



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”

**Bhangura, Pabna**



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July, 2022



# 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 Rural Road Connectivity to the Villages .....</b>	<b>7</b>
4.1 Summary of the Village Connectivity.....	7
4.2 Villages and their connectivity – Union level.....	7
4.3 Map of Hard-to-Reach Villages & Proposed Roads.....	11
<b>5 Consultation Meeting &amp; Field Visit .....</b>	<b>12</b>
5.1 Upazila Level Meeting .....	12
5.2 Visit to Case Study Union.....	12
<b>6 Data Collection &amp; Analysis .....</b>	<b>14</b>
6.1 Proposed Riverine Routes.....	14
6.2 Proposed Roadway for Hard-to-Reach Villages:.....	15
6.2.1 Proposed All Weather Routes: .....	15
6.2.2 Proposed Submersible Routes:.....	17
6.2.3 Proposed Roads for Hard-to-Reach Villages Having No ID: .....	18
6.2.4 Priority for Road Development .....	19
<b>7 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: Upazila Map .....	11
Figure 4: Upazila level Consultation Meeting.....	12
Figure 5: Condition of the visited road alignment at Case Study Union .....	13

### ***List of Tables***

Table 1: Total villages in the Unions and their connectivity.....	7
Table 2: Union wise connected & Hard-to-Reach Villages and their population .....	7
Table 3: Proposed riverine route of the Upazila.....	14
Table 4: Summary of the rural roads in the Upazila.....	15
Table 5: Proposed all weather roads in the Upazila .....	15
Table 6: Proposed submersible roads in the Upazila .....	17
Table 7: Proposed roads for Hard-to-Reach Villages having No ID.....	19
Table 8: 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 **Bhangura** Upazila of **Pabna** District.



# 1 DESCRIPTION OF THE UPAZILA

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## 1.1 GEOGRAPHY AND DEMOGRAPHY

The geographical area of Bhangura Upazila is 138.36 square kilometers and has 5 Unions, 67 mouzas and 122 villages. The Upazila is 43 km away from the District headquarters of Pabna. There exists 3 major rivers flowing over the Upazila, known as Baral, Gomani & Atrai. The total population of the Upazila is 1,25,000 of which 62,000 are male and 63,000 female, total number of households are 28853 and average household size is 4.30 with a population density of 899 (as per population census 2011).

## 1.2 EDUCATION FEATURES

According to the information of the relevant local government offices there are 44 government primary, 52 registered primary, 17 NGO schools & 6 kindergarten schools. On the other hand, Bhangura has 17 non-government high schools only a school & college that operates jointly with 2 privet colleges and 20 madrashas. The literacy rate for the Upazila is 44% 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 Bhangura 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 Bhangura is 317.59 km and out of which, 154.37 km paved and 163.23 km earthen.

## 1.4 AGRICULTURE, FOOD PRODUCTION AND FISHERIES

Agriculture has a major importance for the economy of the people of Bhangura. There are 32,922 acres of arable land in the Upazila. In the fiscal year 2010-11 the Rice production was 09, 7221 & 24882 metric tons for Aus, Aman & Boro seasons respectively. The Upazila also produced 2317 metric tons of Wheat, 356 metric tons of Jute, 317 metric tons of Sugarcane, 521 metric tons of Potato and 1414 metric tons of Oilseed in the same fiscal year 2010-11. There also exists 265 poultry & 745 dairy farms. The Upazila has a large area within *Chalanbeel*, the largest beel of the country. The total area of beel/ pond/ dighee/ other wetlands is around 4000 acres that produces abundant 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 9 hatbazar and 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-I*.

## 2 LOCATION OF THE UPAZILA

Bhangura Upazila is located in the Northern Bangladesh under Pabna District in Rajshahi Division. The location of the Upazila has been shown in the map. It is surrounded by Tarash, Chatmohar and Ullahpara Upazilas on the north, Faridpur (Pabna) Upazila on the south, Ullahpara and Faridpur Upazilas on the east, Chatmohar Upazila on the west. The Upazila is **Chalanbeel** inhabited depressed area, located in the middle of the **Ganges & Brahmaputra River Basin** inside Bangladesh. Both the **Ganga (Padma) & Brahmaputra (Jamuna)** are trans-boundary rivers. The Ganges River rises in the western Himalayas in the Indian state of Uttarakhand. It flows south and east through the Gangetic plain of North India, receiving the right-bank tributary, the Yamuna, which also rises in the western Indian Himalayas, and several left-bank tributaries from Nepal that account for the bulk of its flow. In West Bengal, India, there exists '**Farakka Barrage**' that controls the flow of the Ganges towards downstream inside Bangladesh and the stream known as the **Padma River**. During monsoon, while the river carries a large amount of water from Himalayan snow melting & heavy rainfall, causes extensive flood along the Ganges River Basin. To minimize the flood effect inside India, all the gates of Farakka Barrage are opened, that causes catastrophic flash flood along the bank due to over flow of the Padma river inside Bangladesh. The river, Brahmaputra is another trans-boundary river which flows through Tibet (mountains), India (Arunachal Pradesh & Assam), and Bangladesh and is the 9<sup>th</sup> 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 in Meghalaya, India. During monsoon, the Brahmaputra discharges a large volume of flood water coming from upstream. The entire lower Brahmaputra (*i.e., the part inside Bangladesh and also known as **Jamuna River***) overflows as the flood water exceeds it's carrying capacity and inundates the depressed areas of northern part of the country 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.

