

URBAN DEVELOPMENT DIRECTORATE  
MINISTRY OF WORKS

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

LANDUSE / MASTER PLAN  
DERAI UPAZILA  
SUNAMGANJ ZILA

APRIL : 1989

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PURALOY KAUSHALI LIMITED  
ARCHITECTURAL AND ENGINEERING CONSULTANTS



এতদ্বারা প্রত্যয়ন করা যাইতেছে যে, দিরাই উপজেলা শহরের ভূমি ব্যবহার পরিকল্পনা সম্পর্কে পুরানয় কৌশলী নিঃ এর প্রতিনিধির সহিত আমরা বিস্তারিত আলাপ আলোচনা করি। পুরানয় কৌশলী নিঃ এর প্রস্তুতকৃত দিরাই উপ-জেলা শহরের ভূমি ব্যবহার পরিকল্পনা সরকারের অনুমোদনের জন্য সুপারিশ করা যাইতেছে।



চেয়ারম্যান,  
দিরাই উপজেলা  
২৭/০৩/৮৩

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INTRODUCTION:

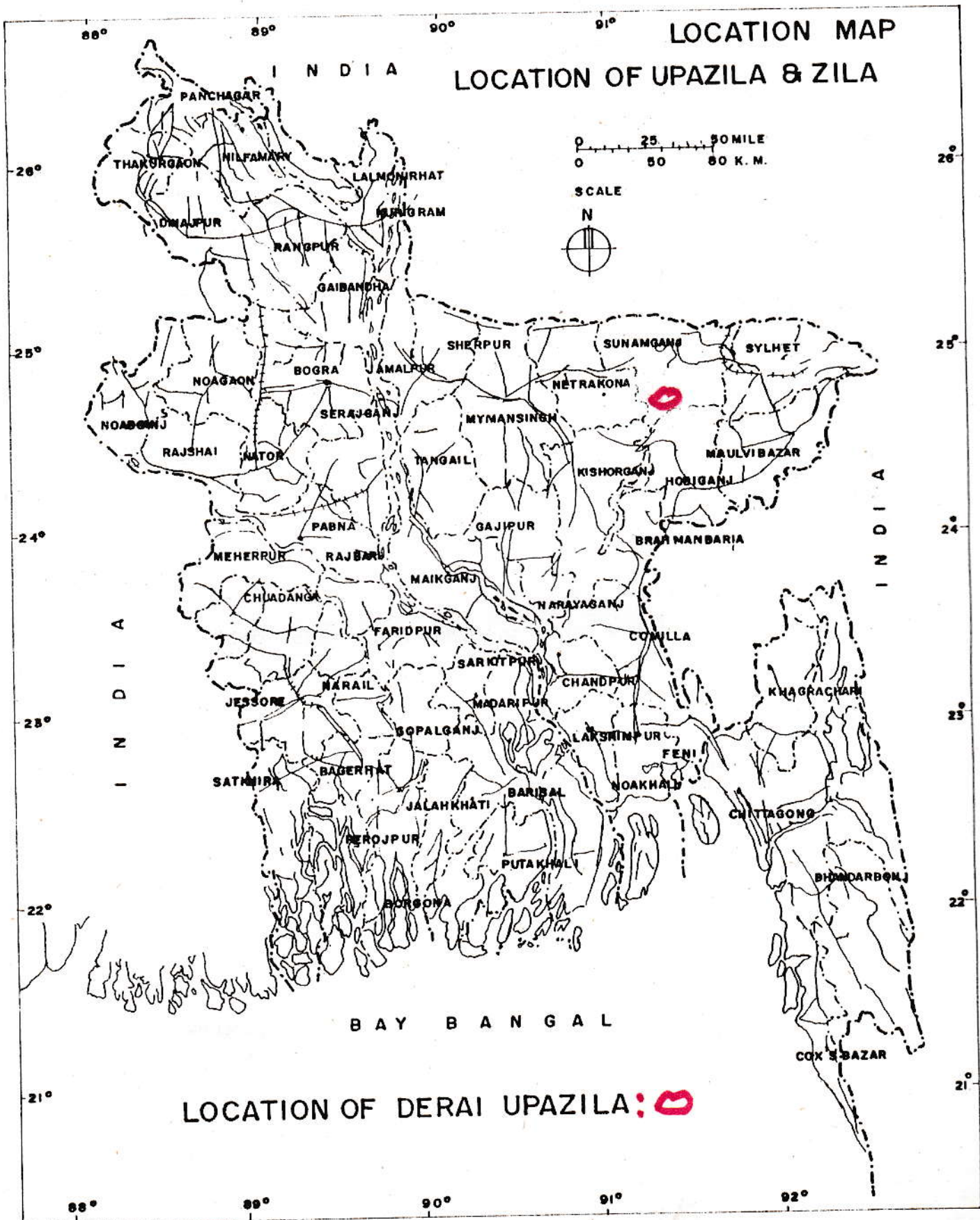
Administrative decentralization through upazila system may be termed as the most important programme of the present Government which is expected to have far reaching impact in the development at lower levels. Apart from administrative functions the programme proposes to provide public services and facilities so as to make them accessible to the rural mass and thus improving the living condition in the rural areas.

As an endeavour the programme is a positive one because of two reasons. Firstly vast majority of the population in this country are deprived of most essential basic services which ultimately hinder national development. Secondly instead of providing services in few urban centres and thus creating a top-heavy urban system, it is better to bring the services closer to the people within their easy reach. The programme also expects that along with serving as administrative centre, the upazila centres should also serve as the economic and cultural centre for the respective sub-region. In other words headquarter of a upazila will be the focal point from where all the development activities will be initiated and economic activities will be geared up. This will lead to concentration of population and urban type physical development will result. Anticipating this the programme to prepare landuse plan by the Urban Development Directorate is a sensible decision so as to have:

- Orderly development at that level.
- Maximum utilization of scarce natural and financial resources.
- Appropriate structure of such a centre with clearly defined zone of activities.
- As a whole, foundations for about 400 new urban centres in the country which will serve as the lowest tier in an appropriate urban hierarchy.

A quick look at the urban areas in the country will reveal that urbanization without planning has long ranging effects on physical and social environment of an area, which in turn not only bring miseries to the dwellers but also hamper rational and economic use of scarce land resources.

This report is the \_\_\_\_\_ of the preparation of landuse plan for Derai upazila shahar of Sunamganj zila. This is an exhaustive report covering all the aspects mentioned in the TOR.



LOCATION OF DERAI UPAZILA: 

MAP-1

THE UPAZILA IN ITS ZILA CONTEXT:

It is most important for the upazila landuse plan preparation to identify the background, location, physical and socio-cultural characteristics of the district first. Then its position, relationship with the surrounding region should also be identified. In the present chapter attempts in this regard are described in details.

2.1 Location and Physical Characteristics:2.1.1 Background:

Derai is one of the very undeveloped upazila of Sunamganj zila. Most of its areas are low-lying. It is not well communicated with zila shahar. A kutchra road has connected the zila shahar with upazila shahar.

The date of establishment of this Thana is not known. But it was upgraded into upazila in the year 1983. It is said that there were two influential men named Jit Roy and and Dijo Roy. It is generally believed that the name of the upazila was originated from the names of those influential men.

2.1.2 Geographical Location:

The upazila is situated at a distance of 87 km. from the district headquarter. It lies between 24°39' and 24°53' north latitude and 91°28' east latitude. It is bounded in the north by Sunamganj and Jamalganj upazila, in the south by Sulla, Baniachong and Nabiganj upazila in the west by Sulla and Mymensingh zila and east by Jagannathpur upazila.

### 2.1.3 Physical Condition:

Soils of Surma-Kushiyara young flood plain are in the Kalni River valley as Balaganj Silty Loams Association or in the south-west and south-east as Sulla Silty Clay Association. Rest of the upazila is covered by the bluish-grey clays of the Terchibary Soil Association.

### 2.1.4 Climate:

The upazila of Derai lies above the northern tropics and its climate is that of a sub-tropical and the monsoon and the monsoon causes heavy rainfall here. It is one of the wettish upazila of Bangladesh. The mean annual rainfall of this upazila is 117 inches. The climate of this upazila is also worked by extreme humidity. During the monsoon period, the humidity is always above 90% and lowest in March (75%). From mid-November to February, the weather is dry and relatively cool. The average temperature is between 65°F to 70°F, with extreme minimum and maximum ranging between 50°F and about 90°F.

