

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"

Gowainghat, Sylhet







July, 2022

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GLOSSARY

- **Hard-to-reach Villages** mean in the Study those villages that are not connected by any paved road with the respective Upazila HQ and/or Union Parishad, and to the nearest economic activity hub and social service centres. The following explanations is important for the concept of hard-to-reach villages.
 - ➢ In haor areas, Village connected with submersible roads dry season and connected with riverine/haor routes in monsoon season has been considered as accessible and excluded from hard-to-reach villages.
 - Within Upazila, Villages that needs a bridge to connect has not considered as hard-to-reach villages.
 - In case of island Upazilas, villages that are accessible with paved roads from Upazila HQ has been considered as accessible and excluded from hard-to-reach villages.
 - In case of villages that are connected with HBB (Herring-Bone-Bond) or Brick flat soling routes has been considered as hard-to-reach villages
- **Mauza** is normally the geographical expression of a unit of landmass for revenue settlement and revenue collection, whereas, the village is a human settlement within a Mauza with strong social bond. Within a Mauza there could be more than one village.
- UnionBangladesh 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
ТА	-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 ruralurban 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 Minster 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 **Gowainghat** Upazila of **Sylhet** District.

1.1 GEOGRAPHY AND DEMOGRAPHY

The geographical area of Gowainghat Upazila is 481.12 square kilometers and has 9 Unions, 231 mouza and 266 villages. Gowainghat is 40 km away from District headquarters of Sylhet. Gowainghat is partly covered by 47 haors and there exists 4 (four) rivers passing over the Upazila. The total population of the Upazila is 2,87,512 of which 1,43,877 are male and 1,43,645 females, total number of households are 47,992 with an average household size 6.0 and population density of 598 (*as per population census 2011*).

1.2 EDUCATION FEATURES

According to the information of the relevant local government offices there are 85 govt. primary, 28 registered primary, 2 non-government primary, 108 NGO and 12 kindergarten schools in the Upazila. There also exists 28 non-government high schools, 3 non-government colleges, and 58 madrashas in the Upazila. The students attending these educational institutes from remote areas face difficulties to reach school due to poor road communications especially in the monsoon. The literacy rate for the Upazila is 30.4% as per BBS 2011.

1.3 RURAL ROAD COMMUNICATIONS

Bangladesh scored in the rural accessibility index at around 87 per cent among South Asian and some other Africa countries. Generally, the people of Bangladesh get all weather within 2 kilometers adjacent to their living places. But the feature of rural roads communications in Gowainghat 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 within Gowainghat Upazila is 634.06 km out of which 214 km paved and 420.06 km earthen.

1.4 AGRICULTURE, FOOD PRODUCTION AND FISHERIES

Along with aggregate & coal business, agriculture has a major importance for the economy of the people living here in Gowainghat. There are 1,18,885 acres of arable land in the Upazila. In the fiscal year 2010-11 the Rice production was 1783.85, 44262.40 & 14873.6 metric tons for Aus, Aman & Boro seasons respectively. The Upazila also produced 48.15 metric tons of Wheat, 586 metric tons of Potato and 121 metric tons of Oilseed in the same fiscal year 2010-11. The tea production was 556 metric tons. A notable quantity of vegetable is also produced here in this Upazila.

According to the BBS (2010-11) data Gowainghat has 4406 Acres of waterbodies that produced 4,575.77 metric tons of fishes.

All the agricultural products are adequate to meet the demand of the Upazila and surpluses are sold to outside of Gowainghat.

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 42 hatbazar and 5 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 centre & hatbazar of the Upazila has been attached in the <u>Annexure-1</u>.

2 LOCATION OF THE UPAZILA

Gowainghat Upazila is in the North-Eastern part of the country under Sylhet District. The location has been shown in the map. The Upazila is adjacent to the Indian border at Meghalaya foothill. The hilly rivers coming down from the '*Khasi and Jaintia hills*' in Meghalaya, India carry particularly high volumes of water during monsoon as they come from some of the rainiest places in the world, resulting flash flood at the foothills inside Bangladesh. Flood coming from uphill Meghalaya (where there is *Cherrapunji*, the wettest place on earth) during monsoon causes waterlogging within the haor basin for almost half the year. Flash floods induce severe impacts in both the built and the natural environment. The effects of flash floods can be catastrophic and show extensive diversity, ranging from damages in buildings and infrastructure to impacts on vegetation, human lives and livestock.

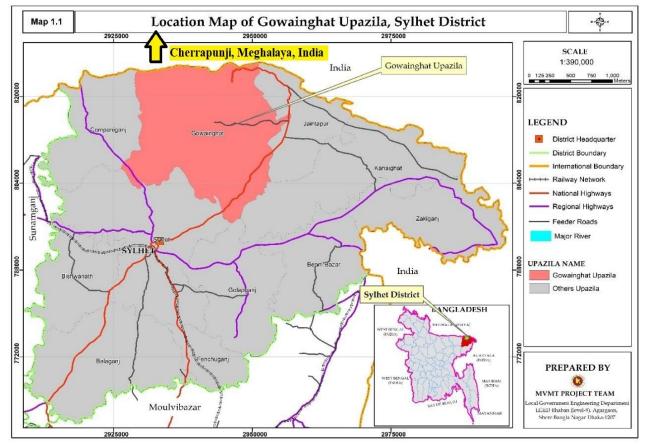


Figure 1: Upazila Location Map.

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 LGED team. and LGI

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

representatives were surveyed each Upazila for collection of detailed observations and validations of the proposed priority needs.

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 nongazette 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.

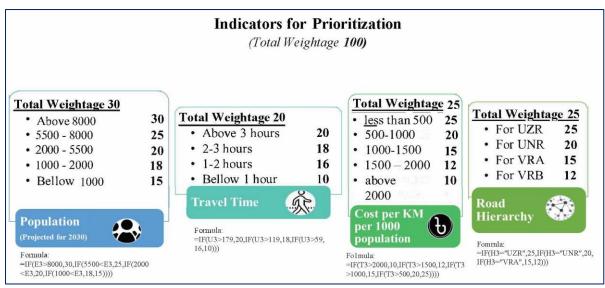


Figure 2: Prioritization indicators & their weightage values

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 nongazette (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 **DESCRIPTION OF WETLANDS**

4.1 DISTRIBUTION OF THE HAORS/ WETLANDS

The Upazila has a large portion of flash flood zone that covers approximately 70% of its area. The roads within the flood zone becomes inundated at monsoon, that requires an attention to take relevant measures during road construction and maintenance.