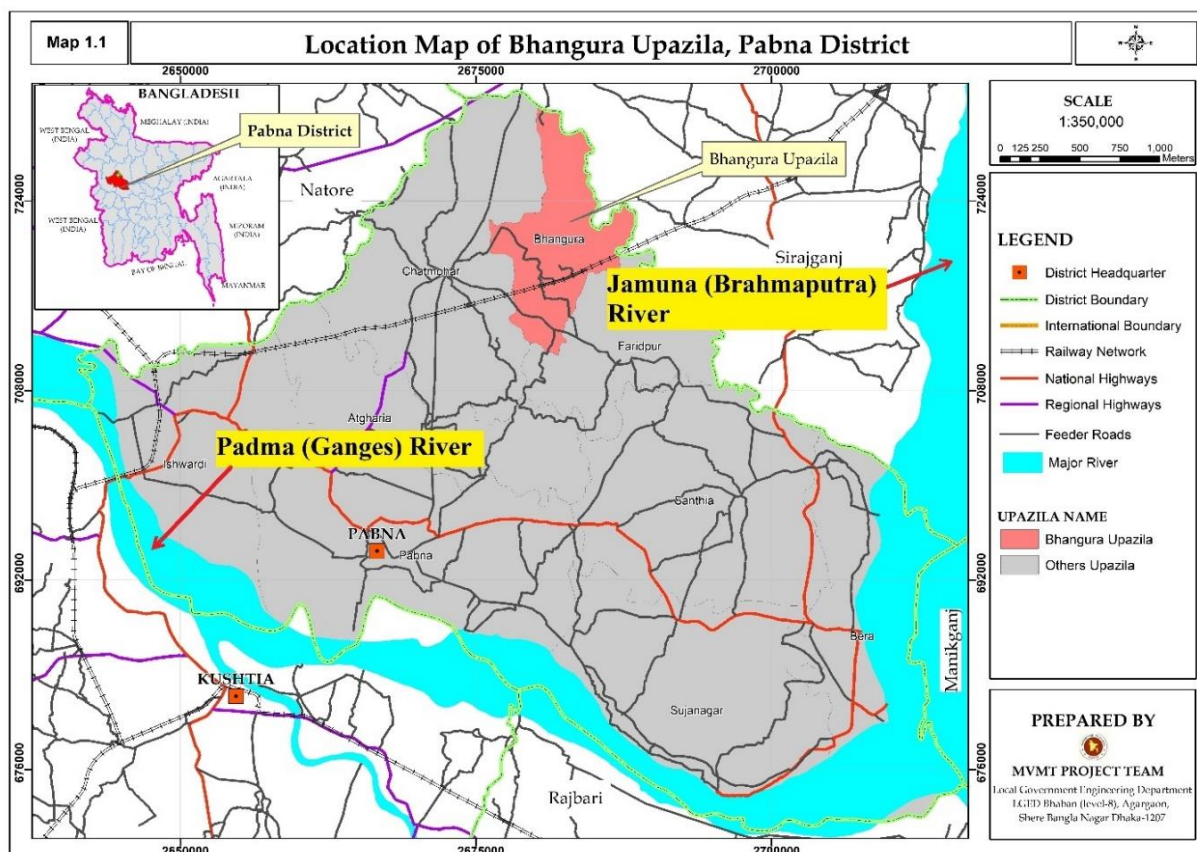


Figure 1: Upazila Location Map.

## 3 APPROACH & METHODOLOGY

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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.

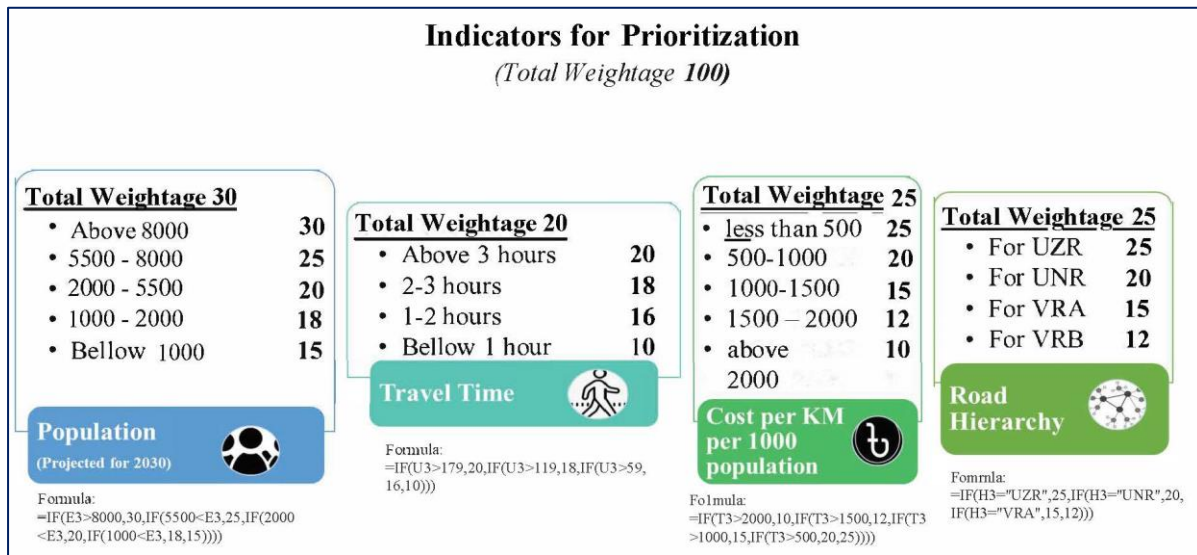


Figure 2: Prioritization indicators & their weightage values

### 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 RURAL ROAD CONNECTIVITY TO THE VILLAGES

### 4.1 SUMMARY OF THE VILLAGE CONNECTIVITY

Bhangura is an Upazila with major Beel areas. The rural road communication is quite poor here. Out of 133 villages, 101 are disconnected from the developed paved road network that brings huge sufferings for the people of those villages. The total rural road network of Bhangura is 317.59 km and out of which, 154.37 km paved and 163.23 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	Ashta Manisha	23	1	22
2	Bhangura	22	11	11
3	Dil Pasar	25	6	19
4	Khan Marich	39	9	30
5	Mondotosh	10	0	10
6	Parbhanguria	14	5	9
<b>Total=</b>		<b>133</b>	<b>32</b>	<b>101</b>

### 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*

Unio	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
Ashta Manisha (23)	1	Hariharpur	687	Ashta Manisha	2758
	2			Banshbaria	972
	3			Baoihat	572
	4			Bara Bisakol	1753
	5			Bhanga Jola	1131
	6			Bishanali	1813
	7			Chhota Bisakol	2049
	8			Denga Para	558
	9			Gadai Rupsi	1095
	10			Jagannathpur	352
	11			Jhabjhabia	1141
	12			Jhoka	247
	13			Kalkati	856
	14			Menda	1020
	15			Mouhat	137

