

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

LAND USE / MASTER PLAN  
BISHAMVARPUR UPAZILLA SHAHAR  
SUNAMGANJ ZILA

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

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PREPARED BY  
**SAHCO INTERNATIONAL LTD.**  
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62/63 MOTIJHEEL C/A  
DHAKA, BANGLADESH.

বিজ্ঞান: দুঃ উদ্ভাবন করলে মনটা পুরত  
 উদ্ভাবন। তল হইবে। উদ্ভাবিত হইবে  
 উদ্ভাবিত উদ্ভাবিত হইবে। ৭০ মিলিয়ন, মিলিয়ন,  
 উদ্ভাবিত উদ্ভাবিত উদ্ভাবিত উদ্ভাবিত উদ্ভাবিত  
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চেয়ারম্যান  
 উপজেলা পরিষদ  
 বিশ্বম্ভরপুর উপজেলা  
 সুনামগঞ্জ।

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## FOREWORD

The Government has shifted its vital administrative tire to rural level in terms of Upazila. So each Upazila centre will be the focal point of all Upazila level administrative activities. With the development of the administrative and economic activities, urbanization is a natural phenomenon. As our land is limited to face the over increasing demand, the growing of townships at the Upazila centre must maintain an optimum land man ratio. But unfortunately there is no control over land at this level. So in a situation of laissezfaire traditional practices and whims of land owners determine the landuse. The growth of urbanization without control will result in undesirable land utilization, internal shape and structure of urbanized areas will create congestion, blight and regional imbalances, which are extremely difficult to correct later. With a view to avoid these spatial hazard and provide greater urban facilities at the Upazila centre, the human habitation, location of official, commercial, industrial, deducational, recreational establishments, provision of basic structure and other services and facilities need to be integrated into a sound guideline called Landuse Plan. The Government have correctly diagnosed the malady and its consequent decision to appoint SAHCO International Ltd. as a Consultant for the preparation of Landuse Plan for Bishamvarpur Upazila Shahar of Sunamganj zila

This Landuse/Master Plan of Bishamvarpur Upazila Shahar, Zila : Sunamganj, is submitted in accordance with the Terms of Reference (TOR) provided by Urban Development Directorate.

# 2

## INTRODUCTION

### 2.1 OBJECTIVES :

The objectives of the preparation of Landuse plan of the upazila are as follows :

- 0 To bring about significant improvement in the quality of life in the rural areas through adequate provision of government services and facilities of the basic needs.
- 0 To prepare the Landuse plan in order to serve as location/spatial guidelines indicating places of work, residence and recreation.
- 0 To facilitate public and private developments at the upazila centre through physical planning approach.
- 0 To serve as a technical backup for planned growth of human settlements in the country specially at the upazila level so that a significant segment of rural migrants to cities are induced to work and live there.
- 0 To enhance the capability of physical planning services in the private sector in managing the preparation of landuse plan of the urban centre.

### 2.2 SCOPE OF SERVICES

The study covered all the major aspects related to the preparation of landuse plan of the upazila shahar. Particular attention had been paid to the following :

- 0 Determination of study area based on future potential development/expansion capacity and other ancillary local factors/conditions in and around the shahar.

- 0 Detailed existing land use survey. Encompassing, among other things, topographical and flood characteristics of the area, existing drainage channel, alternate suitable plan for delineation of drainage project and determining location for flood protection scheme (if necessary).
- 0 Collection of socio-economic and demographic information and data both from primary and secondary sources in the upzila context, analyse such data and information and to forecast future population (15-20 years) and land requirements for various services and facilities.
- 0 Selection of planning area. An area (of areas) not exceeding 200 acres in total, within or adjacent to the upazila headquarters existing built up area as a whole, which may be appropriate for future development as a town services centre.
- 0 In the plan for development of township Identification of rational locations of respective uses, circulation network, social services etc. facilities that area to be provided and their future and requirements depending on the projected size of population and physical development patterns that take place over time.
- 0 The plan will accommodate major investments and activities of the various development agencies/ministries and indicate the stages of development preferably through 5 year programming approach. Consultants would be expected to liaise with all government and semi-government agencies concerned with development at the upazila level. Communication had also been made with the head-offices of such agencies and full details of such communication had been incorporated in the plan.
- 0 The plan will indicate/outline possible framework/strategy or management and development control, institutional arrangements etc. for effective implementation of the plan.

### 2.3 METHODOLOGY :

To accomplish the requirements of objectives and scope of services, it was needed to go through the following methodologies.

**EXISTING LAND USE SURVEY :** Mouza maps in the scale of 1 inch equal to 330 feet were collected from the D.L.R. Office covering whole of the designated study area and traced out with plot boundaries and numbers to prepare field survey sheets. Plot to plot survey of existing land uses were completed and marked on the survey sheets. The layout of the special features were also drawn on the survey sheets. Thus, the survey for existing uses of land were completed for the whole of the designated shahar area.

The survey sheets were compiled and existing land use map was prepared. Examining the existing land use map, the shahar area was delineated. From the survey sheets a map of existing land uses was prepared in graphics.

A table on existing land use was prepared from the map. The quantity of land under different uses were calculated by grid method.

**SOCIO-ECONOMIC SURVEY :** A format of questionnaire containing 98 variables was prepared and administered to collect socio-economic data. Eleven percent of the households were interviewed by field investigators on random basis. The data thus collected were tabulated and analysed to find out the socio-economic characteristics of the study area. To have better local socio-economic impression, government officials transferred here from outside the area were kept out of the survey.

**CATCHMENT AREA SURVEY :** Catchment Area was determined on the basis of the behaviour of the villagers or space preferences.

Investigation on the behaviour of the villagers to identify Catchment Area was made by a village questionnaire and interviewing the village leaders such as, Union Parishad Chairman, Union Parishad members, School teachers, Choukidars, BRDB cooperative members etc.

**HIERARCHY OF SETTLEMENT SURVEY :** To identify a hierarchy of settlements in the Upazila, mouza wise population and services and facilities were listed using a structured format. Population of mouzas in the census year 1981 and the concentration of services and facilities were considered to determine the hierarchy of settlements in the Upazila.

**FORECASTS :** In order to estimate the amount of land which was required for various functional uses, it is necessary to determine the growth of population and labour force of the study area as well as area of influence. The projections of population and labour force were made for 1986, 1991, 1996 and 2000 A.D. using the population and labour of 1981 as base year data. The past trend of growth of population, rate of migration and specially the induced population due to the upgradation of the upazila were taken in consideration. High, medium and low projections were made. Medium projections were used in estimating lands for functional uses.

PLANNING THE LAND USE : The requirements of lands were calculated on the basis of the guidelines on planning provision standards of the TOR. Good reasons were provided in allocation of lands for various urban uses. A new type of land use plan was developed which would be realistic and implementable in the present circumstances. Private residential and commercial development were forecast in terms of location and intensity of development.

The methodology applied in forecasting private residential land use involves forecasting in intensification of the existing land use by mouza in terms of likely increase in persons per acre density as well as forecasting land use extension in terms of increases in the residential acreage.

FINAL PLAN : A comprehensive integrated landuse plan had been prepared for development of upazila shahar. Special attention had been given in organizing the urban functions. The final plan and report were prepared according to the guidelines given in the TOR.

## UPAZILA IN ITS DISTRICT CONTEXT

### 3.1 GEOGRAPHICAL LOCATION :

Bishambarpur is one of the Upazilas of Sunamganj Zila. It lies between  $25^{\circ}-0'$  to  $25^{\circ}-25'$  South Latitude and  $91^{\circ}-10'$  to  $91^{\circ}-27'$  East longitude.

### 3.2 AREA AND BOUNDARY :

Bishambarpur Upazila occupies an area of 65 sq. miles (168 sq. km.). It comprises 3 union and 60 mouzas. It is bounded on the East by the Upazila Sunamganj, on the south by Jamalganj, on the West by the upazila Tahirpur and on the North by India.

### 3.3 PHYSICAL CHARACTERISTICS :

Bishambarpur is an alluvial deposit. It looks like an unbroken flat land traversed by a number of streams and canals. This upazila is generally very low as a result during the six months in the flood season is, for most part, entirely goes under water.

The soil of the Upazila is entirely alluvial. It appears to be largely impregnated with salt on the surface. In the interior of the mainland the soil is etel, bog, doash and sandy loam. There are large deposits of pure sand along the hill.

