



GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATIVES
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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”

Monpura, Bhola



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July, 2022

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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 **Manpura** Upazila of **Bhola** District.

1 DESCRIPTION OF THE UPAZILA

1.1 GEOGRAPHY AND DEMOGRAPHY

The geographical area of Manpura is 373.18 square kilometers and has 4 unions, 18 mouzas and 30 villages. The Upazila is 105 km away from District headquarters of Bhola. Manpura is entirely an island Upazila that is surrounded by the major river of the country, Meghna in the north and Bay of Bengal in the south. The total population of the Upazila is 76,582 of which 38,746 are male and 37,836 female, total number of households are 17,080 and average household size is 4.48 with a population density of 205 (as per population census 2011).

1.2 EDUCATION FEATURES

According to the information of the relevant local government offices there are 14 government primary, 23 registered primary, 3 non-government primary, 150 NGO school & 2 kindergarten schools in the Upazila. On the other hand, Manpura has 8 non-government high schools, 2 private colleges and 13 madrasahs. The literacy rate for the Upazila is 32.1%.

1.3 RURAL ROAD COMMUNICATIONS

Bangladesh scored in the rural accessibility index at around 87 per cent among South Asian and some other Africa countries. Generally, the people of Bangladesh get all weather within 2 kilometers adjacent to their living places. But the feature of rural roads communications in Manpura 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 Manpura is 234.29 km and out of which, 141.95 km paved and 92.34 km earthen.

1.4 AGRICULTURE, FOOD PRODUCTION AND FISHERIES

About 60 percent people of Monpura Upazila are involved in fish business. However, most of them are involved in the business of Hilsa, the national fish of the country. Basically, the business runs for half the year started from monsoon. Agriculture too has a major importance for the economy of the people of Manpura. There are 8,306 acres of arable land in the Upazila. In the fiscal year 2010-11 the Rice production was 11187 & 31197 metric tons for Aus & Aman seasons respectively.

According to the BBS (2010-11) data Manpura has 2959.98 acre of pond, dighee & other wetland areas that produced 14,000 metric tons of fishes.

1.5 GROWTH CENTRE AND HATBAZAR

Growth Centre and Rural Hatbazar is one of the main centres of the rural economy. Hatbazar is like the heart for the development of the rural economy. Rural hatbazar plays a role in increasing production and creating employment impacting on the supply chain of agriculture and non-agriculture products. There are 14 hat bazars and 4 growth centres in the Upazila. The structural development of hatbazar and growth is pivotal to boosting up the rural economy. A details of the growth center & hatbazar of the Upazila has been attached in the [Annexure-1](#)

2 LOCATION OF THE UPAZILA

Manpura Upazila of Bhola District is in the southern part of the country under Barishal division. The location has been shown in the map. The Upazila is completely an island area that is bounded by Tazumuddin Upazila on the north, Bay of Bengal on the south, Hatiya Upazila on the east, Lalmohan and Char Fasson Upazilas on the west. Manpura Upazila is an island in the northern Bay of Bengal, Bangladesh, at the estuary of the ‘Meghna River’ & ‘Bay of Bengal’. It is frequently subject to cyclones and destructive ocean waves. The river Meghna is formed inside Bangladesh in Kishoreganj District above the town of Bhairab Bazar by the joining of the Surma and the Kushiya, both of which originate in the hilly regions of eastern India as the Barak River. The Meghna meets its major tributary, the Padma that is the combined flow of 2 major trans boundary rivers *Ganga (Padma)* & *Brahmaputra (Jamuna)* in Chandpur District that form the Ganges Delta, the largest delta on earth, which fans out to the Bay of Bengal. Other major tributaries of the Meghna include the Dhaleshwari, the Gumti, and the Feni. The Meghna empties into the Bay of Bengal via four principal mouths, named Tetulia (Ilsha), Shahbazzpur, Hatia, and Bamni. During monsoon, the river Meghna carries a large volume of water and is prone to catastrophic flooding in the summer & monsoon (March – October) when it receives enormous water from the Himalayan snow melts along with the heavy rainfall in the upstream. The flood occurs in the island Upazila for many reasons like river erosion and embankment collapse due to incessant rains for days with abnormal tides. The effects of flooding can be devastating and cause significant damage to crops and households, serious bank erosive with consequent loss of structures, land, and loss of many lives and livestock.

