household size and growth of new households in Ullapara Shahar, 1985-2000 A.D.

Parameters	1981 (Base yr)	1985	1990	1995	2000
Population	9,393	10,572	12,208	14,208	16,470
Household size	6.5	6.3	6.0	5.4	5.2
Number of households	1,445	1,678	2,042	2,631	3,167
Formation of new H/H	-	233	364	589	536

iii) Forecasts of Population Density : Table-45 represents the density of population in the Ullapara Shahar upto 2000 A.D.

Table 45 : Density of Population in the Shahar 1985-2000 A.D.
 Note : Total area 1,180 acre or 477 hectare

Parameters	1981 (base year)	1985	1990	1995	2000
Population	9,393	10,572	12,256	14,208	16,470
Density					
- per acre	7.96	8.96	10.39	12.04	13.96
- per hectare	19.70	22.16	25.70	29.78	34.53

4.1.3 Aspects of Migration :

There is no reliable basic information on the aspects of migration for the Ullapara Upazila Shahar. The BBS has determined the aspects of migration in terms of in-and out-migration from the greater Pabna Zila. This is presented below in Table-46. However, the Ullapara Shahar is a part of the Greater Pabna Region, the aspects of migration may be similar.

Table 46 : Aspects of Migration of Greater Pabna Zila

Name of Zila/Upazila	1951	1961	1974	1981
	Net Migrants in % of population in respective years			
Pabna Zila	(-2.36)	(-3.60)	(-3.53)	(-0.20)

Notes: (+) Sign is immigration, (-) sign is out migration and data for Ullapara has compiled as per migrational rate of Pabna.

From Table-46, Net migrational rate is 3.60% out migration in 1961, 3.53% in 1974 and 0.20% out migrates in 1981 in Pabna Zila and same figures may be assume for Ullapara Upazila Shahar.

4.2 Forecasting of Labour Force and Employment

4.2.1 Forecasting of Labour Force and Employment within Sphere of Influence of Ullapara Shahar

The forecasting of Labour force or employment within sphere of influence has been made on the basis of the percentage of Labour force of the involved population of the concerned mouzas. Table-47 shows the mouzas, their total population, involved population, total labour force and involved labour force of the sphere of influence.

Table 47 : Existing Labour Force in the Sphere of Influence as of 1981

Name of Mouzas	Total Population	Involved Population	Total Labour Force in 1981					Involved Labour Force								
			Not working	H/H work	Culti- vation	Agri. non-crop	Manu- facture	Busi- ness	Other	Not working	H/H work	Culti- vation	Agri. non-crop	Manu- facture	Busi- ness	Other
Barabar	3524	463	719	848	601	20	19	87	82	93	110	78	3	2	11	10
Bhutgachha	341	114	27	108	103	-	-	5	1	9	36	34	-	-	2	-
Chala	1051	1051	143	261	238	14	-	3	53	143	261	238	14	-	3	53
Partetulia	1107	672	66	290	254	-	2	25	11	40	177	155	-	1	15	7
Magardanga	973	803	125	196	160	-	3	7	97	102	160	131	-	2	6	80
Purba Dalua	1766	273	250	449	298	28	7	10	144	37	67	44	4	1	2	21
Purniasagati	2046	236	408	487	352	9	11	57	26	45	54	39	1	1	6	3
Pukurpur	648	307	98	162	97	-	-	7	41	46	76	46	-	-	3	19
Mag Rauba	1271	520	182	344	228	1	2	60	36	74	141	93	-	1	25	15
Pang Rauba	206	193	38	44	36	-	-	18	5	36	41	34	-	-	17	4
Paschia Bhadrakhola	1020	96	149	238	164	2	2	5	68	13	21	15	-	-	-	6
Kaliapara	1435	532	250	358	241	-	3	56	57	93	132	89	-	1	20	21
Ratanakauk	526	215	103	125	4	-	1	76	58	42	51	2	-	-	31	24
Sripaigati	938	292	212	162	104	1	126	47	34	66	50	32	-	39	15	11
Singhagati	1916	562	333	349	205	-	27	212	210	97	101	59	-	8	61	60
Enayelpur	3589	1917	339	992	645	37	57	135	132	180	526	342	20	30	72	70
Purba Satteria	2042	901	252	522	339	8	32	45	135	111	230	149	4	14	20	59
Raakantapur	1983	1495	210	489	335	12	31	110	88	157	366	251	9	23	83	66
Teliganj Tetulia	1837	625	202	791	709	16	47	26	20	69	269	241	5	16	9	7
Barala	1324	768	125	420	260	6	10	100	124	73	243	151	3	6	58	72
Ghosgati	1874	818	445	406	31	3	24	344	80	191	175	13	1	10	146	34
Bakha	6785	5204	1165	1685	821	4	153	578	330	897	1143	632	3	118	445	254
Srikola	1601	320	188	353	189	-	29	67	92	37	71	38	-	6	13	18
Bhatikaul	2797	1130	512	629	226	-	50	243	206	265	252	90	-	20	97	82
Total	42645	19507	6541	10508	6640	161	635	2323	2130	2856	4753	2996	67	302	1162	996