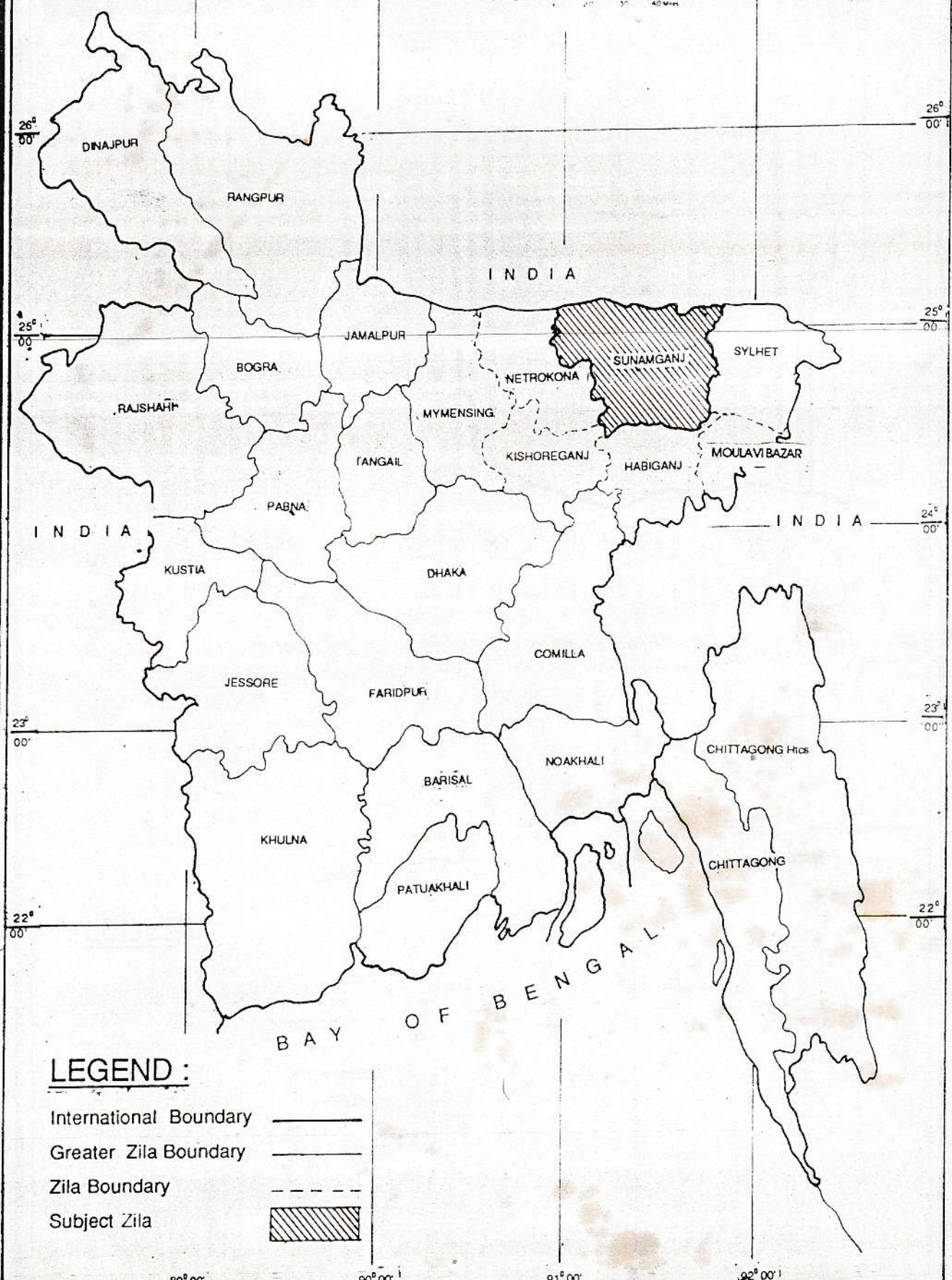
Bishambarpur enjoys a fairly equable temperature and humidity in the atmosphere. The mean minimum temperature is  $13.8^{\circ}\text{C}$  in January and maximum is  $30.9^{\circ}\text{C}$  in March. The annual average rainfall is 201 mm. The levels of humidity is around 84.6% from July to September and around 80.6% from January to March. As a hilly Upazila it has always been subject to frequent floods and heavy rainfall.

NORTH







# BANGLADESH

## LOCATION OF SUNAMGONJ ZILA



### LEGEND :

- International Boundary 
- Greater Zila Boundary 
- Zila Boundary 
- Subject Zila 

89° 00'

90° 00'

91° 00'

92° 00'

26° 00'

26° 00'

25° 00'

25° 00'

23° 00'

23° 00'

22° 00'

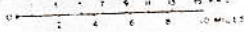
22° 00'

NORTH



# SUNAMGONJ ZILA

## LOCATION OF BISHAMVARPUR UPAZILA



### LEGEND :

- International Boundary
- Zila Boundary
- Upazila Boundary
- Metalled Road
- Unmetalled Road
- Zila Headquarter
- Upazila Headquarter
- Rail Line
- Subject Upazila

### BANGLADESH

#### LOCATION OF SUNAMGONJ ZILA



91°00'

91°15'

91°45'

## 3.4 POPULATION CHARACTERISTICS :

According to 1981 census the population of the upazila was 75972 out of which 38804 (51.4%) were male and 37168 (48.6%) were female. The sex ratio was 104 and the density of population per sq. mile is 1169. A comparative picture of population characteristics of Bishambarpur, Sunamganj and Bangladesh has given below, Table

Table - 3.1 Growth of Population (1961-81) of Bishambarpur Sunamganj and Bangladesh.

Locality	1961	1974	1981	Percentage Variation		
				1961-1974	1974-1981	1961-1981
Bishambarpur	25381	63721	75972	40.32	22.01	15.21
Sunamganj	867732	1206321	1828787	39.02	18.44	64.66
Bangladesh	50840000	7149000	87120000	40.60	21.79	71.36

Source : Statistics, Sylhet, 1983.

If we break down this population into five years groups, the group aged between 0 to 4 is the largest, the next is the group aged between 5 to 9, the next is group aged between 10 to 14. The old people aged 65 and over making up the lowest proportion of all groups (Table - 3.2 ). Thus we have a young population structure in the Upazila.

The total number of households in the Upazila is 12,485. The average size of household is 6.1 which resembles to that of Sunamganj zila also.

Table-3.2 Population by sex and age group

Age	Total	Percent	Male	Female
0 to 4 years	13,624	17.9	6,749	6,875
5 to 9 years	11,992	15.8	5,117	5,875
10 to 14 years	9,507	12.5	5,270	4,237
15 to 19 years	6,031	9.1	3,432	3,479
20 to 24 years	5,875	7.7	2,560	3,315
25 to 29 years	5,962	7.8	2,756	3,206
30 to 34 years	4,467	5.9	2,301	2,166
35 to 39 years	4,138	5.4	2,233	1,905
40 to 44 years	3,169	4.2	1,578	1,591
45 to 49 years	2,331	3.1	1,248	1,083
50 to 54 years	2,416	3.2	1,271	1,145
55 to 59 years	1,192	1.6	685	507
60 to 64 years	1,721	2.3	953	768
65 to 69 years	686	0.9	415	271
70 years and over	1,961	2.6	1,216	745
MEDIAN AGE	17		17	17
Total	75,972	100.0	38,804	37,168

## 3.5 EDUCATION:

Bishamarpur is educationally very poor upazila. In 1981, the general literacy rate of the Upazila was 14 as against Sunamgonj 16 for zila and 23.8 for Bangladesh. According to sex, these percentages were 19.3 for males and 8.5 for females as against 21.5 for males and 10.2 for females for Barguna, Table-3

Table-3.3 Literacy rates of Bishamarpur sunamgonj, and Bangladesh according 1981 census

Locality	Literacy rate (%)
Bishamarpur	14.0
Sunamgonj	16.0
Aunamgonj	23.8

Source: B.B.S.

There are 43 primary schools, 9 high schools no college in the Upazila. Except these there are 7 madrashas in the Upazila out of which 2 are senior, and 5 are junior.

### 3.6 LABOUR FORCE :

The Labour force included the population aged 10 years and above who are engaged in market oriented activities. Non paid household workers are excluded from the labour force. Total number of labor force in the upazila is 21737 . Widespread illiteracy and unskillness has remained a characteristics of the labour force of the upazila.

### 3.7 EMPLOYMENT SITUATION :

The percentage of employment in the market oriented sectors in 1981 in the upazila at 26.92 of the total population of 10 years and above . About 24% people do not work and 69% people are engaged in non-economic household work.

### 3.8 OCCUPATION :

The major fields of occupation prevailing in the upazila are agriculture, manufacturing, business etc. Agruculture ist the largest sector of occupation. It has observed that 78.53 the total labour force are directly engaged in agriculture. It is followed by the business and manufacuring consfituting. 5.3 and 19 respectively. About 13.70 engaged in other services.

### 3.9 AGRICULTURE :

Agriculture in this upazila is mainly of subsistance nature and the most important sector of economy. The amount of total cultivable land in this upazila is 48000 ac. of which only 61.00 % land is cultivated every year. About 37.21% of the cultivated land presents single cropping pattern and 15.31% and 6.66% land present double and triple cropping pattern respectively, The cropping intensity in this upazila was 1146.83 as against 147.7 and 154 for Sunamgonj and Bangladesh respectively. Rice, Khesari, sweet potato etc are the major crops. Among them rice alone constitutes about 95% of the total eropped land. Because of high risk farmers use relatively less modern inputs. Average production of rice is about 12 monds per acre;

(Source : District statstics sylhet --1983))

### 3.10 PISCICULTURE :

Fishing is the second largst sector of economy of the Upazila. The rivers, canals and inland water bodies and the great Haors are rich in fish of many of frarickice. Total number of fish pond in the upazila is 622 which cover an area about 210 acres .

There are about 216 fishing boats, out of which about 2 are being powered with engines. BFDC works for the development of the fishing in the upazila.

### 3.11 HATS AND BAZARS :

The internal trade of the upazila is carried on chiefly by means of permanent and temporary hats and bazars. These hats and bazars can be classified into two groups on the basis of their volume of functions displayed. These are (a) primary markets and (b) secondary markets.

Primary markets are generally small scale producer-consumer markets of agricultural producers. The gathering of population ranges from 500 to 1000. There are 9 markets of this type in Secondary markets are large scale producer-consumer and whole sale markets. The gathering of population ranges from 10,000 to 150,000. There are 4 markets of this type in the upazila.

