



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”

Rangabali, Patuakhali



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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 **Rangabali** Upazila of **Patuakhali** District.

1 DESCRIPTION OF THE UPAZILA

1.1 GEOGRAPHY AND DEMOGRAPHY

The geographical area of Rangabali upazila is 470.12 sq.km and has 5 unions, 53 mouzas and 65 villages. The upazila is an island within Patuakhali District. The total population of the upazila is 1,04,128 of which 55,027 are male and 49,101 female, total number of households are 16,101 (*as per Bangladesh National Portal*).

1.2 EDUCATION FEATURES

According to the information of the Bangladesh National Portal, there are 71 government primary schools, 12 high schools, 3 colleges, and 12 madrashas. The literacy rate for the upazila is 39%.

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 Rangabali 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 Rangabali is 747.41 km and out of which, 149.57 km paved and 597.84 km earthen.

1.4 AGRICULTURE, FOOD PRODUCTION AND FISHERIES

Agriculture has a major importance for the economy of the people of Rangabali. There are approx. 50,000 acres of arable land in the upazila. (*As per Bangladesh National Portal*).

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 and agricultural development. Rural hatbazar plays a role in increasing production and creating employment impacting on the supply chain of agriculture and non-agriculture products. There are 17 hatbazars with no growth centers in the upazila. The structural development of hatbazar and growth is pivotal to boosting up the rural economy. A details of the growth center & hatbazar of the Upazila has been attached in the *Annexure-1*.

2 LOCATION OF THE UPAZILA

Rangabali upazila of Patuakhali District is North-Eastern part of the country under Barisal division. The location has been shown in the map. The upazila was formed from the Galachipa upazila on 2011. It is an island upazila in the coastal region that is bounded by Amtali and Galachipa upazilas on the north, Bay of Bengal on the south, Galachipa and Char Fasson upazilas on the east, Amtali upazila on the west. The upazila is surrounded by the major coastal river of the region, *Tetulia* (i.e., originated from *Meghna River*) and *Bay of Bengal*. During coastal disasters, the upazila faces multiple environmental issues, frequently subject to cyclones and destructive ocean waves. On the other hand, Tetulia river behaves erosive in the monsoon and causes extensive river erosion that induces severe impacts in both the built and the natural environment. 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 erosion with consequent loss of structures, land, and loss of many lives and livestock.

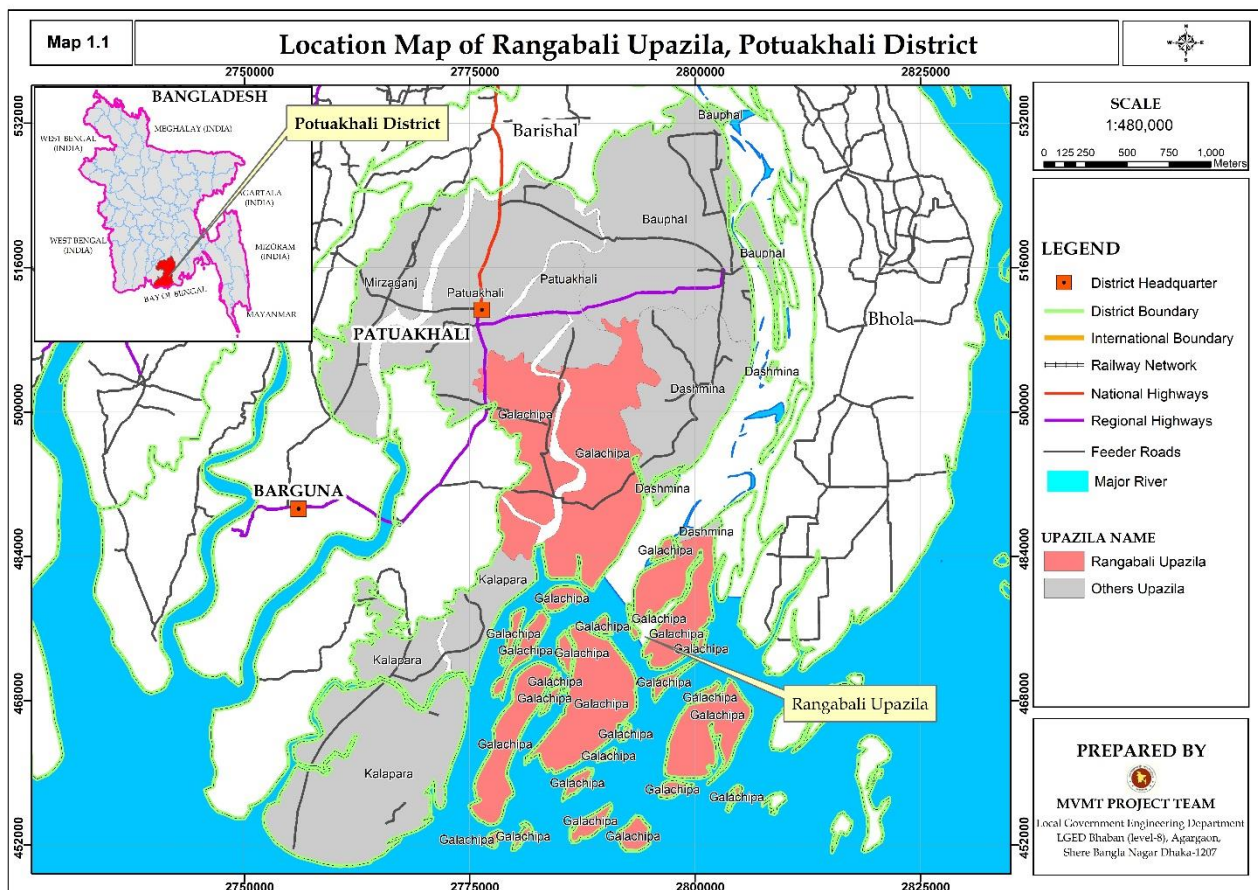


Figure 1: Upazila Location Map.

