

Urban Development Directorate
Ministry of Works
Government of the Peoples
Republic of Bangladesh.

LANDUSE MASTER PLAN
ADAMDIGHI UPAZILA
BOGRA DISTRICT

May-1992

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Urban Development Directorate
Ministry of Works
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Republic of Bangladesh

LANDUSE MASTER PLAN

ADAMDIGHI UPAZILA
Bogra District

Prepared by the
Bogra ADAMDIGHI UPAZILA
Land Use Master Plan
Working Group
May 1997

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Urban Development Directorate Ministry of Works Government of the Peoples' Republic of Bangladesh

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Section 1 INTRODUCTION

The present report has been submitted in accordance with the agreement signed between the U.D.D. and the Design Associates Limited. This report is primarily based on the data collected from field survey particularly focused on proposed landuses and planning aspects of the study upazila.

1.1 *Background of the Project*

The government, considering the present socio-economic condition prevailing in Bangladesh, recently took decision of administrative re-organisation. The upazila system is the outcome of such scheme. The upazila system has two fold interests. It brought a local level activities in the lime-light and as well as it has connected the distant people to the government's activities. The upazila has been recognised as the most significant tier of administration to supervise any activities at upazila level. It is also aimed to see that the local people representative should take part to plan and develop all social, economic infrastructural upliftment of the upazila level. This also reflects the national policy of bringing development in administration and service facilities to the door step of the rural masses and to ensure better delivery of government services to the people.

The decentralisation of administration has made an influence on the increase of population and urban activities at the upazila shahar. Therefore, the upazila headquarters will require to accommodate the surplus rural population. In the light of the above circumstances, it is felt that the upazila shahar should grow up expeditiously and the preparation of the landuse plan for such upazila headquarters is of utmost importance for better utilisation of scarce land, people and natural resources.

1.2 *Project Objectives*

The terms of reference (TOR) of the of the Urban Development Directorate indicates that the following objectives of the land-use plan of the upazila shahar.

- * Improvement of quality of life in rural areas.
- * Provision of technical back up for the planned growth of settlements.
- * Control of public and private development through physical planning approach.
- * Enhancement of capability of physical planning in the private sector.

1.3 *Scope of Services*

The present report will cover the following aspects related to the preparation of land-use plan of the upazila shahar.

- * Determination of the Study Area for survey and data collection.

BANGLADESH ADMINISTRATIVE DIVISIONS

- * Detail existing Land-use survey.
- * Collection of socio-economic and basic demographic information.
- * Analysis and completion of the data and information to forecast future population and land requirements for various services and facilities.
- * Development of detailed plan for Upazila shahar.
- * Development of framework and strategy for management and control and institutional arrangement for effective implementation of the plan.

I N D I A



B A Y OF B E NANG KADISE
IN STRATIVE DIRECTIONS

BANGLADESH ADMINISTRATIVE DIVISIONS

Section 2

ADAMDIGHI Upazila: In its District Context

For the purpose of land-use plan of the upazila shahar the basic information of the upazila as a whole is important. It in fact helps to visualised the need of the people.

2.1 Selected Facts of the ADAMDIGHI Upazila

The data presented below has been compiled from the District Statistics: 1983 published by the BBS.

1. Area : 171 square kilometers
2. No. of Unions : 7
3. No. of Mouzas : 114
4. No. of Villages : 214
5. No. of Households : 23,832 (1981)
6. Average Household Size : 5.6 persons