### 3.12 SOURCES OF FINANCE :

The sources of finance available in the Upazila may be classified broadly into two groups:

- a. Non-institutional sources
- b. Institutional sources

The non-institutional sources include indigenous bankers, that is mahajans, marketing intermediaries, etc. The institutional sources include all types of scheduled and non-scheduled banks. There are only two branches of scheduled bank-Sonali and Agrani, two branches of Agricultural bank, and one branch of Gramin bank in the Upazila.

### 3.13 EXPORT AND IMPORT :

The principle export items of the Upazila consisted of farm products like paddy, rice, oilseeds, pulses, bettlenut, cattle, poultry, etc. Among the non-farm products the main export item are fish (raw and dry), fire wood etc.

The principle import items are salt, kerosine, oil, earthen ware vegetable, iron ware, building material, ice bar etc.

### 3.14 INDUSTRY :

The existing industrial units of the Upazila can be classified according to the following two broad groups.

- a. Small scale Industry
- b. Cottage Industry

There are 134 small scale industrial units in this upazila. Among them fish drying industry tops the list with 42 units. It is followed by tailoring.

There are 175 units of cottage industries in the Upazila. Among them mats and reeds tops the list among the cottage industries with 46 units. It is followed by fishing net and bamboo products with 31 and 30 units respectively.

### 3.15 ROAD NETWORK :

This upazila is served by a very poor road network. Most of the major roads show a pattern of radiated from the major commercial centres. Most of the villages remain disconnected from each other.

### 3.16 WATER WAYS :

The rivers flowing through the upazila and other streams and canals provide extremely convenient and cheap water routes for trawlers and boats.

### 3.17 TELECOMMUNICATION SYSTEM :

In the Upazila the telecommunication system is developing. Regarding long distance telecommunication the administration depends exclusively on the high frequency wireless sets. There is no public call office in the upazila.

### 3.18 POSTAL SERVICE :

Mails to and from other parts of the country and to and from the villages have served through Bishambarpur Sub Post office. Bishambarpur sub-post office controls the Western part of the Upazila through 3 branch offices, while the Eastern part of the Upazila is controlled by Sunamganj sub-post office through 6 branch offices.

### 3.19 ENERGY SUPPLY :

Bishamvarpur lacks the blessing of electricity. Poles have been commissioned and overhead wiring is going on. It is expected that very shortly electricity will be supplied at the major settlements. Existing sources of energy are Oil, Petroleum, Diesel, Fire Wood, Cowdung, Battery cell, Small scale generator etc.

### 3.20 GENERAL HEALTH CONDITION :

There is no hospital in the upazila. Only a rural health centre located aft Bishamvarpur town centre serves the health facilities to the people. Except these there are family planning clinics at every union. These clinics offer primary medical treatment facilities along with population control measures. National population control programmes are not going on satisfactorily in in the Upazila.

### 3.21 SANITATION :

Lack of sanitary conciousness, ignorance and conservative nature of the people, stand in the way of proper rural sanitation. The un-healthyness in the Upazila is caused, in the first place, by the heavy rainfall combined with an imperfact natural drainage which is further obstructed by road, embankments etc. This makes the atmosphere dampy.

### 3.22 TOILET :

Canal and River banks are generally spots of location of latrines. Almost all the latrines are kutcha and open. As a result water of the river and canals become contaminated and consumed indirectly by the majority of the households through cooking and washing utensils and directly through drinking.

## 3.23 WATER SUPPLY :

Ponds and tubewells constitute the principal sources of drinking water for the people.. Till 1982, 37 tubewells were sunk but at present most of them are out of order. Most of the villages have reserve pond.

## 3.24 SETTLEMENT PATTERN :

The growth of the settlement in this Upazila occurred following the proximity of fresh water, type of soil and natural defensibility. Therefore they are either located along the small rivers or canals connected with fertile agricultural land. The homesteads seldom congregate together in chain like settlement. The settlement pattern of the Upazila has been observed as scattered, mostly in the form of primary clusters, small hamlets and isolated homesteads.

This isolation accounts for the absence by large of all communal sentiments and cooperation. Executive actions are made more difficult even in the elementary duty of coping with serious crime the administration has been much hampered. This isolation also accounts for the problems in providing community services and utility services on economic basis.

Table - 3.4 Status of settlement in the Upazila.  
Zila and Greater Zila.

<u>Locality</u>	<u>No. of Unions</u>	<u>No. of Mouza</u>	<u>No. of Village</u>
Bishamvarpur	3	60	60
Sunamganj	83	1571	2236
Greater Sylhet	325	5450	10011

## 3.25 HOUSING STATUS :

The dwelling house of the Upazila can be categorized according to the following types.

Type - A. Chouchala (four roofed) houses with floor space ranging from 1000 to 1600 sft. Average number of rooms per housing unit is 3.5. Occupancy rate per 100 sft is around..50. Total number of unit is 4059 (27.27%). Construction materials are C.I. Sheet, wood etc.

Type - B. Dochala (two roofed) with floor space ranging from 200 to 500 sft. Average number of rooms per housing unit is 2 occupancy rate per 100 sft is 2.7. Total number of unit is 14287 (70.11%). Construction materials are leaf, chan, Bamboo etc.

Type - C. Buildings, floor space ranges from 1000 to 16000 sft. Average number of rooms per housing unit is 5.2. occupancy rate per sft is .50. Total number of unit is 66 (62%). Construction materials are brick, iron, rod etc.

### 3.26 LAND VALUE :

The value of land in the Upazila is determined mainly on the basis of surface level specially in the rural areas.

Generally medium level of land is subject to higher value than high and low land. The land value further determined on the basis of cropping intensity and irrigation. Naturally irrigated double cropped land has higher value, Table 3.8.

Table- 3.5 Average value of land (Per decimal) by level in Taka - 1961

Land Level	Single cropped		Double cropped	
	Irrigated	Non-Irrigated	Irrigated	Non-Irrigated
High	500	500	550	450
Medium	500	500	450	400
Low	300	200	200	200

Source : Sub-registrar Office, Field Survey 1989

3.27 Current Development Programme

<u>Sl.No.</u>	<u>Name of Projects</u>	<u>Amount of fund allocated in taka</u>
1.	Reconstruction of Bridge over Mara Nadi at Ratargaon.	2,30,000.00
2.	Reconstruction of High School at Ratargaon.	1,09,000.00
3.	Buying of Two Power Pump for demonstration field.	69,461.00
4.	Buying of spare parts for Power Pump.	67,000.00
5.	Supply of spare parts and pesticides.	60,000.00
6.	Arranging of Agriculture exhibition in dry season.	35,000.00
7.	Construction of embankment at Kharacher.	70,000.00
8.	Construction of embankment on Chalti river.	20,000.00
9.	Excavation of canal from Chalti river to Kharchar Haor.	10,000.00
10.	Construction of embankment at the mouth of Dharerpar river.	12,000.00
11.	Construction of Purangaon - kior embankment.	10,000.00
12.	Training for small and cottage Industry.	50,000.00
13.	Demonstration Nursery for exhibition.	20,000.00
14.	Plantation Programme.	30,000.00

### 3.28 Identification of Hierarchy of Settlements :

The foregoing paragraphs reveal the account of various services in the Upazila. Localization and special distribution of services and economic activities in growth points are important for the Upazila as a whole. This importance has relevance to the distribution of future population increase within Patharghata Upazila. The growing centres are supposed to share increasing population of the Upazila. As such, they have impact in the determination of the land requirements for the Upazila Shahar.

In determining the hierarchy of settlements five aspects namely (i) Economic activity, (ii) Transport linkage, (iii) Social Cultural facilities, (iv) Urban services and (v) Population concentration have been considered and 20 Socio-economic indicators have been selected (see table - 3.9). During the field survey, data on these indicators have been collected. The distribution of Socio-economic indicators on Mouza basis has been shown in Table. The selected indicators have been given assumed weightage for each (see Table ). According to the given weights, the gravity of each functions located in the Mouza have been calculated. Cardinal number (Say 1, 2, 3, 4, 5, 6, 7, 8 ) in order of importance according to the weights are used to determine the hierarchy of settlements in the Upazila.

It is observed from the Table that Muktikhola is in the first rank of hierarchy having maximum facilities. Meruakhola is in the 2nd rank of hierarchy and its score is above 20. Ratargaon, N. Fotehpur, Enkor Atia place the 3rd rank of hierarchy with a score above 15. The rest of settlements are in the 4th rank of hierarchy having minimum facilities with a total score of below 15 as shown in Table

Table - 3.6 Indicators of Hierarchy of Settlements and their Weights.