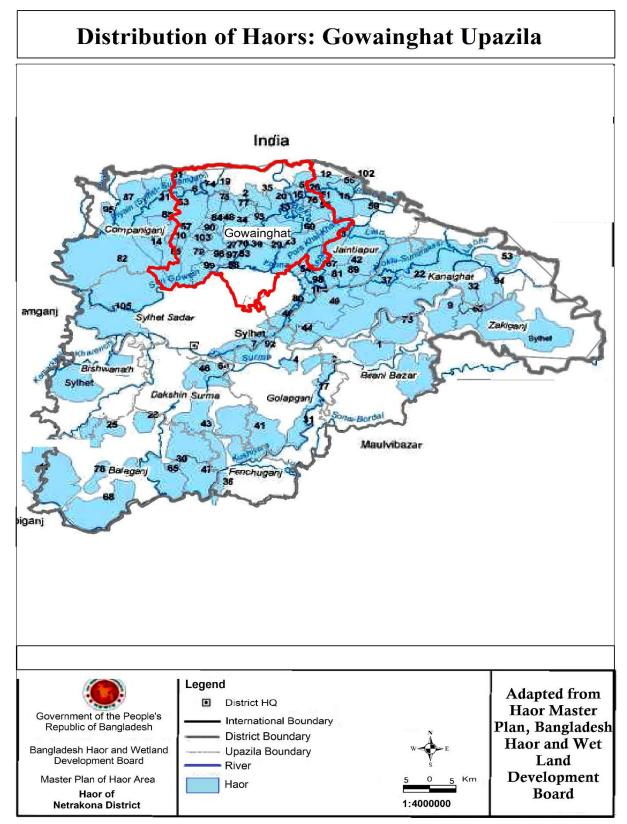


Figure 3: Haor Distribution Map Page | 6

4.2 HAOR/ WETLAND CATEGORY

However, the Upazila is along the Foot Hill, mostly Floodplain zone. There exists no deep haor zone. Road or other infrastructure development in this Upazila has major environmental consequences.

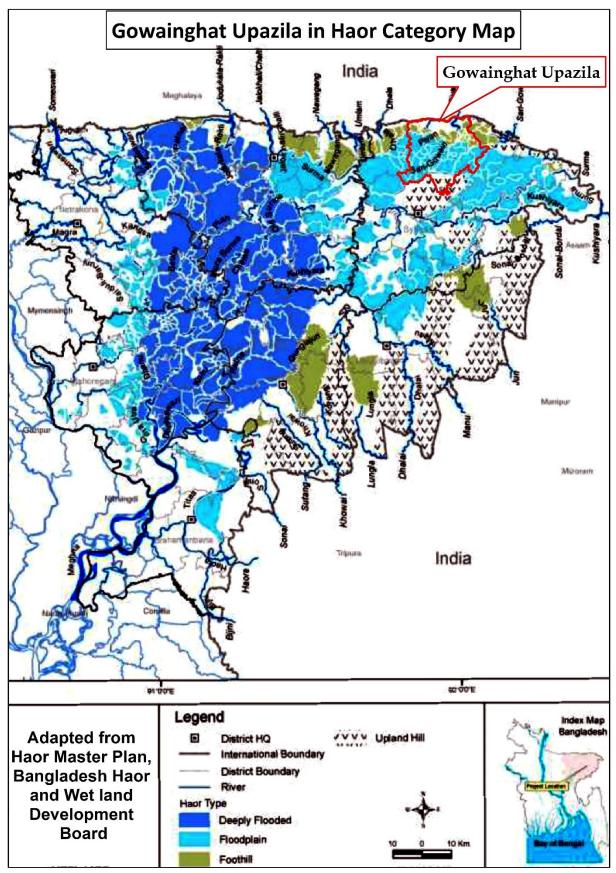


Figure 4: Haor Category Map.

4.3 **BIO-ECOLOGICAL CHARACTERISTICS**

The Bio-ecological characteristics map of the Upazila has been shown below. The map shows that-it is mostly Sylhet Hills & is partially Himalayan Piedmont Plain. Therefore, adequate opening for the road and road structures should be maintained.

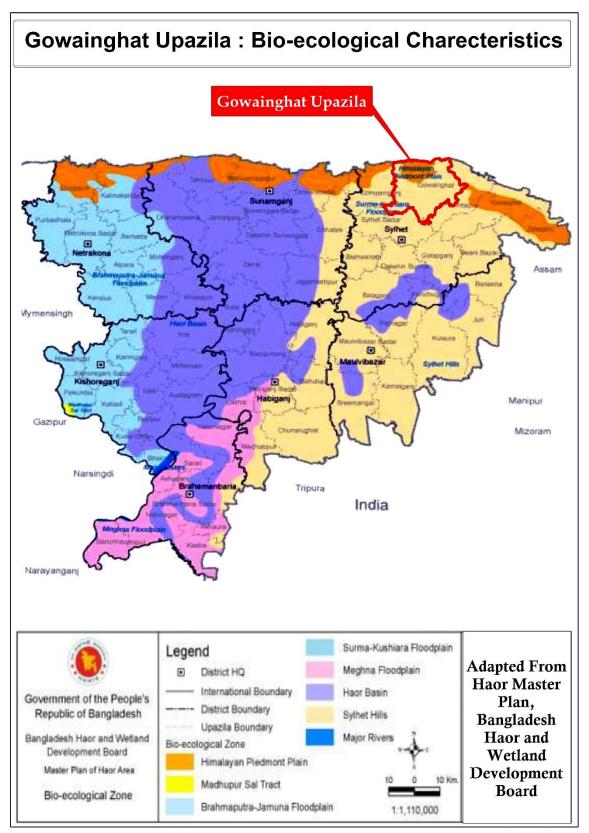


Figure 5: Bio Ecological Characteristics Map

5 RURAL ROAD CONNECTIVITY TO THE VILLAGES

5.1 SUMMARY OF THE VILLAGE CONNECTIVITY

Gowainghat is an Upazila with major haors. The rural road communication is quite poor here. Out of 269 villages, 72 villages are disconnected from the developed paved road network that brings huge sufferings for the people of the villages. The total rural road network of Gowainghat is 634.06 km out of which 214 km paved and 420.06 km earthen.

SL No	Union	No of Villages	Connected Villages	Unions
1	Fatehpur	20	14	6
2	Lengura	37	31	6
3	Dowbari	57	51	0
4	Nandirgaon	23	15	8
5	Paschim Alirgaon	50	40	12
6	Purba Alirgaon	52	40	12
7	Paschim Jaflong	35	20	6
8	Gowainghat Sadar	33	29	6
9	Purba Jaflong	45	35	10
10	Madhya Jaflong	43	55	10
11	Rustampur	37	21	16
12	Towakul	20	12	8
	Total =	269	197	72

 Table 1: Total villages in the Unions and their connectivity

5.2 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.