## 2.2 Population and Settlement Distribution:

### 2.2.1 Within the Zila:

According to 1981 census, Sunamganj zila has a total population of 1428787 out of which 51.58 percent are male and 48.42 percent are female. In 1974 the population was 206321 and growth rate between 1974-81 was 2.45. It has a total area of 3569 sq.km. with a density of 400 persons per sq.km. The average household size of the zila is 6.2. The area of the pourashava of the Sunamganj zila is 2.47 sq.km. The population of the pourashava area is 21565. The total density of pourashava area is 8731 persons per sq.km. (Sylhet District Statistics, 1983).

Population statistics of Sunamganj zila and its upazilas are provided in the following table.

TABLE-1  
Population Statistics of Sunamganj zila and  
its upazilas in 1981.

Upazila/Zila	Area(sq. m.)	Household	Population	Average size of househld	Density per sq. m.
Derai	162	26770	161317	6.0	997
Bishwamvarpur	65	12485	75972	6.1	1169
Chhatak	173	34749	219583	6.3	1269
Dharmapasha	140	15535	84597	5.4	604
Dowarabazar	101	21625	131397	6.1	1301
Jagannathpur	141	24382	163450	6.7	1159
Jamalganj	130	14570	94641	6.4	728
Madhayanagar	86	10298	61779	5.8	719
Sulla	100	11691	70521	6.0	705
Sunamganj	206	39342	244019	6.2	1184
Taherpur	141	19713	121511	6.1	862
Sunamganj zila	1445	230970	1428787	6.2	989

Source: BBS, Sylhet District Statistics, 1983.

#### 2.2.2 Within the Upazila:

The total area of the Derai upazila is 400.00 sq.km. out of which 22.4 sq.km. of area is urban. The total number of rural and urban households are 24711 and 2059 respectively. The rural and urban population of the upazila in the year 1981 are 148966 and 12351 respectively. The urban population comprises 7.7 percent of the total upazila population. In the urban areas there are 112 males for 100 females, but for the rural area it is 106. (Community table of all thanas of Sylhet Districts, July, 1985.)

TABLE-2  
Unionwise Population Statistics of Derai Upazila

Union/Upazila	Households	Population	Average size of households
Taral	2327	13283	5.71
Rajanagar	2983	17087	5.73
Rafinagar	2787	16403	5.89
Kulanj	2905	17853	6.15
Karimpur	3277	20367	6.22
Jogdhal	3999	25497	6.38
Derai Sarmangal Union	3401	20354	5.98
Charmerchar	2715	16787	6.18
Bhatipara	2376	13686	5.76
Derai Upazila	26770	161317	6.03

Source: BBS, Bangladesh Population Census, 1981.

### 2.2.3 Migration:

Available secondary sources of information do not provide any kind of data on migration both for the zila and the upazila. Considering the general situation prevailing in the country it can be reasonably assumed that some percent of rural population of Sunamganj migrated to urban areas of the zila or neighbouring zilas and a small percent also migrate from rural areas of Derai upazila to its centre.

Our field study reveals that 90 percent of the total respondents of the study area of Derai are permanent residents of this area and 10 percent have migrated to outside for different reasons like business and service.

The highest percentage among the migrants are businessmen who constitute 5.45 percent followed by the service holders who comprises 4.55 percent.

TABLE-3  
Migration within the Planning Area

Category	No.of Household	Percentage	Cause of Migration	
			Business	Service
Permanent Resident	99	90.00	-	-
Migrants	11	10.00	6(5.45%)	5(4.55%)
Total	110	100.00	6(5.45%)	5(4.55%)

Source: Field Survey, 1987.

#### 2.2.4 Settlement Distribution:

The settlement pattern of the upazila is more or less compact surrounding the upazila headquarter. Settlements were developed mainly on the both sides of the east-west roads passed through the upazila. Settlements were also found on the both sides of the Babianna River. It is perhaps due to river communication of the region.

### 2.3 Economic Performance and Transportation Linkage:

#### 2.3.1 Employment Situation:

The total population of sunamganj zila of above 10 years age are 963097 which comprises 67.41 percent of the total population. Out of this 963097 population 418126 were engaged in earning activities which constitutes 43.4 percent of the population. Out of the total labourforce 77.55 percent are engaged in agriculture and the rest of 22.45 percent are engaged in non-agricultural sectors.

The situation in Derai upazila was also the same. Out of the 109503 population of age 10 years and above, 49337 (45.1 percent) are engaged in various earning activities. The agriculture and non-agricultural percentage of labour force are 82.37 and 16.63 percent respectively.

The under employment situation is largely contributed by the fact that majority of the female workforce are not engaged in any income generating activities.

TABLE-4  
Population and Labour force of Derai upazila and  
Sunamganj zila in 1981.

Zila/Upazila	Total Population 1981	Population (10 yrs. +)	Active Labour force
Derai Upazila	161317	109503	49337 (41.1%)
Sunamganj zila	1428787	963099	418126 (43.4%)

Source: BBS, Sylhet District Statistics, 1983.

The occupational structure of the respondents is identified by five categories as in the following table. It is seen that majority of the households are engaged in agriculture. Total number of households engaged in this occupation constitutes 37.27 percent of the total households. Daily labour comes in the second position, where 28.18% of households are engaged.

TABLE-5  
Occupational Structure of the Household

Occupation	Household Number	Percentage
Agriculture	41	37.27
Business	19	17.27
Service	11	10.00
Daily Labour	31	28.18
Others	8	7.27
Total	110	100.00

Source: Field Survey, 1987.

### 2.3.2 Income Expenditure Pattern:

Necessary information of income-expenditure pattern of the households in Sunamganj zila and Derai upazila are not available from secondary sources. The situation in the study area for Derai upazila shahar can be inferred from the data collected during socio-economic survey.

The survey indicates that 84.54% of the total households earns below Taka 2000.00 per month. On the other hand only 4.55 percent households income are Taka 5000.00 and above.

TABLE-6  
Monthly Income Pattern of Households

Monthly Income in Taka	Household Number	Percentage
Upto 1000	73	66.36
1001-2000	20	18.18
2001-3000	9	8.18
3001-4000	3	2.73
4001-5000	-	-
5000 +	5	4.55
Total	110	100.00

Source: Field Survey Data, 1987.

Regarding expenditure pattern, about 93.63 percent of the sample families spent less than Taka 3000.00 per month.

TABLE 7  
Expenditure Pattern of the Households

Monthly Expenditure in Taka	Number of Households	Percentage
Upto 1000	76	69.09
1001-2000	19	17.27
2001-3000	8	7.27
3001-4000	4	3.64
4001-5000	2	1.82
5001 +	1	0.91

Source: Field Survey, 1987.

### 2.3.3 Agriculture/Non-agriculture

Sunamganj is basically an agricultural area. Out of the total area of 9,25,000 acres of Sunamganj zila 4,90,000 acres (52.97 percent) were under cultivation in 1982-83. Intensity of cropping is 147 percent which is lower than Bangladesh figure of 155 percent.

In the non-agriculture field, there is no modern industrial establishment of significant nature in this zila. About 3744 cottage industries mainly rice mills, oil mills, saw mills, bakery and confectionary, handloom, cane and bamboo industry are available in the zila.

Derai upazila is also basically a typical agricultural area. Of the total area of 103000 acres of land, 62,000 acres (60.19 percent) were under cultivation in 1982-83. The intensity of cropping (147 percent) is same as the zila figure.

Formal non-agricultural sector is insignificant in this upazila. There are only 493 cottage industries of which 52 are rice mills, 30 oil mills, 105 wooden and furniture products and 110 cane and bamboo industry and the remaining are bakery and confectionary, handlooms, tailoring workshop etc.

TABLE-8

Land utilization characteristics of Derai upazila, Sunamganj zila and Bangladesh, 1982-83.

	Area	Current Fallow	Cropped Area				Total	Intensity of cropping
			Single	Double	Triple	Net		
Derai	103	8	34	27	1	62	91	147
Sunamganj	925	88	281	190	19	490	718	147
Bangladesh	35308	1278	11336	8250	1689	21276	32905	155

Note: All the figures are in 000 acres.

Source: BBS, Sylhet District Statistics, 1983.

#### 2.3.4 Transportation Linkage

In the zila there are 85 km. pucca roads, 45 km. semi-pucca roads and 758 km. of kutcha roads. On the other hand the upazila has only 4 km. of pucca and semi-pucca road. There are 40 km. of kutcha road in the upazila which comprises only 5.28 percent of the zila figure. In both zila and upazila, river communication is the dominant. Launch, country boats as well as engine boat play vital role in the communication system of both zila and upazila. The upazila headquarter is connected with the zila headquarter by kutcha road and with most of the Union Parishads by both kutcha and river roads.