Note : ii Others means petty jobs.

On the basis of the labour force in individual occupation, the labour force are forecasted upto 2000 A.D.

Table 48 : Forecasted Labour Force and Employment of the Sphere of Influence by 2000 A.D.

Category of Occupation	1981 (base year)	1985	1990	1995	2000
Total Population	21427	21947	25430	29466	34142
Not working	2856	3213	3722	4312	4996
Household work	4753	5347	6195	7178	8317
Cultivation	2996	3370	3904	4523	5241
Agri non-crop	67	75	87	101	117
Manufacture	302	339	393	455	527
Business	1162	1307	1514	1754	2032
Others	996	1120	1297	1503	1742
Total	13132	14771	17112	19826	22972

Note: Others means petty jobs.

Since Ullapara may not grow more than 34 percent of the existing population within 2000 A.D., there may not be any substantial change in the growth of Labour force in the sphere of influence by categories. On this consideration the present growth rate of each category of labour has been maintained in calculating the forecasting labour force.

4.2.2 Forecasting of Labour force and employment within the Shahar area:

Labour force and employment in the shahar has been forecasted by making adjustment in non-agricultural activities. Percentage of participation in household activities and cultivation has been proposed to be decreasing and participation in business, manufacture, agri.non-crop and other petty jobs have been increased with the expectation that urbanization would bring about such changes. Table-49 shows the base information on labour and employment in the concerned mouzas of the shahar as compiled by the BBS.

Table 49 : Existing Labour Force in the Ullapara Shahar 1981.

Name of Mouza	Total Population	Involved Population	Total Labour Force of the Mouza					Involved Labour Force								
			Not Work	H/H Cultivation	Others	Manu- facture	Not Work	H/H Cultivation	Others	Manu- facture						
Jhikra	3597	3597	608	897	67	54	32	397	432	608	897	67	54	32	397	432
Srrikola	1601	1281	188	353	189	-	29	67	92	150	282	151	-	23	54	74
Partetulia	1107	432	66	290	254	-	2	25	11	26	113	99	-	1	10	4
Ramkantapur	1983	103	210	489	335	12	31	110	88	46	108	74	3	9	24	19
Banikhua	6785	1581	1165	1485	821	4	153	578	330	291	371	205	1	38	144	83
Bhosgati	1874	468	445	406	31	3	24	344	80	249	227	17	2	13	193	45
Baraia	1324	556	125	420	260	6	10	100	124	53	176	109	3	4	42	52
Bhatiakaak	2797	123	512	629	226	-	50	243	206	21	25	9	-	2	10	8
Purbo																
Satbaria	2042	176	252	522	339	0	32	45	135	20	42	27	1	3	4	4
Total	23110	9393	3571	5491	2522	87	363	1909	1498	1464	2241	758	64	124	878	721

Since Ullapara shahar may also grow by 34.4% of its population upto 2000 A.D. from the year 1990 it is expected that there may be structural changes in employment position. Therefore increased participation in non-agricultural activities beyond 1985 has been assumed. From Table-50 we may also realise the employment situation of the population of Ullapara Shahar area upto 2000 A.D.

