



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”

Hatiya, Noakhali



dat·Ex
DATA EXPERTS
Data Experts (Pvt.) Limited

 **Delight**
Engineers & Consultants Ltd. (DECL)
Delight Engineers & Consultants Ltd.

July, 2022

CONTENTS

GLOSSARY	i
Abbreviation	ii
Background	iii
1 Description of the Upazila	1
1.1 Geography and Demography	1
1.2 Education Features.....	1
1.3 Rural Road Communications.....	1
1.4 Agriculture, Food Production and Fisheries	1
1.5 Growth Centre and Hatbazar.....	1
2 Location of the Upazila	2
3 Approach & Methodology	3
3.1 Study Team Composition.....	3
3.2 Study Area.....	3
3.3 Database Review and Analysis	3
3.4 Prioritization Criteria of Sub-projects	4
3.5 Weightage Distribution for Prioritization.....	4
3.6 Mapping Hard-to-reach Villages & Population.....	5
3.7 Wrap Up Meeting.....	5
3.8 Validation Workshop.....	5
3.9 National Workshop.....	6
4 Rural Road Connectivity to the Villages	7
4.1 Summary of the Village Connectivity.....	7
4.2 Villages and their connectivity – Union level.....	7
4.3 Map of Hard-to-Reach Villages & Proposed Roads.....	10
4 Consultation Meeting & Field Visit.....	11
5.1 Upazila Level Meeting	11
5.2 Visit to Case Study Union.....	11
6 Data Collection & Analysis	13
6.1 Proposed Riverine Routes.....	13
6.2 Proposed Roadway for Hard-to-Reach Villages:.....	14
6.2.1 Proposed All Weather Routes:.....	14
6.2.2 Proposed Submersible Routes:.....	17
6.2.3 Proposed Roads for Hard-to-Reach Villages Having No ID:	17
6.2.4 Priority for Road Development	20
7 Conclusion & Recommendations	21
Annexure - 1.....	22
Annexure - 2.....	25

List of Figures

Figure 1: Upazila Location Map	2
Figure 2: Prioritization indicators & their weightage values	5
Figure 3: Upazila Map	10
Figure 4: Condition of the visited road alignment at Case Study Union	11
Figure 5: Condition of the visited road alignment at Case Study Union	11

List of Tables

Table 1: Total villages in the Unions and their connectivity.....	7
Table 2: Union wise connected & Hard-to-Reach Villages and their population	7
Table 3: Proposed riverine routes of the Upazila	13
Table 4: Summary of the rural roads in the Upazila.....	14
Table 5: Proposed all weather roads in the Upazila	14
Table 6: Proposed roads for Hard-to-Reach Villages having No ID.....	17
Table 8: Considered weightage values for the prioritization.....	20

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

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 **Hatiya** Upazila of **Noakhali** District.

1 DESCRIPTION OF THE UPAZILA

1.1 GEOGRAPHY AND DEMOGRAPHY

The geographical area of Hatiya Upazila is 1507.35 sq.km and has 11 Unions, 44 mouzas and 62 villages. The Upazila is 57 km away from district headquarters of Noakhali. Hatiya is an Upazila consists of several coastal islands and at the bank of the major river Meghna. The total population of the Upazila is approximately 4,53,000 of which 2,24,000 are male and 2,29,000 female, total number of households are 91,013 and average household size is 4.98 with a population density of 300 (as per population census 2011).

1.2 EDUCATION FEATURES

According to the information of the relevant local government offices there are 105 government, 99 registered primary & 5 kindergarten schools in the Upazila. On the other hand, Hatiya has 2 government with 25 non-government high schools, 1 government college, 3 private colleges, and 31 madrasahs. The literacy rate for the Upazila is 34.2%.

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 Hatiya 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 Hatiya is 1007.24 km and out of which, 293.75 km paved and 713.49 km earthen.

1.4 AGRICULTURE, FOOD PRODUCTION AND FISHERIES

Agriculture has a major importance for the economy of the people of Hatiya. There are 1,04,572 acres of arable land in the Upazila. In the fiscal year 2010-11 the Rice production was 28712, 53533 & 10 metric tons for Aus, Aman & Boro seasons respectively. The Upazila also produced 3299 metric tons of Potato and 3970 metric tons of Ground nuts, 5002 metric tons of Pepper in the same fiscal year 2010-11. A notable quantity of vegetable is also produced here in this Upazila.

According to the BBS (2010-11) data Hatiya has 3,989 acre of pond, dhighee & other wetlands that produced 67,824 metric tons of fishes. There also exists 11 poultry & 31 dairy farms.

1.5 GROWTH CENTRE AND HATBAZAR

Growth Centre and Rural Hatbazar is one of the main centres of the rural economy. Hatbazar is like the heart for the development of the rural economy. Rural hatbazar plays a role in increasing production and creating employment impacting on the supply chain of agriculture and non-agriculture products. There are 39 hatbazar and 6 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-I](#).

2 LOCATION OF THE UPAZILA

Hatiya Upazila of Noakhali district is in southern part of the country under Chattogram division. The location has been shown in the map. The Upazila is completely an island that is bounded by Noakhali Sadar and Ramgati Upazilas on the north, Bay of Bengal on the south and the east, Manpura Upazila on the west. Hatiya Upazila is an island in the northern Bay of Bengal, Bangladesh, at the mouth of the ‘*Meghna River*’. 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 Kushiyara, 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 Upazilas 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.