#### 2.4 Social and Economic Infrastructure of the Upazila Region:

##### 2.4.1 Market and Commerce

In the Derai upazila, there are 20 markets out of which 2 meet daily and the remaining meet weekly and bi-weekly. The daily bazar and markets comprises 7.14 percent and 14.29 percent of the zila figure respectively. In the upazila 8066 population are served by one market. There are 28 daily bazars and 126 weekly or bi-weekly hats in Sunamganj zila.

#### 2.4.2 Education

In the Derai upazila, there are 94 primary schools, 2 junior high schools, 12 high schools, one college and 3 madrashas. On the other hand in the zila there are 874 primary schools, 22 junior high schools, 75 secondary schools, 4 colleges and 37 madrashas. The upazila figures comprises 10.76%, 9.09%, 16.0%, 2.7% and 8.11% of the zila figures respectively. The literacy rate of the zila and upazila is 16.0% and 17.2% respectively.

TABLE 9

Educational Facilities in Sunamganj zila and Derai upazila, 1981.

Educational Institutions	Derai		Sunamganj	
	No.	Students	No.	Students
Primary School	94	11740	874	93797
Junior High School	2	400	22	2438
Secondary School	12	2963	75	18945
College	1	-	4	-
Madrasha	3	750	37	7026

Source: BBS, Sylhet District Statistics, 1983.

#### 2.4.3 Health and Welfare

In the Sunamganj zila, there are 8 health complexes with 248 bed, 15 charitable dispensaries, and 4 family welfare centre. There are 45 M.B.B.S. Doctors, 25 L.M.F. Doctors, 53 national and 127 homeopath doctors in the zila. On the other hand in the upazila there are only one upazila health complex with 31 bed and one dispensary and there are 8 M.B.B.S. Doctors, 2 L.M.F. and 10 Homeopath Doctors. It is seen that in the upazila, there is one M.B.B.S. Doctor, one bed and one clinic available for every 16132, 5204 and 161317 persons respectively.

#### 2.4.4 Urban Services and Utilities

##### Water Supply

The upazila has no water supply system. Tubewell and ponds are the main sources of drinking water. There are 689 tubewells in the upazila which comprises only 11.75% of the zila figure. The zila figure is 5866.

### Post and Telegraphs

In the Derai upazila there are 13 post offices and 1 telegraph office which comprises 15.48% and 14.28% of the zila figure. Each post office serves 12,409 persons in the upazila. The number of post offices and telegraph offices in the Sunamganj zila is 84 and 7 respectively.

### Electricity and Sanitary Facilities

Currently, electricity and sanitary facilities are available at the upazila shahar. Out of 237 villages of the upazila only four villages have so far been provided with electricity. This indicates that only 1.67 percent of the total villages of the upazila has electricity facilities. In the zila, out of 2236 villages 79 are electrified i.e. 3.53 percent of the total village is electrified. (Sylhet District Statistics, 1983)

### 2.5 Current Development Projects:

In the financial year 1988-89 total development fund available to Derai Upazila Parishad is Taka 21,00,000/- only. The Parishad has identified the sectorwise allocation of this fund following the guidelines provided by the Planning Commission. But till the date of writing this report the Parishad has not identified the projects they are going to implement in different sectors during present period.

### 2.6 Determination of the Hierarchy of Settlement in the Upazila:

Hierarchy of settlement depends on many variables. An attempt is made to determine the hierarchy of settlements within the upazila as a whole based on population, economic activity, social infrastructure provision with available services and facilities, transport link and other related characteristics. Mouza has been considered as the unit or centre to determine the hierarchy of settlements. In determining the hierarchy of settlement, the weightage method has been applied. Different weights have been given for various ranges of population, economic, social, transport and other services in respect of their degree of importance, extent of services rendered and impact produced on the development of the upazila.

The total weightage obtained for each mouza have been calculated and ranked in four categories. The rank according to weightage obtained in shown in Table-10.

TABLE 10

<u>Category</u>	<u>Weightage</u>
A. Population range of -	
Upto 1000	1
1001-2000	2
2001-3000	3
3001-4000	4
4001-5000	5
5001-6000	6
6001-7000	7
7001-8000	8
8001-9000	9
9001-1000	10
B. Any one of -	
1. Primary School, 2. Mosque, 3. Tubewell	1
C. Any one of -	
1. High School, 2. Hats, 3. Post Office, 4. Electricity	2
D. Any one of -	
1. Bazar, 2. Health centre, 3. BADC office, 4. Bank, 5. Police out post, 6. Food godown	4
E. Any one of -	
1. Hospital, 2. College, 3. Police station, 4. Upazila complex, 5. Telephone exchange & telegraph office, 6. Launch ghat.	8

TABLE-11

Ranking of Hierarchy according to weightage obtained

<u>Total weightage obtained</u>	<u>Rank in hierarchy</u>
30 and above	I
20 to 29	II
10 to 19	III
9 and below	IV

According to the aforesaid method the mouzas obtaining the highest and 2nd highest rank with weightage obtained and shown in the following table.

TABLE-12

Ist and 2nd category of mouzas in the hierarchy of settlement

<u>Name of Mouza</u>	<u>Name of Union</u>	<u>WEightage Obtained</u>	<u>Category</u>
1. Chandpur	Derai	74	I
2. Surmangal	Derai	33	I
3. Bhangra Dahar	Kasimpur	37	I
4. Halia	Kulanj	43	I
5. Paschim Daulatpur	Charnar Char	21	II
6. Singlianad	Jogdhal	26	II
7. Raffinagar	Raffinagar	20	II

It is observed from the above table that there are 4 mouzas have 1st category and 3 mouzas have 2nd category settlements. The mouzawise population and other services available is the 1st, 2nd and 3rd category mouzas are shown in the Annexure-II.

## THE UPAZILA SHAHAR

In order to visualize the extent of service facilities needed at the centre, it is necessary to identify the area and the population which will be served by the centre.

### 3.1 Sphere of Influence/Attractiveness:

While defining catchment area as an important step, the process is rather complicated and lengthy process. Generally the catchment area can be conceived as the area surrounding the upazila headquarter from where people will commute to the centre to avail its services. But to get a rather realistic view some of the issues which needs consideration are:

- Nature of services (both qualitative and quantitative) available and/or will be available at the centre.
- Prevailing and future transportation means and routes.
- Proximity of other centres (both lower and higher order).

The services which the upazila programme intends to provide at each upazila centre are of varying type and nature. As such each one will have different zone of influence. For example, for the administrative and judiciary services population within the administrative boundary of the upazila will have to come to services. People will go to a convenient place (convenient to them) depending on the distance, travel time/mode/cost, quality of services etc. For specialized goods and services people might like to go to zila shahar or even a bigger urban centre for the convenience of choice, price etc. For the goods and services of primary nature people might not come to the centre at all. Again some services and goods have a range or time distance of their own, beyond which they become unattractive. A primary school or an open space should be within 10-15 minutes walking distance. Another important issue is to foresee a situation with improved and higher order services at the centre and improved communication system.

However, the problem of identifying the catchment area of Derai upazila shahar has been taken care of considering.

- the services which are available now.
- availability of services in other centres (mouzas) as analyzed by hierarchy of settlements.
- existing transportation linkage.
- improved services and transportation link in future.
- the information gathered from discussion with upazila officials, a cross-section of people at the centre during survey.

TABLE-13

Area and Population under the Zone of Influence of Derai Upazila

Name of Mouzas	Total area in acres	Involved area in acre.	Total Population			Involved Population		
			61	74	81	61	74	81
Derai (P)	550	440	830	1470	1982	55	147	232
Chandpur (P)	610	406	1065	1749	2351	79	98	222
Majlispur (P)	480	355	760	1166	1561	79	146	180
Duaj (P)	326	241	1165	1560	2097	142	115	207
Daudpur (P)	162	83	1279	1699	2025	110	129	124
Radhanagar (P)	144	77	757	1095	1528	140	156	103
Kasimpur	1033	1033	675	1325	2095	675	1325	2095
Bhangadar Chak	1039	1039	559	1165	1917	559	1165	1917
Paurampur	141	141	469	845	1391	469	845	1391
Bhangdar Chak	1181	1181	2509	4119	4509	2509	4119	4509
Rajapur	100	100	850	1187	1047	850	1187	1047
Sukurnagar	100	100	1091	1268	1547	1091	1268	1547
Bharargaon	741	741	1837	2875	3501	1837	2875	3501
Bangal gram	375	375	1069	1675	2643	1069	1675	2643
Sakitpur	1034	1034	1368	1750	2323	1368	1750	2323
Total =	8016	7346	16283	24948	32517	11032	17000	22041

Note: 'P' Indicate part of the mouza.

Source: 1. BBS, Bangladesh Population Census, 1981.  
 2. BBS, Village Population Statistics, 1974. (Sylhet District)  
 3. District Census Report, Sylhet, 1961.