Sl. No.	Indicators	Weight
1.	Primary School	
2.	Daily Market	2
3.	Fertilizer dealer	6
4.	Forkania Madrasha	4
5.	Club	1
6.	Kutchra road	2
7.	High School	3
8.	Branch Post Office	5
9.	Weekly market	5
10.	F.P. Clinic	8
11.	Launch Station	8
12.	Cyclone shelter	8
13.	Junior Madrasha	9
14.	Junior High School	7
15.	Senior Madrasha	7
16.	P.C.O.	9
17.	Bank Branch	9
18.	Pucca road	8
19.	College	5
20.	General Admn.	10
21.	Animal husbandry	10
22.	Health Complex	10
23.	Population	
	0-500	
	501-1000	1
	1001-1500	2
	1501-2000	3
	2001-2500	4
	2501-3000	5
	3000+	6
		7

3.7 Mouzawise distribution centrality score for the identification of settlement Hierarchy.

Sl. No.	Name of Mouza	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Serial	W Weight	Primary School	Daily Market	Club	Kutchha road	High School	Branch Post Office	Weekly market	F.P. Clinic	Madrasha	Senior High School	P. C. U.	Bank Branch	Pucca road	College	General Admn.	Animal husbandry	Health husbandry	Population	Centrality score		
134	Purangaon	2																		1	3	
135	N. Pur																				1	1
136	Inkor Atia	2				5		8													2	17
145	Butaz																				1	1
146	S. Ghagra																				3	3
147	Dinnakulichak																				1	1
148	W. Baghmara																				2	2
149	Shahapur	2			3																5	10
150	Amuria	2																			1	3
151	Monko																				2	2







Table-3.8 Hierarchy of Settlements on the basis of population concentration, Economic activity, Transport linkage, Urban Services and Social Cultural Facilities Bsihamvarpur Upazila.

Name of Mouza	No. of Settlement	Score of Facilities	Rank of Hierarchy.
Muktikhola	1	65	1st
Meroakhoea	1	above 20	2nd
Ratargaon, N. Fotehpur, Enkor Atia	3	" 15	3rd
Rest of the Mouzas of the Upazila.	55	below 15	4th

Source : Field Survey, 1989.

\* The distribution of Hierarchy of settlement throughout the Upazila according to Mouza has been shown in Map - II.

## 4. UPAZILA HEADQUARTERS

### 4.1 DEFINITION OF THE SHAHAR AREA :

Bishamvarpur Upazila Shahar is now in a transition period. Now it is confronted with serious turning points related to socio-economic and spatial conditions which are caused by recent rapid growth. So the demarcation of the Shahar area involves some critical considerations as well as observations; which are given below :

- 0 The nature of existing urban sprawl
- 0 Changing pattern of landuses from agricultural activities to non-agricultural activities.
- 0 Range of functional diffusion.
- 0 Availability of flood free buildable and khash land.
- 0 Land potentiality regarding future development and expansion.
- 0 Assessment of future urban land requirement.

We have considered first to include Muktikhola, Kachirgati mouza as they consist of the Upazila Heqdquarters combinely. Baghmara mouza is no less important where open space is available. The urban sparawaling is also taking place in these three mouzas equally. More over they meet together near the centre of the shahar. They have vast buildable land.

Thus a maximum area based on the above considerations and observations has been taken as the boundary of the shahar area which has been shown in the MAP - III and Table - 4.1

### 4.2 GEOGRAPHICAL LOCATION :

The shahar is situated within  $25^{\circ}-10'$  North Latitude and  $91^{\circ}-15'$  East Longitude.

#### 4.3 AREA AND POPULATION :

The population and area of the shahar area has been estimated as follows. At first the involved territory of the mouzas included in the shahar area were calculated in percentages, then same percentages of land and population of those mouzas were calculated out from the census reports of 1961, 1974 and 1981. Thus we have the population of the study area as follows; for the calculation of area 1974 census report was taken as the base.

Bishamvarpur Upazila Shahar area (Study Area) encompasses the mouzas of part of Kachirgati, Part of Muktikhola and Part of Baghmara. The Shahar area (Study Area) includes an area of 2485.19 acres and the population is 8979 persons according to 1981 census. ( vide Table - 4.1. ).

#### 4.4 REGIONAL SETTING :

The shahar is about 14 miles North of Sunamganj, about 25 miles North-west of Sylhet as the crow flies. In water ways it is about 12 miles from Sunamganj, about 31 miles from Sylhet.

#### 4.5 BOUNDARY :

Physically the shahar area is bounded by Baghmara on the North, Angaruli Sonar haor on the South, Kachirgati on the east and Angaruli Sonar haor on the West.

#### 4.6 PHYSICAL CHARACTERISTICS :

The shahar area developed on the earth and sand filled low lands. The soil is clay loam. Generally the topography is plain excluding the southern part. The shahar area is prone to frequent floods in the rainy season. The sandy soil in the north provides good base for physical development

Table - 4.1 Area and population of the study Area ( Shahar Area )

Sl. No.	Name of Mouza	Total Area	% of Area involved	Involved Area in the study Area	Total population of the Mouza within the study Area		% of involved population	Involved population in the study area		
					1961	1974		1981	1961	1974
5	Kachirgati (part)	1176.33	39.75%	467.65	2177	3051	39.75%	865	1212	2689
17	Muktikhola ( " )	1785.16	47.05%	839.92	428	2131	47.05%	201	1002	2659
191	Baghmara ( " )	1870.03	62.97%	1177.62	1183	2510	62.97%	745	1574	3108
Total :		4831.52		2485.19	3788	7003		1811	3394	8979

#### 4.7 BRIEF HISTORY :

The Upazila was created in 1976. It is said that once the present area of the shahar area was without any human habitation. One fisherman named Bishwamvar Barman was the first man to settle here. In course of time, he became an influential man of the area in consequence of which it was named Bishwamvarpur after his name.

#### 4.8 FUNCTIONS OF THE SHAHAR :

The shahar functions as a central market place for the surrounding agricultural villages. It is the administrative centre of the Upazila. It has also educational activities. This functional specialization is being enhanced after the creation of Upazila.

#### 4.9 URBANIZATION PROCESS :

Since the upgradation the administrative and economic activities have been increasing rapidly in the shahar area. With the development of the administrative and economic activities, urbanization has been a continuous process. Major characteristics of the urbanization process observed in the shahar are as follows :

- o The urbanization has brought forth the horizontal extension.
- o The development is a "filling-in" process and spreading over agricultural lands.
- o Rather than dense growth, it has moved a kind of scattered urban sprawl, leaving behind open spaces.

#### 4.10 SETTLEMENT PATTERN OF THE SHAHAR AREA :

Basically there are two kinds of settlement observed in the shahar area. They are :

- o Densely settled areas at the central area.
- o Sparsely settled areas at the peripheries.

Densely settled areas are found at the centre and sparsely settled areas are found over flat agricultural land as one move toward the southern, northern and eastern directions from the central area. So it is difficult to draw a clear demarcation line between the shahar and the villages or between the urban and rural communities.

#### 4.11 CHARACTERISTICS OF HOUSEHOLDS :

The average size of household in the Shahar area is 5.8. The largest portion (44.32%) of the household are included in the group consisting of 5 to 6 members. It is followed by the group consisting of 3 to 4 members constituting 22.23%.

#### 4.12 OCCUPATION :

In Bishamvarpur Upazila it seen, agriculture is the largest field of occupation in the shahar area. It is seen from the figure about 43.54% percent of the population are directly engaged in agriculture. Next in importance is the business (21%) which is followed by service and fishing constituting 9.33% and 8.62%.

Table - 4.2 Occupational status in the shahar area.

<u>Name of occupation</u>	<u>Percentage</u>
Agriculture	43.54%
Business	21.00%
Service	9.33%
Fishing	8.62%

Source - Field survey, 1989

#### 4.13 EDUCATION

The shahar area is much advanced in education. About 36% of the inhabitants are literated which undoubtedly is a very important feature of the area. People's consciousness and the availability of educational institutions at almost door step are the main causes of such a good achievement.

## 4.14 LAND VALUE :

The value of land in the shahar area has been classified on the basis of different uses. It is observed that commercial land has the highest value. Homestead land has second highest value. An account of land value according to use has shown below, Table -4 .3.

Table - 4.3 Average price of land per decimal in the shahar area by use in Taka.

Use	Price in Taka
Commercial land	6000
Homestead land	2500
Culturable waste	200

Source : Field Survey, 1989.

## 4.15 STATUS OF DWELLING STRUCTURE :

Out of the total dwelling structure in the shahar area 27.26% are chouchala and 3.29% are semi-pucca. Both types are belonged to solvent farmer and businessmen. It is striking that 66.88% dwelling structures are hutment.

Table - 4.4 Status of dwelling structure

Dwelling status	Percentage
Pucca	3.29%
Chowchala	27.26%
Hutment	66.88%

## 4.16 TYPE OF FAMILY :

The current social and economic mobility, generally initiated by those who achieved a certain degree of education or skill, has begun to make dents into the cohesiveness and solidarity of the extended family. The extended family gradually giving way and losing strength and influence to nuclear family. About 51% families in the shahar area are nuclear and 44% families are extended in type.

#### 4.17 COMMERCIAL ACTIVITIES :

Bishamvarpur is notable for the distribution and collection of commodities to and from its surrounding areas. It functions as a focal point in the trading hierarchy of the region. The imported goods to the part of the Upazila are directly or indirectly distributed through this shahar. On the other hand products of the northern part are exported to other regions through this shahar.

From the view point of its prosperity and liveliness regarding commerce, it is assumed that it has not yet reached to the level of high prosperity. One of the reasons of this fact might be the poor road and water connection with Zila shahar.

#### 4.18 KINDS OF SHOPS IN THE SHAHAR AREA :

The shahar areas is filled with a large number of permanent and temporal shops and stalls which handle consumers goods, rich fish, vegetables, fish milk, poultry, cattleheads, fruit etc. Crowds gather in the morning and evening and they produce high human activities.

The shops are found to be concentrated mostly in the focal area (Old market area) and in the administrative area. (new market) another defuse focal area. The new market area is the centre of the shahar. Most of the whole sale and departmental stores are located at the old market area.