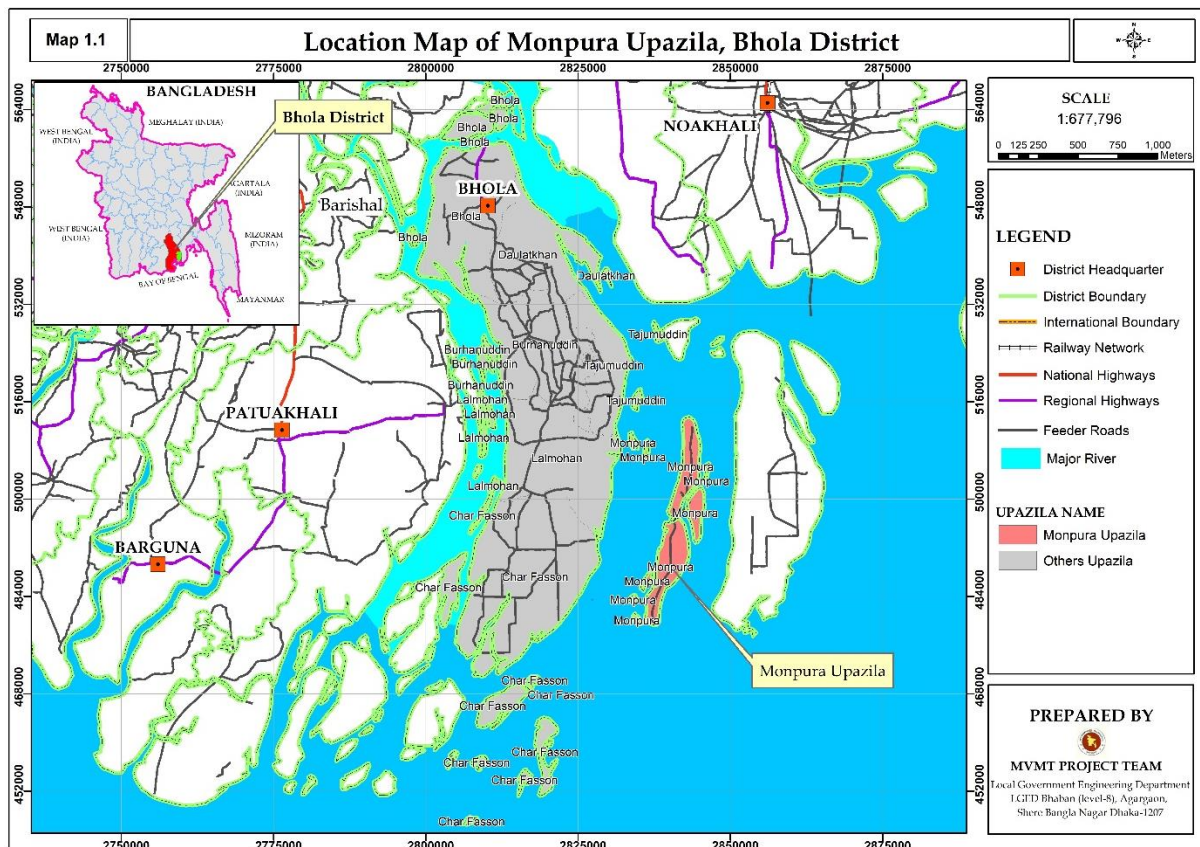


Figure 1: Upazila Location Map.

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.

