



GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH  
MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATIVES  
**Local Government Engineering Department (LGED)**  
Agargaon, Sher-E-Bangla Nagar, Dhaka-1207

**Final Report on Study-03**  
**‘My Village -My Town’ -Technical Assistance Project**  
“Feasibility Study for Rural Connectivity including Multi-Modal Transport  
System in Char and Haor Areas”

**Ajmiriganj, Habiganj**



**dat•Ex**  
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# CONTENTS

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<b>GLOSSARY .....</b>	<b>i</b>
<b>Abbreviation .....</b>	<b>ii</b>
<b>Background .....</b>	<b>iii</b>
<b>1 Description of the Upazila .....</b>	<b>1</b>
1.1 Geography and Demography .....	1
1.2 Education Features.....	1
1.3 Rural Road Communications.....	1
1.4 Agriculture, Food Production and Fisheries.....	1
1.5 Growth Centre and Hatbazar.....	1
<b>2 Location of the Upazila .....</b>	<b>2</b>
<b>3 Approach &amp; Methodology.....</b>	<b>3</b>
3.1 Study Team Composition.....	3
3.2 Study Area.....	3
3.3 Database Review and Analysis .....	3
3.4 Prioritization Criteria of Sub-projects .....	4
3.5 Weightage Distribution for Prioritization.....	4
3.6 Mapping Hard-to-reach Villages & Population.....	5
3.7 Wrap Up Meeting.....	5
3.8 Validation Workshop.....	5
3.9 National Workshop.....	6
<b>4 Description of Wetlands.....</b>	<b>7</b>
4.1 Distribution of the Haors/ Wetlands.....	7
4.2 Haor/ Wetland Category.....	8
4.3 Bio-Ecological Characteristics .....	9
<b>5 Rural Road Connectivity to the Villages .....</b>	<b>10</b>
5.1 Summary of the Village Connectivity.....	10
5.2 Villages and their connectivity – Union level.....	10
5.3 Map of Hard-to-Reach Villages & Proposed Roads.....	14
<b>6 Consultation Meeting &amp; Field Visit .....</b>	<b>15</b>
6.1 Upazila Level Meeting .....	15
6.2 Visit to Case Study Union.....	15
<b>7 Data Collection &amp; Analysis .....</b>	<b>17</b>
7.1 Proposed Riverine routes .....	17
7.2 Proposed Roadway for Hard-to-Reach Villages:.....	18
7.2.1 Proposed All Weather Routes:.....	18
7.2.2 Proposed Submersible Routes:.....	18
7.2.3 Proposed Roads for Hard-to-Reach Villages Having No ID: .....	19
7.2.4 Priority for Road Development .....	19

<b>8 Conclusion &amp; Recommendations .....</b>	<b>20</b>
<b>Annexure - 1.....</b>	<b>21</b>
<b>Annexure - 2.....</b>	<b>22</b>

***List of Figures***

Figure 1: Upazila Location Map .....	2
Figure 2: Prioritization indicators & their weightage values .....	5
Figure 3: Haor Distribution Map .....	7
Figure 4: Haor Category Map .....	8
Figure 5: Bio Ecological Characteristics Map .....	9
Figure 6: Upazila Map .....	14
Figure 7: Upazila level Consultation Meeting.....	15
Figure 8: Condition of the visited road alignment at Azmiriganj Union .....	16
Figure 9: Condition of the visited road alignment at Badalpur Union.....	16

***List of Tables***

Table 1: Total villages in the Unions and their connectivity.....	10
Table 2: Union wise connected & Hard-to-Reach Villages and their population .....	10
Table 3: Proposed riverine routes of the Upazila .....	17
Table 4: Summary of the rural roads in the Upazila.....	18
Table 5: Proposed submersible roads in the Upazila .....	18
Table 6: Considered weightage values for the prioritization.....	19

## GLOSSARY

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**Hard-to-reach Villages** mean in the Study those villages that are not connected by any paved road with the respective Upazila HQ and/or Union Parishad, and to the nearest economic activity hub and social service centres. The following explanations is important for the concept of hard-to-reach villages.

- In haor areas, Village connected with submersible roads dry season and connected with riverine/haor routes in monsoon season has been considered as accessible and excluded from hard-to-reach villages.
- Within Upazila, Villages that needs a bridge to connect has not considered as hard-to-reach villages.
- In case of island Upazilas, villages that are accessible with paved roads from Upazila HQ has been considered as accessible and excluded from hard-to-reach villages.
- In case of villages that are connected with HBB (Herring-Bone-Bond) or Brick flat soling routes has been considered as hard-to-reach villages

**Mauza** is normally the geographical expression of a unit of landmass for revenue settlement and revenue collection, whereas, the village is a human settlement within a Mauza with strong social bond. Within a Mauza there could be more than one village.

**Union** Bangladesh has 3-tiers local government system: District, Upazila and Union. Union is the lowest level of local government below Upazila Parishad

**Upazila** Sub-District; the third level of government administration below division and District.

**Hat** Synonym of bazar or market

**Walking Trail** mean in the Study the village pathway or access used for walking by commuters, in the most cases do not have gazetted or established or commonly used alignment, and to the most, passable by bi-cycle or motor bike. These village trails are not passable by motorized jeep or mini truck or emergency service vehicle or not even by any three wheelers.

**Unpaved Roads** have no pavement or surface material. They are usually the earthen roads.

**Vulnerability** is the human dimension of risk that is defined as conditions determined by physical, social, economic, environmental, political, cultural and institutional factors or processes which increases the likelihood of an individual or a community to the impacts of shocks and hazards.

**Climate-Resilience** is expressed as the ability of a community to resist, absorb, adapt to and recover better from the impacts of disaster like flood and landslides in a sustainable way.



## ABBREVIATION

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ADB	– Asian Development Bank
BBS	– Bangladesh Bureau of Statistics
BC	– Bitumen Carpeting
DatEx	– Data Expert (Pvt.) Limited
DECL	– Delight Engineers and Construction Ltd.
DoE	– Department of Environment
DPHE	– Department of Public Health Engineering
DPP	– Development Project Proposal
FGD	– Focus Group Discussion
GIS	– Geographic Information System
GOB	– Government of Bangladesh
HBB	– Herring-Bone-Bond
HQ	– Headquarter
HTRV	– Hard-to-Reach Village
JV	– Joint Venture
KII	– Key Informant Interview
LGD	– Local Government Division
LGED	– Local Government Engineering Department
LGI	– Local Government Institute
MVMT	– My Village My Town
NGO	– Non-Government Organization
PD	– Project Director
PMO	– Project Management Office
RCC	– Reinforced Concrete
RHD	– Roads & Highways Department
SDGs	– Sustainable Development Goals
TA	– Technical Assistance Project
UE	– Upazila Engineer
UNDP	– United Nations Development Programme
UNO	– Upazila Nirbahi Officer
UNR	– Union Road
UP	– Union Parishad
UPZ	– Upazila Road
VRA	– Village Road A
VRB	– Village Road B





## BACKGROUND

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### Context of the Project

The Government of Bangladesh made massive plans to ensure equitable development around the country. Under this development philosophy, the GoB requirements are to reduce rural-urban divide to foster developmental benefits for all citizens. As part of this, the government declared an election manifesto on the eve of the national parliament election 2018 uniting the theme **Bangladesh on the March Towards Prosperity** aiming at transforming Bangladesh into a developed nation by 2041. Under this, villages have been considered the basic unit of prosperity for building a developed nation.

This firm commitment was declared following the light of the philosophy of the Father of Nation Bangabandhu Sheikh Mujibur Rahman to build ‘Sonar Bangla’ (Golden Bangla) through inclusiveness, balanced and development for all.

