

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

**LAND USE/MASTER PLAN
SUJANAGAR UPAZILA SHAHAR
PABNA ZILA**

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গৃহিত প্রস্তাবাবলী/ রেজুলেশন :

সুজানগর উপজেলা শহরের ভূমি ব্যবহার নক্সা/মারফার প্র্যানের উপর ১৯৮৮ সনের ১ই নভেম্বর তারিখে সংশ্লিষ্ট উপজেলার চেয়ারম্যানের সহিত কনসালটেন্ট এ,এম আহম্মদ এ্যান্ড এসোসিয়েটস এর প্রতি নিধির এক আলোচনা বৈঠকের পর উক্ত প্র্যানটি সর্বসম্মতি ভাবে গৃহিত হইল।

(আহম্মদ তফিজ উদ্দিন)

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CHAPTER - 1.

1. INTRODUCTION.

Under the Government's administrative decentralisation policy the upazila level has been recognized as the most significant tier of administration for bringing development, administration, judiciary and service facilities to the door step of the rural masses and to ensure better delivery of governmental services to the people. Being the focal point of all upazila level administrative, commercial and other activities the upazila centre will be planned and developed to accommodate all social, economic, administrative and infrastructural services for the upazila region. This calls for creation of physical environment at the upazila centre for planning, implementation and administration of the diversified activities to help sustain not only such centre itself but also to promote faster development of the upazila as a whole keeping it functional to the upazila region.

As such, it is felt that the upazila centre should grow up expeditiously and the preparation of landuse plan for such centre is of utmost importance to ensure an orderly development of the centre with better utilization of scarce land, people and natural resources. This is a part of the total planning process at the upazila level which will eventually include plans for remainder of the upazila. With this end in view, the government has engaged consultants for the preparation of landuse plan for some of the upazila centres of Bangladesh for their development in the period to the end of the century and beyond. A.M. Ahmad & Associates has been awarded with such an assignment for upazila shahar Sujanagar by the Urban Development Directorate.

The report contains the landuse plan at the upazila shahar with briefs of forecasted population and land-uses including approach, concept, planning principles and description of the plan along with programming and implementation aspects with other requirements as mentioned in ANNEX-III of Terms of Reference.

The methodology as applied for the study in general included the major works of conducting the existing landuse survey on the study area, conducting socio-economic survey, identifying the hierarchy of settlements in the upazila and then the forecasting of population and landuses and finally the preparation of the landuse plan in the form of a report.

CHAPTER - II

THE UPAZILA IN ITS DISTRICT CONTRACT.

2.1. Location and physical characteristics of the upazila.

Upazila sujanagar earlier was the headquarter of a thana of the same name under sadar sub-division of Pabna district and later on was upgraded as the administrative unit of upazila under the same name and boundary. It is situated at a distance of 19 km. (12 miles) towards south east from the district headquarters of Pabna. It lies between $23^{\circ}48'$ and $24^{\circ}00'$ north latitude and $89^{\circ}23'$ and $89^{\circ}38'$ east longitude. It is bounded in the north by Santhia upazila, in the south by river Padma & Faridpur district, in the east by Bera upazila and in the west by Pabna Sadar upazila. It comprises to a total area of 285.40 sq.km. (110.20 sq.miles) including an area of 21.0 sq.km. of river. The elevation of Sujanagar upazila is 39.07 ft. above mean sea level.

Very young and active meander flood plains silty clay loams alluviums of the Ganges valley are mostly found in the upazila. The oldest Ganges meander flood plains dark greyish brown calcareous clays are occurring in the northern part of the upazila.

The special locational and physical aspects of the upazila shahar is that it is the second nearest upazila from the district head quarters. It is situated on the eastern side of the pucca road coming from Pabna town, the western side being low land surrounded by the recently built BWDB flood protection embankment. The upazila shahar is connected with other areas of the upazila through semi pucca and katcha road. River transport is also available during the monsoon only in some places.

2.2. Population, household and settlement distribution characteristics.

1) Within the Zila :

Pabna, a district of Rajshahi Division is located in the south east corner of this division. It is a wide low lying alluvial plains of the

Ganges, Karatoya and the Jamuna. Pabna occupies a physical area of 2333 sq.km.(901 sq.miles) including the water area. The location of district is such that it is a gateway to Rajshahi Division and North Bengal from the capital city. According to Pabna district statistics 1981 Pabna district comprises of two pourashsava, 8 upazilas, 71 unions, 1291 villages and 243355 households.

According to 1981 population census the total population of the district is 15.45 lacs about 1.79% of the national total. The sex ratio of the district is 106. The average size of household in the district is 6.10 against 5.7 for Bangladesh. The settlement distribution in respect of population, household and density for different upazilas of pabna district is shown in the following table :

TABLE-1.
Household, population and density by upazila, 1981.

Upazila	Area in Sq.km	Popn.	H.H.	Av.H.H. Size	Density per sq.km.	Ranking by Density.
Atghoria	184.20	1,04,798	16,472	6.30	568.93	VII
Bera	247.10	1,63,124	26,914	6.00	660.15	III
Chatmohar	366.70	2,07,546	31,937	6.50	565.98	VIII
Faridpur	213.20	1,26,504	18,210	7.00	593.35	VI
Iswardi	244.20	2,04,845	32,256	6.20	838.84	I
Pabna	439.50	3,47,615	55,136	6.20	790.93	II
Santhia	353.30	2,13,454	33,705	6.30	604.17	V
Sujanagar	285.40	1,77,793	28,725	6.20	622.96	IV
Pabna District.	2333.06	15,45,679	2,43,355	6.10	723	

Source :- Thana Series, Bangladesh population census 1981, B.B.S.

ii) Within the upazila :

According to 1981 population census the total population of the upazila Sujanagar is 1,77,793. The sex ratio is 106 males for every 100 females as against 105 for the district. About 5.2% of the district population live in this upazila in an area 6.0% of the district. The population density of the upazila as calculated in 1981 census shows that there are 660 persons per sq. km. as against 723 persons for the district and 605 persons for the nation. About 49.1% of the total population belong to the ages less than 15 years, where as 45.1% of the total population are voters of above 17 years of age. Dependancy ratio for this upazila in found to be 112 for every 100 population of the age group of 15-64.

According to 1981 population census there are 28,725 households in the upazila of which 28,589 (about 99.5%) are dwelling units and the rest are institutional and business/industrial units. The average households size of dwelling units is found to be 6.2 as against 6.1 for the district and 5.7 for the nation. There are only 10 tribal households in the upazila. The increase in population of the upazila in 1981 over 1974 is 18.01% as against 23.10 % for Pabna district. Again an increase in population of the upazila in 1981 over 1961 is 62.90% as against 81.75% for Pabna district (Table-2).

TABLE -2.

Population in 1961, 1974, 1981 and percentage variations of Pabna district and of Sujanagar upazila.