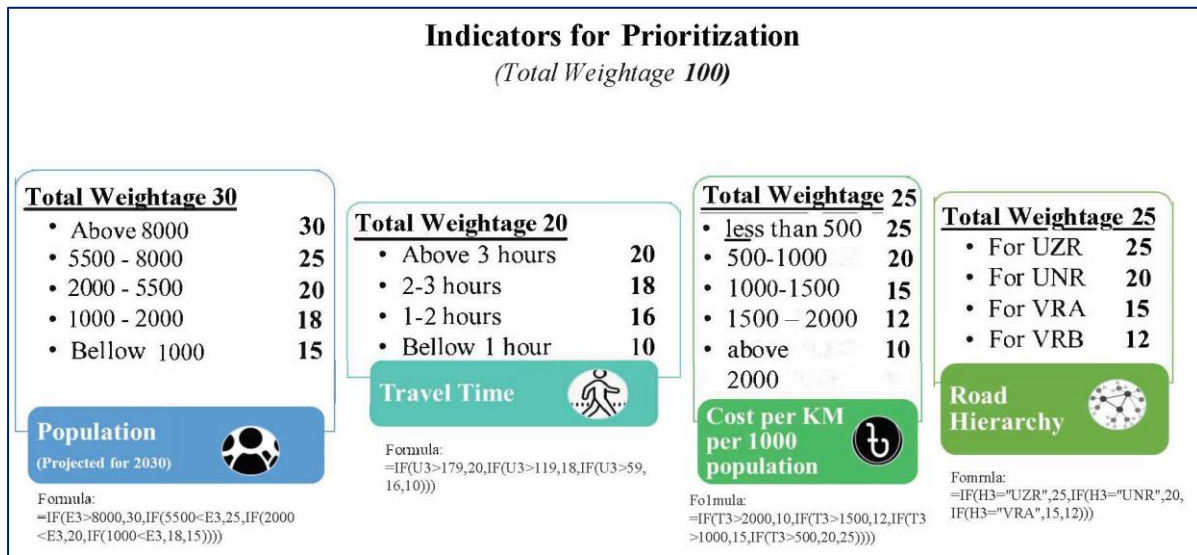


Figure 2: Prioritization indicators & their weightage values

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

Manpura is an Island Upazila. The rural road communication is quite poor here. Out of 53 villages, 30 are disconnected from the developed paved road network that brings huge sufferings for the people of those villages. The total rural road network of Manpura is 234.29 km and out of which, 141.95 km paved and 92.34 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	Dokkhin Sakuchia	4	0	4