Union	SI. No	Connected Villages	Population 2021 (Based on BBS 2011)	Unions	Population 2021 (Based on BBS 2011)
	1	Abdul Mahal	1051	Badhigai Haor	1313
(52)	2	Balla	832	Hajrai	1362
	3	Bamangaon	485	Hudpur	667
Alirgaon	4	Barahal	471	Juje Mahal	1116
irg	5	Barkipur	1118	Kakunakhai Khala	854
AI	6	Dakshin Hatir Para	878	Khalagram	647
	7	Dharmagram	974	Lama Satain	1383
	8	Fadlipur	410	Latu	1671
	9	Garo	1130	Moipur	1970
	10	Guakhai	190	Nayakhel	2482
	11	Kakunakhai	856	Nayamati	2431

Table 2: Union wise connected & Unions and their population

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Unions	Population 2021 (Based on BBS 2011)
	12	Kakunakhai Haor	400	Uttar Nayagram	1287
	13	Khagra	1066		
	14	Khas	1874		
	15	Khathkhai	134		
	16	Khurda	1959		
	17	Khurihai	547		
	18	Lafnaut	2070		
	19	Lamakatapara	1596		
	20	Landu	238		
	21	Laubil Julai	277		
	22	Laubil Khala	26		
	23	Nainda Haor	842		
	24	Nayanagar	718		
	25	Panch Para	3122		
	26	Panch Seuti	856		
	27	Parballi	550		
	28	Pukash	1646		
	29	Purannagar	2900		
	30	Purbo Aligram	403		
	31	Purbo Dighirpar	1673		
	32	Routgram	1484		
	33	Sakarpur	54		
	34	Titgulil Haor	785		
	35	Ujuhat	941		
	36	Upar Kupara	1038		
	37	Upar Satain	975		
	38	Upper Dumka	1441		
	39	Upper Hatlihai	687		
	40		144		
		Sub Total=	38841		17183
	1	Baghbari	390	Baranagar	701
(20)	2	Baragul	827	Fatehpur 1st part	1652
. (2	3	Baranagar T.g.	168	Fatehpur 3rd part	2237
Fatehpur	4	Binnakandi	1959	Fatehpur 4th Part	1223
tehj	5	Dewangram	724	Fatehpur 6th part	1210
Fat	6	Fatehpur 2nd Part	1542	Fatehpur 7th part	1124
	7	Fatehpur 5th Part	2870		
	8	Fatehpur T.G	239		
	9	Goshainpur	1045		
	10	Gulni	844		
	11	Gulni T.g.	691		
	12	Purbo Mahish Kher	938		
	13	Ramnagar	1685		
	14	Ratargul	747		
		Sub Total=	14669		8147

Union	SI. No	Connected Villages	Population 2021 (Based on BBS 2011)	Unions	Population 2021 (Based on BBS 2011)
	1	Baleshwar	895	Baylengura	2790
(37)	2	Bholanathbari	544	Darikhai	897
	3	Charigram	1503	Lengura	4190
Lengura	4	Chatal Haor	171	Lengura Haor	425
Len	5	Chhitinger Haor	1145	Naihain	1852
	6	Dakaterkandi	340	Satkurikandi	1146
	7	Datari	767		
	8	Deami	878		
	9	Dhaubari	2175		
	10	Dhurarband	221		
	11	Ghoahgram	1445		
	12	Gurukchi	2840		
	13	Hatgram Hatirkandi	2840		
	14	Hatirkanda	2840		
	15	Jatabaha	1893		
	16	Jatugram	2097		
	17	Kamaid	1770		
	18	Kataikuri	178		
	19	Khalar Chati	645		
	20	Lama Dumka	2305		
	21	Langpur	1706		
	22	Laurkandi	1137		
	23	Nagar Dengri	1369		
	24	Niagul	1978		
	25	Par Kuribilarpar	462		
	26	Purangaon	192		
	27	Raha	804		
	28	Sati	2108		
	29	Shanirgram	991		
	30	Sreenathpur	256		
	31	Turalikanda	141		
		Sub Total=	38636		11300
	1	Angarjur	4232	Bimarpar	478
(23)	2	Bahar	2209	Chalitabari	1307
uo	3	Chowdhurykandi	321	Darikandi	1557
rgae	4	Damarirpar	133	Kachuarpar	225
Nandirgaon	5	Darirpar	1216	Lakshmi Haor	434
Nai	6	Kadamtala	315	Lama Para	793
	7	Kurirbari	345	Nayagram	2132
	8	Manaura	2072	Siala Hoar	1189
	9	Matri Mahal	2593		

Union	SI. No	Connected Villages	Population 2021 (Based on BBS 2011)	Unions	Population 2021 (Based on BBS 2011)
	10	Nandirgoan	2709		
	11	Raniganj	922		
	12	Salutikar	119		
	13	Sundragoan	752		
	14	Talarpar	278		
	15	Zalur Mukh	561		
		Sub Total=	18777		8115
()	1	Aharkandi	594	Bugailkandi	2290
g (35)	2	Ambari	594	Gara	1146
Paschim Jaflong	3	Ambari Haor	568	Haidar	521
m Ja	4	Chhatargram	572	Kalijuri	952
aschi	5	Chhota Khal	1053	Pannagram	1211
Å.	6	Dakshin Pratappur	4230	Tarukhal	3232
	7	Deoagram	1005		
	8	Derikhal Bagaband	2177		
	9	Dwarikhal	1673		
	10	Gowain	2764		
	11	Hauwara	536		
	12	Kalaiura	312		
	13	Karni	467		
	14	Khuri	762		
	15	Labu	1675		
	16	Lati	2340		
	17	Luni	1638		
	18	Manaikandi	1638		
	19	Muramurir Khal	2949		
	20	Nanglakhal	1421		
	21	Paschim Alirgram	1194		
	22	Phenaikona	577		
	23	Pirijpur	1344		

Union	SI. No	Connected Villages	Population 2021 (Based on BBS 2011)	Unions	Population 2021 (Based on BBS 2011)
	24	Pratappur Hoar	176		
	25	Shimailtala	631		
	26	Sultanpur	1063		
	27	Thakurbari	1323		
	28	Titarai	408		
	29	Uttar Pratappur	1779		
		Sub Total=	37463		9352
	1	Alamnagar	1900	Asam Para	1629
45)	2	Amswapna		Asam Para Haor	1480
<u>ل</u> مە	3	Ashtam Khanda	3262	Baurbhag Haor	4505
laflon	4	Ballapunji	839	Chailakhel 3rd Part	10232
Purba Jaflong (45)	5	Baraband	610	Chailakhel 7th Part	38
	6	Baurbhag	1274	Chailakhel 8th Part	
	7	Bhitrikhel	1168	Chailakhel 9th Part	1336
	8	Bhitrikhel Haor	2057	Naksiya Punji	637
	9	Chaurakhel	1836	Naya Basti	1187
	10	Dubagh Basti	1053	Sangram Punji	638
	11	Gangpar	150		
	12	Gucchagram	836		
	13	Islampur	1501		
	14	Jaflong Basti	1357		
	15	Kalinagar	2426		
	16	Kandu Basti	700		
	17	Kapaura	626		
	18	Kayakandirpur	831		
	19	Malipara	599		
	20	Mominpur	461		
	21	Muslim Nagar	875		
	22	Naljuri/ Chailakhel 5th Part	3755		
	23	Nama Punji	294		
	24	Naya Jangerpar	1061		
	25	Pancha Hatikhel	1143		
	26	Paschim Lakherpar	877		
	27	Pathartila	1954		

