



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”

Bhuringamari, Kurigram



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GLOSSARY

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

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

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 **Bhurungamari** Upazila of **Kurigram** District.

1 DESCRIPTION OF THE UPAZILA

1.1 GEOGRAPHY AND DEMOGRAPHY

The geographical area of Bhurungamari Upazila is 236.26 square kilometers and has 10 Unions, 70 mouzas and 126 villages. The Upazila is 42 km away from District headquarters of Kurigram. There are 4 rivers flowing over the Upazila- Dudh Kumar, Ful Kumar, Godadhar & Kaljani. The total population of the Upazila is 2,31,538 of which 1,13,502 are male and 1,18,036 female, total number of households are 57,005 and average household size is 4.06 with a population density of 980 (*as per population census 2011*).

1.2 EDUCATION FEATURES

According to the information of the relevant local government offices there are 62 government, 46 registered, 4 non-government primary schools, 58 NGO schools & 13 kindergarten schools. On the other hand, Bhurungamari has 32 non-government high schools with a school & college that operates jointly, 4 privet colleges, and 46 madrashas. The literacy rate for the Upazila is 39.6% as per BBS 2011.

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 Bhurungamari 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 Bhurungamari is 326.31 km and out of which, 163.39 km paved and 162.92 km earthen.

1.4 AGRICULTURE, FOOD PRODUCTION AND FISHERIES

Agriculture has a major importance for the economy of the people of Bhurungamari. There are 48,080 acres of arable land in the Upazila. In the fiscal year 2010-11 the Rice production was 96, 27797 & 51020 metric tons for Aus, Aman & Boro seasons respectively. The Upazila also produced 3825 metric tons of Wheat, 3826 metric tons of Jute, 5247 metric tons of Potato and 189 metric tons of Oilseed in the same fiscal year 2010-11. A notable quantity of fruits and vegetables are also produced here in this Upazila.

According to the BBS (2010-11) data Bhurungamari has 783 Acre of pond, dhighee & wetlands that produced 627 metric tons of fishes. There also exists only 2 poultry & 19 dairy farms.

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 30 hatbazar and 4 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-I](#).

2 LOCATION OF THE UPAZILA

Bhurungamari Upazila is located in the Northern Bangladesh under Kurigram District in Rangpur Division. The location has been shown in the map. It is surrounded by West Bengal (India) and Assam (India) on the north, Nageshwari Upazila on the south, Assam on the east, West Bengal on the west. The Upazila is located within the ***Brahmaputra River Basin***. Brahmaputra is a trans-boundary river which flows through Tibet (mountains), India (Arunachal Pradesh & Assam), and Bangladesh and is the 9th largest river in the world by discharge. The river is prone to catastrophic flooding in the summer & monsoon (March – October) when the Himalayan snow melts along with the heavy rainfall occurring in Meghalaya, India. During monsoon, the Brahmaputra discharges a large volume of water and at the same time brings in huge amounts of sediments. The entire lower Brahmaputra (*i.e., the part inside Bangladesh, known as Jamuna River*) consists of a vast network of channels, that are dry in the pre & post monsoon but are submerged during the monsoon. It has numerous islands due to the heavy sedimentation that are locally known as chars and the ‘Bhurungamari’ is such a char Upazila. The huge amount of water Jamuna River carries during monsoon, overflows its carrying capacity and inundates the northern part of the country within its basin as well as the Upazila. The effects of flooding can be devastating and cause significant damage to crops and households, serious bank erosion with consequent loss of structures, land, and loss of many lives and livestock.

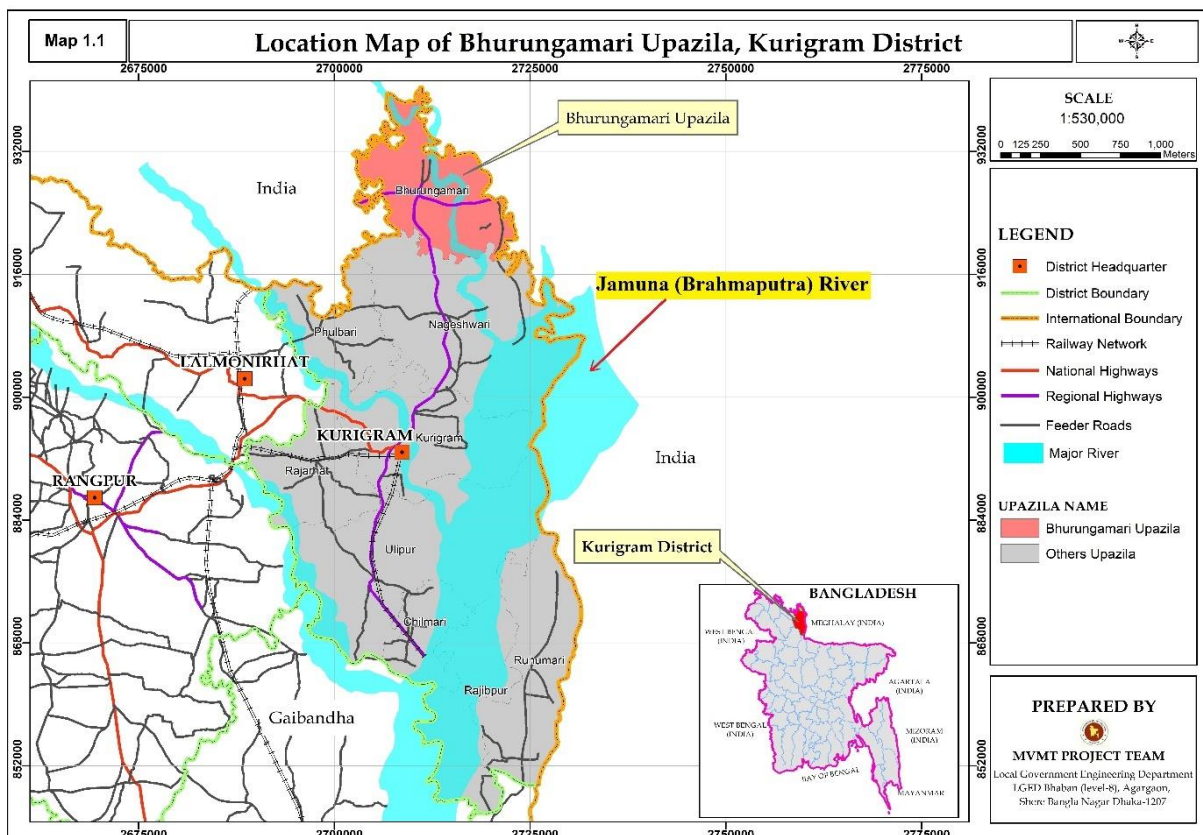


Figure 1: Upazila Location Map.

