

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

**REPORT—IV
LAND USE PLAN
ATGHORIA UPAZILA HEADQUARTERS
PABNA DISTRICT**

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PABNA DISTRICT**

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CHAPTER - 1

1. INTRODUCTION

As a country Bangladesh is characterized by predominance of a vast our underdeveloped rural sector in which the majority of the national population live, whose main occupation is, of course, agriculture. They in fact constitute the backbone of citizenry of the state, but are historically neglected and are deprived of the basic necessities of life. The Government of Bangladesh is heavily committed to stand by the deprived and neglected class of people in the rural areas and to bring their welfare through government services, made available at the door-steps of the people. With this end in view administration has been decentralized at the upazila level, making them the focal point of administration through which all round development of the rural areas and welfare of the rural masses are aimed at.

Keeping such a situation in view the new government of Bangladesh has taken a pragmatic step to decentralize government administration with the ultimate aim of serving the common man in the village and making government responsive to the needs of the people.

The main objectives of such a decentralized administration may be identified as -

- (i) Socio-economic emancipation and welfare of the common man,
- (ii) Accountability of the government officers to the people's representative,
- (iii) co-operation, co-ordination among decision-makers, implementors and the beneficiaries,
- (iv) Economical, quick and fair justice to the people and so on.

To attain such objectives there will be needed for a new work- methods and change of attitudes. Keeping the ultimate goal of serving the common man and improving their way of lives.

So, it is felt that the Upazila headquarters should grow up expeditiously and the preparation of landuse plan/Master Plan for such Upazila headquarters is of utmost importance to better utilization of land, people and natural resources to ensure orderly development in the period upto 2000 A.D. With this end in view, the directorate of Urban development in the Ministry of Works has an attempt to prepare the landuse plan for Atghoria Upazila headquarters of Pabna district.

The analysis of existing landuse and socio-economic infrastructure of the Upazila headquarters were made earlier in the report - II. The third report covered draft plan and draft report of the Atghoria Upazila headquarters. This is the final report of landuse plan of Atghoria Upazila headquarters, prepared with reviewing and modification of the draft report of Atghoria Upazila headquarters.

1.1 Methodology

The methodology of whole works for the preparation of landuse plan of Atghoria Upazila headquarters was furnished by the following methods :

(1) Preliminary work :

Mouza Index Map of scale 1" = 1 mile and Mouza Maps of scale 1" = 330' of Atghoria Upazila were collected from Land and Revenue office, Dhaka and studied. Reference books such as Village Population Statistics (Pabna District)-1974, Pabna District Census-1981, Pabna Village Statistics-1983 and Pabna District Gazette-1979 were collected from Bangladesh Bureau of Statistics, Dhaka and studied. From these secondary sources we have collected information regarding area, demography, history and other socio-economic data of the project area.

(2) Reconnaissance survey :

On the basis of the reconnaissance survey, local contacts and other information available from secondary sources, the tentative boundry of the study area of Atghoria upazila headquarters was demarcated. For demarcation of the tentative boundry line following major aspects were considered :

- (a) Existing pattern of development surrounding the developed part of the headquarters.
- (b) Changing the landuse map/area from agriculture activities to non-agricultural activities.

- (c) Existing trend and growth pattern of transportation network.
- (d) Availability of flood free and buildable land.
- (e) Future potential development/expansion capacity in and around the Upazila headquarters.

(3) Survey :

Following types of survey were carried out for performing the survey work of Atghoria Upazila headquarters :

(a) Socio-economic survey :

With the help of the questionnaire survey, various socio-economic components stated in the study have been performed. There were 100 sample households questionnaire, approximately 11% (percent) of total household of the study area was conducted for finding out the socio-economic character of Atghoria Upazila headquarters.

(b) Hierarchy of settlements :

Determination of the hierarchy of settlements within the Upazila as a whole taking mouza as a unit was based on the population, economic activities, social infrasturture provision and related characteristics. For collection of the above information, the study team conducted interviews with the Upazila Nirbahi Officer, Upazila Parishad Statistics Officer, Education Officer, Union Parishad Chairman, Members and with the local leaders. Pabna District Population Census, Pabna

District Statistics also helped to determine the hierarchy of settlements.

(c) Existing landuse survey :

Followings were the categories of existing landuse in the study area of Atghoria Upazila headquarters pointed for a mapping on the Mouza Maps 1" = 330' of Atghoria Upazila during the landuse survey :-

I. Agriculture, II. Commerce & Industry, III. Education, IV. Health, V. Administrative, Govt. & Autonomous etc. VI. Recreation, VII. Socio-cultural, VIII. Urban services, IX. Roads, X. Residential, XI. Water bodies, XII. Khas Land etc. and physical details on land levels existing natural drainage are included in the landuse survey.

(4) Analysis & forecasting :

Forecasted the population of employment on the basis of past trends with allowances for the induced attraction, effect of the governments upgrading commitment to 1985, 1990, 1995 and to the year 2000 A.D. have been forecasted. Three categories of forecasting have been made viz., low, medium, high. With the help of medium forecasting, the land requirement for various services and residential areas were determined.

(5) Draft plan:

On the basis of the existing landuse survey maps and reports, socio-economic survey report and other secondary information the draft plan of Atghoria Upazila headquarters was prepared.

- (6) With review of the draft report by the government and suggested modification of the draft report, the consultant has prepared the final report of the landuse plan of the Atghoria Upazila headquarters.

CHAPTER - 2

2. THE UPAZILA IN ITS DISTRICT CONTEXT

2.1 Location and physical characteristics of the Upazila.

Atghoria Upazila is situated to the north of Pabna. Chatmohar and Faridpur are situated to the north of Atghoria Upazila and Iswardi is placed in west. This Upazila lies between $24^{\circ}-08'$ to $24^{\circ}-13'$ north latitude and $89^{\circ}-10'$ to $89^{\circ}-25'$ east longitude. It is the smallest Upazila of Pabna district. The geographical location of the Upazila has been shown on the location map (Map - 1). Atghoria is about 8 miles distance from Pabna district town but it is the most backward region of this district. Pabna-Chatmohar road is the main road which connects the Upazila centre.

It is the smallest Upazila of Pabna district in respect of size which is only 72 sq. miles. Atghoria and Debuttar are the two administrative focal points of this Upazila. Pabna-Chatmohar road connects these two points and the distance is found two and a half mile from each other. Present Ratnai river is not used as natural drainage. So this region is not flood free area. This region is flood-plain and fertile, some parts of this Upazila low-lying areas.

PABNA DISTRICT

MAP NO.1



DISTRICT BOUNDARY

THANA

DISTRICT HEADQUARTER

THANA

LOCATION MAP

OF
ATGHORIA UPAZILA



2.2 Population and Settlement Distribution

According to Pabna district statistics-1983, Pabna occupies a physical area of 1906 sq. miles including river area and 1731 sq. miles excluding river area. In respect of physical area it is the 15th national district and cover about 3.43% of the total area of the country. The location of the district is such that it provides a passage to Rajshahi Division and north Bengal from the capital city. The recent government policy of decentralization separates the Pabna Sadar Sub-division into a Pabna district comprising of 2 Pourashavas, 8 thanas, 71 union, 1291-mouzas and 244227 households.

According to census - 1981, the total population of the district is 3,41,800 and 3.4% of the national figure. The average size of household in this district is 6 against 5.8 for Bangladesh. The increase of population in 1981 over 1974 is 21.42% against 21.79 for Bangladesh.

Atghoria thana was upgraded into an Atghoria Upazila under Pabna district in 1983. It occupies a physical area of 72 sq. miles and has a population of 1,04,151 as per 1981 census. The density of population is 1447 per sq. mile against 1566 per sq. mile for Bangladesh. This Upazila has 16,507 (1981) household and the average size of household is 6.31 persons against 6 persons for Pabna district. The increase of population in 1981 over 1974 is 87.66 against 16.30 for Pabna.

2.3 Economic performance and Transport linkage.

The economy of the Pabna district is mainly agriculture. The overwhelming majority of the people is dependent mainly on agriculture for their earning and employment. Agriculture labour in 1961, constituted 75 percent of the total labour force in the district. The economic condition of the people is not good, the few large and small scale industries established, did not create any considerable impact towards raising the standard of living of the people. Trade and Commerce increased both in value and volume, but people engaged in these persuites could not form a substantial economic class. The extent of urbanization is still low in two municipal towns. Only 10.28 percent of total population is urban. The scope of subsidiary occupation within the district is limited, since industries have not been developed as required.

