



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”

Sunamganj Sadar Upazila, Sunamganj



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 present 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 parliamentary election in 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 threshold 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, balance, and development for all.

To realize the commitment 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 incorporating six thematic areas i.e., Rural Communications, Growth Centre and Hatbazar, Rural Water Supply and Sanitation, Rural Waste Management, Community Space and Entertainment, and Upazila Masterplan. Development of Capacity and Increase of Human Resources of Upazila and Union Parishad, Use of Modern Digital Technology in Education, Health Care and Power Energy and Security Sectors, Rural Compact Housing, and Development of Village Project are also addressed with great importance. My Village-My Town Technical Project has started in January 2021 and is scheduled to end in September 2022

Under the technical project, a total number of 36 studies are conducted and 30 policy/frameworks are under preparation. Meanwhile, three databases have been developed on Upazila, union, and village incorporating data of population, agriculture, poverty, income & expenditure, etc. that help uniquely to prepare development plans and make suitable decisions.

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 Local Government Division.

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 **Sunamganj Sadar** Upazila of **Sunamganj** District.

1 DESCRIPTION OF THE UPAZILA

1.1 GEOGRAPHY AND DEMOGRAPHY

The geographical area of Sunamganj Sadar Upazila is 290.71 square kilometers and has 9 unions, 114 mauzas, and 268 villages. Sunamganj Sadar is partly covered by 6 haors/ wetlands and there exist 3(three) rivers flowing over the Upazila. The total population of Upazila is 279019 of which 139561 are male and 139458 females, the total number of households are 49557 and the average household size is 5.57 with a population density of 960 (as per population census 2011).

1.2 EDUCATION FEATURES

According to the information of the relevant local government offices, there are 82 government & 46 non-government primary schools in the Upazila. On the other hand, Sunamganj Sadar has 24 non-government with Two government high schools, 2 Government Colleges, 4 private colleges, and 4 madrasahs. The literacy rate for the Upazila is 38.8% 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 Sunamganj Sadar 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 Sunamganj Sadar is 493.91 km and out of which, 205.15 km are paved and 288.77 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 Sunamganj Sadar. There are 47667 acres of arable land in Upazila. In the fiscal year 2010-11, the Rice production was 1860, 30588 & 55380 metric tons for Aus, Aman & Boro seasons respectively. The Upazila also produced 237 metric tons of Wheat, 246 metric tons of Potato, and 445 metric tons of Oil seed 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, Sunamganj Sadar has 7372 Acre of haor, pond & dighee that produced huge metric tons of fish. There also exist 47 poultry & 3 dairy farms.

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

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 15 Hatbazar and 3 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

Sunamganj Sadar Upazila of Sunamganj district in the North-Eastern part of the country. The location has been shown on the map. The Upazila is situated just near 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.

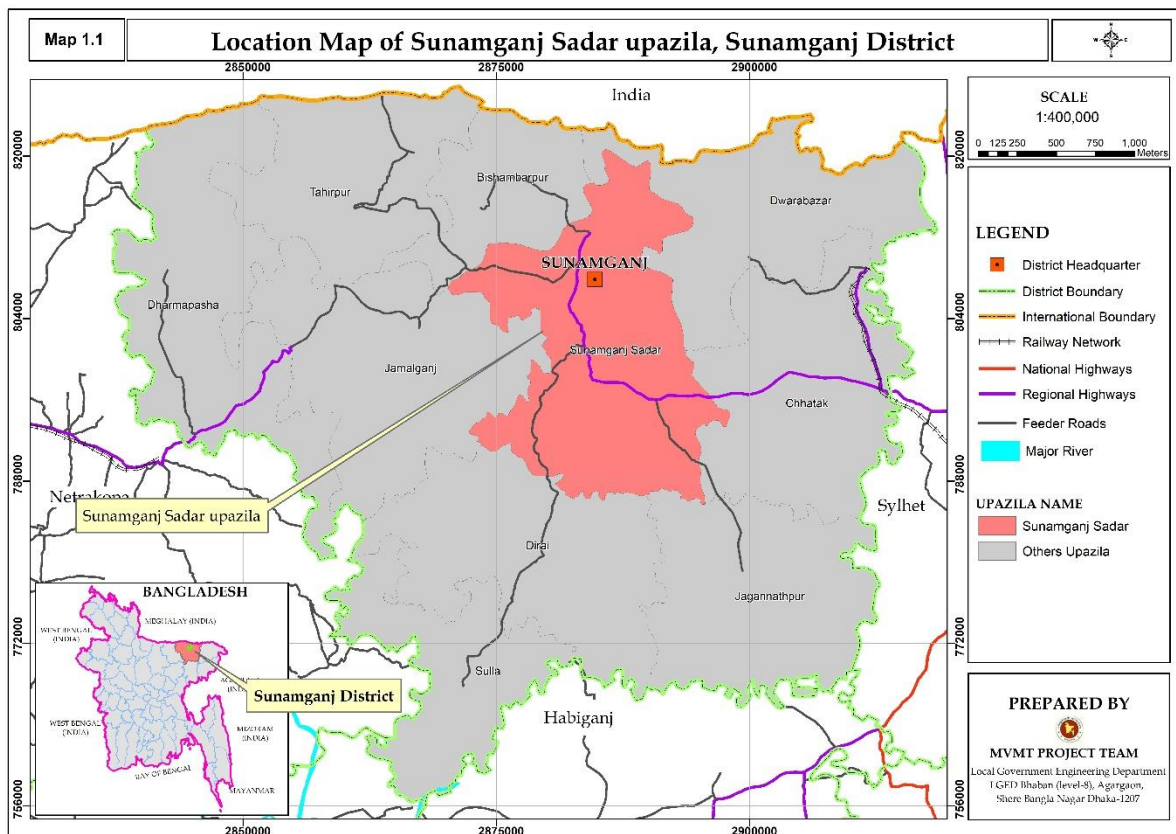


Figure 1: Upazila Location Map

3 APPROACH & METHODOLOGY

2.1 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

2.2 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.