UZ/Dist.	Popn. 1961	Popn. 1974	Popn. 1981	% variation		
				1974 over 1961	1981 over 1974	1981 over 1961
Pabna district	850601	1255638	1545679	47.62	23.10	81.75
Sujanagar upazila	109143	150664	177793	38.04	18.01	62.90

Source : Bangladesh population census, 1981-B.B.S.

The structural pattern of dwelling units shows that 57.5% of the total dwelling units of the upazila are katcha, 41.7% are semi-pucca and 0.7% in pucca. About 67.9% of the total dwelling households depend on tube-well, 28.3% on pond or shallow well and 3.8% on rivers as sources of drinking water. About 94.1% of the dwelling units are owned by owner occupiers.

There are 174 villages in the upazila out of which 72 (about 41.4%) are small villages with a maximum of 100 households, 94 (about 54.0%) are medium villages with more than 100 but less than 501 households and 8 (about 4.6%) are being villages having more than 500 households.

2.3 ECONOMIC PERFORMANCE AND TRANSPORT LINKAGE.

The main occupation of the people of the Upazila is cultivation. The net cropped area is 55134 acres. One-cropped land 57.70 percent, two-cropped land 29.77 percent and multi-cropped land 13.12 percent of total cropped land.

The Upazila headquarters are well-known as business centre for rice, wheat, jute, sugarcane, chilli, onion, garlic etc.

The total yield of various category of rice in 1980-81 are 555618 maunds. The total yield of wheat is 95755 maunds, jute 20925 maunds and sugarcane 1539000 maunds.

The total no. of persons employment in handloom industry is 12000 persons in 1981. Employment in education sector is 897 persons engaged in teaching in 1982. There are 19 persons employed in medical profession in Sujanagar Upazila in 1982.

In respect of income the following table represents the broad annual average income of the Upazila people.

Table - 3
Broad income groups

Category	Yearly income in Taka	Income group	No. of Households
1.	Below 5,000	Lower income group	21
2.	5,000 to 9,999		33
3.	10,000 to 14,999	Middle income group	22
4.	15,000 to 19,999		
5.	20,000 to 24,999	Higher income group	7
6.	25,000 to above.		23
Total:			113

Source: Socio Economic Survey-1986.

The people generally made higher expenditures in food, clothing, education and in daily household expenditures.

In respect to the economic activity, agriculture is main occupation of the district. There are 4,733 sq.km. area and 3423704 population in Pabna district. The overwhelming majority of people is dependent mainly on agriculture for their earning and employment. The total number of farm holding in the district is 2.15 lacs occupying about 77% people of the district are farm population and directly dependent on farming. The contribution of the industrial sector to gross district income is 6% against 10% for Bangladesh. Handloom weaving is fairly widespread in the district and provide about 5.7% good Pabna rank next to Narayanganj. Bangladesh small scale and cottage industries corporation has set up an industrial estate at Pabna.

TRANSPORT LINKAGES:

According to Pabna zila parishad source there are total 621 km. road. Among these road there are 174 km. pucca road, 60 km. semi-pucca road and 388 km. katcha road. There are national road passes through Pabna district connecting important places of the district. Pabna district headquarters is connected by national road with Dhaka via Nagarbari and Pabna connected Kushtia district in Ishwardi. Pabna district headquarters is also connected with Bogra via Bera Upazila and also connected with Rajshahi district through Ishwardi by national road. Pabna district headquarters is also connected directly by pucca road with Bera Upazila Chatmohar & Sujanagar and by feeder road connected Chatmohar to Faridpur Upazila.

Besides there are numerous semi-pucca & katcha roads which connect the important places of the district. It is worth mentioning that Pabna is linked with the capital city Dhaka by Air service. According to Pabna district statistics-1983 there are 11 railway stations, 2 steamer/launch ghats and 7 bus terminals and an Airport in Pabna district for average transport communication.

Sujanagar Upazila is about 19 km. distance from Pabna district town. Pabna-Sujanagar road is the only road which connects the Sujanagar Upazila region as well as Upazila centre. The basic means of transports available in the Upazila and bus, rickshaw and carts. The Upazila headquarters is connected with most of union parishads by katcha roads. Country boats play a vital role in communication during rainy season. There are 19 km. metalled and 77 km. unmetalled roads in the Upazila.

2.4 Social Infrastructure.

Markets:

In every upazila headquarters there are established markets and in district headquarter Pabna there are big markets. In remote areas of the districts or upa-zilas there are common places locally known as hats/bazar where market operations is carried on and goods are exchanged. At present there are 56 daily bazars and 148 weekly or bi-weekly hats in Pabna district. The same in case of Sujanager upazila are 7 nos. of daily bazars and 43 weekly or bi-weekly hats.

Commerce:

According to the Pabna district statistics-1983 there are 95 nos. of bank branches in Pabna district and among these there are 7 nos. established in Sujanager upazila.

Education:

According to the population census 1981 the literacy rate in the district is 19.2% against 23.5% in Bangladesh. Same in Upazila Sujanager is 21%. At present there are 691 primary schools, 27 Junior high schools, 1351 high schools, 17 colleges, 178 Madrashes and 666 Gonoshikha kendra in the district Pabna in 1982. The same for Sujanager Upazila is 90 primary schools, 4 Junior high schools, 1 college and 8 Madrashes.

Health:

In Pabna district there are 8 thana health complexes with 123 beds, 15 charitable dispensaries, 2 Missionary hospitals and 4 other health centres with 20 beds. In district there are 450 registered doctors, among them 79 are M.B.B.S. doctors. In Sujanagar Upazila total no. of doctors are 19 and 5 are M.B.B.S. doctors. In the Upazila headquarters there are one thana health complex with 31 beds capacity and one dispensary providing medical services to the people.

Other Urban Services:

In Pabna district there are 112 post offices, 6 telegraph offices and 21 dak bungalows/rest houses. The same of Sujanagar Upazila are 17 post offices, 1 telegraph office and 1 dak bungalow/rest houses.

Utilities:

In Pabna district water supply facilities are provided in Pabna district headquarters and Ishwardi Upazila. In the rural areas tube-well, tank, river are the main source of water supply. In Pabna district there are 13838 tube-wells and of these number 1219 are in Sujanagar Upazila that provide drinking water to the people. In Pabna district 222 villages are electrified and in Sujanagar 7 villages facilitated with electricity supply. In respect of recreational services there are 14 cinema halls, 51 registered clubs and 10 public libraries in Pabna district. But the same is 1 cinema hall and 7 registered clubs in Sujanagar Upazila that provide recreational facilities.

2.5 Current Development Projects.

Many development projects have been taken up during the last financial years. Most of these are infrastructural development works including drainage, culverts, markets etc. Some socio-economic and other sectoral projects have also been undertaken.