7. Population Size :	Number

1981 :	1,32,690
1974 :	1,06,865
1961 :	1,44,264

8. Density of Population : 776 persons per square kilometer

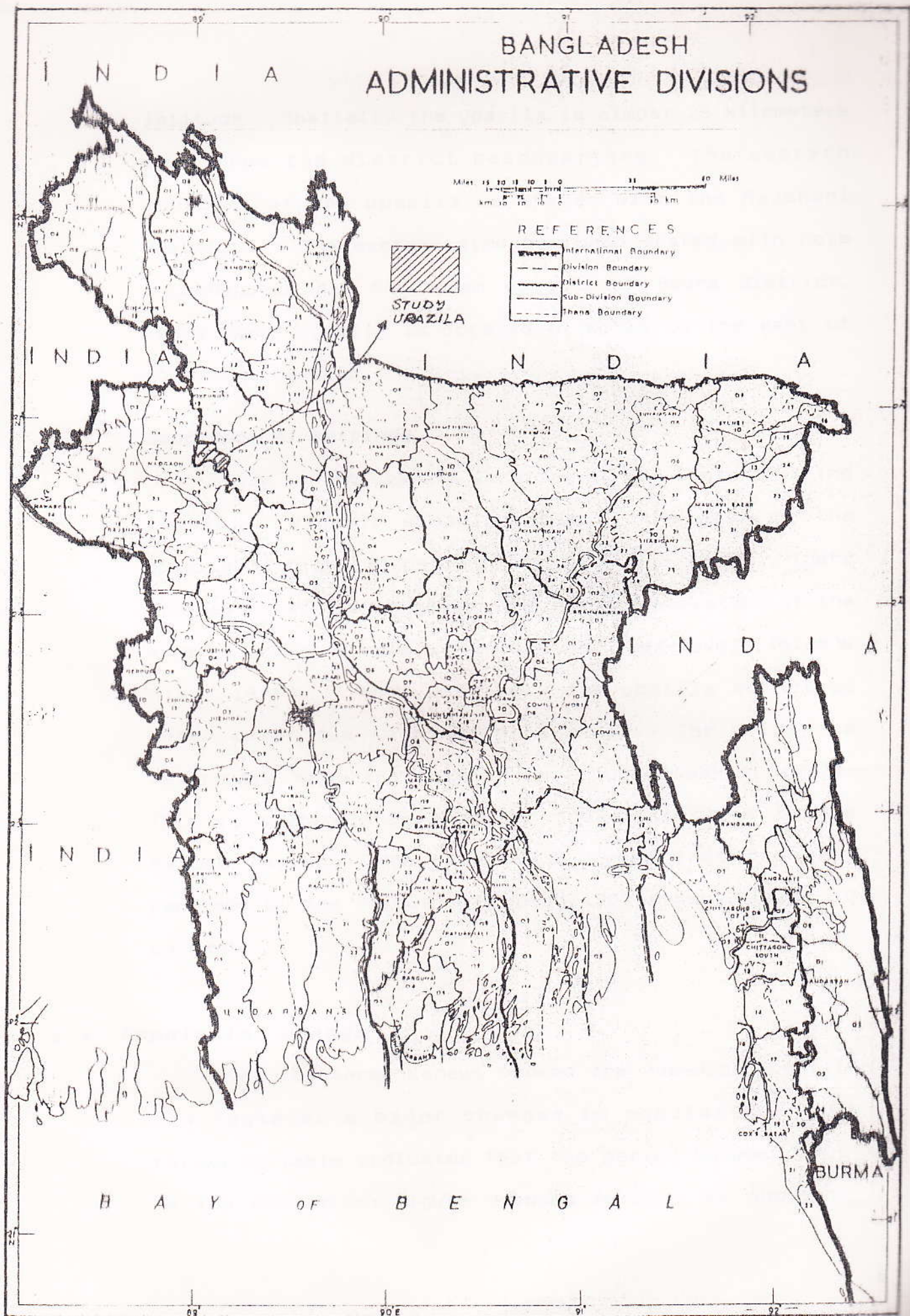
9. Population Sex Ratio: 105

2.2 Location of the Study Upazila

This is one of the 16 upazilas of Bogra district locating in the south-western part of the district. More specifically the upazila is located at the intersection of $89^{\circ} 10'$ E longitude and $24^{\circ} 5'$ N

Miles 15 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000

	International Boundary
	Division Boundary
	District Boundary
	Sub-Division Boundary
	Thana Boundary



latitude. Spatially the upazila is almost 25 kilometers away from the district headquarters. The western boundary of the upazila is shared with the Rajshahi district. The eastern side has been shared with both Dhubchanchia and Nandigram upazila of Bogra district. Bogra Sadar upazila is located directly to the east of Adamdighi upazila.

2.3 *Geographical Settings*

This is the upazila locating in the Eastern Barind region. Broadly speaking most of the area of the upazila is high (90 percent / Source: BBS 1983). There are maps that also suggest the average elevation of the area is about 23 meters from the mean sea-level (Islam & Miah: 1974). More precisely the upazila do not go under water due to monsoon rainfall. The soils are relatively hard and reddish in colour (Rashid: 1967). This is particularly true for the areas close to the Barind region. The broad soil types that has been recorded by the census are doash: 90 percent, Etel: 10 percent.

2.4 *Population Change*

Over the three census period the Adamdighi upazila did register a major changes in population. The following table indicates that the period between 1961-74 the population figure dropped by over 37 thousand:

indicating a population decline of about 26 percent. The comparable figure for the period 1971-81 is about 26 thousand - resulting an increase of 24 percent. This

Table 1: Changes in Population

	1961	1974	1981
Population	1,44,264	1,06,865	1,32,690
Changes in %	---	- 25.9	+ 24.2
Rate of change		1.99%	3.45%

Source: District Statistics - 1983

simply suggest that in the later period (1974-81) the population grew more than the previous period (1961-74). Another way of seeing the data is to find out the rate of change in the two period. This difference in 1961-74 may be explained as the out migration from the upazila.

The present paragraph attempts to describe the situation of population in the upazilas shared boundary with the study upazila. Table 3 clearly indicates

Table 2: Population Variation of Selected Upazila

Upazila	1961-74	1974-81	1961-81
Dubchacha	43.42	20.03	72.14
Akkelpur	N.A.	17.51	N.A.
Nandigram	50.56	27.33	92.78
ADAMDIGHI	- 25.90	23.49	91.48

that the study upazila has fairly lower rate of changing population except the figures of Nandigram.

2.5 Number and Distribution

In order to examine the population distribution within the upazila the table 3 has been compiled. It suggests that the Adamdighi upazila has 6 unions and of which the Champapur Union has the lowest population. On the other hand Santahar Union has the highest population. It is also important to note that in the Small Area Map, the area for each union has been provided but did not mention unit of area. Therefore the present study group fails to calculate the density of population, which is a key parameter to determine the nature of population distribution. However another why of seeing the data is to calculate average house hold size. The lowest house hold size is registered in Adamdighi Union and the highest house hold size appeared to be in Champapur Union. It has an average house hold size of over 5.6 persons. the corresponding figure for

Table 3: Population Distribution (Union-wise)

Unions	No. of Household	Population	Household Size
Adamdighi	3490	19,050	5.45
Champapur	3098	17,245	5.56
Chattiangram	3950	22,197	5.61
Kundagram	3333	18,413	5.52
Nasratpur	3289	18,196	5.53
Santahar	6672	36,824	5.53

ADAMDIGHI			
Upazila	423,832	1,32,690	5.56
Bogra			
District	4,92,914	27,27,967	5.53

the upazila is also 5.6 for the Bogra district it is 5.53 compared to 5.8 for Bangladesh as a whole. The table to also suggests that all the unions have fairly similar house hold size compare to the district's average. The distribution of population is not uniform in the upazila. The union located in the south and western side (Santahar, Chattiangram and Adamdighi) are highly populated.

The rural settlements are primarily dispersely located with a few agglomeration near haats and bazar.

2.6 *Socio-Economic Performance*

This section aims to describe and analyse the socio-economic aspects of the upazila.