3 APPROACH & METHODOLOGY

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.

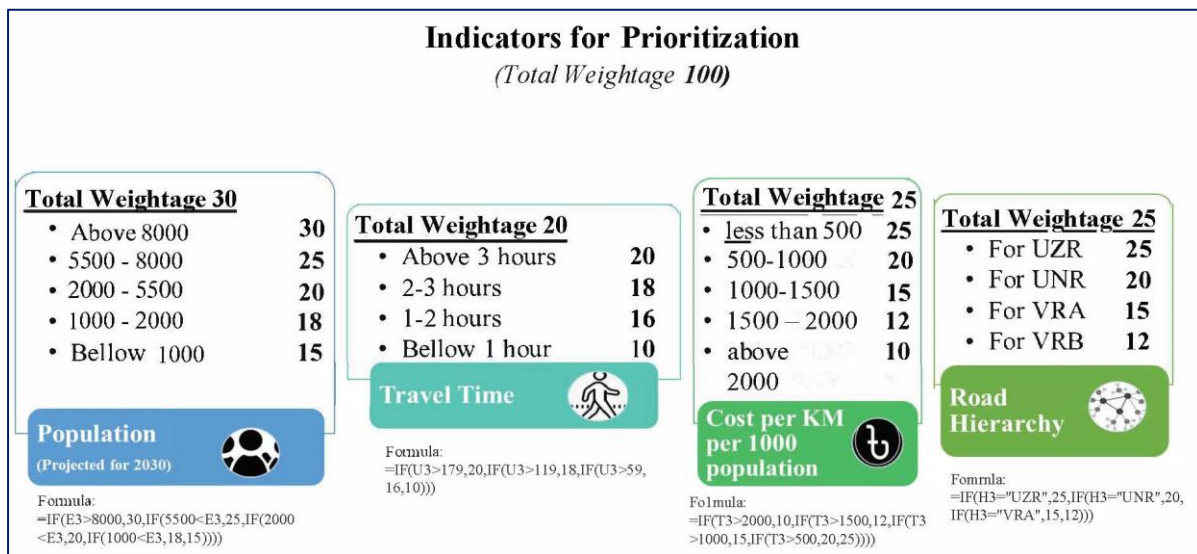


Figure 2: Prioritization indicators & their weightage values

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 RURAL ROAD CONNECTIVITY TO THE VILLAGES

4.1 SUMMARY OF THE VILLAGE CONNECTIVITY

Bhurungamari is a char Upazila. The rural road communication is quite poor here. Out of 143 villages, 50 are disconnected from the developed paved road network that brings huge sufferings for the people of those villages. The total rural road network of Bhurungamari is 326.31 km and out of which, 163.39 km paved and 162.92 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	Andhari Jhar	14	6	8
2	Bangasonahat	17	15	2
3	Bhurungamari	22	18	4
4	Boldia	26	21	5
5	Char Bhurungamari	15	9	6
6	Joymanirhat	7	1	6
7	Paiker Chhara	12	9	3
8	Pathardubi	8	3	5
9	Shilkhuri	9	3	6
10	Tilai	13	8	5
Total =		143	93	50

4.2 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)
Andhari Jhar (14)	1	Andhari Jhan	3886	Bamunerkuti	1375
	2	Bir Dhaurar Kuthi	2879	Birbaruitari	2505
	3	Char Baruitari	2774	Hatirkuti	2062
	4	Char Dhaurar Kuthi	4090	Heldanga	1526
	5	Khamar Andhari Bari	4889	Khamarandhari Jhar	3558
	6	Khamarandhari Jhar Koti	2188	Mondol para	1719
	7			Munshipara	2521
	8			Sarak Kata	2292
	Sub Total=		20706		17558

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
Bangasonahat (17)	1	Charaya Para	2012	Assam Para	1078
	2	Daskhin Bharater Chhar	3511	Uttar Bharater Chhar	2501
	3	Daskhin Mahiganj	475		
	4	Dhakaia Para	1368		
	5	Fakir Para	1533		
	6	Gaybari	1483		
	7	Kani Para Ganarkuthi	465		
	8	Madhya Ganarkuthi	993		
	9	Madhya Mahiganj	1016		
	10	Madnya Bharater Chhara	1755		
	11	Paschim Ganarkuthi	447		
	12	Paschim Para	1139		
	13	Purba Ganarkuthi	763		
	14	Uttar Ganarkuthi	905		
	15	Uttar Mahiganj	1764		
			Sub Total=	19629	
Bhurungamari (22)	1	Bagbhandar	4861	Char Naleya	1990
	2	Bashni Para	1509	Daskin Paschim Bhothat	1927
	3	Bepari Para	2105	Madhya Bhothat	1971
	4	Daskin Dewan Khamar	2049	Purba Bhothat	1936
	5	Daskin Kamat Angaria	6663		
	6	Daskin Manik Kazi	1580		
	7	Daskinpara	1823		
	8	Gopalpur	0		
	9	Jhuki	2131		
	10	Kayem Naleya	1724		
	11	Khamar Ishawrbarua	1735		
	12	Khamar Patranabis	1597		
	13	Paschim Dewan Khamar	4733		
	14	Purba Dewan Khamar	1889		
	15	Sonatali	3372		
	16	Uttar Dewan Khamar	4698		
	17	Uttar Manik Kazi	1094		
	18	Uttarpara Angaria	619		
		Sub Total=	44182		7824
Baldia (26)	1	Angalari Kuti	2444	Bepari Para	438
	2	Balabari	858	Daskin Baldia	1452
	3	Baldia	795	Harimanerpar	332
	4	Bramhatar	904	Satipur	1431
	5	Char Baldia	923	Uttar Baldia	912