Following are the major development projects programmed as informed from the upazila parishad office :-

<u>Name of the project</u>	<u>Estimated cost in Taka.</u>
1. Construction of ring culvert and box culvert for drainage	3,50,000/-
2. Extension of pucca drains of deep tube-wells in 14 nos. mouzas	6,25,000/-
3. Re-excavation of 8 nos. govt. ponds for pisciculture in Bonkola mouza	8,00,000/-
4. Development of hats (weekly bazars) of Kamalapur, Nuruddinpur, Chiakhora, Dulai, Ahammadpur, Poradanga, Satbaria, Nishchintapur & Bonkola	11,25,000/-
5. Repair of 10 nos. primary schools, one madrasha and one high school.	6,50,000/-
6. Extension of stadium	4,50,000/-

Programmed sectorwise development projects (1987-88) in brief are shown below in which the aforesaid projects are included also:

<u>Sector</u>	<u>No. of projects</u>	<u>Sanctioned amount</u>
1. Agriculture, irrigation and industry	27	Tk. 32 lacs.
2. Infrastructure construction	9	Tk. 35 lacs.
3. Socio-economic infrastructure	19	Tk. 21 lacs.
4. Sports & culture	3	Tk. 7 lacs.
5. Misc.	2	Tk. 5 lacs.
Total:	60	Tk. 1.0 Crore.

2.6. Identification of 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. This is shown in the table - 4. The total weightage obtained for each mouza have been calculated and ranked in four categories. The rank according to weightage obtained is shown in table - 5.

TABLE - 4.

Category	weightage.
A. Population range of	
Upto - 500	1
501 - 1000	2
1001 - 2000	3
2001 - 3000	4
3001 - and above	5
B. Any one of	
1. Primary school 2. Mosque 3. Tube-well	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. Bus station 7. Railway station 8. Lanch Ghat.	8

TABLE - 5.

Ranking of hierarchy according to weightage obtained.

Total Weightage obtained	Rank in hierarchy
30 and above	I
20 to 29	II
10 to 19	III
9 and below	IV

According to the afforesaid method the mouzas obtaining the highest & 2nd highest rank with weightage obtained is shown in table - 6.

TABLE - 6.

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

Name of Mouza	Name of Union	Weightage obtained	Category
1. Tantibandha	Tantibandha	22	II
2. Sujanagar	Sujanagar	42	I
3. Bhabanipur	De-	36	I
4. Dulai	Dulai	28	II
5. Gobindapur	Ahmadpur	26	II
6. Bhatikaya	Raninagar	24	II
7. Fakirpur	Satbaria	33	I
8. Goaria	Nazirgonj	20	II
9. Khalilpur	Sagarkandi	22	II

It is observed from the above that Sujanagar union has two and Satbaria union has one of Ist category of settlements while other unions have one 2nd category settlement each except the unions of Manikhat and Hatkhali, who have only III & IV category settlements. The mouza wise popn. and other services available in the I & II category settlements are shown in annexure-no.I.

CHAPTER LIIII.

THE UPAZILA SHAHAR STUDY AREA.

3.1. Definition of sphere of influence/attractiveness.

An attempt is made to identify the upazila shahar's socio-economic sphere of influence or catchment area through reconnaissance survey, land use and socio-economic survey, informations from secondary sources and through personal interviews in the various socio-economic service centres, viz. markets, shops, educational institutions, health complex, govt. offices etc. Two spheres of influences viz. 'primary' and 'secondary' have been identified for the present shahar area. The primary influence spreads over approximately 50 sq.km. (about 20 sq.miles) with a population of 41161 excluding the headquarters area. People from these places come to the headquarters to perform a wide variety of functions and avail various services for their day to day life. As the shahar is situated very close to the north western boundary of the upazila, this sphere of influence also covers some parts of the Pabna upazila. The secondary sphere of influence spreads over the larger distances covering the whole upazila and even exceeds the upazila boundary. People from all over the upazila occasionally come to the shahar mainly for receiving health, administrative and judiciary services. People from Pabna, Bera and Santhia upazilas also occasionally visit Sujannagar upazila shahar mainly for business purposes.

The catchment area has been determined according to the primary sphere of influence considering the factors stated in article 2.4 of this report. The catchment area thus have covered 26 nos. of full mouzas and 4 part mouzas from this upazila and from Pabna upazila. The details are shown in Table - 7 and in map no. 2.

TABLE - 7.

Area and population of the mouzas under the
catchment area of Sujanagar Upazila Shahar.

Sl. No.	Name of Mouzas	J.L. No.	Total area in acres.	Involved area in acres.	Total Population			Involved Population		
					1961	1974	1981	1961	1974	1981
1.	Banagram	2	36	36	1087	2050	2582	1087	2050	2582
2.	Ramjibonpur	221	3	3	103	80	99	103	80	99
3.	Sadullahpur	222	83	83	1423	1577	2536	1423	1577	2536
4.	Patoa	263	269	269	380	480	583	380	480	583
5.	Khalishpur	223	193	193	308	495	616	308	495	616
6.	Khokshabaria	220	1102	1102	2276	3425	4308	2276	3425	4308
7.	Char Tarapur (P)	224	6354	2542	7360	12500	16314	3448	5188	6525
8.	Chandipur	8	83	83	188	313	411	188	313	411
9.	Udaypur	9	269	269	564	749	817	564	749	817
10.	Krordulia (P)	10	933	465	1142	1561	2203	1142	780	1050
11.	Kurmardulia (P)	7	468	234	830	1026	1740	653	513	681
12.	Parbatia	3	406	406	253	352	480	253	352	480
13.	Baraipara	16	340	340	557	897	1100	557	897	1100
14.	Madhupur (P)	15	627	471	8361	1091	1910	731	819	1108
15.	Mathurapur	17	628	628	729	1078	1309	729	1078	1309
16.	Narayanpur	34	511	511	117	179	288	117	179	288
17.	Bhayna	32	915	915	807	383	1701	807	383	1701
18.	Krimapur	33	273	273	273	283	452	273	283	452
19.	Lakshimpur	31	149	149	598	895	1033	598	895	1033
20.	Hemrajpur	39	345	345	766	1278	1669	766	1278	1669
21.	Kuripara	38	632	632	814	1810	2181	814	1810	2181
22.	Sujanagar Char	25	195	195	557	1239	1493	557	1239	1493
23.	Tantibanda	1	1469	1469	989	1350	1675	989	1350	1675
24.	Mojaitpur	40	81	81	415	350	440	415	350	440
25.	Mamrajpur	43	74	74	494	966	667	494	966	667
26.	Mischintapur	44	200	200	932	1750	643	932	1750	643
27.	Jorkula	46	85	73	73	138	179	73	138	179
28.	Tarabaria	47	23	23	550	1036	1350	550	1036	1350
29.	Phakitpur	48	336	336	996	1880	2381	996	1880	2381
30.	Chor Srikrishnapur	189	43	43	635	698	803	635	698	803
Total					12455	34577	41909	53963	22858	33031

(P) Means part of the mouza.