3 APPROACH & METHODOLOGY

3.1 STUDY TEAM COMPOSITION

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

Stakeholder Consultation Meeting

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

3.2 STUDY AREA

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

3.3 DATABASE REVIEW AND ANALYSIS

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

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

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

3.4 PRIORITIZATION CRITERIA OF SUB-PROJECTS

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

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

3.5 WEIGHTAGE DISTRIBUTION FOR PRIORITIZATION

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

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

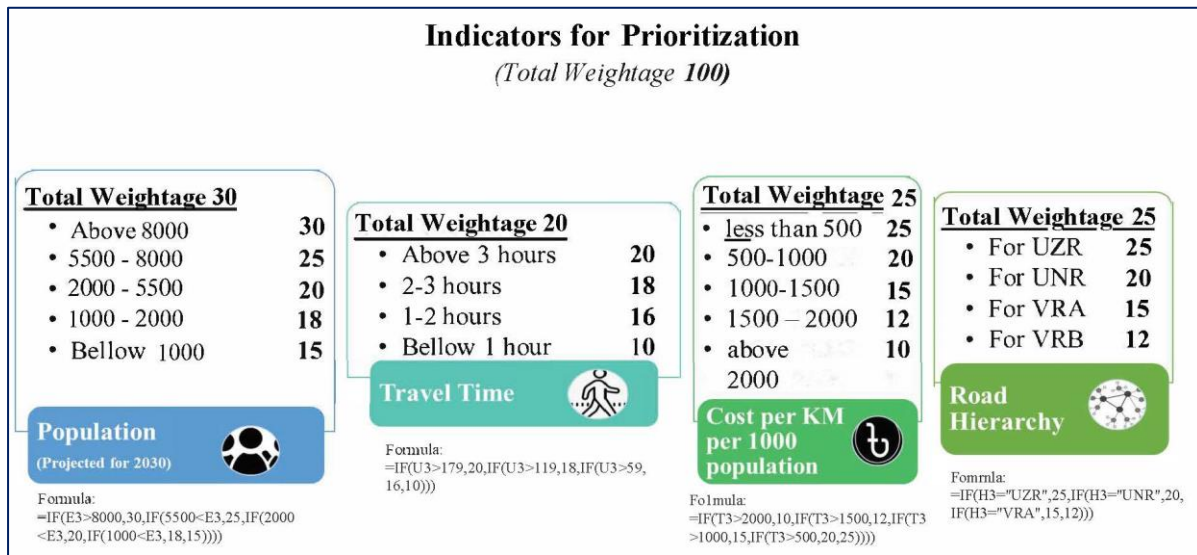


Figure 2: Prioritization indicators & their weightage values

3.6 MAPPING HARD-TO-REACH VILLAGES & POPULATION

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

3.7 WRAP UP MEETING

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

3.8 VALIDATION WORKSHOP

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

3.9 NATIONAL WORKSHOP

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

4 RURAL ROAD CONNECTIVITY TO THE VILLAGES

4.1 SUMMARY OF THE VILLAGE CONNECTIVITY

Rangabali is an Island upazila. The rural road communication is quite poor here. Out of 110 villages, 94 are disconnected from the developed paved road network that brings huge sufferings for the people of those villages. The total rural road network of Rangabali is 747.41 km and out of which, 149.57 km paved and 597.84 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	Bara Baisdia	44	7	37
2	Chalitabunia	6	1	5
3	Char Montaj	13	0	13
4	Chhota Baisdia	16	0	16
5	Rangabali	31	8	23
Total=		110	16	94

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.

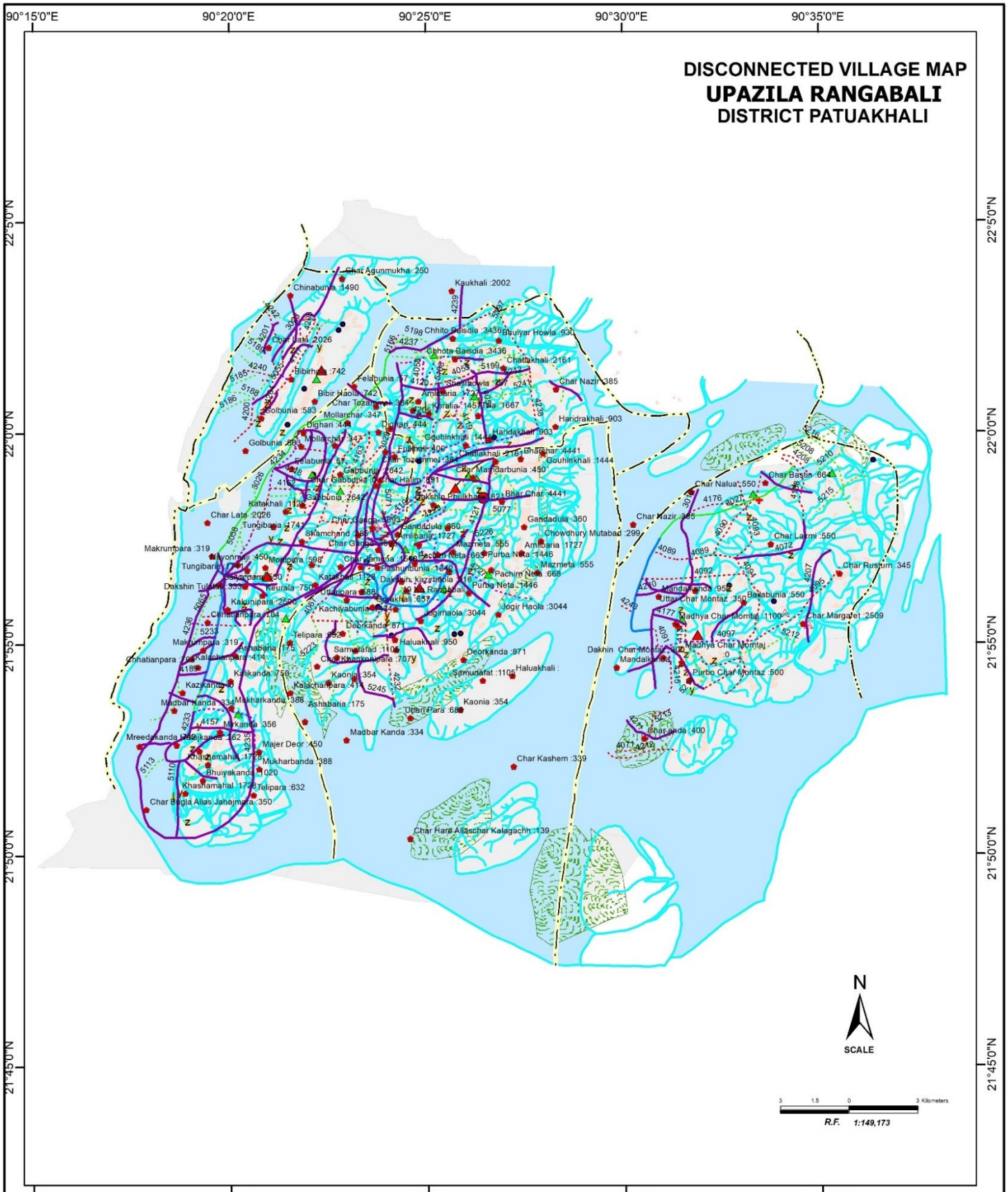
Table 2: Union wise connected & Hard-to-Reach Villages and their population