2.3 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.

2.4 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.

2.5 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.

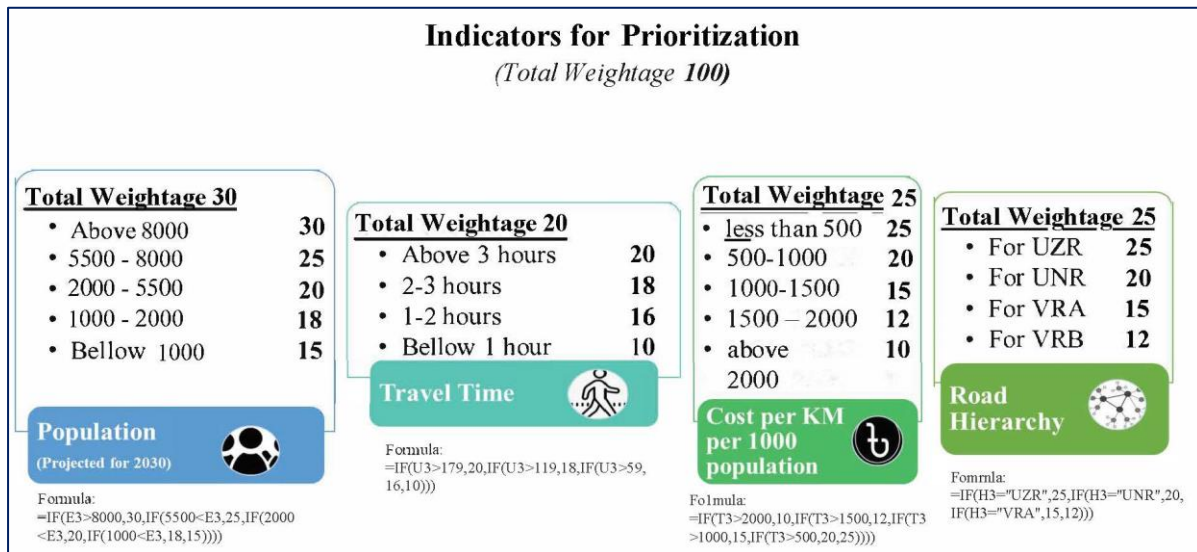


Figure 2: Prioritization indicators & their weightage values

2.6 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.

2.7 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.

2.8 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.

2.9 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

3.1 DISTRIBUTION OF THE HAORS/ WETLANDS

The Upazila has a large portion of flash flood zone that covers almost 90% 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.

