

URBAN DEVELOPMENT DIRECTORATE
MINISTRY OF WORKS
GOVERNMENT OF THE PEOPLES REPUBLIC OF BANGLADESH

LANDUSE / MASTER PLAN

GOWAINGHAT UPAZILA SHAHAR

SYLHET ZILA

1991

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SYLHET ZILA

MAY 1991

PLANNERS AND ASSOCIATES
77, MOTIJHEEL COMMERCIAL AREA,
DHAKA-1000.

মোঃ ছয়ফুল আলম

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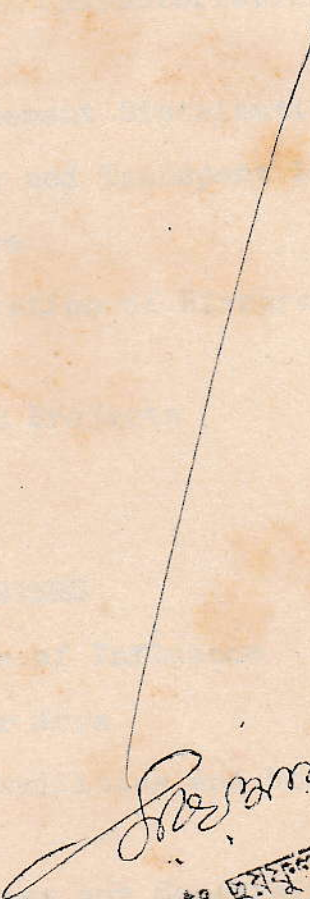
সাবেক এম, পি,

চেয়ারম্যান গোয়াইনঘাট উপজেলা
সিলেট।

সূত্র :

তারিখ : ১৪-০০-১০ইং

নগর উন্নয়ন অধিদপ্তরের মনোনীত পরিকল্পনাবিধ গোয়াইনঘাট
উপজেলা শহরের উন্নয়নকালে যে ভূমি ব্যবহার ম্যাপ তৈরী করেছেন,
তা সফল বাস্তবায়িত হলে অত্র উপজেলার সার্বিক উন্নয়ন হবে বলে
আমি বিশ্বাসী।


মোঃ ছয়ফুল আলম বি. এ.
২৪/৩/১০
চেয়ারম্যান
গোয়াইনঘাট উপজেলা পরিষদ
সিলেট।

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CHAPTER - ONE

1.0 INTRODUCTION

The decision of the Government regarding administrative decentralisation upto Upazila (sub-district) level is commensurable with the socio-economic conditions obtaining in Bangladesh. The country is predominantly rural and roughly 90% of the population live in rural country-side and almost all of them are to survive on agriculture. Development efforts through various sectors from central places at higher level are not adequate to distribute the fruits of development to the common masses. In the recent Government's policy each Upazila centre will be the focal point of all administrative, commercial, and economic activities. Thus, the development of Upazila centre is the government's key strategy for social, economic and infrastructural upliftment of the whole Upazila region. So, the Upazila Shahar land use plan is envisaged to accommodate all socio-economic, administrative and infrastructural services for the Upazila region or the hinter land and development control of the subject area. Eventually, the plan would cover the Upazila region beyond the shahar boundary in phases.

1.1 OBJECTIVES AND METHODOLOGY

Objectives :

The objectives of the study are as follows :

- i. To prepare a viable landuse plan for the Upazila shahar upto 2000 A.D. based on existing landuse and socio-economic survey of the study area.
- ii. To determine a catchment area or zone of influence of the study area in respect to administrative, health, commercial, education etc. facilities.
- iii. To find out a hierarchy of settlements within the Upazila.
- iv. To suggest, guide and control physical development of the study area of the upazila shahar in a planned manner.

1.2 Methodology and Study Design :

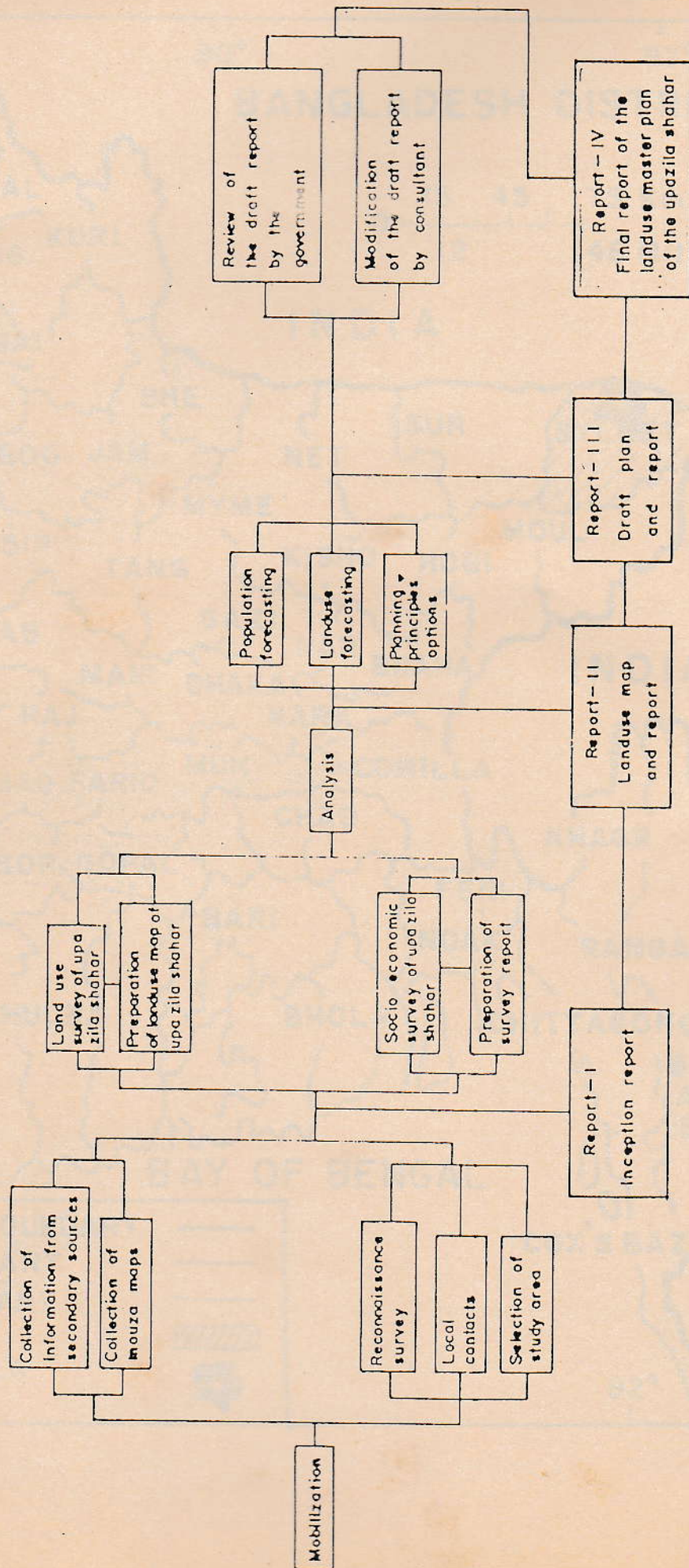
To fulfil the above objectives of the study, the consultant have designed a detailed methodological outline in conducting surveys which is essential for landuse plan for the Upazila shahar. One type of survey is socio-economic and the other is landuse survey, in addition to it, detail survey of town service centre with indication of land forms and man made structures.

The socio-economic survey questionnaire was first prepared and adopted after pre-testing in the field. Due attention was

taken to get clear idea of the socio-economic conditions prevailing. Selection of households for the survey was done by random sampling covering at least 5% of the households in the study area. Check was made in the field during survey for further accuracy.

On the other hand, existing landuse survey map was prepared on cadastral survey (C.S.) maps of 1" = 330'-0" scale. Town service centre map covering about 200 acres of land was prepared in 1:1000 scale incorporating contours from BWDB's maps of the area. All man-made structures were also shown in details. The study area was zoned for convenience. Surveyors and investigators were assigned to individual zones for land use survey. Having done so the maps with plan proposals to be submitted to govt. officials and respective Upazila Chairman for their comments. Then final maps to be prepared according to the instructions laid down in the TOR of the project.