Unio	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
	16			Namkan	731
	17			Nawbaria	2735
	18			Nurnagar	2088
	19			Rupsi	1665
	20			Sahanagar	1575
	21			Shengram	1675
	22			Shingari	871
	<b>Sub Total=</b>		<b>687</b>		
Bhangura (22)	1	Bhadra Para	0	Baguan	618
	2	Bhangura Dakshinpara	608	Bhabanipur	3210
	3	Bhangura Khapara	2282	Char Bhangura	2577
	4	Char Para	729	Chowbaria Takpara	262
	5	Dakshin Singari Kalkati	1303	Khanpara	1565
	6	howbaria Haropara	539	BL Bari	
	7	Jhinaigari Kalkati	1170	Khurda Kaidanga	175
	8	Kalidanga	909	Noabaria	2541
	9	Khalpat	737	Patul	1121
	10	Menda	1140	Puibill	843
	11	Uttar Kalkati	1714	Shantinagar	3632
	<b>Sub Total=</b>		<b>11131</b>		
Dil Pasar (25)	1	Ag Bahar	579	Adabaria	1423
	2	Char Lakshmikol(Chak)	407	Baguan	709
	3	Chowbaria	190	Baonjan	466
	4	Hat Udhunia	987	Belbari	3037
	5	Kuragasa	105	Chaskia	786
	6	Patul	941	Dil Pasar	844
	7			Ershadnagar	2570
	8			Islampur	
	9			Jaintihar	
	10			Katobaria	524
	11			Katobaria	1467
	12			Gopalpur	
	13			Kazitol	1345
	14			Koidanga	
	15			Magura	895
	16			Pachh Bahar	387
	17			Pukurpar	1402
	18			Pachpatul	
	19			Tarapur	186
<b>Sub Total=</b>		<b>3209</b>			<b>16041</b>

Unio	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
Khan Marich (39)	1	Bara Pukuria	960	Baidya Marich	714
	2	Bridha Marich	1713	Chak Digar	1009
	3	Kadripur	1108	Chandpur	606
	4	Kathabaria	431	Das Belay	392
	5	Mahish Bathan	961	Das Marich	558
	6	Miah Para	448	Doharigram	902
	7	Paramanandanpur	736	Dudhbaria	1054
	8	Raghunathpur	336	Ghos Belay	296
	9	Satbaria	838	Gobindapur	1036
	10			Gopalpur	654
	11			Helencha	1239
	12			Jagadishpur	509
	13			Joyrampur	698
	14			Kalianjiri	643
	15			Karatkandi	1408
	16			Kayara	690
	17			Khan Marich	1154
	18			Kotbari	429
	19			Latifgram	563
	20			Madarbaria	1157
	21			Maidan Dighi	1471
	22			Michhu Methair	229
	23			Mundumala	1102
	24			Nandi Marich	697
	25			Pukurpar	1029
	26			Purba Ramnagar	1015
	27			Ramnathpur	571
	28			Siddhi Nagar	905
	29			Sreepur	1257
	30			Sultanpur	1608
		<b>Sub Total=</b>	<b>7531</b>		<b>25595</b>
Mondotosh (10)	1			Boalmari	1146
	2			Chakmaishat	1146
	3			Dhapara	1719
	4			Gojarmara	344
	5			Khalpar	1146
	6			Mallik Chak	1146
	7			Mondotosh	2292
	8			Mondotosh	2292
	9			Sujapara	2292
	10			Uttar Menda	1719
		<b>Sub Total=</b>	<b>0</b>		<b>15242</b>

Unio	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
Parbhauria (14)	1	Hatgram	2796	Bheramara	2804
	2	Kalikadha	1137	Billpara	278
	3	Kashipur	1233	Cakkar para	1020
	4	Par Bhangura	1421	Char Para	912
	5	Taltalia Para	579	Madhurgati	272
	6			Patali Para	2408
	7			Patharghata	1358
	8			Rangalia	2856
	9			Taltola	576
		<b>Sub Total=</b>		<b>7166</b>	

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

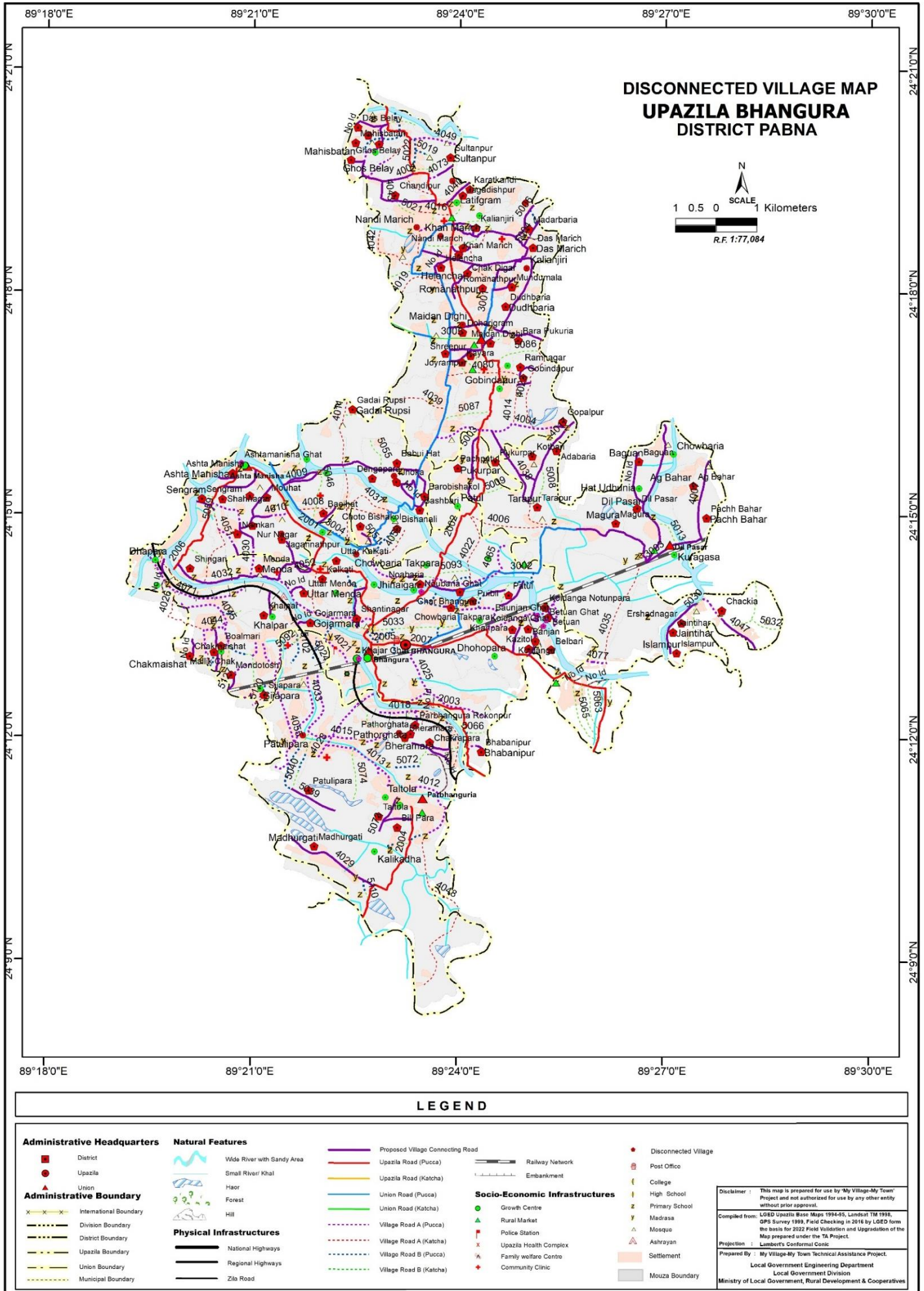


Figure 3: Upazila Map

## 5 CONSULTATION MEETING & FIELD VISIT

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### 5.1 UPAZILA LEVEL MEETING

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



*Figure 4: 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.