The total number of labourers in the district was 10,70,000 in 1979-80 and 10,90,000 in 1980-81. Thus over the one year between 1979-80 and 1980-81, labour force increased by 1.89 percent, whereas populations increased by only 21.42 percent. The total number of farm holding in the district is 2.15 lacs occupying about 77% of the total land of 12 lacs acres in the district. Intensity of cropping in the district is 155% against 154 for Bangladesh. The contribution of the industrial sector to gross district income is 6 against 10% of Bangladesh. Presently there are 5 Jute mills and 4 cotton mills in the district. Handloom weaving is fairly widespread in the district and provide 57% of the total industrial labour force of Pabna.

REGIONAL CONNECTION OF ATGHORIA UPAZILA PABNA DISTRICT

MAP NO.2

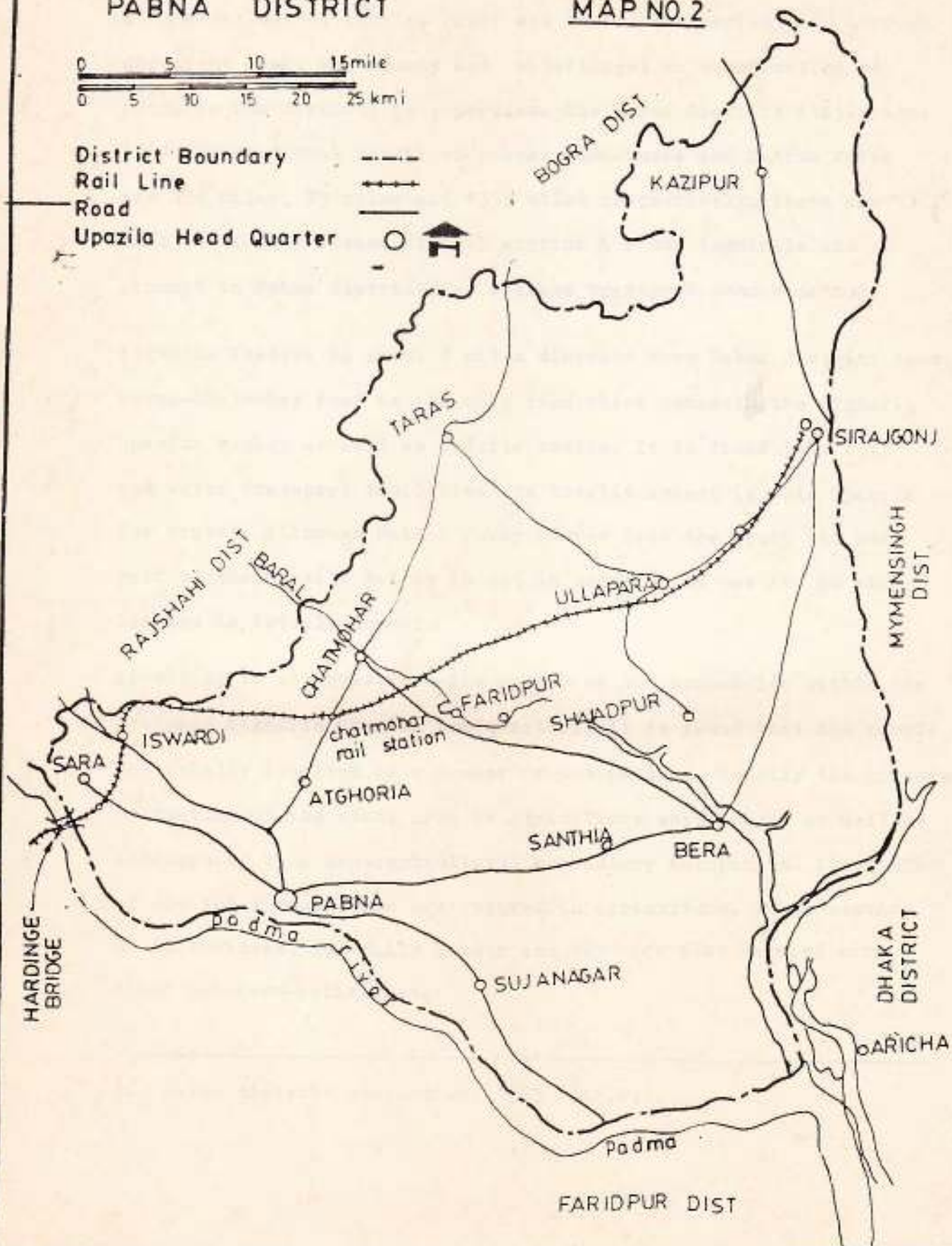
0 5 10 15 mile
0 5 10 15 20 25 km

District Boundary

Rail Line

Road

Upazila Head Quarter



As numerous beels, canals, river and their tributaries pass through different areas are swampy and waterlogged so construction of roads in the district is a problem. The Pabna District statistics, 1981 reported that length of pucca, semi-pucca and katcha roads are 132 miles, 75 miles and 1315 miles respectively. There are 11 rail station, 2 steamer/launch station & 7 bus terminals and an airport in Pabna district for average transport communication.

Atghoria Upazila is about 8 miles distance from Pabna district town. Pabna-Chatmohar road is the only road which connects the Atghoria Upazila region as well as Upazila centre. It is found that rail and water transport facilities are totally absent in this Upazila for travel. Although Ratnai river passes from the south and west part of the Upazila but it is not in position to use it. An air linkage is totally absent.¹

According to the questionnaire survey of 100 households within the proposed Atghoria Upazila headquarters, it is found that the people are usually involved in a number of occupations. Usually the principal occupation of the study area is agriculture which might as well be accompanied by a non-agricultural subsidiary occupation. About 53% of the total households are engaged in agriculture. 7% in service, 8% in business, 20% daily labour and 12% are also engaged with other non-farm-activities.

1. Pabna district statistics, 1983 (B.S.S.).

In the study area 52% of total households belong to low and lower income group having total family income between Tk.5,000/- - 6,999/- per year called low and lower income group, and 42% families having total yearly income between Tk.7,000/- - 11,999/- only called middle income group and 6% households belong to higher income group and their yearly income is Tk. 12,000/- and above.

2.4 Social - Infrastructure.

- Market

A large number of trade is carried on at village hats or markets, which are held on fixed days, one or twice or thrice in a week. There are also daily markets. A market is usually held in an open space, where vendors from neighbouring village and petty traders from distance sell the goods. They either sit on the ground with their wares set out before them or occupy open sheds. At present there are 204 markets in the Pabna Sadar Sub-division which include 56 daily bazars and 148 weekly hats. Atghoria is an important Upazila in Pabna district only having 3 daily bazars and 14 weekly hats.

- Commerce

At the time of partition (1947) there were three non-scheduled banks in this district. At present there is no non-scheduled bank in this district. From Pabna district statistics, 1983, there are 95 number of bank branches shown in Pabna Sadar Sub-division which included 6 number of bank branches in Atghoria Upazila.

- Education

According to the population census 1974, the literacy rate in the Pabna district is 14.77% against 20.20% in Bangladesh. About 1,47,694 students are recorded in the Pabna Sadar Sub-division-the records stated that primary level followed by a decreasing order at the higher Secondary and graduate level reveals there are 691 primary schools, 27 Junoor high schools, 1351 high schools,

17 colleges and 17 madrasahs in the Pabna Sadar Sub-division. The total students enrolment at the above level of education are shown in Annex-XVIII. In Atghoria Upazila 59 Primary schools, 1 Junior High school, 7 high schools, 1 college and 25 Madrasahs in Atghoria Upazila providing 17,197 students.

- Health

Among the health facilities there are 8 thana/Upazila Health complexes with 123 beds, 15 Charitable dispensaries, 2 Missionary hospitals and 4 other health centres in the Pabna Sadar Sub-division Annex- XV). The Pabna mental hospital alone provides 400 beds and is the only such hospital in the country. The Pabna district statistics, 1983 has prescribed that there are 919 physicians in this district.

- Urban Services

In Atghoria 7 Post offices, 6 bank branches are provided as social welfare facilities (Annex- XIV). In almost every village there is a mosque, where Friday and daily prayer are performed by the neighbours.

- Utilities

In the Pabna district, supply of drinking water is not adequate and is unsatisfactory. Villages by sides river grow water, generally uses as drinking water, house works, bathing etc. while the banks in close proximity are made use as latrine. A few villagers have used pond water or katcha well. There are 13838 tubewells were sunk in different places in Pabna Sadar Sub-division to draw drinking water. Out of which 1340 tubewells have been served in Atghoria Upazila as drinking water supply.