FLOW DIAGRAM SHOWING THE METHODOLOGY OF PLANNING



BANGLADESH DISTRICTS



CHAPTER - TWO

2.0 THE UPAZILA IN ITS DISTRICT CONTEXT

2.1 Location and Physical Characteristics of the Upazila

The name of the Upazila is Gowainghat, it was in the status of thana, created in 1941. It is one of the 11 constituent Upazilas of Sylhet district, situated 53 km (33 miles) north-east from Zila headquarter. The Upazila headquarter is situated at latitude 25°07' north and longitude 92°0' east.

The Upazila is located in such a position that its north territory is bounded by international border with India, south by Sylhet sadar and Kanaighat, west by Companiganj and east by Jaintiapur Upazila. It comprises a total area of 563.5 sq. km. (217.6 sq. mile) including an area of 18.0 sq. km of river.

Soils of the Surma-Kushiyara floodplains of Gowainghat (grey silty loams) of Phagu (grey firm clay) are scattered over the central and southern part of the Upazila. The sub-recent piedmont plain of the grey sandy clay of the Pritimpasa or Jafalong grey brownish loams series are occurring in the north and south.

2.2 Population and Settlement Distribution

According to population census 1981, the population of the Gowainghat Upazila is 160893 whereas Sylhet district population is 5655543, Upazila population consists of 83896 males and 76997 females. There are 109 males for every 100 females in the

Upazila as against 105 for the district. About 2.8 percent of the district population live in this Upazila in an area of 4.4 percent of the district. The population density of the Upazila as calculated in 1981 census shows that there are 286 persons per sq. km. as against 445 persons for the district and 605 persons for the nation. About 48.6 percent of the total population belong to the age less than 15 years, whereas 46.1 percent of the total population are above 17 years of age. Dependency ratio for this Upazila is found to be 107 for every 100 population of the age group 15-64. The Upazila Statistics shows that the Upazila has 25195 married women in the fertile age group of 15-44.

According to 1981 population census there are 26,949 house holds in the Upazila as against 932710 households of the district. About 99.0 percent of the total households of the Upazila are dwelling units and the rest are institutional and business/industrial units. The average household size in dwelling units is found to be 5.9 as against 6.0 for the district and 5.7 for the nation. There are only 551 tribal households in the Upazila. The structural pattern of dwelling units show that 86.0 percent of the total dwelling units in the Upazila are Kutcha, 11.0 percent are semi-pucca and 3.0 percent are pucca. About 90.9 percent of the dwelling units are owned by owner occupier.

There are 321 villages in the Upazila out of which 229 (about 71.3 percent) are small villages with a maximum of 100 households and 92 (about 28.7 percent) are medium villages with more than 100 but less than 501 households.

The urban area of this Upazila covers 1.5 sq. km of area with 1314 population. According to 1981 census, 0.8 percent of total population of the Upazila lives in urban area in 0.3 percent of the Upazila area. There are 159 males for every 100 females in this urban locality with a density of 853 persons per sq. km. The Upazila urban population accounts for only 0.3 percent of the district urban population.

The following table shows the population increased and its trend of change over time 1961 to 1981 in the Upazila with respect to district.

Table 2.1: Population in census years with the p.c. variation in upazila and its district.

	Population			Percentage variation		
	1961	1974	1981	74-61	81-74	81-61
Upazila	85897	139760	160893	62.71	15.12	87.31
District	1027084	1478707	1777784	43.97	20.23	73.09

Source : B.B.S.

The following table shows the unionwise Settlement pattern and density of population

Table 2.2: Unionwise Settlement Distribution, density of the Upazila, 1981

Union	Area(acre)	Household	Population	Density/sq. mile
Aligaon	18,346	3771	21,546	751
Fatepur	22,515	5427	30,984	880
Jaflong(east)	9,400	3136	18,540	1262
Jaflong(west)	14,889	3696	22,870	983
Lengura	15,755	2835	17,356	705
Nandirgaon	11,386	2234	14,004	787
Rustompur	22,079	3836	23,160	671
Towakul	11,651	2014	12433	683
Gowainghat	126,023	26,949	160893	817

Source : B.B.S.

The following table shows distribution of population according to age and sex in the study area. From the collected data it is observed that in the age group (18-64) accord the highest position 50 %, next to it is 25.34 % in the age group of (0-9) years. The age group of 65+) occupies the lowest p.c. of population (4.4 %). The dependency rate as calculated from socio-economic survey in the study area is 50 %. Table shows population distribution within the study area in Gowainghat.

Table 2.3 : Age-Sex Distribution

Age group	Male	%	Female	%	Total	% the total
(0-9)	30	24.0	27	27.0	57	25.34
(10-17)	25	20.0	20	20.0	45	20.00
(18-64)	63	50.4	50	50.0	113	50.22
(65 +)	7	5.6	3	3.0	10	4.44
Source Survey:	125		100		225	

Migration : It was difficult to get information on migration at the upazila level. From socio-economic survey within the upazila it was observed that only five families have been migrated in the shahar area for last 10 years of which 2 came from outside the Gowainghat upazila and 3 came from other parts of Gowainghat upazila to the shahar area. Ten families migrated out abroad.

2.3 Economic Performance and Transport Linkages

Economy and Employment : The economy of the Upazila is pre-dominated by agricultural sector. This sector engaged 35314 labourer out of total 47075 persons, i.e., this sector shares 75% of total labour force. Whereas, manufacturing sector shares 3.68% and business sector 4.5%.

Agriculture : Agriculture is the main source of income and employment for the vast majority of the people. The Upazila has a net cropped area of 63000 acres with a cropping intensity 157, against 150 for Sylhet district and 148 for Bangladesh index (1982-83). Total production of rice in the Upazila in 1981-82 season were 238000 mds in Aus, 108000 mds in Aman, and 73000 mds in Boro season, which respectively accounts 12.47% 30%, 3.2% of total district rice production. Other agricultural product of the Upazila include wheat, jute, tea, pulses, rabi crops, groundnuts etc. These products are sold at local, regional and national markets.

Industry : Industrial sector has not been developed significantly to contribute the economy. However, there are few small and cottage industries in the Upazila. There are 381 units of cottage industries, which is 6.76% of total district figure, 623 persons are engaged in these industries, all of them are family labourers, which is 3.45% of the total labourers engaged in Sylhet district in 1982. In the Upazila there are 16 rice mills and only 25 families are engaged in cane and bamboo industries against 457 units and 1865 families for the district.

Income-Expenditure : Upazila level information on income-expenditure are not available. To our view, daily wage rates of differen profession in greater Sylhet Zila can be considered.

Table 2.4 : Daily Wage Rate of Agril. Labour (Tk)

Year	Sylhet	BD.
1989-81	15.00	15.97
1981-82	15.42	15.48
1982-83	22.00	16.93

BBS: Source

From household questionnaire survey in the study area it was observed that highest p.c. of household having monthly income bracket of Tk.1001-3000.The following Table shows the income distribution pattern of the study area.

Table 2.5 : Income Distribution Pattern

Monthly Income (Tk.)	No. of Household	% of the household
Less - 1000	58.00	25
1001 - 3000	90	40
3001 - 6000	33.00	15
6001 -10000	33.00	15
10001 - Above	11.00	5
	225	100

Source : Survey

Transportation Linkage : The Upazila headquarter is connected with the Zila headquarter by road. The basic means of transports available in the Upazila are country boat, rickshaw and buffalo carts. Unions are connected with the Upazila headquarters partly by roads and partly by waterways. In the Upazila there are 27 miles pucca road and 104 miles kutcha road. So total road mileage is 131 (210.82 km). The total district road mileage is 2126 (3421.47 km), out of which, 224 miles are pucca.