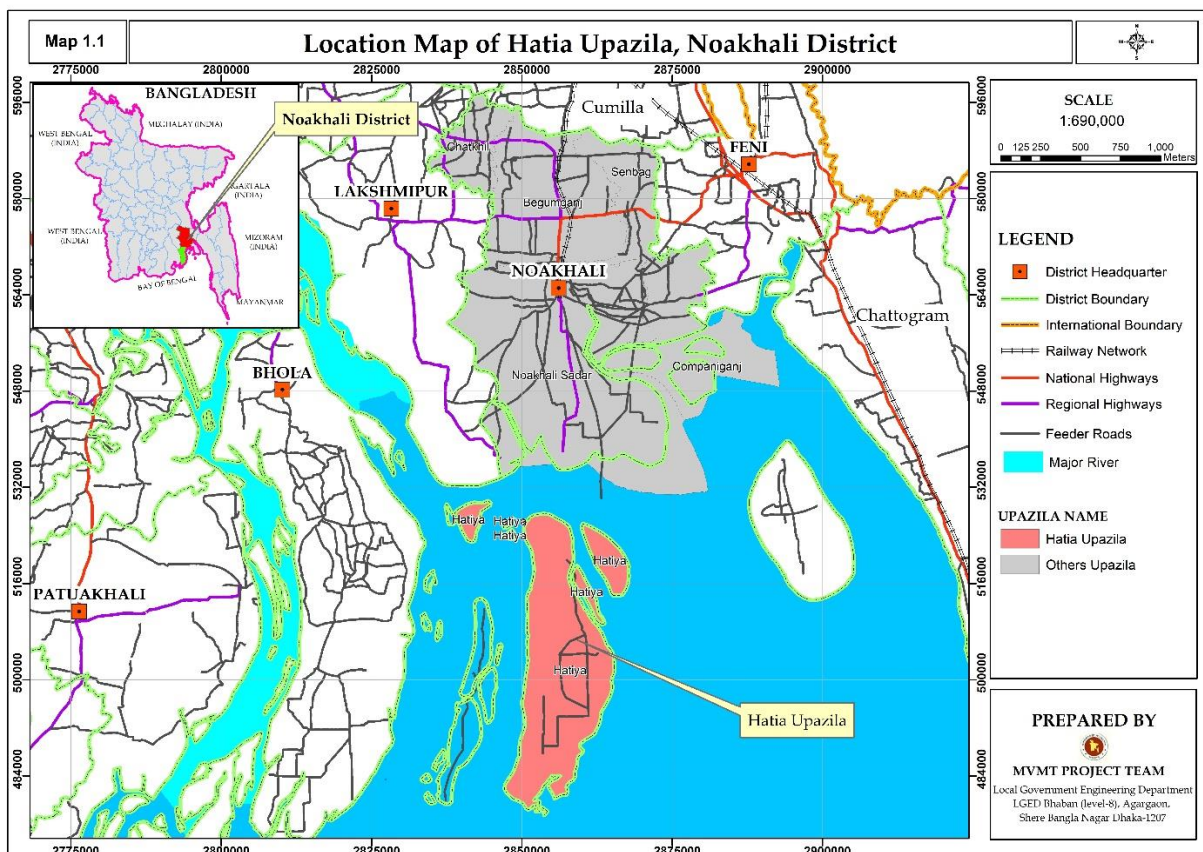


Figure 1: Upazila Location Map.

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.

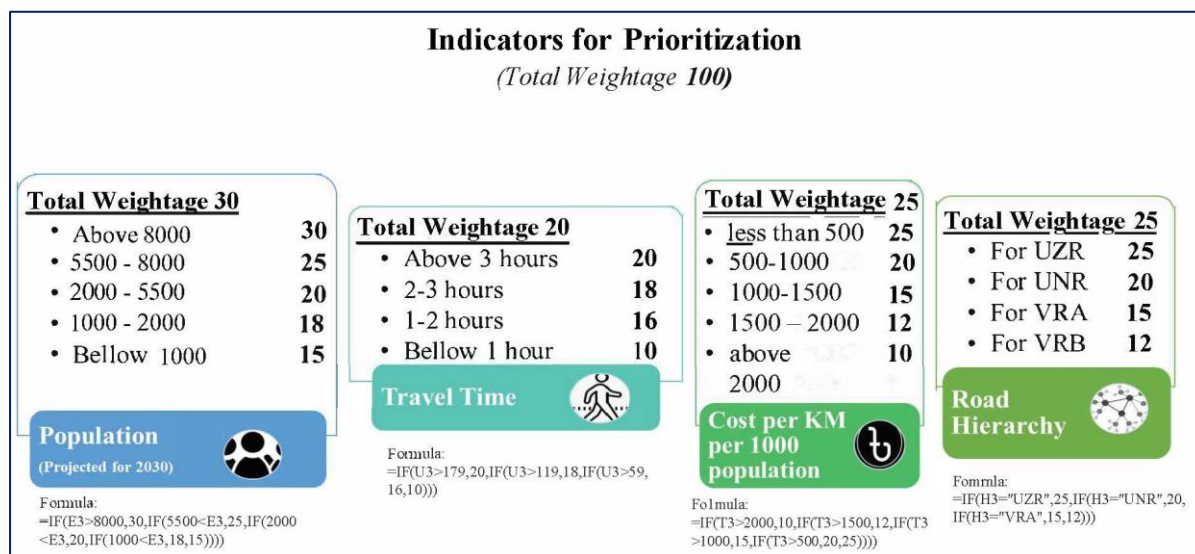


Figure 2: Prioritization indicators & their weightage values

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

Hatiya is an Island Upazila. The rural road communication is quite poor here. Out of 96 villages, 66 are disconnected from the developed paved road network that brings huge sufferings for the people of those villages. The total rural road network of Hatiya is 1007.24 km and out of which, 293.75 km paved and 713.49 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	Burir Char	11	3	8
2	Chanandi	8	0	8
3	Char Ishwar	5	3	2
4	Char King	8	0	8
5	Harni	23	6	17
6	Jahajmara	10	1	9
7	Nalchira	10	7	3
8	Sonadia	3	0	3
9	Sukh Char	6	1	5
10	Tamaruddin	11	8	3
Total =		96	29	66

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)
Burir Char (11)	1	Jorkhali	5621	Burir Char	7562
	2	Purba Baradail	8869	Dakshin Rehanian	3996
	3	Uttar Rehanian	4981	Gullakhali	2548
	4			Kalirchar	8208
	5			Paschim Baradail	3786
	6			Shagaria	5136
	7			Sunnerchar	4442
	8			Surjya Mukhe	6427
	Sub Total=		19471		42105
Chanandi (8)	1			Adarsha Gram	11458
	2			Alipur	11458
	3			Bhuiya Gram	11458
	4			Lalpol	14895
	5			Mannan nagar	5156

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
	6			Mannan Nagar	11458
	7			Rasel Gram	9166
	8			Richsha para	13749
	Sub Total=		0		78486
Char Ishwar (5)	1	Char Latia	2743	Char Lakshmiidia	4928
	2	Dakshin Char Ishwar Roy	5094	Rajar Haola	239
	3	Uttar Char Ishwar Roy	17047		
	Sub Total=		24884		5167
Char King (8)	1			Boalia	11852
	2			Char Bagula	3252
	3			Daskhin Char Iswar Roy	9422
	4			Shullukia	6722
	5			Uttar Char Iswar Roy	14666
	6			College	4583
	7			Ghamchakhali	
	8			Daspara	1897
Sub Total=		0		52394	
Harni (23)	1	Char Darbesh	2383	Ahmmadpur	3437
	2	Char Rasid	2350	Alamin	8020
	3	Decreerchar	0	Bhuiyar Char	13316
	4	Maijchar (Part)	0	Kazir Tak	1375
	5	Muklud (Part)	0	Mohammadpur Gram	11458
	6	Taliar Char	1390	Mufti Somaj	5729
	7			Nobipur	2292
	8			Pashcim rasulpur	8020
	9			Purba Kazir tak	8020
	10			Purba Nobipur	17186
	11			Purba Rasulpur	5729
	12			Purba Rasulpur Leski	11458
	13			Rahamatpur	5729
	14			Shariyatpur	10312
	15			South Islampur	8020
	16			Uttar Adarsho Gram	11458
	17			Zorkhali (South & North)	18332
Sub Total=		6123		149891	
Jahajmara (10)	1	Char Yonus	710	Char Birbiri	7512
	2			Char Hare	3397
	3			Char Mecpharson	9705
	4			Char Osman (Nikum Island)	11949
	5			Jahamara	12011