Table 50 : Forecasted Labour force and employment of the Ullapara Shahar area by 2000 A.D.

Category of profession	1981 (Base year)	1985	1990	1995	2000
Total Population	9393	10572	12256	14208	16470
Not working	1464	1647	1909	2213	2565
Household work	2241	2522	2924	3390	3930
Cultivation	758	853	989	1146	1328
Agri. non-crop	64	72	83	96	111
Manufacture	124	140	162	187	217
Business	878	986	1145	1327	1538
Others	721	811	940	1089	1262
Total	6250	7033	8152	9448	10951

Note : Others means petty jobs.

Figure in parenthesis indicates percentage.

4.3 Land Requirements, Provision Standards

The standards given in the TOR of Urban Development Directorate (UDD) have been generally followed in estimating of the land requirements. But considering the future growth of population standards have been adjusted to actual and possible requirements.

For the purpose of housing, ancillary services and primary schools and parks the forecasted population of the Ullapara Shahar has been considered, and for all other purposes the forecasted population of the sphere of influence together with that of the shahar area have been considered. Table-51 shows the forecasted land requirements for different urban services on the basis of the TOR and lands actually proposed for the town.

Table 5i : Land Requirements for proposed Sahar Area of Ullapara Upazila upto the year 2000 A.D.
(Projected Population in Sahar Area is 16,470 and in influence area is 34,162).

Description of Land Uses	Standard as per TOR	Population	Land Required as per TOR	Existing Area	Proposed Area	Planning Area
			(acre)	(acre)	(acre)	(acre)
1. Residential:	60 persons/acre	16,470	274.50	237.95	62.00	294.95
2. Educational:			49.14	16.10	18.00	34.18
- Primary School	5000/2 acre	16,470	6.58	0.60 (5 units)	1.62 (2 units)	2.22 (7 units)
- High School	20000/5 acre	16,470	12.90	4.10 (2 units)	2.65 (2 units)	6.75 (4 units)
- College	20000/5 acre	50,612	12.65	10.43 (1 unit)	3.00 (Expansion)	13.43 (1 unit)
- Madrasa	20000/5 acre	16,470	4.11	1.05 (1 unit)	-	1.05 (1 unit)
- Vocational Institutes	20000/5 acre	50,612	12.90	-	10.73 (1 unit)	10.73 (1 unit)
3. Health:			15.94	1.00	6.65	7.65
- Health Complex	20000/5 acre	50,612	12.65	-	4.15 (1 unit)	4.15 (1 unit)
- Dispensary/Maternity	5000/1 acre	16,470	3.29	1.00	2.50	3.50
4. Administrative:			17.00	21.17	13.50	34.67
- Upazila Offices and other Offices	Upazila/12 acre Upazila/5 acre		12.00 5.00	21.17 -	- 13.50 (1 unit)	21.17 13.50 (1 unit)
- Jail						
5. Commerce:	1000/1.5 acre	16,470	24.70	13.53	11.00	24.53
6. Industry:	1000/1.5 acre	50,612	25.92	9.60	67.50	77.10
7. Recreation & Open Area:			41.79	1.00	27.90	23.90
- Park	1000/1 acre	16,470	16.47	-	8.00 (3 units)	8.00 (3 units)
- Play Field	1000/1 acre	16,470	16.47	-	7.70 (3 units)	7.70 (3 units)
- Cinema Hall	20000/0.5 acre	50,612	1.26	1.00	-	1.00 (3 units)
- Stadium	20000/3 acre	50,612	7.59	-	7.20 (1 unit)	7.20 (1 unit)

Table 5i contd. in next page.

Table 51 contd.