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Unions	Population 2021 (Based on BBS 2011)
	28	Purba Lakherpar	3013		
	29	Radhanagar Bazar	425		
	30	Sangram Basti	1114		
	31	Sankibhanga Haor	1689		
	32	Shantinagar	1870		
	33	Sonatila	608		
	34	Tamabil	584		
	35	Tirpura Basti	598		
		Sub Total=	43346		21682
	1	Bara Ghosa	1060	Bagaiya	5646
(37)	2	Bheri Bil Haor	1229	Bagaiya	2211
ur	3	Dighirpar	45	Bhitargul	1895
Rustampur (37)	4	Hadarpar	2595	Bir Mangal	420
Rus	5	Isti	319	Bishnukandi	1227
	6	Jatnatha	1375	Damdama Haor	1096
	7	Kanthal Barikandi	895	Goragram	2164
	8	Katlikona	159	Gujarkandi	893
	9	Khairai Juthigram	685	Ita Chakirkandi	801
	10	Kulumchapar	1074	Jhari Khalkandi	387
	11	Lamni	1177	Khala Madhab	1538
	12	Natun Bhanga Haor	930	Kunkiri	1652
	13	Naya Para	355	Kurikhala	657
	14	Naya Para Bir Mangal Haor	2303	Patlikona	1685
	15	Nij Dhargram	1517	Tengnagul	1817
	16	Nij Dhargram Haor	17	Upargram	2154
	17	Paschim Baraghosha	415		
	18	Patni	1413		
	19	Rustampur	819		
	20	Sakar Pekerkhal	1028		
	21	Tukair	363		
		Sub Total=	19773		26243
	1	Baulgram	1605	Chadibhadi Haor	598
(20)	2	Birkuli	1462	Chirurpar	284
In	3	Fultail Chhagram	2525	Dakshin Jangail	4519
Towakul (20)	4	Ghora Marakandi	919	Lakhi	3802
To	5	Ichhabpur	514	Meua Bil	552
	6	Kandirgram	1654	Paik Raj	3427

Union	SI. No	Connected Villages	Population 2021 (Based on BBS 2011)	Unions	Population 2021 (Based on BBS 2011)
	7	Laskarkandi	100	Turukbhag	723
	8	Naoa Para	1062	Turukbhag	1091
	9 Paschim Pekerkhal Haor		525		
	10	Pekerkhal	956		
	11	Purba Pekerkhal Haor	1823		
	12 Shahapur		626		
		Sub Total=	13771		14996

5.3 MAP OF UNIONS & PROPOSED ROADS

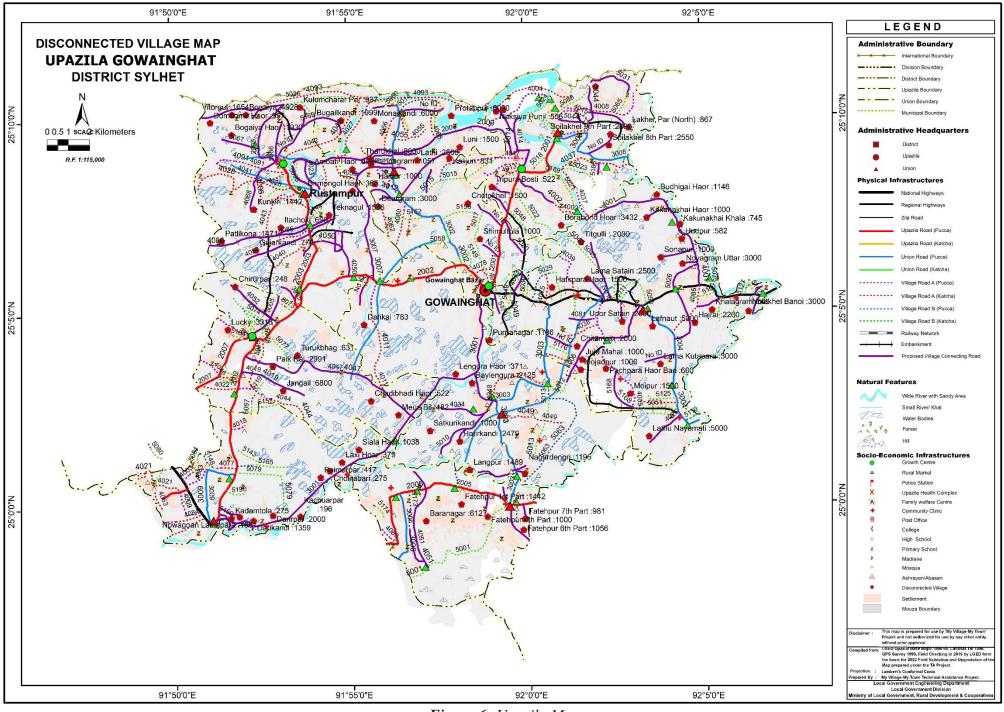


Figure 6: Upazila Map

6 CONSULTATION MEETING & FIELD VISIT

6.1 UPAZILA LEVEL MEETING

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



Figure 7: Upazila level Consultation Meeting

During the meeting, consultant team briefly discussed about the project and instructed the UP Chairmen and UE office for the database correction along with mapping procedure. The team worked on both the database and Upazila map and obtained the necessary outputs subsequently.

6.2 VISIT TO CASE STUDY UNION

The team visited Rustampur, the case study Union in Gowainghat Upazila, through "Bholagong (RHD)-Doyer Bazar-Vhatri-Hadarpar G.C.Road (Gowainghat Portion)" having the Road ID: 691412008. The road was selected for the site visit considering the beneficiary population, educational institutes along the road and the recommendations of the UE Office as the road has a priority within the Union.

The consultant observed and collected necessary information for the study discussing inhabitants and UE office. Team recorded GPS data, interviewed road users and took photos of the alignment condition.



Figure 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



Figure 11: The land sliding due to illegal stone collection

7 DATA COLLECTION & ANALYSIS

The consultant collected data from the field on hard to reach/ Unions. 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:6*) showing prioritized roads and Unions. The proposed riverine & road connectivity by the UE office have been discussed in this section.

7.1 **PROPOSED RIVERINE ROUTES**

As per actual field visit and data analysis from haor development board, Gowainghat Upazila is not a deep haor zone. It is partially floodplain area. The Upazila has a large portion of flash flood zone that covers approximately 70% of the land area. The roads within the flood zone becomes inundated at monsoon. About four rivers have passed through Gowainghat Upazila. These are Piyain, Gowain, Sari, Dauki rivers. Four 4 riverine routes have been proposed by UE office, Gowainghat for the multi-modal transport system.