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
	6			Mohammadpur	8245
	7			Muktaria	2778
	8			Nutan Sukhchar	9982
	9			Purba Birbiri	9828
	Sub Total=		710		
Nalchira (10)	1	Aladigram	0	10 No Gram	3437
	2	Chhayabaria	0	Basir Uddin Mia	2292
	3	Jagannath	0	Kawnia	13108
	4	Lambaria	1287		
	5	Satbaria	0		
	6	Sharif Patari	0		
	7	Tingaon	0		
	Sub Total=		1287		
Sonadia (3)	1			Chengarchar	13051
	2			Maijchara (Part)	6490
	3			Sonadia	19625
	Sub Total=		0		
Sukh Char (6)	1	Char Bharatsen (Part)	0	10 No Gram	6875
	2			Dakshin Char Amanullah	9901
	3			Sowdagor	5729
	4			Sukhchar	1287
	5			Uttar Char Amanullah	922
	Sub Total=		0		
Tamaruddin (11)	1	Athara Beki	3962	Dakshin Bhejugania	4181
	2	Dakshin Tamaruddin	0	Koralia	2788
	3	Madhya Jorkhali	0	Paschim Jorkhali	3073
	4	Paschim Khirodia	2727		
	5	Purba khirodia	3469		
	6	Purba Jorkhali	2164		
	7	Uttar Bhejugania	5185		
	8	Uttar Tamaruddin	4509		
	Sub Total=		22016		

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

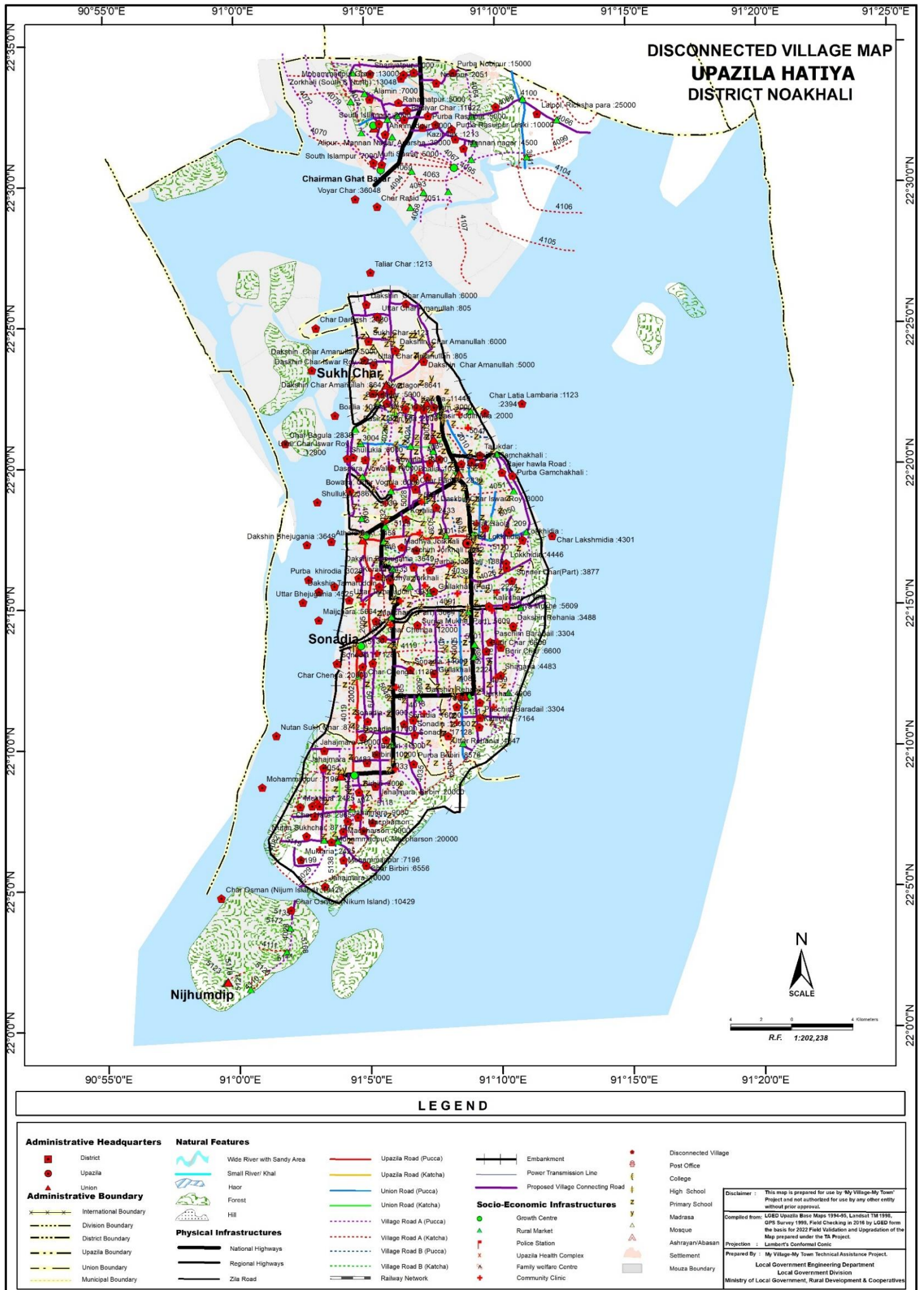


Figure 3: Upazila Map

4 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 “Sullukia Rd-RHD Road.” (ID: 475365028) in Sukh Char, the case study Union and observed the alignment there. During the case study Union visit, the condition of this village road is observed. GPS data has been recorded along the alignment, photos have been taken subsequently and some of it are attached here that can demonstrate the alignment condition clearly.



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



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

As an all weather village road, it serves around 10,000 villagers of Sowdagor. The length of this road is 3km of which 0.5 km paved and rest of the 2.5 km earthen. The condition of this road at present allows the road users to use mostly two-wheelers & electro powered auto rickshaws during dry season.

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

Hatiya Upazila is an island in the northern Bay of Bengal at the mouth of the ‘Meghna River’. As the Upazila is surrounded by water, riverine route is the only mode of transport that connects the Upazila with the other part of the country. According to the UE, Hatiya there exists 4 riverine route that can be used all the year and connects the scattered islands with the Upazila HQ. Generally Small Boat, Engine Boat, Cargo Ships, Launches are used to transport community & commodity.

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	Bander Tila-Nijumdip Namar Bazar (Vill- Nijumdip)	Muktaria Chenel	Perennial	Engine Boat	No
2	Dhalchar Hatia Ghat- Dhalchar kolatoli Ghat (vill- Dhalchar)	Megna River	Perennial	Engine Boat	No
3	Hatia to Chatla Ghat (Vill-Boyerchar)	Megna River	Perennial	Engine Boat	No
4	Hatia to Char Aaur (Vill-Char Aaur)	Char Aaur Khal	Perennial	Small Boat	No

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, 4 (four) 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)
1007.24	293.75	713.49	304

6.2.1 PROPOSED ALL WEATHER ROUTES:

There are 83 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	Khabir mia bazar-Afazia Bazar via Char King UP Office Road	475363003	All weather	3
2	Muzzam Haji road	475364017	All weather	6
3	DK road (Ahmed miar Bazar to Rona Market)	475364026	All weather	7
4	Martin road	475364036	All weather	4.5
5	Vumihin Bazar to Kaladur	475364066	All weather	
6	Jahajmara Road to Puraton Beri (Dak Bangla Road)	475364090	All weather	8
7	Darbesh Bazar to Vumihin Bazar (Shirajpur Road)	475364096	All weather	
8	Halima School road	475364112	All weather	5
9	Delwar Hossain road	475365024	All weather	6
10	Al Amin road	475365025	All weather	6
11	Sullukia road (islam market to Ramchoron bazar Bridge)	475365028	All weather	2.5
12	Mohesh Khali Road	475365090	All weather	5
13	Dr. Waliullah road	475365108	All weather	3.5
14	Surjya Mukhe Parjaton road	475365109	All weather	3.5
15	DC Road to Jahajmara Dona (Mohammad uddin Road)	475365112	All weather	3
16	Chaitanna Bazar-Ahmad Miar Bazar road	475365125	All weather	5