3.2 Definition of shahar area.

In addition to the existing built up urban area of the upazila shahar, the shahar area also includes some area which are expected to develop as urban area in the future. The existing built up urban areas are mostly covered by Sujanagar, Bhabanipur mouzas on the eastern side of the Pabna-Sujanagar road. The current development trend is along the road towards south for which the mouza of Manikdi has been included in the shahar area. As most of the road network are getting developed towards eastern side of the town centre and these areas being high and medium high lands, the mouzas (part or full) of Niogir Bangaon, Nandanpur, Radhanagar, Balarampur and Chota Bangaon have also been included. On the north the upazila boundary being very close to the existing town centre, it has been also taken as a boundary of the shahar area. The low and flooded land on the western side of the main road and embankment in the southern part have been excluded for natural physical constraints.

The total shahar area thus determined (map no.2) covers an area of 3.78 sq. km. (1.46 sq.miles) or 93.5 acres with a population of 13,400 (1981) persons. The mouza wise area and population of the shahar area have been shown in Table-8.

TABLE - 8.

Area and population of the mouzas under
the Sujanagar Upazila Shahar area.

Sl. No.	Name of Mouza	J.L. No.	Total area in acres	Involved area in acres	Total Population			Involved popn.		
					1961	1974	1981	1961	1974	1981
1.	Sujanagar	22	557	233	2287	2666	3342	2258	2632	3300
2.	Bhabanipur	23	661	244	1091	1891	3546	1023	1861	3490
3.	Niogirbangaon	4	186	56	439	575	765	406	533	709
4.	Kharpara	6	224	90	348	548	722	337	521	700
5.	Chotabangaon	3	12	12	762	1205	520	762	1205	520
6.	Nandanpur	5	21	21	36	44	59	36	44	59
7.	Radhanagar	19	45	45	163	218	280	163	218	280
8.	Balarampur	20	81	40	169	192	268	169	192	268
9.	Gokulpur	21	87	75	655	965	1124	655	965	1124
10.	Manikdi	27	405	119	667	1135	3006	660	1113	2950
Total :				935	6617	9439	13632	6469	9284	13400

3.3 Existing Landuse, facilities & utilization characteristics.

The study of existing landuse with a view to landuse planning has got prime importance in planning. The total shahar area covers 934.8 acres or 1.46 sq.miles of land. This includes agricultural, commercial, educational, recreational, residential etc. categories of land. The table below shows the broad landuse of the total projected area.

TABLE - 9.

Distribution of landuse type on the study area-1986.

Sl. No.	Landuse type	Area in acres	% of the total shahar area
1.	Agricultural	568.64	60.83
2.a)	Commerce	4.20	0.45
b)	Industry	7.80	0.83
3.	Education	6.10	0.66
4.	Health	6.08	0.65
5.	Administrative, Govt. & Autonomous departments etc.	12.55	1.34
6.	Recreation	3.20	0.34
7.	Socio-cultural	6.66	0.71
8.	Urban services	1.30	0.14
9.	Roads	44.87	4.80
10.	Residential	273.40	29.25
Total:		934.80	100.00

Agriculture and Forestry:

From the table it appears that among the Landuses agriculture land dominates highest percentage. There is no forest area or reserved land for afforestation.

Commerce and Industry:

In the Upazila headquarters are both commercial and industrial landuses. The commercial landuses comprises with bazar, shops and banks.

Educational facility:

In the education facility there are primary schools, high schools, colleges, and Madrashas and gonosikhya kendras.

Health facilities:

Health facility consists of Upazila health complex and veterinary service and occupies 6.08 acres of land.

Administration and govt. departments:

About 1.34 percent land of total Land-uses, is used for administrative purposes.

The respective landuses has been presented in Table below.

Land use.	<u>TABLE-10</u>	<u>Area in acre</u>
Upazila Headquarters		8.30
Dak Bunglow		0.50
Union Parishad		0.15
Upazila Revenue office		0.71
Forest office		0.70
Food Godown		0.90
Others		1.29
		<u>12.55 acres.</u>

Landuse in Socio-cultural aspects:

In these categories of landuse there are Mosque, Eidgah, Mandir, Graveyard, Electric Supply, Tank, Telegraph Office etc. existed. The total land under these uses is 6.66 acres.

Roads:

Existing 4.80 percent land of shahar area is used for road network. These roads are classified into three categories like major, secondary and local roads on the basis of its width. About 20.32, 18.20 and 6.35 acres lands are covered by major, secondary and local road respectively.

Recreation:

About 0.34 percent land of shahar area is used for recreation purpose which is covered with play ground, pond and open space.

Residential:

Total residential landuses has been distributed according to the different category of houses and occupy 273.40 acres of land which is 29.25 percent of the total land.

3.4 Physical opportunities and constraints.

The present built up area is of unplanned development. The existing growth area is mixed up with commercial, residential, educational & administrative area. The pattern of settlement is linear and scatteric. The trend of development is towards north-west from the east side of the Pabna-Sujanagar road. Towards other side, the W.D.B. embankment stand as artificial barrier for development. A new landuse opportunity has been created due to the establishment of the Upazila Complex. The surrounding area of land is suitable for planned development. Due to the low land at southern area of Upazila Keshabpur, development is not preferable. So planning proposal would be made keeping in view the present trend of development and suitable for future development.

CHAPTER - IV

FORECASTS:

4.1 Forecasting of Population, Household structure & Density:

Natural increase & migration - the two major components of urban growth have been taken into consideration in the forecasting of population for the upazila shahar planning work. The rate of natural increase has been estimated on the basis of past trend and the government's achievements and targets to reduce the growth rate in the future years. The rate of rural urban migration has been estimated on the basis of past and current trend as obtained from secondary sources and socio-economic survey findings (1986). Again the expected migration due to induced attraction effect of the government's upgrading achievements & commitments in the upazila shahar - which is expected to occur during the late part of the plan period has also been taken into account. Growth rates & the forecasted population for the ranges of low, medium & high projections upto year 2000 A.D. as well as the corresponding household structure & density for the catchment area and shahar area have been found accordingly.

From the following table no. 11 and a basis of the growth rate for population forecasting may be obtained :-

TABLE - 11

Area wise population & growth rate (exponential) for the years 1961 to 1981.

Population & growth rate Area covered	Population 1961	Growth rate % 1961-74	Population 1974	Growth rate % 1974-81	Population 1981	Growth rate % 1981-85	Population 1985
1. Upazila shahar Area	7151	2.03	9284	5.38	13400	-	-
2. Upazila shahar catchment area	22856	2.87	33031	3.19	41161	-	-
3. Whole Upazila	109143	2.51	150664	2.46	178591	-	-
4. Pabna district	850601	3.04	1255663	3.07	1552519	3.59	1788000
5. National	55222663	2.48	76398000	2.32	89912000	2.25	10468000

Sources: Pabna District Statistics-1983, B.B.S.

