



GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATIVES
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Final Report on Study-03
'My Village -My Town' -Technical Assistance Project
“Feasibility Study for Rural Connectivity including Multi-Modal Transport
System in Char and Haor Areas”

Beanibazar Upazila, 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 are important for the concept of hard-to-reach villages.

- In haor areas, Villages connected with submersible roads dry season and connected with Riverine/haor routes in the monsoon season have been considered accessible and excluded from hard-to-reach villages.
- Within Upazila, Villages that need a bridge to connect have not been considered hard-to-reach villages.
- In the case of island Upazilas, villages that are accessible with paved roads from Upazila HQ have been considered accessible and excluded from hard-to-reach villages.
- In the case of villages that are connected with HBB (Herring-Bone-Bond) or Brick flat soling routes have been considered hard-to-reach villages

Mauza 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 a strong social bond. Within a Mauza there could be more than one village.

Union Bangladesh has 3-tiers local government systems: 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 means in the Study the village pathway or access used for walking by commuters, in most cases does not have gazetted or established or commonly used alignment, and to the most, passable by bicycle or motorbike. These village trails are not passable by motorized jeeps or mini trucks or emergency service vehicles or not even any three-wheelers.

Unpaved Roads have no pavement or surface material. They are usually 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 that increase 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 disasters like floods and landslides in a sustainable way.

ABBREVIATIONS

| | |
|-------|---|
| ADB | – Asian Development Bank |
| BBS | – Bangladesh Bureau of Statistics |
| BC | – Bitumen Carpeting |
| DatEx | – Data Expert (Pvt.) Limited |
| DECL | – Delight Engineers and Construction Ltd. |
| DoE | – Department of Environment |
| DPHE | – Department of Public Health Engineering |
| DPP | – Development Project Proposal |
| FGD | – Focus Group Discussion |
| GIS | – Geographic Information System |
| GOB | – Government of Bangladesh |
| HBB | – Herring-Bone-Bond |
| HQ | – Headquarter |
| HTRV | – Hard-to-Reach Village |
| JV | – Joint Venture |
| KII | – Key Informant Interview |
| LGD | – Local Government Division |
| LGED | – Local Government Engineering Department |
| LGI | – Local Government Institute |
| MVMT | – My Village My Town |
| NGO | – Non-Government Organization |
| PD | – Project Director |
| PMO | – Project Management Office |
| RCC | – Reinforced Concrete |
| RHD | – Roads & Highways Department |
| SDGs | – Sustainable Development Goals |
| TA | – Technical Assistance Project |
| UE | – Upazila Engineer |
| UNDP | – United Nations Development Programme |
| UNO | – Upazila Nirbahi Officer |
| UNR | – Union Road |
| UP | – Union Parishad |
| UPZ | – Upazila Road |
| VRA | – Village Road A |
| VRB | – Village Road B |

BACKGROUND

Context of the Project

The Government of Bangladesh made massive plans to ensure equitable development around the country. Under this development philosophy, the GoB requirements are to reduce the 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 the 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 its election manifesto 2018 titled ‘My Village-My Town’- Extension of Modern Civic Amenities in Every village. 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, the 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 the mandate of the 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 the implementation of the 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 the 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 the 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 a lot of challenges. These regions are -Haor, Beel, Hills, Chars, islands etc. The people residing in these regions have considerably low access to civic amenities compared to other villages of the country. Therefore, the study and plan development of improvement of rural connectivity is one of the important assignments of the technical assistance project. The project undertook an Upazila-based special study on the villages of these geographically sensitive regions that are mentioned before.

This report contains the rural connectivity status and priority plan of the **Beanibazar** Upazila of **Sylhet** District.

1 DESCRIPTION OF THE UPAZILA

1.1 GEOGRAPHY AND DEMOGRAPHY

The geographical area of Beanibazar Upazila is 253.24 square kilometers and has 10 unions, 239 mauzas, and 473 villages. The Upazila is 39km away from the district headquarters of Sylhet. Beanibazar is partly covered by 4 major haors/ wetlands and there exist 3(three) rivers flowing over the Upazila. The total population of Upazila is 253616 of which 123939 are male and 129677 females, the total number of households are 42119 and the average household size is 6.0 with a population density of 1001 (as per population census 2011).

1.2 EDUCATION FEATURES

According to the information of the relevant local government offices, there are 113 government & 30 non-government primary schools in the Upazila. On the other hand, Beanibazar has 40 non-government with no government high schools, 1 school & college, 1 government college, 4 private colleges, and 13 madrasahs. The literacy rate for the Upazila is 59.7% as per BBS 2011.

1.3 RURAL ROAD COMMUNICATIONS

Bangladesh scored in the rural accessibility index at around 87 percent among South Asian and some other African countries. Generally, the people of Bangladesh get all-weather within 2 kilometers adjacent to their living places. But the feature of rural road communications in Beanibazar Upazila is contrasted. There are many villages, disconnected from the developed paved road network that brings huge suffering for the people of the villages. The total rural road network of Beanibazar is 584.6 km and out of which, 249.98 km are paved and 334.61 km earthen.

1.4 AGRICULTURE, FOOD PRODUCTION, AND FISHERIES

Though the aggregate (coarse sand, stone chips & stone) business is the main source of income for the inhabitants, agriculture too has major importance for the economy of the people of Beanibazar. There are 62210 acres of arable land in Upazila. In the fiscal year 2010-11, the Rice production was 1.85, 1.85 & 3.75 metric tons for Aus, Aman & Boro seasons respectively. The Upazila also produced 85 metric tons of Turmeric, and 680 metric tons of Potato in the same fiscal year 2010-11. A notable quantity of vegetables is also produced here in this Upazila.

According to the BBS (2011) data, Beanibazar has 1747 Acre of haor, pond & dighee that produced 1950 metric tons of fish. There also exist 296 poultry & 6 dairy farms.

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

1.5 GROWTH CENTRE AND HATBAZAR

Growth Centre and Rural Hatbazar are one of the main centers of the rural economy. Hatbazar is like the heart of the development of the rural economy. Rural Hatbazar plays a role in increasing production and creating employment impacting the supply chain of agriculture and non-agriculture products. There are 23 Hatbazar and 4 growth centers in Upazila. The structural development of Hatbazar and its growth is pivotal to boosting the rural economy. Details of the growth center & hatbazar of the Upazila have been attached in **Annexure-1**.

2 LOCATION OF THE UPAZILA

Beanibazar Upazila of Sylhet district in the North-Eastern part of the country. The location has been shown on the map. The Upazila is situated at the foothill of the Indian border and causes flash floods during monsoon coming from uphill Meghalaya where is Cherrapunji, the wettest place on earth, resulting in waterlogging within the haor basin. Flash floods induce severe impacts on both the built and the natural environment. The effects of flash floods can be catastrophic and show extensive diversity, ranging from damages to buildings and infrastructure to impacts on vegetation, human lives, and livestock.