2.4 Social Infrastructure

Markets/Commerce : There are 39 weekly markets (hats)/bazars in this Upazila. This indicates that there is a hat/bazar for every 4125 persons in the Upazila. On the other hand there are 35 daily bazars and 245 weekly or bi-weekly hats in the Sylhet district.

Education : General literacy rate (5 yrs & over) of the Upazila according to 1981 census is 11.3%, against district rate 19.9% and national rate 23.8% while urban literacy is 37.6% in the upazila against district rate 38.3% and national rate 40.7%. In the Upazila, there are 8 schools, 102 primary schools and 20 madrashas against the district total of 429; 3403 and 280 respectively. There is no college in the Upazila.

Health : In the Upazila there are 1 hospital and 1 dispensary/clinic with 31 beds, 5 doctors and 1 paramedic. But in the Zila there are 10 Upazila health complexes with 310 beds, 23 Charitable dispensary and 310 Upazila based doctors.

Other Facilities : Among other facilities in the Upazila, there are 6 post offices, 1 telegraph office and 1 dakbanglow and rest house; while those of 160 post offices, 20 telegraph offices and 11 rest houses in the Zila available. There are 6 bank branches and 16 different govt. offices in the Upazila (1982). In the Upazila there are 1121 tube-wells commissioned reported from B.B.S. 1982, which is 11% of the total no. of tube-wells in the district. There are no public library, cinema halls for cultural activities, but total 354 nos. of mosques are reported against Zila figure of 3876.

2.5 Synthesis : Identification of Hierarchy of Settlement in the Upazila

To determine the hierarchy of settlement within the Upazila as a whole, as per instructions of TOR provided by UDD, potential and possible growth centre within the Upazila were identified. Attention was given to population, economic activities, transport linkage, social infrastructure and other characteristics of the Upazila to determine the hierarchy of settlement.

It is necessary to identify all the settlement areas within the Upazila to determine the hierarchy of settlements in the Upazila. In the present study, mauza has been taken as an unit of settlement each mauza has been ranked through the set rules of scoring. The distribution of score points and ranking of settlements has been made on the basis of population, economic activities, social infrastructural provision, transport

linkages and other related characteristics, and also an interview was made through cross-section of the society. The score codes used for determination of hierarchy of settlements have been shown in the following table. It was identified from the scoring method and interview, that the following growth centres are prominent in the Upazila which are ranked as below.

<u>Name of the Settlements according to Hierarchy</u>	<u>Category/Score</u>
Gowain	A (60+)
Fatepur	B (50+)
Lakhe, Paanichara, Balipara	C (30+)
Chandghat, Nijdhagram, Patlikona	D (20+)

Table 2.5: Scoring and ranking of Settlements by weighted characters in the Upazila

Population 1981/ Services	Wtg. Scores	Settlements								Ranking of Scores		
		Monzas Gowain	Fatepur	Chandghat	Nijahagram	Lakhe	Patlilkona	Panichara	Balipara			
A. Population :												
1. 0-1000	4		4	4	4	4	4	4	4	4	6	Category A = 60+
2. 1001-2000	6	6	6								8	" B = 50 - 59
3. 2001-4000	8											" C = 30 - 49
B. Services :												
4. College	12											" D = Upto 29
5. High School	10	10	10	10	10	10	10	10	10	10	10	
6. Madrasa	5	5	5	5	5	5	5	5	5	5	5	
7. Girls' H. School	5	5	5									
8. Pry School	5	5	5	5	5	5	5	5	5	5	5	
9. Bank	3	3	3	3	3	3	3	3	3	3	3	
10. Electricity	8											
11. Hat/Bazars	12	12	12								12	12
12. Rice Mill	5	5						5				
13. Telegraph	5	5										
14. Post Office	2	2	2	2	2	2	2	2	2	2	2	
15. Health centre	5	5										
16. Cottage Industry	5	5	5	5	5	5	5	5	5	5	5	
Total	100	68	53	29	29	29	33	29	42	42	43	
Category		A	B	D	D	C	D	C	D	C	D	C

2.6 Priority Development Projects :

<u>Sector</u>	<u>Project and Location</u>	<u>Allocation</u>
Food for Works :	Reconstruction of Gowain- ghat Salutikar road at Nan- dirgaon & Toakul U.P.	4280 md.
	- Reconstruction of Jaflong- Bitguly road at East Jaflong U.P.	951 md.
	- Reconstruction of Gowainghat sonarhat road at West Jaflong U.P.	3242 md.
World food : Programme	Construction of 15 span culvert at Pirijpur	1,77,341 Tk.
USAID :	Construction of 35' span pool at Hatirkhat in Pirijpur-Sonarhat road	3,55,524 Tk.
Upazila Parishad :	Construction of 12 meter culvert at Tunjabag bhanga in Gowainghat Salutikar road.	3,72,000 Tk.
	- Construction of 12 meter culvert at Balidhar Khal	3,72,000 Tk.
	- Construction of 30' span culvert at Unairbhanga in Gowainghat Sonarhat road.	3,73,000 Tk.
	- Construction of 4 culverts	4,00,000 Tk.
	- Construction of 1 pry.school	4,50,000 Tk.

CHAPTER - THREE

3.0 THE UPAZILA HEADQUARTERS

3.1 Definition of Sphere of Influence/Attractiveness :

Defining the catchment area or zone of influence of the centre is not an easy task. With the introduction of more facilities at the centre, or with the transfer of facilities and services to the lower centres, the zone of influence of the upazila centre will not remain static overtime. However, induced attraction, govt. commitments for the area, peoples desire etc. were the main basis to draw the zone of influence of the upazila centre. It may here be mentioned that infra-structural development like new transport linkage, change of river course etc. will considerably change the shape of influence zone of the upazila centre.

However, it can be easily understood that the sphere of influence of the upazila shahar is the immediate hinterland which depends upon the centre for administrative, financial, educational, health, recreational and for other service facilities. A discussion in this regards has been made with the local elites , govt. official, public representatives and general peoples to known the surrounding areas where from the people came to the centre. It was a concensus that in a commuting distance people generally came to the Upazila centre (about 2 miles radius from the Upazila centre). It is almost a normal 2-3 miles walking distance. In accordance with the above concensus and considering existing influence of nearby lower order centres, the zone of influence of the upazila shahar has been delineated covering following mouzas.

Area and Population of Catchment Area

Table 3.1:

Name of Mouza	Total area Acre(hect.)	Involved Area Acre(hect.)	Total Population	Involved population
Gowain	400 (161.87)	400 (161.87)	1,314	1314
Pirijpur	202 (81.74)	202 (81.75)	618	618
Lengura	487 (197.08)	240 (97.12)	1,865	932
Satirheor (Satingaon)	474 (191.82)	120 (48.56)	47	12
Alirgaon	222 (89.84)	112 (45.33)	824	812
Karni	267 (108.05)	267 (108.05)	489	245
Semultala	523 (211.65)	523 (211.65)	161	161
Tatarai	535 (216.51)	400 (161.88)	206	206
Pukash	411 (166.32)	205 (82.97)	101	75
Nayanagar	256 (103.60)	256 (103.60)	523	262
Abdulmehal	197 (79.72)	197 (79.72)	328	328
Purnanagar	433 (175.23)	433 (175.24)	1384	1384
		<u>3680</u> (1489.27)		<u>6349</u>

3.2 Definition of Shahar Area

As per terms of reference for the preparation of landuse plan for the upazila shahar, the existing buildup area of the Upazila Shahar/headquarter and future urban land requirements to be considered. It is expected that the area would not exceed a radius of ~~three~~ fourth mile from the settlements central point. In Gowainghat upazila an area of 1.93 sq. mile equivalent to 5.00 sq. km. or 500 hectare (1235 acre) of land was undertaken, keeping in view of the present and future economic, social and commercial growth of the study area of the Upazila shahar. The study area consists of 5 mauzas. According to 1981 population census the total population of the study area is 3654

The shahar area has been determined on the basis of existing landuse, development trend and physical dev. potentiality.