The name of the riverine routes & the associated stream are as follows,

SI. No	Name of the Riverine Route	Name of the Stream	Type of the Stream	Types of Water Vehicle	Need of excavation					
1	Lamer Bazar Eidgha - Kunkuri Lamni Village – Unfforervanga – Bisnakandi Tourist point	Kunkuri khal	Intermittent (May – Oct)	Small Boat & Engine Boat	Yes					
2	Badeypasha – Bisnakandi - Trimukhi point – Hadarpar GC - Goragram – Rustam UP Office	Luni river	Intermittent (May – Oct)	Small Boat & Engine Boat	Yes					
3	Porgana Bazar - Sitting bari - Sangerkhal	Gurukchi khal	Intermittent (May – Oct)	Small Boat & Engine Boat	Yes					
4	Kapna river - Koerer bazar - Hakur bazar – Nihain - Gowain river	Hakur khal	Intermittent (May – Sept)	Small Boat & Engine Boat	Yes					

 Table 3: Proposed riverine routes of the Upazila

7.2 **PROPOSED ROADWAY FOR UNIONS:**

At present, roads are the most partially dominant mode of transportation. Most of the structures were built on the rivers to make the road communication effective. Yet, 11 (eleven) bridges are needed to fulfil the purpose.

A summary of the rural roads of Gowainghat Upazila is given below:

Total Road Length of	Paved Length	Unpaved	Length of unpaved roads
the Upazila (KM)	(KM)	Length (KM)	of Unions (KM)
634.06	214	420.06	169.10

Table 4:	Summary	of the	rural	roads	in	the	Upazila
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7.2.1 PROPOSED ALL WEATHER ROUTES:

There are 43 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;

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
1	Bholaganj RHD - Doyarbazr - Vatrai - Hadarpar GC Rd	691412008	All Weather	7.3
2	Tamabil Highway - Shankivanga Village	No ID	All Weather	7
3	Paikraj-Laxminagar Road.	691414047	All Weather	6.75
4	Gowainghat - Salutikor Rd - Khaipara (uttar) via Birkuli Mashjeed Rd	691414019	All Weather	2.3
5	Atlihai-Nairdahaor Road.	691414001	All Weather	5.01
6	Toakkul Haidoribazar Rd - Lucky Khatiaghat Rd	691415186	All Weather	4.5
7	Pirerbazar - Teknagul Rd	691415142	All Weather	4
8	Radanager Bazar GC - Haderpar Bazar GC Road.	691412009	All Weather	9.93
9	Birmongal High School-Goragram Road.	691414023	All Weather	2.9
10	Shari Gowainghat RHD - Noiakhel Bamti - Noiakhel Banoi Mashjeed	691414076	All Weather	2
11	Amshapna Road.	691415031	All Weather	2
12	Haderper bazar-bisnakandi Road.	691415066	All Weather	2
13	Pirojpur Paschim Jaflong UP - Sonarhat Rd - Tarukhal Rd	691415116	All Weather	2.5
14	Baylengura - Chandertuk	691415141	All Weather	2.5

 Table 5: Proposed all weather roads in the Upazila

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
15	Modina Mosque -Uzan Fathepur GPS Road	691415159	All Weather	2.1
16	Chotokhel - Borbond Haor	691415160	All Weather	2.1
17	Fathepur-Prothom Khanda-Gulni Road .	691414089	All Weather	5.4
18	Maturtal Bazar - Kulom Charer par - Bisnakandi Road.	691415169	All Weather	3.57
19	Jugirkandi Dighirpar - Korerbazar - Ghushgram - Hakurbazar (Garo - Juje Mohal Rd)	691414006	All Weather	4.33
20	Towakul UP - Kurikhola Rd	691413005	All Weather	1.5
21	Binnakandi Bazar - Gulni Tea Garden	691414051	All Weather	6.456
22	Gushergangra - Kuterghat	No ID	All Weather	4
23	Shari - Gowainghat RHD - Hajrai - Fadlipur	691414016	All Weather	3
24	Tamabil RHD - Alirgaon UP - Nayamati - Lathu	691414025	All Weather	2
25	Nagardingri-Longpur GPS Road.	691414035	All Weather	2.9
26	Kholamadab - Nayapara Tukoir Road.	691414050	All Weather	1.5
27	Gohora-Ahar Kandi Road via Dowarikhal	691414061	All Weather	2.2
28	Haderpar -Lamni GPS Road. Via Kunkuri.	691414068	All Weather	2
29	Aarkandi - Haidor - Fenaikona Rd	691414012	All Weather	3
30	Jaflong Tea Estate (Factory) - Protappur Road.	691414020	All Weather	2.76
31	Aharkandi - Pornnagram Road	691414054	All Weather	2.08
32	Hadarpar GC - Patlikona	691414086	All Weather	3.9
33	Pirerbazar Guzarkandi Rd	691414087	All Weather	3
34	Nihain bazar-Hatirkandi Mosque Road.	691415010	All Weather	3.2
35	Lakerpar-Tamabil Road.	691415044	All Weather	3.15
36	Pirerbazar - Itachoki Rd	691415052	All Weather	2
37	Modina Mosque - Upor Longpur Road.	691415158	All Weather	2.02

Sl. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
38	Korerbazar - Mohipur	691415168	All Weather	2.5
39	Fathepur bazar- Fathepur Cha bagan via malgram	691415172	All Weather	2.5
40	Fathepur - Bourbag- Islamnogor road.	691415175	All Weather	3.1
41	Shari - Gowainghat RHD - Khash Mouja Rd - Noyagram Uttar - SDF Bank	691415026	All Weather	3.2
42	Kuper bazar-Jarikhal kandi Road	691415067	All Weather	3
43	Kandigram - Chirorpar Village Rd	691414052	All Weather	2.4

7.2.2 **PROPOSED SUBMERSIBLE ROUTES:**

There are 4 submersible roads proposed to connect the HTRV within the Upazila. The road name, ID, road condition and the length of the unpaved roads are as bellow;

SI. No	Road Name	Road ID	Road Condition	Unpaved length (Km)
1	Nondirgoan UP Office (Salutikor Bazar) Via Jalurmuk Bazar road	691413001	Submersible	8.5
2	Nihain Bazar-Satkuri Kandi Mosque Road	691414034	Submersible	4.5
3	Nowagoan high school -Silchan hoar (Baimarpar)	691415191	Submersible	5
4	Guruckchi - Birmongol High School Rd.	691413007	Submersible	5.5

 Table 6: Proposed submersible roads in the Upazila

7.2.3 PROPOSED ROADS FOR UNIONS HAVING NO ID:

There are 2 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;

Sl. No	Road Name	Road ID	Unpaved length (Km)
1	Tamabil Highway - Shankivanga Village	No ID	7
2	Gushergangra - Kuterghat	No ID	4

 Table 7: Proposed roads for Unions having No ID

7.2.4 PRIORITY FOR ROAD DEVELOPMENT

Considering resources constraint, benefited group of people, time required to travel & road hierarchy, a priority list has been developed (<u>Annexure-2</u>) for the HTRV (Hard to Reach Villages). The priority score has been determined according to following

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

 Table 8: Considered weightage values for the prioritization

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.