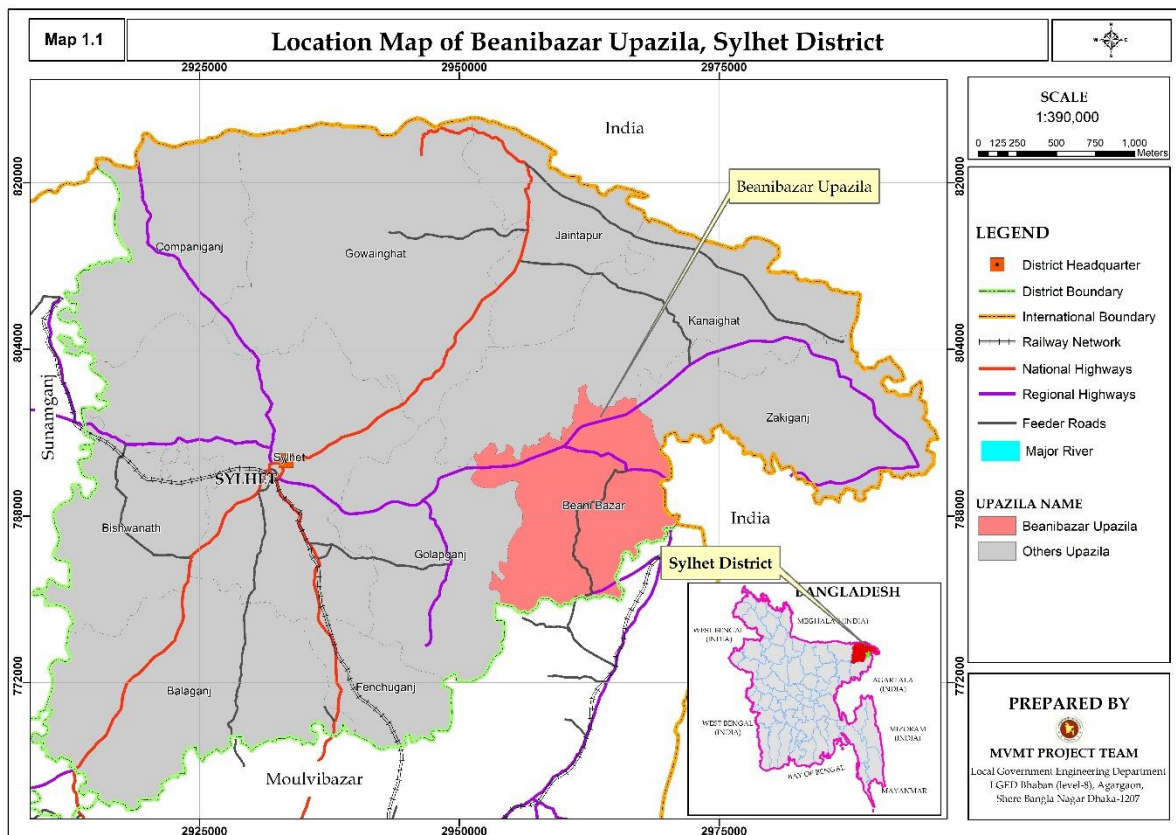


Figure 1: Upazila Location Map

3 APPROACH & METHODOLOGY

3.1 STUDY TEAM COMPOSITION

A team consisting of Senior Rural Road Infrastructure Specialist, Associate Rural Infrastructure Specialist, and Assistant Engineer engaged by the 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. A 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, and priority needs were identified and mapped working together with the LGI representatives and LGED technical team. LGED and LGI representatives surveyed each Upazila for the 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, the PMO team conducted the study in 50 Upazilas of Haor areas, and the rest of the Upazilas of Haor, Beel, Char, and Island areas are conducted by the 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 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 fieldwork) and quantitative (structured and semi-structured interviews) approaches and methods in reviewing and conducting fieldwork 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 fieldwork were:

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

- ❖ Review the Hard-to-reach village database at the ‘Stakeholder consultation meeting’ participated by local government representatives such as the 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, teachers, local farmers, traders, and students depending on 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 the MVMT project.
- ❖ Survey with GPS machine and Google apps in collecting Hard-to-reach village locations, landmarks, chainage at gaps, village road at sections 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 a higher population and travel time get higher weightage;
- Priority is given to roads, ghats, and collection points that will facilitate agricultural diversification, reduce transportation costs, ensure a fair price and create a farm and non-farm employment and income;
- Priority is given to roads development and inland waterways dredging that will enable year-round mobility of the 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 with 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 demands and local needs are reflected in the prioritization which was

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

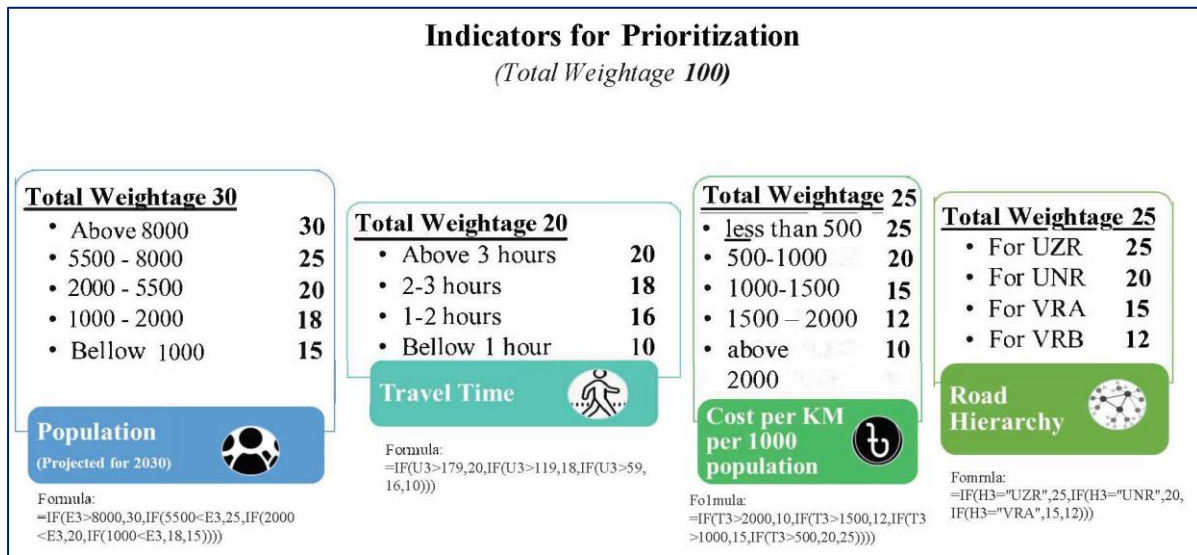


Figure 2: Prioritization indicators & their weightage values

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 the union Chairman and members who know the sub-project and are the best. This was not in scale but approximation was reached by triangulation. Then digitized on screen using GIS, 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 fieldwork 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. The 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 staff.