2.6.1 *Employment Pattern*

Like many of the upazilas of Bangladesh, Adamdighi is no exception. It is primarily an upazila with over one-fifth of the total work force is engaged in the agricultural sectors. Along with the unemployed and household population (females and children) the upazila has nearly 54 percent of dependent population. Other than the district the upazila has comparatively higher degree of non-farm labour forces.

2.6.2 *Agriculture and Transport*

With agriculture as the main stay of economy the upazila is mainly involved with both single and double

Table 4: Cropping Pattern

	1978-79	1979-80	1980-81	1981-82
Current Fallow	1294	1201	840	828
Single Crop	20,600	20,653	20,304	19,131
Double Crop	8,500	8,620	8,850	9,137
Triple Crop	1,700	1,620	1,656	1,847
Cropping Intensity	138.64	138.49	139.48	142.61

* Figures are in acres Source: BBS, 1983

cropping system. To demonstrate the change over a period of 4 years the table 4 has been compiled. It clearly shows that the use of land for agriculture is markedly increasing. For example, in 1978-79 period the current fallow was nearly 1300 acres, but this figure dropped nearly 46 percent by 1981-82. One other observation from the table is that the acreage of single cropping decreased consistently over the period and the triple cropping acreage increased gradually with certain fluctuations. Even the cropping intensity figures increased by almost 4 percent (from 138 to 142 percent) from 1978-79 to 1981-82. The comparable figure for the district is significantly less (168.18 percent). The situation may further be analysed by seeing the irrigation data (see table 5). During the period 1978-

Table 5: Areas under Irrigation
(Different means)

1978-79	6424	Acres
1979-80	7005	"
1980-81	7155	"
1981-82	7250	"

79 to 1981-82 there was a gradual rise in use of irrigation for agriculture.

The production of rice in the upazila indicates that it has lower yield in producing Aus paddy, while the upazila has relatively high yield in Boro paddy. But by examining the data on areas under different irrigation system, it also appears that tube-well and other traditional systems are popular too. The upazila and the district as a whole is well known for its

Table 6: Rice Production Figures - 1981-82

Types	ADAMDIGHI UPAZILA			BOGRA DISTRICT		
	Area*	Production+	Yield/Acre	Area*	Production+	Yield/Acre
Aus	11,525	1,49,780	13.0	11,525	1,49,780	13.0
aman	26,619	4,62,556	17.4	26,619	4,62,556	17.4
Boro	6,610	2,08,649	31.6	6,640	2,08,649	31.4

* in acres

+ in maunds

Source: District Statistics 1983

special variety of potato and chilies. All these

figure, however, suggests that the upazila has relatively better position in the agricultural sector.

The upazila shahar is accessible by roads, railways and river. The district statistics indicate that a total of 148 kilometers of road exists in the upazila. Of which nearly 11 percent of the total mileage is pucca, while for the district as a whole this figure is almost same. The distribution of road types seems to be fairly of comparable standard to that of the district. In another way the situation is little better compare to the district's average. The road

Table 7: Road Mileage by Types

Road Types	Adamdighi		Bogra Dist.	
	miles	percent	miles	percent
Pucca	17	11.49	310	7.89
Semi-Pucca	2	1.35	125	3.18
Kutcha	129	87.16	3494	88.92
Total Mileage	148		3929	
Road Density	1.16		0.96	

density in the Adamdighi upazila is a little over 1 and the corresponding figure for the district is close to 1. The pucca road is mainly confined within the upazila headquarters and in the inter-regional road networks. The upazila registered 7 buses, 13 trucks, 10 auto-rickshaws, 475 rickshaws and 960 carts.

2.7 Socio-Economic Infrastructure

Compared to other upazilas of Bogra district the statistics Adamdighi upazila as a whole is not poor. But the upazila headquarters has very limited social infrastructures. Most of the them is located in Santahar - an important railway junction town. The number of educational institutions for the upazila as a whole is not adequate against the size of population in the upazila. Even considering the present student size, the number of teacher in the upazila is less than minimum standard. The situation can be seen in a different perspectives. According to the district statistics in 1983 there were 24,898 students of different categories

and a total of 544 teachers were involved; giving a ratio of 1:46. This ratio however varies by levels. For example the teacher-student ratio at the primary level is 1:63 as against 1:47 for the district; at the secondary level -- 1:28, comparable figure for the district is 1:25. These figures, however, can amply indicate the poor conditions of the upazila.

Table 8: Major Social Infrascitures

Infrascitures	Number
Primary School	73
Secondary Schools	17
College	2
Madrasa	16
F.P. Centre	6
Physicians	65
Charitable Dispensary	5
Cinema Hall	2

Section 3

THE UPAZILA HEADQUARTERS: the SHAHAR Area

In order to identify the catchment area a simple set of questions were asked to people. Field investigators interviewed the people at the peripheral areas of the shahar. People were requested to answer where do they shop for certain goods. Moreover, the boundary of these catchment area was identified by locating areas from where people commute to the shahar. The study area, in other words, was identified by locating areas from where people travel to the centre of the shahar more frequently for almost every purpose.

3.1 Population Characteristics of the SHAHAR Area

3.2 Age-Sex Composition

The fundamental perspectives of seeing population is the age-sex composition. It appears from the table below that nearly over 32 percent of the study population is under the age of 15 years. It may also be seen that a little over 41 percent of the population may be considered as the most active groups (age groups ranging from 20 to 49 years). It is however should be taken with a note. Because of which nearly fifty percent of them are female who are mostly confined within the domestic chores. The age-sex grouping as a

Table 8: Age-Sex Composition

Age groups (in years)	Male		Female	
	No.	Percent	No.	Percent
0 - 4	9	2.65	12	3.54
5 - 9	21	6.19	22	6.49
10 - 14	24	7.08	22	6.49
15 - 19	29	8.55	16	4.72
20 - 24	24	7.08	11	3.24
25 - 29	15	4.42	8	2.36
30 - 34	9	2.65	9	2.65
35 - 39	8	2.36	13	3.83
40 - 44	7	2.06	11	3.24
45 - 49	17	5.01	8	2.36
50 - 54	9	2.65	7	2.06
55 - 59	6	1.77	1	0.29
60 & above	16	4.71	5	1.47
Total	194	57.23	145	42.77

whole suggests that the urban population in the upazila has male dominance (57 percent).