2	Hajirhat	15	0	15
3	Manpura	17	11	6
4	Sakuchia	17	12	5
Total =		53	23	30

4.2 VILLAGES AND THEIR CONNECTIVITY – UNION LEVEL

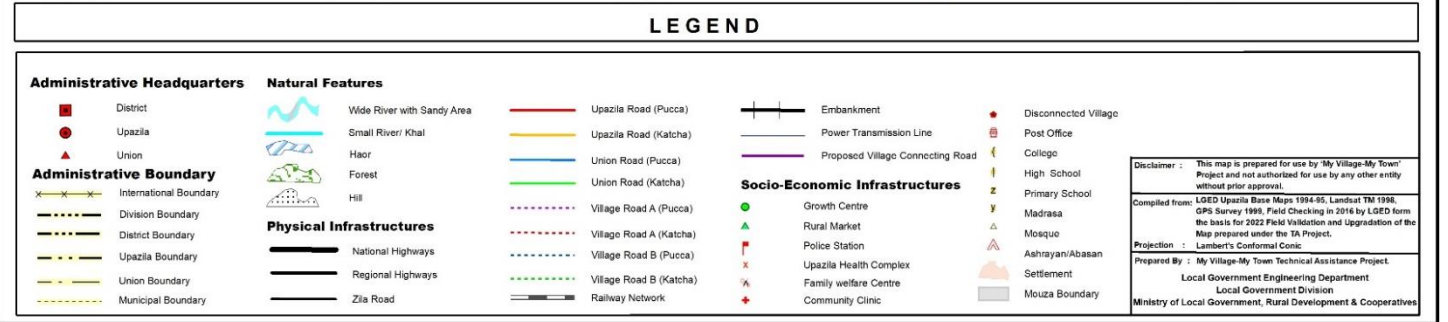
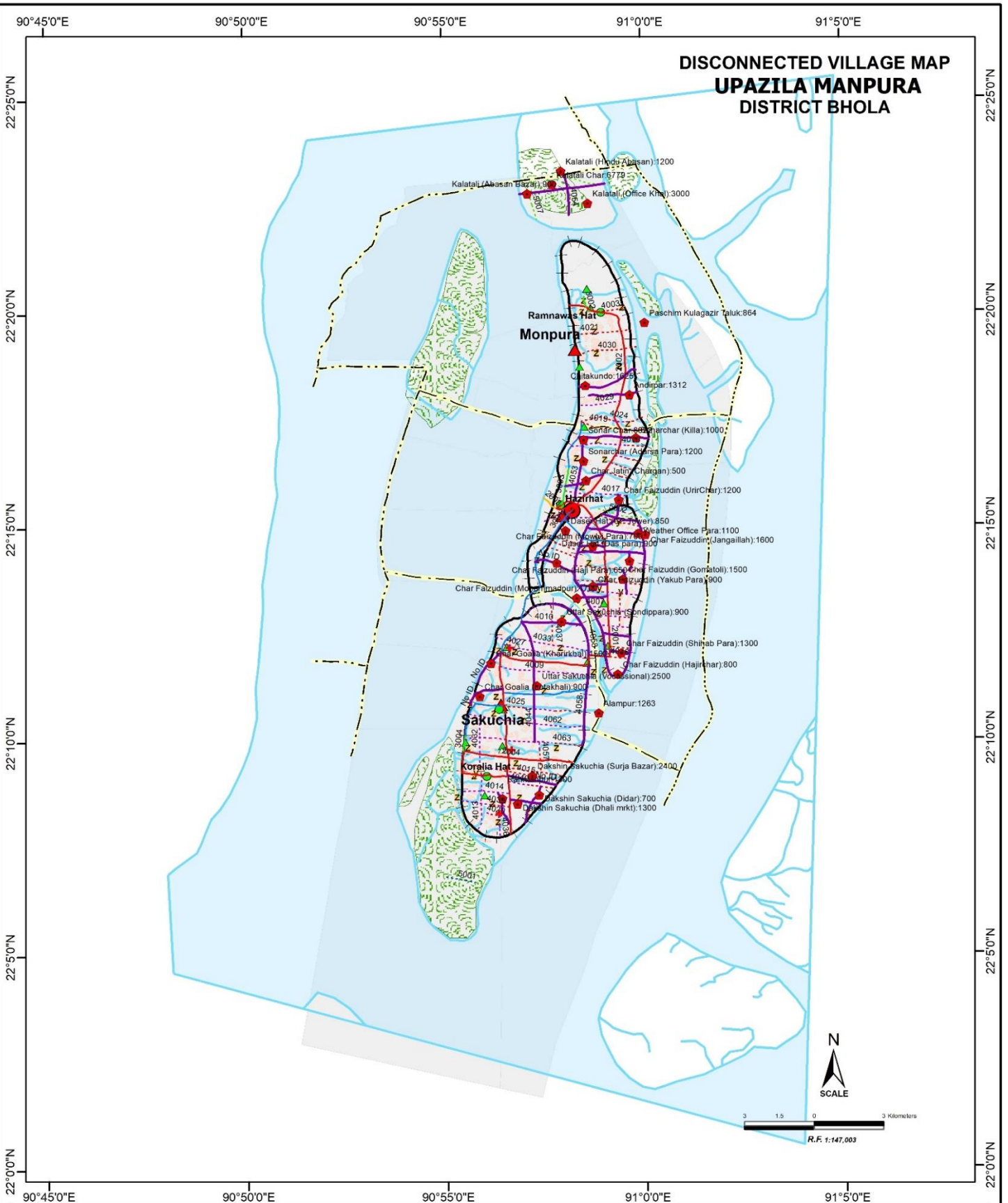
The consultant arranged a meeting at Upazila conference room with and all the UP Chairmen & their secretaries. The team interviewed representative of each the union and collected data about the HTRV.