Description of Land Uses	Standard as per TOR	Population	Land Required as per TOR	Existing Area	Proposed Area	Planning Area
			(acre)	(acre)	(acre)	(acre)
8. Socio-Culture:						
- Eidgah & Mosque	5000/0.5 acre	16,470	1.65	0.50 (4 units)	0.62 (2 units)	1.12 (6 units)
- Graveyard	20000/5 acre	16,470	4.11	0.60 (1 unit)	1.90 (Expansion)	2.50 (1 unit)
- Cemetery	20000/5 acre	16,470	4.11	-	1.02 (1 unit)	1.02 (1 unit)
- Community Centre	20000/1 acre	16,470	0.82	-	0.60 (1 unit)	0.60 (1 unit)
9. Urban Services:						
- Post Office	20000/0.5 acre	16,470	0.41	0.75 (1 unit)	-	0.75 (1 unit)
- Telephone Office	20000/0.5 acre	50,612	1.26	-	0.75 (1 unit)	0.75 (1 unit)
- Police Station	20000/2 acre	50,612	5.06	1.10 (1 unit)	3.52 (1 unit)	4.62 (2 units)
- Bus Terminal	20000/1 acre	50,612	2.53	-	1.25 (1 unit)	1.25 (1 unit)
- Fire Services	20000/1 acre	16,470	0.82	-	0.90 (1 unit)	0.90 (1 unit)
- Electric Sub-Station	20000/1 acre	50,612	2.53	-	1.05 (1 unit)	1.05 (1 unit)
- Dak Banglow	20000/1.5 acre	16,470	1.23	-	0.97 (1 unit)	0.97 (1 unit)
SUB-TOTAL						
			523.52	297.33	214.13	512.51
10. Road:						
	(5-10% of item 1 - 9)		52.35	32.00	27.00	59.00
11. Urban Deferred:						
	(10% of item 1 - 9)		52.35	-	70.00	70.00
12. Reserved: (water body)						
	(5% of item 1 - 9)		26.17	72.72	-	72.72
13. Outlying Agricultural Area:						
			525.61	777.95	-	465.77
TOTAL:						
			1180.00	1180.00		1180.00

CHAPTER V

LAND USE/MASTER PLAN

5.0 THE LAND USE PLAN

5.1 Approach, Concept and Planning Principles

Land use provisions are made for 16470 people (as medium projection) in Ullapara shahar area. Various categories of services will be necessary for this population and the township as a growing urbanism upto the design year 2000 A.D. The services are to be localized in a hierarchical order as follows :

- I. Lowest level of community of about 5000 people which usually demand for a primary school, a mosque, a few shops and playing field ;
- II. A city centre with urban facility locating administrative services, high school, cultural activities and health services.

The transportation network provided by the Bogra-Shahjadpur highway and the Sirajgonj-Iswardi railway line bind together the land uses. The internal road system would have a hierarchy linking the primary communities with the city centre and thereby with the highway and the railway.

5.2 Plan Description

A. Urban Structure : The future township would be a railway-cum-highway based urban center with residential developments of all income groups and employment activities. The functional relationship between places of residence, places of work, recreational and community facilities would be established. The requirement of land for the forecasted population has been laid out on western side of the Bogra-Shahjadpur highway. The central functions like the upazila administration centre, trade centre, market, police station, industries etc. are proposed to be localized on the eastern zone of the town.

B. Residential Areas : 274.5 acres of land has been proposed to accommodate the population of 16,470. The gross density is 60 persons per acre. Leaving out at least 25 percent of the residential land for internal roads, drains, ditches and line services the net residen-

tial density (NRD) would be around 80 persons per acre. This is the minimum density that should be attained in order to bring down per capita cost of development. About housing development care should be taken to provide housing for the low-income groups including squatting population that may grow in the town with time. A comprehensive housing projects should be undertaken by a concerned government agency. It is recommended that standard should be rationalized according to the levels of affordability of the low-income groups and cost should be minimized.

C. Educational Facilities : The educational facilities existing at present are not just adequate to meet the demands of the increasing number of population. At present there are five primary, three high school, one college and one madrasahs and those occupy 16.18 acre of town areas. In view of the growing number of population the following educational facilities are proposed.