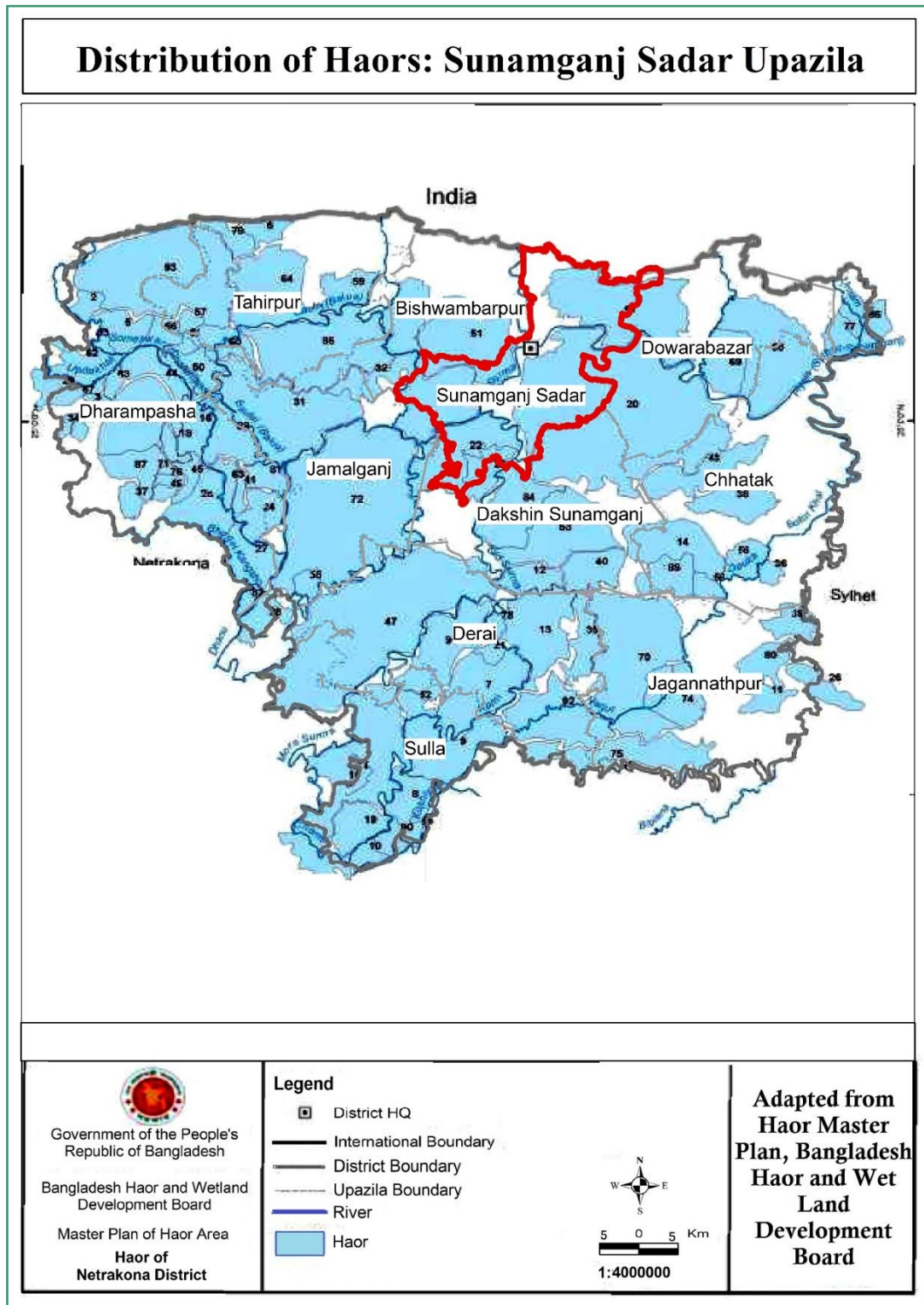


Figure 3: Haor Distribution Map

3.2 HAOR/ WETLAND CATEGORY

However, in the north of the Upazila, it is Foot Hill, middle part is floodplain and other areas of the Upazila are within deep haor range. Therefore, road or other infrastructure development in this Upazila have few major environmental consequences.

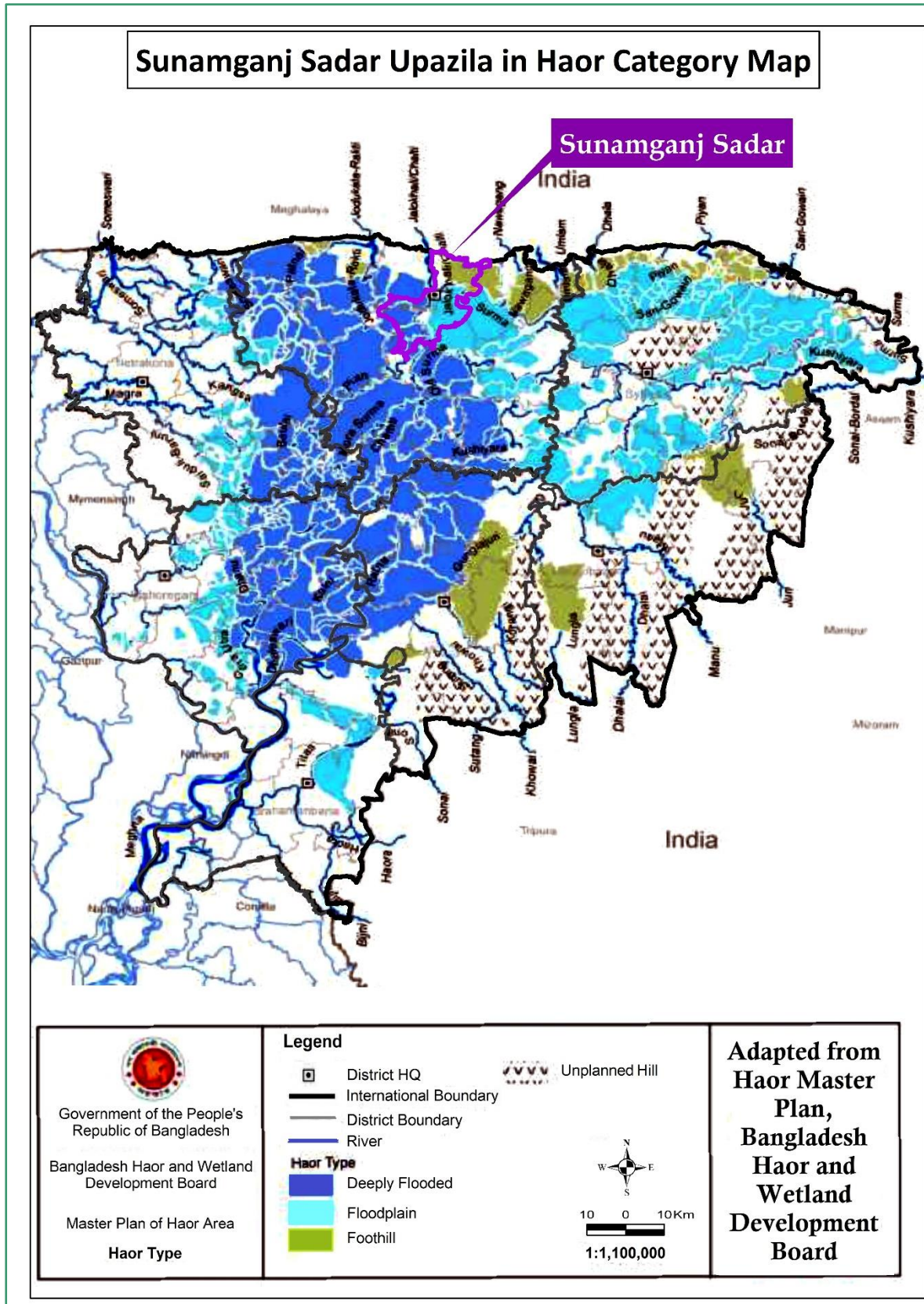


Figure 4: Haor Category Map.