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
17	Pilot Road Baradail Up to Bari	475365131	All weather	4
18	Maijchara Lovely road (Purbo DC Road theke Pushim Berir Matha Jakirer Dokan)	475365142	All weather	5
19	Barakia road	475365148	All weather	3.5
20	Anamia road	475365155	All weather	6
21	Sukhchar Muktaria Ghat to Puschime jahajmara launch Ghat (Jahajmara Launch Ghat Road)	475365190	All weather	2
22	M Ali road Jahajmara Dona South side road	475365197	All weather	4
23	Tarobondhu road	475365199	All weather	7
24	Pondith road Uttare beri theke dokkhine khas mohol Road)	475365208	All weather	6
25	Mir Mohammed Ali Road(Colleg Road to Azma)	NO ID	All weather	8
26	Ali Bazar to Zorkhali Modhur Dokan (Zorkhali road)	NO ID	All weather	7
27	Apirago Polar Gora theke to dokkhine notun beri (Hawladar Road)	NO ID	All weather	7
28	Lovely road (Poshim Beri theke patni Road)	NO ID	All weather	7
29	Habib Ullah Mia Gopat via Macpharson Amtoli Bazar Sluwich	NO ID	All weather	6
30	Hoque Road (Das Para Mondir via Del to Vober Bazar)	NO ID	All weather	5
31	Rajar Dokan to Motkar Dokan	NO ID	All weather	5
32	Bogainnago road - Mohammadpur Bazar to Jaggalla Ghat rod	NO ID	All weather	5
33	Sukchar to Amtoli Bari road	NO ID	All weather	5
34	Mohhamad Uddin Road Road to Bus Stand (M. Ali Road)	NO ID	All weather	5
35	Dc Road to Pushcim Bus Stand Road (Mostafiz Road)	NO ID	All weather	5
36	Aziza Road (Lovely Road to Uttar Sonadia A Akboria Primary School	NO ID	All weather	5
37	Rahmania Road (Powro Simana to poschim Uttar Golam Mawlana Doakan	NO ID	All weather	4
38	Tanki road	NO ID	All weather	4
39	Nijumdwpip Parjoton road	NO ID	All weather	4

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
40	Mohammadpur Bazar to Sukhchar Bazar (Puraton Beri Road)	NO ID	All weather	4
41	M Ali Road (Ismail Road to uttar Joynal Road)	NO ID	All weather	4
42	Suja Mia Road (Hilton road to Poschim Nurul Hoquer Bari)	NO ID	All weather	4
43	Amin Mia Road (Uttar Beri theke Dokkhin Khalpar)	NO ID	All weather	4
44	Mohiuddin Road(Mukul Hajir Bazar to Uttar Khas Mohol Road)	NO ID	All weather	4
45	Nigar Sultana Road (Khas Mohol Road to Dokkhin Jahajmara Dona)	NO ID	All weather	4
46	Ali ahmed Road (Purba Burir Dona khal to Poschim Wapda beri)	NO ID	All weather	4
47	Ashik Ali road (Nimtolli Porjoton Area)	NO ID	All weather	7
48	Yunicia Road (Islam Dalaler bari to poschime Voyrob bazar)	NO ID	All weather	6
49	Abdul Malek Bazar to Champa Ghat	NO ID	All weather	
50	Hatiya bazar to Didar Bazar Road (Madrasha Road)	NO ID	All weather	3
51	Tanki Bazar to Joypur Mondir to Didar Bazar	NO ID	All weather	3
52	Moktaria Ghat Link Road	NO ID	All weather	3
53	Thana Pilot road	NO ID	All weather	2
54	Horaji Gram Mosjid Road to Maen uddin Bazar Road	NO ID	All weather	2.5
55	Chairman Ghat to Didar Bazar	NO ID	All weather	2.5
56	Brick Field to Champa Ghat	NO ID	All weather	2
57	Center bazar to maniker Dokan	NO ID	All weather	2
58	Champa Ghta to Aysha Ali Moshjid	NO ID	All weather	
59	Sukchar Bazar Uttar Jahajmara road	NO ID	All weather	7
60	Murtuja road	NO ID	All weather	5
61	Didar bazar to Mupti Somaj	NO ID	All weather	3
62	Shukh Char -Nalchira Border Road	NO ID	All weather	
63	Purba Rasulpur hatiya Bazar to Ali Ghat	NO ID	All weather	2.5
64	Char Amanullah Moddo Road	NO ID	All weather	
65	Hatiya bazar to Nobinagar Road (School Road)	NO ID	All weather	2

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
66	Dorgah Road (Char Amanullah Moddo to Beribad)	NO ID	All weather	2
67	Choy Baria Road	NO ID	All weather	2
68	Hachania Road	NO ID	All weather	
69	Afer uddin Road	NO ID	All weather	
70	Goironity Ashrom Road	NO ID	All weather	
71	Dakshin Bhejugalia Bhuiya road	NO ID	All weather	2.5
72	Jamalia road	NO ID	All weather	3.2
73	Nur Alam road	NO ID	All weather	3
74	Nobipur Bazar to DC Road (Nobipur road)	NO ID	All weather	3
75	Somadia Road	NO ID	All weather	2
76	Islam Bazar to Abdul malek Bazar (malek Road)	NO ID	All weather	2.5
77	Ponthid Road (Rahmania Road to Utter Jamal Master Bari)	NO ID	All weather	2
78	Ahammadpur Mosjid to Didar Bazar	NO ID	All weather	2
79	Forhad Road	NO ID	All weather	2
80	Paschim Jorkhali road	NO ID	All weather	2
81	Kazir Tak Mosjid Road to Main Road (Kazir Tak road)	NO ID	All weather	3.5
82	Ramsundar road	NO ID	All weather	2
83	Balkia Kaharpara road	NO ID	All weather	2.4

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 59 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	Mir Mohammed Ali Road(Colleg Road to Azma)	NO ID	8
2	Ali Bazar to Zorkhali Modhur Dokan (Zorkhali road)	NO ID	7
3	Apirago Polar Gora theke to dokkhine notun beri (Hawladar Road)	NO ID	7
4	Lovely road (Poshim Beri theke patni Road)	NO ID	7