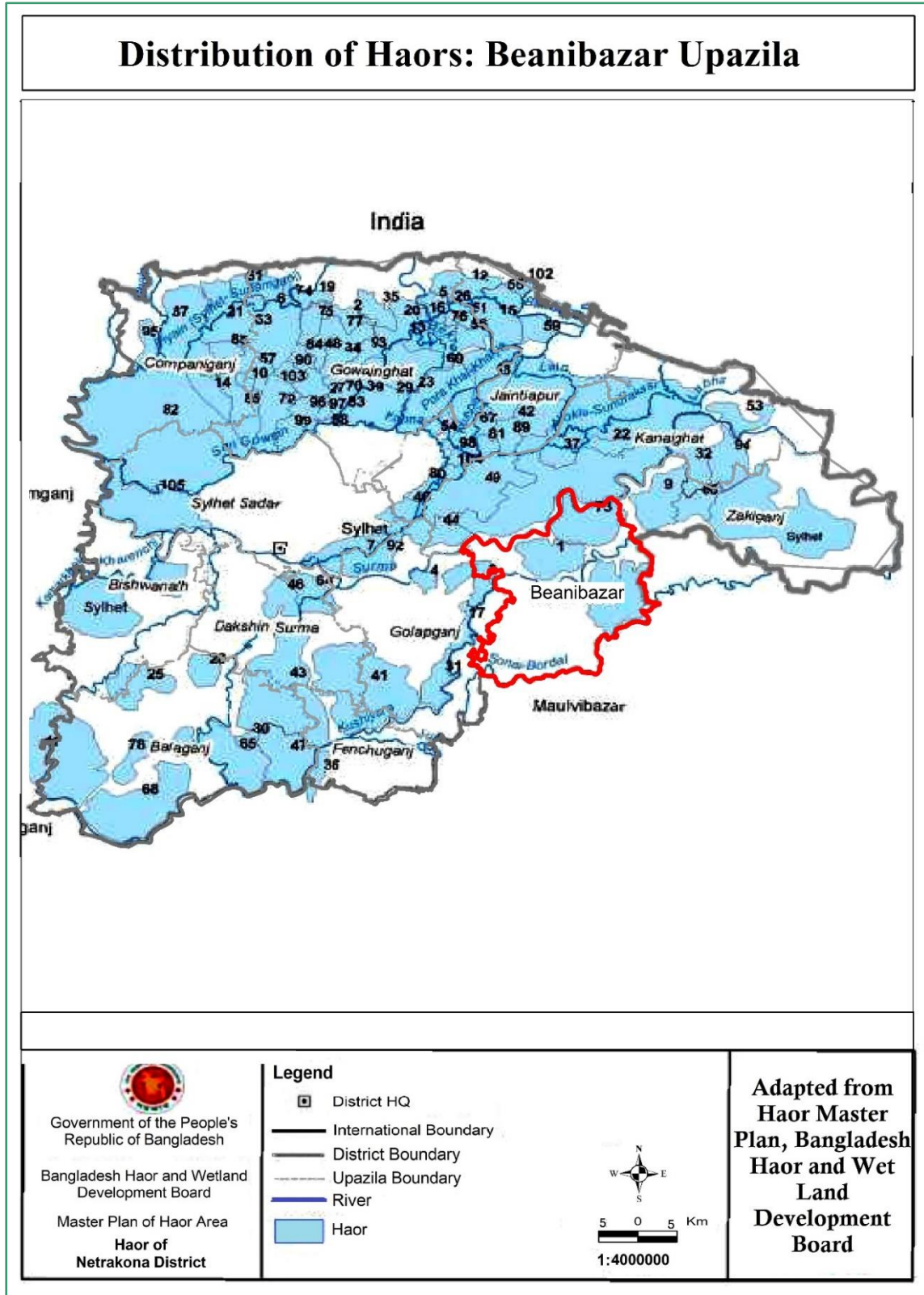
3.9 NATIONAL WORKSHOP

The Draft Report is finalized, incorporating comments received from the validation workshop, LGED head office staff, and the 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 almost 30-40% of its land area. The roads within the flood zone become inundated during monsoon, which requires attention to take relevant measures during road construction and maintenance.



4.2 HAOR/ WETLAND CATEGORY

However, in the north of the Upazila, it is floodplain, in the east foothill and partially is within Unplanned Hill. Therefore, road or other infrastructure development in this Upazila does not have any major environmental consequences.