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)	
	6	Char Satipur	3103			
	7	Chatim	1261			
	8	Islambad	1088			
	9	Khal Isakuri	2224			
	10	Khamar Para	2466			
	11	Khan Para	425			
	12	Khochabari	392			
	13	Komartari	585			
	14	Maangalarkuti	970			
	15	Marakhana	1085			
	16	Nayar Chhar	580			
	17	Parshuramerkuti	550			
	18	Porabhita	708			
	19	Sardarturi	1140			
	20	Sarkar Para	1029			
	21	Shahi Bazar	508			
			Sub Total=	24038		4565
	Char Bhurungamari (15)	1	Bahalkuri	1169	Araji Paikdanga	2292
		2	Beparitari	2093	Baniatari	1704
		3	Charuatari	1619	Bhawalerkuri	2292
		4	Chatra Para	655	Char Bhurungamari Madhya	2004
5		Darga Para	611	Hocharbala	1051	
6		Islamabad	1019	Islampur	1719	
7		Musullitari	495			
8		Purba Para	1341			
9		Sishib Bari	912			
			Sub Total=	9914		11062
Joymanirhat (7)	1	Alkumari Bhati	1369	Bara Khatamari	5326	
	2			Beldaha	3208	
	3			Chhuta khatamari	7602	
	4			Dairerpar	2292	
	5			Khasirvita	2062	
	6			Singjhar	4746	
			Sub Total=	1369		25236
Paiker Chhara (12)	1	Ariarkoti	1681	Beldaha	7029	
	2	Charar Purbapar	1593	Gachhidanga	4982	
	3	Chatra Para	3075	Paiker Chhara	2521	
	4	Diskhinpara	1260			
	5	Jula Para	2385			
	6	Madhyapara	539			
	7	Paikdanga	0			
	8	Pateshwari Para	2017			
	9	Uttarpara	1587			
			Sub Total=	14137		14532

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
Pathardubi (8)	1	Diadanga	2310	Daskhin Banshjani	5100
	2	Maidan	4886	Pathardubi	9498
	3	Taluk Masaldanga	893	Phulkumar	1798
	4			Sahebganj	2406
	5			Seuti kursa	2406
	Sub Total=			8089	
Shilkhuri (9)	1	Daskhin Dhaldanga Char	1374	Daskhin Dhaldanga Bir	5177
	2	Paschim Uttar Dhaldanga	2696	Katgir	2712
	3	Purba Uttar Dhaldanga	1918	Saljhor	2326
	4			Uttar Chhat Gopalpur	3550
	5			Uttar Tilai Bir	4042
	6			Uttar Tilai Char	1632
Sub Total=			5988		19439
Tilai (13)	1	Daskhin Chhat Gopalpur	4027	Bhotegati	1105
	2	Khochabari	936	Dhakaiya para	1719
	3	Madhyapara	585	Iswar Boruwa	2292
	4	Nalea	467	Moshaldanga	2062
	5	Naya Para	559	Tilai Sorola	2864
	6	Paschim Chhat Gopalpur	7444		
	7	Purbapara	1186		
	8	Uttarpara	2149		
	Sub Total=			17353	