3.3

Occupation

The survey indicates that the adult population are involved as many as four different major groups of

Table 9: Major Occupation Groups

Types of Occupation	No.	Percent
Day Labourer	39	
Farmer	33	
Business	38	
Service	18	
ACTIVE POPULATION	128	37.7
House Wife	75	
Unemployed	56	
Student	45	
Not Applicable	35	
(Children under 5)		
DEPENDENT POPULATION	211	62.3

occupation. Of which agricultural sector is main stay. Over 21 percent of the study population are engaged either in agricultural or involved as agricultural day-labourer. Over 16 percent people are engaged in tertiary sector, which signifies a better position of the upazila compared to other upazilas of the district. The table also suggests that the people in upazila have higher proportion of dependent population (over 62 percent).

3.4 *Levels of Education*

Nearly 34 percent of the sample population reported as illiterate and only a negligible number of people claimed to be able to write their names or read only. About 25 percent of the respondent has passed the primary level. In general terms the upazila sample population has a very higher rate of literacy; 66 percent. This figure is well above the district's average and as well as the national level. This may be explained that the sample was taken from the urban areas which has might acted so highly.

Section 4

Adamdighi Shahar: The Existing Landuses

The sphere of influence of the upazila shahar is considered to be an area encompassing the Upazila Headquarters, from where the maximum population travelled to avail services from the shahar.

The future shahar area includes the existing built-up areas and the adjacent areas likely to grow as urban centre in the near future. The shahar area is however referred to as the STUDY AREA, which has been identified to demonstrate the existing landuses and socio-economic survey. The findings of the future township is finally identified after estimating the design population and land requirements for the shahar. In order to demarcate the study area the following aspects were considered.

- a: Existing pattern of development of Urban Services in the built-up areas of the upazila shahar.
- b: Patterns of existing transport network of the shahar and its adjoining areas.
- c: Tendency of landuse changes from agricultural to non-agricultural uses.
- d: Vacant spaces and availability of suitable land for development within the shahar area.
- e: Potentials of the Upazila Shahar for future development of Urban Services and Facilities.

The landuse map shows the existing uses of land surfaces of the upazila sadar. It, however, shows the major landuses and its artitaries of the town. The town is mainly located in the south of the road. The major concentration of the town ip, fact is next to the main inter-district high-way. The centre of the town is the Adamdighi-- named after a famous *dighi* (water body) with a major commercial area next to it. The northern portion is relatively low than the southern portion. It has been reported that the upazila normally do not go under water even in high flooding. The major impetus of the town has been interrupted because of the Santahar -- a major old established trading centre of the region locating in the west end of the upazila. The majority of the people do travel to Santahar for their various economic activities. The upazila headquarters have recently been developed. It is worth noting there are very few settlements close to the upazila headquarters. Although some of the scattered settlements are found on the other side of the inter-district high way. The other interesting observation is that the settlements tend to be agglomerated in certain points. The major administrative headquarters, however, are located in the Talson and Adamdighi mouzas. Within the upazila shahar boundary there are atleast 40 rice-mills, 1 brick-field, 1 saw-mill.

Table 10: Area Under Different Landuses

Major Landuses	Area in acres	Percent
<u>GOVERNMENT OFFICES</u>	24.85	1.36
Upazila Administrative Complex	13.41	
Upazila Health Complex	7.68	
Police Station	2.52	
Animal Husbandry Office	.77	
Post Office	.23	
Registrar Office	.06	
Union Parishad Office	.18	
<u>COMMERCIAL AREAS</u>	5.58	0.30
Bazar	5.23	
Road Side Shops	.20	
Krishi Bank	.11	
<u>INDUSTRIAL AREAS</u>	21.62	1.19
Boiler and Rice Mills	20.84	
Brick Field (1)	.68	
Rice Mill (2)	.10	
<u>EDUCATIONAL INSTITUTIONS</u>	5.61	0.13
High School	2.86	
Girls' School	1.77	
Primary School	.50	
Madrassa	.48	
<u>RELIGIOUS INSTITUTIONS</u>	5.84	0.32
Mosque	1.41	
Temple	.35	
Graveyard	3.09	
Eid-gahh	.99	
<u>RECREATIONAL</u>	1.44	0.08
Cinema Hall (1)	.20	
Club (1)	.04	
Play Ground	1.20	
<u>SETTLEMENT</u>	120.01	6.59
<u>AGRICULTURE</u>	1636.83	89.85
Total Area	1821.78	100.00

Section 5

Forecasts: The Catchment and the Shahar Area

The present section attempts to forecasts on the population size, population density and household structure in the upazila shahar. The estimated population has considered the in-migration in the shahar.

5.1 Catchment Area

The study indicates that about 53 villages that fall under the catchment are of the upazila. The total area accounts for 14,410 acres covering a population of about 46 thousand (according to 1981 census). It however appears that the catchment area tend to be circular suggesting a more uniform travel time distance. The Study Area however includes 8 major settlements (see table 11) covering an area of 1873 acres with a population of about 6500 (according to 1981 census).