Most of the people in Pabna district are deprived from the facilities of electric supply. In Pabna Sadar Sub-division only 222 villages were electrified out of 13838 villages. On the other hand 7 villages were electrified in Atghoria Upazila (Annex. - XVIII).

- Recreation facilities:

Inadequate recreation facilities are found in Atghoria Upazila. About 14 Cinema halls, 51 registered clubs and 10 public libraries are used as recreational facilities in Pabna Sadar Sub-division. But these type of facilities are almost absent in Atghoria Upazila.

2.5 Current development projects.

Government and CARE have taken some important development projects for Atghoria Upazila. These Projects are listed in following tables:

Table No. 1.

Statement showing total No. of Schemes taken up for execution in Atghoria Upazila Parishad with the A.D.P.
Grant Tk.25,00,000/-during FY 1984-85.

Sl. No.	Name of Sectors	Total No. of schemes taken up for execution.	Name of Schemes	Amount allocated	Amount spent	Progress achieved
1		2	3	4	5	6
1.	Agriculture, Irrigation and Industry.	10 Nos.	1. Demonstration firm	30,000/-	10,000/-	35%
			2. Purchase of spray machine ..	10,000/-	-	-
			3. Upazila Horticulture Nursery with const. of a latrine	56,000/-	12,000/-	25%
			4. Const.of Pucca Drain for Upazila Parishad office building and staff quarters.	50,000/-	45,225/-	100%
			5. Const.of Ring for Culvert. ..	1,50,000/-	1,07,500/-	80%
			6. Const. of Poultry firm. ..	3,30,000/-	-	40%
			7. Const.of Bituminous carpeting on HBB in U.P.Compound	2,74,000/-	-	15%
			8. Extension & repairing of Uttar Chakhalgari Jola culvert	80,000/-	40,000/-	100%
			9. Tree Plantation	7,000/-	1,000/-	10%
			10. Const.of a ghat for Atghoria Thana pond.	15,000/-	-	-
				10,02,000/-		
2.	Physical Infra-structure.	5 Nos.	1. 5 Union parishad	4,00,000/-	-	-
			2. Repairing & extension of Ekdanta Charitable dispensary. ..	1,00,000/-	-	70%
			3. Purchase of 3 Nos. of Refrigerator for F.P.Dept.	30,000/-	30,000/-	35%
			4. Birth & death registration services	30,000/-	30,000/-	35%
			5. Const.of 30'span bridge over Rotnai river under Chandva	1,30,000/-	-	-

Cont'd..

1	2	3	4	5	6
Socio Economic Infrastructure.	12 Nos.	1. Repair & reconst.of Debuttar Pry.school	91,000/-	18,000/-	40%
		2. Const.of roof slab of Atghoria High school ..	1,60,000/-	-	20%
		3. Const.of pucca wall of srikantapur pry. school	52,000/2	40,000/-	100%
		4. Repairs of Sharutia pry. school	60,000/-	33,000/-	75%
		5. Repairs of Raghobour pry.school	30,000/-	-	30%
		6. Repairs of Bacoikhola pry.school	30,000/-	-	30%
		7. ,, Ekdanta Baraipara	33,000/-	-	35%
		8. ,, Gokulnagar ,,	30,000/-	-	35%
		9. ,, Kachuarampur ,,	55,000/-	-	-
		10. ,, Tarapasha ,,	55,000/-	-	-
		11. Social Welfare Deptt.	50,000/-	-	-
		12. Complete for incomplete works of Debuttar U.P.office	15,000/-	-	-
			6,61,000/-		
Sports & culture	2 Nos.	1. Development of sports & culture of this upazila ..	40,000/-	8,500/-	40%
		2. Purchase of Bangla Academy's books	8,000/-	8,000/-	100%
Miscellaneous	2 Nos	1. Carrying cost of C.R.wheat	50,000/-	34,380/-	80%
		2. Anser & VDP Traing	25,000/-	-	-
		3. Natural calamity, Disaster relief & rehabilitations control room etc.	24,000/-	-	-
			99,000/-		
Total :- Sector No.1		Tk.10,02,000/-			
	2.	Tk. 6,90,000/-			
	3.	Tk. 6,61,000/-			
	4.	Tk. 48,000/-			
	5.	Tk. 99,000/-			
Total:		Tk. 25,00,000/-			

Table No.2

Uptodate statement of CARE/FFW/WEP Projects
Under Atghoria Upazila, 1984 - 85.

Name of the Projects	Approved cft.	Date of started	Allocation mounds	Progress	Remarks
Reconstruction road from Hydarner Pry.school to Jorgecha ending at Dehzar-gram Rice mill-CARE-01	1636226	27-12-84	2168 mds.	(1% work found done)	Ekdanta U.P.
Const. of road from Bahadi -artola CARE road to Dulampur Switchgate ending at Balughata CARE-02	2137358	19-12-84	2832 ,,	35% ,,	Laxmipur
Re-const. of road from Raipur to Patshar -WFP	888310	12-11-84	1177 ,,	85% ,,	Debutter
Reconst. of road from Dilalpur to Bachamara Mokton - WFP	421886	27-12-84	824 ,,	48% ,,	Chandua
Reconst. of road from Rokonpur Jaber Pk.'s house to Sarabaria Islam's house Via- PerKhudirpur	754716	1-11-84	1000 ,,	90% ,,	Majpara

Source : P.I.O. Upazila Atghoria.

2.6 Synthesis : Identification of hierarchy of Settlement in the Upazila.

The spatial arrangement of population in different mouza of Atghoria Upazila is found non-uniform. The changes of Population to be followed as increasing rate by passing the year. The mouza-wise hierarchy of population is shown in Table - 4 (a). The range of population upto 500 have been found 85 mouzas by the year of 1961, 50 and 20 mouzas are found by the year of 1974 & 1981 respectively. The population 501-1000 have been found in 18 mouzas, 30 mouzas and 35 mouzas by the year 1961, 1974, 1981 respectively. In 1961, 1974 and 1981, the population, 1001 to 2000 have been found in 6, 18 and 28 respective mouzas in Atghoria Upazila. Out of 109 mouzas, the population 2001 to 3000 have been found in 6 and 8 mouzas in 1974 and 1981 respectively. The population range 3001 & above have been found in 5 and 18 mouzas of Atghoria Upazila by the year of 1974 and 1981 respectively.

The services facility in different mouzas of Atghoria Upazila are found non-uniform. In 1961 (Table No. 4(b) out of 109 mouzas of Atghoria, about 26 and 8 mouzas did not get any service facility during the period of 1974 and 1981 respectively.

Primary school, tube-well, religious facility and hat are represent by the symbol "A" which were found in 54, 61 and 70 mouzas in Atghoria Upazila by the year 1961, 1974 and 1981.

In the category "B" the High school, colleges, health centre and bazar are found in 5, 9, & 12 mouzas in 1961, 1974 and 1981 respectively which is involved higher facility than the category "A" hospital, post office, Telegraph & Telephone office and Police station are found in 6, 8, 111 mouzas by the year of 1961, 1974 & 1981 respectively and represent by the symbol "C". The category "C" involved higher facility than above of A & B. The fourth category "D" are found in 4, 7 & 20 mouzas in 1961, 1974 & 1981 respectively than the category of A, B & C. The facility of electricity, Bank, BADC office, Upazila complex are to be included in the category of "D". The service facility under category "D" is shown in Mouza map.