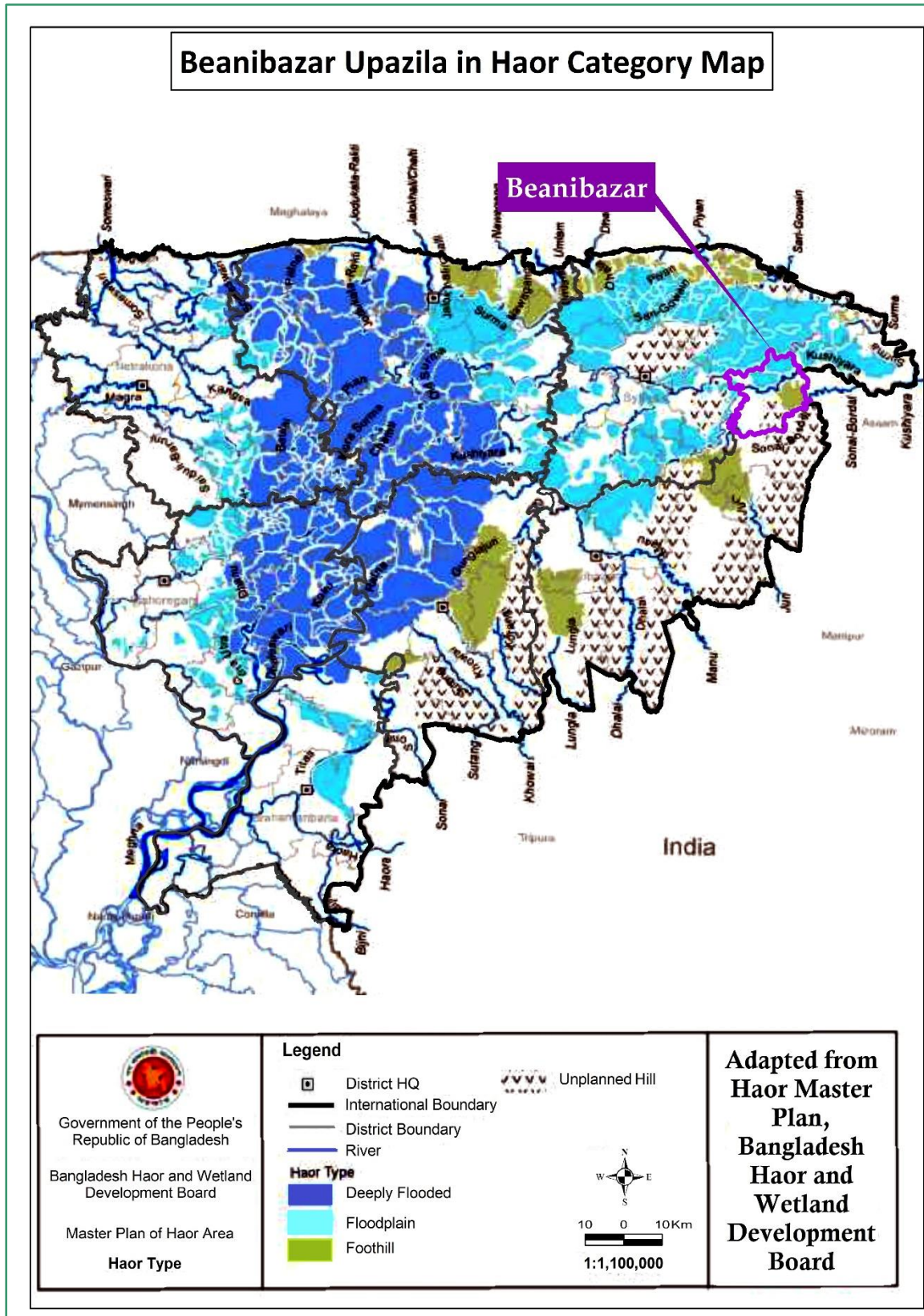


Figure 4: Haor Category Map.

4.3 BIO-ECOLOGICAL CHARACTERISTICS

The Bio-ecological characteristics map of the Upazila has been shown below. The map shows that the Upazila is under Sylhet Hills.

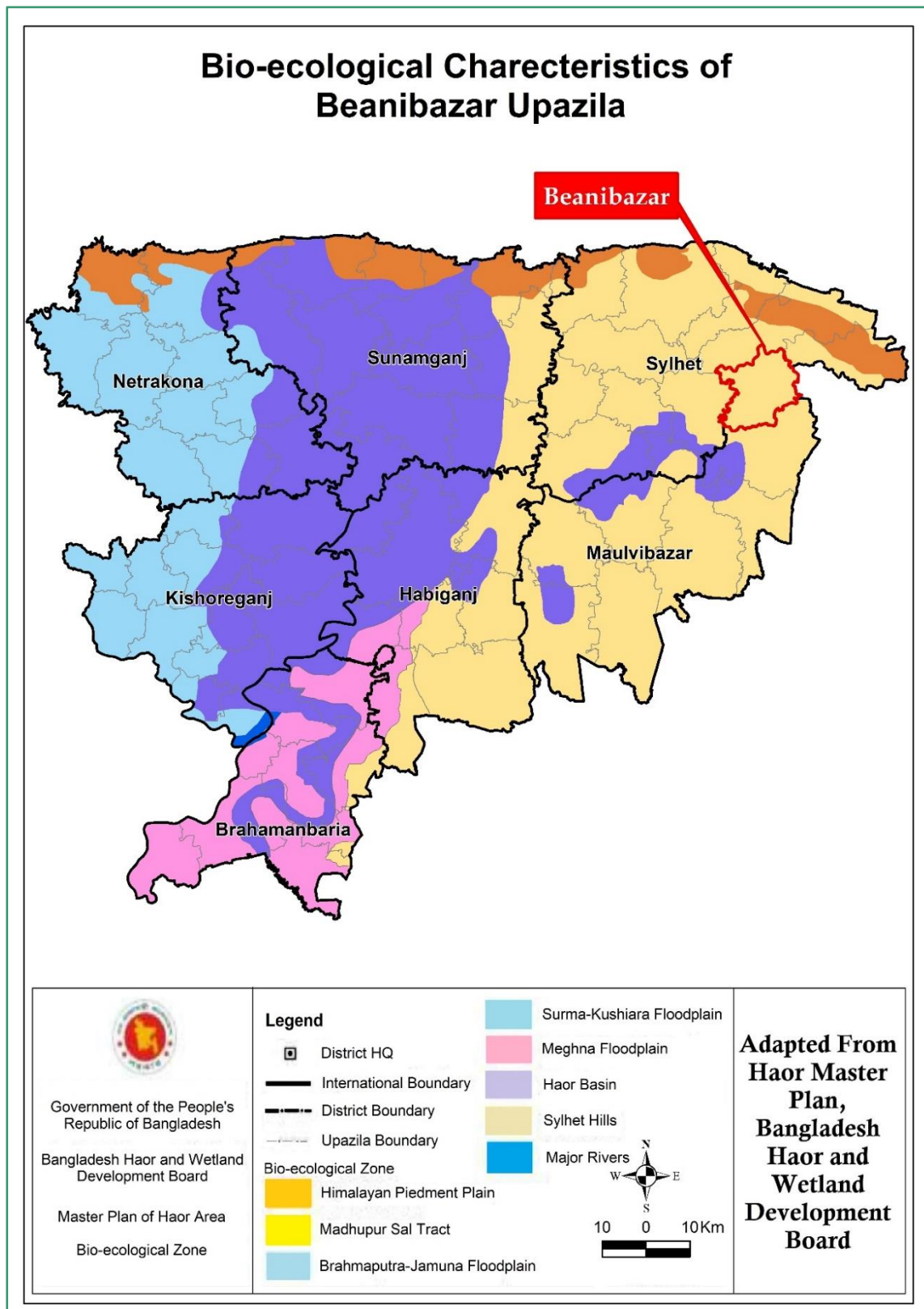


Figure 5: Bio Ecological Characteristics Map

5 RURAL ROAD CONNECTIVITY TO THE VILLAGES

5.1 SUMMARY OF THE VILLAGE CONNECTIVITY

The feature of rural road communications in Beanibazar Upazila is contrasted. Out of 183 villages, 7 are disconnected from the developed paved road network which brings huge suffering for the people of those villages. The total rural road network of Beanibazar is 584.6 km and out of which, 249.98 km are paved and 334.61 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 | Alinagar | 15 | 14 | 1 |
| 2 | Beani Bazar | 9 | 9 | 0 |
| 3 | Charkhai | 43 | 42 | 1 |
| 4 | Dobhag | 13 | 13 | 0 |
| 5 | Kurar Bazar | 14 | 13 | 1 |
| 6 | Lauta | 15 | 14 | 1 |
| 7 | Mathiura | 11 | 11 | 0 |
| 8 | mollahpur | 11 | 10 | 1 |
| 9 | Muria | 20 | 19 | 1 |
| 10 | Sheola | 15 | 15 | 0 |
| 11 | Tilpara | 17 | 16 | 1 |
| | Total | 183 | 176 | 7 |