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)
Dokkhin Sakuchia (4)	1			Didar	802
	2			Dhali market	1489
	3			Rahmanpur	1203
	4			Shurzomhukhi Bazar	2750
	Sub Total=		0		
Hajirhat (15)	1			Adarsa Para	1375
	2			Chargan	573
	3			Das para	1031
	4			Gomatoli	1719
	5			GP Tower	974
	6			Haji Para	745
	7			Hajirchar	917
	8			Jangaillah	1833
	9			Killa	1146
	10			Mohammadpur	1948
	11			Mowlvi Para	802
	12			Shihab Para	1489

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
	13			UrirChar	1375
	14			Weather Office Para	1260
	15			Yakub Para	1031
	Sub Total=		0		18218
Manpura (17)	1	Char Ishwarganj	2075	Chitakundo	1862
	2	Ghutia	0	Paschim Andhirpar	1131
	3	Kacharidogi	0	Purba Andhirpar	1281
	4	Kowertak	1467	Abasan Bazar	1031
	5	Machua Khali	1503	Hindu Abasan	1375
	6	Majhgram	0	Office Khal	3437
	7	Manpura	0		
	8	Paschim Kulagazir Taluk	990		
	9	Purba Kulagazir Taluk	915		
	10	Ram Nawaz Bazar	1731		
	11	Kalatali	7767		
Sub Total=		16448		9086	
Sakuchia (17)	1	Alipur	5298	Alampur	1447
	2	Badiuzzaman	756	Kharirkhal	1719
	3	Char Nizam Kalkini	1682	Lotakhali	1031
	4	Dakshin Rahmanpur	0	Sondippara	1031
	5	Koralia	0	Vocassional	2864
	6	Majidpur	3246		
	7	Saguriha	0		
	8	Samedpur	992		
	9	Sandwip	2420		
	10	Sobhanpur	0		
	11	Sonapur	3900		
	12	Uttar Rahmanpur	0		
Sub Total=		18294		6373	

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



Disclaimer : This map is prepared for use by 'My Village-My Town' Project and not authorized for use by any other entity without prior approval.