Table 11: Area and Population in the Catchment Area

Mouzas	Area (in acres)	Population
Kaikuri	868	2801
Sagarpur	592	2040
Darikuri	116	138
Bhebra	153	433
Bara Akhira	438	1457
Chotta Akhira	211	1086
Pachim Singair	342	1072
Indail	159	669
Kamarkuri	118	186
Kayetpara	161	927
Kasimila	188	1035

Prasadkali	220	395
Kadama	340	612
Rambura	252	1033
Kasimala	333	869
Kusumbi	319	1129
Jorepukurdi	143	171
Mandabpur	232	446
Bamahgaon	243	648
Paikpara	351	828
Dalamba	124	723
Dahapur	186	615
Gargaon	138	467
Sialson	250	760
Talsan	465	1731
Tentulia	180	575
Adamdighi	179	797
Ujalta	165	509
Shibpur	244	1046
Jinari	588	1526
Baradighi	310	792
Mangalpur	162	307
Kumarpura	670	1816
Sanail	447	1861
Datta Baria	253	729
Sankoa	193	636
Pusinda	213	1434
Murail	639	1397
Dashkin Bishnupur	195	326
Dumurgaon	291	751
Sudin	337	1060
Lakshmipur	240	1816
Dighra	120	125
Muradpur	380	402
Kesarta	335	1089
Barabaria	291	800
Purba Dalumba	363	1505
Latibpur	213	932
Nasratpur	363	1505
Binsora	114	431
Palla	171	316

14,410

46,179

Source: Small Area Atlas, BBS: 1980

The table below illustrates the trend of population expected to increase over certain time period. In making these projections, the positive effect of family planning has been considered.

5.2 Population Forecasts

The forecast of the population in the year 2000 is likely to grow about the double the present size (table 12). This is again suggests that the shahar area followed the national level trend.

Table 12: Population Projection: Catchment Area

Period	Rate of Growth of Population Over Period		
	High(2.8)	Medium(2.6)	Low(2.4)
1981	46,179	--	--
1991	61,879	60,956	60,032
2000	82,917	80,461	78,041

5.3 Density of Population: Catchment Area

The density of population in the catchment area for the selected time period is shown in table 13. It appears that the density will increase by double by the turn of the century.

Table 13: Population Density: Catchment Area

Period	1981	1991	2000
Area (in acre)	14,410	14,410	14,410
Population	46,179	60,956	80,461
Person/acre	3.2	4.2	5.6

5.4 Population in the Shahar Area

The shahar area tends tends to be rather compact. It however, covers an area of 1821 acres having a population of nearly six thousand and five hundred. It covers 8 major settlements (see table 14).

Table 14: Population in the Shahar Area

Mouzas	Area	Population
Paikpara	351	828
Dalamba	124	723
Dahapur	186	615
Gargaon	138	467
Sialson	250	760
Talson	465	1731
Jentulia	180	575
Adamdighi	179	797

*area in acres

Source: Bangladesh Population Census (1981), Community Tables of all thanas of Bogra District, December, 1985

5.5 Population Forecast

The table below suggests that considering a medium scale population growth the shahar will grow by double at the end of the present decade.

Table 15: Population Projection: Shahar Area

Period	Rate of Growth of Population Over Period		
	High(3.4)	Medium(3.3)	Low(3.0)
1981	46,179	--	--
1991	61,879	60,956	60,032
2000	82,917	80,461	78,041

5.6 Density of Population: Shahar Area

In order to demonstrate the density of population medium rate of population increase has been considered.

Following the overall growth of population the density will also grow by double.

Table 16: Population Density: Shahar Area

Period	1981	1991	2000
Area (in acres)	1,879	1,879	1,879
Population	6,496	8,574	11,317
Person/acre	3.4	4.6	6.0

5.7 Hierarchy of Settlements

In order to identify the hierarchy of settlements the following table has been compiled. It appears from

Table 17: Settlements by Population Size

Population Size	No.	Percent
Upto 1000	167	80.7
1001 - 2000	23	11.1
2001 - 3000	9	4.3
3001 - 4000	2	1.0
4001 - 5000	4	1.9
5001 - 7000	2	1.0

the table that over 80 percent of settlements have population of 1000 or below. This clearly suggests that the upazila has settlements of smaller size. which in those isolated population is far more difficult.

The hierarch of settlements in the upazila is shown in Table 18. It appears from the table that the upazila headquarters recorded the highest number in the Matrix Score, indicating that the different services are concentrated only in the upazila headquarters. Other settlements are quite far away from services. This pattern in a way would eventually help the upazila to grow faster than it is anticipated. But the most