8 **CONCLUSION & RECOMMENDATIONS**

- Part of Gowainghat Upazila is foothill of Meghalaya Mountains and part of the Upazila is floodplain zone. Four rivers dominate the ecosystem, transport system of the Upazila. The rivers are Piyain, Gowain, Sari & Dauki. These rivers originate at Meghalaya, India. During monsoon, these rivers carry huge volume of flood water from Khasi & Jainta hills. Though the Upazila has a number of rivers, riverine transport is available in this Upazila only during May October. Small Boat & Engine Boat carrying stones, sand and other agricultural products are carried during monsoon. The rivers can supply irrigation water throughout the year but it does not have enough water for riverine transportation except monsoon.
- As the Upazila is heavily flooded during monsoon, rural roads and structures are highly vulnerable in this Upazila.
- The Upazila has a total number of 72 Unions. To develop rural connectivity, there are proposals for all weather as well as submersible roads. This report contains a list of roads with their priority. The priority has been determined based on Population, Travel Time, Cost per KM/1000 people & Road Hierarchy.
- This Upazila is highly vulnerable to disasters. Due to climate change, the vulnerability is getting intense. The year 2022 has shown catastrophic flood that was not seen over the last 18years (*last in 2004 similar to 1998 & 1988*). Therefore, it is highly recommended to study the road alignments before going for investment.
- Case by case design of roads in this Upazila considering different aspects such as exposure to floods, erosion etc. is highly recommended. A special study regarding the road and structure design of the Upazila Gowainghat in Sylhet District is highly recommended.

DETAILS OF GROWTH CENTER & HATBAZAR

		Ory	12	ory	ory		.=			Land	l Area (A	Acre)	T	Т
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)	Toha	Khas	Private	Lease/ Khas Collection BDT (2020)	Lease/ Khas Collection BDT (2019)
Alirgaon	Kuarar bazar	HB	Yes	Special Market	Wholesale	2	0	0.00	0	0.00	0.63	0.00	70000	28000
Alirgaon	Madrasha bazar	HB	Yes	Special Market	Wholesale	2	0	0.00	0	0.00	0.00	1.30	12500	11000
Alirgaon	Barhal bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.07	0.00	5000	4300
Alirgaon	Pach sheoti bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.14	0.00	0	0
Alirgaon	Bagar shorok bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.13	0.00	0	0
Alirgaon	Khagra bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.00	0.57	0	0
Alirgaon	Mongiltal bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.00	0.38	0	0
Alirgaon	Sari ghat bazar (north)	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.00	1.56	0	0
Fatehpur	Binna kandi bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.25	0.00	2710	0
Fatehpur	Alinagar bazar (boyra)	HB	No	0	0	0	0	0.00	0	0.00	0.00	0.00	0	0
Fatehpur	Bangla bazar	HB	No	0	0	0	0	0.00	0	0.00	0.00	0.00	0	0
Fatehpur	Madrasha bazar	HB	No	0	0	0	0	0.00	0	0.00	0.00	0.00	0	0
Fatehpur	Gulni bazar	HB	No	0	0	0	0	0.00	0	0.00	0.00	0.00	0	0
Fatehpur	Madrashar bazar	HB	No	0	0	0	0	0.00	0	0.00	0.00	0.00	0	0
Fatehpur (Dowbari)	Manikgonj bazar	HB	Yes	General Market	Wholesale	2	19	0.40	29	0.30	0.96	0.00	0	205000
Fotepur	Fotepur bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.00	0.82	2500	0
Lengura	Gurucchi bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.24	0.24	0.00	5352	0

		çory	12	;ory	çory				Land Area (Acre)			Acre)	L	T
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)	Toha	Khas	Private	Lease/ Khas Collection BDT (2020)	Lease/ Khas Collection BDT (2019)
Lengura (Dowbari)	Hakur bazar	HB	Yes	General Market	Wholesale	2	11	0.66	27	0.33	0.99	0.00	71199	50000
Lengura (Dowbari)	Nehain bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.35	0.35	0.00	31199	10500
Lengura (Dowbari)	Neagul bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.00	0.00	0	0
Lengura (Dowbari)	Lawer kuni bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.00	0.57	0	0
Nandirgaon	Shalutikor bazar	HB	Yes	General Market	Both	2	0	0.00	0	0.00	1.40	0.00	179000	171500
Nandirgaon	Mosjidar bazar (naya bazar)	HB	Yes	General Market	Wholesale	0	0	0.00	0	0.00	0.00	2.78	0	0
Paschim Jaflong	Gowainghat bazar	GC	Yes	General Market	Both	2	73	0.78	181	0.78	2.67	0.43	432500	159000
Paschim Jaflong	Monortol bazar	HB	Yes	General Market	Wholesale	2	89	1.10	131	0.37	1.78	0.00	12276	11000
Paschim Jaflong	Aherkandi bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.06	0.13	0.76	5151	5005
Paschim Jaflong	Maturtol bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.90	0.00	3851	0
Paschim Jaflong	Pargonar bazar	HB	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.00	0.50	2651	0
Purba Jaflong	Radhanagar bazar	GC	Yes	Special Market	Both	2	53	0.26	79	1.28	2.72	1.99	5205000	1622000
Purba Jaflong	Jafflong bazar	HB	Yes	General Market	Both	2	121	1.04	147	0.45	2.35	1.76	121000	52100
Purba Jaflong	Mamar dokan bazar	HB	Yes	Special Market	Wholesale	7	0	0.00	0	0.00	0.00	0.00	0	0
Purba Jaflong	Bangla bazar	HB	Yes	General Market	Wholesale	2	87	0.70	107	1.05	2.30	0.00	2000	1100
Purba Jaflong	Bolla ghat bazar	HB	Yes	Special Market	Wholesale	7	0	0.00	0	0.00	0.00	0.00	0	1800
Purba Jaflong	Sankibhanga bazar	HB	Yes	General Market	Wholesale	7	0	0.00	0	0.00	0.00	0.34	0	0
Purba Jaflong	Londony bazar	HB	No	0	0	0	0	0.00	0	0.00	0.00	0.00	0	0