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
Bara Baisdia (44)	1	1 Charkhali	376	Ashabaria	201
	2	Bailabunia	596	Bailabunia	458
	3	Char Hare Aliaschar Kalagac	159	Bhuiyakanda	1169
	4	Kalachandpara	481	Char Bagla Alias Jahajmara	0
	5	Kankanipara	650	Char Gabbunia	0
	6	Kharadeowr	827	Char Ganga	4117
	7	Marajangi		Char Halim	1021
	8			Chhatianpara	807
	9			Dakshin Tulatali	382
	10			Dighari	509
	11			Felabunia	65
	12			Gabbunia	3027
	13			Gaiya para	630
	14			Hafejkanda	300
	15			Howlader Kanda	516
	16			Kakunipara	650
	17			Kalachan para	474

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
	18			Kalachanpara	474
	19			Kalikanda	0
	20			Katakhali	1292
	21			Keurala	859
	22			Khashamahhal	1980
	23			Madbar Kanda	383
	24			Majer Deor	516
	25			Makrumpara	365
	26			Mirkanda	408
	27			Mollarchar	398
	28			Monipara	630
	29			Moudukhali	2292
	30			Mreedakanda	850
	31			Mukharkanda	445
	32			Nayonmaji	516
	33			Nichkatha	472
	34			Nizkata	630
	35			Shamchand	327
	36			Telipara	724
		37			Tungibaria
		Sub Total=	3089		29882
Chalitabunia (6)	1	Chalitabunia	2076	Bibirhola	850
	2	Marajangi	569	Char Agunmukha	286
	3			Char Lata	2321
	4			Chinabunia	1707
	5			Golbunia	668
			Sub Total=	2645	
Char Montaj (13)	1			Bailabunia	630
	2			Char anda	458
	3			Char Bastin	761
	4			Char Laxmi	630
	5			Char Margaret	516
	6			Char Momtaj	0
	7			Char Nalua	630
	8			Char Rustum	395
	9			Dakhin Char Montaz	344
	10			Madhya Char Montaj	0
	11			Mandalkanda	0
	12			Purbo Char Montaz	573
	13			Uttar Char Montaz	401
		Sub Total=	0		5338

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
Chhota Baisdia (16)	1			Bhuiyar Howla	1066
	2			Char Emarson	426
	3			Char Mamdarbunia	0
	4			Char Nazir	441
	5			Char Tozammel	440
	6			Chatlakhali	2476
	7			Chhito Baisdia	3937
	8			Dakshin Phulkhali	2086
	9			Gouhinkhali	1654
	10			Haridakhali	1035
	11			Kaukhali	2294
	12			Koralia	1669
	13			Naya Bhanguni	2694
	14			Shajirhowla	867
	15			Tilla	1910
	16			Fulkhali	458
			Sub Total=	0	
Rangabali (31)	1	Char Bastin	761	19 No Rangabali	712
	2	Charkanda	739	Amlibaria	1979
	3	Choukha	474	Bharchar	5088
	4	Hapuakhali	470	Char Jamuna	1774
	5	Kataban	786	Char Kashem	388
	6	Senerhaola	848	Char Khankonipara	810
	7	Sonarchar	0	Chowdhury Mutabad	299
	8			Dakshin kazirhaola	1050
	9			Deorkanda	998
	10			Gandadula	412
	11			Gorakhali	753
	12			Haluakhali	1088
	13			Jugirhaola	3488
	14			Kachiyabunia	1643
	15			Chowdhury Mutabad	343
	16			Kaonia	406
	17			Mazmeta	636
	18			Paschim Neta	765
	19			Pashuribunia	1538
	20			Purba Neta	1657
	21			Samudafad	1266
	22			Uttar Kazirhaola	1974
	23			Uttaripara	788
		Sub Total=	4121		29212

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



LEGEND

Administrative Headquarters District Upazila Union Administrative Boundary International Boundary Division Boundary District Boundary Upazila Boundary Union Boundary Municipal Boundary	Natural Features Wide River with Sandy Area Small River/ Khal Haor Forest Hill Physical Infrastructures National Highways Regional Highways Zilla Road	Proposed Village Connecting Road Upazila Road (Puca) Upazila Road (Katcha) Union Road (Puca) Union Road (Katcha) Village Road A (Puca) Village Road A (Katcha) Village Road B (Puca) Village Road B (Katcha) Railway Network	Embankment Power Transmission Line Socio-Economic Infrastructures Growth Centre Rural Market Police Station Upazila Health Complex Family welfare Centre Community Clinic	Disconnected Village Post Office College High School Primary School Madrasa Mosque Ashrayani/Abasan Settlement Mouza Boundary
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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 1998, GPS Survey 1998. 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, that was participated by UNO, UE and all the UP Chairmen & their secretaries. During the meeting, consultant team briefly discussed about the project and instructed the UP Chairmen and UE office for the database correction along with mapping procedure. The team worked on both the database and upazila map and obtained the necessary outputs subsequently.

5.2 VISIT TO CASE STUDY UNION

The consultant visited “Kasem Mollar Sluice - Abu Miar Sluice” (ID: 578584207) in Char Montaj union and observed the alignment of case study union there. It’s an all-weather road and was selected considering the beneficiary population, educational institutes along the road. The road serves approximately 3000 people of the village Char Margaret.



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



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

In accordance with LGED, the length of this road is 3 km that is completely earthen. During the case study union visit, the condition of this upazila road has observed. GPS data has been recorded along the alignment; photos have been taken subsequently to demonstrate the alignment condition clearly.

This earthen village road allows the road users to use mostly two-wheelers & electro powered auto rickshaws at present. It is noted, the road condition does not meet the standard for four-wheelers.



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



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



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



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



Figure 10: Condition of the visited road alignment at Case Study union

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

Rangabali is an island upazila that is surrounded by waterbodies and is adjacent to the Bay of Bengal. 5 (five) rivers have passed through the upazila. That are Agunmukha, Darchira, Bura Gowranga, Ramnabad, Meghna, Tetulia & Galachipa rivers. As an island upazila, waterways have a major importance for transportation to the inhabitants of the upazila. According to the UE, Rangabali 4 (four) riverine routes can be used as multi modal transport system.