Sl. No	Road Name	Road ID	Unpaved length (Km)
5	Habib Ullah Mia Gopat via Macpharson Amtoli Bazar Sluwich	NO ID	6
6	Hoque Road (Das Para Mondir via Del to Vober Bazar)	NO ID	5
7	Rajar Dokan to Motkar Dokan	NO ID	5
8	Bogainnago road - Mohammadpur Bazar to Jaggalla Ghat rod	NO ID	5
9	Sukchar to Amtoli Bari road	NO ID	5
10	Mohammad Uddin Road Road to Bus Stand (M. Ali Road)	NO ID	5
11	Dc Road to Pushcim Bus Stand Road (Mostafiz Road)	NO ID	5
12	Aziza Road (Lovely Road to Uttar Sonadia A Akboria Primary School	NO ID	5
13	Rahmania Road (Powro Simana to poschim Uttar Golam Mawlana Doakan	NO ID	4
14	Tanki road	NO ID	4
15	Nijumdwp Parjoton road	NO ID	4
16	Mohammadpur Bazar to Sukhchar Bazar (Puraton Beri Road)	NO ID	4
17	M Ali Road (Ismail Road to uttar Joynal Road)	NO ID	4
18	Suja Mia Road (Hilton road to Poschim Nurul Hoquer Bari)	NO ID	4
19	Amin Mia Road (Uttar Beri theke Dokkhin Khalpar)	NO ID	4
20	Mohiuddin Road(Mukul Hajir Bazar to Uttar Khas Mohol Road)	NO ID	4
21	Nigar Sultana Road (Khas Mohol Road to Dokkhin Jahajmara Dona)	NO ID	4
22	Ali ahmed Road (Purba Burir Dona khal to Poschim Wapda beri)	NO ID	4
23	Ashik Ali road (Nimtolli Porjoton Area)	NO ID	7
24	Yunicia Road (Islam Dalaler bari to poschime Voyrob bazar)	NO ID	6
25	Abdul Malek Bazar to Champa Ghat	NO ID	
26	Hatiya bazar to Didar Bazar Road (Madrasha Road)	NO ID	3
27	Tanki Bazar to Joypur Mondir to Didar Bazar	NO ID	3
28	Moktaria Ghat Link Road	NO ID	3
29	Thana Pilot road	NO ID	2
30	Horaji Gram Mosjid Road to Maen uddin Bazar Road	NO ID	2.5

Sl. No	Road Name	Road ID	Unpaved length (Km)
31	Chairman Ghat to Didar Bazar	NO ID	2.5
32	Brick Field to Champa Ghat	NO ID	2
33	Center bazar to maniker Dokan	NO ID	2
34	Champa Ghta to Aysha Ali Moshjid	NO ID	
35	Sukchar Bazar Uttar Jahajmara road	NO ID	7
36	Murtuja road	NO ID	5
37	Didar bazar to Mupti Somaj	NO ID	3
38	Shukh Char -Nalchira Border Road	NO ID	
39	Purba Rasulpur hatiya Bazar to Ali Ghat	NO ID	2.5
40	Char Amanullah Moddo Road	NO ID	
41	Hatiya bazar to Nobinagar Road (School Road)	NO ID	2
42	Dorgah Road (Char Amanullah Moddo to Beribad)	NO ID	2
43	Choy Baria Road	NO ID	2
44	Hachania Road	NO ID	
45	Afer uddin Road	NO ID	
46	Goironity Ashrom Road	NO ID	
47	Dakshin Bhejugalia Bhuiya road	NO ID	2.5
48	Jamalia road	NO ID	3.2
49	Nur Alam road	NO ID	3
50	Nobipur Bazar to DC Road (Nobipur road)	NO ID	3
51	Somadia Road	NO ID	2
52	Islam Bazar to Abdul malek Bazar (malek Road)	NO ID	2.5
53	Ponthid Road (Rahmania Road to Utter Jamal Master Bari)	NO ID	2
54	Ahammadpur Mosjid to Didar Bazar	NO ID	2
55	Forhad Road	NO ID	2
56	Paschim Jorkhali road	NO ID	2
57	Kazir Tak Mosjid Road to Main Road (Kazir Tak road)	NO ID	3.5
58	Ramsundar road	NO ID	2
59	Balkia Kaharpara road	NO ID	2.4

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

- Hatiya is an island Upazila in the *northern Bay of Bengal* at the mouth of the ‘*Meghna River*’ that is protected by BWDB embankments. During coastal disasters (*cyclones*) and monsoon, the Upazila faces extensive river erosion that induces severe impacts in both the built and the natural environment. Waterways are the dominant mood of transport that connects the Upazila with countries mainland.
- 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 64 Hard-to-Reach Villages. To develop rural connectivity, there are proposals for only 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 Hatiya in Noakhali 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		
1 No. Horoni	Hatiya Bazar	HB	Yes	General Market	Wholesale	2	260	2.49	350	0.30	2.49	0.00	624340	615000
1 No. Horoni	Chairmen Ghat Bazar	HB	Yes	General Market	Wholesale	2	270	5.58	402	0.80	5.58	0.00	146810	0
1 No. Horoni	Ali Bazar (Chowrasta Bazar)	HB	Yes	General Market	Wholesale	2	47	1.44	70	0.30	1.44	0.00	5759	5600
1 No. Horoni	Forest Center Bazar	HB	Yes	General Market	Wholesale	2	26	1.35	44	0.25	1.35	0.00	3674	3600
1 No. Horoni	Tankar Bazar	HB	Yes	General Market	Wholesale	7	125	4.25	175	0.40	4.25	0.00	11448	11100
1 No. Horoni	Mainuddin Bazar	HB	Yes	General Market	Wholesale	2	42	2.45	70	0.40	2.45	0.00	3392	3400
10 No. Jahajmara	Jahazmara bazar	GC	Yes	General Market	Wholesale	2	13	0.69	527	0.32	2.75	0.69	347680	337500
10 No. Jahajmara	Center Bazar	HB	Yes	General Market	Wholesale	2	9	1.34	258	0.10	0.41	1.34	70843	69300
10 No. Jahajmara	CDSP Bazar	HB	Yes	General Market	Wholesale	1	1	0.19	57	0.05	0.13	0.19	13709	13300
10 No. Jahajmara	Nuton Sukchar Bazar	HB	Yes	General Market	Wholesale	1	0	0.00	47	0.03	0.00	0.00	6890	5800
10 No. Jahajmara	Mohammadpur Bazar	HB	Yes	General Market	Wholesale	1	0	0.00	150	0.07	0.00	0.00	530	500
10 No. Jahajmara	Meckparson Bazar	HB	Yes	General Market	Wholesale	1	3	0.20	10	0.00	0.00	0.20	530	0
11 No. Nijhumdip	Bandartila Bazar	HB	Yes	General Market	Wholesale	2	0	0.00	211	0.07	3.28	0.00	17384	17000
11 No. Nijhumdip	Nijhum dip Namar Bazar	HB	Yes	General Market	Wholesale	1	0	0.00	137	0.03	0.96	0.00	8656	8600
11 No. Nijhumdip	CDSP Bazar	HB	Yes	General Market	Wholesale	1	0	0.00	78	0.03	1.51	0.00	2544	2500
2 No. Chanandi	Morshed Bazar	HB	Yes	General Market	Wholesale	2	82	1.97	110	0.35	1.97	0.00	74200	74000