Thana Series- Bangladesh Population Census-1981, B.B.S.
Statistical year book of Bangladesh-1986, B.B.S.

The natural growth rate at the upazila level from the year 1981 to-date is yet to be available from the secondary sources. The national natural growth rate by rural urban residence since 1981 is, however, available and shown in the table-12 which gives an idea about the growth trend of the population in the very recent past.

TABLE - 12

Natural growth rate by rural urban residence at national level.

Area	1981	1982	1983	1984	1985
National	2.31	2.26	2.27	2.25	2.22
Rural	2.35	2.41	2.32	2.32	2.34
Urban	1.76	1.60	1.96	1.65	1.97

Source : Statistical yearbook of Bangladesh, 1986 - B.B.S.

From the table-11 it is observed that for upazila shahar area and catchment areas the growth rates during 1974-81 is much higher than that of 1961-74 period while for the upazila, district and national levels it shows a considerable decrease. The sharp rise in growth rate in the upazila shahar level during 1974-81 period was possibly due to rural urban migration occurred during the post liberation period added by a high natural growth rate in the area. But the field survey (1986) shows the migration into the shahar after 1981 have become negligible, while even a trend of few outmigration is also observed. From table-12 the growth rate in both urban and rural areas shows a smooth decline from 1981 through 1985. This shows the partial achievement of the targets of government's third five year plan to bring down the population growth rate from around 2.4% to 2.0% for the plan period and to 1.8% in the terminal year of the plan (about 5% reduction in growth rate per year) and also to further reduce the growth in the subsequent plan periods. These achievements

can obviously be considered as the direct outcome of the proportionate reduction of the growth rate in the upazila levels and it is also expected that the growth rate will be further reduced in the future years as well.

On the basis of the aforesaid analysis the following assumptions can be made for the estimation of growth rate of future population.

- i) The population will increase mostly due to natural increase.
- ii) The growth rate by natural increase will gradually decline in the future years.
- iii) Government's target to reduce the growth rate will be partially achieved.
- iv) Migration effect will be negligible.
- v) Government's commitments on major development programmes will be achieved by 1995 which may result in some induced migration into the upazila shahar during that period.
- vi) Private sector development activity specially on commerce, industry and transport will also increase to induce some migration in the latter part of the plan period.

From the above assumptions, growth rates for the ranges of low, medium and high projections may be assumed as follows for the purpose of population forecasting upto year 2000.

	<u>Catchment area</u>	<u>Shahar area</u>
High projection	adding 25% to growth rate of 1974-81 for 1981-85 & a reduction of 15% for each five subsequent years upto year 2000 A.D.	growth rate of 1974-81 (5.38%) to continue upto 1985 and a reduction of 15% for each five subsequent years upto 1985 & an increase of 10% thereon in year 2000 A.D.
Medium projection	growth rate of 1974-81 (3.19%) to continue upto 1985 and a reduction of 15% for each five subsequent years upto year 2000 A.D.	25% less to growth rate of 1974-81 for 1981-85 & a reduction of 15% in each subsequent years upto 1995 & an increase of 10% thereon in year 2000 A.D.
Low projection	25% less to growth rate of 1974-81 for 1981-85 and reducing by 15% in each five subsequent years upto year 2000 A.D.	growth rate of 1961-74 (2.03%) to stand for 1981-85 and a reduction of 15% in each subsequent years upto 1995 and an increase of 10% thereon in year 2000 A.D.

The increase of 10% in growth rate from 1995 to 2000 is assumed for the expected in-migration due to induced attraction effect of the expected achievement of government's development activities in the shahar area. This increase has been applied for the shahar area only while for catchment area the reduction in growth rate is expected to continue as assumed.

In the context of the above, the forecasting of population, household structure & density within the sphere of influence and within the upazila shahar area can be explained in the following manner :-

i) Within sphere of influence:

Considering the population of 1981 census as the base population the table shows the forecastee population of catchment area of Sujanagar Upazila shahar with low, medium and high projection over the years 1985, 1990, 1995 and 2000 A.D.

TABLE - 13

Forecasted population of catchment area of Sujanagar
upazila shahar.

Range of projection.	1974	1981	1985	1990	1995	2000
High	Population 33,031	41,161	48,134	56,865	65,539	73,970
	Growth rate	3.19	3.99	3.39	2.88	2.45
Medium	Population 33,031	41,161	46,670	53,346	59,770	65,862
	Growth rate	3.19	3.19	2.71	2.30	1.96
Low	Population 33,031	41,161	45,239	50,686	55,225	59,405
	Growth rate	3.19	2.39	2.03	1.73	1.47

The table shows that the population in 1981 is expected to increase by 60% within 20 years i.e. by the year 2000 on medium projection, while the increase will be 80% and 40% on high and low projection respectively.

Increase in population over the years will also require for more number of households and the density will also increase accordingly in the area considering in average size of households of 6.20 as stands for the upazila in 1981, the following table - 14 shows the forecasted population, household structure and density in the catchment area upto year 2000 A.D. on medium projection. The catchment area as calculated approximately covers 12455 acres of land.

TABLE - 14

Forecasted population, household and density in the catchment area of upazila shahar Sujanagar.

Years	Population	No. of household	Density per acre	per sq. km.
1974	33,031	5,328	2.65	655
1981	41,161	6,639	3.30	815
1985	46,670	7,527	3.75	927
1990	53,346	8,604	4.28	1,057
1995	59,770	9,673	4.80	1,186
2000	65,862	10,623	5.29	1,307

ii) Within upazila shahar area:

Table-15 below shows the forecasted population in the upazila shahar area on high, medium and low projections over the years 1981, 1990, 1995 and 2000 A.D. The population of 1981 census has been taken as the base population. The growth rates as assumed are also shown in the table.

TABLE -15.

Forecasted population of Sujanagar upazila shahar area.

Ranges of projection		1974	1981	1985	1990	1995	2000
High	Population	9284	13,400	16,525	20,662	25,006	30,821
	Growth rate		5.38	5.38	4.57	3.89	4.27
Medium	Population	9284	13,400	15,883	18,806	21,717	25,434
	Growth rate		5.38	4.035	3.43	2.92	3.21
Low	Population	9284	13,400	14,522	15,822	17,020	18,444
	Growth rate		5.38	2.03	1.73	1.47	1.62

The table shows that the population in the shahar area in 1981 is expected to become about doubled in 2000 on medium projection, while the increase on high and low projection will be about 2.3 times and 1.38 times respectively.

Considering the average size of household as 7.05 for the upazila shahar in 1986 (as attained from socio-economic survey, 1986), the following table-16 shows the forecasted population, household structure and density in the shahar area upto year 2000 on medium projection. The total shahar area covers about 935 acres of land.

TABLE - 16

Forecasted population, household and density in the
upazila shahar Sujanagar.