The name of the riverine routes & the associated streams with types of water vehicle are as follows;

Table 3: Proposed riverine routes of the upazila

Sl. No	Name of the Riverine Route	Name of the Stream	Type of the Stream	Types of Water Vehicle	Need of excavation
1	Upazila H/Q- Koralia Village - Char Halim village- Uttar Kazir Howla - Baher Char Village - Dakhin Tulatali Village	Agunmukha river, Darchira river & Gohinkhali Khal	Intermittent (April – Aug)	Small Boat, Engine Boat, Trawler, Cargo, Lanuch	Yes
2	Upazila H/Q - Char Madarbunia village - Mondol Village - Char Montaz Village - Char Anda Village	Bura Gauranga	Intermittent (April – Aug)	Small Boat, Engine Boat, Trawler, Cargo, Lanuch	Yes
3	Upazila H/Q - Moudubi Village - Nizkata Village	Asabaria Khal	Intermittent (April – Aug)	Small Boat & Engine Boat	Yes
4	Upazila H/Q - Char Bestin Village - Laxmi village - Char Margaret Village	Char Bestin Khal	Intermittent (April – Aug)	Small Boat & Engine Boat	Yes

6.2 PROPOSED ROADWAY FOR HARD-TO-REACH VILLAGES:

At present, roads are the most dominant mode of transportation. Most of the structures were built on the rivers to make the road communication effective. Yet, 15 (fifteen) 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)
747.41	149.57	597.84	278.20

6.2.1 PROPOSED ALL WEATHER ROUTES:

There are 85 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	Char Montaz UPC-Char Nalua Bazar	578583019	All Weather	10.2
2	Chalitabunia UPC - Galachipa UPC	578583023	All Weather	7
3	Barobaisdia UPC - Kachiabunia Bazar.	578583025	All Weather	4.055
4	Cottobaisdia UPC - Koralia Bazar	578583028	All Weather	2
5	Barobaisdia UPC - Tulatali Bazar	578583029	All Weather	3
6	Chottoobisha UPC - Kachabunia Bazar Via Char halim Wapda	578583030	All Weather	6.2
7	Chottabaisdia UPC - Gohinkhali Bazar	578583031	All Weather	4.5
8	Gahin Khali-Haridra khali	578584054	All Weather	4.1
9	Gongi Para pry.school-Battala	578584061	All Weather	2.85
10	Katichiabunia F.P. Office-Pashirbunia	578584062	All Weather	2.62
11	North Kazir howla-Jabbor howlader House	578584064	All Weather	4.25
12	Amlibaria Nadupada-Rasulbaria	578584065	All Weather	3
13	Neta old Talukder-Fazhul hoque House	578584066	All Weather	2.4
14	Matiar Rahman house-Char Margaret	578584072	All Weather	8.5
15	Montaz hat-H/O Rashid Garami	578584073	All Weather	3.75

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
16	Rashid Mridha house-Darbanga	578584095	All Weather	5.4
17	Moudubi Bazar-Forest office via - Bailabunia GPS	578584098	All Weather	0.5
18	Degree pry. /S-Falabunia Bazar.	578584118	All Weather	2
19	Kazi bari - Horidrakhali Bazar via Molla Bazar	578584120	All Weather	6.29
20	Bahar char- Thana - Neta bazar via.Das bari.	578584121	All Weather	2.5
21	Gohinkhali UZR - South Fulkhali GPS - WAPDA UNR.	578584146	All Weather	6.15
22	SCI Office to Bailabunia	578584157	All Weather	3
23	Asabaria Bridge to Kankonipara L.Ghat .	578584158	All Weather	2.3
24	Nayerkanda L.Ghat to Gabbunia Cyclone shelter .	578584160	All Weather	1.5
25	Felabunia bazar to Degree sobahan chowkider bari.	578584161	All Weather	2.7
26	Char montaj Union Health complex - Harejkhbarbari.	578584177	All Weather	2.1
27	Barobisda UPC - House of Jamir Mreda Via Bellal Mufti House	578584188	All Weather	2.8
28	Kankonipara WAPADA--Asaralo Mosque	578584189	All Weather	2
29	Charlata Closser--Charlata Asraon Rg. PS	578584201	All Weather	3.4
30	Golbunia C/S--Golbunia GPS	578584204	All Weather	2.7
31	Koralia FWC --West WAPADA	578584205	All Weather	1.5
32	Charbastin Juniar High School -- Charbastin Abation	578584206	All Weather	6.4
33	Kasem Mollar Sluice - Abu Miar Sluice	578584207	All Weather	3
34	Uttar Charmontaj Rg. P.S --West WAPADA	578584210	All Weather	5
35	Charunda South WAPADA -- Charunda Khayaghat	578584211	All Weather	4.5
36	Bou Bazar - Nayarchar Rg. P. S	578584214	All Weather	5.8
37	19 NO GPS - Bridge AT Samudabad Road Via Mufti Bari	578584216	All Weather	2.5
38	Borobisda up - East Tulatali WAPADA	578584221	All Weather	3
39	Baherchar Bazar - Gohinkhali L. ghat	578584230	All Weather	1.3

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
40	Gohinkhali Bazar UZR - Gohinkhali L. Ghat	578584231	All Weather	1.55
41	Moudubi Bazar - Moudubi Mokurbanda C.S Cum GPS	578584233	All Weather	3.8
42	Jahajmara Abashan - Tulatoli Bazar - Modukhali Abashan UNR.	578584235	All Weather	9.5
43	Jahajmara Abashan - Nijkata Bazar - Giapara L.Ghat .	578584236	All Weather	5.7
44	Korali Bazar - Kawkhali GPS	578584237	All Weather	4.7
45	Kawkhali GPS WAPDA - Kawkhali River Ghat.	578584239	All Weather	2.9
46	Gongi para-Govt. Pry School -left side Jalal Doctor Bari	578584245	All Weather	2.2
47	Chiltabunia khal gora-Jahangir Mufter	578585055	All Weather	2.95
48	Gabbunia Dakhil Madrasha-Katakhali Rd	578585057	All Weather	1.8
49	Moudubi Bazar-Kazi Kanda	578585059	All Weather	0.5
50	A. Hakim H/S-Katakhali Bazar	578585060	All Weather	1
51	Moudubi H/S-Mukhor Bandha	578585062	All Weather	3.5
52	Moudubi bazar-H/O Razir Babu	578585064	All Weather	1
53	Jugir Howla kala mia-East Neta	578585076	All Weather	3.81
54	Neta tota Mistory-Sluice	578585078	All Weather	1.2
55	Naya Miah House-Tara Dafader	578585082	All Weather	1.75
56	Moudovi new market to Nizkata Launchghat .	578585109	All Weather	1.5
57	Kashmohol to Char Bogla .	578585110	All Weather	2.9
58	Belar bari to Mirda bari	578585111	All Weather	2.73
59	Mondolbazar - Union connecting road	578585122	All Weather	3
60	Charganga Khayghat--Kachiabunia Khayaghat	578585147	All Weather	2.4
61	Mukhorbanda at Motahar House-Char bogla sluice	578585150	All Weather	2
62	Barobisda up--House of Jamir Master House	578585151	All Weather	2.6
63	Noya Vanguni Aziz Khalifa Bari - West side of Embankment	578585163	All Weather	0