### 5.2 VISIT TO CASE STUDY UNION

The team visited ‘Dilpasra’, the case study Union in Bhangura Upazila, through “Patul Village Road” having the Road ID: 176195003. 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 5: Condition of the visited road alignment at Case Study Union*

The length of this submersible road is 2.43km, that is totally earthen. The road connects 2 major villages of the Union named Pukurpar and Pachpatul 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 fully inundated. There exists, two madrasa, one Primary School and a community clinic.

## 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

Bhangura Upazila is *Chalanbeel* inhabited depressed area, located between *Ganges & Brahmaputra River Basin*. There are 6 (six) major rivers that dominate the ecosystem & transport system of the Upazila. That are Bara Atrai, Soto Atrai, Nagar, Barnoi, Nandakuja & Gurr rivers. According to the Ue office, Bhangura, there exists 7 (seven) riverine routes that can be used as multi-modal transport system. Generally Small Boat, Engine Boat, Trawler & Cargo ships are used mostly April – August. At monsoon large area of the Upazila gets inundated due to being a depressed area i.e., beel area. During this part of the year waterways becomes the only mode of transport in the submerged areas for transporting community & commodity.

The name of the riverine route & the associated stream with types of water vehicle are as follows;

*Table 3: Proposed riverine route 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	Upazila H/Q – Nowbria – Char Bhangura, Betaun – Bawanjanpara Ershadnagar – Bhangura – Saratnagar – Bhabanipur – Bheramara – Jogatola - Noor Nagor – Manda	Gomani river	Intermittent (Apr - Aug)	Small Boat, Engine Boat Trawler & Cargo	Yes
2	Shatbaria – Koyra – Patul – Chtobisakol – Dilpashar	Chalan beel	Intermittent (Jun - Aug)	Small Boat, Engine Boat & Trawler	Yes
3	Upazila H/Q – Bhangura – Shartnagar – Bhabanipur – Bheramara Jogatola - Noor Nagar – Manda	Boral river	Intermittent (Apr - Aug)	Small Boat, Engine Boat Trawler & Cargo	Yes
4	Chachika – Laxmikole – Boro Magura - Chto Magura - Betaun	Chachkia Khal	Intermittent (Apr - Aug)	Small Boat, Engine Boat & Trawler	Yes



Sl. No	Name of the Riverine Route	Name of the Stream	Type of the Stream	Types of Water Vehicle	Need of excavation
5	Hat Udhunia -Dilpashar -Chachkia - Boro Magura - Chto Magura	Hat Udhunia Dodha	Intermittent (Apr - Aug)	Small Boat, Engine Boat & Trawler	Yes
6	Khalpart - Gozermare – Boalmari - Noor Nagar - Manda	Khalpart Khal (Gomani river)	Intermittent (Apr - Aug)	Small Boat, Engine Boat & Trawler.	Yes
7	Rupshi - Gadai Rupshi – Shatbaria – Dangapara	Dhalaghara Khal	Intermittent (Apr - Aug)	Small Boat, Engine Boat & Trawler	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, 7 (seven) 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)
317.59	154.37	163.23	128.34

### 6.2.1 PROPOSED ALL WEATHER ROUTES:

There are 41 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	Khanmorich UP H/Q - Chandipur Hat via Madarbaria H/School Road.	176193001	All Weather	3
2	Astomonisha GCM road - Menda ferry ghat	176194030	All Weather	1.8
3	Singuri UZR road - Noornagar UZR road.	176194032	All Weather	3.53
4	Adabaria - Kotobaria Rd	176194038	All Weather	1.7
5	Chandipur - Jagodis pur Rd	176194040	All Weather	0.8
6	Shinggari Azimuddin house - Patail beal via Govt. primary school.	176194052	All Weather	1.1
7	Bhabnipur Khazar ghat - BL Bari Bordar.	176194053	All Weather	0.9
8	Astomonisha Bazer - Astomonisha Mosque road	176194062	All Weather	0.7
9	Lamkan -Shanagar road	176194063	All Weather	0.5
10	Menda-Lamkan road	176194064	All Weather	0.53

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
11	Char Bhangura puranpara-Gomani river ghat	176194070	All Weather	0.8
12	Gobindapur Road	176195005	All Weather	3
13	Char Bhangoor Sarker para Rd	176195037	All Weather	1
14	Uttar Kolkoti road	176195038	All Weather	0.5
15	Astomnisha Kallol Sanga - Kalibari	176195045	All Weather	0.7
16	Chotobisacol Kamal house - Bishanali Ghat	176195049	All Weather	1
17	Rupsi pond - Jabarat chairman House.	176195053	All Weather	0.85
18	Bawaihat Govt. primary school - Babar Ali house.	176195054	All Weather	0.95
19	Shahnagar Golam Mostofa house - Ferry ghat via Jonab Mol	176195060	All Weather	1
20	CharBhangura Balu shardar house - Gomani river.	176195068	All Weather	0.5
21	Dhapara BWDB Embankment - Dhapara GPS	176195096	All Weather	0.35
22	Nowbaria Ghat- Chotobishakol	176195106	All Weather	1.5
23	Sujapara BC Road - H/O Montaj Sarder Road	176195120	All Weather	0.85
24	Mondotosh RHD - Mondotosh Rail Line	176195127	All Weather	0.8
25	Vangura Chatmohor Highway H/O Mohammad Bridge - H/O Rashid Via H/O Salam	No ID	All Weather	0.5
26	Kalkati shantinagar Bridge - Shingari Kalkati Bridge	No ID	All Weather	1.5
27	Dangapara Pucca Cowrasta - Barobishakol Pucca Road Via Raihan House	No ID	All Weather	2
28	Vangura Chatmohor Highway H/O Abdus salam - H/O Kuddus	No ID	All Weather	0.25
29	Bhangura Naogaon Road Moydandighi - Moydandighi Family Planning office	No ID	All Weather	0.6
30	Chakmaishat - Jalessor Road Boalmari Darus salam Mosque - Denga Via Bokkor Master House	No ID	All Weather	0.8
31	Chakmaishat Vanga Bridge - Jalessor Road Jafor Rice Mill - H/O Hasinur	No ID	All Weather	0.8
32	Khanmarich - Mia Para	No ID	All Weather	1
33	Vangura Pourashava Pucca Roasd Graveyard - Menda Field pond Via Alauddin Hazi Ghat	No ID	All Weather	1
34	Sarutia - Charpara Road H/O Abdul Mannan - Brick Vata	No ID	All Weather	1