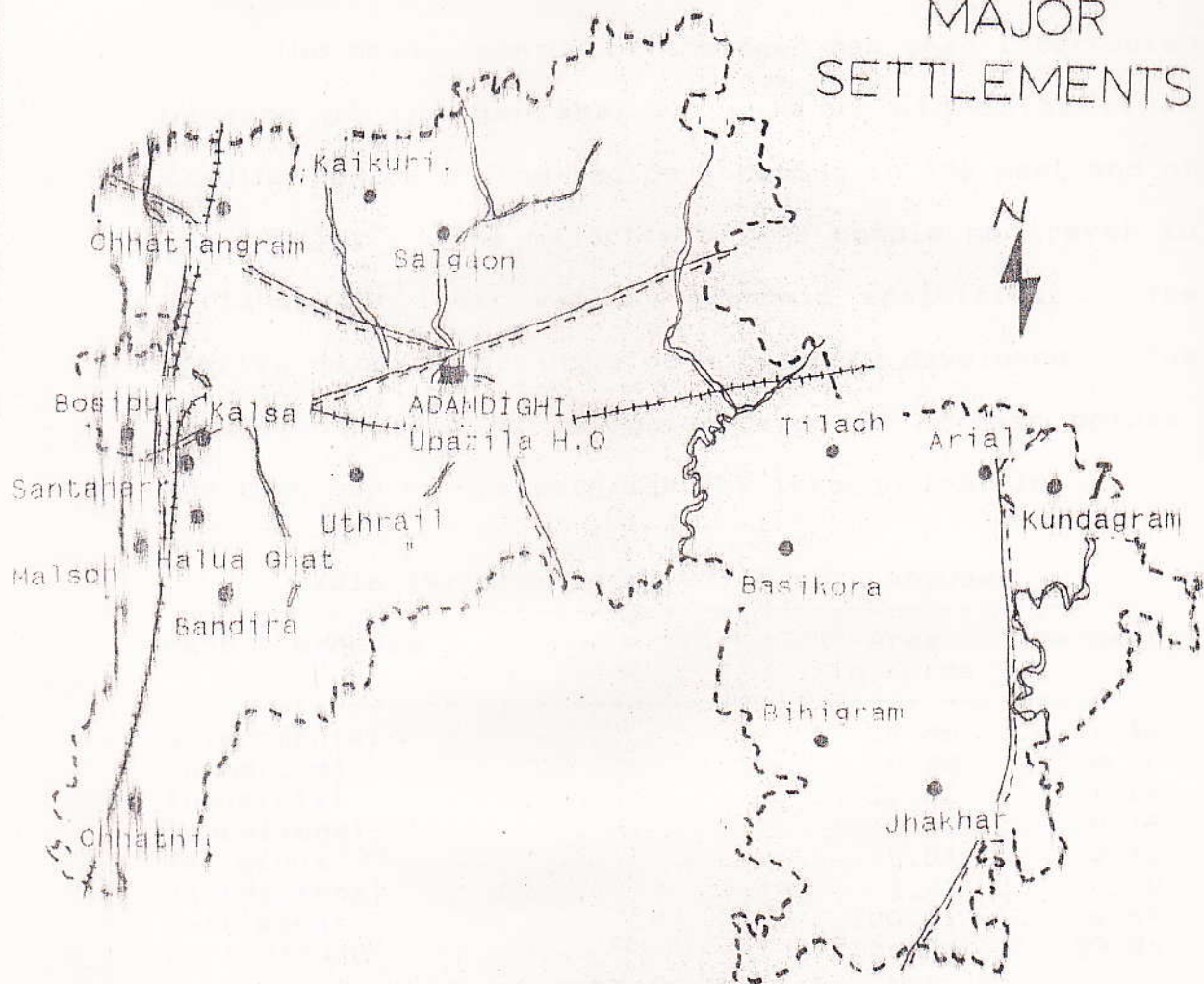
negative impetus for Adamdighi is the Town Santahar. It has got almost double the population than Adamdighi and also it has quite higher Matrix Score. It is revealed that Adamdighi would never achieve a status (in terms of business) that would surpass Sanatahar.

Table 18: Hierarchy of Settlements: Adamdighi

Service Sectors'		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	Main	
Codes with SCORES		8	3	6	4	3	5	4	3	3	5	2	1	2	3	5	3	3	2	3	SCORES	
Settlements	Pop.	Value																				
Adamdighi	6496	6.5	8	3	18	4	3	5	4	3	.	.	4	1	2	3	.	9	1	2	3	81.5
Santahar	10621	10.6	.	6	.	4	3	5	4	3	6	.	6	4	4	3	5	15	6	6	.	97.6
Arail	2179	2.2	.	3	.	.	.	.	.	3	.	.	2	1	.	.	.	.	.	.	.	11.3
Bihigram	2584	2.6	.	3	.	.	3	.	.	3	.	.	2	1	.	.	.	.	.	.	.	14.6
Jhakhar	5149	5.1	.	.	.	4	3	.	.	3	3	.	4	2	2	.	.	.	.	2	.	28.1
Chhatlangram	6509	6.6	.	3	.	4	3	.	.	3	3	.	4	2	.	3	.	3	3	2	.	59.6
Kaikuri	2801	2.8	.	.	.	.	.	.	.	3	.	.	2	1	.	.	.	.	.	.	.	8.4
Salgaon	2040	2.0	.	.	.	.	.	.	.	3	3	.	.	2	.	.	.	.	.	.	.	10.0
Basikora	2471	2.5	.	3	.	.	.	.	.	3	3	.	2	1	.	.	.	.	.	.	.	14.5
Kundagram	5385	5.4	.	6	.	.	3	.	.	3	6	.	2	2	.	.	.	.	.	2	.	29.4
Tilach	2460	2.5	.	.	.	.	.	.	.	3	3	.	.	1	.	.	.	.	.	.	.	9.5
Basipur	4493	4.5	.	3	.	.	3	.	.	3	6	.	2	2	2	.	.	.	.	2	.	27.5
Chhatni	4249	4.2	.	3	.	.	3	.	.	3	6	.	2	2	2	.	.	.	.	2	.	27.5
Haludghar	2153	2.2	.	3	.	.	3	.	.	3	.	.	2	1	.	.	.	.	.	.	.	14.8
Kalsa	4745	4.7	.	6	.	.	.	.	.	3	6	.	2	3	2	.	.	.	.	2	.	28.2
Haison	2250	2.2	.	.	.	.	.	.	.	3	.	.	2	1	.	.	.	.	.	.	.	8.2
Sandira	3554	3.5	.	6	.	.	3	.	.	3	.	.	2	3	2	.	.	.	.	.	.	22.5
Uthraill	2076	2.1	.	.	.	.	.	.	.	3	3	.	.	2	.	.	.	.	.	.	.	10.1

Service Sectors' A=Upazila Ad. Complex(8); B=Other Govt. Office(3); C=Upazila Health Complex(6); D=Family Planning Office
 Codes Details Clinic(4); E=Post Office(3); F=Telephone Exchange(5); G=Electricity(4); H=Bara(1); I=Hat(3);
 J=College(5); K=High School(2); L=Pr. School(1); M=Madrasa(2); N=Bus Stand(3); O=Railway Station(5);
 P=Industry(3); Q=Bank(3); R=Cinema Hall(2); S=Police Station(3);

Adamdighi Upazila DISTRIBUTION OF MAJOR SETTLEMENTS



LEGEND

Upazila Boundary	
Road	
Railway	
River/Canal	
Upazila Headquarters	
Major settlements	

1.6 0 1.6 Km
1 0 1 mile

Section 6 Proposed Landuse Plan

6.1 Landmarks of the Existing Landuse

The major impetus of the town has been interrupted because of the Santahar -- a major old established trading centre of the region locating in the west end of the upazila. The majority of the people do travel to Santahar for their various economic activities. The upazila headquarters have been recently developed. The settlements tend to be agglomerated in certain points. The town may be characterised by through traffic.