Table 3.2 : Area and Population of the Study Area

Sl. No.	Name of the Mouza	Total Area		Involved Area		Population of the involved study	
		Acre	Hect.	Acre	Hect.	1981	1974
1.	Gowain	380	161.88	375	151.76	1314	959
2.	Pirijpur	202	81.75	202	81.75	618	500
3.	Furnanagar	433	175.23	266	107.65	828	678
4.	Abdulmahal	197	79.72	197	79.72	428	357
5.	Lengura	487	197.08	195	78.92	466	399
				<u>1235</u>	<u>499.80</u>	<u>3654</u>	<u>2893</u>

3.3 Existing landuse, Facilities and Utilization Characteristics :

Determination of existing landuse is the most important for guided development of an area. In upazila centre new facilities and activities are going to take place. In this regard, existing land use survey would be able to understand present situation and to estimate the future need of land according to projected tone of activities. The following table represents the details of generalised landuse of different categories following the TOR within the Study Area.

Table 3.3 : Existing Landuse of Gowainghat Upazila Shehar

Sl. No.	Broad Landuse	Detail Landuse	Area		%
			Acre	Hect.	
1.	Agriculture/ Forestry	Agriil cultivation, Agriil Farm, other	994.11	402.31	80.49
2.	Commerce and Industry	Markets, Shops,	5.12	2.07	0.42
		Industry	1.70	0.69	0.14
3.	Education	Primary school, Secondary school (Boys & Girls) Madrasha	3.44	1.39	0.28
4.	Health	Upazila Health Complex, Dispen- sary	4.01	1.62	0.32
5.	Administretion	UNO Complex Govt. & Semi Govt. office, other offices	3.36	3.38	0.68

Sl. No.	Broad Landuse	Detail Landuse	Area		%
			Acre	Hect.	
6.	Recreation	Cinema Hall Clubs Play Ground/Park	-	-	
7.	Socio-cultural	Mosque, Graveyard Eidgah, Cemetary, Mandir	1.65	0.67	0.13
8.	Urban Services	Post Office, T & T Bus/Stopage, Police Station	7.42	3.00	0.60
9.	Residential	Private Houses Govt. Housing Estate	122.37	49.52	9.91
10.	Tank and Water Bodies	Tank, Khal/River Haor	67.82	27.45	5.49
11.	Road	Major (pucca) Secondary (Semi- pucca) local (Katcha)	19.00	7.69	1.54
Total :			1235.00	499.80	100.00

Land Use Description by Mauzas :

The detail description of existing land use of Gowainghat Upazila Shahar by the mauzas are described below :

Table 3.4: Landuse description of Upazila Shahar by Mauzawise Existing Facilities.

<u>Mauza</u>	<u>Existing Facilities</u>
Gowain	: Upazila Complex, Hospital, Police Station, Pry. School, High School, B.A.D.C. Office, Bazar, Veterinary Hospital, Settlement & Revenue office, Grameen Bank, T&T, Tohsil office, Dak Banglow, Eidgah, Mill, Mosque, Bazar, Residences, Agricultural.
Purnanagar	: Godown, Bus Stopage, Commercial, Madrasa, Residence.
Lengura	: Primary school, Residence, Agriculture.
Pirijpur	: Residential, Mosque, Agriculture.
Abdulmahal	: Residence, Agriculture.

Agriculture and Forestry :

Most of the land within the study area is under agricultural use represents 80.49 % of the total area. This excludes ponds and water bodies and the total under this category constitutes 994.11 acres.

Commerce and Industry :

This type of land is mainly confined to bazars/hats near upazila complex which includes small shops , retail and wholesale trading, rice mill, oil mill and others retail-ed business uses. The percentage of land under this use within the study area is only 0.56 . Bazar area is situated in Gowain mouza.

Education :

Educational institutions situated within the study area have acquired only 3.44 acres of land which comprises 0.28 percent of the total study area. High school is located in Gowain mouza and one primary school is in Lengura mouza.

Health :

Health category accounts for 4.01 acres land which comprises 0.32% of land of the total study area, found in Gowain mouza.

Administration :

Administrative zone is sited to the central side of the study area. The upazila complex as well as construction

of others administrative buildings are built newly after the upgradation of the upazila. The landuse in this category represents 0.68 percent of the total land within the study area, particularly in Gowain mouza.

Recreation :

No. significant recreation facilities such as cinema hall, club, play ground are found in the upazila.

Socio-cultural :

Socio-cultural services includes community centre, religious facilities, crematorium, club, public library etc. But there is no community centre and public library in the study area. The remaining socio-cultural activities comprises 0.13 percent of the total study area. Eidgah and a mosque are located in Gowain mouza. One mosque is in Purnanagar mouza

Urban Services :

This service includes post office, telephone exchange, police station, bus terminal, place for garbage disposal etc. The area under this category comprises only 0.60 percent of the total study area. Bus stand is located in Purnanagar, and other services are found in Gowain mouza.

Residential :

Public and private residential use of land exists within the study area having main concentration within and around

Upazila Complex. Private residences are mainly dwelled by the local people though a very few have been rented. It is found that 9.91 percent of the total area are being used under residential activity within the study area in all mouzas.

Roads :

In the study area pucca, semi-pucca and katcha roads which cover an area of 19.0 acres of land, which constitutes about ^{1.54%} of the total area of land in the study area. In Purnanagar and Gowain partly pucca road exists.

Tank & Water Bodies :

There are number of haors, tanks and khals etc. which covers 67.82 acres of land, constituting 5.49 percent of the total area.

3.4 Physical Opportunities and Constraints :

Potential areas for development : Gowainghat Upazila is situated on the northern side of Sylhet Zila. For the growth of crop production, fishery and tea plantation, the upazila is a potential one, in the Zila. Marketing centres connectings the headquarter by development of roads is a necessary item to support timely supply of

goods and thereby promoting economy and employment situation of the upazila.

Map of buildable Areas for future development shows mouza Gowainghat, Pirijpur, Satirgaon and Furnanagar would be suitable for future development. A bridge over the river Gowain is necessary.

Areas liable to major flooding : Gowainghat upazila is a low lying area. A lot of haors and beels surrounds the upazila headquarter. The southern part of the headquarter is comparatively low and some haors and beels are situated there, the beside areas are susceptible to major flooding. It is also understood from the physical studies that due to heavy rainfall and lack of water management and irrigation and lack of drainage system, the major areas of the upazila faces physical development constraints.