15 mouzas were included in the catchment area of the Derai upazila shahar. This catchment area spreads on an area of 7346 acres with a population of 22041 in 1981.

### 3.2 Difinition of Shahar Area:

The future shahar area includes the existing build-up area and the adjoining areas including areas likely to be developed as urban area in future. To determine the study area following aspects were considered.

- Existing pattern and trend of development.
- Tendency of landuse changes from agricultural to non-agricultural activities.
- Existing pattern of transportation network within and around the build-up areas.
- Availability of flood free and buildable land.

TABLE 14

Area and Population under Planning area of Derai Upazila

Name of Mouzas	Total area in acres	Involved area in acres	Total Population			Involved Popn.		
			61	74	81	61	74	81
Derai (P)	550	110	775	1323	1982	830	1470	1750
Chandpur (P)	610	204	986	1651	2351	1065	1749	2129
Majlispur (P)	480	125	681	1020	1561	760	1166	1381
Duaj (P)	325	85	1023	1445	2097	1165	1560	1890
Daudpur (P)	162	79	1169	1570	2025	1279	1699	1901
Radhanagar (P)	144	67	617	939	1528	757	1015	1425
Total =	2271	670	5251	7948	11544	5826	8612	10476

Note: 'P' Indicates part of mouza.

Sources: 1. BBS, Bangladesh Population Census, 1981.  
2. BBS, Village Population Statistics, 1974.  
3. District Census Report, Sylhet, 1961.

An area of about 670 acres covering six mouzas has been selected as the planning area. After conducting detail survey and analysis the future land requirement, socio-economic situation and topographical condition, the final shahar area of the upazila will be determined.

The population of the planning area was 10,476 in 1981 which was 5826 and 8612 in 1961 and 1974 respectively.

### 3.3 Existing Landuse and Utilization Characteristics:

Existing landuse pattern has been identified by conducting field survey. Plot to plot physical survey were carried out and marked in mouza maps to identify specific use and utilisation characteristics of the planning area. Detail landuse pattern of the study area has been presented in the following table.

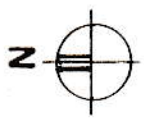
#### 3.3.1 Summary of Landuse:

Various landuses are classified in 11 categories keeping in line with the guidelines provided in the TOR and presented in the table.

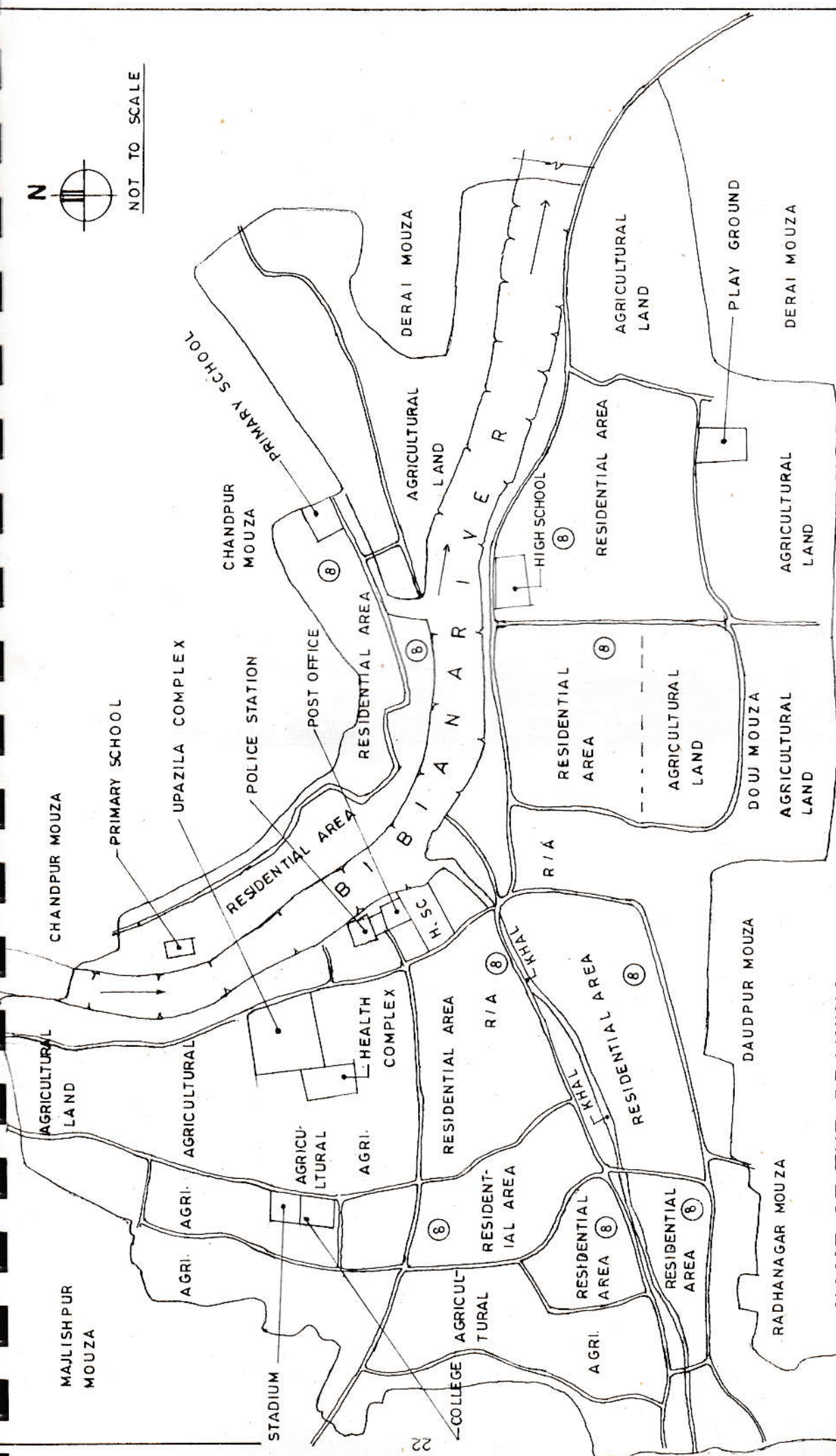
TABLE-15  
Existing Landuse Pattern of the planning area

Sl. No.	Landuse Type	Area (in acre)	% of the study area
1.	Agriculture	400.75	60.81
2.	(a) Commerce	6.00	0.90
	(b) Industry	1.50	0.22
3.	Education	11.20	1.70
4.	Health	3.00	0.44
5.	Administrative, Govt. & Autonomous etc.	18.40	2.75
6.	Recreation	5.20	0.78
7.	Socio-cultural	5.80	0.86
8.	Urban services	1.20	0.18
9.	Roads	18.65	2.78
10.	Residential	120.00	18.39
11.	Water Bodies/River	68.30	10.19
<u>Total =</u>		<u>670.00</u>	<u>100.00</u>

Source: Landuse Survey, 1987.



NOT TO SCALE



MAP NO-4

**NAME OF THE DRAWING:**  
**EXISTING LAND USE MAP OF**  
**DERAI UPAZILA SHAHAR**

It is found that the highest percentage of land, that is 60.81 percent belongs to agriculture. After that 18.39 percent in home stead, 10.19 percent water body and 2.78 percent for roads.

### 3.3.2 Land Utilizations

#### Agricultural Land

Agricultural land means all such lands which are under the plough or cultivated. In a sense other landuse categories are essentially treated as supplementary to it. The agricultural land covers an area of 400.75 acres which is 60.81% of the total planning area.

#### Commercial Landuse

This type of land is mainly include small shops, retail and wholesale trading. The area under this use is 6.00 acres which comprises 0.90% of the total area.

#### Industrial Landuse

The small scale and cottage industry came under this category. The small and cottage industry cover an area of 1.50 acres which comprises 0.22 percent of the total area.

#### Educational Landuse

The educational land covers an area of 11.20 acres which is 1.70% of the total study area. The survey reveals that two primary schools, one boys high school, one girls high school, one madrasha and one college are located within the planning area.

#### Health Facilities

All kinds of health facilities came under this category. In the Derai upazila only <sup>one</sup> upazila health complex and dispensary exists which accounts an area of 3.00 acres of land comprising 0.44% of the total area.

### Landuse for Administrative, govt. & Autonomous Bodies

This category covers an area of 18.40 acres which is 2.75% of the total planning area. The upazila complex occupies the maximum land of 13.00 acres and other offices of the government covers 5.40 acres.

### Recreational Spaces

Recreational spaces covers an area of  $\frac{1}{2}$ .20 acres which is 0.78% of the planning area. There are 3 playgrounds used as open recreational space in the upazila shahar covering an area of 3.50 acres which is 67.31% of this category. The closed recreational facilities are local clubs and auditorium. It covers only 1.70 acres which is .40% of the total planning area.