Following the philosophy of the Father of the Nation, the government declared election manifesto 2018 titled ‘My Village-My Town’- Extension of Modern Civic Amenities in Every Villages. The Local Government Division under the Ministry of Local Government, Rural Development and Cooperatives has prepared a comprehensive work plan to make this election commitment a reality. The Local Government Division with its two agencies, Local Government Engineering Department (LGED) and Department of Public Health Engineering (DPHE) has undertaken a technical assistance project named ‘My Village-My Town’- Technical Assistance Project. Under this project, 36 studies and 30 guidelines are being developed on eight thematic components related to mandate of Local Government Division. The eight thematic components are Rural Communications, Growth Centre and Hat bazar, Rural Water Supply and Sanitation, Rural Waste Management, Community Space and Recreation Facilities, Upazila Masterplan, Rural Housing and Capacity building of Upazila and Union Parishad. Besides this, a coordination framework is being developed among the other ministries involved in implementation of My Village-My Town election manifesto. It is notable to mention that a coordination committee has been formed comprising 21 ministries to implement the program in a coordinated way under the leadership of the Minister of Local Government, Rural Development and Co-operatives.

### Context of the Report

This report is a part of study of the component ‘Rural Connectivity’. Rural connectivity is the basic of all amenities in the villages. Rural connectivity works as the conduit that can supply a number of bare necessities such as access to market, health, education, employment etc. In general Bangladesh has remarkable progress in rural connectivity. Instead of this, a number of regions of the country are geographically sensitive where rural connectivity is not easy and has lot of challenges. These regions are -Haor, Beel, Hills, Chars, Islands etc. The people residing in these regions has considerably low access to civic amenities compared to other villages of the country. Therefore, study and plan development of improvement of rural connectivity is one of the important assignments of the technical assistance project. The project undertook Upazila based special study on the villages of these geographically sensitive regions that are mentioned before.

This report contains rural connectivity status and priority plan of the **Azmiriganj** Upazila of **Habiganj** District.



# 1 DESCRIPTION OF THE UPAZILA

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## 1.1 GEOGRAPHY AND DEMOGRAPHY

The geographical area of Azmiriganj Upazila is 223.98 sq.km. It has 5 Unions, 68 mouzas and 133 villages. Azmiriganj is 42 km far from District headquarters of Habiganj. It is partly covered by 3 major haors and there also exists 2 major rivers flowing over the Upazila- Kalni & Kushiara. The total population of the Upazila is 1,14,265 of which 56,615 are male and 57,650 female, total number of households are 21,293 and average household size is 5.39 and density of population is 510 (as per population census 2011).

## 1.2 EDUCATION FEATURES

According to the information availed from relevant local government offices, there are 39 govt. primary, 16 registered primary, one non-government primary & 5 kindergarten schools. On the other hand, Azmiriganj has 6 non-government high schools with a private college and 12 madrashas. The literacy rate for the Upazila is 37.1%.

## 1.3 RURAL ROAD COMMUNICATIONS

Bangladesh scored in the rural accessibility index at around 87 per cent among South Asian and some other Africa countries. Generally, the people of Bangladesh get all weather within 2 kilometers adjacent to their living places. But the feature of rural roads communications in Azmiriganj Upazila is contrasted. There are many villages, disconnected from the developed paved road network that brings huge sufferings for the people of the villages. The total rural road network of Azmiriganj is of 272.52 km, out of that, 140.84 km paved and 131.68 km earthen.

## 1.4 AGRICULTURE, FOOD PRODUCTION AND FISHERIES

Agriculture has a major importance for the economy of the people of Azmiriganj. There are 32,264 acres of arable land in the Upazila. In the fiscal year 2010-11 the Rice production was 7846 & 68878 metric tons for Aman & Boro seasons respectively. The Upazila also produced 2032 metric tons of Potatoes in the same fiscal year 2010-11.

According to the BBS (2010-11) data Azmiriganj has 261 acres of haor/ pond/ dhighee/ other wetlands that produced 4,782 metric tons of fishes.

## 1.5 GROWTH CENTRE AND HATBAZAR

Growth Centre and Rural Hatbazar is one of the main centres of the rural economy. Hatbazar is like the heart for the development of the rural economy. Rural hatbazar plays a role in increasing production and creating employment impacting on the supply chain of agriculture and non-agriculture products. There are 3 hatbazars with 3 growth centers in the Upazila. The structural development of hatbazar and growth is pivotal to boosting up the rural economy. A details of the growth center & hatbazar of the Upazila has been attached in the [Annexure-1](#).

## 2 LOCATION OF THE UPAZILA

Azmiriganj Upazila is in the North - Eastern part of the country under Habiganj District in Sylhet division. The location has been shown in the map. It is surrounded by Sulla and Baniachang Upazilas on the north, Baniachang and Mithamain Upazilas on the south, Baniachang Upazila on the east and Itna Upazila on the west. The Upazila is mostly flashflood zone in between Sylhet & Mymensingh Haor Basin. The hilly rivers coming down from the ‘Garó, Khasi and Jaintia hills’ in Meghalaya, India carry particularly high volume of water during monsoon as they come from some of the rainiest places in the world, resulting flash flood at the foothills inside Bangladesh. Flood coming from uphill Meghalaya (*where there is Cherrapunji, the wettest place on earth*) during monsoon causes waterlogging within the haor basin for almost half the year. Flash floods induce severe impacts in both the built and the natural environment. The effects of flash floods can be catastrophic and show extensive diversity, ranging from damages in buildings and infrastructure to impacts on vegetation, human lives and livestock.