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		
2 No. Chanandi	Janata Bazar	HB	Yes	General Market	Wholesale								54413	45000
2 No. Chanandi	Rahamatpur Bazar	HB	Yes	General Market	Wholesale	2	30	1.45	45	0.25	1.45	0.00	18938	15400
2 No. Chanandi	Darbesh Bazar	HB	Yes	General Market	Wholesale	2	26	1.35	44	0.25	1.35	0.00	2579	2600
2 No. Chanandi	Kaladour Bazar	HB	Yes	General Market	Wholesale	2	66	2.75	105	0.50	2.75	0.00	26606	27000
2 No. Chanandi	Noler Bhumihin Bazar	HB	Yes	General Market	Wholesale	7	39	2.68	72	0.48	2.68	0.00	1802	0
2 No. Chanandi	Caring Char Mosque Market	HB	Yes	General Market	Wholesale								318	0
3 No. Shokchar	Ramchoron Bazar	HB	Yes	General Market	Wholesale	2	104	1.15	79	0.16	0.96	0.20	63953	62300
4 No. Sonadia	Char changa hat	GC	Yes	General Market	Wholesale	2	23	0.51	375	0.12	4.84	0.51	97308	97700
4 No. Sonadia	Chowrasta Bazar	HB	Yes	General Market	Wholesale	2	1	0.24	172	0.03	0.00	0.24	4628	4800
4 No. Sonadia	Sonadia Bangla Bazar	HB	Yes	General Market	Wholesale	3	3	0.12	74	0.03	1.56	0.12	6607	6400
4 No. Sonadia	Maijdi Bazar	HB	Yes	General Market	Wholesale	2	24	0.77	161	0.03	0.50	0.77	5476	5300
5 No. Char Isshor	Char Isshor Bangla Bazar	HB	Yes	General Market	Wholesale	1	26	0.74	18	0.06	0.62	0.12	5830	4500
6 No. Char King	Bridge Bazar	HB	Yes	General Market	Wholesale	1	41	0.54	76	0.00	1.10	0.44	46180	46700
6 No. Char King	Dasher Hat	HB	Yes	General Market	Wholesale	1	38	0.26	56	0.00	0.00	0.26	18373	18500
6 No. Char King	Danumiar Hat	HB	Yes	General Market	Wholesale	1	28	0.32	40	0.00	0.00	0.32	5960	9100
6 No. Char King	Bhairab Bazar	HB	Yes	General Market	Wholesale	1	17	0.77	50	0.08	0.54	0.15	5936	6000
6 No. Char King/5 No. Isshor	Afazia Bazar	HB	Yes	General Market	Both	2	72	2.95	115	0.10	1.85	1.10	346796	370000

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		
6 No. Char King/5 No. Isshor	Khasher Hat	HB	Yes	General Market	Wholesale	2	110	1.73	144	0.16	1.01	0.72	109498	105700
7 No. Tamaruddin	Tamaruddin bazar	GC	Yes	General Market	Both	2	60	0.80	300	0.20	15.79	1.00	129426	124300
7 No. Tomoruddin	Bottoli Bazar	HB	Yes	General Market	Both	2	29	0.87	50	0.10	0.78	0.87	18500	17000
7 No. Tomoruddin	Tomoruiddi Dasher Hat	HB	Yes	General Market	Both	2	70	0.70	70	0.10	0.12	0.70	13300	12900
9 No. Burir Char	Shagaria Bazar	HB	Yes	General Market	Wholesale	2	104	2.14	200	1.13	9.76	7.57	457036	446000
9 No. Burir Char	Azizia Bazar	HB	Yes	General Market	Wholesale	2	30	0.15	50	0.05	1.00	0.30	62151	0
9 No. Burir Char	Rahmat Bazar	HB	Yes	General Market	Wholesale	7	30	0.30	40	0.00	0.85	0.00	13250	0
Hatiya Pouroshova	Ojkhali bazar	GC	No	General Market	Both	2	68	0.89	230	0.06	0.34	0.54	361500	361000
Hatiya Pouroshova	Khobir Miar Bazar	HB	No	General Market	Wholesale	2	42	0.48	72	0.00	0.03	0.45	12000	10000
Hatiya Pouroshova	Chumohoni Bazar	HB	No	General Market	Wholesale	2	50	1.00	100	0.20	0.46	0.20	79800	79400
	Nalchira hat	GC	No											
	Shahebanir hat	GC	No											