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
64	Amlia Baria Nadu Pada Bari - Maj Neta Via Satter bepari Bari Up to Samudabad Road	578585171	All Weather	1.9
65	Rangabali Katchiabunia lanch ghat - Ali Asraf Forester Bari	578585173	All Weather	0.95
66	kalu Mia House - South Side of Saner Hawla Embankment Jame Mosque Via Chowkider Bari	578585175	All Weather	1.75
67	Gongi Para SahabuddinDr. Shop - Sluise Ghat Via Mohurali Foraji Bari.	578585176	All Weather	1.1
68	Uttar Kazir Hawla Madrasha - Katchiabunia Embankment Via Dakkin Kazir Hawla Reg. GPS	578585183	All Weather	4.5
69	Char Emartion East WAPADA -- West WAPADA	578585192	All Weather	5
70	East Char Najir --West Char Najer	578585193	All Weather	4
71	Cowkhali Nur Islam House --AD Ali House	578585195	All Weather	2.5
72	Chatlakhali H/O Sanu Farazi - Chatlakhali H/Oshajahan Mredha	578585199	All Weather	4.8
73	Thilla H/O Dhala Member --H/O Afran Pada	578585202	All Weather	2
74	Bailabunia Rg. PS --Charmontaj H/O Habib How	578585211	All Weather	4
75	Ragabali khal gora Bazar -- Razar Bazar -- Samudabad Sluice	578585220	All Weather	9
76	Charkankune Rasid House - West Way Bazlu khan House	578585225	All Weather	5
77	Nata Mostak MemberHuse - Maj Nata Rahiem Member House	578585227	All Weather	3.5
78	Taktaibunia bazar -- North Way H/O Jakier master	578585231	All Weather	1
79	Moni para-H/O Ripon House--H/O Moklies mail House-- Tulatali	578585233	All Weather	2
80	Gayea para -- Taktabunia Bazar	578585234	All Weather	1.5
81	Kankunipara TDR Nedar office - south Dalal bari via Habibur Rahman howlader bari	578585238	All Weather	2.205
82	Mara Jangi Das bari -Nasir member bari road	578585239	All Weather	2
83	Samudabad Molla bari - Samudabad Shikder Bari WAPDA	578585244	All Weather	0.8
84	Gongi para Shahalam Shop Uttari Para - Uttari para-Allah dan Mosque WAPDA	578585245	All Weather	0.7
85	Modukhali L.Ghat to North gabbunia river .	578584166	Submersible	6.2

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 no roads proposed to connect the HTRV within the upazila that have no ID yet.

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 6: Considered weightage values for the prioritization

Criteria	Weightage
Population	30
Travel Time	20
Cost per Km/ 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

- Rangabali is a coastal Upazila. There are 7 (seven) rivers that dominate the ecosystem & transport system of the Upazila. That are Agunmukha, Darchira, Bura Gowranga, Ramnabad, Meghna, Tetulia & Galachipa. During coastal disasters and monsoon, these rivers behave erosive and cause extensive river erosion that induces severe impacts in both the built and the natural environment. Though the Upazila has a number of rivers, riverine transport is available only during Apr – August and some can be used 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 94 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 Rangabali in Patuakhali 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		
Bara Baisdia	Felabunia Hat	HB	Yes	General Market	Both	1	0	0.00	46			0.00	0	0
Bara Baisdia	Takta Bunia Hat	HB	Yes	General Market	Both	1	0	0.00	195			0.00	0	0
Bara Baisdia	Dokkhin Tulatali Ghat Bazar	HB	Yes	General Market	Both	1	0	0.00	45			0.00	0	0
Bara Baisdia	Kata Khali Hat	HB	Yes	General Market	Both	1	0	0.00	25			0.00	0	0
Chalitabunia	Chalitabunia bazar	HB	Yes	General Market	Both	2	0	0.00	95	0.00	0.00	0.00	0	4500
Char Montaj	Char Montaj Sluij Bazar	HB	Yes	General Market	Both	1	0	0.00	315			0.00	50000	50000
Char Montaj	Char Bestin Hat	HB	Yes	General Market	Both	1	0	0.00	60			0.00	0	2500
Char Montaj	Char Montaj Puran Bazar	HB	Yes	General Market	Both	1	0	0.00	35			0.00	225100	0
Chhota Baisdia	Mollar Hat	HB	Yes	General Market	Both	1	0	0.00	200			0.00	20000	50000
Chhota Baisdia	Haridrakhali Bazar	HB	Yes	General Market	Both	1	0	0.00	113			0.00	15640	8400
Chhota Baisdia	Gohin Khali Hat	HB	Yes	General Market	Both	1	0	0.00	100	1.00	1.00	1.00	1620000	2550100
Moudubi	Moudubi Bazar	HB	Yes	General Market	Both	1	0	0.00	155			0.00	60500	41000
Moudubi	Nichkata Bazar	HB	Yes	General Market	Both	1	0	0.00	144			0.00	0	32000
Rangabali	Rangabali Notun Bazar	HB	Yes	Collection Center	Both	1	29	1.41	225	1.44	2.89	0.00	90000	183000
Rangabali	Baher Char Hat	HB	Yes	General Market	Both	1	317	15.85	390	5.43	11.6 2	0.00	190000	505100
Rangabali	Netar Hat/Neta Bazar	HB	Yes	General Market	Both	1	0	0.00	50			0.00	11400	12000
Rangabali	Pulghat Hat	HB	Yes	General Market	Both	1	0	0.00	210			0.00	0	40000