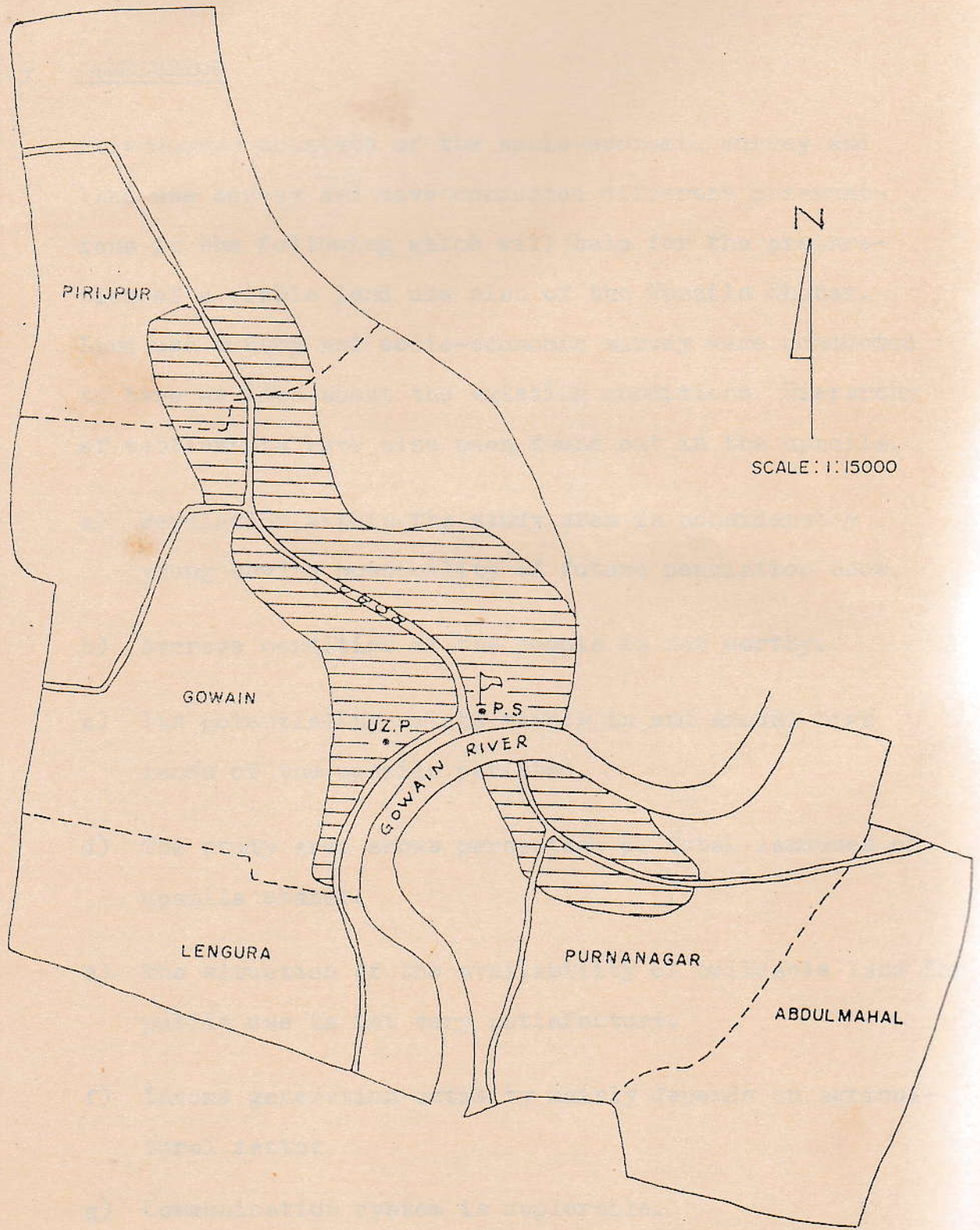
Constraints for other reasons : Major difficulty in the upazila headquarter is undeveloped transportation system. Only a part of the main road is paved. Land values are high within the upazila headquarters. Development by private sectors are normally difficult.



Low lying area required huge earth filling to develop. Landuses around the upazila shahar started changes from agriculture to non-agriculture. These attracted many towards upazila shahar. As such land value considerably increased recently. The following table shows land value in the shahar area.

Table 3.5 : Land Value in the Upazila Shahar area by uses

Land by uses	Price in Taka per acre
Upazila Complex	2,00,000
Educational area	1,00,000
Commercial area	3,00,000
Residential area	2,00,000
Agricultural area	80,000

Source : Survey



BUILDABLE LAND : 
LIABLE TO FLOOD : 

SCHEMATIC CONCEPT PLAN OF
GOWAINGHAT UPAZILA SHAHR

3.5 CONCLUSION

This chapter consists of the socio-economic survey and land use survey and have conducted different observations in the following which will help for the preparation of a viable land use plan of the Upazila Shahar. Land use survey and socio-economic survey were conducted to have an idea about the existing conditions. Hierarchy of settlements have also been found out in the upazila.

- a) Population within the study area is considerably young having possibility of future population boom.
- b) Average condition of the people is not worthy.
- c) Its potentiality exists mainly in and around high lands of the upazila parishad.
- d) The study area shows percentage of total landuses of upazila shahar.
- e) The situation of the availability of buildable land for public use is not very satisfactory.
- f) Income generation activity mainly depends on agricultural sector.
- g) Communication system is deplorable.

CHAPTER- FOUR

4.0 FORECASTS

4.1 Population, Household Structure and Density :

Within Sphere of Influence :

Population : Population projection is very essential for determining the extent of social services and for land use that will need to be provided in the upazila shahar itself. Thus, attempt has been taken to forecast population upto the year 2000 A.D. The population has been projected at high, medium and low levels. In case of determining population growth rates time in between two census years has been considered for the serviced population.

Table 4.1 : Population and Growth Rate Composition of the Catchment Area

Name of Mauza	Total Population			Involved Population			G.R. of Inv. Pop.		
	1961	1974	1981	1961	1974	1981	61-74	74-81	61-81
Gowain	746	959	1314	746	959	1314			
Pirijpur	338	500	618	338	500	618			
Lengura	1246	1596	1865	623	798	932			
Satirhaor	16	30	47	4	7	12			
Alirgaon	246	670	824	234	660	812	3.05	3.31	3.14
Karni	85	322	489	42	161	245			
Semultala	91	112	161	91	112	161			
Tatarai	34	167	206	34	167	206			
Pukash	31	58	101	23	43	75			
Nayargeon	145	368	523	72	184	262			
Abdulmahal	286	357	328	286	357	328			
Purnanagar	923	1104	1384	923	1104	1384			
				3416	5052	6349			

The annual growth rate within the sphere of influence between 1961 to 1974 is 3.05 assuming medium fertility and high mortality. The medium growth rate between 1961 to 1981 is 3.14 assuming medium fertility and medium mortality. The high growth rate between 1974 to 1981 assuming medium fertility and low mortality. With those growth rates, the population will be projected at 5 years interval upto the year 2000 A.D. taking 1981 as base.

Table 4.2 : High, Medium and Low Projection of Population within the Sphere of Influence, 1985 to 2000 A.D.

Year	High Growth Rate 3.31	Medium Growth Rate 3.14	Low Growth Rate 3.05
1981	6349	6349	6349
1985	7232	7184	7159
1990	8511	8385	8320
1995	10016	9787	9669
2000	11787	11424	11236

For the preparation of landuse plan, the medium growth rate has been taken, which shows gentle figure between long ranges of time.

Household Structure : The household structure in the sphere of influence is expressed here in terms of number of persons per household from medium level of growth rate of household at 2.22% and accordingly populations projected upto 2000 A.D. are assumed to forecast household sizes, taking 1981 as base year.

Table 4.3 : Forecasting of Household Sizes in the Sphere of Influence upto 2000 A.D.

Pop./H.H.	1981	1985	1990	1995	2000
Population	6349	7184	8385	9787	11424
H/H Nos.	1008	1100	1228	1370	1530
H/H Sizes	6.2	6.5	6.8	7.1	7.4

This shows the ascending size of household, As the average size of household in the upazila at present is 5.9 as against 6.0 for the district, the study shows medium fertility and low mortality trend.

Population Density : Considering the projected populations from 1985 to 2000, the density of population per acre of catchment area are found as follows.

Table 4.4 : Gross Density of Population Over the area of Catchment

Pop./Area	1981	1985	1990	1995	2000
Area in acre	3680	3680	3680	3680	3680
Population	6349	7184	8385	9787	11424
Density per acre	1.72	1.95	2.27	2.65	3.10

Within Shahar Area:

Population : The growth rate from 1961 to 1974 is 1.99. The growth rate from 1974 to 1981 is 3.39 and the growth rate from 1961 to 1981 is found 2.48.

Table 4.5 : Population and Growth Rate Composition of the Shahar Area

Name of Mauza	Total Population			Involved Pop.			G.R. of Inv. Pop.		
	1961	1974	1981	1961	1974	1981	61-74	74-81	61-81
Gowain	746	959	1314	746	959	1314			
Pirijpur	338	500	618	338	500	618			
Purnana-gar	1246	1596	1865	541	678	828	1.99	3.39	2.48
Abdulmahal	286	357	428	286	357	428			
Lengura	923	1104	1348	326	399	466			
				2237	2893	3654			

The high, medium and low projection have been made for the upazila shahar also. Medium fertility and low mortality, low fertility and medium mortality, and low fertility and high mortality are assumed as 3.39, 2.48 and 1.99 respectively. Assuming those, the future increase of population of the shahar have been determined, by using high, medium and low projection rates upto 2000 A.D. at

5 years interval considering 1981 as base year.