3.3 BIO-ECOLOGICAL CHARACTERISTICS

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

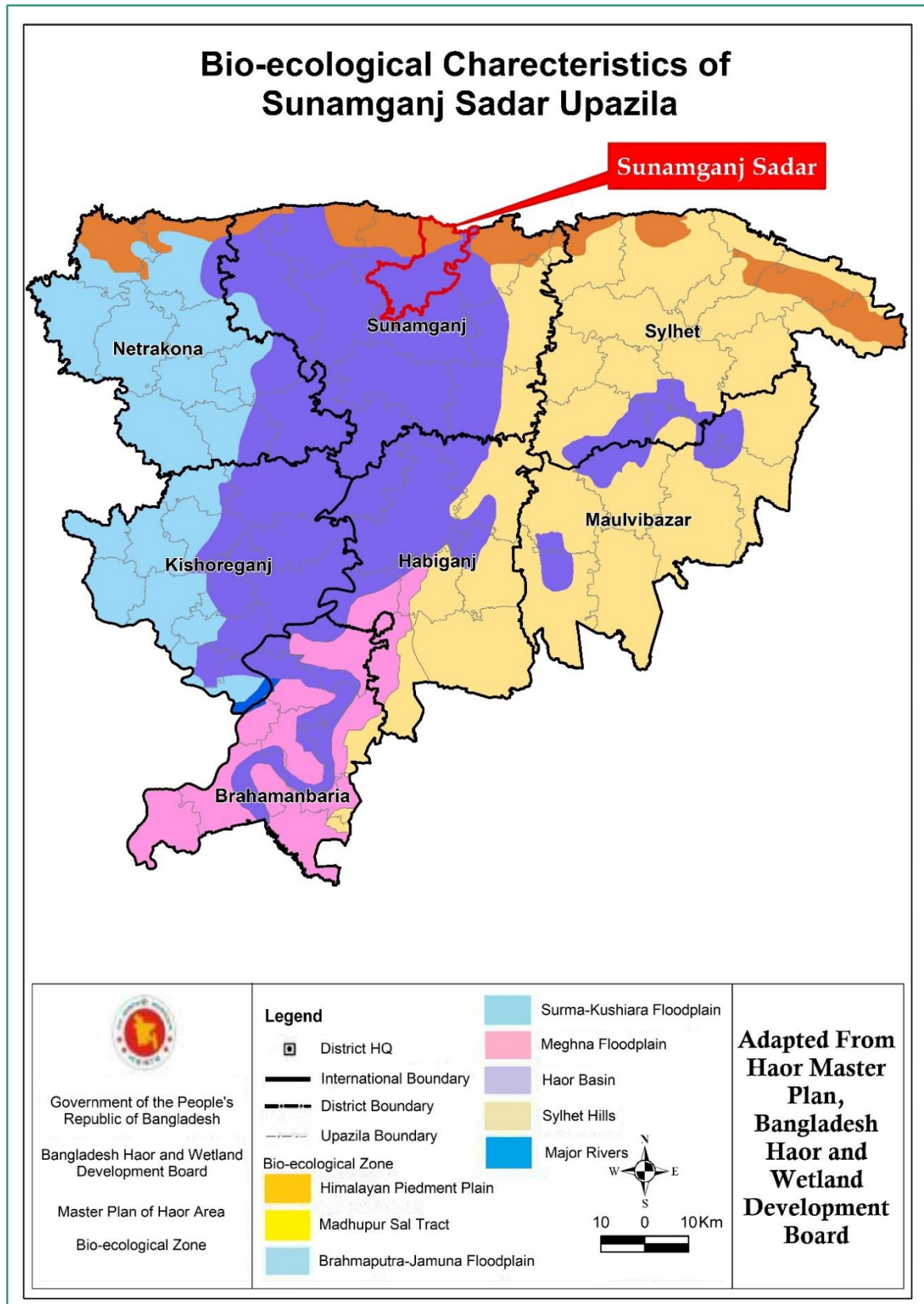


Figure 5: Bio Ecological Characteristics Map

5 RURAL ROAD CONNECTIVITY TO THE VILLAGES

4.1 SUMMARY OF THE VILLAGE CONNECTIVITY

The feature of rural road communications in Sunamganj Sadar Upazila is contrasted. Out of 257 villages, 13 are disconnected from the developed paved road network which brings huge suffering for the people of those villages. The total rural road network of Sunamganj Sadar is 493.91 km and out of which, 205.15 km are paved and 288.77 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	Aftabnagar	26	23	3
2	Gourararang	43	42	1
3	Jahangirnagar	24	23	1
4	Katair	15	15	0
5	Lakshmansree	18	17	1
6	Mohanpur	19	18	1
7	Mollah Para	53	50	3
8	Rangar Char	28	25	3
9	Surma	31	31	0
Total		257	244	13

4.2 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)
Aftabnagar	1	Achintapur	240	Kalarkanda	128
	2	Alampur	1129	Khalerkhagar	816
	3	Badipur	3133	Natun Brammangaon	199
	4	Brammangaon	2837		
	5	Drargaon	549		
	6	Godargaon	862		
	7	Hamilpur	372		
	8	Hasanbahar	1075		
	9	Hasanpur	365		
	10	Kairghat	122		
	11	Kairi (Kandargaon)	615		
	12	Khamtiyer	741		
	13	Lalarchar	382		
	14	Majibari	3387		
	15	Monoharpur	689		
	16	Nabinagar			
	17	Noyagaon	567		
	18	Paschim Nurpur	159		
	19	Pirijpur	143		
	20	Purbo Nurpur	1525		
	21	Rajnagar	155		
	22	Shahapur	812		
	23	Shakergaon	650		
	Sub Total		20509		1143
Gourarang	1	Achintapur	1599	Ujan Sapahala	1055
	2	Ahamedabad	457		
	3	Amritasri	639		
	4	Bahadurpur	85		
	5	Baraghat	975		
	6	Barigaon	178		
	7	Berajali	655		
	8	Bhati Sapahala	1659		
	9	Biyatakhali	549		
	10	Chandpur	383		
	11	Dampara	544		
	12	Dibebara Ghat	351		
	13	Doalpashi	301		
	14	Gaura Ranga Bade	2271		