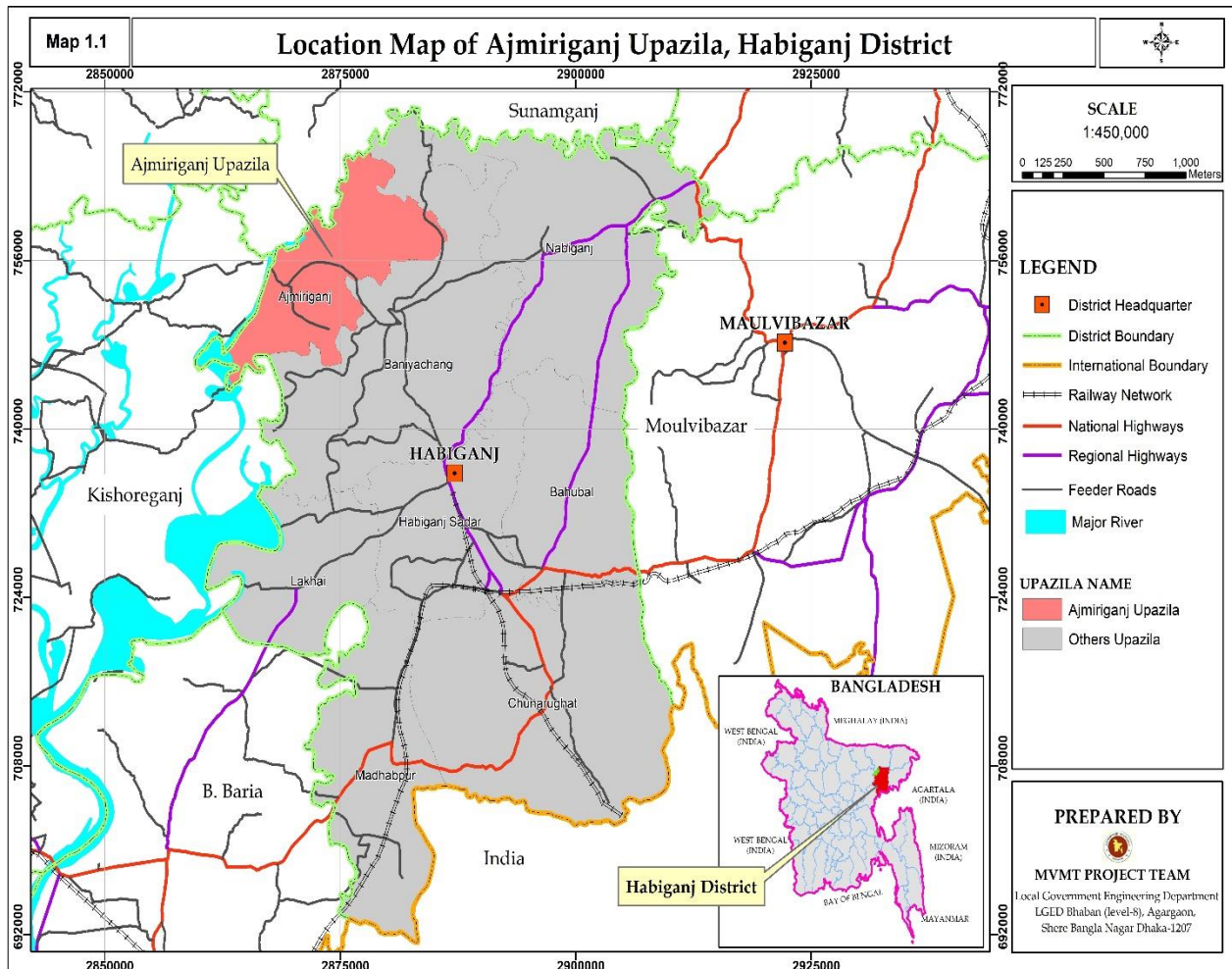


Figure 1: Upazila Location Map.

## 3 APPROACH & METHODOLOGY

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### 3.1 STUDY TEAM COMPOSITION

A team consisting of Senior Rural Road Infrastructure Specialist, Associate Rural Infrastructure Specialist, Assistant Engineer engaged by Project Management Office (PMO) conducted the study. On the other hand, A team consisting of Deputy Team Leader cum Rural Infrastructure Engineer, Junior GIS expert and Junior Engineer engaged by consulting firm (datEx & DECL JV) conducted the study. Participatory approach to review the database and identify priority transport infrastructure needs ('sub-projects') was instrumental. At the stakeholder consultation meeting held in each District, the database was reviewed, priority needs identified and mapped working together with the LGI representatives and LGED technical team. LGED and LGI representatives were surveyed each Upazila for collection of detailed observations and validations of the proposed priority needs.

#### **Stakeholder Consultation Meeting**

- Hard-to-reach Village Database and database of sub-projects reviewed
- Prioritization of sub-projects for each Upazila with LGI and LGED representatives
- Hard-to-reach villages and priority sub-projects mapped in the LGED GIS Map

### 3.2 STUDY AREA

The Study was conducted in 72 Upazilas of haor areas, 3 Upazilas of Beel areas, 8 Upazilas of Char areas, and 4 Upazilas of Island areas during the period from December 2021 to June 2022. Apart from this, PMO team conducted the study in 50 Upazilas of Haor areas and rest of the Upazilas of Haor, Beel, Char and Island areas are conducted by consulting firm team. The Upazila technical staff of LGED supported in organizing stakeholder consultation meetings and in database review and mapping the Hard-to-reach villages and population during this study period. They also supported in the field work and authentication check by visits to the sub-projects in their respective Upazila, and looking at the feasibility of some proposed sub-projects from technical, social and environmental perspectives.

### 3.3 DATABASE REVIEW AND ANALYSIS

The Study applied both qualitative (e.g., focused group discussions and in-depth case study field work) and quantitative (structured and semi structured interviews) approach and methods in reviewing and conducting field work in all the haor areas to understand the need and impact of rural accessibility in remote village contexts. The most applied methods in the reviewing and conducting field work were:

- Key Informants Interview (KII)
- Focus Group Discussion (FGD)
- Case Study for authentication check and individual sub-project feasibility study.

- ❖ Review Hard-to-reach village database at the ‘Stakeholder consultation meeting’ participating by local government representatives such as UP chairman and members, Upazila chairman, vice-chairman, and UNO.
- ❖ FGD and KII were conducted using a checklist. Composition in the FGD included local community people: male and female, teacher, local farmer, trader, and student depending on the availability.
- ❖ KIIs of Union Chairman, Upazila chairman, UNO male and female, and teacher depending on availability.
- ❖ Authentication and feasibility check by visits to the sub-projects reviewed and listed for the 40 selected case study Unions under MVMT project.
- ❖ Survey with GPS machine and Google apps in collecting Hard-to-reach village location, landmark, chainage at gaps, village road at section vulnerable to land erosion damage, narrow existing width or sharp slope location.

### **3.4 PRIORITIZATION CRITERIA OF SUB-PROJECTS**

Prepare a priority list of sub-projects by Upazilas that includes gazette ID roads and non-gazette roads (No ID) with attributes like name and number of villages and population. The criteria used in the prioritization are described below.

- Population, travel time needed from the remotest villages to the Upazila HQ, road type and cost per km per 1000 population are the indicators weighted giving a value in a formula.
- Priority is given to single connection with no alternative transport road and multi-modal transport route to connecting the villages with Upazila HQ and Union Parishad, growth centre and important markets and social service centres; villages with higher number of population and travel time get higher weightage;
- Priority is given to roads, ghats and collection points that will facilitate agricultural diversification, reduce transportation cost, ensure fair price and create farm and non-farm employment and income;
- Priority is given to roads’ development and inland waterways dredging that will enable year-round mobility of general public and villagers in particular, health workers, teachers and students, and tourists to facilitate tourism development, quality education and better health service in the District and region;
- Special priority is given to sub-projects of roads, riverine routes/inland waterways that will mainstream deprived communities living in the hard-to-reach villages;
- Identified sub-projects more cost-effectiveness than others using per km per 1000 population cost for each sub-project;
- Every sub-project(s) is to be climate-resilient, sustainable and cost-effective.

### **3.5 WEIGHTAGE DISTRIBUTION FOR PRIORITIZATION**

The approaches and methodologies of the Study for reviewing database and prioritization are synthesized in the diagrams below, noting that the proposed sub-projects of roads in the databases are prioritized based on weightage calculated on the set criteria (as shown in the diagram). People’s demand and local need are reflected in the prioritization which were

determined by the Study, working together with LGI representatives and LGED field level technical staff at the stakeholder consultation meetings held in each Upazila.