- i) Primary School : Primary schools for the communities are proposed one at Mouza Bakhua, and other at Mouza Partetulia and those are covered about 1.62 acre of land.
- ii) Secondary School : At present there is a high school for boys on the Bogra Road in Mouza Jhikra & one girls school at Mouza Jhikra near the upazila police headquarter. The area for proposed high school is 1.60 acre for boys and 1.05 acre for girls and those are proposed at mouza Srikola and mouza Bakhua respectively.
- iii) College : A college is existing partly at mouza Bakhua and Jhikra near upazila complex bhaban. Student from the catchment area and also from beyond places receiving the education from this institute. Total area is covered by existing college is 10.43 acre and proposed extension is further 3.00 acre upto 2000 A.D.
- iv) Madrasa : Only one madrasah is present in the town. Which is located at mouza Ghosgati and is covered 1.05 acre of area. So the total area under this facilities is 1.05 acre.
- v) Vocational Institute : For skill development of upazila manpowers a vocational training institute has been proposed to be established on the 10.72 acre of area adjacent to Purnimagati Road at the mouza Bakhua.

D. Health Complex : The main upazila health complex of Ullapara is present at the mouza Purnimagati which is about four miles away from the Town Centre. So the following health services centres are proposed to establish over 6.65 acre of area.

- i) Upazila Health Complex of 4.15 acre at mouza Bhattakauk.
- ii) Maternity & Child Care Centre in the mouza Bakhua and would cover 2.50 acre of land area.

E. Commercial Facilities : Commercial facilities are existing along the highway of Bogra-Shahjampur and at mouza Jhikra. Small size shopping areas are also found in the other communities. Local shops have been proposed near educational institutions. Proposed area for commercial and trading activities is about 11.00 acre and which is located at the mouza Ramkantapur. Therefore total area for commercial facilities is about 24.53 acre.

F. Industrial Area : At all there is no identifiable industrial development happened in the town. In pursuance of Government's policy of rural employment generation in the upazila town an industrial area has been proposed at the part of mouza Ramkantapur and Purbo Satbaria on the basis of land availability and suitability of transportation services. The total area for Industrial Complex is about 77.00 acre.

G. Administrative Functions : The administrative services have already been located at mouza Jhikra and which includes Upazila Parishad Bhaban, Judiciary Court Building etc. The total area under such utilities is about 21.17 acre. Also, 13.5 acre area has proposed for Sub Central Jail and it is located partly at mouza Bakhua and Srikola.

H. Recreational Facilities : There is no adequate recreational facilities at Ullapara shahar. In view of this; provisions have been incorporated for the recreational facilities of the urban population.

- i). Open recreations : A stadium has been proposed in mouza Jhikra and with 7.20 acre of covered area, play ground have been proposed along with the primary & secondary schools and 7.7 more acre of additional land have been proposed to fulfil these purpose.
- ii). Closed recreations : Closed recreations are included Cinema halls, indoor game complex etc. Existing total area for the Cinema hall is about 1.00 acre and which may be acceptable for the upazila town neighbourhood upto 2000 A.D.

I. Socio-Cultural Facilities : Socio-cultural facilities specify the religions centres, community centre, Graveyards and cemeterial places. The following type of socio-cultural services including area have been presented below:

- i). Religions facilities : At least one mosque should have for every community in shahar area. Therefore two new mosques and a central Eidgah has been proposed. Meanwhile one Mandir has also proposed in this area. Therefore total area under proposed facilities for religious function is 1.12 acre.
- ii). Community Centre : The community centre is proposed at the central area and which is covered about 0.60 acre of area at Mouza Jhikra.
- iii). Graveyard and Central areas : Presently one large graveyards for the muslim and one cemeterial place for the hindu community is found in Ullapara shahar. More than 0.60 acre of land has remain for these purpose. This plan has also proposed for more 1.90 acre of land for the expansion of graveyard area and 1.02 acre for cemeterial places. The proposed area for above function is covered by 2.92 acre.