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
35	Koidanga Khan Para - Nodipara	No ID	All Weather	1.5
36	Sarutia - Charpara Road Gojarmara H/O babul Akter - Durga Mondir	No ID	All Weather	0.3
37	Mondumala H/O Sultan - H/O Abu Hanif	No ID	All Weather	0.6
38	Bhangura Noagaon Road Latif Mor - Boiddomorich Mosque	No ID	All Weather	1
39	Das bilai village road	No ID	All Weather	1
40	Koidanga Notun para - Wabda Badh	No ID	All Weather	2
41	KoiDanga Rail Line - Koidanga Charpara	No ID	All Weather	1.2

### 6.2.2 PROPOSED SUBMERSIBLE ROUTES:

There are 39 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 6: Proposed submersible roads in the Upazila*

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
1	Bhangura UZ H/Q - Dilpashar UP Office Road	176193002	Submersible	2
2	Dilpashar UP H/Q - Udhunia UP road.	176193003	Submersible	3.5
3	Mohis Bathan - Karat Kundi road	176194001	Submersible	7
4	Dudbaria - Mohisbathan Road	176194003	Submersible	5
5	Ketra-Gopalpur	176194004	Submersible	2
6	Doharigram - Bara Pukuria	176194005	Submersible	2.75
7	Dilpashar- Pach bohor Road	176194007	Submersible	2
8	Banshbaria - Rupsi Ferry Ghat	176194009	Submersible	3.6
9	Namkan - Jabjabia road	176194010	Submersible	1
10	Adabaria - Gopalpur Rd.	176194017	Submersible	2.43
11	Hatgram UZR road - parshadanga hat road.	176194029	Submersible	2.3
12	Bawanjanpara BWDB embankment - Dilpasar Rail Station	176194036	Submersible	1.22
13	Joyrampur - Ramanager Rd	176194041	Submersible	1.6
14	Khanmorich - Maipara	176194043	Submersible	1.4
15	Kazitol Ferry ghat - Islampur	176194046	Submersible	2
16	Kazitol - Chachkia Rd	176194047	Submersible	3.25

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
17	Joyrampur UNR - Naoga UZR.	176194057	Submersible	4
18	Ramnagar Graveyard - Gobidopur Aziz house.	176194058	Submersible	1.2
19	Panch Batuan Jam-E- Moaque at river ghat via Panch Batuan RNGPS	176194068	Submersible	1.2
20	Sultanpur GPS-Taratia Bottree N/H/O Shobas	176194073	Submersible	2
21	Adabria - Sarkarpara Road	176195002	Submersible	0.58
22	Patul Village Road	176195003	Submersible	2.43
23	Madharbaria Road	176195004	Submersible	0.6
24	Kalingiri - Dashmorich Road	176195006	Submersible	1.5
25	Patulipara Madrasha - Rohal beel	176195039	Submersible	1
26	Chottobisacol Eftedai Madrasha - Samad Mermber house.	176195051	Submersible	0.6
27	Bawaihat Govt. primary school - Babar Ali house.	176195054	Submersible	2.5
28	Bheramara Taltolla R&H - Larongari Beal .	176195073	Submersible	1
29	Bheramara Taltola - H/O Boksha Road.	176195090	Submersible	0.5
30	Chowbaria north para Ajahar Pk land - charbhanga tack para Golamnabi house road	176195116	Submersible	1.2
31	BL bari Bazar-BB School & College road	176195124	Submersible	0.14
32	Chakrapara Eidgah - Chatarbill	No ID	Submersible	0.5
33	Bheramara Pucca Road Etimkhana - H/O Samad Khan	No ID	Submersible	1
34	Barobishakol Pucca Road H/O Aynal - H/O Tauhid Via Barobishakol Mosque and Jele para	No ID	Submersible	2.5
35	Mundumala village road	No ID	Submersible	1.3
36	Chakdighor road	No ID	Submersible	1.5
37	Helancha road	No ID	Submersible	2
38	Ghos bilai village road	No ID	Submersible	1.2
39	Hatudhunja- Baguan Road	No ID	Submersible	2

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

There are 13 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 7: Proposed roads for Hard-to-Reach Villages having No ID*

Sl. No	Road Name	Road ID	Unpaved length (Km)
1	Khala Bari - Joskasori Village Internal Road	No ID	0.45
2	Dargha Village Internal Road	No ID	1.6
3	Kawla Miah Road - Kadamtara Village Road	No ID	0.7
4	Dakhin Atpara School - Patulipara	No ID	1.15
5	Gayen Village Internal Road	No ID	0.4
6	Pairal Village Internal Road	No ID	0.45
7	LGED Road - Munsibari Village Internal Road	No ID	0.6
8	Ichabpur Village Internal Road	No ID	1
9	LGED Road - Naya Hati Village Internal Road	No ID	0.5
10	Protapur - Chalkmahmudpur Road	No ID	1.2
11	Jhilua School - Hamaikhali	No ID	2
12	Matikara - Udaypur Village Road.	No ID	1
13	Tinkosa Village Internal Road	No ID	1.2