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
	15	Gobindapur	257		
	16	Harinagar	594		
	17	Hasnabad	564		
	18	Hossainpur	705		
	19	Icheabpur	181		
	20	Ichhiar Char	689		
	21	Inayetnagar	1798		
	22	Jagannathpur	850		
	23	Jogiargaon	1562		
	24	Kamartuk	686		
	25	Kandigaon	631		
	26	Lalpur	3369		
	27	Manmatar Char	479		
	28	Naluarpar	956		
	29	Niamatpur	1553		
	30	Nidhir Char	606		
	31	Noagaon	1276		
	32	Puran Laxmansree	1070		
	33	Purangaon	393		
	34	Radhanagar	729		
	35	Rajargaon	559		
	36	Senpara	0		
	37	Shaktarpur	866		
	38	Sonapur	1837		
39	Tukergaon	742			
40	Umedsree	1938			
41	Upendra Nagar	154			
42	Uttar Kutubpur	751			
		Sub Total	36441		1055
Jahangirnagar	1	Aimagaon	217	Dulaipar	652
	2	Baghmara	0		
	3	Baisharpar	0		
	4	Dalagaon	0		
	5	Ghasigaon	1072		
	6	Islampur	1524		
	7	Jahangirnagar	1096		
	8	Kamar Vita	763		
	9	Kamargaon	492		
	10	Kanda Para	623		
	11	Kathalbari	518		
	12	Khagergaon	722		
	13	Kona Para	466		
	14	Konagaon	0		

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
	15	Malaigaon	418		
	16	Mangalkata	1882		
	17	Mirar Char	201		
	18	Mugai Para	551		
	19	Narayantala (Cumilla Hat)	674		
	20	Nurujpur	717		
	21	Ratargaon (Kayargaon Part)	4117		
	22	Sahebnagar	0		
	23	Terapur	0		
Sub Total			16053		652
Katair	1	Brammangaon	397		
	2	Chandetior	339		
	3	Gulergaon	1089		
	4	Hasan Nagar	816		
	5	Jagibabpur	694		
	6	Kaiair	560		
	7	Magura	1300		
	8	Mantail	43		
	9	Narkila	336		
	10	Natun sakhaiti	2575		
	11	Nawagaon			
	12	Puran sakhaiti	377		
	13	Tetaiya	521		
	14	Ulutulu	922		
	15	Uttar Narayanpur	1330		
Sub Total			11299		
Lakshmansree	1	Bahadurpur	1399	Salimpur	364
	2	Baroghor	333		
	3	Fakirnagar	738		
	4	Ghosh Madanpur	1313		
	5	Gobindapur	1258		
	6	Habatpur	1538		
	7	Haluargaon	740		
	8	Jalilpur	106		
	9	Janigaon	2526		
	10	Lilpur	1032		
	11	Madanpur	412		
	12	Pirijpur			
	13	Rabarbari	1197		
	14	Sarishpara	446		
	15	Sreepur	1040		
	16	Tajpur	418		
	17	Tegharia	817		

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
	Sub Total		15313		364
Mohanpur	1	Banipur	1035	Dewan Nagar*	1209
	2	Brahmuttar	1069		
	3	Chuapur			
	4	Dakshin Monmotherchar	628		
	5	Joynagar	786		
	6	Kalaiya	1149		
	7	Mohanpur	2332		
	8	Murarband	1035		
	9	Natun Pinda	1757		
	10	Naukakhali	571		
	11	Nurullah	1561		
	12	Paschim Haripur	2148		
	13	Puran Pinda	411		
	14	Rahamatpur	767		
	15	Rashnagar	610		
	16	Santipur	180		
	17	Sardarpur	725		
	18	Tajnagar	596		
	Sub Total		17360		1209
Mollah Para	1	Abdullahpur	520	Dupikona	172
	2	Akilpur	353	Madhupur	297
	3	Amtali	235	Rowarpar	108
	4	Anantapurkandi	284		
	5	Bade Abdullahpur	439		
	6	Bade Sadakpur	978		
	7	Bhabanipur	146		
	8	Brdrigaon	31		
	9	Burisatl	341		
	10	Dariabaj	1261		
	11	Durlavpur	392		
	12	Echargari	760		
	13	Ganipur	99		
	14	Gochhara	502		
	15	Hassan Hussain	114		
	16	Horipur	260		
	17	Hurmatnagar	361		
	18	Jagannathpur	322		
	19	Jagjibanpur	554		
	20	Jaifarpur	461		
	21	Jalalpur	1133		
	22	Jugirgaon	466		
	23	Kagura	726		