#### 4.19 BANKS :

There are one branch of Agrani Bank and one branch of Krishi Bank in the Shahar area.

## 4.20 INDUSTRY :

There is no considerable industry except five tailoring shops and one rice mill in the shahar area.

## 4.21 GENERAL HEALTH :

There is no hospital in the shahar area. Only a rural health centre located at the upazila parisad complex. There are 8 beds in this hospital. It is executed by two doctors and three nurses. The medicine supply is poor incompare necessity.

## 4.22 TOILET :

Sanitary toilet facilities are very poor in the shahar. Latrine with some structure is the common mode. An account of modes of toilet in the Shahar area has given below.

Table - 4.5 Modes of toilet by household

<u>Modes of toilet</u>	<u>Number of household</u>	<u>Percentage of household</u>
Kutchha	120	88.61
Pucca	30	19.39

Source : Field Survey, 1989

The table reveals that about 88.61% households use kutchha latrine and only 19.39 use pucca latrine. All most all the latrines are open and spills over frequently.

#### 4.23 WATER SUPPLY :

There are 11 tubewells and 1 reserve tanks in the shahar area. Most of the tubewells are out of order. About 78% percent of the people have access to tubewell water.

#### 4.24 ROAD NETWORK :

Characteristically the road network of the shahar area is as follows :

- o Radial roads from the town centre.
- o Roads are fairly congruous with topographical conditions.
- o Roads are seriously affected by rainfall.

Secondary markets are large scale producer-consumer and whole sale markets. The gathering of population ranges from 10,000 to 150,000. There are 4 markets of this type in the upazila.

#### 4.25 TELE-COMMUNICATION SYSTEM :

The tele-communication facility in the shahar area is very poor. Most long distance telecommunication is carried out exclusively throughout the country over high frequency wireless sets belongs to Department of Police.

## 4.26 LIGHTING :

The lacking of the blessing of electricity has much influences which is reflected every where from dwelling houses to public places. After the sunset whole area become dark. Houses are enlightened by traditional modes of light. Harican (41.46%) and cuppy (64.54%) are most common mode of light.

## 4.27 SEWAGE DISPOSAL :

Sewage disposal service in the shahar area is arbitrarily run, disorganized and completely unsatisfactory. Most of the houses have latrines beside them. Most of the sewage is absorbed into the ground and swept away by canals. When overflow occurs sweep are called from Sunamganj.

## 4.28 DRAINAGE SYSTEM :

Kutchra surface drains along the road sides specially in the old market are predominant having an estimated average width of about 1 foot and depth of 2 feet. These are maintained by bazar committee

## 4.29 GARBAGE COLLECTION :

Garbage collection and disposal service is very poor in the shahar. It appears that the custom of dumping garbage at a convenient place near ones house or on the road is wide-spread and done sporadically. There is no common dustbin or dumping place in the shahar area. They are collected and carried out to the river or accumulated on an fallow space. Most of the garbage is absorbed into the ground; some time it is burnt out. The collection and disposal services are done by 2 sweepers. They use traditional equipments.

## 4.30 RECREATION :

The types of recreation existing in the shahar are as follows :

The most popular and familier type of recreation is to take rest in tea stalls popularly known as 'addah'.

There is one play grounds in the Shahar area. In the afternoon crowd gather in play grounds to participate and enjoy foot ball, vally ball, badminton and other games. Among the game foot ball is most popular.

## 4.31 KHAS LAND

The vast fallow land is the source of huge khash land without any cost and disturbance.

Any way, the existing khash land in the shahar area has been estimated as follows :

Table - 4.6 Distribution of Khash land by Mouza constituting the shahar area.

Name of the Mouza	Amount of Khash Land	
	Acre	Hectares
Muktikhola	21.32	
Kachirgati	35.11	
Baghmara	28.14	
<b>Total</b>	<b>84.57</b>	

Source : Field Survey, Revenue Department, 1989

## 4.32 PHYSICAL OPPORTUNITIES AND CONSTRAINTS.

The physical opportunities and constraints existing in the upazila shahar have been identified as follows :

Physical opportunities :

- o The upazila shahar has sufficient vacant land for future provision of urban services.
- o The Haors provides good transport linkage and fishing in the rainy season.
- o The beautiful landscape of the shahar stands for attractive tourist centre.
- o Advancing khash land into the Bishkhali river due to continuous siltation will help for low cost development.
- o Sandy loam soil - better for land development and road construction.
- o The shahar has taken a definite shape.

- o The beautiful landscape of the shahar stands for attractive tourist centre.
- o Advancing khash land into the Bishkhali river due to continuous siltation will help for low cost development.
- o Sandy loam soil - better for land development and road construction.
- o The shahar has taken a definite shape

#### Physical Constraints

- o The settlement pattern accounts for the problems in providing community services and utilities on economic basis.
- o The shahar lacks the blessing of electricity.
- o Surrounding area is very low. Earth work is very costly.

# BISHAMVARPUR UPAZILA SHAHAR

## VALUE OF LAND

MOUZA BOUNDARY



TK.2500.00 PER DECI.



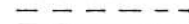
UPAZILA SHAHIR BOUNDARY



TK.6000.00 PER DECI.



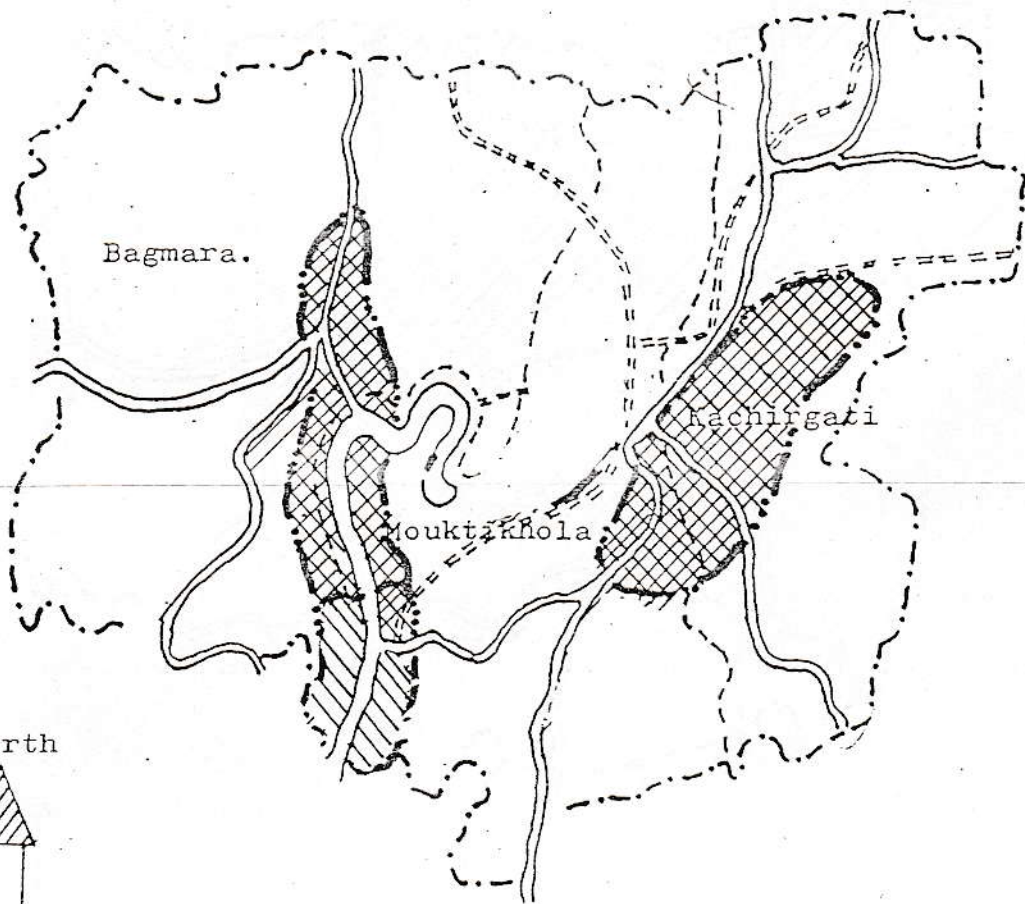
ROADS



TK.200.00 PER DECI.