Compiled from: LGED Upazila Base Maps 1994-95, Landsat TM 1996, GPS Survey 1995, Field Checking in 2016 by LGED form the basis for 2022 Field Validation and Upgradation of the Map prepared under the TA Project.

Projection : Lambert's Conformal Conic

Prepared By : My Village-My Town Technical Assistance Project,
Local Government Engineering Department
Local Government Division
Ministry of Local Government, Rural Development & Cooperatives

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, Manpura 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 team visited Manpura union in the Upazila, along the alignment of “Kawertak - Sitakunda Road” having the Road ID: 509654012. The road was selected for the site visit considering the beneficiary population 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

The length of this road is 2 km, totally earthen. The road connects a major village of the union named Chitakundo, having the total population of approx. 2000. People living here doesn't have any good road network with the Upazila HQ due to having unpaved road communication.

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

Monpura is an Upazila that has scattered islands within the estuary of the 'Meghna River' & 'Bay of Bengal'. As the Upazila is surrounded by water, riverine route is the major mode of transport that connects the Upazila with the other part of the country. According to the UE, Monpura there exists a riverine route that can be used throughout the year and connects the scattered islands with the Upazila HQ. Generally Small Boat, Engine Boat, Cargo Ships are used to transport community & commodity. The usage of this route depends on tidal actions of the estuary and the sea. Due to inadequate navigation depth during Low Tide, the riverine route becomes ineffective.

The name of the riverine route & 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	Monpura Upazila H/Q – Tulatoli Ghat - Kobir Bazar - Char Kolatoli Village	Megna River & Kobir Bazar Khal	Perennial (<i>but can only be used during high tides</i>)	Small Boat, Engine Boat, Fishing Boat, Cargo Ships	Yes (<i>Kobir Bazar Khal only</i>)

6.2 PROPOSED ROADWAY FOR HARD-TO-REACH VILLAGES:

At present, roads are the most dominant mode of transportation. As the Upazila is a special type of zone, i.e., island, there needs no bridges to improve the connectivity.

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)
234.29	141.95	92.34	89.54

6.2.1 PROPOSED ALL WEATHER ROUTES:

There are 29 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	Hazirhat UP (Badher Hat) - Bhuiar Hat South Embankment Road	509653009	All Weather	6.74
2	Urirchar GPS - 20 Kaloni Janglar Khal Road	509654004	All Weather	3.9
3	AHB School Road	509654010	All Weather	3
4	Kawertak-Sitakunda Road	509654012	All Weather	2
5	West Embk. - East EMBK. (Weather Office) Road	509654026	All Weather	3.6
6	Dhali Market - East Side WDB Embk.(GPS)	509654041	All Weather	2.35
7	Sakuchia Vocassional school-Natun Bazar Road	509654044	All Weather	4.65
8	Farazi Road (Model GPS) to Sonar Char GPS Rd.	509654053	All Weather	3
9	Kolatoli MiaJamirshah Abason-Goler Khal-Monir Bazarl Rd.	509654054	All Weather	3.5
10	Kalatoli Abassion Bazar - Monir Bazar - Kabir Bazar Road	509654055	All Weather	2
11	West EMT.-UZR-East EMT. Jogir halot Rd.	509654056	All Weather	3.8
12	Alom Bazar - Anondo Bazar (UZR-2) - Taltola Bazar Road	509654058	All Weather	4
13	Pal Bari Road - Nazir Ahammed GPS Road Vai H/o Sahe Alam Bepary	No ID	All Weather	2.5
14	Shurzomhukhi Road - Embankment Road Via Souths H/o Didar	No ID	All Weather	2.5
15	UZR East Embankment -West Shurzomokhi Bazar Embankment	No ID	All Weather	4
16	Fokir Hat V-A Road - Daser Hat 50 Koloni Road	No ID	All Weather	2.2
17	H/o Ledu Haji - East Embankment Via URZ	No ID	All Weather	3.5
18	H/o Sihab Mawlana -UZR- H/o East beri Kalam Road	No ID	All Weather	2.1
19	Pacca Road - H/o Bacchu Mia East North Charzotin Jame Mosque Road	No ID	All Weather	2.5
20	Pucca Road Gogan member Halot - North H/o Alamgir Master Pucca Road	No ID	All Weather	2.8
21	UNR Road H/o Babul Mazi - East Embankment Road	No ID	All Weather	3
22	UNR Tower Mosque - West Embankment UNR Road	No ID	All Weather	2.5