TABLE - 4(a)

Hierarchy regarding population

Population range	Y e a r		
	1961	1974	1981
	No. of Mouza	No. of Mouza	No. of mouza
Upto 500	85	50	20
501 - 1000	18	30	55
1001 - 2000	6	18	28
2001 - 3000	-	6	8
3001 and above	-	5	18
Total :	109	109	109

TABLE - 4 (b)

Hierarchy regarding services

Category	Y e a r		
	1961	1974	1981
	No. of Mouza	No. of Mouza	No. of Mouza
A:			
Any two of : Primary school, Tube-well, Religious facility, hat	54	61	70
B :			
Any one of : High school, College Health centre, Bazar	5	9	12
C:			
Any one of : Hospital, Post office, Telegraph & Telephone office, Police station	6	8	11
D:			
Any one of Electricity, Bank, BADC, Office, Upazila Complex	2	5	8
No Service	42	26	8
Total :	109	109	109

TABLE - 4(c)

Name of the employment places in the Hierarchy

(Mouza under Category - D)

Sl. No.	Constituent Mouza
1. ..	Chandba
2.	Atghoria
3. ..	Debottar
4. ..	Radhakantapur
5. ..	Kandorpopur
6. ..	Sahapur
7.	Miapara
8. ..	Lakhmanpur

CHAPTER - 3

3. THE UPAZILA HEADQUARTERS.

3.1 Definition of sphere of influence/attractive areas.

Sphere of influence is the immediate hinterland surrounding the rural area within a distance of 2.5 to 3 miles. People from surrounding areas normally commute such distances to take the advantages of various services of the Shahar area. The catchment area of Atghoria Upazila Headquarters was determined by the assessment of future urban land requirements on the basis of spatial distribution and immediate hinterland which is likely to accord benefits from different services of socio-economic infrastructure. Following aspects are also considered for demarcation of catchment area :

- (a) Existing pattern of development surrounding the developed part of headquarters.
- (b) Changing land use areas from agricultural activities to non-agricultural activities.
- (c) Future potential development/expansion capacity in and around the Upazila headquarters.
- (d) Socio-cultural behaviour pattern and urban services and facilities.

With the above points in view 21 full mouzas are considered in catchment area in Atghoria Upazila Headquarters (Annexure-II).

3.2 Definition of Headquarters area.

(1) The Upazila has been re-organised as the most significant tier of the administration. So each Upazila centre will be the focal point of all Upazila level administrative activities. It will plan and develop all social, economic and infrastructural upliftment of the Upazila region. This also reflects the national policy of bringing development, administration and service facilities to the door step of the rural masses and to ensure better delivery of governmental services to the people.

(2) With the decentralization of administration to the Upazila level there will increase in population and consequently several activities are concentrated surrounding the Upazila centre.

Therefore, the Upazila headquarters will provide the location for administrative, judiciary, cottage and small scale industries, education, health, social and utility services, commercial and recreational. So the Upazila headquarters will accommodate the surplus rural population with employment.

(3) In the light of the above circumstances, it is felt that the Upazila headquarters should grow up expeditiously and the preparation of landuse plan/Master plan is of utmost importance for better utilization of scarce land, people and natural resources.

(4) Headquarters area has been determined on the basis of spread of urban and semi-urban activities and concentration of population considering the above points.

The present location of headquarters is in Debuttar and Atghoria. Debuttar and Atghoria are the two administrative focal points of this Upazila. Local political conflict is responsible for this division. Pabna-Chatmohar road connects these two points and the distance is found two and a half miles from each other. Considering the peculiarities and problems, the proposed study area is designed including Debuttar and Atghoria. Resulting that the pattern of study area becomes linear and its area is 3.33 sq.miles (2127.37 acres). The proposed study area is characteristically rural although it is an administrative centre of lower order. It is expected that the mentioned area will be designed for the people of this region is setting more service facilities and easy accessibility. This said area is comprising 12 mouzas (full & part) and its present estimated population 6014. This projected population will be stood 10,082 in 2000 A.D. The annual growth rate is considered 3.50 (Annexure-I & V).

3.3 Existing Landuse, Facilities and Utilization Characteristics.

The landuse structure is mainly the result of nature growth. The centre business district (CBD) is located in the densely populated at Debuttar and Atghoria centres. The area is surrounded by agricultural lands and privately owned residential houses. This also follows the land prices. The study concludes that about 80.16 percent of the study area is being used for farming and rest of lands are covered with administrative and other related activities. The existing landuse of the mentioned area are described below:

Table No. 5.
Existing landuse of the study area

Landuse pattern	Area (in acres)	Percentage of study area
- Agriculture	1705.50	80.16
- Commerce and Industry	22.43	1.06
- Education	40.10	1.88
- Administration govt. depts.	29.62	1.39
- Health	5.15	.24
- Recreation	19.00	(.71 + .18) = .89
- Socio-cultural	2.92	.14
- Road(Major, secondary & local)	(52 + 9.55 + 82.00) = 143.55	6.75
- Urban services	8.10	.38
- Residential	151.00	7.11
TOTAL :	2127.37	100
(3.33 sq. miles)		

- Agriculture : The present landuse survey reveals that 80.16 percent land of study area is used for farming.
- Commerce and Industry: About 1.06 percent land of the study area is used for commerce and industrial purposes. Debuttar and Atghoria are two focal points where these services exist.
- Institutions : Educational institutions of Atghoria Upazila headquarters cover only 1.88 percent land with primary schools, madrasa, high schools and college.
- Health complex : Only one government hospital is established in Atghoria which covers .24 percent land of study area.
- Administration and other govt. departments : About 1.39 percent land of total study area is used for administrative purposes. Due to local political conflict, administrative set up is divided into two wings named Atghoria and Debuttar. New Upazila administrative complex is set up in Debuttar.
- Urban services and Socio-cultural aspects : Landuse survey reveals that about .38 percent land of study area is used for urban services.
- Recreation :
 - (a) Active Recreation : About .71 percent lands of study area is used for these purposes and .51 percent land is covered with play ground and .20 percent land cover by ponds which are sometimes used for swimming.
 - (b) Passive Recreation : About 18.00 percent land of said area is vacant which is used for open space and play ground.

- Roads : Existing 6.75 percent land of study 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 52.00, 9.55 and 82.00 acre lands are covered by major, secondary and local roads respectively.

- Residential : Maximum high lands are used for residential purposed which is 7.11 percent of the study area.

3.4 Physical opportunities and constraints.

Distribution of households according to different size of land-holdings are in Table No. 6. The table reveals that out of the total households in the study area, 12.00 percent households are landless. In this mentioned area 31.00 percent families are holding below 1.00 acre lands. The table shows 23.00 and 14.00 percent families of the study area are possessing 1.00 - 2.99 and 3.00 - 4.99 acres lands. In the study area per capita land holding is 0.35 acre.

Table No. 6.

Distribution of household according to different size of land holding.

Size of land holding(in acres)	No. of households	Percentage of total h. holds	Total average	Average land per family (in acres)
Landless	12	12.00	-	-
Below 1.00 acre	31	31.00	10.85	.34
1.00 - 2.99	23	23.00	46.00	2.00
3.00 - 4.99	14	14.00	55.72	3.98
5.00 - 6.99	16	16.00	94.40	5.90
7.00 and above	4	4.00	36.00	9.20
TOTAL	: 100	X	243.72	X

According to household survey the land value in the study area normally varies between fifteen thousands and eighty thousand Taka per acre. This is a considerable value in respect of the economic level of the country but fortunately much less than the land values in the capital. There is a great opportunity to acquisition the lands for Upazila headquarters development (Annex-XXII).

The Atghoria Upazila headquarters occupies the flat alluvial land, major part of lands are built up area is order to compact and unplanned way that there is little scope of planned development. Roads are narrow and zigzag, Industries are developed in residential area. There is no planned residential area and slums and squatters are developed along the main road side. The lands in Debuttar and Atghoria are high lands and have a opportunity for urban development. Since 80.46 percent of the total lands in the study area under the agriculture. Any landuse opportunity to be created for urban development, no alternative way the save the agricultural land. It is already said that the landuse in the Upazila headquarters is congested.

There is no natural hazard regarding flooding in this area, but during the monsoon the rain water creates flooding in low laying areas or urban areas due to bad drainage and sewerage disposal facilities.

CHAPTER - 4

4. FORECASTING

4.1 Population, Household Structure, Density

Atghoria Upazila headquarters is an administrative and commercial unit. The total population of the study area stood 5240 in 1981. The last two decades between 1961 and 1981 the population growth rate of the study area was calculated. The increasing growth rate was found to maximum at the rate of 3.66 between the period of 1974 to 1981. Different projection for the future population in the study area given in the table. Annexure - III.

The population of 1981 census has become treated as the base population for the purpose of projection. According to terms of reference three level of projects have been made with the growth rate of 3.34, 3.50 and 3.66, low, medium and high projection respectively for the 1985, 1990, 1995 and 2000 A.D. The 1981 population of medium projection of about 5240 in the study area would grow to 6014 in 1985. By the year 2000 A.D. this would nearly double to approximate 10082. The government policy to decentralization of activities towards Upazila headquarters would lead to higher growth in the study area.

Table No. 7.