J. Urban Services : The following urban services have been proposed for Ullapara shahar:

- i). Post Office : Existing one covered 0.75 acre area and which is suitable to served the demand needs.
- ii). Telephone Exchange : Single unit of telephone exchange has proposed on 0.75 acre of area at Mouza Jhikra.
- iii). Police Station : Existing Police station is situated at the heart of the town and covering 1.10 acre of land. With the growth of urban facilities, services from the police will have to expand and obviously area of police station also be expand. So the proposed area of 3.52 acre has been suggested to expand the police station area at mouza Srikola near proposed Sub Central Jail.
- iv). Fire Services : As per specification of TOR, about 0.82 acre of land is required for fire service station. But 0.90 acre of area is found for the proposed one. Therefore more 0.90 acre of land has proposed for the fire station of Ullapara shahar. The Fire Service Station is proposed at mouza Jhikra near Stadium (proposed).

- v). Bus Station : There is no specific place for bus terminal in Ullapara shahar, though Ullapara play a vital role in transportation network specially in highway communication. On the basis of existing trend of urbanisation and in view of future traffic demand and town conjection a bus terminal has proposed at Mouza Jhikra over 1.25 acre area.

K. Urban Circulation System : The transportation services of Ullapara shahar are offered mainly by Bogra-Shajadpur road. This mode of service is aligned in north-south direction and have attracted all the urban functions and services of the town. There are secondary roads branching off radially to the left and right of this highway. Total area covered by this existing road system in shahar area is 32 acres. The proposed land use plan of Ullapara shahar as shown in Map-3, has integrated these local roads effectively within principles of small sized communities of about 5,000 persons. Most of the urban services like schools, parks, offices, play grounds, health centres etc. have been located on these roads. Total area covered by the proposed roads is 27 acres. Therefore land use for road network of the town would be 59 acres.

L. Urban Deferred : About 70 acres of land have so far been proposed as urban deferred. One of them is located between the mouza Jhikra and mouza Srikola. This area may further be used either for the expansion of administrative area or for development of housing facilities. Thus, considering the expansion of major urban services after 2000 A.D. more new areas would be necessary in the present town. So 72 acres of isolated places in shahar boundary have been recognised as urban deferred with the spatially close to the major services.

M. Reserved Area (Water bodies): Existing derelict canal passing through mouza Ghosgati and Bhattakauk is contrary to public health of the town. So the canal may be refilled for the use of it as other urban functions, specially for commercial area, by the establishment of shops, bazar, markets etc.

N. Dutlying Agricultural Areas : Within the planning area about 465 acres of land has been reserved for agriculture. These lands may be intensively utilised for the purpose of HYV agricultural production upto the further expansion of urban-neighbourhood.

CHAPTER VI

PROGRAMMING AND IMPLEMENTATION

6.0 PROGRAMMING AND IMPLEMENTATION

6.1 Priority Action, Cost Implications

A. Priority Actions : The proposed land-use plan seeks to achieve ordered development of social and physical infra-structure for the welfare of the sub-urban and semi-urban people. The plan serves as a formulation for the local bodies to develop the township gradually in a systematic and planned attitude. This, however, is the guidance for the authorities. For the people dispensation of welfare measures are important factors. These are housing, employments, education, recreation etc. It is important for the local authorities to improve these facilities on priority basis.

In this regard the local authorities should make a choice of priority projects out of the proposals made in the plan. For the time being the following priority projects are identifiable:

- i). Employment generation: In considering the availability of raw materials and suitability of transportation system at Ullapara shahar, government may like to develop the industrial estates to provide employment to the people. At the same time vocational training should be undertaken for the skills development of manpower.
- ii). Housing: Government should acquire the area ear-marked for housing estate and develop housing facilities considering affordability of the low-income group and recovery of costs.
- iii). Roads development: All the arterial road should be developed and the lands on both sides of the roads required for their widening should be acquired.
- iv). Water Supply and Sanitation Programme: Acute problem for water supply and sanitation system are very common for almost all of the upazila town. Ullapara town is not exception from that situation. The concern authorities should take immediate action to improve and expand the water supply & sanitation facilities of the shahar area.