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
23	UZR- east Embayment H/o Alauddin Road	No ID	All Weather	2
24	UZR-(2001) H/o Khalek Chairman - West Embayment Road	No ID	All Weather	2
25	V-A Uttar H/o Nasir - South H/o Jamal Batania Road	No ID	All Weather	2
26	East Embankment - UZR- West Via Sanaullah	No ID	All Weather	3.3
27	Mia Jomir Sah Bazar - Abasan Bazar Road Via Office Khal Bazar - Jahangir Khal Bazar	No ID	All Weather	5
28	Mini Solar System - LotaKhali Pacca Road - Via H/o Abu Mazi	No ID	All Weather	3
29	Nunabunia Bridge - KharirKhal Pacca Road Via West Embankment	No ID	All Weather	2.1

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 17 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	Pal Bari Road - Nazir Ahammed GPS Road Vai H/o Sahe Alam Bepary	No ID	2.5
2	Shurzomhukhi Road - Embankment Road Via Souths H/o Didar	No ID	2.5
3	UZR East Embankment - West Shurzomokhi Bazar Embankment	No ID	4
4	Fokir Hat V-A Road - Daser Hat 50 Koloni Road	No ID	2.2
5	H/o Ledu Haji - East Embankment Via URZ	No ID	3.5
6	H/o Sihab Mawlana -UZR- H/o East beri Kalam Road	No ID	2.1
7	Pacca Road - H/o Bacchu Mia East North Charzotin Jame Mosque Road	No ID	2.5
8	Pucca Road Gogan member Halot - North H/o Alamgir Master Pucca Road	No ID	2.8
9	UNR Road H/o Babul Mazi - East Embankment Road	No ID	3

Sl. No	Road Name	Road ID	Unpaved length (Km)
10	UNR Tower Mosque - West Embankment UNR Road	No ID	2.5
11	UZR- east Embayment H/o Alauddin Road	No ID	2
12	UZR-(2001) H/o Khalek Chairman - West Embayment Road	No ID	2
13	V-A Uttar H/o Nasir - South H/o Jamal Batania Road	No ID	2
14	East Embankment - UZR- West Via Sanaullah	No ID	3.3
15	Mia Jomir Sah Bazar -Abasan Bazar Road Via Office Khal Bazar - Jahangir Khal Bazar	No ID	5
16	Mini Solar System - LotaKhali Pacca Road - Via H/o Abu Mazi	No ID	3
17	Nunabunia Bridge - KharirKhal Pacca Road Via West Embankment	No ID	2.1

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

- Monpura is a coastal Upazila that has scattered islands within the estuary of the '*Meghna River*' & '*Bay of Bengal*'. Waterways are the main mood of transport that gets the access to the scattered islands from the Upazila HQ. During coastal disasters and monsoon, the Upazila faces extensive river erosion that induces severe impacts in both the built and the natural environment. There exists a potential riverine transport that connects within the Upazila which is effectiue only during high tides throughout the year. Small Boat, Engine Boat, Trawler, Cargo, Speed Boat, Fishing Trawler & Launch are used to transport community & commodity throughout the year.
- The Upazila faces extensive river erosion time to time, rural roads and structures are highly vulnerable in this Upazila.
- The Upazila has a total number of 13 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 coastal disasters. 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 cyclones, erosion etc. is highly recommended. A special study regarding the road and structure design of the Upazila Monpura in Bhola 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		
Dakhin Sakuchia	Koralia Bazar	GC	Yes	General Market	Both	2	70	0.98 শতাংশ	125	0.16	0.16	0.42	40000	75510
Dakhin Sakuchia	Jonota Bazar	HB	Yes	General Market	Wholesale	2	48	0.66 শতাংশ	58	0.00	0.00	0.00	4000	8250
Dakhin Sakuchia	Siraj Gong Bazar	HB	Yes	General Market	Wholesale	2	38	.4250 শতাংশ	45	0.00	0.00	0.00	10000	10000
Dakhin Sakuchia	Dali Market	HB	No	Special Market	Wholesale	1	28	0.35 শতাংশ	28	0.00	0.00	0.00	0	0
Dakhin Sakuchia	Notun Bazar	HB	No	Special Market	Wholesale	1	10	0.18 শতাংশ	16	0.00	0.00	0.18 শতাংশ	0	0
Hajirhat	Hazirhat Bazar (H.Q)	GC	Yes	General Market	Both	2	20	0.25	195	1.10	0.38	2.46	1001000	537000
Hajirhat	Fakir Hat	HB	Yes	General Market	Wholesale	2	0	0.00	134	0.72	0.00	1.68	62000	62250
Hajirhat	Bhuiar Hat	HB	No	Special Market	Wholesale	2	0	0.00	65	0.36	0.00	0.82	0	0
Hajirhat	Chowdury Bazar	HB	No	Special Market	Wholesale	2	0	0.00	62	0.42	0.00	0.80	0	0
Manpura	Ramnewaz Bazar	GC	Yes	General Market	Both	2	55	0.68	64	0.00	0.00	0.68	13000	12000
Manpura	Abason Bazar	HB	No	Special Market	Wholesale	2	120	1.60	135	0.00	2.00	0.00	0	0
Manpura	Tulatoli Bazar	HB	No	Collection Center	Wholesale	1	32	2.36	62	0.00	1.10	0.38	0	0
Manpura	Kobir Bazar	HB	No	Special Market	Wholesale	2	52	0.65	70	0.00	1.10	0.00	0	0
Manpura	Monir Bazar	HB	No	Special Market	Wholesale	2	45	0.56	58	0.00	0.92	0.00	0	0
Manpura	Ripon Bazar	HB	No	Special Market	Wholesale	2	22	0.28	48	0.00	0.90	0.00	0	0