Year	Population	No. of household	Density	
			per acre	per sq. km.
1974	9284	1317	9.92	2450
1981	13400	1901	14.33	3540
1985	15888	2254	16.99	4196
1990	18806	2668	20.11	4967
1995	21717	3080	23.23	5738
2000	25434	3608	27.20	6718

4.2 Forecasting of labour force and employment:

The economic survey (1986) reveals that about 69% of the population of upazila shahar is available as labour force (age group 10-59 years) while about 50% of the population are youth (15-49 years age). The survey also shows that 53% of the labour force is employed in the agricultural sector, about 20% in day-labour and the rest in business, service and other non-agricultural sectors. About 44% of them have also some subsidiary occupations. A large quantity of day labourers in agricultural sector are seasonally employed for their employment in farm and non-farm activity.

Analysing the existing trend, government's targets to expand employment the following assumptions may be made for the purpose of labour force projections.

- i) Around 69% of the total population (as available at present) will also be available within the age group of 10-59 years (40% male and 29% female) upto years 2000.
- ii) Economically active male labour force may be assumed to be 50% of the total male population of age group 10-59 years for catchment area and 65% for the shahar area.
- iii) The female participation rate will increase from 7% in 1985 to 15% in 2000 gradually.
- iv) Child labour force (10-14 years age group) will decrease due to increased school enrolment in the future years.
- v) Employment opportunity will increase in the non-agricultural sectors due to increased administrative and development activity in the shahar area.

According to the above assumption the following table shows the labour force and employment projection for catchment area on medium projection.

TABLE - 17.

Forecasted labour force for catchment area of upazila
shahar Sujanagar on medium projection.

Population	Projected population in the years			
	1985	1990	1995	2000
1. Total population	46,670	53,346	59,770	65,862
2. Total population 10-59 years age group				
Male (40%)	18,668	21,338	23,908	26,345
Female (29%)	13,534	15,470	17,333	19,100
3. Economically active population				
Male (50% of above 2)	9,334	10,669	11,954	13,173
Female (7% to 15% above 2)	2,030	2,321	2,600	2,865
4. Total labour force	11,364	12,990	14,554	16,038

The projection shows an employment population ratio of 1:1.4 for which an employment opportunity should be created for about 16,038 workers to support about 65,862 persons expected to be accommodated in the catchment area by the end of the planned period.

The following table shows the forecasted labour force and employment on medium projection for the upazila shahar area.

TABLE - 18.

Forecasted labour force and employment of Sujanagar upazila
shahar on medium projection.

	Projected population in the years			
	1985	1990	1995	2000
1. Total population	15,888	18,806	21,717	25,434
2. Total population of 10-59 years age group				
Male (42% of above 1)	6,673	7,899	9,121	10,682
Female (29% of above 1)	4,608	5,454	6,298	7,376
3. Economically active popn.				
Male (65% of above 2)	4,337	5,134	5,929	6,943
Female (7% to 15% of above 2)	323	491	756	1,106
4. Total labour force	4,660	5,625	6,685	8,049

4.3 Land requirements, provision standards :

Guidelines have been laid out for provision standard and land requirement in Annex-2 of Terms of Reference (TOR). Assuming 45% of total landuse as residential and the rest 55% for other landuses as per TOR the total area comes to 1450 acres for the year 2000 A.D. But in practice while preparing the landuse plan the total area has been reduced and the area allocated for different landuses have been varied (increased or decreased) due to main following reasons :-

- i) Sharp rise of growth in the future cannot be expected when compared to the slow & gradual growth in the past for some landuses viz. commerce, industry, etc.
- ii) Due to presence of some facilities and services in the area of influence only a part of the population of this area will only use these facilities from the shahar area. These landuses include markets, high schools, open spaces, religious facilities, cemeteries, post offices, etc.
- iii) Upazila shahars being becoming the focus of decentralized administration of the government, the Upazila complex and other government establishments may require more areas than anticipated in the TOR.
- iv) Some facilities and services will only be used occasionally and by a part of the people of the area of influence. These include hospital, police station, telephone exchange, bus station, stadium, etc.
- v) The no. of units as specified for most of the landuses can be reduced to lesser number by providing good circulation and communication system within the shahar area. Thus allowing lesser total area for the respective type of landuse.
- vi) The specified net residential density may not be

achieved within the plan period due to the horizontal and spaced expansion trend of the residences in the shahar area - thus increasing the percentage of residential landuses as anticipated in the TOR.

- vii) The determination of the boundary of the Upazila shahar has been mainly governed by the physical opportunities and constraint, existing trend of growth, space available for future landuses etc. Unnecessary carriage of wider area as required by TOR has been avoided.
- viii) A certain percentage of the total area have been allocated as urban deferred which, however, will take care of any additional areas if required for the landuses in the future.

The details of proposed landuses have been shown in Annex. no.2.
(Landuse Plan)

CHAPTER FIVE

5. LANDUSE PLAN

5.1 Approach, concept, planning principles

The methodological approach as adopted towards the preparation of the landuse plan of Faridpur upazila shahar includes - firstly, a reconnaissance survey undertaken by the planning team to determine the study area. Secondly, a landuse survey made through C.S. map to identify the existing landuse character. Simultaneously, a socio-economic survey is undertaken to have socio-economic condition of the people. Determination of catchment area is made on the basis of direct or primary socio-economic influence of the shahar area. Population forecasting is made for both of shahar area and catchment area. Finally, land allocation and determination of planning area is made on the requirements of the forecasted population following the guideline of planning provision standards given in Annex - 2 of TOR and article 4.3 of chapter- IV of this report.

The concept behind the preparation of landuse plan for the upazila shahar can be traced principally from the government's policy of decentralization of administration and the recognition of the upazila level as the most significant tier of administration for bringing development, administration, judiciary and service facilities to the door step of the rural masses. This is a part of the total planning process at the upazila level which will eventually include plans for remainder of the upazila. Conceptually, landuse plan does not deal with detailed planning - rather it can be called as landuse zoning plan identifying suitable location for social, administrative, economic, circulatory and other appropriate landuses. Broad landuse zones have been identified only. Detailed planning would be done under zonal plan.

Effort is made for maximum utilization of the scarce land. The existing landuse pattern, land level, on site physical opportunities and constraints have been duly considered for planning of the upazila shahar. As a policy to retain existing urban landuses as far as practicable the existing urban landuses have been incorporated in the planning proposals

in a way that maximum possible facilities and services can be provided with minimum disturbances to the existing land use pattern. The existing development trend have been given much importance in selecting the probable direction of expansion of the shahar area with proposals of new land uses.

5.2 Plan description:

The land use plan of Sujanagar upazila shahar will make accommodation of 25,434 population upto the year of 2000 A.D. The plan has been proposed an area of 934.80 acres or 3.75 sq.km. (1.46 sq.miles). The proposed broad land allocation with percentage to the total area has been shown in table- .