5.2 VILLAGES AND THEIR CONNECTIVITY – UNION LEVEL

The consultant arranged a meeting at the Upazila conference room with and all the UP Chairman & their secretaries. The team interviewed a representative of each 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) |
|-------------|------------------|------------------------|-------------------------------------|------------------------|-------------------------------------|
| Alinagar | 1 | Alinagar (Ranagaon) | 2669 | Hetimkhali | 876 |
| | 2 | Chandagaon | 3141 | | |
| | 3 | Chandapur | 513 | | |
| | 4 | Fulmalik | 369 | | |
| | 5 | Kadi Malik | 1316 | | |
| | 6 | Kargaon (Bara Para) | 1272 | | |
| | 7 | Khalagaon | 731 | | |
| | 8 | Khalagram (Koakhalish) | 823 | | |
| | 9 | Khasa (Rougubagh) | 573 | | |
| | 10 | Nij Mohamedpur | 1887 | | |
| | 11 | Razzakpur | 957 | | |
| | 12 | Roykail | 1249 | | |
| | 13 | Ujandhaki | 974 | | |
| | 14 | Uttarbagh (Kaudia) | 4089 | | |
| | Sub Total | | 20563 | | 876 |
| Beani Bazar | 1 | Alutali | 409 | | |
| | 2 | Fatehpur | 2304 | | |
| | 3 | Kasaripara | 1494 | | |
| | 4 | Kasba | 1242 | | |
| | 5 | Khasa | 1232 | | |
| | 6 | Khasa Auni Pandit | 1529 | | |
| | 7 | Noa Gram | 3486 | | |
| | 8 | sree Dhara Dakshin | 1936 | | |
| | 9 | Sree Dhara Uttar | 2259 | | |
| | Sub Total | | 15891 | | |
| Charkhai | 1 | Adinabad | 898 | Niar Chak | 420 |
| | 2 | Baban Chak | 624 | | |
| | 3 | Baghbari | 1211 | | |
| | 4 | Bilua (Dawnguri) | 695 | | |
| | 5 | Boraigram | 829 | | |
| | 6 | Chak Rabbani | 1618 | | |
| | 7 | Dahal | 425 | | |
| | 8 | Dakshin Hajrapara | 771 | | |
| | 9 | Dalakhani | 826 | | |
| | 10 | Dattagram | 806 | | |
| | 11 | Deulgram | 1000 | | |
| | 12 | Gola | 456 | | |

| Union | Sl.No | Connected Villages | Population 2021 (Based on BBS 2011) | Hard-to-Reach Villages | Population 2021 (Based on BBS 2011) | |
|-------|---------------|----------------------|-------------------------------------|------------------------|-------------------------------------|------------|
| | 13 | Jalalnagar | 1408 | | | |
| | 14 | Jirkhai | 621 | | | |
| | 15 | Kakura | 1309 | | | |
| | 16 | Kamargram | 745 | | | |
| | 17 | Khapan | 390 | | | |
| | 18 | Konagram | 779 | | | |
| | 19 | Lagnakona (Banigram) | 612 | | | |
| | 20 | Madhur Chak | 734 | | | |
| | 21 | Mandar Gram | 1393 | | | |
| | 22 | Mohanpur | 256 | | | |
| | 23 | Munshir Chak | 673 | | | |
| | 24 | Nateshwar | 492 | | | |
| | 25 | Nateshwar Chak | 853 | | | |
| | 26 | Noakhani | 930 | | | |
| | 27 | Noyagram | 864 | | | |
| | 28 | Pailgram | 443 | | | |
| | 29 | Pally Shasan | 399 | | | |
| | 30 | Patan | 751 | | | |
| | 31 | Poegram | 301 | | | |
| | 32 | Purbo Kachkatkha | 468 | | | |
| | 33 | Ramashid | 450 | | | |
| | 34 | Ramat Khani | 396 | | | |
| | 35 | Sachan | 671 | | | |
| | 36 | Sachan Chak | 898 | | | |
| | 37 | Safa | 682 | | | |
| | 38 | Safa Chak | 604 | | | |
| | 39 | Sayed Kotba | 168 | | | |
| | 40 | Shikarpur | 1177 | | | |
| | 41 | Taranga | 433 | | | |
| | 42 | Uttar Hajrapara | 96 | | | |
| | | Sub Total | | 30155 | | 420 |
| | Dobhag | 1 | Bangal Huda | 1226 | | |
| | | 2 | Bara Gram | 1185 | | |
| | | 3 | Charia | 2874 | | |
| | | 4 | Dakshin Dobang | 1587 | | |
| | | 5 | Gailapur | 617 | | |
| | | 6 | Gajukatas | 2023 | | |
| | | 7 | Kharabara | 2095 | | |
| | | 8 | Mewa | 3076 | | |
| | | 9 | Noya Dobhag | 1822 | | |
| | | 10 | Pailgram Chak | 1059 | | |
| | | 11 | Pamjipuri | 849 | | |

| Union | Sl.No | Connected Villages | Population 2021 (Based on BBS 2011) | Hard-to-Reach Villages | Population 2021 (Based on BBS 2011) |
|--------------------|------------------|--------------------|-------------------------------------|------------------------|-------------------------------------|
| | 12 | Sylheti Para | 1519 | | |
| | 13 | Uttar Bhag | 2271 | | |
| | Sub Total | | 22203 | | |
| Kurar Bazar | 1 | Angorjor (Kuchai) | 1676 | Akakhajana | 1777 |
| | 2 | Angura | 347 | | |
| | 3 | Angura Bazar | 462 | | |
| | 4 | Angura Mohamedpur | 1845 | | |
| | 5 | Debasree | 693 | | |
| | 6 | Deulgram (Kalapur) | 2378 | | |
| | 7 | Gararbanda | 2125 | | |
| | 8 | Gobinda Sree | 2707 | | |
| | 9 | Khashir | 3449 | | |
| | 10 | Khashirband | 3823 | | |
| | 11 | Pachim Laujhari | 532 | | |
| | 12 | Purbo Laujhari | 624 | | |
| | 13 | Uttar Akakhajana | 1434 | | |
| | Sub Total | | 22095 | | 1777 |
| Lauta | 1 | Astashangan | 626 | Tikar Para | 3661 |
| | 2 | Baghprachanda Khan | 2105 | | |
| | 3 | Baraigram | 1528 | | |
| | 4 | Bhabanipur | 114 | | |
| | 5 | Dakshin Patti | 573 | | |
| | 6 | Gajarai | 1844 | | |
| | 7 | Jaldhup Kalaura | 1938 | | |
| | 8 | Jhaldhup | 2339 | | |
| | 9 | Kanli | 585 | | |
| | 10 | Kasi Bahar | 379 | | |
| | 11 | Lauta | 2707 | | |
| | 12 | Nandirkal | 1398 | | |
| | 13 | Paria Bahar | 1962 | | |
| | 14 | Uttar Paria Bahar | 1194 | | |
| | Sub Total | | 19292 | | 3661 |
| Mathiura | 1 | Bara Mollapur | 2163 | | |
| | 2 | Bejgaon | 743 | | |
| | 3 | Durdhabkushi | 2152 | | |
| | 4 | Khalasan Datta | 239 | | |
| | 5 | Laishaitala | 1623 | | |
| | 6 | Paschimpar | 2537 | | |
| | 7 | Purbopar | 2600 | | |
| | 8 | Purush Pal | 590 | | |
| | 9 | Sutarkandi | 599 | | |
| | 10 | Uttarpar | 908 | | |
| | Sub Total | | 14154 | | 551 |