B. Cost Implications : In general the local authorities like the Paurashava experience acute shortage of financial resources. The Paurashava finds it extremely difficult to maintain the services. Expansion of services are hardly possible. The main difficulties is due to lack of institutional capabilities to estimate the potential revenue income and their realisation. It will be seen from the report and the plan that a reasonable level of density of residential areas, standards and locations of services have been proposed. The recommended density must be achieved so that the per capita cost of development is within the reasonable range and affordable to various income groups.

Location of higher level non-residential land-uses have been proposed in CBD areas where the cost of land due to this locational criteria is also higher than in the peripheral places. It is, therefore, recommended that the locational factors should be considered to be important by the concerned authorities.

It is further recommended that the expenditure for development and maintenance services should be recovered. The local authorities are advised to maintain all land and property records and to update them with newer developments. Based on these land records rates and taxes should be reviewed from time to time and collect the rates and taxes accordingly.

6.2

Phasing, Urban Deferred

A. Phasing : This plan may be implemented within the next 11 years from 1989. To implementation of the plan participation of private and public sector would be necessary with the governmental bodies. Local authorities and governmental agencies should prepare detailed survey and design for expansion of all physical and social infrastructure. Private sector should be encouraged to develop the housing, industries, trade and other urban services either individually or collectively. For this purpose the major components of urban growth should be energised in the first phase (first 5 years). These are includes acquisition of land and development of the industrial estates, roads, central zone and also developments of the housing estates to be sponsored by the government. Therefore the housing areas, away from the central area, should be taken up in the successive

stage. The agricultural areas should be under intensive use from the beginning. With giving priority to cereal crops production of vegetables, milk dairy and poultry should be encouraged.

Review of the plan and further intensified use of the land and property should be ensured atleast five years before of the end of this century.

B. Urban Deferred : About 70 acres of land or 6.0 percent area of the town has been reserved as urban deferred area. This is in view of the essential requirements of more lands other than that has been allocated for urban services at present. The local authorities may use the deferred land as per other requirements of the shahar, e.g. administrative, recreation & rehabilitation etc.

6.3 Development Control

The relevant ordinance of 1982 does not fully satisfy the administration of development control measures. It is, however, important to note that the Upazila Parishad may find the proposed land-use plan as a legal document to prevent non-conforming use of lands by any private individual or a group or any agency.

But in order to make use of this opportunity certain specified legal issues are to be undertaken. The following steps are suggested about those points.

- i) The proposed landuse plan should be given a legal status through the approval by a competent authority, viz, Ministry of Works under whose supervision the urban land-use are being prepared.
- ii) Unless and until a Paurashava is instituted and the planning areas of the proposed plan are brought under its control, the Upazila Parishad may be assigned as the local authority to prepare the detailed plans, review of plan and to prepare building codes.
- iii) Unless and until a suitable enactment is made for non-municipal towns, Building Construction Act of 1953 may be followed. Detailed building codes comprising locational analysis and set-back of building and land-uses should be prepared. In

giving planning permission and to control non-conforming uses of lands and haphazard constructions the building codes should be the guiding principles. The legal measures should apply to all private and public sector agencies. Appellate jurisdiction should lie with the zila judge court.

6.4 Monitoring and Review of the Land-Use Plan

A. Monitoring : The assigned local authority will monitor the progress in respect of implementation of the land-use plan. This includes mainly to expansion of physical and social infrastructure by various agencies. The progress of work should be charted according to 5-year phases and split into yearly annual development programme (ADPs). Necessary efforts must be made to achieve the phasewise targets. Delay in project implementation will result the problems of unnecessary upward revision of project cost and complications in the expansion of services.

B. Review of Plan : The Ullapara town is still a small size urban area. Problems in terms of acute shortage of housing and services, especially for the low-income groups, have not yet emerged. But, in future, the population of the township would be increased possibly with greater number of low-income groups. The costs of lands may be beyond the reach of this group of people. As a result squatters and floating population would be increased.

On the other hand, Government's programme of providing adequate housing, services and employment opportunities may not be fulfilled as per demand of the growing population of Ullapara Shahar.

Considering all these institutional and demographic conditions the local authority should review the plan and recast it in every 5 years, if needed.