		gory	d?	gory	gory		н	:=	E	Land	l Area (A	Acre)	ЪТ	D
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)	Toha	Khas	Private	Lease/ Khas Collection BDT (2020)	Lease/ Khas Collection BDT (2019)
Rustampur	Kupar bazar	НВ	Yes	General Market	Both	2	0	0.00	10	1.00	1.86	0.00	31573	0
Rustampur	Perer bazar	HB	Yes	General Market	Both	2	0	0.00	12	1.00	1.10	0.00	6850	5000
Rustampur	Chowdhury bazar	НВ	Yes	General Market	Wholesale	7	0	0.00	0	0.00	0.00	0.00	0	0
Rustampur	Hathar par bazar	HB	No	0	0	0	0	0.00	0	0.00	0.00	0.00	0	0
Rustampur	Lama bazar	НВ	Yes	General Market	Wholesale	7	0	0.00	0	0.00	0.00	0.00	0	0
Rustampur	Tokoir bazar	HB	Yes	General Market	Wholesale	7	0	0.00	0	0.00	0.00	0.00	0	0
Rustampur	Tukuer bazar	HB	No	0	0	0	0	0.00	0	0.00	0.00	0.00	0	0
Rustampur	Uppargram hadarpar bazar	GC	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.00	0.00	0	0
Towakul	Toakul bazar	GC	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.75	0.00	109000	104100
Towakul	Montol bazar	НВ	Yes	General Market	Wholesale	0	0	0.00	0	0.00	0.14	0.00	0	0
Towakul (Nandirgaon)	Jalur mukh bazar	НВ	Yes	General Market	Wholesale	2	0	0.00	0	0.00	3.00	0.00	25000	24000
Rustampur	Uppargram hadarpar bazar	GC	Yes	General Market	Wholesale	2	0	0.00	0	0.00	0.00	0.00	0	0

PRIORITY LIST FOR ROAD DEVELOPMENT

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	(Union	, Villa	Population 2021 Based on BBS 2011)	2			ype by Condition	Length	length (km)	Length (km)	length	HBB + Unpaved (11+12) in (km)	Cost of c)	Gap	Structure	(in lac) ructures)	/KM	in lac)	e	for	for le	Weightage for Cost per 1000 Population	for	Total Weightage (21+22+23+24)
v	cting	cting	on B]	Vam	A	Type	e Co	Road [+12)	leng	eng	ed le	Un] in (x. Co lac)))	f Str	Cost + Sti	Population ((4÷13)	ve 1000 ion (Time	tage tion	Weightage fo Travel Time	age f	Weightage 1 Road Type	Veig +23-
Priority	nne	nne	pula	ad	ad I	ad 1	Road J Surfac	Total I (10+11+	Paved	HBB L	Unpaved (km)	3B + [+12	Approx. Road (lac	Structure/ (meter)	Cost of S (in Lac)	Fotal (Roads	pula ÷13)	Fentative Budget/100 Population	[ravel ' in min)	Veightage Population	eigh avel	eight: r 100	eigh ad 7	tal V l+22
	<u> </u>	Ŭ 3	4 4	<u> </u>	ă 6	7	e Roa	5 <u>5</u> 9	표 10									<u> </u>						
1	Rustampur	Domdoma Haor, Vitorgul, Bogaiya,	4 10849	5 Bholaganj RHD - Doyarbazr - Vatrai - Hadarpar GC	6 91412008	/ UZR	All Weather	7.3	10	11	12 7.3	13 7.3	14 876	15 125	16 1125	17 2001	18 1486	19	20 110	21 30	22 16	23	24 25	25 96
-	Lengura,	Bogaiya Haor Lengura Haor, Darikandi, Baimarpar,		Rd Nondirgoan UP Office(Salutikor Bazar) Via Jalurmuk		UZK	All weather	7.5				7.5					1480	104	110	50	10	25	25	
2	Nandirgaon	Siala Hoar, Kachuarpar, Cholitabari, Laxmi Hoar	5615	Bazar road	691413001	UNR	Submersible	8.5			8.5	8.5	1530	250	2250	3780	661	673	128	25	18	20	20	83
3	Towakul	Paik Raj, Turukbhag, Meua Bil, Chadibhadi Haor	5300	Paikraj-Laxminagar Road .	691414047	VRA	All Weather	7.5	0.75		6.75	6.75	810		0	810	785	153	101	20	16	25	15	76
4	Dowbari	Nihain, Satkurikandi	2997	Nihain Bazar-Satkuri Kandi Mosque Road	691414034	VRA	Submersible	5		0.5	4.5	5	900	50	450	1350	599	450	68	20	16	25	15	76
5	Towakul	Jangail	7791	Gowainghat - Salutikor Rd - Khaipara (uttar) via Birkuli Mashjeed Rd	691414019	VRA	All Weather	2.8	0.5		2.3	2.3	276	15	135	411	3387	53	35	25	10	25	15	75
6	Fatehpur	Fatehpur 1st part	1652	Fathepur-Prothom Khanda-Gulni Road .	691414089	VRA	All Weather	5.4			5.4	5.4	648	12	108	756	306	458	81	18	16	25	15	74
7	Towakul	Lucky	3802	Toakkul Haidoribazar Rd - Lucky Khatiaghat Rd	691415186	VRB	All Weather	4.5			4.5	4.5	540	20	180	720	845	189	68	20	16	25	12	73
8	Nandirgaon	Nowagoan Lamapara	2925	Nowagoan high school -Silchan hoar (Baimarpar)	691415191	VRB	Submersible	5			5	5	900		0	900	585	308	75	20	16	25	12	73
9	Paschim Alirgaon & Purba Alirgaon	Badhigai Haor, Khalagram, Kakunakhai Khala, Hudpur	3481	Atlihai-Nairdahaor Road .	691414001	VRA	All Weather	8.46	3.45		5.01	5.01	601.2	135	1215	1816.2	695	522	75	20	16	20	15	71
10	Lengura	Langpur	4190	Nagardingri-Longpur GPS Road .	691414035	VRA	All Weather	4.5		1.6	2.9	4.5	540		0	540	931	129	44	20	10	25	15	70
11	Purba Alirgaon	Noiakhel Banoi	2482	Shari Gowainghat RHD - Noiakhel Bamti - Noiakhel Banoi Mashjeed	691414076	VRA	All Weather	2			2	2	240	10	90	330	1241	133	30	20	10	25	15	70
12	Rustampur	Goragram	2164	Birmongal High School-Goragram Road.	691414023	VRA	All Weather	2.9			2.9	2.9	348		0	348	746	161	44	20	10	25	15	70
13	Rustampur	Kunkiri	1652	Haderpar -Lamni GPS Road. Via Kunkuri.	691414068	VRA	All Weather	2			2	2	240		0	240	826	145	30	18	10	25	15	68
14	Rustampur	Khala Madhab	1538	Kholamadab - Nayapara Tukoir Road .	691414050	VRA	All Weather	2		0.5	1.5	2	240		0	240	769	156	23	18	10	25	15	68
15	Purba Alirgaon	Lathu Nayamati	1671	Tamabil RHD - Alirgaon UP - Nayamati - Lathu	691414025	VRA	All Weather	2.5	0.5		2	2	240	10	90	330	835	198	30	18	10	25	15	68
16	Purba Alirgaon	Hajrai	1362	Shari - Gowainghat RHD - Hajrai - Fadlipur	691414016	VRA	All Weather	3.5	0.5		3	3	360	10	90	450	454	330	45	18	10	25	15	68
17	Paschim Jaflong	Gahara	1146	Gohora-Ahar Kandi Road via Dowarikhal	691414061	VRA	All Weather	2.2			2.2	2.2	264	30	270	534	521	466	33	18	10	25	15	68
18	Paschim Jaflong	Kalijuri	952	Radanager Bazar GC - Haderpar Bazar GC Road.	691412009	UZR	All Weather	13.45	3.52		9.93	9.93	1191.6	98	882	2073.6	96	2178	149	15	18	10	25	68
19	Madhya Jaflong	Baurbhag Haor	3932	Chotokhel - Borbond Haor	691415160	VRB	All Weather	2.1			2.1	2.1	252		0	252	1873	64	32	20	10	25	12	67
20	Purba Jaflong	Asam Para, Asam Para Haor	3110	Amshapna Road . Pirojpur Paschim Jaflong UP - Sonarhat Rd - Tarukhal	691415031	VRB	All Weather	2			2	2	240		0	240	1555	77	30	20	10	25	12	67
21	Paschim Jaflong	Tharukhal	3232	Rd	691415116	VRB	All Weather	2.5			2.5	2.5	300		0	300	1293	93	38	20	10	25	12	67
22	Fatehpur	Fatehpur 3rd part	2237	Modina Mosque -Uzan Fathepur GPS road	691415159	VRB	All Weather	2.1			2.1	2.1	252	6	54	306	1065	137	32	20	10	25	12	67
23	Dowbari	Baylengura	2435	Baylengura - Chandertuk	691415141	VRB	All Weather	3		0.5	2.5	3	360	15	135	495	812	203	38	20	10	25	12	67
24	Rustampur	Bishnukandi, Upargram	3381	Haderper bazar-bisnakandi Road.	691415066	VRB	All Weather	2			2	2	240	120	1080	1320	1691	390	30	20	10	25	12	67
25	Rustampur	Teknagul	1817	Pirerbazar - Teknagul Rd	691415142	VRB	All Weather	4			4	4	480	60	540	1020	454	561	60	18	16	20	12	66
26	Paschim Alirgaon	Juje Mahal	974	Jugirkandi Dighirpar - Korerbazar - Ghushgram - Hakurbazar (Garo - Juje Mohal Rd)	691414006	VRA	All Weather	6.83	2.5		4.33	4.33	519.6	30	270	789.6	225	811	65	15	16	20	15	66
27	Fatehpur	Fatehpur 4th Part	1223	Modina Mosque - Upor Longpur Road.	691415158	VRB	All Weather	2.02			2.02	2.02	242.4		0	242.4	605	198	30	18	10	25	12	65
28	Paschim Alirgaon	Moipur	1719	Korerbazar - Mohipur	691415168	VRB	All Weather	3.5	1		2.5	2.5	300	10	90	390	687	227	38	18	10	25	12	65
29	Fatehpur	Fatehpur 6th part	1210	Fathepur bazar- Fathepur Cha bagan via malgram	691415172	VRB	All Weather	2.5			2.5	2.5	300		0	300	484	248	38	18	10	25	12	65
30	Purba Jaflong	Naya Basti	1187	Lakerpar-Tamabil Road .	691415044	VRB	All Weather	3.15			3.15	3.15	378		0	378	377	318	47	18	10	25	12	65
31	Fatehpur	Fatehpur 7th part	1124	Fathepur - Bourbag- Islamnogor road.	691415175	VRB	All Weather	3.1			3.1	3.1	372		0	372	363	331	47	18	10	25	12	65
32	Lengura	Satkurikandi	1146	Nihain bazar-Hatirkandi Mosque Road .	691415010	VRB	All Weather	3.2			3.2	3.2	384		0	384	358	335	48	18	10	25	12	65
33	Rustampur	Kurikhola	657	Towakul UP - Kurikhola Rd	691413005	UNR	All Weather	1.5			1.5	1.5	180	20	180	360	438	548	23	15	10	20	20	65
34	Paschim Jaflong	Pannagram	1211	Aharkandi - Pornnagram Road	691414054	VRA	All Weather	2.5	0.42		2.08	2.08	249.6	55	495	744.6	582	615	31	18	10	20	15	63
35	Purba Jaflong	Naksiya Punji, Sangram Punji	1275	Jaflong Tea Estate (Factory) -Protappur Road.	691414020	VRA	All Weather	2.76			2.76	2.76	331.2	55	495	826.2	462	648	41	18	10	20	15	63
36	Rustampur	Patlikona	1685	Hadarpar GC - Patlikona	691414086	VRA	All Weather	5.5	1.6		3.9	3.9	468	100	900	1368	432	812	59	18	10	20	15	63
37	Rustampur	Itachoki	801	Pirerbazar - Itachoki Rd	691415052	VRB	All Weather	2			2	2	240		0	240	400	300	30	15	10	25	12	62