| Union | Sl.No | Connected Villages | Population 2021 (Based on BBS 2011) | Hard-to-Reach Villages | Population 2021 (Based on BBS 2011) |
|-----------|------------------|----------------------|-------------------------------------|------------------------|-------------------------------------|
| mollahpur | 1 | Abdullahpur | 1730 | Alipur | 667 |
| | 2 | Baurbagh | 381 | | |
| | 3 | Choto Mollapur | 2121 | | |
| | 4 | Jaldhup Patan | 1134 | | |
| | 5 | Kacha | 951 | | |
| | 6 | Lama Patan | 1098 | | |
| | 7 | Lashaitala | 506 | | |
| | 8 | Matikata | 1341 | | |
| | 9 | Nidhanpur (part) | 744 | | |
| | 10 | Roybanshi | 551 | | |
| | 11 | Ushpar | 689 | | |
| | Sub Total | | 11362 | | |
| Muria | 1 | Abangi (Bharaubari) | 738 | Inampur | 163 |
| | 2 | Astaghari | 1058 | | |
| | 3 | Bara Desh | 2307 | | |
| | 4 | Baruakana | 93 | | |
| | 5 | Barudha | 1115 | | |
| | 6 | Chandagram | 2258 | | |
| | 7 | Chattish | 82 | | |
| | 8 | Chotta Desh | 2804 | | |
| | 9 | Gangadia | 5522 | | |
| | 10 | Konagram | 1995 | | |
| | 11 | Maij Kapon | 396 | | |
| | 12 | Maligram | 513 | | |
| | 13 | Noagaon | 2254 | | |
| | 14 | Patharipara | 1201 | | |
| | 15 | Shafla | 16 | | |
| | 16 | Shaitsala | 49 | | |
| | 17 | Sharpur | 1836 | | |
| | 18 | Tajpur | 1801 | | |
| | 19 | Tepaikona | 1136 | | |
| | Sub Total | | 27174 | | 163 |
| Sheola | 1 | Alipur | 401 | | |
| | 2 | Balinga | 1972 | | |
| | 3 | Charabai | 1915 | | |
| | 4 | Charua | | | |
| | 5 | Dakshin Bagh | 757 | | |
| | 6 | Daudpur | 419 | | |
| | 7 | Dattagram | 478 | | |
| | 8 | Deunagar (Kamargaon) | 2588 | | |
| | 9 | Dighalbak | 2969 | | |
| | 10 | Gangkul | 452 | | |

| Union | Sl.No | Connected Villages | Population 2021 (Based on BBS 2011) | Hard-to-Reach Villages | Population 2021 (Based on BBS 2011) |
|---------|------------------|--------------------|-------------------------------------|------------------------|-------------------------------------|
| | 11 | Gharua | 498 | | |
| | 12 | Kakardia | 2698 | | |
| | 13 | Saleswar | 1885 | | |
| | 14 | Saleswar Kuna | 1248 | | |
| | 15 | Teradal | 1506 | | |
| | Sub Total | | 19786 | | |
| Tilpara | 1 | Bibirai | 591 | Nachhirpur | 696 |
| | 2 | Burchia | 317 | | |
| | 3 | Chandla | 481 | | |
| | 4 | Dasura | 3418 | | |
| | 5 | Debarai | 2056 | | |
| | 6 | Debarai Chak | 198 | | |
| | 7 | Gangkul | 419 | | |
| | 8 | Gorer Tek | 443 | | |
| | 9 | Inam | 1088 | | |
| | 10 | Matijura | 1979 | | |
| | 11 | Nandishawr | 1182 | | |
| | 12 | Sadarpur | 1176 | | |
| | 13 | Shaneswar | 708 | | |
| | 14 | Tilpara | 1275 | | |
| | 15 | Tuku | 697 | | |
| | 16 | Ulu Uri | 641 | | |
| | Sub Total | | 16669 | | 696 |