#### 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 8: 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.

## 7 CONCLUSION & RECOMMENDATIONS

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- Bhangura Upazila is *Chalanbeel* inhabited depressed area, located between *Ganges & Brahmaputra River Basin*. There are 3 (three) major rivers that dominate the ecosystem & transport system of the Upazila. That are Baral, Gomani & Atrai 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 that can be used from April – August. Small Boat, Engine Baot, 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 101 Hard-to-Reach Villages. To develop rural connectivity, there are proposals for both all weather & 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 Bhangura in Pabna 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		
Ashtamanisha	Austomnisha hat	GC	Yes	General Market	Wholesale	2	-	-	-	-	1.61	0.00	96500	42500
Bhangura	Boral Bridge Bazar	HB	No	-	-	-	-	-	-	-	-	-	-	-
Bhangura	Shoratnagar hat	GC	Yes	General Market	Wholesale	2	-	-	-	-	0.84	0.00	1975000 0	1805100 0
Bhangura	Boral Bridge Bazar	HB	Yes	Special Market	Retail	7	-	-	-	-	0.50	0.00	499500	388500
Bhangura	Bhangura hat	GC	Yes	General Market	Wholesale	2	-	-	-	-	0.46	0.00	705000	565100
Dilpashar	Betuyan Hat	HB	No	-	-	-	-	-	-	-	-	-	-	-
Dilpashar	Puybil Hat	HB	No	-	-	-	-	-	-	-	-	-	-	-
Dilpashar	Delpasar Station Bazar	HB	Yes	Special Market	Retail	7	-	-	-	-	0.16	-	151100	0
Khanmarich	Pukurpar Bazar	HB	No	-	-	-	-	-	-	-	-	-	-	-
Khanmarich	Moydan Dighi Hat	HB	Yes	General Market	Wholesale	2	-	-	-	-	3.10	-	111600	101100
Khanmarich	Chandipur Hat	HB	Yes	General Market	Wholesale	2	-	-	-	-	-	2.62	26600	24500
Par Bhangura	Veramara Hat	HB	Yes	General Market	Wholesale	2	-	-	-	-	-	1.29	123800	118500

## 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	Khan Marich	Madarbaria, Helencha, Romanathpur	2966	Khanmorich UP H/Q - Chandipur Hat via Madarbaria H/School Road.	176193001	UNR	All Weather	4.7	1.7		3	3	360	25	225	585	989	197	45	20	10	25	20	75
2	Ashta Manisha	Chotobisacol	5729	Chotobisacol Eftedai Madrasa - Samad Member house	176195051	VRB	Submersible	0.6			0.6	0.6	108		0	108	9548	19	9	25	10	25	12	72
3	Khan Marich	Mahisbatan, Biddyo Marich, Siddhi Nagar	2585	Mohis Bathan - Karat Kundi road	176194001	VRA	Submersible	7			7	7	1260	30	270	1530	369	592	105	20	16	20	15	71
4	Bhangura	Char Bhangura, Patul	3704	Char Bhangura puranpara - Gomani river ghat Road	176194070	VRA	All Weather	0.8			0.8	0.8	96		0	96	4630	26	12	20	10	25	15	70
5	Ashta Manisha	Ashta Manisha	2758	Astomonisha Bazer - Astomonisha Mosque road	176194062	VRA	All Weather	0.7			0.7	0.7	84		0	84	3940	30	11	20	10	25	15	70
6	Bhangura	Bhabanipur	3210	Bhabnipur Khazar ghat - BL Bari Bordar	176194053	VRA	All Weather	1.51	0.61		0.9	0.9	108		0	108	3567	34	14	20	10	25	15	70
7	Khan Marich	Chandipur, Jagadishpur, Karatkandi	2523	Chandipur - Jagodispur Rd	176194040	VRA	All Weather	0.8			0.8	0.8	96		0	96	3154	38	12	20	10	25	15	70
8	Ashta Manisha	Nurnagar, Shahnagar	3663	Namkan - Jabjabia road	176194010	VRA	Submersible	1.5	0.5		1	1	180		0	180	3663	49	15	20	10	25	15	70
9	Khan Marich	Ramnagar, Gabindapur, Maidan Dighi	3575	Ramnagar Graveyard - Gobidopur Aziz house	176194058	VRA	Submersible	1.2			1.2	1.2	216	3	27	243	2979	68	18	20	10	25	15	70
10	Khan Marich	Jayrampur, Kayara, Sreepur	2643	Joyrampur - Ramanager Rd	176194041	VRA	Submersible	1.6			1.6	1.6	288		0	288	1652	109	24	20	10	25	15	70
11	Dil Pasar	Ershadnagar, Islampur, Jaintihar	2570	Kazitol Ferry ghat - Islampur Road	176194046	VRA	Submersible	2			2	2	360		0	360	1285	140	30	20	10	25	15	70
12	Dil Pasar	Adabaria, Katobaria, Gopalpur	2890	Adabaria - Gopalpur Rd.	176194017	VRA	Submersible	2.43			2.43	2.43	437.4		0	437.4	1189	151	36	20	10	25	15	70
13	Dil Pasar	Magura	895	Bhangura UZ H/Q - Dilpashar UP Office Road	176193002	UNR	Submersible	2			2	2	360		0	360	447	402	30	15	10	25	20	70
14	Khan Marich	Dudhbaria, Doharigram	1857	Dudhbaria - Mohisbathan Road	176194003	VRA	Submersible	5			5	5	900	10	90	990	371	533	75	18	16	20	15	69