### Landuse for Socio-cultural Purposes:

Socio-cultural facilities include mosque, temple, eidgah, graveyard, crematorium and community centre. But there is no community centre in the Derai upazila. The socio-cultural services include an area of 5.80 acres which comprises 0.86% of the total area.

### Urban Services:

Urban services cover an area of 1.20 acres which is only 0.18% of the total planning area. Urban services available in this upazila shahar include only one post and telegram office and one dak bungalow, ferry ghat, electrical sub-station, police station etc.

### Land under Roads

Roads cover a total area of 18.65 acres which is 2.78% of the planning area. The roads are classified into three categories.

- |                   |                               |
|-------------------|-------------------------------|
| a. Local Road     | - Upto 24 ft. wide.           |
| b. Secondary Road | - Upto 25 ft. to 39 ft. wide. |
| c. Major Road     | - 40 ft. and above.           |

The survey report is stated that majority of the roads are local and kutchra which become unuseable for vehicles during the rainy season. The major road is all weather road and pucca.

### Residential Landuse

Public and private residential use of land exist within the planning area having main concentration within and around upazila complex. Private residence are mainly dwelled by the local people. There are a few rented houses which are dwelled by the service holders and businessmen. The total area covered by the residential use is 120.00 acres which comprises 18.39% of the total area. Pucca structures cover an area of 20.00 acres, semi-pucca structures cover an area of 50.00 acres and kutcha houses that is temporary houses cover an area of 50.00 acres of land.

### Land under Water Bodies

The <sup>Planning</sup> area includes a river, khals and a number of tanks and low lying area. The low lying areas remain under water throughout the year. The area under this category are 68.30 acres of land which comprises 10.19% of the total area.

## 3.4 Physical Opportunities and Constraints:

### 3.4.1 Opportunities

Derai is one of the newly developing upazila of the Sunamganj zila of Sylhet region. It was upgraded as upazila in the year 1983. There is still very little number of structure in the upazila head quarter. Land within the upazila head quarters are available for planned development of the upazila shahar.

The upazila centre is located on the bank of Bibinna River and this upazila has a good water communication with the outside upazila and zilas of that region. There is a scope to develop both sides of the river in planned manner by connecting better launch, engine boat and country boat facilities. Some agro-based industries like fishing and cold storage may also be established on the opposite side of the river.

### 3.4.2 Constraints

This upazila is very much backward in respect of its communication with outside. Most of the areas are low lying haor areas and development cost might be higher for future development of the upazila head quarter. Due to presence of the river it will be very difficult to establish an easy communication with southern part of the upazila.

The existing major services in the upazila head quarters are scattered all over the present build-up area. As such it will be difficult to group alike services in a definite zone.

### 3.4.3 Land Value

Land value in the study area has been found to vary between Taka 10,000/- to Taka 1,00,000/- per bigha depending on different categories of land.

- a. High Land: High land in the head quarter area, used for economical and industrial establishments is sold at Taka 2,00,000/- lakhs per bigha on average, that is Taka 10,000/- each Katha.
- b. Medium Land: Medium land used mainly for homesteads, is sold between Taka 50,000/- to Taka 1,00,000/- per bigha.
- c. Low Land: Low land in the study area is sold between Taka 35,000/- to Taka 40,000/- per bigha.

#### Agricultural Land:

Agricultural land within the study area has following sales value:

- Low land at Taka 10,000/- to Taka 30,000/- per bigha.
- Medium land at Taka 30,000/- to Taka 50,000/- per bigha.

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## FORECASTS

Present chapter forecasts on population size, household structure and density level in the upazila shahar and its sphere of influence over different phases of the plan period. The issue of migrant population and labour force have also been considered in the estimate.

### 4.1 Population, Household Structure and Density:

To identify the number of target population is the most important element of any strategic plan. So in this situation also it is necessary to forecast the future population both for shahar area and its catchment area. It is important that forecast should be as much realistic as possible. But in the Derai upazila shahar there is no reliable data on birth rate, death rate and migration is available. Only the base population of the three census years 1961, 1974 and 1981 is found available. Based on that, inter-census growth rates were included. The population forecasts were made on the basis of certain assumptions and three growth rates.

As per guidance of the TOR low, medium and high projections were made. For the high projection a combination of slow decline in fertility rate (which exists now), lower mortality rate (from the existing level) and migration flow is assumed. For the low projection it is assumed that fertility rates will fall taking into account the positive effect of family planning programme of the government and also the area will experience a lower migration flow because of improved employment opportunities in the rural areas. The medium projection is taken in between the two.

#### 4.1.1 Sphere of Influence:

The catchment area population of Derai upazila shahar was 11032, 17000 and 22041 in the census year 1961, 1974 & 1981 respectively. The growth rate of 1961-81, 1961-74 & 1974-81 period were 3.52, 3.38 & 3.78 percent. On the basis of growth rates and

also considering different level of migration flow to the catchment area high, medium and low growth rates are assumed to be 3.78, 3.52 and 2.0 percent respectively. The base population for these three projections is taken to be 22041 which was the population of the catchment area in 1981.

TABLE-16  
Population Projection for the Catchment Area of  
Derai Upazila Shahar

Year	High	Medium	Low
	Popn. growth rate (7-81) = 3.78%	Popn. growth rate (61-81) = 3.52%	Popn. growth rate assumed = 2%
1981	22041	22041	22041
1985	25488	25292	23857
1990	30565	30038	26340
1995	36653	35675	29081
2000	43954	42370	32107
2005	52710	50322	35448

Even though it is expected that the growth rate for any population will change over the plan period, an average growth rate is assumed for the sake and simplicity. The average growth rate for the three projections exceeded the expected national rate of growth because of inclusion of an assumed percentage of immigrants to the catchment area from the surrounding region.

Considering the medium rate of projection gross density level within the catchment area has been established.

TABLE-17  
Gross Density Level within the Catchment Area, 1985-2005.

	1985	1990	1995	2000	2005
Total area (acre)	7346	7346	7346	7346	7346
Projected Population (medium)	25292	30038	35675	42370	50322
Density per acre	3.44	4.08	4.85	5.76	6.85

In the year 2005 gross density of population in the catchment area of Derai upazila shahar is expected to be around 6.85 person per acre.

The average size of household in the planning area was found to be about 6.05 in 1981. It is expected that due to urbanisation household size will be lower over the years. The following table gives the assumed household size and resultant number of households at different phases of plan period.

TABLE-18  
Household size and number <sup>in the</sup> catchment area, 1985-2005.

	1985	1990	1995	2000	2005
Total Population	25292	30038	35675	42370	50322
Household size	6.30	6.20	6.10	6.00	5.90
Household number	4014	4844	5848	7061	8529

It is expected that in the year 2005, the catchment area of Derai will have around 8529 households.

#### 4.1.2 Upazila Shahar

For the purpose of future population forecasting of the upazila shahar, it needs careful consideration due to the fact that one of the main objective of upazila programme is to hold city-wide migrants at the upazila shahar. If economic activity really geared up a upazila centres, employment opportunities will be created, which will lead to a considerable segment of future population increase as migrants. But it is difficult to visualize the extent of economic activities at the centre which leads to the difficulty of estimation the migrants.

TABLE-19  
Population Projections of the Planning Area for  
Derai Upazila Shahar

Year	Projections		
	High	Medium	Low
	Popn. growth rate (74-81)= 4.02%	Popn. growth rate (61-81)= 3.51%	Popn. growth rate assumed 2%
1981	10476	10476	10476
1985	12255	11790	11339
1990	14910	13667	12519
1995	18140	15843	13821
2000	22070	18366	15259
2005	26790	21291	16847

The population of the area finally identified as the Derai upazila shahar area was found to be 5251, 7948 and 10476 in the census year 1961, 1974 and 1981 respectively. Inter census growth rates were 3.23 percent (1961-74), 3.51 percent (1961-81) and 4.02 percent (1974-81).

On the basis of above mentioned growth rates and also considering that migrants will be a major component of the future population, three (high, medium and low) growth rates are assumed which are 4.02, 3.51 and 2.0 percent respectively. The base population for all three projections is taken to be 10,476 in 1981.

Considering medium rate of growth, density of population for the shahar area was calculated and presented in the following table.

TABLE-20  
Density Level of Population in Derai Upazila Shahar

	1985	1990	1995	2000	2005
Total area (acre)	670.00	670.00	670.00	670.00	670.00
Projected Population (Medium)	11790	13667	15843	18366	21291
Density per acre	17.6	20.39	23.64	27.41	31.77

The future shahar area of Derai upazila is expected to have an average population density of 31.77 persons per acre in the year 2005.