4.3 MAP OF HARD-TO-REACH VILLAGES & PROPOSED ROADS

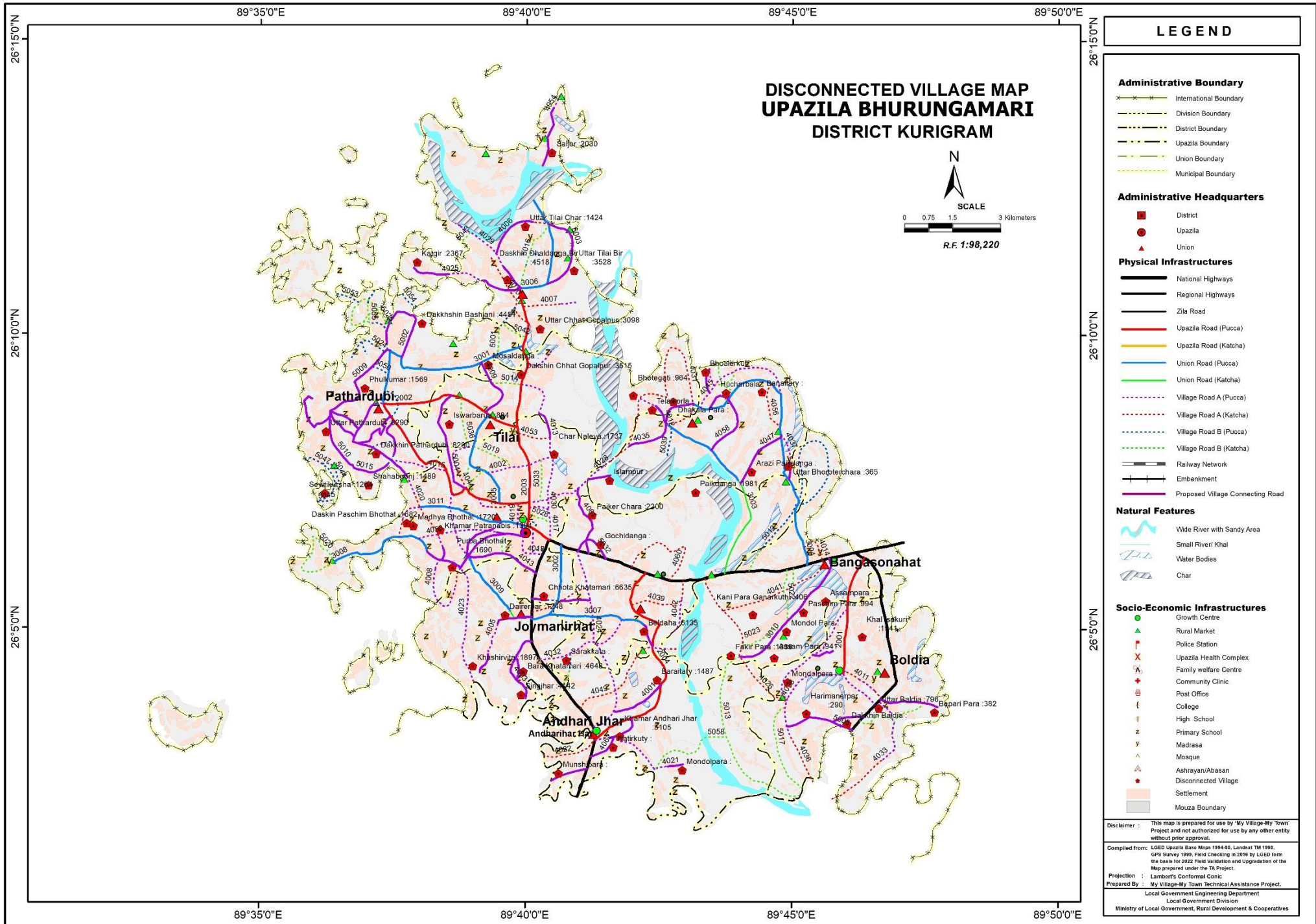


Figure 3: Upazila Map

5 CONSULTATION MEETING & FIELD VISIT

5.1 UPAZILA LEVEL MEETING

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

5.2 VISIT TO CASE STUDY UNION

The consultant visited “Bhurungamari - Shahebgonj Road” having the Road ID: 149065015 in Pathardubi, the case study Union. 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.

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.



Figure 4: Condition of the visited road alignment at Case Study Union



Figure 5: Condition of the visited road alignment at Case Study Union



Figure 6: Condition of the visited road alignment at Case Study Union



Figure 7: Condition of the visited road alignment at Case Study Union



Figure 8: Condition of the visited road alignment at Case Study Union



Figure 9: Condition of the visited road alignment at Case Study Union

The length of this road is 2.5 km that is 0.37 km paved and rest of the 2.13 earthen. The road connects three major villages of the Union named Bagbhandar, Pathordubi & Sahebganj, having the total population of approx. 6500. 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 muddy and unusable for any sort of a vehicle. There exists, two masjid, two Primary schools along the alignment of this road. Two bridges (Fulkumar river bridge & Badoler Dhara bridge) are required along the alignment of this road on the Fulkumar river.

6 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:3*) showing prioritized roads and Hard-to-Reach Villages. The proposed riverine & road connectivity by the UE office have been discussed in this section

6.1 PROPOSED RIVERINE ROUTES

Bhurungamari Upazila is located within *Brahmaputra River Basin*. There are 4 (four) rivers flowing over the Upazila known as Dudh Kumar, Ful Kumar, Godadhar & Kaljani rivers. According to the UE, Bhurungamari, there are 7 riverine routes that can be used for all along the year as multi-modal transport system. Many people use these riverine routes specially for carrying their goods. At monsoon large area of the Upazila gets inundated due to the overflow of Brahmaputra River. Engine boats are readily available to transport community & commodity.

The name of the riverine routes & the associated streams with types of water vehicle 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	Andharijhar Bazar - Char Dhourarkuti	Dudh Kumar	Perennial	Small Boat & Engine Boat	Yes
2	Sonahat RHD Road Near Girls GPS - Chowdhuri Bazar Via Asham Para Road	Sonahat Chora	Perennial	Small Boat & Engine Boat	Yes
3	Chowdhurir Hat - Chaitalir Mor FCD	Sonahat Chora	Perennial	Small Boat & Engine Boat	Yes
4	RHD Sonahat Steel Bridge - Paikdanga Village	Paiker Chora	Perennial	Small Boat & Engine Boat	Yes
5	RHD - Kurar Par via Pond & H/O Siraj driver	Paiker Chora	Perennial	Small Boat & Engine Boat	Yes
6	Shilkuri UP (Dhaldanga Bazar) - Kaljani Riverghat (Uttar Dhaldanga Bazar)	Kaljani	Perennial	Small Boat & Engine Boat	Yes
7	Saljore Ghat- Saljore GPS via godador Bazar	Godador	Perennial	Small Boat & Engine Boat	Yes

6.2 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, 21 (twenty-one) bridges are needed to fulfil the purpose.

326.31 km and out of which, km paved and km earthen.

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)
326.31	163.39	162.92	123.5

6.2.1 PROPOSED ALL WEATHER ROUTES:

There are 59 all weather 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 all weather roads in the Upazila

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
1	Joymonirhat UP (R&H)-Deperhat	149063007	All Weather	0.7
2	Bhurungamari UP-Manik kazir bazar-Mukti Joddah hat road.	149063008	All Weather	4.43
3	Bangosonahat UP-Chowdhuri Hat Road (Shamsul Haque Chowdhuri road)	149063010	All Weather	0.8
4	Andhari Pacca Rd-Baraitary Mosque	149064001	All Weather	0.55
5	R&H-Trimohini Shingjhar Rd	149064003	All Weather	1
6	Joymonirhat Bazer-Diparhat Bridge	149064004	All Weather	2.83
7	Joymonirhat-Trimohonia	149064005	All Weather	1.95
8	Shilkhuri GPS-Uttar Telai Madrasha.	149064006	All Weather	1.95
9	Dhamerhat-Taluk Moshaldanga	149064009	All Weather	0.59
10	Char Bhurungamari-Dakshin Telai Sorola	149064012	All Weather	1.9
11	Char Bhurungamari-Dakshin Telai Sorola	149064012	All Weather	1.9
12	Char Bhurungamari-Dakshin Telai Sorola	149064012	All Weather	5
13	Nalaya-Hamidakhanam High School more	149064013	All Weather	1.61