RIVERS



North



NOT TO SCALE

FIGURE NO. I

# BISHAMVARPUR UPAZILA SHAHAR

## POTENTIAL LAND

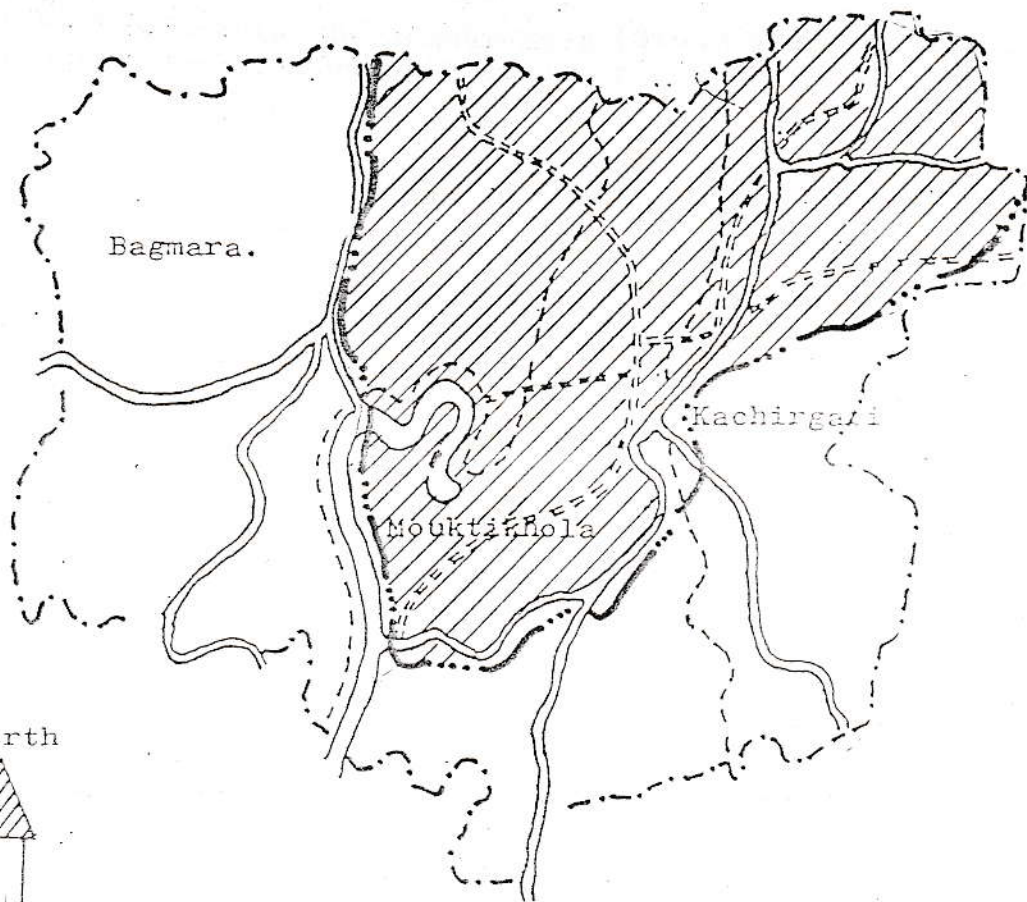
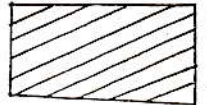
MOUZA BOUNDARY

UPAZILA SHAHIR BOUNDARY

ROADS

RIVERS

POTENTIAL LAND



North



NOT TO SCALE

FIGURE NO. I

#### 4.33 EXISTING LANDUSE :

There is no control over the use of land in this shahar. Traditional practices and whims of land owners determine the landuse which results in a undesirable shape and structure of the shahar.

Though the growing administrative, commercial functions in accordance to the rapid progress of the shahar are concentrated around the central part of the shahar, it is not unusual to find a factory or press in the residential area and residences in the midst of commercial area. Furthermore educational institutes are found in the administrative, residential or commercial area. Noise, smoke, explosions and other hazards are common in the neighbourhoods resulting in the degradation of residential and educational environment. In the older part of the shahar multiplication of landuses results in very high density.

The area within the shahar area (Study area) is 2485.19 acres. A detail break down of land use according to use has been shown in Table - 4.7

Table - 4.7 Distribution of land according to use in the study Area (in acres )

Sl. No.	Land uses	Name of Mouzas in the study Area		Total Area (in acre) according to use	Percentage of total Area
		Muktikhola	Kachirgati Baghmara		
1.	Residential	100.00	73.25	190.75	7.67
2.	Administrative	15.00	-	15.00	0.60
3.	Health	2.50	-	2.50	0.10
4.	Education	5.40	-	5.40	0.22
5.	Recreation	-	-	-	-
6.	Urban Services	-	-	-	-
7.	Socioculture	-	-	.51	-
8.	Commerce	10.00	-	10.00	0.40
9.	Industry	-	-	-	-
10.	Water bodies	43.75	6.25	62.65	2.53
11.	Roads	1.27	0.12	1.89	0.08
12.	Embankment	-	-	-	-
13.	Agriculture	662.5	1097.5	2197.00	88.40
Total area of the study area :				2485.19	100%

#### 4.34 Catchment Area, Definition of Catchment Area:

The Upazila has a total area of 65 square miles. There are some activities such as administration, commerce, education, health, service for which the whole population of the Upazila are influenced by Upazila Headquarters. But there are some activities such as education in Primary & Higher Secondary School and other daily necessities for which the whole population do not depend on Upazila Headquarters. The area from where most of the people come towards the Upazila Headquarters for the purpose of daily necessities such as service, business, marketing and other activities daily and weekly is the catchment area. It is the area of attractiveness of other centres and will be the basis of population forecasting and thereby determining the extent of social services and other land use that will need to be provided in the Upazila Shahar area.

Hence on the basis of space performance made by the surrounding villagers for the above mentioned facilities we have the following catchment area of the shahar Area (study Area). The catchment Area includes the mouzas of Muktikhola (Part), Kachirgati (Part), Baghmara (Part) Umarpur, Angasulisonar haor, Pirijpur, Tahirpur Betal, Ananthapur, Umepur, Dhahirpara, Mayarhaor, Purangaon, Balijuri, Mangper Chack and Manjargaon.

The catchment Area covers an area of 15.93 sq. miles. Detail of the catchment Area has been shown in table 4.8 and in Map - II.

Table - 4.8 Area and population of the catchment Area of Bishamvarpur Upazila Shahar Area(Study Area)

Sl. No.	Name of Mouza	JL No.	Area in Acre	Population		
				1961	1974	1981
1.	Muktikhola (part)	17	945.00	227	1129	2994
2.	Kachirgati ( " )	5	709.00	1312	1839	4075
3.	Baghmara ( " )	191	693.00	432	936	1828
4.	Umarpur	190	526.00	67	212	447
5.	Angarulisonah haor	40	1080.07	424	1337	2271
6.	Pirijpur	41	587.00	177	267	419
7.	Tahirpur Betal	43	306.00	676	267	392
8.	Anantapur	42	229.00	425	509	674
9.	Umedpur	193	50.67	109	154	143
10.	Dharirpara	44	2593.97	388	565	645
11.	Raransri(Part)	14	388.10	432	653	838
12.	Purangaon	134	380.08	178	347	803
13.	Balijuri	195	1032.59	105	191	1311
14.	Mangper Chack	198	391.52	253	695	974
15.	Manjargaon	95	289.00	185	705	1014
Total :			10201.00	5,390	9806	18,828

## FORECASTS

### 5.1 POPULATION PROJECTION :

In the study population projections were made by calculating the annual growth rate for the subject area during the period of 1961-81. For High, Medium and Low projections at first three annual growth rates of three intercensus periods of 1961-74, 1974-81 and 1961-81 were computed by the following formula.

Formulas :

(a) For calculating the growth rate :

$$\frac{\text{Horizon population} - \text{Base population}}{\text{Nos. of years}} = \text{Growth rate}$$

(b) For projecting the future population :

$$\text{Growthrate} \times \text{Nos. of years} \times \text{Base population} = \text{Horizon population}$$

According to the formula the population growth rate stands at very large size. But in practical the growth rate should not be so high in the area, because it is located at a remote corner its communication is very poor and socio-economic mobility is very poor. Moreover the increasing imphasise and activities on family planning, it is easier to assume that in future the population in the area will not increase as in the past. So a modified growth rate has been assumed.

From these modified growth rates, High, Medium and low rates were selected accordingly for high, Medium and low projections. These rates were then projected into the years of 1985, 1995 and 2000 AD and thus we got the High, Medium and low projected population for the catchment area and the shahar area which has shown in the following tables ( Table - 5.1 and Table - 5.2 ).

Table - 5.1.A Population and growth rate in the study area and catchment area of the Bishamvarpur upazila shahar.

	Population			Groth rate		
	1961	1974	1981	1961-74	1974-81	1961-1981
Study area	1811	3394	8997	3.90	5.90	4.30
Catchment area	5390	9806	18828	3.50	5.70	4.00

Table - 5.1.B Population projection of Bishamvarpur upazila shahar (1985 - 2000 AD).

Range of projection	Rate of annual growth	Population projection				
		1981	1985	1990	1995	2000
Medium	4.3	8979	11082	13678	16882	208379
High	5.9	8979	11959	15928	21214	28255
Low	3.9	8979	10871	13162	15946	19295

Table - 5.2 Population projection of catchment area of Bishamvarpur upazila shahar area (1985 - 2000 AD)

Range of projection	Rate of annual growth	Population projection				
		1981	1985	1990	1995	2000
Medium	4.0	18828	22907	27869	33906	41251
High	5.7 <sup>1974-81</sup>	18828	24841	32775	43243	57054
Low	3.5	18828	22361	26557	31541	37460

## 5.2 PLAN POPULATION :

The plan population for the determination of land requirements as per provision standards has been determined according to the terms of reference provided by UDD.

Medium projected populations of 2000 AD of both shahar area and catchment area have been taken as plan population. Plan population based on shahar area has been taken for residential, Primary education, recreation (open) and socio-cultural land requirements. On the other hand sum of population of shahar area and catchment area has been taken for Health, Higher level of education, Recreation (closed), urban services, Commerce and Industrial land requirements. There we have the plan population for the land use plan as shown as in the following table ( Table - 5.3).

Table -5.3 Plan population for land requirements for the land use plan as shown as in the land use as per provision standards of Bishamvarpur upazila shahar.