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
	24	Kalaura	261		
	25	Khairghat	196		
	26	Lalpur	1048		
	27	Maukhola	106		
	28	Mirpur	67		
	29	Mollapara	623		
	30	Muchipara	47		
	31	Nagergaon	144		
	32	Pirpur	514		
	33	Purbo Haripur	597		
	34	Purbo Rameshawarpur Chak	685		
	35	Purbo Sreenathpur	1183		
	36	Rahamanpur	257		
	37	Rameshwarpur	758		
	38	Ramnagar	259		
	39	Rasulpur	184		
	40	Ratanpur	310		
	41	Sadekpur	284		
	42	Sardabaj	312		
	43	Sarifban	266		
	44	Shantipur	54		
	45	Solabagi Chak	224		
	46	Sreenathpur	312		
	47	Tupikona	150		
48	Uchargaon	547			
49	Uttar Fatehpur	552			
50	Uttar Sreenathpur Chak	482			
	Sub Total		21160		577
Rangar Char	1	Ballavpur	441	Bakter Gaon	216
	2	Bangaon	898	Chandpur	341
	3	Brindaban Nagar	1415	Kathalbari	930
	4	Chatlarpar	493		
	5	Chinaura	498		
	6	Dakshin Naygaon	957		
	7	Darpagram (Banai) (Part)	644		
	8	Dulai			
	9	Hasaura	1461		
	10	Kadamtali	341		
	11	Kandigaon	38		
	12	Kishoreganj Hati	469		
	13	Mahish Dolong	162		
	14	Noagaon	865		
	15	Paschim Chandpur	385		

Union	Sl. No	Connected Villages	Population 2021 (Based on BBS 2011)	Hard-to-Reach Villages	Population 2021 (Based on BBS 2011)
	16	Paschimpara	3169		
	17	Purbapara	2432		
	18	Rangar Char	2358		
	19	Rasulpur	528		
	20	Shahpur	490		
	21	Singpurhati	688		
	22	Somadnagar	1652		
	23	Uttar Kandigaon (Kandigao)	510		
	24	Uttar Muradpur (Rangpur Hat)	267		
	25	Uttar Naygaon	640		
	Sub Total		21801		1487
Surma	1	Akshaynagar	855		
	2	Amirganj	170		
	3	Amirpur	659		
	4	Ampara	870		
	5	Balikandi	2399		
	6	Banipur	394		
	7	Belabar Hati	654		
	8	Berigaon	1257		
	9	Dolora	606		
	10	Fenibil	1284		
	11	Haluaghat	339		
	12	Hurarkanda	742		
	13	Ibrahimpur	4407		
	14	Jagannathpur	802		
	15	Jamlabad (Islampur)	529		
	16	Jharjharia	2943		
	17	Krishnanagar	485		
	18	Kuratala	449		
	19	Manpur	2001		
	20	Muslimpur	1408		
	21	Natun Gudigaon	1351		
	22	Parbatipur	704		
	23	Puratan Gudigaon	899		
	24	Radhartek	326		
	25	Rahmatpur	686		
	26	Rajanagar	433		
	27	Sadarpur	1639		
	28	Sahebnagar	236		
	29	Saidpur	4695		
	30	Shanirkara			
	31	Sholaghar	599		
	Sub Total		34821		