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
14	Thanaghat-Shahebganj Border Road	149064020	All Weather	0.5
15	Andharijhar Bazar-Char Dhourarkut	149064021	All Weather	0.59
16	Andharijhar Bazer-Fulkumarghat	149064022	All Weather	1.51
17	Dhaldanga Bazer(Mondolpara mosque) -Katgir Border	149064025	All Weather	3.25
18	Dhaldanga bazar-Shilkhuri Kheyaghat	149064029	All Weather	2.15
19	Nutan hat-Char Bhurungamari Kheya ghat	149064035	All Weather	3.25
20	Moynatala Bazar-Char Bhurungamari Road	149064037	All Weather	0.43
21	Bagbhandar-Purba Vothat road.	149064040	All Weather	0.5
22	College more-Manik Kajibazar	149064043	All Weather	1.88
23	Babur hat-Nurul Dacter's house via Trimohoni Eidgah	149064047	All Weather	2.5
24	Lal Bridge-Trimohoni via B.Khatamari Reg. NGPS	149064048	All Weather	2.5
25	Sonatali Pukur par to Vot hat bazar via sore beparir ghat	149064050	All Weather	0.9
26	Andharijhar R&H Road at Shimultola Hatirkuti more-Munsipara	149064052	All Weather	0.35
27	Saljore ghat-Saljore GPS via godador Bazar	149064054	Submersible	3.5
28	Andharijhar Fedaration centre (H/O majom Compani To Mogolkata Bazara	149064055	All Weather	2.75
29	Babur hat (Near H/O Chan mia) to Huchare bala Community clinic	149064056	All Weather	0.76
30	Baldia FCD Embankment	149064057	All Weather	3.5
31	Char-Bhurungamari FCD Embankment	149064058	All Weather	8.5
32	R&H road Kurar par - Islampur Akhrmore	149064061	All Weather	2.04
33	R&H road Bagbasher dola(H/O Basi Driver)-Andharijher clinic para road	149064062	All Weather	1.82
34	Dhaidanga Rd-India Border	149065002	All Weather	2.25
35	CHAR Gopalpur School-Dhaldanga Ghat	149065003	All Weather	4

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
36	Talukmosaldanga-Isvar Babarua	149065004	All Weather	3.5
37	Choto Khatamari pacca Rd-Pailler Chara U.P. Border	149065005	All Weather	1.06
38	Baldia Madrasha-India Border Keder	149065006	All Weather	4.75
39	Subalpar-Kader H/O Osman	149065007	All Weather	1.14
40	CHAR Baldia-Subalpar	149065008	All Weather	3.5
41	dhabdhabirhat-Maidam khni Bari	149065009	All Weather	2.15
42	Pathordubi Pry School-Akber Master,s House	149065010	All Weather	2
43	Telal Ghat-Nayerhat	149065011	All Weather	3.25
44	H/O Johauddin-Helodanga WDB	149065013	All Weather	1.7
45	Bhurungamari-Shahebgonj	149065015	All Weather	2.5
46	Bodia-Nageswari Border	149065017	All Weather	1.7
47	Chowdhurir hat-Chaitalir mor FCD	149065022	All Weather	1.3
48	Dhaldanga BOP link	149065026	All Weather	0.2
49	Sarak Kata R&H Rd to Paikerchara Rd	149065031	All Weather	0.65
50	RHD- kurar par via pond & H/O Siraj driver	149065032	All Weather	2.6
51	Borokhatamari mondolpara GPS- Shingjhsr GPS (End point H/O Musa)	149065035	All Weather	1.75
52	West Sat Gopalpur madrasha more- Eakabbar more	149065036	All Weather	1.9
53	Pucca road (start from H/O sabuj) to BGB camp via H/O mojammel	149065038	All Weather	1
54	Islampur more (H/O Hasen member) - Noor Islam more road.	149065040	All Weather	2.92
55	Seutikursa Citmohol at Anower more - Pathordubi village road.	149065044	All Weather	0.59
56	Andharijhar gorostan more- Dakhin char Baruitari amtola more road	149065058	All Weather	1.3
57	Uttar Pathordubi Chadni Bazar- Khorardara H/O Ayub Ali via Uttar Pathordubi GPS	No ID	All Weather	3.36
58	Thanaghat Narikeltola More - Dhebdebir Bazar via Dakkhin Pathordubi GPS	No ID	All Weather	3.09
59	Panditpara Nurul Ulum Balika Nurani & Hafijia Madrasha- Khokonor Dokan	No ID	All Weather	0.908

6.2.2 PROPOSED SUBMERSIBLE ROUTES:

There are no submersible roads proposed to connect the HTRV within the Upazila.

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

There are only 3 roads proposed to connect the HTRV within the Upazila that have no ID yet. The road name, ID and the length of the unpaved part are as bellow;

Table 6: Proposed roads for Hard-to-Reach Villages having No ID

Sl. No	Road Name	Road ID	Unpaved length (Km)
1	Uttar Pathordubi Chadni Bazar- Khorardara H/O Ayub Ali via Uttar Pathordubi GPS	No ID	3.36
2	Thanaghat Narikeltola More - Dhebdebir Bazar via Dakkhin Pathordubi GPS	No ID	3.09
3	Panditpara Nurul Ulum Balika Nurani & Hafijia Madrasha- Khokoner Dokan	No ID	0.908

6.2.4 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 7: Considered weightage values for the prioritization

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

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.

7 CONCLUSION & RECOMMENDATIONS

- Bhurungamari Upazila is located within the *Brahmaputra River Basin* that has plenty of chars, topographically low land in the dry season but submerged during monsoon. The Upazila has enormous agricultural potential due to highly fertile soil gains from heavy sedimentation. Waterway is the dominant mood of transport throughout the year. There exist 4 (four) rivers that dominates the ecosystem & transport system of the Upazila. Generally Small Boat, Engine Boat are used to transport community & commodity.
- The Upazila faces extensive flood and river erosion during monsoon, rural roads and structures are highly vulnerable in this Upazila.
- The Upazila has a total number of 50 Hard-to-Reach Villages. To develop rural connectivity, there are proposals only for all weather 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 flood. Due to climate change, the vulnerability is getting intense.
- Case by case design of roads in this Upazila considering different aspects such as exposure to flood, erosion etc. is highly recommended. A special study regarding the road and structure design of the Upazila Bhurungamari in Kurigram District is highly recommended.