Table 4.6 : High, Medium and Low Projection of Population of the Upazila Shahar

Year	High Growth Rate 3.39	Medium Growth Rate 2.48	Low Growth Rate 1.99
1981	3654	3654	3654
1985	4175	4030	3953
1990	4932	4555	4363
1995	5827	5148	4814
2000	6884	5819	5313

For the preparation of landuse plan, the high growth rate projected population to be considered, because medium growth rate is below than national figure.

Household Structure : The household structure in the shahar area is expressed in terms of number of persons per household from medium level of forecasted population.

Table 4.7 : Forecasting of Household sizes in the shahar Area

Pop./H.H	1981	1985	1990	1995	2000
Population	3654	4175	4932	5827	6884
H/H. Nos.	610	673	761	861	975
H/H. Sizes	5.99	6.20	6.4	6.7	7.0

Here the household size have been assumed ascending trend comparatively lower trend than chatahment area figures shows more consciousness of adopting family planning in shahar area.

Density : Considering the projected population, the density per acre has been worked out for the shahar area, are as follows.

Table 4.8 : Gross Density of Population over Shahar Area Upto 2000 A.D.

Pop./Area	1981	1985	1990	1995	2000
Area in acre	1235	1235	1235	1235	1235
Population	3654	4175	4932	5827	6884
Density per acre	2.9	3.3	3.9	4.7	5.5

Aspects of Migration : It is hoped that the migration will increase gradually in the shahar area. Presently, no reliable series date on migration aspects of upazila shahar are available to carryout an intensive study. From the field survey in the study area, it was observed that only 1.0% of households are from outside settled there in the occupation of trading. There are some seasonal migration into the shahar by stone collectors and agril. Labourers, but no reliable series data are available. Now, if we assume that @ 1.0% of the peoples are migrants, then consequently in the years 1990, 1995 and 2000, there are respectively 49, 58 and 68 peoples would be migrants.

Table 4.9 : Migrants and Projected Population

Year	Population-in Total	Migrants	Population
1985	4216	41	4175
1990	4981	49	4932
1995	5885	58	5827
2000	6952	68	6884

4.2 Labour Force and Employment :

Determination of labour force and employment is essential for the preparation of any development plan. For that purpose forecasting of labour force and employment of the shahar population upto year 2000 A.D. have been made.

Table 4.10 : Forecasting of Labour Force of Shehar Area,
1985 to 2000 A.D.

Population	1985	1990	1995	2000
Shahar Population	4175	4932	5827	6884
Population (Over 10 Yrs. are 75%)	3131	3699	4370	5163
Labour force (as 45.1% of population)	1882	2224	2627	3104

N.B. Calculated from B.B.S. Mauza and Thana Statistics, 1981.

Employment : The agril, sector share about 75% of total labour force, which is largest, Whereas, manufacturing sector shares only 3.68% and business sector 4.5%. But it can be assumed that in the agricultural labour employment there are over employment and also under employment, again seasonal unemployment is prominent. With the increased investment in different occupations by public and private sector, it can be hoped that new employment opportunities will be opened and more peoples could be provided in future.

4.3 Land Requirements and Provision Standard :

Design population is the basis for measuring land requirements in the upazila landuse plan. The following table gives the design population for the upazila shahar.

Table 4.11 : Design Population for Housing and Other Services

Population	1985	1990	1995	2000
Design population for Housing (Shahar Pop. plus migration)	4216	4981	5885	6952
Design population for other Services (Catchment Pop.)	7184	8385	9787	11424
Assumed migration in Catchment area @ 1.0%	71	83	97	114
Total (Catchment area) Population	7255	8468	9884	11538

CHAPTER - FIVE

5.0 LAND USE PLAN

5.1 Planning Approach, concept, planning principle :

The Planning approach considers two principles for the Upazila Shahar.

The status of the Upazila and the Upazila Shahar in terms of economic in the context of the Zila and the special development situation is characterised by linear development.

The existing land use map shows that the Shahar has so far been developed on both side of the river of the Shahar and the new developments are taking place at some outlying areas.

Adopted planning approach :

The following approach have been adopted.

- A. Soluation of the problems of concentration of develop-ments along the main road.

Perhaps it is not possible to suggest a reverse trend without initiating a contentric growth pattern. But in order to confront that trend, it is necessary to induce developments to the north and south by proposing peri-pherel links with the present road.

- B. Staged Sub-Urban development.
- C. Cost effective approach.

A cost effective approach implying provision of infrastructure according to the levels of density has been considered.

- D. Provision of adequate access and environment improvement.

The present state of converting agricultural land for housing may not be wise. It may be useful to lay down the provision of access and basic services before these rural type residential areas which are presently consisted and unaccessible or inadequate by accessible.

Concept :

Preparation of land use plan involve different stages. The prior condition of the preparation of the rational land use plan is to collect correct socio-economic information and existing land use of the study area. The data on flood characteristics, economic level of people and historical importance of the town, water supply, drainage, sanitation, electricity, telephone and housing have been collected from the field level. The trend of future township is also important. On the whole, any kind of investment whether economic or social should be based on the well thought out land use plan prepared for long term basis which can also be revised periodically in every 5 to 10 years basis. This will also ensure the cost minimum different schemes based on the land use plan.

Planning Principles :

In proposing the draft land use plan, the following principles seem to have been rational in the prospective of the Upazila Shahar.

- i) The administrative boundary of the Upazila is considered.
- ii) An area of about 1235 acres are taken for the prospective township of the Upazila Shahar in and around the Upazila Parishad complex.
- iii) The Physical condition of the Upazila as well as the study area are considered important.

- iv) The socio-economic conditions of the study area are considered vital.
- v) The land level is considered as important element.
- vi) The existing nature of developments are mostly kept in tact.
- vii) The value of land is also considered.
- viii) The reserved of the area are taken into consideration.
- ix) The concept of zoning is also considered as far as practicable.
- x) The road linkage are proposed considering the various importance of different roads.
- xi) Different essential services have been proposed in the vicinity of large residential area, primary School, mosque and commercial services.

5.2 Plan Description :

Major perspectives : The study and the land use plan have been following major perspectives :

Social and physical infrastructure development are based on the projected population of the Shahar and the sphere of influence, future economic development at Upazila level.

These have actually governed the land uses and the regional and local transportation net work have also induced land uses and localized them. The land use plan is described below :

In the preparation of the land use proposal, it has been tried to the best to keep the existing situation undisturbed. The broad land use has been prepared on an area of 1235.00 acres equivalent to 499.80 hectares. The road side development has been proposed have to save the additional cost for new road linkages and considering the low lying character of land. All the services and facilities are proposed on an area of 297.33 acres of land inclusive of existing land use. Most of the land in and around Upazila complex which comprise about 65 percent of the total area are kept for agricultural uses. Areas have been earmarked for different functional uses like government administration, residence, commerce, industries etc. Which may be required by the beginning of the next country.

Agriculture: The agricultural land occupise 65.83 percent of the planning area. These will serve as open space and will help to keep the environment free from pollution. In all the mouzas of the Shahar area, the agricultural land are scattared.

Commerce: An area of total 10.29 acres are proposed for the commercial activities which include markets and shops. The existing markets and shops are kept intact. The shops along the road side are not proposed for demolition but new shopping area is proposed along side on an area of 0.83% in Gowain and Purnagar Mauza.

Industry: Considering the transportation facilities for incoming of the raw materials and out going of finished products industrial estate of 5.0 acres have been proposed by the side of the major road which has connected to district head-quarter. in Purnanagar Mauza.

Education: Now new educational institution have been proposed. Considering the financial constraint, along with new institutions, extension of the existing institutions have been suggested which will meet the demand of the growing population up to the year 2000 A.D. A College is proposed in Gowain Mauza.

A total area of 12.44 acres of land use proposed for educational institutions which comprises 1.00 percent of the total area.

Health: Existing Upazila health complex and a dispensary has been extended to meet the growing demand for health care up to the year 2000 A.D. in the Upazila Shehar and its catchment area. A total area of 8.01 acres of land has been proposed for the health services which comprises 0.65% (acres) of the total area.