The number of households in the planning area was found to be 1731 with an average household size of 6.05 in 1981. For the reasons mentioned earlier, household size is expected to be reduced which is shown in the following table.

TABLE-21  
Forecast of Household size and Number of  
Households in the Planning Area.

	1981	1985	1990	1995	2000	2005
Population	10478	11790	13667	15843	18366	21291
Household size	6.05	6.00	5.80	5.60	5.30	5.15
Household number	1731	1965	2356	2829	3465	4134

It is expected that Derai upazila shahar will have about 4134 households in the year 2005.

#### 4.1.3 Migration Aspect:

There is hardly any data regarding migration to the upazila shahar from the secondary sources. From the socio-economic survey it was found that 10 percent of the total population in the upazila shahar are migrant from the surrounding areas due to increase of urban investment in different sectors. In this situation in order to visualise the extent of migration, it is assumed that 12 percent of the future population will be migrant to the shahar.

TABLE-22  
Estimated number of Migration in Derai upazila shahar

	1990	1995	2000	2005
Projected Population (Medium)	13667	15843	18366	21291
No. of Migrants (12%)	1640	1901	2203	2554

This migrant population is already considered in the growth rates for three projections.

#### 4.2 Labour force and Employment:

In Derai upazila only 30.58 percent of the total population and 45.1 percent of the population of 10 years and above were engaged in various earning activities in 1981. It is assumed that 35% percent of the total population will constitute the labour force in the catchment area with the consideration that participation in earning activities will gradually rise due to the added investment and economic activities.

TABLE 23  
Forecasting Labour Force for the catchment area of  
Derai upazila shahar

	1985	1990	1995	2000	2005
Projected Population (Medium)	25292	30038	35675	42370	50322
Labour Force (35%)	8852	10513	12486	14829	17612

For the future upazila shahar the situation is expected to be a little different. Apart from the Resident Labour Force (RLF) within the shahar area, there will be commuter labour force from the surrounding areas. Commuter labour force is taken to be another 10 percent of the resident labour force.

TABLE-24  
Estimated Labour Force of Derai Upazila Shahar Area

	1985	1990	1995	2000	2005
Resident Population	11790	13667	15843	18366	21291
Resident Labour Force	4176	4783	5545	6428	7451
Commuter Labour Force	885	1051	1248	1482	1761
Total Labour Force =	5011	5834	6793	7910	9212

### 4.3 Land Requirements and Provision Standards:

Based on the identified service population and provision standards provided in the TOR, land requirements for different services and facilities are estimated. The identified catchment population and resident population of the shahar itself is 50322 and 21291 respectively in the horizon year 2005. As per TOR for housing it is shahar and for all other services catchment area population has to be considered. But the consultant feels that design population have to be different for different services depending on the nature, type, level of provision etc. The shahar population designated as 'A' and catchment population as 'B' and the land requirement estimates are provided in the following table.

TABLE 25  
Future Requirement of Land for Derai Upazila Shahar

Land use	Provision Standard (Acre/Popn.)	Design Popn. (A = 21291) (B = 50322)	Land Requirement (Acre)
<b>Commerce &amp; Industry:</b>			
a. Commerce	1.5/1000	A+B	107.41
b. Industry	1.5/1000	A+B	107.41
<b>Education:</b>			
- Primary School	2/5000	A	8.51
- Secondary School	5/20000	A+B	17.90
- College	5/20000	A+B	17.90
<b>Health:</b>			
- Dispensary, <sup>maternity,</sup> Childcare	1/5000	A+B	14.32
- Health centre, Hospital	5/20000	A+B	17.90
Administrative/Judiciary	12/Upazila	-	12.00
<b>Recreation:</b>			
- Parks, open space	1/1000	A	21.29
- Cinema, closed space	0.5/20000	A+B	1.79
- Sports, Stadium	3/20000	A+B	10.74
<b>Socio-Cultural:</b>			
- Community centre	1/20000	A+B	3.58
- Religious facilities	0.5/5000	A	7.16
- Graveyard/Cemetery	5/20000	A+B	17.90

Landuse	Provision Standard (Acre/Popn.)	Design Popn. (A = 21291) (B = 50322)	Land Requirement (Acre)
Urban Services:			
- Post Office	0.5/20000	A+B	1.79
- Telephone Exchange	5/20000	A+B	17.90
- Police Station	2/20000	A+B	7.16
- Bus stand	-	-	-
- Bank	-	-	-
Road	5%to10% of Shahar Area	A	-
Residential	1/100	A	212.91
Urban Defered	10% of Shahar Area	A	-
Reserve	-	-	-

## LANDUSE PLAN

In the previous chapters existing situation and future requirements for Derai upazila shahar has been evaluated and presented. This chapter presents a discussion on approach, concept and planning principles for the landuse plan preparation. A description of the plan is also provided.

### 5.1 Approach, Concept, Planning Principles:

It should be cleared at this point that landuse plan for a upazila centre is a broad guide plan in order to control the development through an appropriate locational and functional arrangement of services and facilities so that efforts of all the concerned agencies can be guided to a common goal. Once the main criteria and basic guidelines for development schemes are set individual area development schemes have to be detailed out according to the guiding principles of the plan and development phases.

For the preparation of landuse plan for Derai upazila centre some of the factors were found worth considering which are discussed below.

#### 5.1.1 General Considerations

The allotment of government fund for the upazila level development is much more now than it was before. But it is still hardly enough for the kind or development envisaged. So it was important that development cost have to be at most reasonable minimum. At this fact has dictated that existing development has to be kept intact as far as practicable.

It is also reasonable to consider and act according to the existing trend of physical development. Any suggestions altogether reverse to the existing one might be unacceptable to the inhabitants and costly to implement.

Land is the most scarce resource in an agrarian society of Bangladesh. In this situation it goes beyond saying that great care has to be taken to convert agri-use land for non-agricultural purposes as minimum as possible. So firstly existing built-up areas are proposed for maximum possible utilization and then taking some agricultural land, if necessary.

Apart from the above mentioned considerations the proposals are based on existing situation, existing and expected trend of growth, future population projections and service requirements.

#### 5.1.2 Specific Consideration

Some of the specific considerations for the preparation of landuse plan for Derai upazila centre are discussed below.

- Through existing service facilities are scattered all over the built-up area without any pattern, attempt is taken to have some sort of zoning of various broad landuse areas. Conventional methods (like compatible/uncompatible association, locational criteria of specific use) of landuse planning have been utilized.
- The main through fares of the road network system are used to provide separation between different landuse zones as well as inter connection, so as to retain environmental quality of an area.
- Land which are not appropriate for future development (like low-lying areas, and other important current use) are properly noted and marked as "reserve".

## 5.2 Plan Description

The landuse plan that has been prepared for Derai upazila shahar, taking into considerations mentioned above, will hopefully accommodate a population of 11118 in the year 2005 and will spread on an area of about 6700 acres. In addition to the resident population, it will also serve an estimated 17654 number of catchment area population. It will provide residential accommodation to the shahar population and other facilities like commercial, industrial, educational, administrative, recreational, health, socio-cultural to both shahar and catchment population. Proper spatial organisation of all these activities and functions is attempted as far as practicable, to attain desirable healthy, livable environment. Landuse proposed for different major categories are discussed in the following paragraphs & summary of the proposed landuse are provided in Table-26.

### 5.2.1 Commerce & Industry:

#### Commerce

Landuse under commerce occupy about 6.00 acres which mostly compose of shops and bazars. The proposals for commercial landuse include 13.10 acres of land which is 1.96% percent of the total planned area with the following criteria:

- ° Intensification and improvement of existing bazar and proposed super market.
- ° Newly established shops near the upazila complex along the both sides of road.

#### Industry

Virtually there are no big industries in this area. Industrial landuse mostly comprises a few rice mills scattered all over the build-up area and fishing industry on the bank of the river which occupy only 1.5 acres of land. An area of 8.70 acres is being proposed for small and cottage development which is the 1.30% percent of the planning area.

### 5.2.2 Education:

While the present educational establishments are preserved and all of them are proposed to be expanded and improved in order to accommodate greater number of students. New facilities proposed in this category are -

- ° Two primary schools one in Derai another in Majlishpur mouza.
- ° Improvement of existing boys and girls high school in order to accommodate vocational training facilities for them.
- ° One vocational training institute, for men near to the college.
- ° Expansion of the existing college area along with hostel facilities.

(2.48%)

16.60 acres  $\frac{1}{2}$  of land has been proposed for the purpose of the planning area.