Population, Density and Variation of 1974 and 81

Area in sq. mile	Population		Density	Variation 1981-74
	1974	1981		
3.33	4117	5240	1574	18.18

Within the Zone influence of Atghoria Upazila headquarters the population growth rate between 1961 and 1981 was calculated 3.50 which is used as the growth rate for future medium projection. The growth rate for population of high projection was made by considering the growth rate between 1974 and 1981 which is 3.66 and the low projection was made by the assumed growth rate as 3.34. Different projection for the future population in the catchment area is shown in Annex - IV.

-Household Structure:

The existing population in the catchment area of Atghoria Upazila headquarters is considered having the dwelling quantitatively sufficient. The added population over the twenty years period is estimated to be 34266 with the average size for household for 6, the number of dwelling units will be needed (Annex - VIII).

Density: - The density of study area was 1574 per sq. mile in 1981 and over the period of 1985, 1990, 1995 and 2000 A.D. would be estimated as respectively (Annex - V).

-Migration :- The statistical year book 1981 indicate that the out migration from the Pabna district were much higher than the immigration. But in Atghoria only 21 persons have come from Dhaka, Tangail, Serajgonj, Rangpur, Faridpur and also 21 persons migrated from different concern of Pabna district. On the other hand about same number of families are migrated in different places from this Upazila (Annex - X).

4.2 Labour force and Employment

The population in 10-49 age group is considered as a Labour force in this catchment area. The projected labour force becomes 25.73% of the Catchment area.

Table - 8

Projected population and labour force in catchment area.

Projected year	1985	1990	1995	2000 A.D.
- Total Population	16675	18599	20745	23138
- Total labour	4290	4785	5337	5953

The rest of population of (old age group and children) depends on this labour force.

The plan proposed employment and populations ratio stand 1:3:88 and advocates for creation of employment opportunities for about 5953 workers/employees to support about 23138 people expected to be accommodated by the end of the plan period.

4.3 Land Requirements, Provision Standards.

In the study area about 560 acres lands are designated for different services like commerce, industry, education, health, administration, recreation and urban services for the projected population of catchment area upto 2000 A.D. Medium projected Population 23138 of catchment area in 2000 A.D.

Table No. 9.

Standard Provision for the Atghoria Upazila

(According to TOR)

Sl.	Name of activities	Standard provision		Involved in acre
		Popn.	Required acres	
1.	Commerce and Industries	1,000	1.5	34.71
2.	Education:			
	1. Primary School	5,000	5.00	23.14
	2. Secondary School or Colleges	20,000	5.00	5.78
3.	Health :			
	1. Dispensary	5,000	1.00	4.63
	2. Health centre	20,000	5.00	5.79
4.	Administrative	10,000	12.00	27.77
5.	Recreation	20,000	1.00, 50, 3.00	62.47
6.	Social culture	20,000	1.00, 50, 500	13.71
		5,000		
		20,000		
7.	Urban service	20,000	.50, 2.00, 1.00	8.57
8.	Urban Deferred (10% built up area)			212.74 acres

CHAPTER - 5

5. LANDUSE PLAN

5.1 Approach, concept, planning principles

- Approach

The following methodological approach has been adopted towards the preparation of landuse of Atghoria Upazila.

- i. Identification of Upazila headquarters area
 - Reconnaissance survey
 - Collection of Upazila Map
 - Discussion with Upazila Parishad officials etc.
- ii. Preparation/submission of Inception Report
- iii. Survey
 - Collection of mouza/C.S. maps
 - Preparation of base map
 - Preparation/Pre-testing, finalisation of socio-economic questionnaire and other charts lists.
 - Plot to plot existing landuse survey.
 - Socio-economic survey
- iv. Preparation of existing landuse map.
- v. Identification of areas suitable for town service centre.
 - Analysis of existing landuse map .
 - Verification of location of man-made structure etc.

- Concept

The concept used in the preparation of landuse plan of Atghoria Upazila can be traced principally from the government's policy of decentralization of administration down to the Upazila level. The government aimed at the improvement of the quality of life of the rural masses through delivering administration and services at the door step of the people. Exphasis has been given on sectoral development of the economy by government such as agriculture, rural industries, education, health, transportation, rural electrification etc. Within the Upazila region, result to diversify the activities at the sub-regional level. It requires a spatial footing where from these sectoral development facilities can be determined within the whole of Upazila region. This Upazila headquarters centre wherein certain build in facilities are already in existence would play an effective role in distributing these services. In order to promote faster development at the Upazila region, a planned physical environment must be created at the Upazila centre and this calls for preparation of landuse/Master plan of Upazila. The rural masses will find place of work, place of residence and place of recreation of optimum location.

- Planning Principles

The existing landuse pattern, land level in and around the Upazila headquarters area/Study area, flood-free characteristics, on site physical opportunities and constraints have been duly considered Planning for Atghoria Upazila. The existing development trend within the area has been given more importance in planning and incorporated in a manner whereby the living environments of the whole Upazila experiences a marked improvement. It is assumed that the headquarters will develop along the Pabna-Chatmohar road from Debuttar to Atghoria. These are localised within one place which has got good road and easy approach from neighbouring mouzas. Therefore emphasis has been given in the plan to localise all these functions into one composite area. All future development like commerce, park, play ground, health complex etc. will be located at neighbourhood level, distribution of local services of a primary school, mosque and open space.

5.2 Plan Description

The landuse plan of Atghoria Upazila headquarters will accommodate 9796 population upto the year 2000 A.D. This plan has been proposed over an area of 560 acres which is called planning area. The following table highlights the landuse pattern of upazila headquarters area.

Table No. 10(A)
Land requirements at the interval of 5 years
(e.g., 1985, 1990, 1995, 2000 A.D.)

Sl. No.	Categories of landuse	Required lands(ac.) in 1985-90	Required lands(ac.) in 1990-95	Required lands(ac.) in 1995-2000
1.	Land development (housing)	77.00 (35%)	99.00 (45%)	44.00 (20%)
2.	Administrative	51.02 (75%)	13.61 (20%)	3.40 (5%)
3.	Industry	10.72 (40%)	14.73 (55%)	1.34 (5%)
4.	Commerce	19.04 (40%)	23.80 (50%)	4.76 (10%)
5.	Education	15.75 (45%)	17.50 (50%)	1.75 (5%)
6.	Health	6.21 (50%)	4.96 (40%)	1.24 (10%)
7.	Recreation	11.39 (45%)	12.65 (50%)	1.26 (5%)
8.	Roads	35.69 (60%)	15.85 (30%)	5.95 (10%)
9.	Others	22.88 (35%)	26.15 (40%)	16.35 (25%)
		249.7	230.25	80.05

Table No. 11

Distribution of the existing and proposed landuse of
the Atghoria Upazila Headquarters (Planned area).

Sl. No.	Categories of land use	Total area in acres existing	Additional proposed area in acr.	Total planned area in acres.	% of the total planned area
1.	Commerce and Industry	13.50	60.89	74.39	13.28
2.	Education	19.10	15.90	35.00	6.25
3.	Health	4.60	4.81	12.41	2.22
4.	Administrative and Govt.	16.45	51.58	68.03	12.15
5.	Recreation :				
	Open recreation	5.07	10.83	15.90	2.84
	Closed ..	1.05	8.35	9.40	1.68
6.	Socio-cultural	1.80	2.27	4.07	0.73
7.	Urban services	2.00	8.31	8.31	1.48
8.	Roads :				
	Major roads 100'	-	16.52	16.52	2.95
	Secondary .. 60' & 40'	33.77	- 5.77	28.00	5.00
	Local .. 30'	3.75	11.22	14.97	2.67
9.	Residential	63.8	156.20	220.00	39.29
10.	Urban Deferred	-	-	40.00	7.14
11.	Reserve	-	-	13.00	2.32
TOTAL :		-	-	560.00	100.00

- Transportation Network

For the Upazila headquarters, upgrading the existing transportation network has been given more importance in plan than proposing new roads. Recommendation has been made to convert existing Pabna-Chatmohar road into 100' which connects Debuttar and Atghoria Centre. Two ring-roads (60' wide) are proposed for two centres (Debuttar and Atghoria) and other roads proposed as secondary roads. The existing landuse shows that all the important functions have developed along the main road. Attempts have been made in the Plan to encourage this linear development as because two centres are developed as administrative units of this Upazila which are located along the Pabna - Chatmohar road.

- Core Area / Town Service Centre.