	1985	1990	1995	2000
(a) Plan population (based on shahar area) for residential, Primary education, recreation (open) and socio-cultural land requirements.	11032	13678	16832	20839
(b) Plan population (based on catchment area) for Health, Higher level of education, recreation (closed) urban services, commerce and industrial land requirements.	33939	41547	50788	62090

5.3 LAND REQUIREMENTS ACCORDING TO THE PROVISIONAL STANDARDS :

The requirements of land for different uses are prepared as per instructions of TOR. All provision standards relate to the population of catchment area except for residences, primary schools, parks, community centre, central mosque and graveyard for which population of shahar area are taken into consideration. In all cases population of medium projections are followed. According to medium projections the population of shahar and catchment areas will be 20839 and 41251 respectively in 2000 AD. Table No. 5.4 shows the requirements of land as per provision standards of TOR and the existing uses of land from which additional requirements of land are easily found out to allocate lands for our proposed plan logically.

Table - 5.4 Land requirements as per provision standard of TOR, Bishanvarpur Upazila Shahar landuse plan.

Sl. No.	Land uses	Provision St. Acres/POP	Population catch.Area/ Study Area	Land requirements as per TOR in acres	Existing uses of land in acre
1.	Com. and Industry	1.50/1000	62090	93.13	10.00
2.	Education			23.85	5.40
	(a) Nursery and prymary School	2.00/5000	20839	8.33	
	(b) High School and College	5.00/20000	62090	15.52	
3.	Health			27.94	2.50
	(a) Disp./M/CC	1.00/5000	62090	12.42	
	(b) HC.H	5.00/20000	62090	15.52	
4.	Recreation			31.70	Nil
	(a) Parks	1.00/1000	20839	20.84	
	(b) Cinema	0.50/20000	62090	1.55	
	(c) Sports Stadium	3.00/20000	62090	9.31	
5.	Socio. cultural			8.23	.51
	(a) Community centre	1.00/20000	20839	1.04	
	(b) Central Mosque	.50/5000	20839	2.08	
	(c) Graveyard	5.00/20000	20839	5.21	
6.	Urban services			15.51	4.00
	(a) Post office	0.50/20000	62090	1.55	
	(b) Tele. exchange	0.50/20000	62090	1.55	
	(c) Police station	2.00/20000	62090	6.21	
	(d) Bus/Ghat	1.00/20000	62090	3.10	
	(e) Others	1.00/20000	62090	3.10	
7.	Administration	As per TOR		12.00	11.00
8.	Residential	1.00/80	20839	260.48	128.00
9.	Urban Defered	10% of the builtup area		45.00	

## LANDUSE PLAN

### 6.1 PLANNING CONCEPT AND PRINCIPLES :

The Planning concept of the Landuse plan of Bishimvarpur upazila Shahar has been developed on the basis of Government's key strategy of the development of Upazila Shahar as a focal point for socio-economic and infrastructural upliftment of the Upazila region.

In the light of above discussion, four basic principles of preparing the landuse plan are as follows :

First, rational locations of respective uses, circulation network, social services and facilities are to be identified within the Upazila Shahar.

Second, functions to be located at the Upazila Shahar will be commensurated with socio-economic and physical infrastructural requirements of the Shahar's projected population upto 2000 A.D.

Third, functions related to socio-economic and employment generating activities are to be shared by the Upazila Shahar and other growth points.

Fourth, the land requirements for residences are catered to the needs of the projected population of the Upazila shahar, while the land requirements for urban services and facilities are catered to the needs of the projected population of the catchment area of the shahar.

On these basis principles individual schemes for implementation may be taken up for detail works according to a phase-wise development programme. The proposals in the plan are involved on the basis of existing conditions and expected trend in the growth of future population and services.

6.2 PLANNING APPROACH :

Based on planning concept and principles as well as practical limitations in the organization of Landuses, proposal for different uses and guidelines for implementation of them are prepared. A general approach to the preparation of Landuse Plan is to consider the natural-physical forces at work, such as, the natural drainage pattern, flood affected areas, existing pattern of development, etc. For allocating land, a conventional method is adopted for distributing different uses, e.g. administrative commercial, industrial, residential and other urban services and facilities. As far as practicable, existing land-uses and current scheme of any project are incorporated in the Plan. However, the landuses are proposed in such a way so that urban facilities are well distributed.

The road network in the proposed Landuse Plan of the Shahar is in a way to obtain an efficient circulation system within the Shahar and its surroundings. Neighbourhoods have been created within the road network system.

Finally, in the preparation of Landuse Plan, attempts were made so that adequate services and facilities may be achieved. Also, care is taken not to misuse the scarce land in anyway.

6.3 PLAN DESCRIPTION :

The landuse plan of the upazila shahar includes an area of 344 acres ( 139.32 hectares). The estimated population are 20339 and 62090 for the shahar area and for the catchment area respectively. The plan has been prepared to provide residential, primary education, recreation (open) and socio-cultural facilities etc. for the shahar's population and Health, higher level of education, recreation (closed), urban services and facilities for shahar's population as well as the catchment area population.

The size of the shahar area is rectangular shape. It is divided into four zones. They are located within the circulation network. The distribution of land in the plan according to use has shown in table 0.1 and a brief description has given in the following paragraphs.

#### Road Network :

To have better traffic circulation system existing roads have been proposed to be widened. From upazila complex Bishamvarpur-Sunamganj road has been proposed to 60 feet width, Roads to Bagmara has been proposed to 40 feet width. Other existing road have been proposed to 24 feet width have been proposed to connect Bagmara and Sunamganj road. These two roads will play important role to provide better circulation system within the planning area. The overall pattern of road network is supposed to avoid any traffic congestion. A space for rickshaw parking and bus stand have been proposed at the town respectively.

#### Commerce :

There are two markets in the shahar area. One is located at the upazila complex and another is at the southend of the shahar area. Two additional markets have been proposed in the planning area. More land have been allocated at the existing markets.

#### Industry :

It is considered that there will be small scale industries based on local raw materials; like fish, paddy, rice etc. The land for industrial uses are proposed at the north pheripheral part of the shahar area. This are will be served by a prevailing wind is expected to flew away the industrial smoke and bad smell hazard out of the shahar.

#### Recreation :

The recreational uses in the plan includ park, stadium, play field, shishupark and cinema hall. The cinema hall is proposed at the central area - accessible from all direction. Proposed park and stadium are supposed to be a fantastic recreational area. Moreover, college, high schools and primary schools are proposed to be provided with additional land for individual play fields. A common shishupark has also been proposed in the plan.

#### Administrative use :

Existing administrative land uses are sufficient as against the requirement as per provision standards. So no further land is proposed. However changes or extension of areas if need for this use two more urban deferred areas have been proposed to be use.

#### Education :

Location of each primary school is selected for approximately a population of 5000. The secondary and colleges are provided for both shahar population and catchment population. A women college is also proposed in the plan near the present high school.

#### Health :

The Health Services in the plan mainly include a Hospital and a Maternity or Child Care Centre. The existing location of the Hospital is remain undisturbed more over additional area has been included adjacent to it as per planning standard. The Maternity Centre is located in central area to minimize the travel distance for the dwellers.

#### Urban Services :

The major urban services proposed in the plan are Post Office, Water Supply, Power Supply, dumping and fire service. These are located in the suitable places in the shahar.

#### Socio-Cultural Uses :

The important Socio-cultural uses proposed in the plan are Community Centre, Town Hall, Central Eidgah. The site for these facilities are selected in such a way so that people from every corner of the shahar have easy access. A graveyard is also proposed in the outskirts of the shahar

Residential Uses :

The existing residential uses are least disturbed in the plan. Additional areas as per requirement have been proposed in the planning area.

Urban Deferred :

The urban deferred land keeping scope for future extension for urban services and facilities and Governmental uses has been proposed in the plan adjacent to the upazila complex.

Reserve :

The existing low land, water bodies and some good agricultural land within different uses have been kept as reserve.

Table - 6.1 Summary of proposed land for landuse plan of Bishamvarpur Upazila Shahar.

Sl. No.	Land uses	Total land requirements as per TOR		Existing landuse		Proposed Land		Percentage of proposed land %
		Acres	Hectars	Acres	Hectars	Acres	Hectars	
1.	Commerce and Industry (a) Commerce (b) Industry	93.13	37.71	10.00	4.05	45.00	18.22	1.81 0.80 1.01
2.	Socio-cultural, Admn. and urban services. (a) Education (b) Health (c) Administrative (d) Recreational (e) Socio-cultural (f) Urban services	119.23	48.28	23.41	9.48	111.41	45.13	4.48 1.02 0.70 0.48 1.37 0.34 0.57
3.	Roads (6.45% of the planning area)	-	-	3.39	1.37	25.00	10.12	1.01
4.	Residential (Housing Estate)	260.48	105.49	128.00	51.84	189.84	76.90	7.64
5.	Agriculture	-	-	2279.87	923.35	2043.37	827.57	82.22
6.	Tank	-	-	0.52	0.21	-	-	-
7.	Ditch	-	-	21.00	8.50	-	-	-
8.	Canal	-	-	19.00	7.70	-	-	-
9.	Reserve	-	-	-	-	40.57	16.41	1.63
10.	Deffered	-	-	-	-	30.00	12.15	1.21
	<b>Total</b>			2485.19	1006.50	2485.19	1006.50	100

#### 6.4 PRIORITY ACTION, COST IMPLICATION :

The Landuse Plan of the Upazila Shahar enunciates a Landuse Zoning of different urban uses. The Landuse Zones are to be elaborated in future with detailed plans before laying out internal road and services network.

Some important services like Market, Industry, Stadium, Park, Cinema hall, Postal Service, Water Supply and Fire Service are to be developed on priority basis.