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

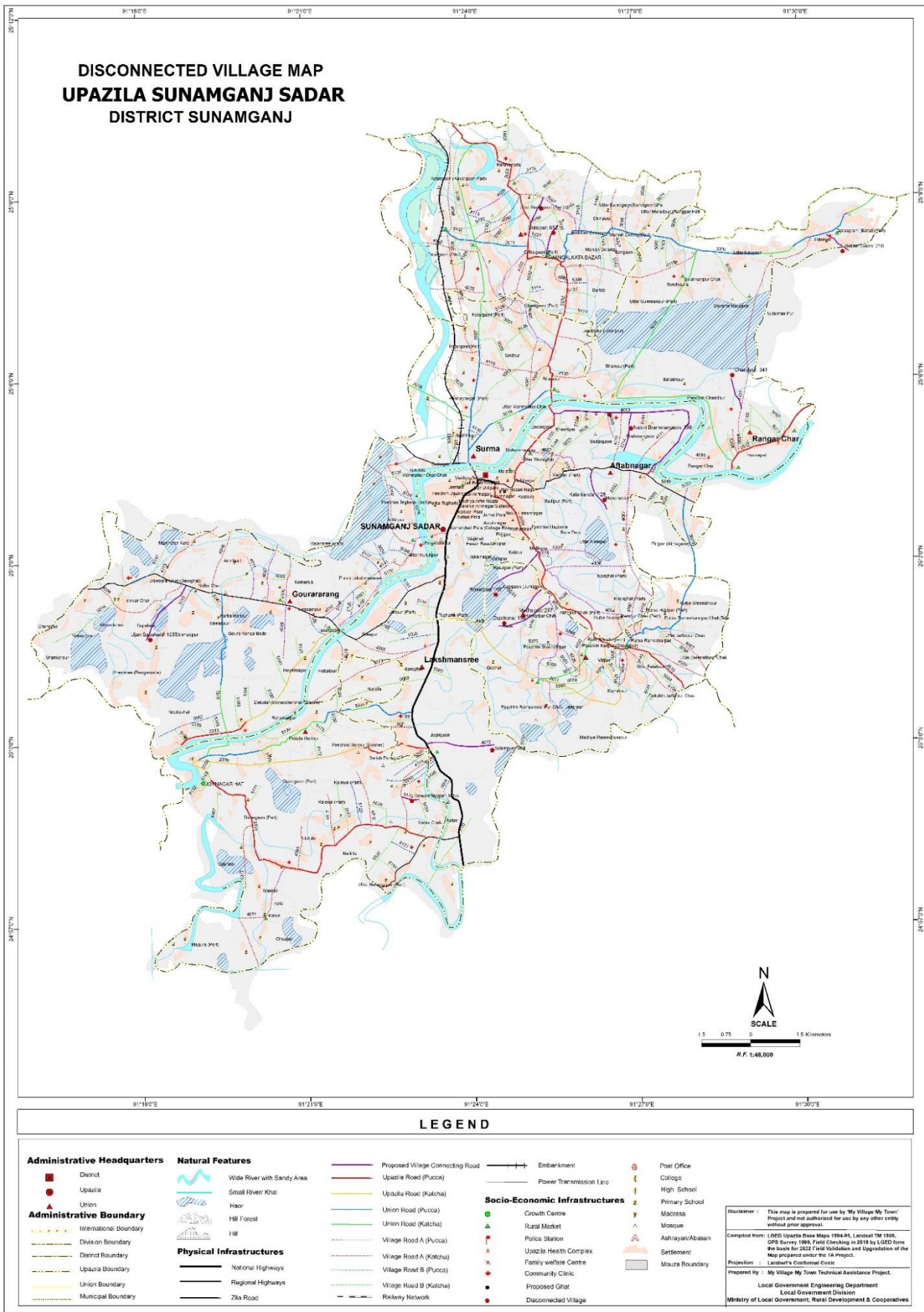


Figure 6: Upazila Map

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.

5.1 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)
493.91	205.15	288.77	29.00

5.1.1 PROPOSED SUBMERSIBLE ROUTES:

There are 10 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:

Table 4: Proposed submersible roads in the Upazila

Sl No	Road Name	Road ID	Road Type by Surface Condition	Unpaved length (km)
1	Mongolkata Hasaura road to Baktergoan road	No ID	Submersible	1.3
2	Birampur to Chanpur Via Ballavpur road	No ID	Submersible	4
3	Dewan Nagar Monjur Shop - Nowagaon Village Road	690895178	Submersible	1
4	Badesadekpur to Dupikona road	No ID	Submersible	1.5
5	Khaimtoir-Gudargoan-Brammangaon road to Kalarkanda road	No ID	Submersible	2.5
6	Sholobhagi to Madhupur road	No ID	Submersible	1.2
7	Brammangaon utor para to Notun Brammangaon	690894104	Submersible	3.5
8	Haluarghat shantiganj bazar pirpur road to Rowarpar road	No ID	Submersible	1
9	RHD Rabarbari to Salimpur road.	690894072	Submersible	4

Sl No	Road Name	Road ID	Road Type by Surface Condition	Unpaved length (km)
10	Sunamganj Jamalganj road to Uzan shafela road	No ID	Submersible	1.5

5.1.2 PROPOSED ALL WEATHER ROUTES:

There are 3 all-weather roads proposed to connect the HTRV within the Upazila. The road name, ID, road condition, and the length of the unpaved roads are as bellow;

Table 5: Proposed all-weather roads in the Upazila

SL No	Road Name	Road ID	Road Type by Surface Condition	Unpaved length (km)
1	Mogolkata Bazar To Durlobpur road Via Dolaipar road	No ID	All Weather	2.5
2	BGB Camp Road to Kathalbari road Via Viorobhati road.	No ID	All Weather	2
3	Khaimtoir-Gudargoan-Brammangaon road	690894003	All Weather	1

5.1.3 PROPOSED ROADS FOR HARD-TO-REACH VILLAGES HAVING NO ID:

There are 9 roads proposed to connect the HTRV within the Upazila that have no ID yet. The road name, ID, and the length of the unpaved part are as bellow;

Table 6: Proposed roads for Hard-to-Reach Villages having No ID

Sl. No	Road Name	Road ID	Unpaved length (Km)
1	Mongolkata Hasaura road to Baktergoan road	No ID	1.3
2	Birampur to Chanpur Via Ballavpur road	No ID	4
3	Mogolkata Bazar To Durlobpur road Via Dolaipar road	No ID	2.5
4	Badesadekpur to Dupikona road	No ID	1.5
5	Khaimtoir-Gudargoan-Brammangaon road to Kalarkanda road	No ID	2.5
6	BGB Camp Road to Kathalbari road Via Viorobhati road.	No ID	2
7	Sholobhagi to Madhupur road	No ID	1.2
8	Haluarghat shantiganj bazar pirpur road to Rowarpar road	No ID	1
9	Sunamganj Jamalganj road to Uzan shafela road	No ID	1.5

5.1.4 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 7: Considered weightage values for the prioritization

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

It has been observed that there are a number of roads that bear 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