Plan envisaged one core area into which following functions i.e., govt. and semi - govt. establishment, commerce, health education are present. This core area will also encompass the Upazila Complex. Since all activities are located and will be located in this area, naturally it will have wider sphere of influence. For this the core area has been developed in such a way that neighbouring mouzas have easy access to it.

CHAPTER - 6

6. PROGRAMMING AND IMPLEMENTATION

6.1 Priority Action, : Cost implication.

- Priority Action : In order to energise the economy of Atghoria upazila headquarters certain employment oriented economic activities to be identified. These may be established of industrial units in the centre. Construction of roads and improvement of communication system may be another action oriented step for economic improvement of the Upazila shahar base. However, the following are the few priority action projects identified in line with the land-use plan of Atghoria.
- The main road (Fabna-Chatmohar road) passing through middle of the Upazila and which also connects Debuttar and Atghoria be exped and developed.
- Two ring roads should be constructed for easy access as well as used for demarcation of two centres.
- The employment area like the existing bazar and industrial mills should be developed and thereby the employment opportunities will be available.
- Social sectors developments like primary schools, health centre, play ground, park, and other related facilities should be given due emphasis.

Cost implication:

In the initial period of execution of the different projects, as visualized in the landuse plan would be met up by the users of these services. On this plan, due attention has been given so that additional/unnecessary cost does not require to infilling the land to build up certain services at distant places. However, it is suggested that certain income generating projects need to be established for enhancing the financial capability of the authority responsible for implementing the landuse plan.

6.2 Phasing, Urban Deferred

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	75%	20%	5%
3.	Industry	40%	55%	5%
4.	Commerce	40%	50%	10%
5.	Education	45%	50%	5%
6.	Health	50%	40%	10%
7.	Recreation	45%	50%	5%
8.	Roads	60%	30%	10%
9.	Others	35%	40%	25%

- Urban Deferred

About 7.14% lands of planning area has been kept in the plan as urban deferred land to cope with any unforeseen requirement of land at the Upazila headquarters level. The government deem necessary from time to time that certain services and facilities need to be developed at Upazila levels. Therefore, such requirement of lands would be provided from area earmarked as urban deferred in the landuse plan. Further, the population as projected in the plan may exceed over the period in that case change of additional requirement of land would be provided by urban deferred.

6.3 Development control

- Legal Framework.

The development control boundry as proposed in the landuse plan in Atghoria Upazila head-quarters area is suggested to declare as municipal area by the government and thus landuse plan should be approved by the government immediately so that the town grows orderly and effectively as per directions as incorporated in the plan. However, in absence of such arrangements, the concerned Upazila Parishad will be executive authority to emplement developmental activities in line with the landuse plan.

- Implimentation considerations.

The effective implimentation of the headquarters plan can only be achieved by concreted action between government private enter-prise and the general people's awareness. To realise the above a number of rules have to be laid down to which all the parties concerned must adhere. Observance and enforcement of the rules/regulations in order to be ensured has got to be based st tutory provisions. As a precondition for carrying out the plan successfully, a check list of the laws need to be prepared.

These are enough indications to show that the government is aware of the accessities of formulating a legal and institutional framework which will affectively control and direct planning towards position development.

- The Question of landownership within the Headquarters area.

In implementing the headquarters, landuse plan the primary requirement is the availability of land in the hands of the plan executing authority. When the Upazila headquarters landuse plan is accepted in principle, the authority should as soon as possible ensure the right of disposal over those areas forming parts of the headquarters plan.

Obtaining of the right of disposal will depend upon the provision within the legal framework. It may be done by purchase, by

aquisition or preferably by a statutory mechanism giving the authority effective jurisdiction over the estimate landuse in the centre. In the case where land would be obtained through purchase of acquisition at the outset. On the otherhand, the authorities can expect enhanced revenues once these lands have been sold or leased out for various development purpose. Not having access over land will only result in unefficiency of services as they may have to be established or less expensive land away from the main concentration of people.

- Development control

Landuse plans will be of little use if the concerned authorities have no effective means to deal with violations of a designated landuse. It is, therefore, essential that the landuse plan be at least partially fixed by law and at the same time statutory powers be given to the authorities to deal with an improper occupation, exploitation or use. Once the landuse of the headquarters is decided, it may be legally ascertained in two ways.

(1) it can be stipulated that the land may only be used as indicated in the plan.

(II) the different use can be attributed a certain order of rank such as :

- Area intended for building or open spaces, social functions, play ground (1st order).
- Detail area designated for residential use (2nd order).
- Area intended for commercial functions - shops, market, bazar, storage facilities etc. (3rd order).
- Area identified for light heavy index trial uses.
- Rice mills, saw mills, factories etc. (4th order).

This can then be stipulated that in the area where landuse has been designated for a certain use, higher order functions may be placed but not of lower order.

6.4 Monitoring, Review

- Monitoring : As various sectoral agencies will be involved in execution of services and facilities and nation building projects at the Upazila shahar level, the Upazila Parishad as the local agency will monitor all such activities as envisaged in the plan.

At present under the Annual development programme the upazila Parishad receives considerable amount of grant to carry on all the development programmes within the Upazila level and this needs to be elaborated in line within the plan i.e., provision of roads, parks & open space, water supply and drainage, embankment, bridges and culverts etc. specially through food for works programme.

-Review.

It is suggested that as this landuse plan has been prepared on the basis of certain assumptions and projections, it requires modifications/revision. For this landuse plan be reviewed/evaluated preferably every five years as number of endogenous and exogenous factors may alter its effectively by incorporating the changes that may occur.

This can be done by the Urban Development Directorate, ministry of works and initiated by the Upazila Parishad.

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73	Formulas	433	434	435	436	437	438
74	Equations	439	440	441	442	443	444
75	Tables	445	446	447	448	449	450
76	Figures	451	452	453	454	455	456
77	Charts	457	458	459	460	461	462
78	Photographs	463	464	465	466	467	468
79	Maps	469	470	471	472	473	474
80	Diagrams	475	476	477	478	479	480
81	Formulas	481	482	483	484	485	486
82	Equations	487	488	489	490	491	492
83	Tables	493	494	495	496	497	498
84	Figures	499	500	501	502	503	504
85	Charts	505	506	507	508	509	510
86	Photographs	511	512	513	514	515	516
87	Maps	517	518	519	520	521	522
88	Diagrams	523	524	525	526	527	528
89	Formulas	529	530	531	532	533	534
90	Equations	535	536	537	538	539	540
91	Tables	541	542	543	544	545	546
92	Figures	547	548	549	550	551	552
93	Charts	553	554	555	556	557	558
94	Photographs	559	560	561	562	563	564
95	Maps	565	566	567	568	569	570
96	Diagrams	571	572	573	574	575	576
97	Formulas	577	578	579	580	581	582
98	Equations	583	584	585	586	587	588
99	Tables	589	590	591	592	593	594
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ANNEXURE - 1

Detail of the Study Area

Sl. No.	Constituent Mouza	Total acres	Involved acres	p o p u l a t i o n			
				1961	1974	1981	1984
1.	Debuttar	125	125	233	415	566	647
2.	Uttar Ramchandra pur (part)	483	250	156	247	316	351
3.	Phalia(part)	250	100	187	237	269	284
4.	Radhakantapur (part)	195	110	145	216	267	293
5.	Bararia	147	147	284	381	625	773
6.	Kandurpara	117	117	259	355	617	782
7.	Chak Dhaleswar	62	62	103	120	130	135
8.	Dhaleswar(part)	843	598	356	470	545	580
9.	Bishrampur (part)	120	100	103	195	275	319
10.	Atghoria(part)	580	324	500	820	906	945
11.	Rustompara (part)	176	120	180	311	341	355
12.	Chandoa (part)	1465	74	205	308	383	420
TOTAL :		4563	2127	2711	4075	5240	5884

3.33 sq. miles

ANNEXURE-II

Detail of the Catchment Area

Sl.	Sl.No.	Constituent Mouza	Total area	Area involved	1961	1974	1981	1984
1.	13	Uttar Kamchandrapur (Part)	483	233	331	520	663	735
2.	-	Phalia (part)	250	150	230	320	382	412
3.	58	Radhakantapur (Part)	195	85	100	117	127	131
4.	51	Dhaleswar (part)	843	245	400	170	107	87
5.	55	Bisurampur (Part)	120	20	14	30	45	53
6.	52	Atghoria (part)	580	256	181	400	613	736
7.	53	Rustompara (Part)	176	56	36	150	323	448
8.	39	Chandva (part)	1465	1391	456	355	310	292
9.	62	Ramnagar	151	151	84	174	254	298
10.	63	Breekantapur	502	502	573	837	1026	1119
11.	50	Sirajpur	129	129	276	370	433	463
12.	48	Roghunathpur	493	493	532	278	196	169
13.	42	Abhirampur	781	781	589	1000	1329	1301
14.	-	Bhabendrapur	410	410	587	805	954	1026
15.	41	Hashaikhali	302	302	170	275	356	398
16.	40	Bashikhala	280	280	205	348	462	522
17.	103	Shahpur	1652	1652	5107	6670	7701	8190
			8812	7136	9871	12817	15280	16380