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	Chhota Baisdia	Dakshin Phulkhali	2086	Chottabaisdia UPC - Gohinkhali Bazar	578583031	UNR	All Weather	5.7	1.2		4.5	4.5	540		0	540	464	259	68	20	16	25	20	81
2	Chhota Baisdia	Chhito Baisdia	3937	Korali Bazar - Kawkhali GPS	578584237	VRA	All Weather	4.7			4.7	4.7	564		0	564	838	143	71	20	16	25	15	76
3	Char Montaj	Char Bastin	1802	Charbastin Juniar High School --Charbastin Abation	578584206	VRA	All Weather	6.4			6.4	6.4	768		0	768	282	426	96	18	16	25	15	74
4	Chhota Baisdia	Haridakhali	1035	Gahin Khali-Haridra khali	578584054	VRA	All Weather	4.1			4.1	4.1	492		0	492	252	476	62	18	16	25	15	74
5	Rangabali	Dakshin kazirhaola	1050	North Kazir howla-Jabbor howlader House	578584064	VRA	All Weather	4.25			4.25	4.25	510		0	510	247	486	64	18	16	25	15	74
6	Chhota Baisdia	Chatlakhali	2476	Chatlakhali H/O Sanu Farazi --Chatlakhali H/Oshajahan Mredha	578585199	VRB	All Weather	4.8			4.8	4.8	576		0	576	516	233	72	20	16	25	12	73
7	Rangabali	Uttar Kazirhaola	1974	Uttar Kazir Hawla Madrasha - Katchiabunia Embankment Via Dakkin Kazir Hawla Reg. GPS	578585183	VRB	All Weather	4.5			4.5	4.5	540		0	540	439	274	68	18	16	25	12	71
8	Rangabali	Bharchar	5088	Bahar char- Thana - Neta bazar via.Das bari.	578584121	VRA	All Weather	7.35	2.5	2.35	2.5	4.85	582		0	582	1049	114	38	20	10	25	15	70
9	Char Montaj	Char Margaret	2875	Kasem Mollar Sluice --Abu Miar Sluice	578584207	VRA	All Weather	3	0	0	3	3	360		0	360	958	125	45	20	10	25	15	70
10	Chhota Baisdia	Kaukhali	2294	Kawkhali GPS WAPDA - Kawkhali River Ghat .	578584239	VRA	All Weather	2.9			2.9	2.9	348		0	348	791	152	44	20	10	25	15	70
11	Chalitabunia	Char Lata	2321	Charlata Closser--Charlata Asraon Rg. PS	578584201	VRA	All Weather	3.4			3.4	3.4	408		0	408	683	176	51	20	10	25	15	70
12	Bara Baisdia	Majer Deor, Bailabunia	1111	Moudubi Bazar-Forest office via -Bailabunia GPS	578584098	VRA	All Weather	4	3.5	0	0.5	0.5	60		0	60	2223	54	8	18	10	25	15	68
13	Chhota Baisdia	Koralia	1669	Koralia FWC - West WAPADA	578584205	VRA	All Weather	1.5			1.5	1.5	180		0	180	1113	108	23	18	10	25	15	68
14	Chhota Baisdia	Gohinkhali	1654	Gohinkhali Bazar UZR - Gohinkhali L. Ghat	578584231	VRA	All Weather	4.8	3.25		1.55	1.55	186		0	186	1067	112	23	18	10	25	15	68
15	Bara Baisdia	Tungibaria	1995	Borobisda up -- East Tulatali WAPADA	578584221	VRA	All Weather	3			3	3	360		0	360	665	180	45	18	10	25	15	68
16	Rangabali	Amlibaria	1979	Amlibaria Nadupada-Rasulbaria	578584065	VRA	All Weather	3			3	3	360		0	360	660	182	45	18	10	25	15	68
17	Rangabali	Kachiyabunia	1643	Katchiabunia F.P. Office-Pashirbunia	578584062	VRA	All Weather	2.62			2.62	2.62	314.4		0	314.4	627	191	39	18	10	25	15	68
18	Char Montaj	Madhya Char Montaj	1260	Char montaj Union Health complex - Harejkhbari.	578584177	VRA	All Weather	2.1			2.1	2.1	252		0	252	600	200	32	18	10	25	15	68
19	Bara Baisdia	Kalachanpara, Keurala	1341	Barobisda UPC--House of Jamir Mreda Via Bellal Mufti House	578584188	VRA	All Weather	2.8	0	0	2.8	2.8	336		0	336	479	251	42	18	10	25	15	68
20	Bara Baisdia	Mreedakanda, Hafejkanda	1150	Moudubi Bazar - Moudubi Mokurbanda C.S Cum GPS	578584233	VRA	All Weather	3.8			3.8	3.8	456		0	456	303	396	57	18	10	25	15	68
21	Rangabali	Samudafad, Char Kashem	1654	Gongi Para pry.school-Battala	578584061	VRA	All Weather	6.45		3.6	2.85	6.45	774		0	774	257	468	43	18	10	25	15	68
22	Bara Baisdia	Char Ganga	4117	Charganga Khayghat--Kachiyabunia Khayaghat	578585147	VRB	All Weather	2.4			2.4	2.4	288		0	288	1715	70	36	20	10	25	12	67
23	Bara Baisdia	Gabbunia	3027	Gabbunia Dakhil Madrasha-Katakhal Rd	578585057	VRB	All Weather	1.8			1.8	1.8	216		0	216	1682	71	27	20	10	25	12	67
24	Char Montaj	Mandalkanda	4648	Mondolbazar - Union connecting road	578585122	VRB	All Weather	3			3	3	360		0	360	1549	77	45	20	10	25	12	67
25	Chhota Baisdia	Nayavanguni	2694	Noya Vanguni Aziz Khalifa Bari - West side of Embankment	578585163	VRB	All Weather	1.85	0	1.85	0	1.85	222		0	222	1456	82	0	20	10	25	12	67
26	Rangabali	Jugirhaola	3488	Jugir Howla kala mia-East Neta	578585076	VRB	All Weather	3.81			3.81	3.81	457.2		0	457.2	915	131	57	20	10	25	12	67
27	Chhota Baisdia	Shajirhowla	867	Kazi bari - Horidrakhali Bazar via Molla Bazar	578584120	VRA	All Weather	6.29			6.29	6.29	754.8		0	754.8	138	870	94	15	16	20	15	66
28	Rangabali	Pashuribunia	1538	Rangabali Katchiabunia lanch ghat - Ali Asraf Forester Bari	578585173	VRB	All Weather	4.65	3.7		0.95	0.95	114		0	114	1619	74	14	18	10	25	12	65
29	Bara Baisdia	Nayonmaji, Moudukhali	1384	Taktaibunia bazar -- North Way H/O Jakier master	578585231	VRB	All Weather	1	0	0	1	1	120		0	120	1384	87	15	18	10	25	12	65
30	Rangabali	Haluakhali	1088	Samudabad Molla bari - Samudabad Shikder Bari WAPDA	578585244	VRB	All Weather	0.8			0.8	0.8	96		0	96	1361	88	12	18	10	25	12	65
31	Chhota Baisdia	Tilla	1910	Thilla H/O Dhala Member --H/O Afran Pada	578585202	VRB	All Weather	2			2	2	240		0	240	955	126	30	18	10	25	12	65
32	Chalitabunia	Chinabunia	1707	Mara Jangi Das bari -Nasir member bari road	578585239	VRB	All Weather	2			2	2	240		0	240	854	141	30	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
33	Rangabali	Purba Neta	1657	Neta tota Mistry-Sluice	578585078	VRB	All Weather	2.4		1.2	1.2	2.4	288		0	288	690	174	18	18	10	25	12	65