Administration: Besides, the administrative centre of the Upazila complex, there are also other government and semi-government offices in different mouzas of the Upazila Shehar with some extension a total of 11.25 acres of land has proposed for Upazila complex, total area of 19.61 acres proposed for administration comprises 1.58 percent of the total area.

Recreation: Recreation includes cinema hall, play ground, stadium and park. As there are play grounds in all the educational institutions, no new one is proposed. But a park on riverside in an area of 2.77 acres has been suggested and a Stadium of 7.23/acre in Gowain Mauza.

Socio-cultural: Socio-cultural activities includes community centre, religious facilities and cemetery. A total of 3.5 acres of land which comprises 0.28 percent of the total area has been proposed for these facilities. Cemeteries are suggested by the side of the mosque in the cases.

Residential: Except the existing settlement areas of the Upazila Shahar, one new housing estate for the government employees have been proposed. The housing areas are sub-zoned in different mouzas which covers an area of 94.02 acres and the government employees housing estate has been proposed nearby Upazila centre. The existing housing areas will remain undisturbed. A total area of 216.39 acres of land comprising 17.52 percent of the total area have been proposed for the residential purposes.

Urban Services: For urban services a total of 10.42 acres of land have been proposed which is 0.84 percent of the planned area. Urban services include post office, telephone exchange, police station, ferry ghat, bus. Bus stand is proposed to the eastern end of the road connecting to Sylhet. It will save the town from congestion. A fire brigade office have been proposed and a Telegraph Office have been proposed south of upazila complex.

Urban Deffered: An area of 30 acres which is 2.42 percent of the planned area has been kept under deffered which will be used gradually as the town expands mostly by the year 2000 A.D. The specific purpose of this deffered is not mentioned in the plan. The area may be used for the expansion of the administration and important commercial use.

Reserve: An area of 67.82 acres which is 5.49 percent of the planned area has been kept reserve. The reserve area include ponds, beels, river area etc.

Roads : A Major roads have been proposed to be 60' wide which will connect the district road and the secondary road of 40' ft. width have been proposed for linkage within the Upazila. The local roads have been proposed which are of 24' ft. width for use of the village and other primary uses.

TABLE : 5.1

FUNCTIONAL USES AND ESTIMATED LAND REQUIREMENTS UPTO 2000 A.D.
ACCORDING TO THE PROVISION STANDARD

Functional uses	Design Population	As per TOR provision	Land Req.d.as per TOR(Acr.)	Existing Area		In %	Proposal (including Existing Area)		Prop. in %
				Acres	Hectare		Acres	Hectare	
1. Commerce & Industry :									
a. Commerce	11424	1.5 Acre/ 1000 served	<u>17.13</u>	<u>5.12</u>	<u>2.07</u>	0.42	<u>10.29</u>	<u>4.16</u>	0.83
b. Industry	"	"	"	<u>1.70</u>	<u>0.69</u>	0.14	<u>6.70</u>	<u>2.71</u>	0.54
2. Education :									
i) Primary/ Nursery	6952	2 acres/ 5000 served	<u>10.38</u> <u>2.78</u>	<u>3.44</u> <u>0.63</u>	<u>1.39</u> <u>0.25</u>	0.28	<u>12.44</u> <u>3.39</u>	<u>5.03</u> <u>1.37</u>	1.01
ii) Secondary School	11424	5 acres/ 20,000 servd.	2.85	2.18	0.89		3.42	1.39	
iii) Madrasa/ Vocational	"	5 acres/ 30,000 "	1.90	0.63	0.25		0.63	0.25	
iv) College	"	5 acres/ 20,000 servd.	2.85				5.0	2.02	
3. Health:									
i) Upazila Health complex	"	5 acres/ 20,000 Served	<u>5.13</u> <u>2.85</u>	<u>4.01</u> <u>4.01</u>	<u>1.62</u> <u>1.62</u>	0.32	<u>8.01</u> <u>6.46</u>	<u>3.24</u> <u>2.61</u>	0.65
ii) Dispensary/ Maternity Child Care Clinic	"	1 acre/ 5000 Served	2.28				1.55	0.63	
4. Administration:									
	"	12 acres per Upazila	<u>12.0</u>	<u>8.36</u>	<u>3.38</u>	0.68	<u>19.61</u>	<u>7.94</u>	1.59

Functional uses	Design Population	As per TOR provision	Land Reqd. as per TOR (Acr.)	Existing Area		In %	Proposal (including Existing Area)		Prop. in %
				Acre	Hectare		Acre	Hectare	
5. Recreation :									
i) Cinema Hall	11424	0.5 acres/ 20,000 Served	$\frac{8.94}{0.28}$				$\frac{10.0}{4.05}$		0.81
ii) Stadium/ Play Field	"	3 acres/ 20,000 Served	1.71				7.23	2.93	
iii) Parks/ Open Space	6952	1 acre/ 1000 Served	6.95				2.77	1.12	
6. Socio-cultural:									
i) Community Centre	11424	1 acre/ 20,000 Served	$\frac{3.45}{0.57}$	$\frac{1.65}{0.67}$	$\frac{0.67}{0.13}$		$\frac{3.5}{0.75}$	$\frac{1.42}{0.30}$	0.28
ii) Mosque/ Idgah	"	0.5 acre/ 5000 Served	1.14	1.65	0.67		1.65	0.67	
iii) Graveyard	6952	5 acres/ 20,000 Served	1.74				1.10	0.45	
7. Urban Service :									
i) Post Office	11424	0.5 acre/ 20,000 Served	$\frac{2.27}{0.28}$	$\frac{7.42}{0.23}$	$\frac{3.0}{0.09}$	0.60	$\frac{10.42}{0.23}$	$\frac{4.22}{0.09}$	0.84
ii) Telephone Exchange	"	"	0.28	0.20	0.08		0.44	0.18	
iii) Police Station	"	2 acre/ 20,000 Served	1.14	1.25	0.51		2.25	0.91	
iv) Ghat/Bus Station	"	1 acre/ 20,000 Served	0.57	0.46	0.19		1.46	0.59	
vi) Helipad/ Fire/ Others				5.28	2.13		6.04	2.45	

Functional uses	Design Population	As per TOR provision	Land Req. as per TOR (Accr.)	Existing Area		In %	Proposal (including Existing Area)		Prop. in %
				Acre	Hectare		Acre	Hectare	
<u>8. Residential:</u>	6952	100 person/ac. (net density)	69.52	122.37	49.52	9.91	216.39	87.57	17.52
<u>9. Urban deferred:</u>		10% of total build-up area	123.0	-	-		30.0	12.14	2.43
<u>10. Reserves:</u>		Pond, River etc.		67.82	27.45	5.49	67.82	27.45	5.49
<u>11. Roads:</u>				19.0	7.69	1.54	26.87	10.87	2.18
Major	60'						2.55	1.03	
Secondary	40'			17.5	7.08		21.77	8.81	
Local	24'			1.5	0.61		2.55	1.03	
<u>12. Agriculture:</u>				994.11	402.31	80.49	812.95	329.0	65.83
				Total: 1235.0	499.8	100.0	1235.0	499.8	100

Cultivation/
Ag. Farming

Land requirements by provision standards :

On the basis of designed population the following development projects are identified and land requirements are determined for housing and other services and facilities on the basis of provisions standard suggested in the terms of reference. But these provision standards are not strictly followed but adopted with modifications. The preceding table gives a list of identified projects and land requirements for the period 1990 to 2000 A.D.

The Upazila is very interior area on the north-eastern side of the country. The maximum people of this Upazila are illiterate. Population planning and birth control is not encouraging. We have justified from our study the existing area must be expanded because population upto 1990 to 2000 A.D. will be increased more or less double. So we have decided 17.52 percent (216.39 acre) land requirements for housing within the upazila shahar. For the development of the upazila shahar, emphasis will be given sectoral development which will involve deconcentration of activities. In order to ensure planned development of these activities in future, a physical planning framework will be required to ensure better utilization of land to help promote planned development.