ANNEXURE - 2

PRIORITY LIST FOR ROAD DEVELOPMENT

Priority	Connecting Union	Connecting Village	Population 2021 (Based on BBS 2011)	Road Name	Road ID	Road Type	Road Type by Surface Condition	Total Road Length (10+11+12)	Paved length (km)	HBB Length (km)	Unpaved length (km)	HBB + Unpaved (11+12) in (km)	Approx. Cost of Road (lac)	Structure/ Gap (meter)	Cost of Structure (in Lac)	Total Cost (in lac) (Roads + Structures)	Population /KM (4-13)	Tentative Budget/1000 Population (in lac)	Travel Time (in min)	Weightage for Population	Weightage for Travel Time	Weightage for Cost per 1000 Population	Weightage for Road Type	Total Weightage (21+22+23+24)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Jahajmara	Jahajmara, Macpharson	21716	Jahajmara Road to Puraton Beri (Dak Bangla Road)	475364090	VRA	All weather	8			8	8	960		0	960	2714	44	120	30	18	25	15	88
2	Burir Char	Kalirchar	8208	Martin road	475364036	VRA	All weather	4.5			4.5	4.5	540	4	36	576	1824	70	68	30	16	25	15	86
3	Jahajmara	Purba Birbiri	9828	M Ali road Jahajmara Dona South side road	475365197	VRB	All weather	4			4	4	480		0	480	2457	49	60	30	16	25	12	83
4	Char King	Uttar Char Iswar Roy	14666	Anamia road	475365155	VRB	All weather	6			6	6	720	7.5	67.5	787.5	2444	54	90	30	16	25	12	83
5	Sonadia	Char Chenga	13051	Pondith road Uttere beri theke dokkhine khas mohol Road)	475365208	VRB	All weather	6			6	6	720	4	36	756	2175	58	90	30	16	25	12	83
6	Char King	Boalia	11852	Delwar Hossain road	475365024	VRB	All weather	7	1		6	6	720	18	162	882	1975	74	90	30	16	25	12	83
7	Char King	Daskhin Char Iswar Roy	9422	Al Amin road	475365025	VRB	All weather	6			6	6	720	9	81	801	1570	85	90	30	16	25	12	83
8	Chanandi	Lalpol, Richsha para	28644	Vumihin Bazar to Kaladur	475364066	VRA	All weather	4		4		4	480		0	480	7161	17	0	30	10	25	15	80
9	Chanandi	Bhuiya Gram, Rasel Gram	20624	Darbesh Bazar to Vumihin Bazar (Shirajpur Road)	475364096	VRA	All weather	5		5		5	600		0	600	4125	29	0	30	10	25	15	80
10	Sonadia	Maijchara (Part)	6490	Maijchara Lovely road (Purbo DC Road theke Pushim Berir Matha Jakirer Dokan)	475365142	VRB	All weather	5			5	5	600		0	600	1298	92	75	25	16	25	12	78
11	Burir Char	Burir Char	7562	Pilot Road Baradail Up to Bari	475365131	VRB	All weather	5		1	4	5	600	11.5	103.5	703.5	1512	93	60	25	16	25	12	78
12	Jahajmara	Jahajmara	12011	Sukhchar Muktaria Ghat to Puschime jahajmara launch Ghat (Jahajmara Launch Ghat Road)	475365190	VRB	All weather	2			2	2	240		0	240	6006	20	30	30	10	25	12	77
13	Jahajmara	Birbiri	9828	DC Road to Jahajmara Dona (Mohammad uddin Road)	475365112	VRB	All weather	3			3	3	360		0	360	3276	37	45	30	10	25	12	77
14	Char Ishwar	Char Lakshmiidia	4928	Halima School road	475364112	VRA	All weather	5			5	5	600		0	600	986	122	75	20	16	25	15	76
15	Char Ishwar	Lakshmiidia	4928	DK road (Ahmed miar Bazar to Rona Market)	475364026	VRA	All weather	7			7	7	840	4	36	876	704	178	105	20	16	25	15	76
16	Burir Char	Gullakhali	2548	Muzzam Haji road	475364017	VRA	All weather	6			6	6	720	10	90	810	425	318	90	20	16	25	15	76
17	Char King	College, Ghamchakhali	4583	Khahir mia bazar-Afazia Bazar via Char King UP Office Road	475363003	UNR	All weather	3			3	3	360		0	360	1528	79	45	20	10	25	20	75
18	Burir Char	Shagaria	5136	Mohesh Khali Road	475365090	VRB	All weather	5			5	5	600	2	18	618	1027	120	75	20	16	25	12	73
19	Jahajmara	Muktaria	2778	Tarobondhu road	475365199	VRB	All weather	7			7	7	840		0	840	397	302	105	20	16	25	12	73
20	Sukh Char	Sowdagor	5729	Sullukia road (islam market to Ramchoron bazar Bridge)	475365028	VRB	All weather	3		0.5	2.5	3	360		0	360	1910	63	38	25	10	25	12	72
21	Burir Char	Surjya Mukhe	6427	Surjya Mukhe Parjaton road	475365109	VRB	All weather	3.5			3.5	3.5	420		0	420	1836	65	53	25	10	25	12	72
22	Burir Char	Paschim Baradail	3786	Dr. Waliullah road	475365108	VRB	All weather	3.5			3.5	3.5	420	11.5	103.5	523.5	1082	138	53	20	10	25	12	67
23	Tamaruddin	Koralia	2788	Barakia road	475365148	VRB	All weather	3.5			3.5	3.5	420	2	18	438	796	157	53	20	10	25	12	67
24	Char Ishwar	Rajar Haola	239	Chaitanna Bazar-Ahmad Miar Bazar road	475365125	VRB	All weather	5			5	5	600		0	600	48	2506	75	15	16	10	12	53
25	Char King	Uttar Char Iswar Roy, Bowalia, Char Vogula	29769	Mir Mohammed Ali Road(Colleg Road to Azma)	No ID	VRA	All weather	8			8	8	960		0	960	3721	32	120	30	18	25	15	88
26	Harni	Mohammadpur Gram , Zorkhali (South & North), Uttar Adarsho Gram	41302	Ali Bazar to Zorkhali Modhur Dokan (Zorkhali road)	No ID	VRA	All weather	7			7	7	840	2	18	858	5900	21	105	30	16	25	15	86
27	Sonadia	Sonadia	19625	Suja Mia Road (Hilton road to Poschim Nurul Hoquer Bari)	No ID	VRA	All weather	4			4	4	480		0	480	4906	24	60	30	16	25	15	86
28	Sonadia	Sonadia	19625	M Ali Road (Ismail Road to uttar Joynal Road)	No ID	VRA	All weather	4			4	4	480		0	480	4906	24	60	30	16	25	15	86
29	Sonadia	Sonadia	19625	Nigar Sultana Road (Khas Mohol Road to Dokkhin Jahajmara Dona)	No ID	VRA	All weather	4			4	4	480		0	480	4906	24	60	30	16	25	15	86
30	Sonadia	Sonadia	19625	Mohiuddin Road(Mukul Hajir Bazar to Uttar Khas Mohol Road)	No ID	VRA	All weather	4			4	4	480		0	480	4906	24	60	30	16	25	15	86
31	Jahajmara	Mohammadpur, Macpharson	17950	Mohammadpur Bazar to Sukhchar Bazar (Puraton Beri Road)	No ID	VRA	All weather	4			4	4	480		0	480	4487	27	60	30	16	25	15	86
32	Jahajmara	Jahajmara, Birbiri	21839	Mohammad Uddin Road Road to Bus Stand (M. Ali Road)	No ID	VRA	All weather	5			5	5	600		0	600	4368	27	75	30	16	25	15	86