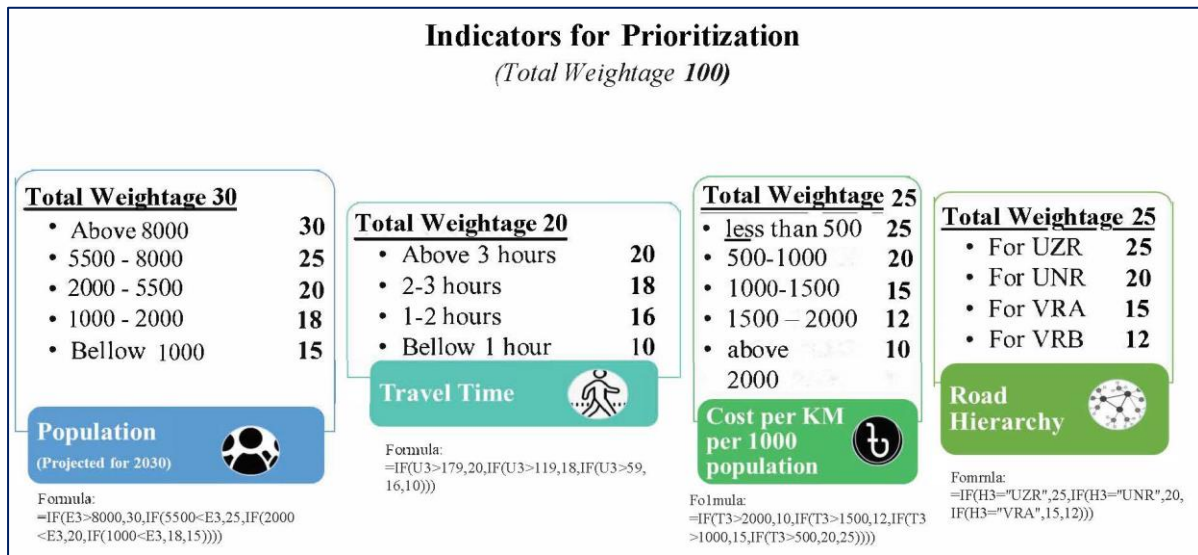


Figure 2: Prioritization indicators & their weightage values

### 3.6 MAPPING HARD-TO-REACH VILLAGES & POPULATION

- With the active support of LGED technical staff, first, draw every priority listed MVMT roads and Hard-to-reach villages on the LGED GIS map in presence of Union Chairman and members who knows the sub-project and area the best. This was not in scale but approximation was reached by triangulation. Then digitized on screen using GIS, and validate with Google map and checked with data and information on important features and points collected using GPS during field visits.
- There were challenges in deciding on starting node and/or zero chainage of the non-gazette (No ID) road, because not all non-gazette sub-projects were visited and surveyed by the Study team.

### 3.7 WRAP UP MEETING

Wrap up the field work progress at each District holding a meeting chaired by the Executive Engineer, LGED and participated by all Upazila engineers of the respective District. On completion of the fieldwork, this was conducted to share issues and updates to the District Executive Engineer for feedback and action, as necessary.

### 3.8 VALIDATION WORKSHOP

On completion of data analysis and drafting of the database and mapping, the Study outputs were shared with the respective Districts and Upazilas for final review. Later validation workshop was held at the respective District on the Draft Report to share and validate the findings. This was participated by the LGED Division, District and Upazila officials and technical staffs.

### **3.9 NATIONAL WORKSHOP**

The Draft Report is finalized, incorporating comments received from the validation workshop, LGED head office staff and PMO office. A National Level workshop was held at LGED HQ for sharing and disseminating the results of the Study.



## 4 DESCRIPTION OF WETLANDS

### 4.1 DISTRIBUTION OF THE HAORS/ WETLANDS

The Upazila has a large area of flash flood zone that covers almost 90% of its total area. The roads within the flood zone becomes inundated at monsoon, that requires an attention to take relevant measures during road construction and maintenance.

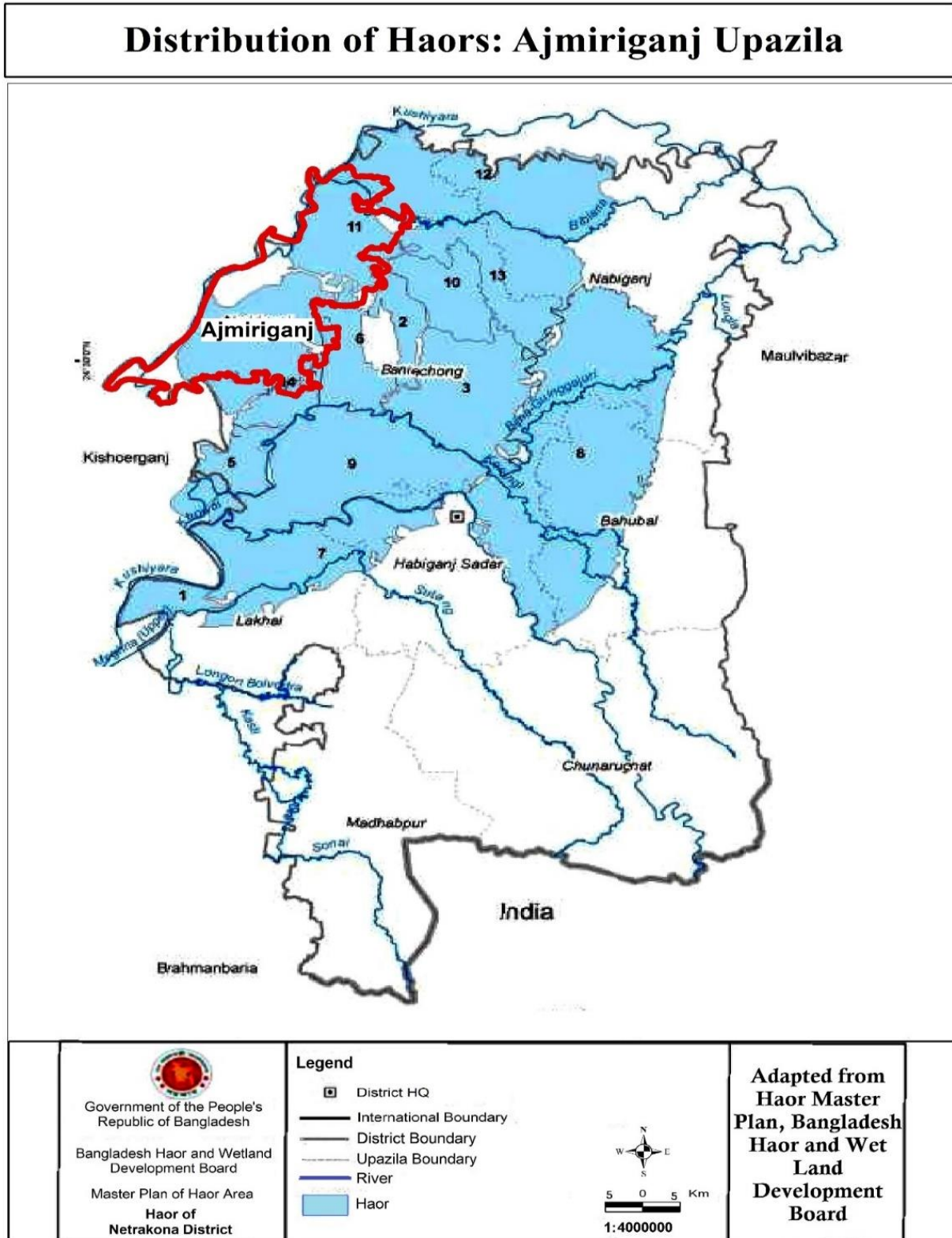


Figure 3: Haor Distribution Map

## 4.2 HAOR/ WETLAND CATEGORY

However, the Upazila is deeply flooded zone. Therefore, road or other infrastructure development in this Upazila has major environmental consequences.