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

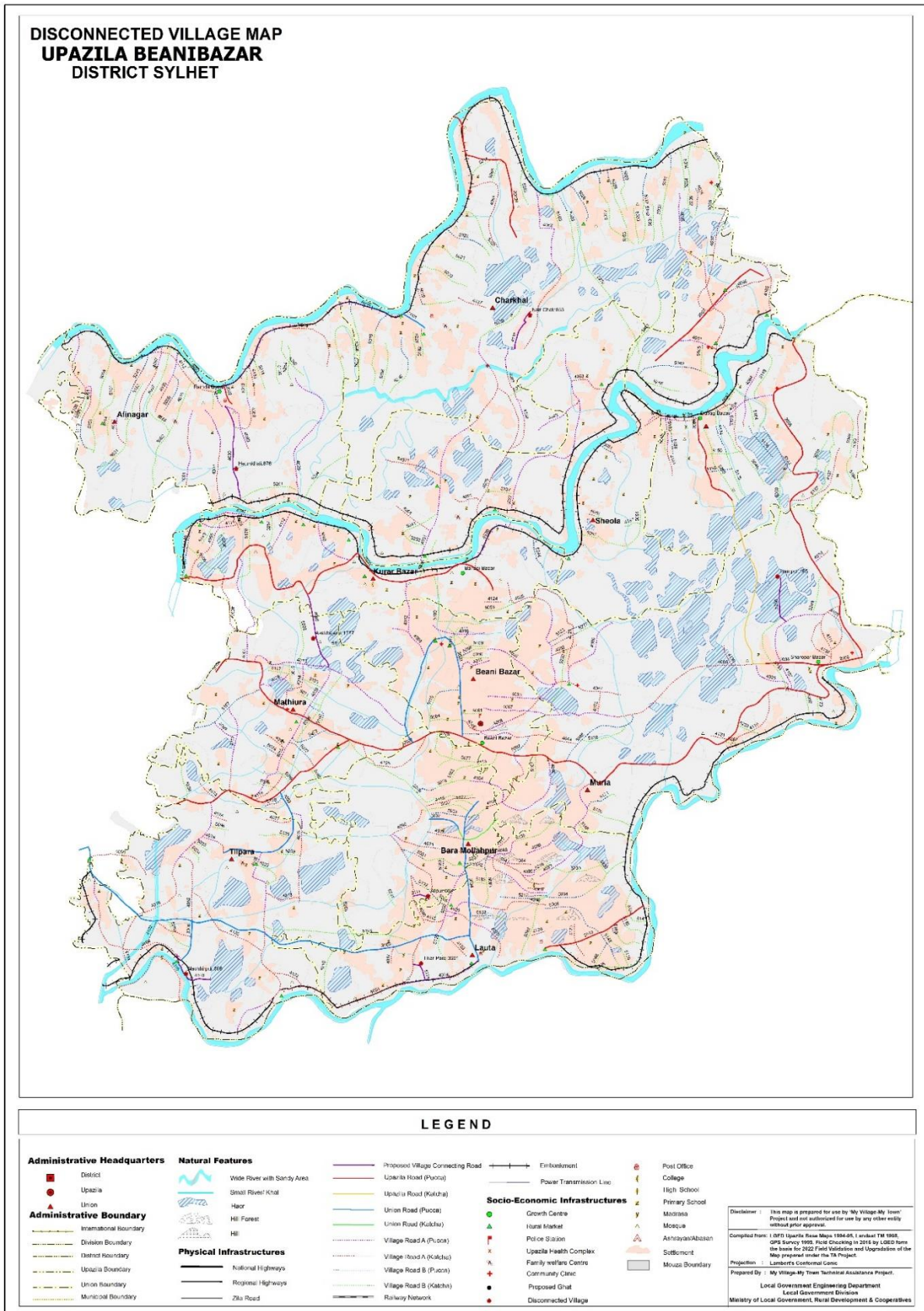


Figure 6: Upazila Map

6 DATA COLLECTION & ANALYSIS

The consultant team collected data from the field on Hard-to-Reach Villages. Data were collected from those villages including population, road alignment information (*type, length, condition*), travel time, a structure required on the alignment, potential Riverine routes that can be used for a multi-modal transport system etc. The data were then analyzed, categorized, and finally used to obtain a priority list along with a map (*Figure:5*) 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 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 road communication effective.

Table 3: 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) |
|---------------------------------------|-------------------|---------------------|--|
| 584.6 | 249.98 | 334.61 | 10.23 |

6.1.1 PROPOSED ALL-WEATHER ROUTES:

There are 7 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 4: Proposed all-weather roads in the Upazila

| Sl. No | Road Name | Road ID | Road Condition | Unpaved length (Km) |
|--------|--|-----------|----------------|---------------------|
| 1 | Dodboxi-Akhakajana Road | 691174069 | All Weather | 1.63 |
| 2 | Alipur Village Road | 691175111 | All Weather | 1 |
| 3 | Hetimkani-Gobindersree Road | 691174030 | All Weather | 0.5 |
| 4 | Baruda-Maiskapon Inampur Primary School Road | 691175250 | All Weather | 1.73 |
| 5 | Bibirai-Nosirpur road | 691174103 | All Weather | 1.44 |
| 6 | RHD-(Shodakhal)-Noirchak village road | 691174131 | All Weather | 2.3 |
| 7 | Tikarpara-Bauratul Village Road | 691175118 | All Weather | 1.47 |

6.1.2 PRIORITY FOR ROAD DEVELOPMENT

Considering resources constraint, benefited a group of people, the 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 5: 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 the same score. In these cases, the minimum budget required for providing connectivity to thousands of people- will get more priority compared to more budget-required roads. The roads bearing ID will have higher priority than the roads without ID.

7 CONCLUSION & RECOMMENDATIONS

- Beanibazar Upazila is located within the *partially flash flood and foothill zone*. Beanibazar is partly covered by 4 major haors/ wetlands and there exist 3(three) rivers flowing over the Upazila that dominate the ecosystem, and transport system of the Upazila. During monsoons, these rivers carry a huge volume of flood water.
- 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 7 Hard-to-Reach Villages. To develop rural connectivity, there are proposals for both all-weather and 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, vulnerability is getting intense. The year 2022 has shown catastrophic flood that was not seen over the last 18 years (*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 Beanibazar Upazila in Sylhet district is highly recommended.

ANNEXURE - 1

DETAILS OF GROWTH CENTER & HATBAZAR

| Sl. No. | 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 | Alinagar | Ramda bazar | GC | Yes | General Market | Both | 2 | 13 | 0.26 | 13 | 0.45 | 0.71 | 0.00 | 52226 | 627500 |
| 2 | Alinagar | Modonganj bazar | HB | No | Collection Center | Both | 2 | 15 | 0.10 | 15 | 0.21 | 0.31 | 0.00 | 0 | 0 |
| 3 | Beanibazar Paurashava | Beani bazar | GC | No | 0 | 0 | 0 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0 | 0 |
| 4 | Charkhai | Choumuhoni bazar | HB | Yes | General Market | Both | 7 | 0 | 0.00 | 0 | 0.78 | 0.78 | 0.00 | 140000 | 160100 |
| 5 | Charkhai | Gadair bazar | HB | Yes | General Market | Both | 2 | 0 | 0.00 | 0 | 0.70 | 0.12 | 0.00 | 1000 | 0 |
| 6 | Charkhai | Kakura bazar | HB | Yes | Collection Center | Both | 0 | 0 | 0.36 | 0 | 0.32 | 0.68 | 0.00 | 0 | 0 |
| 7 | Dubag | Dubagh bazar | GC | Yes | General Market | Both | 2 | 0 | 0.00 | 0 | 0.48 | 0.48 | 0.00 | 0 | 587000 |
| 8 | Dubag | Charia bazar | HB | Yes | General Market | Wholesale | 7 | 0 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0 | 0 |
| 9 | Kurar Bazar | Bairagi bazar | GC | Yes | General Market | Both | 2 | 10 | 0.05 | 10 | 0.61 | 0.91 | 0.00 | 1120000 | 715000 |
| 10 | Kurar Bazar | Dewlgram bazar | HB | Yes | Collection Center | Both | 2 | 0 | 0.00 | 0 | 0.05 | 0.10 | 0.10 | 590 | 500 |
| 11 | Kurar Bazar | Gobindosree bazar | HB | Yes | Collection Center | Both | 2 | 29 | 0.24 | 25 | 0.16 | 0.24 | 0.00 | 690 | 600 |
| 12 | Kurar Bazar | Farir bazar | HB | Yes | Collection Center | Both | 2 | 3 | 0.10 | 3 | 0.16 | 0.26 | 0.10 | 1290 | 1050 |
| 13 | Kurar Bazar | Kurar bazar | HB | Yes | Collection Center | Both | 2 | 23 | 0.12 | 23 | 0.65 | 1.05 | 0.00 | 910 | 750 |
| 14 | Lauta | Baroigram bazar | HB | Yes | General Market | Both | 7 | 0 | 0.00 | 0 | 0.23 | 0.37 | 0.00 | 1423000 | 1312000 |
| 15 | Lauta | Thana bazar | HB | Yes | General Market | Both | 2 | 0 | 0.00 | 0 | 0.90 | 0.31 | 0.00 | 76500 | 51500 |
| 16 | Lauta | Kalibari bazar | HB | Yes | General Market | Both | 2 | 0 | 0.00 | 0 | 0.31 | 0.48 | 0.00 | 40600 | 27872 |
| 17 | Lauta | Bahadurpur madrasah bazar | HB | Yes | Collection Center | Both | 2 | 0 | 0.00 | 0 | 0.12 | 0.19 | 0.00 | 0 | 0 |