*** 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	Jahajmara	Birbiri, Mohammadpur, Macpharson	27778	Apirago Polar Gora theke to dokkhine notun beri (Hawladar Road)	No ID	VRA	All weather	7			7	7	840		0	840	3968	30	105	30	16	25	15	86
34	Sonadia	Sonadia	19625	Aziza Road (Lovely Road to Uttar Sonadia A Akboria Primary School)	No ID	VRA	All weather	5			5	5	600		0	600	3925	31	75	30	16	25	15	86
35	Harni	Purba Nobipur	17186	Rajar Dokan to Motkar Dokan	No ID	VRA	All weather	5			5	5	600		0	600	3437	35	75	30	16	25	15	86
36	Harni	Bhuiyar Char	13316	Tanki road	No ID	VRA	All weather	4			4	4	480		0	480	3329	36	60	30	16	25	15	86
37	Sonadia	Char Chenga	13051	Amin Mia Road (Uttar Beri theke Dokkhin Khalpar)	No ID	VRA	All weather	4			4	4	480		0	480	3263	37	60	30	16	25	15	86
38	Sonadia	Char Chenga	13051	Ali ahmed Road (Purba Burir Dona khal to Poschim Wapda beri)	No ID	VRA	All weather	4			4	4	480		0	480	3263	37	60	30	16	25	15	86
39	Jahajmara	Char Osman (Nikum Island)	11949	Nijumdwp Parjoton road	No ID	VRA	All weather	4			4	4	480		0	480	2987	40	60	30	16	25	15	86
40	Char King	Bowalia	11852	Rahmania Road (Powro Simana to poschim Uttar Golam Mawlana Doakan	No ID	VRA	All weather	4			4	4	480		0	480	2963	41	60	30	16	25	15	86
41	Char King	Daspara, Vowalia	13749	Hoque Road (Das Para Mondir via Del to Vober Bazar)	No ID	VRA	All weather	5			5	5	600		0	600	2750	44	75	30	16	25	15	86
42	Sonadia	Sonadia	19625	Lovely road (Poshim Beri theke patni Road)	No ID	VRA	All weather	7			7	7	840	4	36	876	2804	45	105	30	16	25	15	86
43	Jahajmara	Nutan Sukhchar	9982	Sukchar to Amtoli Bari road	No ID	VRA	All weather	5			5	5	600		0	600	1996	60	75	30	16	25	15	86
44	Jahajmara	Birbiri	9828	Dc Road to Pushcim Bus Stand Road (Mostafiz Road)	No ID	VRA	All weather	5			5	5	600		0	600	1966	61	75	30	16	25	15	86
45	Jahajmara	Mohammadpur	8245	Bogainnago road - Mohammadpur Bazar to Jaggalla Ghat rod	No ID	VRA	All weather	5			5	5	600		0	600	1649	73	75	30	16	25	15	86
46	Jahajmara	Char Mecpharson	9705	Habib Ullah Mia Gopat via Macpharson Amtoli Bazar Sluwich	No ID	VRA	All weather	6			6	6	720		0	720	1617	74	90	30	16	25	15	86
47	Char King	Shullukia	6722	Yunicia Road (Islam Dalaler bari to poschime Voyrob bazar)	No ID	VRA	All weather	6			6	6	720		0	720	1120	107	90	25	16	25	15	81
48	Jahajmara	Char Birbiri	7512	Ashik Ali road (Nimtol Porjoton Area)	No ID	VRA	All weather	7			7	7	840		0	840	1073	112	105	25	16	25	15	81
49	Harni	Shariyatpur	10312	Center bazar to maniker Dokan	No ID	VRA	All weather	2			2	2	240		0	240	5156	23	30	30	10	25	15	80
50	Char King	Daskhin Char Iswar Roy	9422	Ponthid Road (Rahmania Road to Utter Jamal Master Bari)	No ID	VRA	All weather	2			2	2	240		0	240	4711	25	30	30	10	25	15	80
51	Chanandi	Alipur, Mannan Nagar, Adarsha Gram	28071	Abdul Malek Bazar to Champa Ghat	No ID	VRA	All weather	6		6		6	720		0	720	4679	26	0	30	10	25	15	80
52	Sukh Char	Dakshin Char Amanullah	9901	Dorgah Road (Char Amanullah Moddo to Beribad)	No ID	VRA	All weather	2			2	2	240	3	27	267	4950	27	30	30	10	25	15	80
53	Sukh Char	Dakshin Char Amanullah	9901	Choy Baria Road	No ID	VRA	All weather	2			2	2	240	3	27	267	4950	27	30	30	10	25	15	80
54	Nalchira	Kawnia	13108	Thana Pilot road	No ID	VRA	All weather	3		1	2	3	360	2	18	378	4369	29	30	30	10	25	15	80
55	Harni	Purba Kazir tak	8020	Brick Field to Champa Ghat	No ID	VRA	All weather	2			2	2	240		0	240	4010	30	30	30	10	25	15	80
56	Jahajmara	Jahajmara	12011	Moktaria Ghat Link Road	No ID	VRA	All weather	3			3	3	360		0	360	4004	30	45	30	10	25	15	80
57	Sukh Char	Dakshin Char Amanullah	9901	Char Amanullah Moddo Road	No ID	VRA	All weather	2.5		2.5		2.5	300	3	27	327	3960	33	0	30	10	25	15	80
58	Harni	Alamin	8020	Horaji Gram Mosjid Road to Maen uddin Bazar Road	No ID	VRA	All weather	2.5			2.5	2.5	300		0	300	3208	37	38	30	10	25	15	80
59	Harni	South Islampur	8020	Chairman Ghat to Didar Bazar	No ID	VRA	All weather	2.5			2.5	2.5	300		0	300	3208	37	38	30	10	25	15	80
60	Sukh Char	Dakshin Char Amanullah	9901	Shukh Char -Nalchira Border Road	No ID	VRA	All weather	3		3		3	360	3	27	387	3300	39	0	30	10	25	15	80
61	Harni	Pashcim Rasulpur	8020	Hatiya bazar to Didar Bazar Road (Madrasha Road)	No ID	VRA	All weather	3			3	3	360		0	360	2673	45	45	30	10	25	15	80
62	Harni	South Islampur	8020	Tanki Bazar to Joypur Mondir to Didar Bazar	No ID	VRA	All weather	3			3	3	360		0	360	2673	45	45	30	10	25	15	80
63	Harni	Purba Rasulpur Leski	11458	Champa Ghta to Aysha Ali Moshjid	No ID	VRB	All weather	1		1		1	120		0	120	11458	10	0	30	10	25	12	77
64	Sukh Char	Dakshin Char Amanullah	9901	Goironity Ashrom Road	No ID	VRB	All weather	1.5		1.5		1.5	180	3	27	207	6600	21	0	30	10	25	12	77
65	Char King	Char Bagula	3252	Murtuja road	No ID	VRA	All weather	5			5	5	600	21	189	789	650	243	75	20	16	25	15	76
66	Jahajmara	Char Hare	3397	Sukchar Bazar Uttar Jahajmara road	No ID	VRA	All weather	7			7	7	840	9	81	921	485	271	105	20	16	25	15	76
67	Sukh Char	10 No Gram	6875	Afer uddin Road	No ID	VRA	All weather	2		2		2	240	3	27	267	3437	39	0	25	10	25	15	75

*** 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	Harni	Rahamatpur	5729	Hatiya bazar to Nobinagar Road (School Road)	No ID	VRA	All weather	2			2	2	240		0	240	2864	42	30	25	10	25	15	75
69	Sukh Char	Sowdagar	5729	Hachania Road	No ID	VRA	All weather	2		2		2	240	3	27	267	2864	47	0	25	10	25	15	75
70	Harni	Purba Rasulpur	5729	Purba Rasulpur hatiya Bazar to Ali Ghat	No ID	VRA	All weather	2.5			2.5	2.5	300		0	300	2292	52	38	25	10	25	15	75
71	Harni	Mufti Somaj	5729	Didar bazar to Mupti Somaj	No ID	VRA	All weather	3			3	3	360		0	360	1910	63	45	25	10	25	15	75
72	Chanandi	Mannan nagar	5156	Islam Bazar to Abdul malek Bazar (malek Road)	No ID	VRA	All weather	2.5			2.5	2.5	300		0	300	2062	58	38	20	10	25	15	70
73	Harni	Ahmmadpur	3437	Ahammadpur Masjid to Didar Bazar	No ID	VRA	All weather	2			2	2	240		0	240	1719	70	30	20	10	25	15	70
74	Tamaruddin	Paschim Jorkhali	3073	Paschim Jorkhali road	No ID	VRA	All weather	2			2	2	240		0	240	1536	78	30	20	10	25	15	70
75	Burir Char	Sunnerchar	4442	Nur Alam road	No ID	VRA	All weather	3			3	3	360	2	18	378	1481	85	45	20	10	25	15	70
76	Burir Char	Dakshin Rehanian	3996	Jamalia road	No ID	VRA	All weather	3.2			3.2	3.2	384		0	384	1249	96	48	20	10	25	15	70
77	Nalchira	10 No Gram	3437	Somadia Road	No ID	VRA	All weather	3		1	2	3	360	1.5	13.5	373.5	1146	109	30	20	10	25	15	70
78	Nalchira	Basir Uddin Mia	2292	Forhad Road	No ID	VRA	All weather	2			2	2	240	1.5	13.5	253.5	1146	111	30	20	10	25	15	70
79	Tamaruddin	Dakshin Bhejugania	4181	Dakshin Bhejugalia Bhuiya road	No ID	VRA	All weather	3.5		1	2.5	3.5	420	6	54	474	1195	113	38	20	10	25	15	70
80	Harni	Nobipur	2292	Nobipur Bazar to DC Road (Nobipur road)	No ID	VRA	All weather	3			3	3	360	2	18	378	764	165	45	20	10	25	15	70
81	Sukh Char	Sukhchar	1287	Ramsundar road	No ID	VRA	All weather	2			2	2	240		0	240	643	187	30	18	10	25	15	68
82	Harni	Kazir Tak	1375	Kazir Tak Masjid Road to Main Road (Kazir Tak road)	No ID	VRA	All weather	4	0.5		3.5	3.5	420		0	420	393	305	53	18	10	25	15	68
83	Sukh Char	Uttar Char Amanullah	922	Balkia Kaharpara road	No ID	VRA	All weather	3		0.6	2.4	3	360	2	18	378	307	410	36	15	10	25	15	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)