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		
Andharijhar	Andharijhar hat	GC	Yes	General Market	Wholesale	2	24	0.12	27	0.39	0.51	0.00	356500	325000
Bangasonahat	Bongosona hat	GC	Yes	General Market	Wholesale	2	23	0.68	23	1.03	1.71	0.00	199999	161500
Bangasonahat	Chowdhuri Hat	HB	Yes	General Market	Wholesale	2	30	0.30	30	0.59	0.89	0.00	6000	1805
Bangasonahat	Moynatala Hat	HB	No											
Bhurungamari	Bhurungamari hat	GC	Yes	General Market	Both	2	94	2.30	94	3.48	5.78	0.00	3077777 7	1120000 0
Bhurungamari	Bagbhandar bazar	HB	No											
Bhurungamari	Mukti Joddha Hat	HB	No											
Bhurungamari	Yousuf Bepari Hat	HB	No											
Boldia	Shahi bazar hat	GC	Yes	General Market	Wholesale	2	8	0.27	8	0.60	0.87	0.00	389000	451111
Boldia	Kashim Bazar	HB	Yes	General Market	Wholesale	2	15	0.15	20	0.34	0.59	0.00	82001	85101
Boldia	Boldia Hat	HB	Yes	General Market	Wholesale	2	23	0.22	23	0.44	0.66	0.00	32800	30000
Charbhurungamari	Notun Hat	HB	Yes	General Market	Wholesale	2	21	0.11	21	0.41	0.51	0.00	94000	106500
Charbhurungamari	Babur Hat	HB	Yes	General Market	Wholesale	2	20	0.10	20	0.40	0.50	0.00	39000	21000
Joymonir Hat	Joy monir Hat	HB	Yes	General Market	Wholesale	2	42	0.40	42	0.79	1.50	0.00	351999	150000
Paikerchhara	Bridger Par Hat	HB	Yes	General Market	Wholesale	2	8	0.72	149	0.92	2.01	0.00	301000	189500
Paikerchhara	Pateshwari Hat	HB	Yes	General Market	Wholesale	2	38	0.57	119	0.63	1.50	0.00	75500	66500
Paikerchhara	Deeper Hat	HB	Yes	General Market	Wholesale	2	47	0.22	47	0.03	0.60	0.00	22101	30505

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		
Pathardubi	Thana Ghat Hat	HB	Yes	General Market	Wholesale	2	28	0.34	28	0.20	1.86	0.00	768045	72103
Pathardubi	Dhonirhat	HB	Yes	General Market	Wholesale	2	40	0.60	55	0.60	1.22	0.00	15509	10509
Pathardubi	Depdebi Hat	HB	Yes	General Market	Wholesale	2	0	0.24	15	0.10	0.34	0.00	6000	20460
Pathardubi	Dakkhin Bashjani Hat	HB	No											
Pathardubi	Moidam Hat	HB	No											
Shilkhuri	Pagla Hat	HB	Yes	General Market	Wholesale	2	60	0.29	60	0.76	1.50	0.00	251000	240200
Shilkhuri	Dhal Dhanga Hat	HB	Yes	General Market	Wholesale	2	18	0.08	18	0.16	0.24	0.00	23200	12700
Shilkhuri	Debir Hat	HB	Yes	General Market	Wholesale	2	0	0.20	0	0.00	0.00		500	400
Shilkhuri	Horir Hat	HB	No											
Shilkhuri	Madrsha Hat	HB	No											
Shilkhuri	Shal Jhour Hat	HB	No											
Shilkhuri	Uttar Dhaldanga	HB	No											
Tilai	Dhamer Hat	HB	Yes	General Market	Wholesale	2	25	0.25	25	0.90	0.34	0.00	65800	63500
Tilai	Anondo Bazar	HB	No											
	Cutgir Hat	HB	No											
	Sahashi Bazar	HB	No											
	Shilkhuri Hat	HB	No											