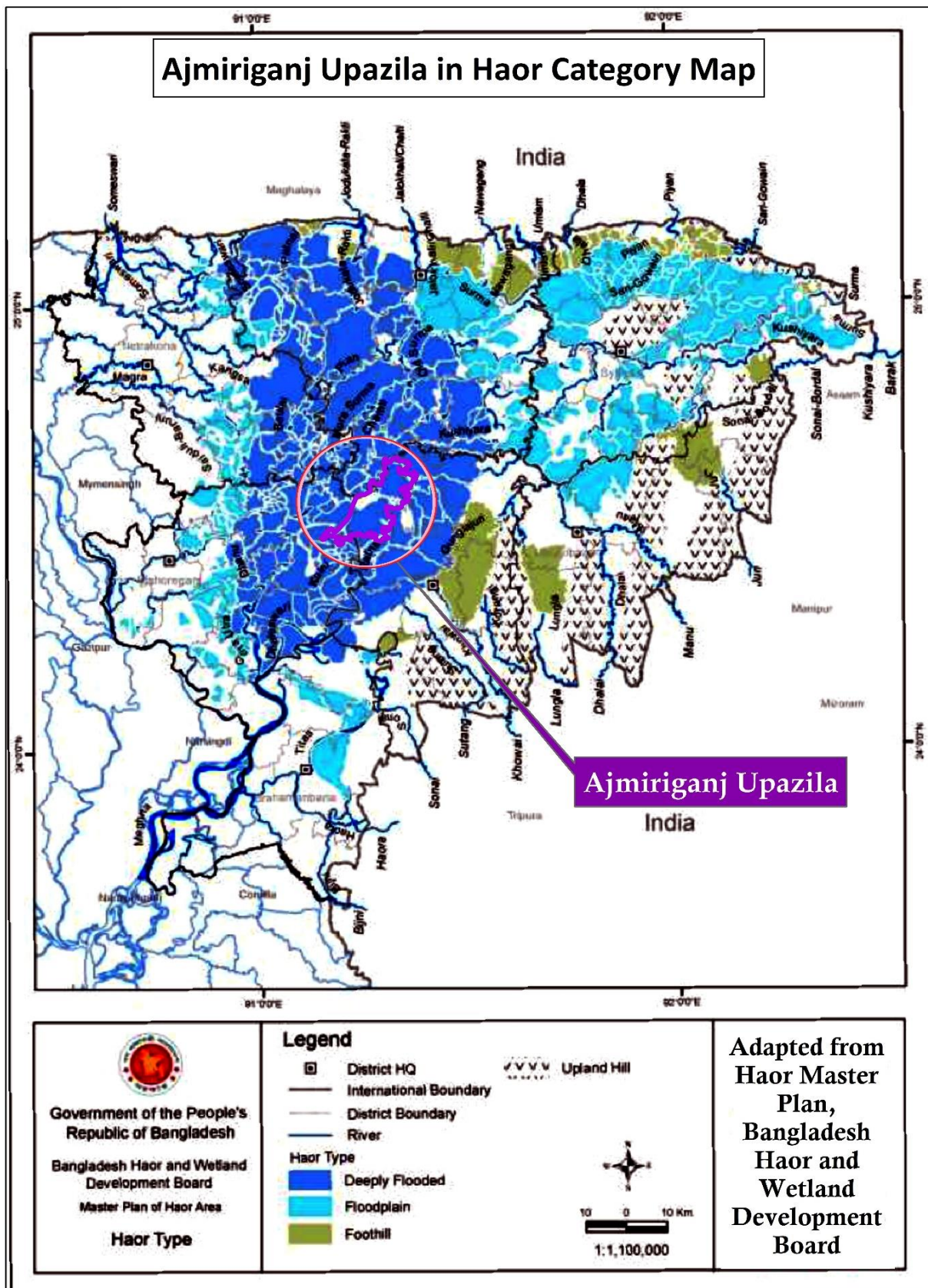


Figure 4: Haor Category Map.

### 4.3 BIO-ECOLOGICAL CHARACTERISTICS

The Bio-ecological characteristics map of the Upazila has been shown below. The map shows that it is completely a haor basin. Therefore, adequate opening for the road and road structures should be maintained.

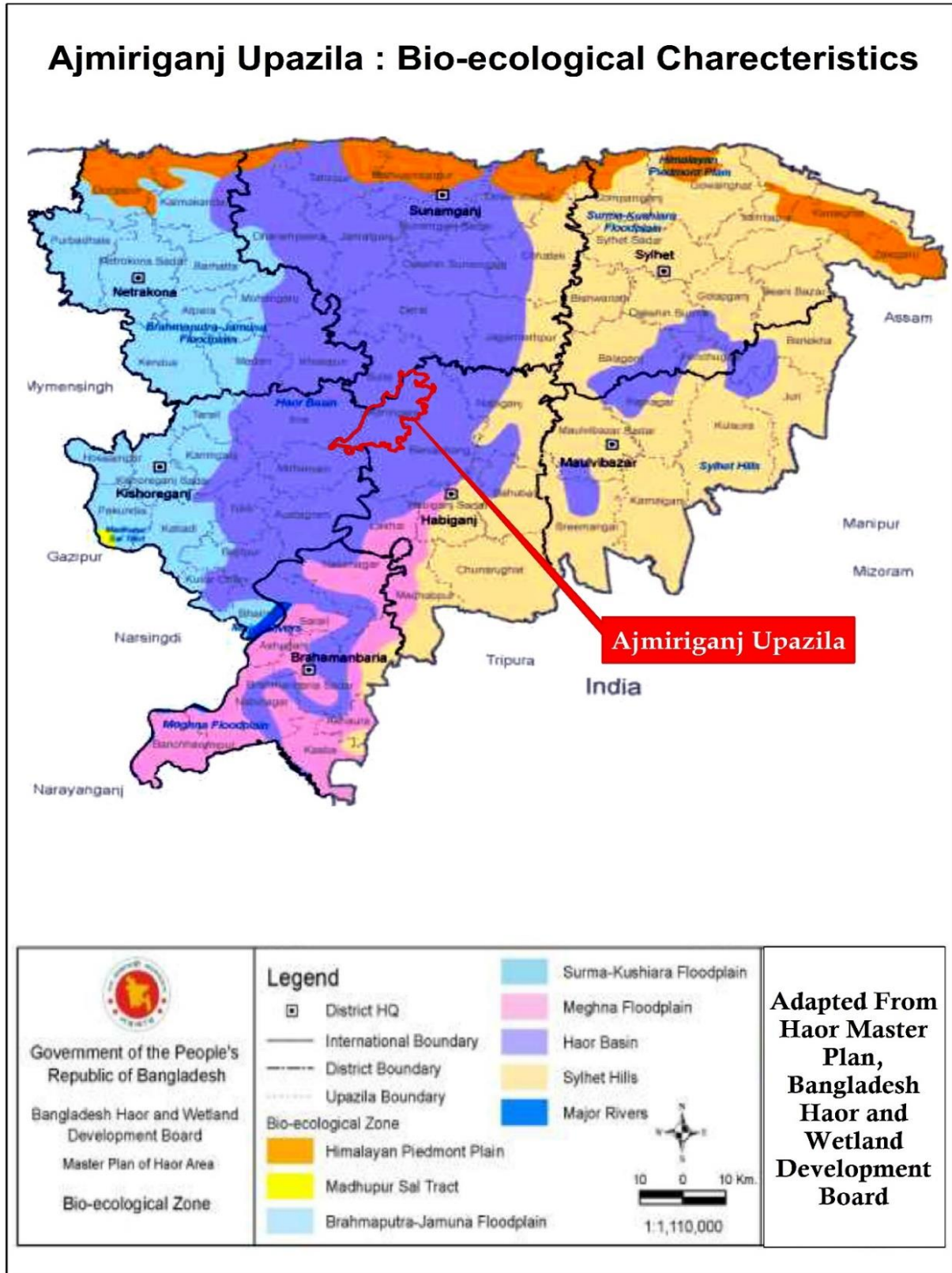


Figure 5: Bio Ecological Characteristics Map

## 5 RURAL ROAD CONNECTIVITY TO THE VILLAGES

### 5.1 SUMMARY OF THE VILLAGE CONNECTIVITY

Azmiriganj is an Upazila with major haors. The rural road communication is quite poor here. Out of 133 villages, 9 are disconnected from the developed paved road network that brings huge sufferings for the people of those villages. The total rural road network of Azmiriganj is of 272.52 km, out of that, 140.84 km paved and 131.68 km earthen.