The existing built up area of Sujanagar upazila shahar is situated mostly on the eastern part of the 100 ft. wide road (12 ft. metalled) coming from Pabna town and passing through the shahar towards Sataria. The western part of the road is mostly low land and is partly covered by BWDB embankment. A north-south linear settlement is observed along the main road. The present trend of development is towards the eastern parts of the built up area. The proposed boundary of the shahar has been determined accordingly to include all the built up areas and the adjacent or the nearby scattered residential areas along with agricultural/vacant lands for accommodating new proposals. The land use planning proposals of Sujanagar upazila shahar are separately described as follows:

TABLE-19

Sujanagar

LAND REQUIREMENTS:

Forecasted Population of Planning Area :- 25,434
 " " of Area of influence :- 65,862

Sl. No.	Land use type	Land re-quired as per TOR	Land un-der exis-ting use.	Addl. area pro-posed.	Total area pro-vided.	% of total area pro-vided.
1a.	Commerce	138.0	4.20	14.60	18.80	2.01
1b.	Industry	138.0	7.80	13.00	20.80	2.23
2.	Education :-	35.0	6.10	8.2	14.3	1.53
	- Primary school	10.0				
	- Secondary school or college	25.0				
3.	Health :-		6.08	0.80	6.88	0.73
	- Dispensary	19.0				
	- Hospital	25.0				
4.	Administrative/Judiciary	12.0	12.55	11.50	24.05	2.57
5.	Recreation :-	109.5	3.20	11.1	14.3	1.53
	- Park, open space	92.0				
	- Cinema, closed space	2.5				
	- Sports stadium	15.0				
6.	Socio-cultural :-	39.50	6.66	10.20	16.86	1.80
	- Community centre	5.0				
	- Religious facility	9.5				
	- Cemetary	25.0				
7.	Urban Services :-	15.0	1.30	16.95	18.25	1.95
	- Heli port					
	- Post office	2.50				
	- Telephone exchange	2.50				
	- Bus/ghat/rail station	5.0				
	- Others (fire stn. etc.)	5.0				
8.	Residential	255	273.40	263.34	536.74	57.41
9.	Urban deferred	10%	-	88.2	88.20	9.43
10.	Roads :-					
	- Major		20.32	64.76	85.08	9.10
	- Secondary		18.20	-	18.20	1.95
	- Local		6.35	7.07	13.42	1.43
11.	Reserve		-	60.12	60.12	6.43
Total:			366.16	568.64	934.80	100

TABLE-20.

Landuse types and areas proposed for Gujanagar
Upazila shahar.

Sl. No.	Landuse type	Existing area in acres	Addl. area provided in acres	Total area provided in acres	% of total area provided.
1a.	Commerce	4.20	14.60	18.80	2.01
1b.	Industry	7.80	13.00	20.80	2.23
2.	Education	6.10	8.2	14.30	1.53
3.	Health	6.08	0.80	6.88	0.73
4.	Administrative/Judiciary	12.55	11.50	24.05	2.57
5.	Recreation	3.20	11.10	14.30	1.53
6.	Socio-cultural	6.66	10.20	16.86	1.80
7.	Urban services	1.30	16.95	18.25	1.95
8.	Residential	273.40	263.34	536.34	57.41
9.	Urban deferred	-	88.20	88.20	9.43
10.	<u>Roads</u>				
	40'-0" & above.	20.32	64.76	85.08	9.10
	25'-0" to 39'-0"	18.20	-	18.20	1.9
	Upto 24'-0"	6.35	7.07	13.42	1.43
11.	Reserve	-	60.12	60.12	6.43
Total:		366.16	568.64	934.80	100%

Commercial landuse:

The principal commercial area (CBD) of the upazila shahar lies on the north-western part of the shahar and is situated on both sides of the main road and adjacent to the upazila parishad complex and is gradually expanding covering the attached residential areas and agricultural land. A limited and controlled expansion is proposed to the existing commercial areas so as to avoid environmental disorder and traffic jam on the main road. To provide with day to day commercial services to the distant residential areas from the CBD, three more commercial areas have been evenly distributed at three different locations. The landuse plan proposes about 18.80 acres or 2.01% of total planning area for commercial purposes.

Industrial landuses:

Industrial landuses as existing in the shahar are mostly covered by brick field and small industries like oil & flower mills, saw mills and ice cream factories located in the C.B.D. and also in scattered way in different parts of the shahar. Such further scattered, unhygenic and unplanned establishment of industries should be controlled. Considering environmental conditions, economy in providing services, low land value and good transportation system a new industrial area has been proposed on the north-eastern boundary of the shahar at the junction of two proposed 60 ft. wide roads. The total proposed industrial landuse area is 20.80 acres or 2.23% of the total planning area.

Educational landuse:

The proposals for educational landuse are as follows :-

1. As the schools are mostly situated at one end of the shahar along the main road sides, and far away from other residential areas, two more primary schools and high schools have been proposed in those areas.
2. Addition of new lands to one of the existing primary and girls' high schools.
3. Expansion of existing college land.

The total area thus proposed comes to 14.30 acres which is 1.53% of the total planning area.

Health:

In addition to the existing upazila health complex which is the major landuse for health purpose a health centre has been proposed to the northern part of the shahar to serve the people of that surrounding area. The total area proposed for health purposes is 6.88 acres which is 0.73% of the total planning area.

Administrative landuse:

Land available with the upazila parishad is not sufficient and needs expansion which is proposed on the eastern side of its boundary & to be extended upto the two metalled roads on two sides. The total area proposed for administrative landuses is 24.05 acres i.e. 2.57% of the total planning area.

Recreational landuse:

Recreation facility as available in the shahar area is poor, specially in the residential areas. The proposals for additional recreational facilities are as follows :-

1. Two open spaces/parks one along the embankment on the south and the other in the residential areas on the north have been proposed.
2. Addition of two more play grounds evenly located in the residential areas.
3. Addition of land to the existing stadium to make it a full fledged one.

The total area proposed for recreational purposes comes to 26.60 acres or 2.85% of the total shahar area.

Socio-cultural landuses:

In addition to the existing facilities a central eidgah and a community centre has been proposed at the location having good communication facilities from all parts of the shahar area. The total area proposed for socio-cultural landuse is 16.86 acres or 1.80% of the total planning area.

Urban services:

New proposals are a new post office on the southern part of the shahar - the only existing one being on the northern part, have been proposed. A fire service station adjacent to the 60 ft. wide road towards Raut Nagda have been proposed also. Other services like T&T and police station have been recently constructed and no addition of land to these services have been proposed. A heli port consisting of 11.0 acres of land have been proposed near the Upazila headquarter area. The total area for Urban services as proposed becomes 18.25 acres i.e. 1.95% of the total planning area. This area also includes a heli port of 11.0 acres.