ANNEXURE - III

Projected Population from 1985 - 2000 A.D. in
Study Area

Year	High	Medium	Low
	popn.growth rate in(1974-81)=3.66	Popn.growth rate 1961-81 = 3.35	Assumed growth rate- 3.00
1985	6049	5978	5898
1990	7239	7048	6837
1995	8663	8309	7925
2000	10367	9796	9187

ANNEXURE- IV

Projected Population from 1985 - 2000 A.D. in
Catchment Area

Year	High	Medium	Low
	Popn.growth rate in(1974-81)=2.54	Popn.growth rate in (1961-81)=2.21	Popn.assumed growth rate- 2.00
1985	16894	16675	16545
1990	19153	18599	18274
1995	21714	20745	20183
2000	24617	23138	22292

ANNEXURE - V

Density Level, 1985 - 2000 A.D. of Projection
in Study Area

	Population Density per acre in			
	1985	1990	1995	2000
Population	5978	7048	8309	9796
Area	2127.37	2127.37	2127.37	2127.37
Density per Acre	2.81	3.31	3.91	4.60

ANNEXURE - VI

DENSITY Level, 1985 - 2000 A.D. of the Medium
Rang of population in Catchment Area

	Population Density per acre in			
	1985	1990	1995	2000
Population	16675	18599	20745	23138
Area	7136	7136	7136	7136
Density per Acre	2.34	2.61	2.91	3.24

ANNEXURE - VII

Forecasting of Household size in the
Study Area (Medium Projection)

	Population and Household size in				
	1981 based yr.	1985	1990	1995	2000
Population	5240	5978	7048	8309	9796
Household size	6.00	5.50	5.18	4.90	4.61
No. of Household	873	1093	1361	1697	2123

ANNEXURE - VIII

Forecasting of Household size in the
Catchment Area

	Population and Household size in				
	1981	1985	1990	1995	2000
Population	15280	16675	18599	20745	23138
Household size	6.00	5.50	5.18	4.90	4.61
No. of Household	2546	3031	3590	4233	5019

ANNEXURE - IX

Projected labour force from 1985-2000 A.D. of
Catchment Area of Atghoria Upazila

	Level of projection	Projected population in			
		1985	1990	1995	2000
1. Total Population	Low	16545	18274	20183	22292
	Medium	16675	18599	20745	23138
	High	16894	19153	21714	24617
2. Student & dependent (50% of total)	Low	8272	9137	10091	11146
	Medium	8337	9299	10372	11567
	High	8447	9576	10857	12308
3. Total Male labour (50% of above-2)	Low	4136	4568	5045	5573
	Medium	4168	4649	5186	5784
	High	4223	4788	5428	6154
4. Total Female labour (2.93% of above-3)	Low	121	133	147	163
	Medium	122	136	151	169
	High	123	140	159	180
5. Total labour	Low	4257	4701	5192	5736
	Medium	4290	4785	5337	5953
	High	4346	4928	5587	6334

ANNEXURE - X

Migration from 1974 - 84 :

Places	No. of migrated	% of total migrated
Within the Pabna district ..	21	50.00
Dhaka ..	12	28.57
Sirajganj ..	2	4.76
Taigail ..	2	4.76
Rangpur ..	1	2.38
Faridpur ..	2	4.76
India ..	2	4.77
	42	100.00

Source : Socio-economic Sample Survey of Atghoria.

ANNEXURE - XI

Population in 1961, 1974, 1981 & Percentage variation of Pabna Sadar Sub-division and of Atghoria Upazila :

Thana/Sub-division	1961	1974	1981	Percentage variation		
				1974 over 1961	1981 over 1974	1981 over 1961
Pabna Sub-division	850601	1255638	1552519	47.62	23.64	82.52
Atghoria Upazila	47722	49556	104151	87.66	16.30	118.24

Source : Pabna district statistics - 1983 (BSS).

ANNEXURE - XII

No. of Primary school, teacher and involvement therein 1982

of Pabna Sadar Sub-division and Atghoria Upazila:

Thana/Sub-division	Primary School	Teacher			Student			Teacher-student ratio
		Male	Female	Total	Male	Female	Total	
Pabna Sadar Sub-division	691	3214	288	3502	88481	59213	147694	42.17
Atghoria Upazila	59	284	4	288	2895	5392	12287	42.67

Source : Pabna District Statistics- 1983 (BSS).

ANNEXURE - XIII

Length of miles of pucca, semi-pucca and kutcha road- 1982

of Pabna Sadar Sub-division and Atghoria.

Thana/Sub-division	Pucca road (in mile)	Semi-pucca road (in miles)	Kutcha road (in miles)
Pabna Sadar Sub-division	132	75	1315
Atghoria Upazila	7	5	240

Source : Pabna District Statistics-1983 (BSS).

ANNEXURE - XIV

Number of Government office, Post office, Telegraph office,
Bank branches and Rest House of Pabna Sadar Sub-division
and Atghoria Upazila:

Thana/Sub- division	No. of govt. offices	No. of post office	No. of Tele- graph office	No. of bank branches	No. of Dak banglows
Pabna Sadar Sub-division	226	112	6	95	21
Atghoria Upazila	20	7	-	6	-

ANNEXURE - XV

Position of health facilities - 1984 of Pabna Sadar Sub-division
and of Atghoria Upazila:

Thana/Sub- division	Thana Health complex		Charitable dispensary	Mission Hospital		Other Health centres	
	No.	Bed No.		No.	Bed No.	No.	Bed No.
Pabna Sadar Sub-division	8	123	15	2	2	4	20
Atghoria Upazila	1	5	1	-	-	-	-

ANNEXURE - XVI

No. of Cinema hall, Registered club, Public library and Orphanage - 1982 of Pabna Sadar Sub-division and of Atghoria Upazila.

Thana/Sub-division	No. of Cinema hall	No. of Regd. club	No. of public library	No. of orphanage	No. of Sheba Asram
Pabna Sadar Sub-division	14	51	10	1	2
Atghoria Upazila	-	2	1	-	-

ANNEXURE - XVII

No. of hat, bazar, tubewell (drinking) and village electrified - 1982 of Pabna Sub-division and of Atghoria Upazila:

Thana/Sub-division	Number of			
	Daily bazar	Weekly or bi-weekly hat	Tubewell drinking	Village electrified
Pabna Sadar Subdivision	56	148	13838	222
Atghoria Upazila	3	14	1340	7

Source : Pabna District Statistics - 1983 (BSS).

ANNEXURE - XVIII

No. of Primary school, Junior high schools, High school,
Colleges, Madrasahs and involvement therein 2 1982 of
Pabna Sadar Sub-division and of Atghoria Upazila:

Thana/Sub- division	Primary school	Jr. High school	High school	College	Madrasah	Total student
	No. Stud.	No. Stud.	No. Stud.	No. Stud.	No. Stud.	
Pabna Sadar Sub-Division	691 147694	27 11029	1351 45579	17 8057	178 35186	247545
Atghoria Upazila	59 12287	1 125	7 1960	1 240	23 2585	17197

Source : Pabna District Statistics- 1983 (BSS).

ANNEXURE - XIX

Number of registered factories by major industrial group
of Pabna District and Bangladesh.

Industry	Pabna district				Bangladesh 1982-83	Pabna district as a % of Bangladesh
	1979-80	1980-81	1981-82	1982-83		
Sugar Mills	1	1	1	1	70 (1981-82)	1.43
Cotton Textile	4	4	4	4	56 (1981-82)	7.14
Food Manufacturing	8	8	8	8	674	1.24
Manufacturing of paper and paper products	1	1	1	1	42	2.39
Printing, Publish- ing and allied industries	1	1	1	1	183	0.55
Manufacturer of drugs	6	6	6	6	229	3.49
Manufacturer of Metal product	1	1	1	1	326	0.31
Manufacturer of sports goods athletic goods	1	1	1	1	140	0.7
TOTAL :	24	24	26	28	3214	0.87

Source : Pabna District Statistics- 1983 (B.S.S.)