*** 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
38	Paschim Jaflong	Bugailkandi	2290	Maturtal Bazar - Kulom Charer par - Bisnakandi Road.	691415169	VRB	All Weather	3.57			3.57	3.57	428.4	90	810	1238.4	642	541	54	20	10	20	12	62
39	Fatehpur	Baranagar	701	Binnakandi Bazar - Gulni Tea Garden	691414051	VRA	All Weather	6.456			6.456	6.456	774.72		0	774.72	109	1105	97	15	16	15	15	61
40	Rustampur	Birmongol Haor	420	Guruckchi - Birmongol High School Rd.	691413007	UNR	Submersible	6.5	1		5.5	5.5	990	25	225	1215	76	2889	83	15	16	10	20	61
41	Purba Alirgaon	Noyagram Uttar	1287	Shari - Gowainghat RHD - Khash Mouja Rd - Noyagram Uttar - SDF Bank	691415026	VRB	All Weather	3.8	0.6		3.2	3.2	384	35	315	699	402	543	48	18	10	20	12	60
42	Gowainghat	Haidor	521	Aarkandi - Haidor - Fenaikona Rd	691414012	VRA	All Weather	4	1		3	3	360		0	360	174	691	45	15	10	20	15	60
43	Rustampur	Gujarkandi	893	Pirerbazar Guzarkandi Rd	691414087	VRA	All Weather	5	2		3	3	360	40	360	720	298	807	45	15	10	20	15	60
44	Rustampur	Jhari Khalkandi	387	Kuper bazar-Jarikhal kandi Road	691415067	VRB	All Weather	3	0		3	3	360		0	360	129	930	45	15	10	20	12	57
45	Towakul	Chirurpar	284	Kandigram - Chirorpar Village Rd	691414052	VRA	All Weather	3.4	1		2.4	2.4	288	25	225	513	118	1805	36	15	10	12	15	52
46	Purba Jaflong	Soilakhel 3rd, 7th, 8th & 9th Part	10129	Tamabil Highway - Shankivanga Village	No ID	VRB	All Weather	7			7	7	840	30	270	1110	1447	110	105	30	16	25	12	83
47	Paschim Alirgaon	Lama Satain	1383	Gushergangra - Kuterghat	No ID	VRB	All Weather	4			4	4	480	50	450	930	346	672	60	18	16	20	12	66