*Table 1: Total villages in the Unions and their connectivity*

SL No	Union	No of Villages	Connected Villages	Hard-to-Reach Villages
1	Ajmiriganj	16	16	0
2	Badalpur	32	29	3
3	Jalsuka	17	17	0
4	Kakailseo	47	44	3
5	Shibpasha	21	18	3
<b>Total=</b>		<b>133</b>	<b>124</b>	<b>9</b>

### 5.2 VILLAGES AND THEIR CONNECTIVITY – UNION LEVEL

The consultant arranged a meeting at Upazila conference room with and all the UP Chairmen & their secretaries. The team interviewed representative of each the Union and collected data about the HTRV.

*Table 2: Union wise connected & Hard-to-Reach Villages and their population*

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
Ajmiriganj (16)	1	Durlong Pur	321		
	2	Madusadan Pur	418		
	3	Ajmiriganj	807		
	4	Aoi	793		
	5	Bashati	1666		
	6	Bihat	457		
	7	Fatehpur (part)	245		
	8	Gucha Gram	321		
	9	Hasham Pur	459		
	10	Islam pur	269		
	11	Mirzapur	1130		
	12	Noruttam Pur	254		
	13	Nowabda	1033		
	14	Rania	738		
	15	Shanbari (part)	966		
	16	Udhabpur	280		
<b>Sub Total=</b>			<b>10157</b>		<b>0</b>

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
Badalpur (32)	1	Azadpur	143	Dighalbak	536
	2	Badalpur	1134	Nowaga	563
	3	Baldi Bade	600	Shanjoy Pur	391
	4	Bhabanipur	218		
	5	Bochikhali	856		
	6	Charmamudpur	22		
	7	Chhatar Kandi	1413		
	8	Gandhrabpur	537		
	9	Guchagram	569		
	10	Gupi	580		
	11	Hamaikhali Bade	544		
	12	Haripur	762		
	13	Hashampur Bade	179		
	14	Hilaj Pur	243		
	15	Jhilua	1045		
	16	Joy Pur	521		
	17	Katakhali (Part)	1087		
	18	Katakhali (Part)	1092		
	19	Kayagupi	383		
	20	Mamudpur	708		
	21	Matiakara	769		
	22	Nadipur	768		
	23	Paharpur	3905		
	24	Paharpur Bazar	407		
	25	piatur Kandi (Part)	1565		
	26	Pirojpur	1224		
	27	Purba Kalni	2156		
	28	Sunam Pur	448		
	29	Uday Pur	229		
		<b>Sub Total=</b>	<b>24107</b>		<b>1489</b>
Jalsuka (17)	1	Anantapur	636		
	2	Atpara	2047		
	3	Chanderabad	168		
	4	Dakhin Atpara	1032		
	5	Durgapur	226		
	6	Durlabhpur	441		
	7	Ishabpur	1463		
	8	Jalsuka	181		
	9	Kadirpur	147		
	10	Lakhihati	283		
	11	Madabpasha	2193		

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
	12	Madhaypara	1585		
	13	Murakhai	243		
	14	Nowagoan	5005		
	15	Patli Para	1306		
	16	Shanka Mahal (Part)	936		
	17	Uttar Atpara	647		
			<b>Sub Total=</b>	<b>18540</b>	
Kakailseo (47)	1	Anadapur	1465	Alipur	457
	2	Badarpur	355	Dhobateka (Rehala)	1959
	3	Bahadur Pur	209	Mahtabpur	1063
	4	Binna Khali	115		
	5	Chan Pur	426		
	6	Char Hati	574		
	7	Demikandi	178		
	8	Enayet Nagar	147		
	9	Fakhrabad	165		
	10	Gaora Nagar	297		
	11	Ghardair	827		
	12	Gonga Nagar	360		
	13	Gopal Pur	734		
	14	Goshai Pur	510		
	15	Hargori Hati	179		
	16	Jamigoalgaon (Enatnagar)	2786		
	17	Jamigoawlgaon	423		
	18	Jaynagar	110		
	19	Joganath Pur	113		
	20	Kadir Pur	214		
	21	Kakailseo	493		
	22	Kamalpur	6290		
	23	Kannajuri	58		
	24	Khala Para	229		
	25	Krepal Nagar	296		
	26	Mahes Nagar	9		
	27	Mamudpur	685		
	28	Manger Hati	399		
	29	Manipur	315		
	30	Mirzapur	192		
	31	Narsingpur	344		
	32	Nayahati	150		

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)	
	33	Qumedpur	1342			
	34	Raja Nagar	251			
	35	Ramonipur	1516			
	36	Rania (Part)	724			
	37	Rasulpur uttar	1563			
	38	Rudra Nagar	116			
	39	Sarifpur	1572			
	40	Sarifpur	1068			
	41	Saulari	761			
	42	Saulari (Jatrapur)	603			
	43	Shampur	323			
	44	Umed Nagar	316			
			<b>Sub Total=</b>	<b>29801</b>		<b>3480</b>
	Shibpasha (21)	1	Banganj	606	Bang	<b>3610</b>
2		Bhargaon	2613	Nayahati	<b>707</b>	
3		Digirpar	119	Razbari	<b>365</b>	
4		Gayen	311			
5		Hukurua	2261			
6		Ichabpur	408			
7		Jashkishori	2960			
8		Kayesta Para	569			
9		Nurpur	133			
10		Nurpur	446			
11		Padmatara	1256			
12		Pairal	247			
13		Paschimbangh	1306			
14		Purba Padmatarachak	100			
15		Shib Pasha	9170			
16		Tinkusa	227			
17		Varalipara	221			
18		Votra Para	412			
		<b>Sub Total=</b>	<b>23364</b>		<b>4683</b>	