Roads:

The existing road network (pucca & kutcha) in the shahar after development will work as a good communication system for the shahar area. The proposals have been made

accordingly as follows :-

1. Widening and development of the portion of Pabna-Sujanagar road passing through the shahar area.
2. Widening and development of 5 nos. north-south roads branching out from the Pabna-Sujanagar road.
3. widening and development of the existing 4 nos. cross roads connecting the north-south roads.
4. New road network in the proposed residential areas.

The total area proposed for roads thus comes 116.7 acres or 12.48% of total shahar area comprising of major, secondary and local roads, the details of which are shown in table-19.

Residential landuses:

About 264 acres of additional area has been proposed to the existing 273.40 acres of residential area with 57.41% of total planning area. The locations are mostly proposed adjacent to the existing residential areas situated at different parts of the shahar. The proposed gross density comes to 27 persons per acre with net density of 47 persons per acre for the year 2000 A.D.

Urban deferred:

87 acres or 9.31% of the planning area have been ear-marked as urban deferred for future urban expansion should the area for various landuses becomes inadequate during the plan period or beyond. The locations have been proposed in different parts mostly in the peripheral regions of the shahar area for even development.

Reserve:

Same areas in the planning area will not be used for further development purpose and will remain as reserve. Such area proposed in the plan is a highly productive agricultural land with deep tubewell irrigation with an area of about 51 acres situated near the eastern boundary of the shahar. About 9 acres of BWDB embankment running through the planning area is also proposed as reserve.

CHAPTER - VI.

PROGRAMMING AND IMPLEMENTATION

6.1. Priority action, cost implication.

Growth of the upazila shahar will depend on the extent of development activities to be occurring within the upazila by 2000 A.D. The landuse plan is a guide line for the orderly growth of the upazila shahar. All the landuses cannot, rather should not be developed or all the services cannot be provided at a time. Priority actions are to be selected carefully for the sequential and balanced development of the shahar. Revenue earning landuses should be given first priority. For example, market, commerce, etc. which will help increase revenue for government expenditure and at the same time will provide day to day services to the people. Production and employment oriented landuses such as industry may be given next priority. Side by side infrastructure development should be made to facilitate the functioning and operation of the above said landuses. Urban services, health and education will come next. Provision of housing facilities for the people arrived in the shahar by induced attraction effect may receive next priority. Recreational facilities may be provided at the last stage.

On the basis of priority the projects should be identified and cost of the same should be worked out accordingly for implementation. The cost generally includes the cost for acquisition of land, land development (if required) cost, cost of construction & infrastructure development, operational and maintenance cost etc. The cost should be worked out prior to the time of implementation by the respective implementation authority and finance to be arranged accordingly. Side by side to public sector, private sector should also be encouraged and allowed for implementation of some projects of the plan.

6.2 Phasing, Urban Deferred.

6.2.1 Phasing: plan implementation should be done in some phases at an interval of 5 years upto 2000 A.D. It should be related to the national 5-year development plans. Development activities, for approval by the Government, should be broken up into Annual Development Programme (ADPs). Phasing of development activities according to the plan is shown below :

<u>Sl.</u>	<u>Sectors</u>	<u>1985-90</u>	<u>1990-95</u>	<u>1995-2000</u>
1.	Land development (for housing)	35%	45%	20%
2.	Administrative	70%	20%	5%
3.	Industry	40%	55%	5%
4.	Commerce	40%	50%	10%
5.	Educational	45%	50%	5%
6.	Health	50%	40%	10%
7.	Recreation	45%	50%	5%
8.	Roads	60%	30%	10%
9.	Others	35%	40%	25%

6.2.2 Urban Deferred : Approximately 10% of the total built up area has been earmarked in the plan as urban deferred for unforeseen future activities.

6.3 Development control :

To ensure timely implementation of the plan provisions the implementing authority must have some legal power. The plan should be passed by the government. To implement the upazila plans on an uniform basis there should be some rules and regulations containing powers to acquire land or to impose development controls etc. like East Bengal Building construction Act. 1952 or Town Improvement Act etc. There should be provision in the Govt. Annual Budget to allocate money for upazila parishad to implement the plan provisions.

6.4 Monitoring, review :

The Upazila Parishad will be the custodian of the plan. There are many government/autonomous bodies to function in the Upazila level. They have to construct their office or acquire land for their project purpose. The Upazila Parishad will inform the Govt. agencies/autonomous bodies about the plan provisions, so that the landuses can be regulated as per plan provisions.

The plan has been formulated on certain assumptions, conditions or requirements may be changed in future. So to cope up with the changing conditions the plan should be revised after every three to five years.

ANNEXURE - I

A. MUZA WISE POPULATION AND OTHER SERVICES AVAILABLE IN THE B II CATEGORY SETTLEMENT IN THE UPAZILA SUJANAGAR.

SL NO.	NAME OF MOUZA	NAME OF UNION	POPULATION 1981	POPULATION WEIGHTAGE	PRIMARY SCHOOL	TUBE WELL	MOSQUE/ MNDIR/CRCH	HAT	HIGH SCHOOL	BAZAR	COLLEGE	HEALTH CENTRE	HOSPITAL	POST OFFICE	TELEGRAPH, TELE. OFFICE	POLICE OUT-POST	ELECTRICITY	BANK	B.A.D.C OFFICE	UPAZILA COMPLEX	LAUNCH, BUS, RLY STN	TOTAL WEIGHTAGE	HIERARCHY CATEGORY	REMARKS	
				105	1	1	1	2	2	4	8	4	8	2	8	4	2	4	4	4	8	4	80		
1.	BHADANIPUR	SUJANAGAR	3546	5	1	1	1	-	-	-	-	-	-	2	8	-	2	4	4	8	-	36	II		
2.	SUJANAGAR	SUJANAGAR	3342	5	1	1	1	2	2	4	8	-	8	-	-	4	2	4	-	-	4	46	I		
3.	TANTI BANDAH	TANTI BANDAH	1675	3	1	1	1	2	2	4	-	4	-	2	-	-	2	-	-	-	-	22	II		
4.	DULAI	DULAI	5906	5	1	1	1	2	2	4	-	4	-	2	-	-	2	4	-	-	-	28	II		
5.	GOBINDAPUR	AMHAPUR	3230	5	1	1	1	-	2	4	-	4	-	2	-	-	2	4	-	-	-	26	II		
6.	VATKIA	HANI NAGAR	3710	5	1	1	1	2	2	4	-	4	-	2	-	-	2	-	-	-	-	24	II		
7.	FAKIRPUR	SATDARIA	2381	4	1	1	1	-	2	4	8	-	-	2	-	-	2	4	4	-	-	33	I		
8.	GOA RIA	HAJIRGAJ	271	2	-	1	1	2	-	4	-	-	-	2	-	-	-	4	4	-	-	20	II		
9.	KHALILPUR	SAGAR, ANDI	3488	5	1	1	1	2	2	4	-	4	-	2	-	-	-	-	-	-	-	22	II		
10.																									
11.																									