| Sl. No. | Union | Market Name | Market Category (GC=Growt h 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 Collectio n BDT (2020) | Lease/ Khas Collectio n BDT (2019) |
|---------|----------|-------------------------|---|--------------------------|---|--|---------|------------------------|----------------------|----------------------|------------------|------|---------|------------------------------------|------------------------------------|
| | | | | | | | | | | | Toha | Khas | Private | | |
| 18 | Mathiura | Eidgah bazar | HB | Yes | General Market | Both | 7 | 0 | 0.00 | 0 | 0.08 | 0.13 | 0.00 | 0 | 0 |
| 19 | Mathiura | Mathiura bazar | HB | Yes | Collection Center | Wholesale | 1 | 0 | 0.00 | 0 | 0.75 | 1.13 | 0.00 | 0 | 0 |
| 20 | Muria | Kazir bazar | HB | Yes | Collection Center | Both | 2 | 0 | 0.00 | 0 | 0.49 | 0.74 | 0.00 | 0 | 0 |
| 21 | Muria | Saropar bazar/ shapahar | GC | Yes | General Market | Both | 2 | 0 | 0.00 | 0 | 0.13 | 0.39 | 0.00 | 0 | 1200 |
| 22 | Shewla | Kakordi bazar | HB | Yes | Collection Center | Both | 2 | 6 | 0.12 | 6 | 0.32 | 0.44 | 0.00 | 0 | 0 |
| 23 | Shewla | Shaliya/shewla bazar | HB | Yes | Collection Center | Both | 2 | 0 | 0.00 | 0 | 0.14 | 0.14 | 0.00 | 0 | 0 |
| 24 | Tilpara | Dashura bazar | HB | Yes | Collection Center | Both | 2 | 30 | 0.16 | 30 | 0.38 | 0.54 | 0.00 | 0 | 0 |
| 25 | Tilpara | Bibirai bazar | HB | Yes | Collection Center | Both | 2 | 15 | 0.08 | 2 | 0.12 | 0.20 | 0.00 | 0 | 0 |
| 26 | Tilpara | Ashirganj bazar | HB | Yes | General Market | Both | 2 | 39 | 0.20 | 7 | 0.22 | 0.34 | 0.00 | 0 | 0 |
| 27 | Tilpara | Saneshor bazar | HB | Yes | General Market | Both | 2 | 22 | 0.17 | 0 | 0.31 | 0.48 | 0.00 | 8000 | 3000 |

ANNEXURE - 2

PRIORITY LIST FOR ROAD DEVELOPMENT

| SL No | Upazila | Connecting Union | Connecting Village | Village Population BBS 2011 | Population 2021 (Based on BBS 2011) | Road Name | Road ID | Road Type | Road Type by Surface Condition | Total Road Length | Paved length (Km) | HBB Length (km) | Unpaved length (Km) | Total Road Length to be Developed | HBB + Unpaved in (km) | Approx. Cost of Road (Lac) | Structure/ Gap (Meter) | Cost of Structure (in Lac) | Total Cost (in lac) (Roads + Structures) | Population /KM (10÷17) | Tentative Budget/1000 Population (in lac) | Travel Time (in min) | Weightage for Population | Weightage for Travel Time | Weightage for Cost per 1000 Pop | Weightage for Road Type | Total Weightage | Priority |
|-------|------------|------------------|--------------------|-----------------------------|-------------------------------------|---|-----------|-----------|--------------------------------|-------------------|-------------------|-----------------|---------------------|-----------------------------------|-----------------------|----------------------------|------------------------|----------------------------|--|------------------------|---|----------------------|--------------------------|---------------------------|---------------------------------|-------------------------|-----------------|----------|
| 1 | Beanibazar | Lauta | Tikarpara | 3661 | 4195 | Tikarpara-Bauratul Village Road | 691175118 | VRB | All Weather | 1.47 | | | 1.47 | 1.47 | 1.47 | 176.40 | 0.00 | 0.00 | 176.40 | 2853 | 42.05 | 22.05 | 20 | 10 | 25 | 12 | 67 | 1 |
| 2 | Beanibazar | Kurar Bazar | Akakhajana | 1777 | 2036 | Dodboxi-Akhakajana Road | 691174069 | VR A | All Weather | 1.79 | 0.16 | | 1.63 | 1.79 | 1.63 | 195.60 | 0.00 | 0.00 | 195.60 | 1249 | 96.07 | 24.45 | 20 | 10 | 25 | 12 | 67 | 2 |
| 3 | Beanibazar | Alinagar | Hetimkhali | 876 | 1004 | Hetimkani-Gobindersree Road | 691174030 | VR A | All Weather | 0.50 | | | 0.50 | 0.50 | 0.50 | 60.00 | 0.00 | 0.00 | 60.00 | 2007 | 59.78 | 7.50 | 18 | 10 | 25 | 12 | 65 | 3 |
| 4 | Beanibazar | Mullapur | Alipur | 667 | 764 | Alipur Village Road | 691175111 | VRB | All Weather | 1.00 | | | 1.00 | 1.00 | 1.00 | 120.00 | 0.00 | 0.00 | 120.00 | 764 | 157.02 | 15.00 | 15 | 10 | 25 | 12 | 62 | 4 |
| 5 | Beanibazar | Tilpara | Nachirpur | 696 | 797 | Bibirai-Nosirpur road | 691174103 | VR A | All Weather | 1.44 | | | 1.44 | 1.44 | 1.44 | 172.80 | 0.00 | 0.00 | 172.80 | 554 | 216.69 | 21.60 | 15 | 10 | 25 | 12 | 62 | 5 |
| 6 | Beanibazar | Charkhai | Nair Chak | 420 | 481 | RHD-(Shodakhal)-Noirchak village road | 691174131 | VR A | All Weather | 2.30 | | | 2.30 | 2.30 | 2.30 | 276.00 | 0.00 | 3.00 | 279.00 | 209 | 579.78 | 34.50 | 15 | 10 | 20 | 12 | 57 | 6 |
| 7 | Beanibazar | Muria | Inampur | 163 | 187 | Baruda-Maisapon Inampur Primary School Road | 691175250 | VRB | All Weather | 1.73 | | | 1.73 | 1.73 | 1.73 | 207.60 | 0.00 | 0.00 | 207.60 | 108 | 1111.59 | 25.95 | 15 | 10 | 15 | 12 | 52 | 7 |

*** 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 per KM/1000 people= 25, Road Hierarchy= 25)