ANNEXURE - XX

Gross district product at current prices of Pabna district.

(Figures in million taka)

Sector	1977-78	1978-79	1979-80	1980-81	1981-82	Bangladesh 1981-82	Pabna district as a % of Bangladesh
Agriculture	2939	3305	3319	3855	4679	121691	3.84
i) Cropping	2471	2737	2655	3208	4004	94800	4.12
ii) Forestry	2	9	9	11	12	6502	0.18
iii) Livestock	184	383	476	456	466	92713	3.76
iv) Fishery	177	176	179	180	197	7676	2.57
Mining and quarrying	-	-	-	-	-	6	-
Industry	260	321	389	463	511	25166	2.03
i) Large scale	116	168	203	242	267	15588	1.83
ii) Small scale	144	153	186	221	244	10578	2.31
Construction	224	356	343	483	623	16899	3.69
Power, gas, water, sanitary service	13	15	18	22	26	959	2.71
Transport storage and communication	283	284	371	616	650	22858	2.84
Trade services	417	505	623	682	780	22083	3.53
Housing services	310	404	474	538	617	16722	3.69
Public administra- tion and defence	136	141	167	320	371	9442	3.93
Banking and Insurance	59	77	105	140	142	4191	3.93
GDP at current factor cost	4627	5370	5770	7032	8390	241812	3.47
Population (in million)	3.29	3.37	3.46	3.53	3.60	91.60	3.93
Per capita GDP at factor cost Taka	1406	1593	1668	1992	2331	2703	-

Source : Pabna District Statistics, 1983 (B.S.S.)

ANNEXURE - XXI

Economically active population by age and sex, 1974
at Pabna district.

Age	Both sex	Male	Percentage of male	Female	Percentage of female	% by age & sex		
						Both sex	Male	Female
10 to 14 years	105269	97981	93.08	7288	6.92	13.90	13.34	31.79
15 to 19 ..	86548	82745	95.61	3803	4.39	11.43	11.27	16.59
20 to 24 ..	74253	72117	97.12	2136	2.88	9.80	9.82	9.32
25 to 34 ..	150706	147576	97.92	3130	2.08	19.90	20.09	13.66
35 to 44 ..	132922	130655	98.29	2267	1.71	17.55	17.79	9.89
45 to 54 ..	97736	96115	98.34	1621	1.66	12.91	13.09	7.07
55 to 64 ..	62059	60566	97.59	1493	2.41	8.19	8.25	6.52
65 and over	47858	46675	97.53	1183	2.47	6.32	6.35	5.16

Note : Economically active population covers employed person
10 years and above.

Source : Pabna District Statistics, 1983 (B.S.S.)

ANNEXURE - XXII

The present mouzawise land value of the proposed
Upazila Headquarters (Atghoria)

Name of Mouza/village	Value per acre Taka
1. Debuttar	Tk. 78000 to 90000 .
2. Uttar Ramchandrapur	Tk. 62000 to 75000 .
3. Phalia ...	Tk. 61000 to 63000 .
4. Radhakantapur ...	Tk. 63000 to 72000 .
5. Bararia ...	Tk. 58000 to 64000 .
6. Kandurpara ...	Tk. 57000 to 64000 .
7. Ghak Dhaleswar ...	Tk. 58000 to 63000 .
8. Dhaleswar ...	Tk. 55000 to 60000 .
9. Bishrampur ...	Tk. 55000 to 60000 .
10. Atghoria ...	Tk. 68000 to 79000 .
11. Rustampara ...	Tk. 57000 to 63000 .
12. Chandva ...	Tk. 61000 to 65000 .

SOCIO-ECONOMIC SURVEY OF
- 1984

1. Head of the Household

a) Name

b) Religion :- i) Village.

ii) Union/Municipality

iii) Upazila

iv) Zila

2. Name of Interviewers :-

3. Socio-economic condition of the household.

No.	Name of the family members.	Sex	Age	Relation with the head of the family	Marital status	Education	Main occupation	Subsidiary occupation
-----	-----------------------------	-----	-----	--------------------------------------	----------------	-----------	-----------------	-----------------------

1

2

3

15

4. Yearly agro-based income and landuse information.

Categories of land	Land in acres	Amount in Taka
Household		
Cultivable		
Uncultivable		
Single cropping		
Double cropping		
Multiple cropping		
Pond/ditch		
Others		
Total	:	

5. Yearly Non-Agro-based income

Categories of income	Amount in Taka
a) Services	
b) Business	
c) Rickshawpullar	
d) Handicrafts	
e) House-rent	
f) Day labour	
g) Hawkers	
h) Main servant	
i) Others	

6. Household expenditure

Major items	Yearly expenditure in Taka
a) Food	
b) Clothing	
c) Education	
d) Fuel and light	
e) Social function	
f) Other expenses	

7. Solvency of the family

- a. Expenditure.
- b. Savings.
- c. Loans.

8. Number & category of House

Category	Number
Pucca House	
a) Single storied	
b) Double storied	
c) Multi-storied	
d) Pucca wall C.I.roof	
e) Thatched wall C.I.roof	
f) Mud wall tile roof	
g) Mud wall thatched roof	
h) Thatched wall and roof	
i) Others	

9. Housing problem

a) Construction Materials problems :-	Yes/No
Type of problem :-	1)
	2)
	3)
b) Accommodation problem :-	Yes/No
Type of problem :-	1)
	2)
	3)

10. Migration

Are you a permanent inhabitant in this area :

From where and why you have migrated ?

- a. Reason - -----
- b. Place -----
- c. Year/month -----

Do you have any plan to leave this upazila ?

If yes, why, where and when will you leave ?

- a. Reason
- b. Place
- c. Year/month

11. Source of water

- a) Supply of water
- b) Pond
- c) Tube well
- d) River
- e) Other

12. Sources of light

- a) Electricity
- b) Kupa
- c) Harican
- d) Others (if any)

13. Suggestion regarding the development of Upazila

B. LANDUSE SURVEY INSTRUCTION SHEETFRACTIONAL CODE SYSTEM

The following lists almost all the features that you are liable to come across in your field survey. However, if in the course of your work you come across some unlisted devise your own symbols.

Numerator of the fraction Code

(Man made aspects)

First Digit

(Landuse class)

1. Agriculture, Forestry
2. Commerce and industry (a. Daily bazar, b. Weekly bazar, c. Bank, d. Heavy industry, e. Small industry etc.)
3. Education : (a. Primary School, b. High School, c. College and d. Madrasha).
4. Health : (a. Hospital, b. Health centre).
5. Administration, Govt. Deptt.
Cantonment etc. : - Name - (a. Thana headquarters, b. Upazila headquarters, c. Food godown, d. Tahsil office, e. U.P. Office).
6. Recreation open : (a. Park, b. Playground etc.)
7. Recreation closed: (a. Cinema hall, b. Club etc.)
8. Socio-cultural (Mosque, Idgah etc.)
9. Urban services (a. Electric supply with location of pole, b. Water supply, c. Tubewell, d. Tank etc.)
10. Roads : Major : 40'-0" & above.
Secondary : 25'-0" ..
Local : 20'-0" ..

11. Residential : a. Pucca (I), (II)
 b. C.I.P.W.
 c. C.I. roof
 d. Mud house
 e. Tarja & Thatched roof
12. Urban deferred.
13. Reserves. (Khas land & other required land by the Government)
14. a. Union boundary
 b. Upazila boundary
 c. District boundary

Second Digit

(Agriculture)

- A. Single cropping
 B. Double cropping
 C. Multiple cropping
 D. Inter culture

Third Digit

(Irrigation intensity)

- a. Regular
 b. Infrequent
 c. Not paratised.

4th Digit

1. Land value per Bigha

Dimonitar of the Code

(Physical character)

1st Digit

(Land levels)

- | | |
|----------------------------------|---------|
| 1. Highest level (Use local name | - Vity. |
| 2. 2nd ,, ,, | - Danga |
| 3. 3rd ,, ,, | - Nama |
| 4. 4th ,, ,, | - Bila |
| 5. 5th ,, ,, | - Jala |

2nd Digit

(Flood ability)

- A. Flooded regularly
 B. Flooded in frequently
 C. Not flooded

3rd Digit

(Social fertility)

- a. Good
 b. Medium
 c. Bad