15	Dil Pasar	Kazitol, Koidanga, Banjan	1815	Panch Batuan Jam-E- Moaque at river ghat via Panch Batuan RNGPS	176194068	VRA	Submersible	1.2			1.2	1.2	216		0	216	1512	119	18	18	10	25	15	68
16	Khan Marich	Kotbari, Pukurpar	1460	Adabaria - Kotobaria Rd	176194038	VRA	All Weather	1.7			1.7	1.7	204	10	90	294	859	201	26	18	10	25	15	68
17	Ashta Manisha	Menda	1020	Astomonisha GCM road - Menda ferry ghat	176194030	VRA	All Weather	2.6	0.8		1.8	1.8	216		0	216	567	212	27	18	10	25	15	68
18	Khan Marich	Sultanpur	1608	Sultanpur GPS - Taratia Bortree N/H/O Shobas	176194073	VRA	Submersible	2.9	0.9		2	2	360		0	360	804	224	30	18	10	25	15	68
19	Ashta Manisha	Shingari, Kalkati	1730	Singuri UZR road - Noomagar UZR road	176194032	VRA	All Weather	3.53			3.53	3.53	423.6		0	423.6	490	245	53	18	10	25	15	68
20	Ashta Manisha	Bhnaga Jola, Baboy Hat	1703	Banshbaria - Rupsi Ferry Ghat	176194009	VRA	Submersible	3.6			3.6	3.6	648		0	648	473	381	54	18	10	25	15	68
21	Dil Pasar	Baguan, Belbari	3754	BL bari Bazar-BB School & College road	176195124	VRB	Submersible	0.14			0.14	0.14	25.2		0	25.2	26811	7	2	20	10	25	12	67
22	Bhangura	Char Bhangura, Puibill	3427	CharBhangura Balu shardar house - Gomani river	176195068	VRB	All Weather	1	0.5		0.5	0.5	60		0	60	6854	18	8	20	10	25	12	67
23	Ashta Manisha	Rupsi, Bhnaga Jola, Godai Rupshi, Joka	4138	Rupsi pond - Jabarat chairman House	176195053	VRB	All Weather	0.85			0.85	0.85	102		0	102	4869	25	13	20	10	25	12	67
24	Parbhanguria	Rangalia, Billpara	3141	Bheramara Taltola - H/O Boksha Road	176195090	VRB	Submersible	0.5			0.5	0.5	90		0	90	6281	29	8	20	10	25	12	67
25	Ashta Manisha	Jhaphapoa, Shahnagar	2717	Astomnisha Kallol Sanga - Kalibari	176195045	VRB	All Weather	0.7			0.7	0.7	84		0	84	3881	31	11	20	10	25	12	67
26	Ashta Manisha	Chotobisacol, Bishanali	3868	Chotobisacol Kamal house - Bishanali Ghat	176195049	VRB	All Weather	1			1	1	120		0	120	3868	31	15	20	10	25	12	67
27	Ashta Manisha	Shahnagar, Shengram	3256	Shahnagar Golam Mostofa house - Ferry ghat via Jonab More	176195060	VRB	All Weather	1			1	1	120		0	120	3256	37	15	20	10	25	12	67
28	Mondotosh	Mondotosh	2292	Mondotosh RHD - Mondotosh Rail Line	176195127	VRB	All Weather	0.8			0.8	0.8	96		0	96	2864	42	12	20	10	25	12	67
29	Bhangura	Char Bhangura	2577	Char Bhangura Sarker para Rd	176195037	VRB	All Weather	1			1	1	120		0	120	2577	47	15	20	10	25	12	67
30	Mondotosh	Sujapara	2292	Sujapara BC Road - H/O Montaj Sarder Road	176195120	VRB	All Weather	0.85			0.85	0.85	102	2	18	120	2696	52	13	20	10	25	12	67
31	Parbhanguria	Bheramara, Taltola	3387	Bheramara Taltolla R&H - Larongari Beal	176195073	VRB	Submersible	1			1	1	180		0	180	3387	53	15	20	10	25	12	67
32	Ashta Manisha	Nawbaria	2735	Nowbaria Ghat- Chotobishakol Road	176195106	VRB	All Weather	1.5			1.5	1.5	180		0	180	1823	66	23	20	10	25	12	67
33	Parbhanguria	Patulipara	2408	Patulipara Madrasa - Rohal beel	176195039	VRB	Submersible	1			1	1	180		0	180	2408	75	15	20	10	25	12	67
34	Mondotosh	Dhapara	1719	Dhapara BWDB Embankment - Dhapara GPS Road	176195096	VRB	All Weather	0.35			0.35	0.35	42		0	42	4910	24	5	18	10	25	12	65
35	Bhangura	Uttar Kalkati	1714	Uttar Kolkoti road	176195038	VRB	All Weather	1	0.5		0.5	0.5	60		0	60	3428	35	8	18	10	25	12	65
36	Khan Marich	Madarbaria, Das Marich	1715	Madharbaria Road	176195004	VRB	Submersible	0.6			0.6	0.6	108		0	108	2859	63	9	18	10	25	12	65
37	Ashta Manisha	Bawaihat, Bhangajola	1703	Bawaihat Govt. primary school - Babar Ali house	176195054	VRB	All Weather	0.95			0.95	0.95	114		0	114	1792	67	14	18	10	25	12	65
38	Ashta Manisha	Namkan	731	Menda-Lamkan road	176194064	VRA	All Weather	1.4	0.87		0.53	0.53	63.6		0	63.6	1379	87	8	15	10	25	15	65
39	Khan Marich	Chandipur, Michhu Methair	835	Khanmorich - Maipara Road	176194043	VRA	Submersible	1.4			1.4	1.4	252		0	252	597	302	21	15	10	25	15	65
40	Dil Pasar	Pukurpar, Pachpatul	1402	Patul Village Road	176195003	VRB	Submersible	2.43			2.43	2.43	437.4		0	437.4	577	312	36	18	10	25	12	65
41	Khan Marich	Gobindapur	1036	Gobindapur Road	176195005	VRB	All Weather	3			3	3	360		0	360	345	348	45	18	10	25	12	65