ANNEXURE - 2

PRIORITY LIST FOR ROAD DEVELOPMENT

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	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Paiker Chhara	Beldaha	7029	Joymonirhat UP (R&H)-Deperhat	149063007	UNR	All Weather	3.7	3		0.7	0.7	84		0	84	10042	12	11	25	10	25	20	80
2	Bhurungamari	Purba Bhothat	1936	Bhurungamari UP-Manik kazir bazar-Mukti Joddah hat road.	149063008	UNR	All Weather	8.33	3.9		4.43	4.43	531.6	10	90	621.6	437	321	66	18	16	25	20	79
3	Tilai, Char Bhurungamari	Tilai Sorola, Char Bhurungamari, Bhoteghati	5973	Char Bhurungamari-Dakshin Telai Sorola	149064012	VRA	All Weather	3.5	1.6		1.9	1.9	228		0	228	3144	38	29	25	10	25	15	75
4	Shilkhuri	Uttar Tilai	4042	CHAR Gopalpur School-Dhaldanga Ghat	149065003	VRB	All Weather	4			4	4	480		0	480	1011	119	60	20	16	25	12	73
5	Joymanirhat	Chhuta khatamari	7602	Choto Khatamari pacca Rd-Pailler Chara U.P. Border	149065005	VRB	All Weather	1.4		0.34	1.06	1.4	168		0	168	5430	22	16	25	10	25	12	72
6	Bangasonahat	Uttar Bhoreterchara	2501	Moynatala Bazar-Char Bhurungamari Road	149064037	VRA	All Weather	2.45	2.02		0.43	0.43	51.6		0	51.6	5817	21	6	20	10	25	15	70
7	Joymanirhat	Singjhar	4746	R&H-Trimohini Shingjhar Rd	149064003	VRA	All Weather	3.3	2.3		1	1	120		0	120	4746	25	15	20	10	25	15	70
8	Andhari Jhar	Baraitary	2505	Andhari Pacca Rd-Baraitary Mosque	149064001	VRA	All Weather	2.55	2		0.55	0.55	66		0	66	4554	26	8	20	10	25	15	70
9	Pathardubi	Dakshin Pathardubi	4812	Thanaghat-Shahebganj Border Road	149064020	VRA	All Weather	6	5.5		0.5	0.5	60	10	90	150	9624	31	8	20	10	25	15	70
10	Tilai	Moshaldanga	2062	Dhamerhat-Taluk Moshaldanga	149064009	VRA	All Weather	1.59	1		0.59	0.59	70.8		0	70.8	3496	34	9	20	10	25	15	70
11	Andhari Jhar	Munshipara	2521	Andharijhar R&H Road at Shimultola Hatirkuti more-Munshipara	149064052	VRA	All Weather	1.35	1		0.35	0.35	42	10	90	132	7202	52	5	20	10	25	15	70
12	Paiker Chhara	Paiker Chhara	2521	R&H road Kurar par - Islampur Akhmore	149064061	VRA	All Weather	2.04			2.04	2.04	244.8		0	244.8	1236	97	31	20	10	25	15	70
13	Joymanirhat	Dairerpar	2292	Joymonirhat-Trimohonia	149064005	VRA	All Weather	3	1.05		1.95	1.95	234		0	234	1175	102	29	20	10	25	15	70
14	Joymanirhat	Chhuta khatamari	2062	College more-Manik Kajibazar	149064043	VRA	All Weather	2.06	0.18		1.88	1.88	225.6		0	225.6	1097	109	28	20	10	25	15	70
15	Joymanirhat	Beldaha	3208	Joymonirhat Bazer-Diparhat Bridge	149064004	VRA	All Weather	2.83			2.83	2.83	339.6	5	45	384.6	1134	120	42	20	10	25	15	70
16	Andhari Jhar	Khamar Andhari Jhar	4889	Andharijhar Fedaration centre (H/O majom Compani To Mogolkata Bazara	149064055	VRA	All Weather	2.75			2.75	2.75	330	30	270	600	1778	123	41	20	10	25	15	70
17	Char Bhurungamari	Araji Paikdanga	2292	Babur hat-Nurul Dacter's house via Trimohoni Eidgah	149064047	VRA	All Weather	2.5			2.5	2.5	300		0	300	917	131	38	20	10	25	15	70
18	Shilkhuri	Katgir	2712	Dhaldanga Bazer(Mondolpara mosque) -Katgir Border	149064025	VRA	All Weather	4.25	1		3.25	3.25	390		0	390	834	144	49	20	10	25	15	70
19	Joymanirhat	Khasirvita	2062	Lal Bridge-Trimohoni via B.Khatamari Reg. NGPS	149064048	VRA	All Weather	4	1.5		2.5	2.5	300		0	300	825	145	38	20	10	25	15	70
20	Andhari Jhar	Hatirkuti	2062	R&H road Bagbasher dola(H/O Basi Driver)-Andharijhar clinic para road	149064062	VRA	All Weather	1.82			1.82	1.82	218.4	10	90	308.4	1133	150	27	20	10	25	15	70
21	Char Bhurungamari	Baniyatari	1704	Babur hat (Near H/O Chan mia) to Huchare bala Community clinic	149064056	VRA	All Weather	0.76			0.76	0.76	91.2		0	91.2	2242	54	11	18	10	25	15	68
22	Bhurungamari	Madhya Bhothat	1971	Sonatali Pukur par to Vot hat bazarvia sore beparir ghat	149064050	VRA	All Weather	3.5	2.6		0.9	0.9	108		0	108	2190	55	14	18	10	25	15	68
23	Bhurungamari	Dakshin Paschim Bhothat	1927	Bagbhandar-Purba Vothat road.	149064040	VRA	All Weather	1.12		0.62	0.5	1.12	134.4		0	134.4	1721	70	8	18	10	25	15	68
24	Bhurungamari	Char Naleya	1990	Nalaya-Hamidakhanam High School more	149064013	VRA	All Weather	4.75	3.02	0.12	1.61	1.73	207.6		0	207.6	1150	104	24	18	10	25	15	68
25	Shilkhuri	Uttar Tilai Char	1632	Shilkhuri GPS-Uttar Telai Madrasha.	149064006	VRA	All Weather	1.95			1.95	1.95	234		0	234	837	143	29	18	10	25	15	68
26	Shilkhuri	Dakshin Dhaldanga	1374	Dhaldanga bazar-Shilkhuri Kheyaghat	149064029	VRA	All Weather	3.15	1		2.15	2.15	258		0	258	639	188	32	18	10	25	15	68
27	Char Bhurungamari	Islampur	1719	Nutan hat-Char Bhurungamari Kheya ghat	149064035	VRA	All Weather	3.25			3.25	3.25	390		0	390	529	227	49	18	10	25	15	68
28	Andhari Jhar	Helodanga	1526	Andharijhar Bazar-Char Dhourarkut	149064021	VRA	All Weather	4	3.41		0.59	0.59	70.8	45	405	475.8	2587	312	9	18	10	25	15	68
29	Boldia	Dakshin Baldia	1452	Baldia FCD Embankment	149064057	VRA	All Weather	3.5			3.5	3.5	420	20	180	600	415	413	53	18	10	25	15	68
30	Bangasonahat	Assam Para	1078	Bangasonahat UP-Chowdhuri Hat Road (Shamsul Haque Chowdhuri road)	149063010	UNR	All Weather	2.8	2		0.8	0.8	96	60	540	636	1348	590	12	18	10	20	20	68
31	Pathardubi	Seuti kursa	2406	Seutikursa Citmohol at Anower more - Pathardubi village road.	149065044	VRB	All Weather	0.59			0.59	0.59	70.8		0	70.8	4078	29	9	20	10	25	12	67
32	Andhari Jhar	Sarak Kata	2292	Sarak Kata R&H Rd to Paikerchara Rd	149065031	VRB	All Weather	1.3	0.65		0.65	0.65	78		0	78	3525	34	10	20	10	25	12	67