34	Bara Baisdia	Khash mahal	1980	Kashmohol to Char Bogla .	578585110	VRB	All Weather	2.9			2.9	2.9	348		0	348	683	176	44	18	10	25	12	65
35	Bara Baisdia	Bhuiyakanda	1169	Mukhorbanda at Motahar house-Char bogla sluice	578585150	VRB	All Weather	2			2	2	240		0	240	584	205	30	18	10	25	12	65
36	Bara Baisdia	Katakhal	1292	A. Hakim H/S-Katakhal Bazar	578585060	VRB	All Weather	1			1	1	120	20	180	300	1292	232	15	18	10	25	12	65
37	Rangabali	Deorkanda	998	Gongi para Govt .Pry School -left side Jalal Doctor Bari	578584245	VRA	All Weather	2.2			2.2	2.2	264		0	264	454	265	33	15	10	25	15	65
38	Chhota Baisdia	Bhuiyar Howla	1066	Cowkhali Nur Islam House --AD Ali House	578585195	VRB	All Weather	2.5			2.5	2.5	300		0	300	426	282	38	18	10	25	12	65
39	Bara Baisdia	Chhatianpara	807	Kankonipara WAPADA--Asaralo Mosque	578584189	VRA	All Weather	2			2	2	240		0	240	403	298	30	15	10	25	15	65
40	Rangabali	Paschim Neta	765	Neta old Talukder-Fazhul hoque House	578584066	VRA	All Weather	2.4			2.4	2.4	288		0	288	319	376	36	15	10	25	15	65
41	Rangabali	19 No Rangabali	712	19 NO GPS -- Bridge AT Samudabad Road Via Mufti Bari	578584216	VRA	All Weather	2.5			2.5	2.5	300		0	300	285	422	38	15	10	25	15	65
42	Bara Baisdia	Mollarchar	398	Nayerkanda L.Ghat to Gabbunia Cyclone shelter .	578584160	VRA	All Weather	1.5			1.5	1.5	180		0	180	265	453	23	15	10	25	15	65
43	Bara Baisdia	Dighari	509	Degree pry./S-Falabunia Bazar.	578584118	VRA	All Weather	4.2	2.2		2	2	240		0	240	254	472	30	15	10	25	15	65
44	Chalitabunia	Golbunia	668	Golbunia C/S--Golbunia GPS	578584204	VRA	All Weather	2.7			2.7	2.7	324		0	324	247	485	41	15	10	25	15	65
45	Chhota Baisdia	Char Tozammel	440	Cottobaisdia UPC - Koralia Bazar	578583028	UNR	All Weather	5	3		2	2	240		0	240	220	545	30	15	10	20	20	65
46	Bara Baisdia	Kakunipara	650	Barobaisdia UPC - Tulatali Bazar	578583029	UNR	All Weather	3			3	3	360		0	360	217	554	45	15	10	20	20	65
47	Char Montaj	Char Nalua	630	Char Montaz UPC-Char Nalua Bazar	578583019	UNR	All Weather	13.7	3.5	0	10.2	10.2	1224		0	1224	62	1942	153	15	18	12	20	65
48	Bara Baisdia	Char Halim	1021	Chottoobisha UPC - Kachabunia Bazar Via Char halim Wapda	578583030	UNR	All Weather	6.2			6.2	6.2	744	270	2430	3174	165	3109	93	18	16	10	20	64
49	Rangabali	Char Khankonipara	810	Charkankune Rasid House -- West Way Bazlu khan House	578585225	VRB	All Weather	5			5	5	600		0	600	162	741	75	15	16	20	12	63
50	Char Montaj	Bailabunia	630	Bailabunia Rg. PS --Charmontaj H/O Habib How	578585211	VRB	All Weather	4	0	0	4	4	480		0	480	158	762	60	15	16	20	12	63
51	Bara Baisdia	Kalikanda	859	Moudubi bazar-H/O Razir Babu	578585064	VRB	All Weather	1			1	1	120		0	120	859	140	15	15	10	25	12	62
52	Bara Baisdia	Madbar Kanda	383	Moudubi Bazar-Kazi Kanda	578585059	VRB	All Weather	2	1.5		0.5	0.5	60		0	60	765	157	8	15	10	25	12	62
53	Rangabali	Uttaripara	788	Gongi Para SahabuddinDr. Shop - Sluice Ghat Via Mohurali Foraji Bari.	578585176	VRB	All Weather	2.1	1		1.1	1.1	132		0	132	717	167	17	15	10	25	12	62
54	Bara Baisdia	Howlader Kanda, Nizkata	988	Moudovi new market to Nizkata Launchghat .	578585109	VRB	All Weather	1.5	0	0	1.5	1.5	180		0	180	658	182	23	15	10	25	12	62
55	Rangabali	Kaonia	406	Gongi para Shahalam Shop Uttari Para -Uttari para Allah dan Mosque WAPDA	578585245	VRB	All Weather	0.7			0.7	0.7	84		0	84	579	207	11	15	10	25	12	62
56	Rangabali	Gorakhali	753	kalu Mia House - South Side of Saner Hawla Embankment Jame Mosque Via Chowkider Bari	578585175	VRB	All Weather	1.75			1.75	1.75	210		0	210	430	279	26	15	10	25	12	62
57	Bara Baisdia	Gaiya para	630	Gayea para -- Taktabunia Bazar	578585234	VRB	All Weather	1.5			1.5	1.5	180		0	180	420	286	23	15	10	25	12	62
58	Bara Baisdia	Monipara	685	Moni para H/O Ripon House--H/O Moklies mail House-- Tulatali	578585233	VRB	All Weather	2	0	0	2	2	240		0	240	343	350	30	15	10	25	12	62
59	Chalitabunia	Bibirhola	850	Chiltabunia khal gora-Jahangir Mufter	578585055	VRB	All Weather	3.4	0.45		2.95	2.95	354		0	354	288	416	44	15	10	25	12	62
60	Char Montaj	Char anda	458	Charunda South WAPADA --Charunda Khayaghat	578584211	VRA	All Weather	6.5	1	1	4.5	5.5	660		0	660	83	1440	68	15	16	15	15	61
61	Char Montaj	Uttar Char Montaz	401	Uttar Charmontaj Rg. P.S --West WAPADA	578584210	VRA	All Weather	5	0	0	5	5	600		0	600	80	1496	75	15	16	15	15	61
62	Chalitabunia	Char Agunmukha	286	Chalitabunia UPC - Galachipa UPC	578583023	UNR	All Weather	11.033	3.74	0.293	7	7.293	875.16		0	875.16	39	3055	105	15	16	10	20	61
63	Bara Baisdia	Shamchand	327	Barobaisdia UPC - Kachiabunia Bazar .	578583025	UNR	All Weather	8.5	3.745	0.7	4.055	4.755	570.6	270	2430	3000.6	69	9189	61	15	16	10	20	61
64	Chhota Baisdia	Char Mamdarbunia	516	Baherchar Bazar - Gohinkhali L. ghat	578584230	VRA	All Weather	7	4.2	1.5	1.3	2.8	336		0	336	184	652	20	15	10	20	15	60
65	Char Montaj	Purbo Char Montaz	573	Montaz hat-H/O Rashid Garami	578584073	VRA	All Weather	3.75	0	0	3.75	3.75	450		0	450	153	786	56	15	10	20	15	60
66	Bara Baisdia	Mirkanda	408	SCI Office to Bailabunia	578584157	VRA	All Weather	3			3	3	360		0	360	136	883	45	15	10	20	15	60
67	Rangabali	Char Jamuna	761	Ragabali khal gora Bazar -- Razar Bazar -- Samudabad Sluice	578585220	VRB	All Weather	9			9	9	1080		0	1080	85	1420	135	15	18	15	12	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)