Table 19: Area Under Different Landuses

Major Landuses	Area in acres	Percent
Governmental	24.85	1.36
Commercial	5.58	0.30
Industrial	21.62	1.19
Educational	5.61	0.13
Religious	5.84	0.32
Recreational	1.44	0.08
Settlement	120.01	6.59
Agriculture	1636.83	89.85
Total Area	1821.78	

6.2 Planning Approach

Based on planning concepts and principles as well as practical limitations in the organization of landuses, proposal of different landuses and guideline for implementation of those are prepared. Some of the landuses may not be appropriate in near future, but if

We consider our plan period (2000 AD) those landuses will be unavoidable.

A general approach to the preparation of the 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. The existing landuses and current scheme of any project is incorporated for the plan. However, the landuse are proposed in such a way so that urban facilities are well distributed. There was also consideration of not planning compatible landuses side by side.

The road network in the proposed landuse plan is arranged in a way to obtain an efficient system of inter-communication between all parts of the shahar and its surroundings. Number of traffic along with new landuses were also considered.

In order to make an effective plan for the present upazila the following approach has been considered:

I. Agglomeration of services

Land use for different services were proposed in a central area to save agriculture land as well as to make it easily accessible to people by making a single trip. But provisions are there for further development specially for major land use types.

2. To Make It Economic:

Future landuses are planned for those areas which are geomorphologically suitable for development. For example comparatively low lands (ditches, swampy areas) were discouraged in incorporating in the plan. This was also discouraged because these land usually require more investment to offer any construction for development. On other hand these low lands provide a natural drainage to the existing shahar areas. This was done in view that presently most of the big cities are facing acute drainage problem.

3. Optimization of Present Landuse:

Attempt was also made to utilize the existing landuses. For example this plan did not ask for a college as there is a college in the close vicinity. The MCH unit has been proposed next to the upazila health complex, so that it can easily use the existing facilities. On the other hand provision is there for further expansion.

4. Public Facilities

The quality of public facilities at family level (electricity, water supply, sewerage etc.) were taken into consideration in planning the residential density and area. The proposed plan encouraged vertical extension instead of horizontal not exceeding to the 4 storied building (walk-up limit). This will save our most valuable agricultural land as well as construction

cost. This was also done since we can not ensure the supply of electricity or water supply in the near future.

6.3 Proposed Plans

The present plan proposes certain steps to be taken quite soon. This will facilitate to implement the overall plan.

6.3.1 Width of the Road

According to the TOR the width of the road in Adamdighi Upazila is not acceptable, at least the inter-regional link road. The local authority must ensure that for the minor roads, the present width will not shrink in future. The width of the major road should increase by atleast 6 feet. The present group suggests that the local shahar authority must develop some form of rules/restriction from unauthorized use of the road width.

6.3.2 Parking and Unauthorized Construction

It is perhaps well known experiences in Bangladesh that in most of the towns (the fast growing towns), parking spaces for traffic are either not designed or not a felt need. But in the perspective of the years to come, it is desirable to make provision for parking spaces. This is specially a must case for the major commercial areas locating in the heart of the town. The present plan do not show them in the map. It is

because that the developer must make provision (with the approval of the local shahar authority) for parking spaces at their own cost.

It is equally important to note that all unauthorized construction must be stopped for a healthy, clean and planned town. The unauthorized growth of town very often jeopardize the beauty and expected extension of town. Even in extreme cases the development efforts become expensive.

6.3.3 Sewerage and Drainage

Since the town has some khals, it will not be difficult to plan sewerage and drainage systems of the town. It is important, because this will help the town to be clean and healthy. Existing khals must not be used in any form except for drainage purposes.

6.3.4 Commercial and Industrial

In addition to the present commercial and industrial areas the drafted plan has proposed certain measures that should be incorporated with the development effort for the town. The primary objectives of the present plan is to generate a compact commercial area with standard road networks and other facilities. A compact and well plan will save the town from unnecessary horizontal increase in an exaggerated rate. In general horizontal increase will consume more agricultural land.

The Adamdighi shahar suffers from impetus of a planned core commercial area. The present commercial area is located around the Adamdighi itself.

The local shahar authority must take initiatives on imposing bar over developers for sufficient parking spaces, in cases of shopping centres. The existing commercial and industrial landuse is far more than that of TOR's requirement. Still the proposal is made to extend it by 3 acres. Since it is a dynamic sector of development. It is suggested to develop planned shopping centre.

6.3.5 Housing

The settlements are mostly scattered, thus enabling to form a more compact population. In the shahar the housing area covers only about 10 percent. The proposed plan thus emphasized on more compact plans. This will help in locating other social infrastructures in a reasonable distance. It is noticeable that in Adamdighi most of the settlements are away from the main road and still are rural in character. Population density per acre is 4.2. The cluster of settlement is very significant from the map. One of the significant aspects of the "Gor Gaon" settlement area is that, it is full of graveyards, and are overwhelmingly populated by muslims. On the other hand there is no graveyard in Tal Shoon area, where mostly the hindu people live.