\*\*\* 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
42	Ashta Manisha	Jagannathpur	352	Shinggari Azimuddin house - Patail beel via Govt. primary school	176194052	VRA	All Weather	1.1			1.1	1.1	132		0	132	320	375	17	15	10	25	15	65
43	Ashta Manisha	Mouhat	137	Lamkan -Shanagar road	176194063	VRA	All Weather	1	0.5		0.5	0.5	60		0	60	275	436	8	15	10	25	15	65
44	Dil Pasar	Dil Pasar	844	Dilpashar UP H/Q - Udhunia UP road.	176193003	UNR	Submersible	3.5			3.5	3.5	630		0	630	241	746	53	15	10	20	20	65
45	Dil Pasar	Katobaria	524	Adabria - Sarkarpara Road	176195002	VRB	Submersible	0.58			0.58	0.58	104.4		0	104.4	903	199	9	15	10	25	12	62
46	Khan Marich	Das Marich	558	Kalingiri - Dashmorich Road	176195006	VRB	Submersible	1.5			1.5	1.5	270		0	270	372	484	23	15	10	25	12	62
47	Khan Marich	Joyrampur	698	Joyrampur UNR - Naoga UZR. Road	176194057	VRA	Submersible	4			4	4	720		0	720	174	1032	60	15	16	15	15	61
48	Khan Marich	Doharigram	902	Doharigram - Bara Pukuria Road	176194005	VRA	Submersible	2.75			2.75	2.75	495		0	495	328	549	41	15	10	20	15	60
49	Khan Marich	Gopalpur	654	Ketra - Gopalpur Road	176194004	VRA	Submersible	3.2	1.2		2	2	360		0	360	327	550	30	15	10	20	15	60
50	Dil Pasar	Chaskia	786	Kazitol - Chachkia Rd	176194047	VRA	Submersible	3.75	0.5		3.25	3.25	585		0	585	242	744	49	15	10	20	15	60
51	Dil Pasar	Pachh Bahar	387	Dilpashar- Pach bohor Road	176194007	VRA	Submersible	2			2	2	360		0	360	194	930	30	15	10	20	15	60
52	Bhangura	Chowbaria Takpara	262	Chowbaria north para Ajahar Pk land - charbhangura tack para Golamabi house road	176195116	VRB	Submersible	1.2			1.2	1.2	216		0	216	219	823	18	15	10	20	12	57
53	Dil Pasar	Tarapur	186	Bawanjanpara BWDB embankment - Dilpasar Rail Station	176194036	VRA	Submersible	1.22			1.22	1.22	219.6		0	219.6	152	1183	18	15	10	15	15	55
54	Parbhanguria	Madhurgati	272	Hatgram UZR road - parshadanga hat road	176194029	VRA	Submersible	2.3			2.3	2.3	414		0	414	118	1525	35	15	10	12	15	52
55	Mondotosh	Mondotosh	2292	Vangura Chatmohor Highway H/O Mohammad Bridge - H/O Rashid Via H/O Salam Road	No ID	VRB	All Weather	0.5			0.5	0.5	60		0	60	4583	26	8	20	10	25	12	67
56	Bhangura	Shantinagar, Jhinaigati, Kalkati	4811	Kalkati shantinagar Bridge - Shingari Kalkati Bridge	No ID	VRB	All Weather	1.5			1.5	1.5	180		0	180	3207	37	23	20	10	25	12	67
57	Parbhanguria	Cakkar para, Pathorghata	2382	Chakrapara Eidgah - Chatarbill	No ID	VRB	Submersible	0.5			0.5	0.5	90		0	90	4764	38	8	20	10	25	12	67
58	Parbhanguria	Bheramara, Char Para	3716	Bheramara Pucca Road Etimkhana - H/O Samad Khan	No ID	VRB	Submersible	1			1	1	180		0	180	3716	48	15	20	10	25	12	67
59	Ashta Manisha	Barobishakol, Banshbaria	2725	Dangapara Pucca Cowrasta - Barobishakol Pucca Road Via Raihan House	No ID	VRB	All Weather	2			2	2	240	20	180	420	1362	154	30	20	10	25	12	67
60	Ashta Manisha	Chotobisacol, Joka, Denga Para	2854	Barobishakol Pucca Road H/O Aynal - H/O Tauhid Via Barobishakol Mosque and Jele para	No ID	VRB	Submersible	2.5			2.5	2.5	450	60	540	990	1142	347	38	20	10	25	12	67
61	Mondotosh	Mallik Chak	1146	Vangura Chatmohor Highway H/O Abdus salam - H/O Kuddus Road	No ID	VRB	All Weather	0.25			0.25	0.25	30		0	30	4583	26	4	18	10	25	12	65
62	Khan Marich	Maidan Dighi	1471	Bhangura Naogaon Road Moydandighi - Moydandighi Family Planning office Road	No ID	VRB	All Weather	0.6			0.6	0.6	72		0	72	2452	49	9	18	10	25	12	65
63	Khan Marich	Khan Marich, Nondimorich	1850	Khanmarich - Mia Para Road	No ID	VRB	All Weather	1			1	1	120		0	120	1850	65	15	18	10	25	12	65
64	Mondotosh	Uttar Menda	1719	Vangura Pourashava Pucca Roasd Graveyard - Menda Field pond Via Alauddin Hazi Ghat	No ID	VRB	All Weather	1			1	1	120		0	120	1719	70	15	18	10	25	12	65
65	Mondotosh	Boalmari	1146	Chakmaishat - Jalessor Road Boalmari Darus salam Mosque - Denga Via Bokkor Master House	No ID	VRB	All Weather	0.8			0.8	0.8	96		0	96	1432	84	12	18	10	25	12	65
66	Mondotosh	Chakmaishat	1146	Chakmaishat Vanga Bridge - Jalessor Road Jafor Rice Mill - H/O Hasinur	No ID	VRB	All Weather	0.8			0.8	0.8	96		0	96	1432	84	12	18	10	25	12	65
67	Mondotosh	Khalpar	1146	Sarutia - Charpara Road H/O Abdul Mannan - Brick Vata	No ID	VRB	All Weather	1			1	1	120		0	120	1146	105	15	18	10	25	12	65
68	Bhangura	Khanpara, BL Bari	1565	Koidanga Khan Para - Nodipara Road	No ID	VRB	All Weather	1.5			1.5	1.5	180		0	180	1043	115	23	18	10	25	12	65
69	Khan Marich	Mundumala	1102	Mundumala village road	No ID	VRB	Submersible	1.3			1.3	1.3	234		0	234	848	212	20	18	10	25	12	65
70	Khan Marich	Chak Digar	1009	Chakdighor road	No ID	VRB	Submersible	1.5			1.5	1.5	270		0	270	673	267	23	18	10	25	12	65
71	Khan Marich	Helench	1239	Helancha road	No ID	VRB	Submersible	2			2	2	360		0	360	619	291	30	18	10	25	12	65
72	Mondotosh	Gojarmara	344	Sarutia - Charpara Road Gojarmara H/O babul Akter - Durga Mondir	No ID	VRB	All Weather	0.3			0.3	0.3	36		0	36	1146	105	5	15	10	25	12	62
73	Khan Marich	Kalianjuri	643	Mondumala H/O Sultan - H/O Abu Hanif	No ID	VRB	All Weather	0.6			0.6	0.6	72	3	27	99	1071	154	9	15	10	25	12	62
74	Khan Marich	Latifgram	563	Bhangura Noagaon Road Latif Mor - Boiddomorich Mosque Road	No ID	VRB	All Weather	1			1	1	120		0	120	563	213	15	15	10	25	12	62
75	Bhangura	Khurda Kaidanga, Baguan	794	Koidanga Notun para - Wabda Badh	No ID	VRB	All Weather	2			2	2	240		0	240	397	302	30	15	10	25	12	62
76	Khan Marich	Das Belay	392	Das bilai village road	No ID	VRB	All Weather	1			1	1	120		0	120	392	306	15	15	10	25	12	62
77	Khan Marich	Ghos Belay	296	Ghos bilai village road	No ID	VRB	Submersible	1.2			1.2	1.2	216		0	216	246	731	18	15	10	20	12	57
78	Bhangura	Khurda Kaidanga	175	KoiDanga Rail Line - Koidanga Charpara	No ID	VRB	All Weather	1.2			1.2	1.2	144		0	144	146	821	18	15	10	20	12	57
79	Dil Pasar	Baguan	709	Hatudhunia- Baguan Road	No ID	VRB	Submersible	2			2	2	360	80	720	1080	355	1523	30	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)