*** 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)

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	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
33	Joymanirhat	Bara Khatamari	5326	Borokhatamari mondolpara GPS-Shingjhsr GPS (End point H/O Musa)	149065035	VRB	All Weather	1.75			1.75	1.75	210		0	210	3043	39	26	20	10	25	12	67
34	Pathardubi	Uttar Pathardubi	4686	Pathardubi Pry School-Akber Master,s House	149065010	VRB	All Weather	2			2	2	240		0	240	2343	51	30	20	10	25	12	67
35	Char Bhurungamari	Bhawalerkuri	2292	Pucca road (start from H/O sabuj) to BGB camp via H/O mojjammel	149065038	VRB	All Weather	1			1	1	120		0	120	2292	52	15	20	10	25	12	67
36	Pathardubi	Daskhin Banshjani	5100	Dhaidanga Rd-India Border	149065002	VRB	All Weather	2.4		0.15	2.25	2.4	288		0	288	2125	56	34	20	10	25	12	67
37	Shilkhuri	Uttar Chhat Gopalpur	3550	West Sat Gopalpur madrasa more-Eakabbar more	149065036	VRB	All Weather	1.9			1.9	1.9	228		0	228	1868	64	29	20	10	25	12	67
38	Paiker Chhara	Gochidanga	4982	RHD- kurar par via pond & H/O Siraj driver	149065032	VRB	All Weather	2.6			2.6	2.6	312	20	180	492	1916	99	39	20	10	25	12	67
39	Pathardubi	Sahebganj	2406	Bhurungamari-Shahebgonj	149065015	VRB	All Weather	2.5			2.5	2.5	300	90	810	1110	962	461	38	20	10	25	12	67
40	Char Bhurungamari	Hucharbala	1051	Char-Bhurungamari FCD Embankment	149064058	VRA	All Weather	8.5			8.5	8.5	1020	20	180	1200	124	1142	128	18	18	15	15	66
41	Shilkhuri	Dhaldanga	1374	Dhaldanga BOP link	149065026	VRB	All Weather	0.2			0.2	0.2	24		0	24	6869	17	3	18	10	25	12	65
42	Andhari Jhar	Mondol para	1719	Andharihar gorostan more- Dakhin char Baruitari amtola more road	149065058	VRB	All Weather	1.3			1.3	1.3	156		0	156	1322	91	20	18	10	25	12	65
43	Pathardubi	Phulkumar	1798	dhabdhabirhat-Maidam khni Bari	149065009	VRB	All Weather	2.15			2.15	2.15	258		0	258	836	144	32	18	10	25	12	65
44	Bangasonahat	Assam Para	1078	Chowdhurir hat-Chaitalir mor FCD	149065022	VRB	All Weather	1.3			1.3	1.3	156		0	156	829	145	20	18	10	25	12	65
45	Char Bhurungamari	Islampur	1719	Islampur more (H/O Hasen member) - Noor Islam more road.	149065040	VRB	All Weather	2.92			2.92	2.92	350.4		0	350.4	589	204	44	18	10	25	12	65
46	Tilai	Iswar Boruwa	1735	Talukmosaldanga-Iswar Babarua	149065004	VRB	All Weather	3.5			3.5	3.5	420		0	420	496	242	53	18	10	25	12	65
47	Tilai	Dhakaiya para	1368	Telal Ghat-Nayerhat	149065011	VRB	All Weather	3.25			3.25	3.25	390		0	390	421	285	49	18	10	25	12	65
48	Shilkhuri	Saljhor	2326	Saljore ghat-Saljore GPS via godador Bazar	149064054	VRA	Submersible	3.5			3.5	3.5	630	81	729	1359	665	584	53	20	10	20	15	65
49	Andhari Jhar	Bamunerkuti	1375	Andharihar Bazer-Fulkumarghat	149064022	VRA	All Weather	1.51			1.51	1.51	181.2	60	540	721.2	911	525	23	18	10	20	15	63
50	Boldia	Uttar Baldia	912	Subalpar-Kader H/O Osman	149065007	VRB	All Weather	1.14			1.14	1.14	136.8		0	136.8	800	150	17	15	10	25	12	62
51	Boldia	Dakkhin Baldia	1452	Bodia-Nageswari Border	149065017	VRB	All Weather	1.7			1.7	1.7	204	81	729	933	854	643	26	18	10	20	12	60
52	Boldia	Satipur	1431	H/O Johauddin-Helodanga WDB	149065013	VRB	All Weather	1.7			1.7	1.7	204	100	900	1104	842	771	26	18	10	20	12	60
53	Boldia	Bepari Para	438	Baldia Madrasa-India Border Keder	149065006	VRB	All Weather	4.75			4.75	4.75	570	40	360	930	92	2125	71	15	16	10	12	53
54	Boldia	Harmanerpar	332	CHAR Baldia-Subalpar	149065008	VRB	All Weather	3.5			3.5	3.5	420	50	450	870	95	2618	53	15	10	10	12	47
55	Pathardubi	Uttar Pathardubi	4686	Uttar Pathordubi Chadni Bazar- Khorardara H/O Ayub Ali via Uttar Pathordubi GPS	No ID	VRB	All Weather	3.36			3.36	3.36	403.2		0	403.2	1395	86	50	20	10	25	12	67
56	Pathardubi	Dakkhin Pathardubi	4812	Thanaghat Nariketola More - Dhebdebir Bazar via Dakkhin Pathordubi GPS	No ID	VRB	All Weather	3.09			3.09	3.09	370.8	81	729	1099.8	1557	229	46	20	10	25	12	67
57	Boldia	Uttar Baldia	912	Panditpara Nurul Ulum Balika Nurani & Hafijia Madrasa- Khokoner Dokan	No ID	VRB	All Weather	0.908			0.908	0.908	108.96		0	108.96	1004	119	14	15	10	25	12	62

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*** Weightage Values; (Population = 30, Travel Time= 20, Cost per1000 people= 25, Road Hierarchy= 25)