### 5.2.3 Health:

The present upazila health complex needs expansion. The other provisions proposed for the improvement of the health facilities are -

- ° Establishment of health clinic in Daudpur Mouza.
- ° Establishment of maternity, child clinic, family planning clinic near to the health complex.

Area proposed for health facilities is 6.10 acres.

### 5.2.4 Administrative/Judiciary:

Most of the government offices of the upazila are newly built and placed together. The semi-government offices like BADC is also adjacent to the upazila complex. The police station, post office and Upazila Revenue Office is not located near to the administrative area. The upazila complex has been proposed as Administrative area. All government, semi-government offices should be located in this area and if the existing one are not occupying their own premises they should also move to this area. The area proposed for the purpose is 29.60 acres which is 4.42% percent of the total planning area.

#### 5.2.5 Recreation:

Existing play fields and proposed cinema hall are kept intact and proposed for further improvement.

- ° One central park has been proposed near to the proposed college and stadium.
- ° Another two recreational parks have been proposed, one is in the extreme south end of the upazila shahar and another in the opposite bank of the Bibiana river. These are proposed on the basis of settlement in those areas.
- ° The sports stadium shall be located to the north of the college in Majlishpur mouza.

For recreational purposed 10.90 acres of land has been shown which is 1.63% percent of the planning area.

#### 5.2.6 Socio-Culture:

Important provisions proposed in this category with <sup>in</sup> 16.80 acres of land are:

- ° One community centre -cum- public library in the proposed socio-culture area.
- ° Existing graveyard and shashan ghat will remain in the same places and be expanded to take care of the future requirements.
- ° Existing religious facilities (mosque, mandir, eidgah etc.) are kept in their original location and proposed for improvement.
- ° One small parcel of land near to the proposed college be kept for Central Shahid Minar.

#### 5.2.7 Urban Services:

The important provision for different urban services are -

- ° Existing Dak Bunglow on the bank of river should be improved into a commercial cum residential hotel.
- ° Launch terminal should be developed with better facilities.

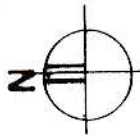
- The new launch ghat should be proposed in the upper and lower portion of the river for easy communication between the both sides of the river.
  - Both the post office and police station will shift to the proposed administrative area of the upazila shahar.
- For the urban services 7.00 acres of land has been provided.

#### 5.2.8 Road:

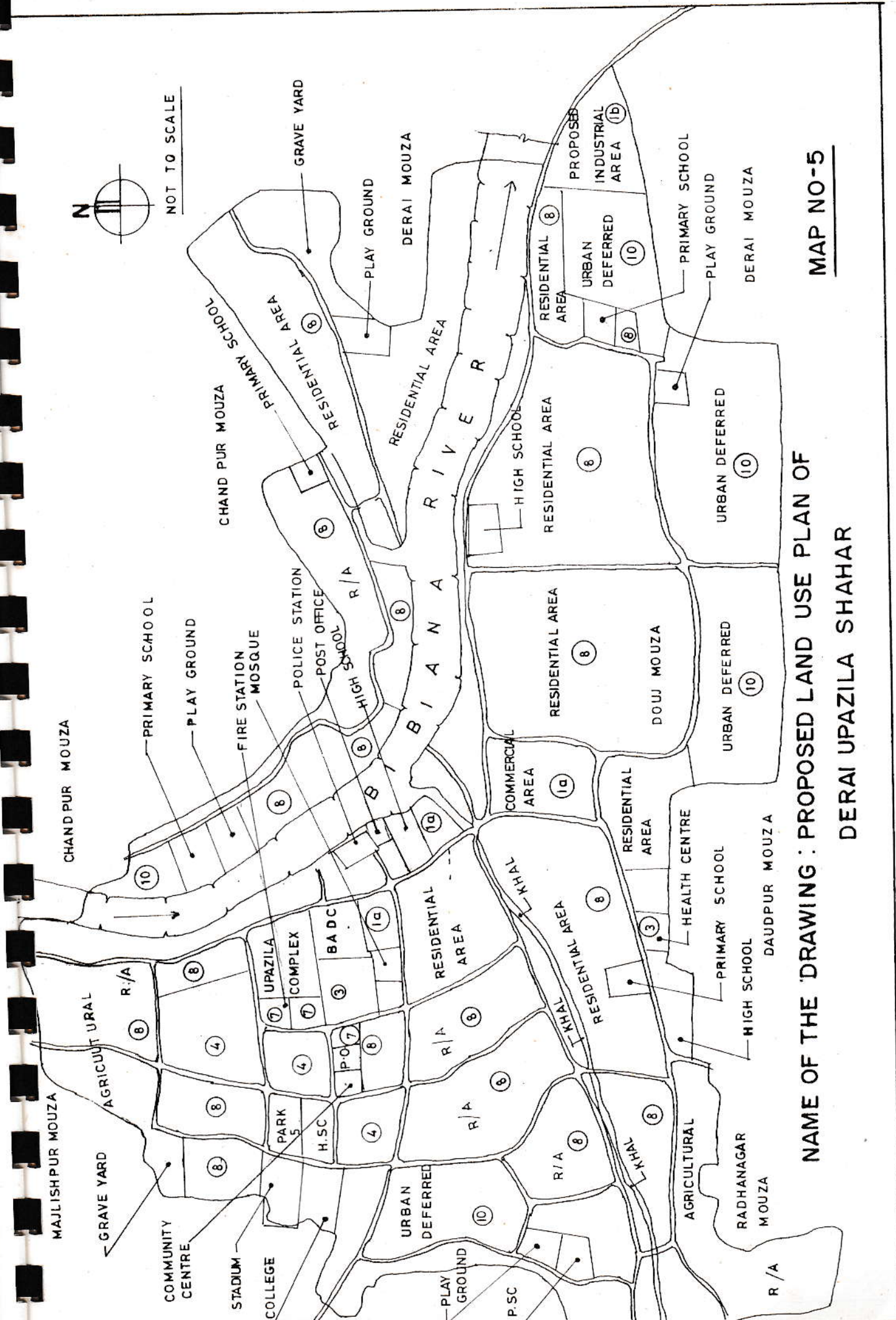
Existing road network of the upazila is not at all satisfactory. There are only two pucca roads with <sup>a</sup>very short distance. One pucca road passed from upazila complex to <sup>the</sup>present police station and another one from police station to the west near to the proposed college. There is no pucca road communication of the upazila with the zila head quarter. The present pucca road in front of the upazila complex may be extended both the side from BRAC to Union Council of Douj with 60'-0" wide. Existing link road between police station to the proposed college may be widened with 60'-0". The kutchra road from Radhanagar to the north towards Sunamganj may also be developed and widen upto 40'-0". Another 40'-0" road may also be proposed from Sukurnagar toward east upto Sameswar. To make a good link between the two banks of the river the present launch ghat should be developed and improved. Another two boat ghats may be established in the upper and lower part of the river by passed the upazila shahar.

#### 5.2.9 Residential:

Derai upazila study area has about 120 acres of land under residential use. If all these land are developed into specified density (100 per acre) it will accomodate more residential population than the plan period foresees for the shahar. 224.20 acres of land has been shown for the proposed residential development which may also be used for government housing estate to resettle the effected households due to urban provisions. But it is important that detail layout plan has



NOT TO SCALE



NAME OF THE DRAWING : PROPOSED LAND USE PLAN OF  
DERAI UPAZILA SHAHAR

MAP NO-5

to be prepared for each block of residential land in order to put them into their fullest capacity.

#### 5.2.10 Urban Deferred:

In order to accommodate the fluctuations in the forecasts made, urban deferred land are identified and marked on the plan. Current use of this land must continue as long as they are not actually needed 67.00 acres (10 percent) of Land has been shown as urban deferred in the planning area.

#### 5.2.11 Reserve:

Apart from the existing water body/ponds, tanks, khals etc. in the proposed shahar area "reserve" land includes a significant amount of agricultural land surrounding the proposed build-up area. This type of use of land might be used for cultivation, fish culture, livestock and poultry farming etc. and will act as invisible boundary of shahar area. The amount of the reserve land has been kept 68.30 acres which is 10.20 percent of the planning area.