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		
Uttar Sakucia	Bangla Bazar	GC	Yes	General Market	Both	2	79	0.87	120	0.22	0.54	0.32	80100	80000
Uttar Sakucia	Master Hat	HB	Yes	General Market	Wholesale	2	42	0.56	48	0.30	0.62	0.20	70000	55500
Uttar Sakucia	Anando Bazar	HB	No	Special Market	Wholesale	2	25	0.29	32	0.00	0.00	0.00	0	0

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	Sakuchia	Vocassional	2864	Sakuchia Vocassional school- Natun Bazar Road	509654044	VRA	All Weather	5.65	0	1	4.65	5.65	678	15	135	813	507	284	70	20	16	25	15	76
2	Sakuchia	Alampur	1447	Alom Bazar - Anondo Bazar (UZR-2) - Taltola Bazar Road	509654058	VRA	All Weather	7	3	0	4	4	480	0	0	480	362	332	60	18	16	25	15	74
3	Hajirhat	Jangaillah	1833	Hazirhat UP (Badher Hat) - Bhuiar Hat South Embankment Road	509653009	UNR	All Weather	10.7	3.96	0	6.74	6.74	808.8	12	108	916.8	272	500	101	18	16	20	20	74
4	Manpura	Chitakundo	1862	Kawertak-Sitakunda Road	509654012	VRA	All Weather	2	0	0	2	2	240	5	45	285	931	153	30	18	10	25	15	68
5	Dakshin Sakuchia	Dhali market	1489	Dhali Market - East Side WDB Embk.(GPS)	509654041	VRA	All Weather	2.8	0.45	0	2.35	2.35	282	7	63	345	634	232	35	18	10	25	15	68
6	Hajirhat	Adarsa Para	1375	Farazi Road (Model GPS) to Sonar Char GPS Rd.	509654053	VRA	All Weather	3	0	0	3	3	360	2.9	26.1	386.1	458	281	45	18	10	25	15	68
7	Manpura	Hindu Abasan	1375	Kolatoli MiaJamirshah Abason- Goler Khal-Monir Bazar Rd.	509654054	VRA	All Weather	3.5	0	0	3.5	3.5	420	3	27	447	393	325	53	18	10	25	15	68
8	Hajirhat	UrirChar	1375	Urirchar GPS - 20 Kaloni Janglar Khal Road	509654004	VRA	All Weather	4.1	0.2	0	3.9	3.9	468	3	27	495	353	360	59	18	10	25	15	68
9	Sakuchia	Sondippara	1031	AHB School Road	509654010	VRA	All Weather	3	0	0	3	3	360	4	36	396	344	384	45	18	10	25	15	68
10	Hajirhat	Weather Office Para	1260	West Embk. - East EMBK. (Weather Office) Road	509654026	VRA	All Weather	3.6	0	0	3.6	3.6	432	12	108	540	350	428	54	18	10	25	15	68
11	Manpura	Abasan Bazar	1031	Kalatoli Abassion Bazar - Monir Bazar - Kabir Bazar Road	509654055	VRA	All Weather	5	1	2	2	4	480	3	27	507	258	492	30	18	10	25	15	68
12	Hajirhat	Hajirchar	917	West EMT.-UZR-East EMT. Jogir halot Rd.	509654056	VRA	All Weather	5	1.2	0	3.8	3.8	456	2.7	24.3	480.3	241	524	57	15	10	20	15	60
13	Manpura	Office Khal	3437	Mia Jomir Sah Bazar -Abasan Bazar Road Via Office Khal Bazar - Jahangir Khal Bazar	No ID	VRA	All Weather	5	0	0	5	5	600	0	0	600	687	175	75	20	16	25	15	76
14	Dakshin Sakuchia	Shurzomhukhi Bazar	2750	UZR East Embankment -West Shurzomokhi Bazar Embankment	No ID	VRA	All Weather	5	0	1	4	5	600	25	225	825	550	300	60	20	16	25	15	76
15	Manpura	Andirpar	2412	East Embankment - UZR- West Via Sanaullah	No ID	VRA	All Weather	3.3	0	0	3.3	3.3	396	0	0	396	731	164	50	20	10	25	15	70
16	Hajirhat	Mohammadpur	1948	Fokir Hat V-A Road - Daser Hat 50 Koloni Road	No ID	VRA	All Weather	2.2	0	0	2.2	2.2	264	3	27	291	885	149	33	18	10	25	15	68
17	Sakuchia	Kharirkhal	1719	Nunabunia Bridge - KharirKhal Pacca Road Via West Embankment	No ID	VRA	All Weather	2.1	0	0	2.1	2.1	252	2	18	270	818	157	32	18	10	25	15	68
18	Hajirhat	Shihab Para	1489	H/o Sihab Mawlana -UZR- H/o East beri Kalam Road	No ID	VRA	All Weather	2.1	0	0	2.1	2.1	252	0	0	252	709	169	32	18	10	25	15	68
19	Hajirhat	Gomatoli	1719	Pucca Road Gogan member Halot - North H/o Alamgir Master Pucca Road	No ID	VRA	All Weather	2.8	0	0	2.8	2.8	336	4	36	372	614	216	42	18	10	25	15	68
20	Hajirhat	Yakub Para	1031	UZR- east Embayment H/o Alauddin Road	No ID	VRA	All Weather	2	0	0	2	2	240	2	18	258	516	250	30	18	10	25	15	68
21	Dakshin Sakuchia	Rahmanpur	1203	Pal Bari Road - Nazir Ahammed GPS Road Vai H/o Sahe Alam Bepary	No ID	VRA	All Weather	2.5	0	0	2.5	2.5	300	10	90	390	481	324	38	18	10	25	15	68
22	Sakuchia	Lotakhali	1031	Mini Solar System - LotaKhali Pacca Road - Via H/o Abu Mazi	No ID	VRA	All Weather	3	0	0	3	3	360	2	18	378	344	367	45	18	10	25	15	68
23	Hajirhat	Das para	1031	UNR Road H/o Babul Mazi - East Embankment Road	No ID	VRA	All Weather	3			3	3	360	2	18	378	344	367	45	18	10	25	15	68
24	Hajirhat	Mowlvi Para	802	UZR-(2001) H/o Khalek Chairman - West Embayment Road	No ID	VRA	All Weather	2	0	0	2	2	240	2	18	258	401	322	30	15	10	25	15	65
25	Hajirhat	Haji Para	745	V-A Uttar H/o Nasir - South H/o Jamal Batania Road	No ID	VRA	All Weather	2	0	0	2	2	240		0	240	372	322	30	15	10	25	15	65
26	Hajirhat	GP Tower	974	UNR Tower Mosque - West Embankment UNR Road	No ID	VRA	All Weather	2.5			2.5	2.5	300	5	45	345	390	354	38	15	10	25	15	65
27	Dakshin Sakuchia	Didar	802	Shurzomhukhi Road - Embankment Road Via Souths H/o Didar	No ID	VRA	All Weather	2.5	0	0	2.5	2.5	300	10	90	390	321	486	38	15	10	25	15	65
28	Hajirhat	Killa	1146	H/o Ledu Haji - East Embankment Via URZ	No ID	VRA	All Weather	3.5	0	0	3.5	3.5	420	20	180	600	327	524	53	18	10	20	15	63
29	Hajirhat	Chargan	573	Pacca Road - H/o Bacchu Mia East North Charzotin Jame Mosque Road	No ID	VRA	All Weather	2.5	0	0	2.5	2.5	300		0	300	229	524	38	15	10	20	15	60

*** 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)