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
68	Bara Baisdia	Telipara	724	Jahajmara Abashan - Tulatoli Bazar - Modukhali Abashan UNR .	578584235	VRA	All Weather	9.5			9.5	9.5	1140		0	1140	76	1574	143	15	18	12	15	60
69	Char Montaj	Char Laxmi	630	Matiar Rahman house-Char Margaret	578584072	VRA	All Weather	8.5	0	0	8.5	8.5	1020		0	1020	74	1619	128	15	18	12	15	60
70	Chhota Baisdia	Char Nazir	441	East Char Najir --West Char Najer	578585193	VRB	All Weather	4			4	4	480		0	480	110	1088	60	15	16	15	12	58
71	Chhota Baisdia	Char Emarson	426	Char Emartion East WAPADA --West WAPADA	578585192	VRB	All Weather	5			5	5	600		0	600	85	1408	75	15	16	15	12	58
72	Chhota Baisdia	Fulkhali	458	Gohinkhali UZR - South Fulkhali GPS - WAPDA UNR .	578584146	VRA	All Weather	7.4	1.25	0	6.15	6.15	738		0	738	75	1610	92	15	16	12	15	58
73	Char Montaj	Char Rustum	395	Rashid Mridha house-Darbanga	578584095	VRA	All Weather	5.4	0	0	5.4	5.4	648		0	648	73	1639	81	15	16	12	15	58
74	Bara Baisdia	Char Bagla Alias Jahajmara	401	Jahajmara Abashan - Nijkata Bazar - Giapara L.Ghat .	578584236	VRA	All Weather	5.7			5.7	5.7	684		0	684	70	1706	86	15	16	12	15	58
75	Bara Baisdia	Char Gabbunia	573	Modukhali L.Ghat to North gabbunia river .	578584166	VRA	Submersible	6.2			6.2	6.2	1116		0	1116	92	1948	93	15	16	12	15	58
76	Rangabali	Gandadula	412	Naya Miah House-Tara Dafader	578585082	VRB	All Weather	1.75			1.75	1.75	210		0	210	236	509	26	15	10	20	12	57
77	Rangabali	Mazmeta	636	Nata Mostak MemberHuse -- Maj Nata Rahiem Member House	578585227	VRB	All Weather	3.5			3.5	3.5	420		0	420	182	660	53	15	10	20	12	57
78	Rangabali	Chowdhury Mutabad	343	Amlia Baria Nadu Pada Bari - Maj Neta Via Satter bepari Bari Up To Samudabad Road	578585171	VRB	All Weather	4.8	2.9		1.9	1.9	228		0	228	180	666	29	15	10	20	12	57
79	Bara Baisdia	Kalachanpara	474	Belar bari to Mirda bari	578585111	VRB	All Weather	2.73			2.73	2.73	327.6		0	327.6	174	691	41	15	10	20	12	57
80	Bara Baisdia	Dakshin Tulatali	382	Kankunipara TDR Nedar office -south Dalal bari via Habibur Rahman howlader bari	578585238	VRB	All Weather	2.205			2.205	2.205	264.6		0	264.6	173	694	33	15	10	20	12	57
81	Bara Baisdia	Makrumpara	365	Barobisda up--House of Jamir Master House	578585151	VRB	All Weather	2.6			2.6	2.6	312		0	312	141	854	39	15	10	20	12	57
82	Bara Baisdia	Mukharkanda	445	Moudubi H/S-Mukhor Bandha	578585062	VRB	All Weather	3.5			3.5	3.5	420		0	420	127	945	53	15	10	20	12	57
83	Char Montaj	Dakhin Char Montaz	344	Bou Bazar -- Nayarchar Rg. P.S	578584214	VRA	All Weather	5.8	0	0	5.8	5.8	696		0	696	59	2025	87	15	16	10	15	56
84	Bara Baisdia	Ashabaria	201	Asabaria Bridge to Kankonipara L.Ghat .	578584158	VRA	All Weather	2.3			2.3	2.3	276		0	276	87	1377	35	15	10	15	15	55
85	Bara Baisdia	Felabunia	65	Felabunia bazar to Degree sobahan chowkider bari .	578584161	VRA	All Weather	2.7			2.7	2.7	324		0	324	24	4961	41	15	10	10	15	50

*** 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)