CHAPTER - SIX

6.0 PROGRAMMING AND IMPLEMENTATION

6.1 Priority Actions, Cost Implications :

Priority actions : Development of a large number of Upazila and Zila Shahars throughout Bangladesh is a very tough job for the Government of this poor country. Mobilization of financial and other resources is a typical problem. Availability of external resources is not easy. The international fund giving organizations will found the projects out of which cost can be recovered easily. Considering this view the following priorities are relevant.

- a) Development of revenue earning project sites.
- b) Development of accesses.
- c) Acquisition and development of proposed road and commercial spaces.

The spaces and sites for different uses are shown in the land use map. The revenue earning projects like improvement of commercial and industrial areas will get highest priority. The residential area will be developed gradually with the increase of economic activities. Expansion of utility services and facilities will then get the preference and comes in the areas of priority action.

The Upazila administration is still under a process of organisation and the physical facilities for the upazila complex are required to be created on priority basis for developing an efficient upazila administration. A sizeable proportion of the block allocation of funds to upazila is likely to be spent in such priority schemes. As the population in the upazila headquarters area is growing, construction of structures are rapidly increasing and density of population is increasing. This process will require some of the urban services such as pure water supply and

drainage systems are to be provided on priority basis. One of the important tasks of the upazila administration will be preparation of separate master plans for the essential services maintaining the proposed road as noted above and direct the available resources for creating such facilities on the phased programme. Investment in construction of roads within the upazila headquarters is another essential priority action. Apart from the growing traffic in the shahar, the rapid construction activities sectors will trend to create problems day by day in maintaining the proposed alignment of roads and natural drainage unless the land is acquired for the purpose of roads with essential width.

The main objective will be guidance of development in such a way that creation of slums and unhygienic areas are avoided as far as possible in a suitable where provision of adequate urban facilities such as sewerages, drainage etc. , lag behind the increase in population density. In housing sector there most important tasks will be the development of standards and introduce an effective system of regulation to ensure that and construction activities are carried out in conformity with the general landuse and physical plan of the shahar. In this regard it may be borne in mind that private owners would desire to increase the level of density and to raise the revenue income and thereby to pay for the municipal services.

Cost Implications :

Resource constraint is one of the great barriers towards implementation of the land use plan of the Upazila Shahar. So in preparing the plan, it is essential to keep in mind about the cost of the proposed services and utilities. In this respect, care has been taken to work out the estimated cost of structures and roads in context of the Upazila.

For this purposes, material and labour cost in the local level have been collected and the average rate of construction of buildings and roads have been estimated which may help in decision making for the implementation of different projects. A table has been given below showing the estimated rates of different types of construction.

TABLE : 6.1 Cost implications of buildings and roads

Types of construction	Estimated rates (per sft.)
Pucca Building	550/-
Semi-Pucca Building	325/-
Pucca road including earth filling.	300 (per Rft.)
Kutchra Road	80/- (per Rft.)
Land development cost with services and facilities (per acre)	2,00,000/-

Priority action :

Considering the resource constraints, the proposals of the plan have been listed in priority actions starting from 1991. A list of the priority action programme is given below :

- i) Earth filling is necessary for any construction in and around the upazila shahar because the general land elevation is below the flood level. The shahar has been developed in the linear pattern along the side of the river and roads.
- ii) Government and semi-government offices in different mauzas of the upazila shahar with some extension a total of 3 acre land has been proposed for upazila complex have been listed in priority action, starting from 1991.

- iii) Major roads which has been proposed to be 60' wide and the secondary road of 40' wide and the local road have been proposed to be 24' ft. width have been proposed for linkage with different upazila & union have been listed in priority action, starting from 1991.
- iv) Nursery School, Primary School, electrical sewerage and water supply have been listed in first priority action.

6.2 Phasing :

The list of priority actions mentioned earlier have been divided in the three phases consisting of 5 years each starting from 1991 i.e.

First Phase : 1991-1995
 Second Phase : 1996-2000

Phase wise establishment of different services and activities are given in the following table :

TABLE : 6:2: Phasing

First Phase 1991-1995	Second Phase 1996-2000
a) Government Offices and residence	a) College
b) Nursery School and Primary School.	b) Technical School.
c) Community Centre	c) Agricultural School.
d) Roads	d) Modern Shopping Centre.
e) Electrical, Sewerage and Water supply.	e) Rest House/Dakbanglow.
f) Industrial Estate	f) Park
g) Embankment	g) Stadium

Urban defered :

Urban deferred areas are shown on the plan. These areas would be utilized when necessary, specially, if actual population exceeds medium forecasting.

6.3 Development Control :

It is obviously true that, development control will be the most important element of plan implimentation especially in a situation of investment limitations. The provision of the plan relating to development of infrastructures and urban services will not possibly keep pace with the tempo of development and the infrastructures will not be available in time. There after, landuse decisions for investment will tend to be arbitrary and haphazard. Development in housing is also likely to be unplanned. In order to overcome these problems and effective development control system has to be evolved and proper machinery have to be created for its implementation.

To ensure timely implementation of the plan provisions the implementing authority must have some legal power. The plan should be approved by the Government. To implement the Upazila plans on an uniform basis there should be some rules and regulations containing powers to acquire land and to impose development control etc. like East Bengal Building Construction Act-1952 or Town improvement Act etc. there should be a committee consisting of people's representatives, other development and administrative officers under the authority of the Upazila parishad to control landuse provisions and to review it from time to time.

The most important requirement will be proper institutional development for further detailed planning and development of appropriate standards for regulation of physical development activities. This will include

introduction of system of mandatory planning permission from the upazila administration for both public and private development schemes. Here also have another important consideration is the recovery of municipal services costs. This would gradually improve the financing budget of the urban authority on the one hand, induce the private developers to raise density levels to improve their income and capacity to consume and pay for adequate services.

6.4 Monitoring review :

In the proposed land use plan the development of all the sectors have been incorporated. The upazila parishad and the sector development agencies are responsible to carryout these development activities.

A well Co-ordination is needed among the development agencies and monitoring is essential at local, regional and national levels. The upazila parishad who are the care taker of the plan at the local level should monitor the progress of various sectors to the higher levels of the government.

The development of upazilla centre is the Government's key strategy for social, economic and infrastructural upliftment of the upazila region. It forms an integral part of the national policy of social-economic development and contributes to the national development efforts. A sizeable portion of the development budget of the upazila comes from the national budget. The allocation of fund will consequently be linked with the priorities of schemes at upazila level and the total fund requirement at a particular time. The allocation will also depend upon the performance and absorbing capacity of each upazila. This will necessiate review and monitoring of the implementation of the plan.

Conclusion and recommendation :

Conclusion : Upazila Land Use Plan is a very important concept for the plan development of the Shahar. So, this Land Use Plan has been prepared for an area of surrounding upazila headquarters. For this purpose, it is necessary to find out the potentiality of the upazila whether these can be properly utilized. So, land use survey and socio-economic survey were conducted to have an idea about the existing condition. Hierarchy of settlement has also been found out in the upazila.

The proper implementation of the plan will depend mostly on the people's participation and the willingness to follow different proposals set-forth in it and also the sincerity of the agencies responsible for doing it. The financial and resource constraint may be a handicap for the full implementation of the plan. Annual flood also effect in the upazila shahar which will also act as a hindrance to the plan.

Recommendation :

The land use plan has been prepared for a long term period which may be implemented by the year 2000 A.D. or beyond. The financial and resource constraint together with the large number of proposals cannot be implemented all at a time. Therefore, the identification of the priority programmes will help to recommend the following measures for its effective implementation.

1. The government offices and staff quarters has been proposed near upazila centre are of immediate priority for the development of the shahar.
2. A Bus Stand is proposed and a major road connecting to Sylhet are also of vital important.
3. Relivant effective legislation should be enacted for implementation of the plan.
4. A Upazila planning Officer should be appointed from among the planning graduates who can better deal with the implementation of such plan.