TABLE-26

Landuse Pattern of the Planning Area of Derai Upazila Shahar - 2005 A.D.  
'Area in acres'

Landuse	Land Requirement as per TOR	Existing Landuse 1988 (A)	Area actually proposed (B)	Total Planned area in acres (A+B)	Percentage
1	2	3	4	5	6
1. Commerce & Industry:					
1.a. Commerce	107.41	6.00	7.10	13.10	1.96
1.b. Industry	107.41	1.50	7.20	8.70	1.30
2. Education:	44.31	11.20	5.40	16.60	2.48
- Primary School	8.51	4.20	1.40	6.60	
- Secondary "	17.90	3.00	2.00	5.00	
- College	17.90	4.00	2.00	6.00	
3. Health:	32.22	3.00	3.10	6.10	0.91
- Dispensary, Maternity, Childcare	14.32	-	-		
- Health centre, Hospital	17.90	3.00	3.10		
4. Administrative/ Judiciary	12.00	18.40	11.20	29.60	4.42

1	2	3	4	5	6
5. Recreation:	33.82	5.20	5.70	10.90	1.63
- Parks, Open space	21.29	-	2.20	2.20	
- Cinema, Closed space	1.79	-	0.50	0.50	
- Sports, Stadium	10.74	5.20	3.00	8.20	
6. Socio-Cultural:	28.64	5.80	11.00	16.80	2.49
- Community Centre	3.53	-	1.00	1.00	
- Religious facilities	7.16	2.80	1.50	3.30	
- Graveyard/Cimetry	17.90	3.00	8.50	11.50	
7. Urban Services:	13.22	1.20	5.80	7.00	1.04
- Post Office	1.79	-	1.00	1.00	
- Telephone Exchange	1.72	1.00	1.00	1.00	
- Police Station	7.16	-	2.00	3.00	
- Bus stand/Ghat	2.48	0.20	0.80	1.00	
- Elec. Supply	-	-	1.00	1.00	
8. Residential	212.91	120.00	104.20	224.20	33.46
9. Road	-	18.65	62.65	81.30	12.14
10. Urban Deferred	67.00	-	67.00	67.00	10.00
11. Reserve (Water Bodies)	-	68.30	-	68.30	10.20
12. Agriculture	-	400.75	-	120.40	17.97
Total =	-	670.00	-	670.00	100.00

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## PROGRAMMING AND IMPLEMENTATION

Some of the programming and implementation issues of the landuse plan are discussed in this chapter. Development of such a huge number of upazila centres throughout Bangladesh is rather a monumental task for everybody concerned. Availability and mobilization of financial resources, adequate number of trained manpower and appropriate organisations structure to carryout the work are some of the major problems. To share the burden it is resonable to expect that each individual consultant should recognise these practicle limitations, give due consideration during plan preparation and finally should come up with appropriate measures to implement the proposals.

### 6.1 Priority Actions and Cost Implication:

#### 6.1.1 Priority Actions

Even if an individual centre is considered, total amount of work that has to be done is really huge. It is not possible to list them down and priorities. But some of the projects which need early action are listed below.

- All the land proposed for public uses should be earmarked and any kind of further development by private sector, should be prohibited. But these land must continue their present use as long as they are not physically acquired and developed.
- Precondition for development in any designated zone is the detail layout of that area. This is to ensure that the area is put into its fullest capacity.
- The main throughfares need early development. They will not only shape the future township the way it is desired, but also gear up private sector activities.

- Development of commercial areas (markets, shops, bazars, etc.) should get priority as they might lead to earning opportunities for the Upazila Parishad. But pre-condition for their development is the market feasibility study.
- Designated residential areas, within the proposed buildup area, will be developed gradually when the demand for such development is felt, following the specified priorities of the blocks. The consultant likes to suggest a different approach in developing the residential areas. The existing practice in this country is the acquisition of land first by an urban development agency (in this case Upazila Parishad) and finally selling them at cost prices. Instead of doing that, it is better to develop these areas in collaboration with present land owners. This attitude will reduce the problems of public acquisition and compensation, resettlement problem of evicted land owners etc. One of the most widely regarded technique of such approach, Land Pooling and Readjustment, is worth mentioning here.
- The reserve land (water bodies, tanks, canals) deserve some considerations also. Instead of leaving them the way they are, they should be developed (excavation, linked, landscaping) so that they can be used for drainage, pisciculture and recreational purpose.

#### 6.1.2 Cost Implication

Most uneasy component of upazila development programme is the magnitude of financial resources needed. It really troubles the imagination whether it will be possible to finance urban-type development eventhough the consultant has tried atmost to minimise the cost.

It is also very difficult to pinpoint the exact amount of financial resource needed for Derai upazila centre from a rather conceptual landuse plan. Most important component not available at this stage is the percent of covered area in each type of landuse. But it is needless to mention that alternate cost effective development approaches has to be evaluated and utilised. One important component

of physical development at upazila level is the cost of earth filling. Upazila Parishad can evaluate the possibility of dyke and pump system for big percent of land.

## 6.2 Phasing and Urban Deferred:

The year 2005 is tentatively designated as the horizon year for Derai upazila shahar landuse plan. Considering present year, it has about 18 years plan period in which development proposals have to be implemented in different phases. But the plan period and consequently the target year should not be considered too strictly as the plan is a broad guideline to control and guide the self-generated development activities. Development proposals for each phase should be mainly on the basis of previous phases performance, future prospect and guidelines from the plan.

Tentatively the plan period can be divided into four phases. Development activities can be quantified (in terms of percentage) for each phase to give some indication. The guideline for such quantification is the population projection and project priorities.

TABLE -27

Development Activities in Different Phases for Upazila Shahar

Sector	P h a s e s				Total
	1988-89	1990-95	1995-2000	2000-2005	
Commerce	20	40	30	10	100
Industry	-	20	30	50	100
Education	20	50	25	05	100
Health	20	50	30	-	100
Administration	20	40	40	-	100
Recreation	20	30	35	15	100
Socio-cultural	20	35	30	15	100
Urban services	20	40	30	10	100
Roads	20	40	30	10	100
Residential	20	40		10	100

Note: All figures indicates percentage.

The present landuse plan is prepared on the basis of medium projection of population. Due to various unforeseen circumstances, it might so happen that a little bit of more land is required for different uses. To tackle that kind of situation "Urban Deferred" land are identified and properly marked on the plan. They are located in such a manner that even if they are not required at the end of the plan period, there would not be any vacant lot or "without purpose" land within the proposed buildup area.

### 6.3 Development Control:

Some of the existing situation deserves worth mentioning before discussing the possible control mechanism.

"The Local Government (Upazila Parishad and Upazila Administrative Re-organisation) Ordinance-1983" does not provide to take preventive measures/actions against contrary, unauthorized development both by private and public sector.

Upazilas which are under the landuse plan preparation programme are beyond the administrative boundaries of existing metropolitan and municipal towns. As such there does not exist any development control measure.

At such a situation, most general suggestion that can be made is the formulation and adoption of appropriate development control mechanism for the upazila centres. Regulations regarding building type and hight, set back, density, plot coverage, preservation of historic sites and various form of taxes should be incorporated in such a mechanism. It would not be wise to suggest existing urban regulations for the upazila centres. A set of more appropriate regulations should be formulated considering the socio-economic situation and enforcement problems for the upazila centres.

Some specific suggestions could be made regarding development control of upazila centres.

- The proposed build-up area could be designated as "Development promotion area" where all kinds of development will be preferred and given incentive as long as they are not contrary to the proposed landuse plan. And rest of the study area could be regarded as "Development Control Area" where premature urban development has to be restricted.
- Within the development promotion area all development are subjected to control by regulation and all the measures should be enforceable by law.
- Assuming that all public sector activities would be in confirmation with the proposals made in the landuse plan, they would only be subject to normal approval from Upazila Parishad.
- Development control mechanism should not only take care of regulations but also manpower at upazila level and above. Following suggestions are found feasible.

There should be at least one person in the Upazila Parishad, who understands the preliminaries of development control like understand-the plan, evaluating proposals, field check during execution etc. As the Upazila Engineer is partially qualified in this respect he/she should be given one or two months intensive training by UDD to make up the rest.

- UDD should extend its establishment upto, at first, for each old district level and then for two or three new districts to provide technical advice to Upazila Parishad.

#### 6.4 Monitoring and Review:

The proposals made for the physical development and improvement of Derai upazila shahar are rather guidelines than fixed set of rules. The proposals are based partly on the basis of present government development efforts at upazila level and greatly on the expectation that private sector activities will be geared up due to government efforts. As the private sector activities can not be forecasted accurately, it generates

certain amount of uncertainty. This factors alone makes it necessary to monitor the plan closely. And a periodical review becomes inevitable.

So it is recommended that the progress in the implementation of the proposed plan or any change or deviation should be noted and marked on the plan by the Upazila Parishad. The Upazila Parishad should seek advice, consultation from UDD in case of difficulty in the implimentation of the plan.

It would have been wise to say that on the basis of yearly monitoring report, the landuse plan should be reviewed in every five year. But review, revision, updating is as cumbersome and time-consuming process as preparing new proposals. Since there is acute shortage of qualified planners to do so, it is suggested that review, revision will be done after 5 years, i.e. in the year 1998.