### 5.3 MAP OF HARD-TO-REACH VILLAGES & PROPOSED ROADS

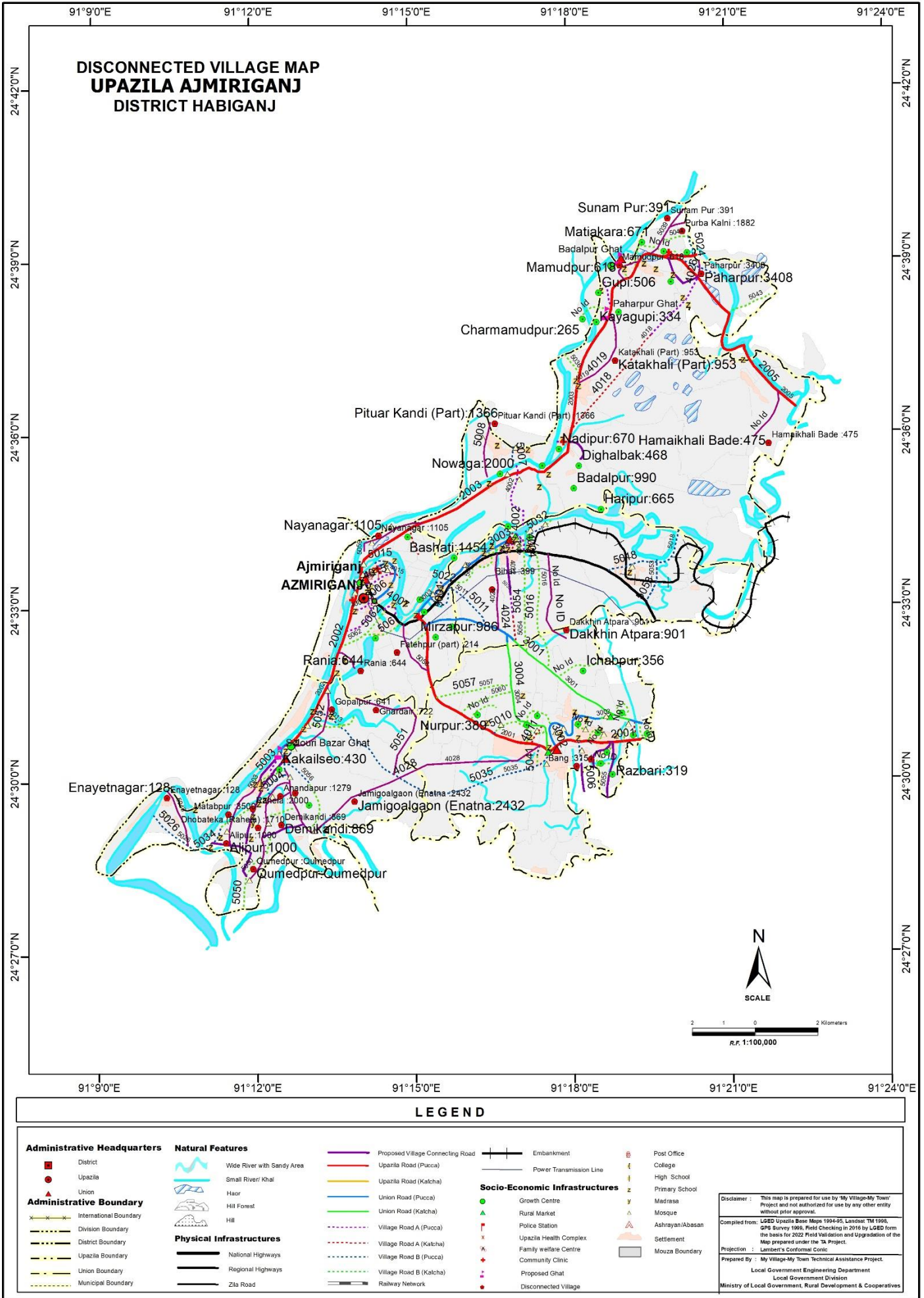


Figure 6: Upazila Map



## 6 CONSULTATION MEETING & FIELD VISIT

### 6.1 UPAZILA LEVEL MEETING

The consultant arranged a meeting at Upazila conference room with the support of the UE office, Azmiriganj that was participated by UNO, UE and all the UP Chairmen & their secretaries.



*Figure 7: Upazila level Consultation Meeting*

During the meeting, consultant team briefly discussed about the project and instructed the UP Chairmen and UE office for the database correction along with mapping procedure. The team worked on both the database and Upazila map and obtained the necessary outputs subsequently.

### 6.2 VISIT TO CASE STUDY UNION

The team visited two case study Unions in Azmiriganj Upazila, that are 'Azmiriganj & Badalpur'. While visiting the road alignment, the consultant observed and collected necessary information for the study discussing inhabitants and UE office. Team recorded GPS data, interviewed road users and took photos of the alignment condition.

In **Azmiriganj** Union, the consultant visited "Pirijpur Jamae Masjeed - Nayanagoar Primary School" having the Road ID: 636025059. The road was selected for the site visit considering the beneficiary population, educational institutes along the road and the recommendations of the UE Office as the road has a priority within the Union.



*Figure 8: Condition of the visited road alignment at Azmiriganj Union*

The length of this road is 6 km, having 3 km HBB & 3 KM earthen. The road connects a village of the Union named Nayanagar having the total population of approx. 1500. People living here doesn't have any good road network with the Upazila HQ due to having unpaved road communication. During monsoon, the road becomes partially inundated. There exists, one madrasa and two Primary Schools.

As for **Badalpur** Union, the consultant visited "Purbo Kalni Cominunity Clinic - Shitol Para Road" having the Road ID: 636024027. This road was visited considering the number of beneficiaries, educational institutes and the suggestions of the UE Office.



*Figure 9: Condition of the visited road alignment at Badalpur Union*

The length of this road is 6 km, having 3 km HBB & 3 KM earthen. The road connects a village of the Union named Purba Kalni having the total population of approx.2200. During monsoon, the road becomes inundated. There exists 1 Primary Schools and a bazar along the visited road.

## 7 DATA COLLECTION & ANALYSIS

The consultant collected data from the field on hard to reach/ Hard-to-Reach Villages. Data were collected of those villages including population, road alignment information (*type, length, condition*), travel time, structure required on the alignment, potential riverine routes that can be used for multi-modal transport system etc. The data then analyzed, categorized and finally used to obtain a priority list along with a map (*Figure:6*) showing prioritized roads and Hard-to-Reach Villages. The proposed riverine & road connectivity by the UE office have been discussed in this section.

### 7.1 PROPOSED RIVERINE ROUTES

As per actual field visit and data analysis from haor development board, Ajmiriganj Upazila is within deep haor zone. Around 80% area of the total Upazila is flood plain zone that gets inundated during monsoon and becomes a haor basin. Two major rivers have flown over the Upazila known as Kalni & Kushiara.

All through the year, many people use both of these rivers specially for carrying their goods. Generally smaller boats, engine boats, trawler, launch & cargo ships are used along the year to transport community & commodity. At monsoon almost entire area of the Upazila gets inundated due to flash flood and heavy rainfall at the uphill. The water depth becomes 8-10 feet resulting the waterways as only mode of transport in the submerged, i.e., haor area.

According to the UE, Ajmiriganj, there is only one riverine route that can be used as multi-modal transport system. The name of the riverine route & the associated stream with types of water vehicle usage are as follows;

*Table 3: Proposed riverine routes of the Upazila*

Sl. No	Name of the Riverine Route	Name of the Stream	Type of the Stream	Types of Water Vehicle	Need of excavation
1	Bhairab - Upazila H/Q - Azmiriganj Kamalpur Ghat - Kakailsew Ghat - Solari Ghat - Azmiriganj Ghat - Pirijpur Ghat - Bodolpur Ghat - Pituarkandi Ghat - Katakali Ghat - Paharpur Ghat	Kalni	Perennial	Small Boat Engine Boat Trawler Launch & Cargo	Yes

## 7.2 PROPOSED ROADWAY FOR HARD-TO-REACH VILLAGES:

At present, roads are the most dominant mode of transportation. Most of the structures were built on the rivers to make the road communication effective. Yet, 2 (two) bridges are needed to fulfil the purpose.

*Table 4: Summary of the rural roads in the Upazila*

Total Road Length of the Upazila (KM)	Paved Length (KM)	Unpaved Length (KM)	Length of unpaved roads of Hard-to-Reach Villages (KM)
272.52	140.84	131.68	21.15

### 7.2.1 PROPOSED ALL WEATHER ROUTES:

There are no proposed all weather routes to connect the HTRV within the Upazila.