The standard and provision of services followed in the Landuse Plan of the Upazila Shahar is in the line with the present economic situation of the country. In some cases a moderate approach is adopted in the provision of standards.

It is considered that for any development of new services and facilities, land filling upto buildable level may be required. As a result, cost of any project in the Shahar may include the cost of land filling cost of physical infrastructure e.g. roads, drainage, water and power supply, earth filling per acre is likely to be around Taka 2,50,000.00 considering the present cost of building materials, design, engineering, supervision and labour and compensation.

#### 6.5 PHASING AND URBAN DEFERRED :

Projects shown in the plan may be divided into two phase, phase-I, upto the year 1995 and Phase-II 1996-2000 A.D.

In the phase-I, major roads should be developed. Studies showed that industrial development is very poor in the upazila shahar, whereas the number of unemployed labour forces are gradually increasing. Employment generating projects should be taken in hand immediately.

So industrial Zone has been proposed to develop in the Ist phase.

The studies also showed that the upazila shahar is lacking of socio-cultural functions and some of them should be developed in phase-I. The development of community centre, the central mosque and the graveyard shall be taken in hand immediately. There is some recreational facilities in the upazila shahar. The construction of stadium and the cinema hall may be taken in the 1st phase. Govt. officers' quarters is needed to be constructed immediately. The shopping centre shown in the town centre maybe developed in the 1st phase. Remaining projects will be developed in phase-II.

The land of urban deferred have been shown function-wise in different sectors. Whenever the proposed land will not fulfil the requirements they will be used. Even if they are not required to be used in the plan period they will remain as deferred.

#### 6.6 DEVELOPMENT CONTROL :

The implementation of the land use plan will spread over many years and planning is a continuous process. It is essential that all planning matters should be administered by a single authority and should be subject to control. It is an essential part of local government administration. The land use plan must be kept under continuous reviews, but in itself only constitutes a small part of the planning work. Urban planning is a profession in its own right and is recommended that an experienced planner should take its charge.

#### 6.7 MONITORING AND REVIEW :

The monitoring of all activities regarding the implementation of the upazila shahar should remain under the charge of the UNO who is well aware of all of activities of the upazila region. If possible an officer of Urban Development Directorate may be placed in every region to look after the proper implementation of land use plan of upazila shahar.

APPENDIX - I

UPAZILA PROFILES AT A GALANCE

o.	Area	:	65	Sq. miles
o.	Population (1981)			
	Total	:	75972	
	Male	:	38804	
	Female	:	37168	
	House hold	:	12485	
o.	Administrative			
	Mouzas	:	60	
	Unions	:	3	
	Govt. offices	:	21	
o.	Education			
	Primary School	:	43	
	Secondary	:	7	
	Madrasha	:	5	
	College	:	Nil	
o.	Occupation			
	Cultivators	:	22137	
	Fishermen	:	1492	
	Weavers	:	192	
	Business	:	1225	
	Others	:	3005	
o.	Communication	:		
	Katcha Road	:	55	
	Water way canal	:	19	
	Pucca Road	:	1	
	Semi-pucca Road	:	3	

	<p style="text-align: center;">Population and Services</p> <p style="text-align: center;">Mouzas</p>
	<p>Upazila Administrative complex</p> <p>Other Govt. offices</p> <p>Health Complex</p> <p>Family Planning Clinic</p> <p>Other Health Service</p> <p>Market (Weekly/bi weekly)</p> <p>Post office</p> <p>Telephone Exchange</p> <p>Electric Sub-station</p> <p>Police station</p> <p>College</p> <p>High School</p> <p>Primary School</p> <p>High Madrasha</p> <p>Junior Madrasha/Maktab</p> <p>Metalled Road</p> <p>Un metalled Road</p> <p>Bus stopage</p> <p>Railway line</p> <p>Railway station</p> <p>Launch/Boat Ghat</p> <p>Shops (Nos)</p> <p>Mosque</p> <p>Temple/Mandir</p> <p>Other with name</p>



৬। জমি সংক্রান্ত তথ্যাদি (পেজাংক/পনজা/একর)

(২)

বসত বাড়ীর পরিমাণ	কৃষি জমির পরিমাণ	বর্গা পেয়ারার পরিমাণ	বর্গা দেয়া পরিমাণ	মোট জমির পরিমাণ

৭। ক) আপনি কতদিন যাবত এখানে বসবাস করিচ্ছেন ?

আলে কোথায় বাস করতেন -

কেন এখানে এসেছেন -

পরিবারের কজন একসাথে এসেছেন -

খ) আপনার পরিবারের কোন সদস্য অন্য কোথাও চলে গিয়েছে কি?

কোথায় গিয়েছে -

কেন গিয়েছে -

কত মাসে গিয়েছে -

৮। কর্মসংস্থানের দুরত্ব (পরিবারের প্রধানের)

উপজেলা পরিষদের এক মাইলের মধ্যে	১ হইতে ৫ মাইলের মধ্যে	৬ থেকে ১০ মাইলের মধ্যে	১০ মাইলের	উপ জেলার	দেশের বাহিরে

৯। পড়ালেখার জন্য আপনার সন্তানেরা কতদূর যায় ( টিক চিহ্ন দিন )

উপজেলা পরিষদের এক মাইলের মধ্যে	১ হইতে ৫ মাইলের মধ্যে	৬ থেকে ১০ মাইলের মধ্যে	১০ মাইলের উপরে	উপজেলার বাহিরে	জিলার বাহিরে	দেশের বাহিরে

১০। আপনি উপজেলা শহরে বা উপজেলার বাহিরে কিভাবে যাতায়াত করেন (টিক চিহ্ন দিন )

মাধ্যম	উপজেলার শহরে	উপজেলার বাহিরে
ওটো/পায়ে হেটে		
সাইকেলে		
বিক্রম		
গরুর গাড়ী		
বাস		

১১। ক) বসতবাড়ীর বিবরণ প্রধান ঘর ( টিক চিহ্ন দিন )

অংশ	ছাঁদ	পাকা	টিন	লোহা	কাঠ	বাস	পাতা/ছন	মাটি
দেয়াল								
মেঝে								
দরজা/ছানলা								

খ) বসতবাড়ী কত তলা (টিক চিহ্ন দিন ) একতলা/দোতলা/তিনতলা/চার তলা

১২। পানির উৎস ( টিক চিহ্ন দিন )

উৎস	ব্যবহার	
	স্বাস্থ্য	অন্যান্য
নলকূপ		
কুয়া		
কান		
নদী		
পুকুর		
সাপ্লাই		

১৩। বাড়ির উৎস ( টিক চিহ্ন দিন )

বিদ্যুৎ/হারিকেন/কৃষি/অন্যান্য

১৪। পাঠ্যবানার ব্যবস্থা (টিক চিহ্ন দিন )

কাটা /গানা/বাই।

১০। আপনি কি পরিবার পরিকল্পনা গ্রহণ করেছেন? < টিক চিহ্ন দিন >

হ্যাঁ/না, স্বায়ী/অস্বায়ী < টিক চিহ্ন দিন >

১৬। বিনোদনের উৎস < টিক চিহ্ন দিন >

আড্ডা/বেলাধুলা/হেটে কোনো/ সিনেমা দেখা/অন্যান্য।

১৭। প্রাকৃতিক দুর্যোগ সংশ্লিষ্ট তথ্যাদী :

(ক) আপনি কি কখনো বন্যা/প্রাচীর দেখেছেন ?

হ্যাঁ/না, হয় হলে তবে:

কখন কোন সালে -----

(খ) এই স্বায়ী আপনার এলাকার নদীতীরের পানি কতদূর পর্যন্ত উঠেছিল < উচ্চতা হিসাবে > -----

(গ) আপনি কি বন্যায় ক্ষতিগ্রস্ত হয়েছেন ?

হ্যাঁ/না, হয় হলে তবে:

কি ধরনের ক্ষতি হয়েছে বর্ণনা করুন -----

(ঘ) বন্যা হওয়ার কারণ হিসাবে কি মনে করেন -----

(ঙ) বন্যা রোধের জন্য কি ব্যবস্থা নেয়া যেতে পারে -----

১৮। উপজেলা পথের উন্নয়নের জন্য আপনার মতামত বর্ণনা করুন ।

স্বাক্ষরকার প্রহরকারীর নাম-

ঠিকানা-

তত্ত্বাবধায়ক-

তারিখ-

APPENDIX - IV

Aspects of Existing Land Use Survey and notation to be used in the field works.

<u>Aspects</u>			<u>Notation</u>
1.	Residential		1
	a. Pucca	....	1(a)
	b. Kutcha	....	1(b)
2.	Recreational		2
	a. Park	....	2(a)
	b. Stadium	....	2(b)
	c. Play ground	....	2(c)
3.	Educational		3
	a. Primary school	....	3(a)
	b. High school	....	3(b)
	c. College	....	3(c)
	d. Madrasha	....	3(d)
4.	Commercial		4
	a. Shops	....	4(a)
	b. Trade centre	....	4(b)
	c. Hate/bazar	....	4(c)
	d. Bank	....	4(d)
5.	Industrial		5
	a. Small Industry	....	5(a)
	b. Large Industry	....	5(b)
6.	Health		6
	a. Central Hospital	....	6(a)
	b. Clinic/Health Centre	..	6(b)
	c. Dispensary	....	6(c)
7.	Administrative/Defensive		7
	a. Govt.	....	7(a)
	b. Semi-Govt.	....	7(b)
	c. Private	....	7(c)