Table 20: Present and Proposed Land Requirements

Categories of Landuses	Area in Acres		
	Existing	As/TOR	Proposed*
A: Commerce and Industry			
1: Commerce	5.6	2.5	6.2
2: Industry	21.6	7.2	23.8
B: Educational			
1: Nursery & Primary Schools	0.5	2.6	2.0
2: Secondary & College	5.1	1.6	5.1
C: Health Services			
3: Dispensary, Maternity & Child Care	NONE	1.3	1.0
4: Health Centre & Hospital	7.7	1.6	7.7
D: Administration & Judiciary (including residence)	13.5	12.0	13.5
E: Recreational Facilities			
5: Park, Club & Open Spaces	1.2	6.5	4.0
6: Cinema & Other Spaces	0.2	0.2	0.2
7: Stadium	NONE	1.0	5.0
F: Community Facilities			
8: Community Centre	NONE	0.3	0.5
9: Religious Facilities	5.6	0.6	5.6
10: Graveyard	3.1	1.6	3.1
G: Urban Services			
11: Post Office	0.2	0.2	0.2
12: Telephone Exchange	NONE	0.2	0.2
13: Police Station	2.5	0.6	2.5
14: Bus/Railway Station	NONE	0.3	0.3
H: Settlement	120.01	-	140.0
I: Agriculture	1636.83	-	-
Total	1821.78		

* including the existing areas covered by individual landuse types.

6.3.6 Socio-Cultural Aspects

Enough open space has been planned as play ground and as well as parks. Parks to be located next to the Upazila Complex and the other one will be located in relatively densely populated part of the town. Space

for stadium has been proposed, and this may be implemented when funds and other impetus are reached. Town Hall with a library facility has been proposed located in the hub of the town.

A common graveyary is planned in the outer zone of the town which will be able meet the demand of shahar as well as the people of Upazila.

6.3.7 Health Facilities

Considering the population of the town the health facility is quite up to the standard of Bangladesh. New facilities may be incorporated within the hospital.

6.3.8 Urban Services

Fire service, Bus Terminal, Electric Supply Sub-Station and Post Office have been planned. The central bus stand would located in the outer periphery of the shahar. In order to communicate with the stand, local rickshaw will play a significant role. This will help eliminating traffic congestion in the town in future.

6.3.9 Education

The shahar is in need of spaces specially for primary level education; atleast an extra land area of about 2 acres. It is to be noted that the town Santahar meets the demand for secondary and college level educational facilities. Therefore primary level educational facilities should get priority at the

upazila shahar

6.4 Conclusions

Most of the landuses and activities requested in the TOR are covered in this plan. People of Adamdighi are used to use all urban services and facilities from the next higher order urban centre; Santahar. Santahar is the municipal town of this upazila. Adamdighi was never given any importance before it was declared upazila. Even with the development of Adamdighi, people will still continue to use all services of Santahar town, which is only 5 kilometers away with a good road transport network.

There is also provision for land as Urban Deferred accounting to 10 percent of the total shahar area.

6.5 Programme and Implementation

This chapter presents a discussion on programme and implementation of the Landuse plan of the Upazila shahar. The major aspects are phasing and priority action of project, provision of urban deferred lands for future governmental uses and development control, monitoring and review of the Upazila shahar's Landuse Plan.

6.5.1 Priority Actions, 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, administration, health, education, market, shopping centres, Stadium, Park, Telephone, Power and Water supply services are also to be developed on priority basis. The idea behind this priority action is that all possible sectors of urban services and revenue income are to be harnesses alongwith expansion of residential facilities.

The standards and provision of services for in the Landuse Plan of the Upazila Shahar is in line with the present economic situation of the country. In most cases, a moderate approach is adopted in the provision of standards for each services and facilities.

It is considered that for any development of new services and facilities, land filling upto certain level may be required. As a result, cost of any project in the Upazila Shahar may include the cost of land filling.

6.5.2 *Phasing, Urban Deferred*

The present plan is prepared keeping in view the requirements for the development of services and facilities consistent with the increment changes of population. Usually, a 5000 population qualify to be a primary urban neighborhood. In cost cases, each neighbourhood and major Landuse Zones are bounded by services roads. As the plan period is divided into five

yearly phases, concern authorities advised to follow the five year development targets as per population size of the periods.

The phase-wise development proposal should however, differ in some priority areas such as, expansion of the principal road network for each land for which land should be acquired.

The present Landuse Plan is prepared on the basis of medium population projections. As a result, in future, additional land may be required accommodate changes in population size and urban services and facilities vis-a-vis for any decision regarding new projects in the Upazila Shahar. Considering the above situation, the urban deferred land is distributed over different areas within the Shahar so that a balance may be maintained in the Landuse Plan.

6.5.3 Development Control

All types of development work including changes of any landuse should be subject to planning control. It is necessary to specify the uses which will be normally permitted in various zones. Uses which create siting problems, such as filling stations, cinemas, hotels, stadium, etc. will be necessitate special consideration. Regulations regarding building heights, density, plot coverage, preservation of flora and fanuna, preservation of historic sites and various archaeological construction should be incorporated in the planning

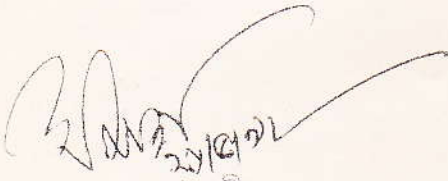
process.

At present, there are no planning rules or regulations to control growth in the Upazila Shahar. The provisions of the Municipal ordinance is applicable only for the declared Municipalities.

Hence, an appropriate planning regulation for all Upazila Shahar's and potential Urban centres should be framed urgently. For the time being East Pakistan Construction Act (EPBCA) of 1952 can be adopted for the Upazila Shahar unless other suitable measures are taken by the Government. In any case the Upazila Parishad should be the custodian of the Landuse Plan. Some one, preferably authorized officer to act as the controlling officer. He will approve proposed according to the Landuse Plan.

- সম্মতি পত্র -

মেসার্স ডিজাইন এ্যাসোসিয়েটস্‌ লিঃ, আমার আদমদিঘী উপজেলা শহরের যে
ভূমি উন্নয়ন পরিকল্পনার নকশা করিয়াছেন, তাহা আমাদের নিকট গ্রহণ যোগ্য
বলিয়া বিবেচিত হইয়াছে।


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