### 7.2.2 PROPOSED SUBMERSIBLE ROUTES:

There are 9 submersible roads proposed to connect the HTRV within the Upazila. The road name, ID, road condition and the length of the unpaved roads are as bellow;

*Table 5: Proposed submersible roads in the Upazila*

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
1	Bong Road-Paddy Land road (Muradpur)	636025006	Submersible	5.1
2	Kakailsow Bajar - Rahela	636025027	Submersible	2.9
3	Azmiriganj Paharpur GCC Road koyerdala - Kudalia Ferry Ghat	636024022	Submersible	1.2
4	Paharpur GCC R-Digolbag Pry School	636025028	Submersible	0.9
5	Anondopur Ferryghat - Matabpur Road	636025003	Submersible	3.5
6	Nikli - Bosanto Kumar high school	636025045	Submersible	1.2
7	Hokra Road-Paddy Land Road	636025009	Submersible	2.5
8	Mahatabpur-Bonpuri Road	636025049	Submersible	2.1
9	Shibpasa-Bong 4no Word Graviya Road	636025055	Submersible	1.75

### 7.2.3 PROPOSED ROADS FOR HARD-TO-REACH VILLAGES HAVING NO ID:

There are no roads proposed to connect the HTRV within the Upazila that have no ID yet.

### 7.2.4 PRIORITY FOR ROAD DEVELOPMENT

Considering resources constraint, benefited group of people, time required to travel & road hierarchy, a priority list has been developed (Annexure-2) for the HTRV (Hard to Reach Villages). The priority score has been determined according to following

*Table 6: Considered weightage values for the prioritization*

Criteria	Weightage
Population	30
Travel Time	20
Cost per 1000 Population	25
Road Type	25
<b>Total=</b>	<b>100</b>

It has been observed that, there are a number of roads that bear same score. At these cases, the minimum budget required for providing connectivity to thousand people- will get more priority compared to more budget required roads. The roads bearing ID will have the higher priority than the roads without ID.

## 8 CONCLUSION & RECOMMENDATIONS

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- Azmiriganj Upazila is located within Deeply Flooded zone. There are 2 (two) major rivers that dominate the ecosystem, transport system of the Upazila. That are Kalni & Kushiara rivers. During monsoon, these rivers carry huge volume of flood water. Though the Upazila has a number of rivers, riverine transport is available in this Upazila. Small boats, Engine boats, Heavy trawlers and Cargo ships carrying agricultural products and passengers during monsoon.
- As the Upazila is heavily flooded during monsoon, rural roads and structures are highly vulnerable in this Upazila.
- The Upazila has a total number of 9 Hard-to-Reach Villages. To develop rural connectivity, there are proposals for only submersible roads. This report contains a list of roads with their priority. The priority has been determined based on Population, Travel Time, Cost per KM/1000 people & Road Hierarchy.
- This Upazila is highly vulnerable to disasters. Due to climate change, the vulnerability is getting intense. The year 2022 has shown catastrophic flood that was not seen over the last 18years (last in 2004 similar to 1998 & 1988). Therefore, it is highly recommended to study the road alignments before going for investment.
- Case by case design of roads in this Upazila considering different aspects such as exposure to floods, erosion etc. is highly recommended. A special study regarding the road and structure design of the Upazila Azmiriganj in Habiganj District is highly recommende.

## ANNEXURE - 1

### DETAILS OF GROWTH CENTER & HATBAZAR

Union	Market Name	Market Category (GC=Growth Center, HB=Hat Bazar)	Market Listed? (Yes/No)	Market Category (General/ Special/ Collection center)	Market Category (Wholesale/ Retail/both)	Hat Day	Chandina Viti (Number)	Chandina Viti (Land)	Chandina Viti (Shop)	Land Area (Acre)			Lease/ Khas Collection BDT (2020)	Lease/ Khas Collection BDT (2019)
										Toha	Khas	Private		
Azmiriganj	Ajmiriganj bazar	GC	Yes	General Market	Both	2	334	1.77	0	1.39	6.11	0.00	8214360	1101500 5
Jalsukha	Jalsukha	HB	Yes	General Market	Wholesale	1	0	0.07	0	0.00	0.00	0.00	246666	100000
Kakailsew	Kakailseo chowdhury hat	GC	Yes	General Market	Both	2	0	0.25	0	0.88	1.43	0.00	406150	280000
Badarpur	Paharpur bazar hat	GC	Yes	General Market	Wholesale	1	695	3.48	695	0.10	4.00	0.00	127500	341000
Shibpasha	Pashimbhagh Bazar	HB	No	General Market	Both	7	0	0.00	0	0.00	0.00	0.00	0	0
Shibpasha	Sabusganj Bazar	HB	No	General Market	Both	7	0	0.00	0	0.00	0.00	0.00	0	0

## ANNEXURE - 2

### PRIORITY LIST FOR ROAD DEVELOPMENT

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Priority	Connecting Union	Connecting Village	Population 2021 (Based on BBS 2011)	Road Name	Road ID	Road Type	Road Type by Surface Condition	Total Road Length (10+11+12)	Paved length (km)	HBB Length (km)	Unpaved length (km)	HBB + Unpaved (11+12) in (km)	Approx. Cost of Road (lac)	Structure/ Gap (meter)	Cost of Structure (in Lac)	Total Cost (in lac) (Roads + Structures)	Population /KM (4-13)	Tentative Budget/1000 Population (in lac)	Travel Time (in min)	Weightage for Population	Weightage for Travel Time	Weightage for Cost per 1000 Population	Weightage for Road Type	Total Weightage (21+22+23+24)
1	Shibpasha	Bang	3610	Bong Road-Paddy Land Road (Muradpur)	636025006	VRB	Submersible	10.2	2.3	2.8	5.1	7.9	1422	25	225	1647	457	456	77	20	16	25	12	73
2	Kakailseo	Dhobateka (Rehala)	1959	Kakailsow Bajar - Rahela	636025027	VRB	Submersible	5.8	0	2.9	2.9	5.8	1044	30	270	1314	338	671	44	18	10	20	12	60
3	Badalpur	Nowaga	563	Azmiriganj Paharpur GCC Road koyerdala - Kudalia Ferry Ghat	636024022	VRA	Submersible	2.4	0.115	1.085	1.2	2.285	411.3	0	0	411.3	246	731	18	15	10	20	15	60
4	Badalpur	Dighalbak	536	Paharpur GCC R-Digolbag Pry School	636025028	VRB	Submersible	1.8	0	0.9	0.9	1.8	324	0	0	324	298	604	14	15	10	20	12	57
5	Kakailseo	Mahtabpur	1063	Anondopur Ferryghat - Matabpur Road	636025003	VRB	Submersible	7	0	3.5	3.5	7	1260	35	315	1575	152	1481	53	18	10	15	12	55
6	Badalpur	Shanjoy Pur	391	Nikli - Bosanto Kumar high school	636025045	VRB	Submersible	2.4	0	1.2	1.2	2.4	432	0	0	432	163	1106	18	15	10	15	12	52
7	Shibpasha	Nayahati	707	Hokra Road-Paddy Land Road	636025009	VRB	Submersible	5	0	2.5	2.5	5	900	0	0	900	141	1273	38	15	10	15	12	52
8	Kakailseo	Alipur	457	Mahatabpur-Bonpuri Road	636025049	VRB	Submersible	4.2	0	2.1	2.1	4.2	756	0	0	756	109	1654	32	15	10	12	12	49
9	Shibpasha	Razbari	365	Shibpasa-Bong 4no Word Graviya Road	636025055	VRB	Submersible	3.5	0	1.75	1.75	3.5	630	0	0	630	104	1724	26	15	10	12	12	49

\*\*\* Cost for Roads & Structures; (All Weather Rd= 120 lac/km, Submersible= 180 lac/km, Structure= 9 lac/m)  
 \*\*\* Weightage Values; (Population = 30, Travel Time= 20, Cost per1000 people= 25, Road Hierarchy= 25)