- Sunamganj Sadar Upazila is located within deep haor basin. Sunamganj Sadar is partly covered by 6 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 13 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 Sunamganj Sadar Upazila in Sunamganj 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	Gaowrarang	Toker Bazar	HB	Yes	General Market	Both	2	60	0.35	150	0.30	0.65	1.10	1006000	997500
2	Gaowrarang	Islamganj	HB	Yes	General Market	Wholesale	2	95	1.50	120	0.15	1.75	0.45	37500	0
3	Jahangir nagar	Ampara Bazar	HB	Yes	General Market	Both	2	20	0.10	20	0.05	0.60	0.70	82500	69000
4	Jahangir nagar	Choumuhoni Bazar	HB	Yes	General Market	Both	2	20	0.10	20	0.03	0.50	0.65	91200	2500
5	Jahangir nagar	Mongolkata Bazar	GC	Yes	General Market	Both	2	70	0.35	70	0.17	3.79	2.15	24000	2400000
6	Jahangir nagar	Kairgaon Bazar	HB	Yes	General Market	Both	2	0	0.00	0	0.00	0.00	0.50	0	0
7	Katoyir	Cremothi Bazar	HB	Yes	General Market	Wholesale	2	0	0.00	60	0.12	0.12	0.50	550000	0
8	Laksmanshree	Nilpur Bazar	HB	Yes	General Market	Both	2	38	0.19	38	0.07	0.29	1.50	29400	14000
9	Mohonpur	Joynagar	GC	Yes	General Market	Both	2	160	0.80	220	0.35	1.15	1.00	890560	772800
10	Mullapara	Bethganj Bazar	GC	Yes	General Market	Both	2	35	0.11	22	0.08	0.25	1.10	14000	14000
11	Rangarsor	Bongaon Bazar	HB	Yes	General Market	Both	2	0	0.00	0	0.00	0.81	1.10	23800	0
12	Rangarsor	Noingang Bazar	HB	Yes	General Market	Both	2	18	0.09	18	0.04	0.70	0.50	4500	5750
13	Rangarsor	Hashaura Bazar	HB	Yes	General Market	Both	2	20	0.10	20	0.04	0.70	0.60	4700	0
14	Rangarsor	Horinapati Bazar	HB	No	0	0	0	0	0.00	0	0.00	0.00	0.00	0	0
15	Rangarsor	Rangarsor Bazar	HB	Yes	General Market	Both	2	0	0.00	0	0.00	0.67	1.20	0	0
16	Shurma	Haluargat Bazar	HB	Yes	General Market	Both	2	22	0.11	22	0.06	0.25	1.60	14000	13000
17	Shurma	Balakanda Bazar	HB	Yes	General Market	Both	2	0	0.00	0	0.00	0.90	0.70	0	0
18	Sunamganj Pourashoba	Sunamganj Bazar	HB	No	General Market	Both	2	30	0.15	30	0.07	0.46	2.50	0	0

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	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	Sunamganj Sadar	Mohanpur	Dewan Nagar	1055	1209	Dewan Nagar Monjur Shop - Nowagaon Village Road	690895178	VRB	Submersible	1.00			1.00	1.00	1.00	180.00	0.00	0.00	180.00	1209	148.91	15.00	18	10	25	12	65	1
2	Sunamganj Sadar	Gourararang	Ujan Sapahala	1055	1209	Sunamganj Jamalganj road to Uzan shafela road	No ID	VRB	Submersible	1.50			1.50	1.50	1.50	270.00	0.00	0.00	270.00	806	223.37	22.50	18	10	25	12	65	2
3	Sunamganj Sadar	Rangar Char	Kathalbari	812	930	BGB Camp Road to Kathalbari road Via Viorobhati road.	No ID	VRB	All Weather	2.00			2.00	2.00	2.00	240.00	0.00	0.00	240.00	465	257.96	30.00	15	10	25	12	62	3
4	Sunamganj Sadar	Jahangirnagar	Dulaipar	652	747	Mogolkata Bazar To Durlobpur road Via Dolaipar road	No ID	VRB	All Weather	2.50			2.50	2.50	2.50	300.00	0.00	0.00	300.00	299	401.59	37.50	15	10	25	12	62	4
5	Sunamganj Sadar	Aftabnagar	Khalerkhagar	712	816	Khaimtoir-Gudargoan-Brammangaon road	690894003	VRA	All Weather	3.00	2.00		1.00	3.00	1.00	120.00	30.00	270.00	390.00	816	478.07	15.00	15	10	25	12	62	5
6	Sunamganj Sadar	Mollah Para	Madhupur	297	340	Sholobhagi to Madhupur road	No ID	VRB	Submersible	1.20			1.20	1.20	1.20	216.00	0.00	0.00	216.00	284	634.75	18.00	15	10	20	12	57	6
7	Sunamganj Sadar	Rangar Char	Bakter Gaon	216	247	Mongolkata Hasaura road to Baktergoan road	No ID	VRB	Submersible	1.30			1.30	1.30	1.30	234.00	0.00	0.00	234.00	190	945.51	19.50	15	10	20	12	57	7
8	Sunamganj Sadar	Lakshmansree	Salimpur	364	417	RHD Rabarbari to Salimpur road.	690894072	VRB	Submersible	4.00			4.00	4.00	4.00	720.00	0.00	0.00	720.00	104	1726.38	60.00	15	16	12	12	55	8
9	Sunamganj Sadar	Rangar Char	Chandpur	341	391	Birampur to Chanpur Via Ballavpur road	No ID	VRB	Submersible	4.00			4.00	4.00	4.00	720.00	0.00	0.00	720.00	98	1842.82	60.00	15	16	12	12	55	9
10	Sunamganj Sadar	Mollah Para	Rowarpar	108	124	Haluarghat shantiganj bazar pirpur road to Rowarpar road	No ID	VRB	Submersible	1.00			1.00	1.00	1.00	180.00	0.00	0.00	180.00	124	1454.64	15.00	15	10	15	12	52	10
11	Sunamganj Sadar	Mollah Para	Dupikona	150	172	Badesadekpur to Dupikona road	No ID	VRB	Submersible	1.50			1.50	1.50	1.50	270.00	0.00	0.00	270.00	115	1571.01	22.50	15	10	12	12	49	11
12	Sunamganj Sadar	Aftabnagar	Natun Brammangaon	199	228	Brammangaon uttor para to Notun Brammangaon	690894104	VRA	Submersible	3.50			3.50	3.50	3.50	630.00	0.00	0.00	630.00	65	2763.08	52.50	15	10	10	12	47	12
13	Sunamganj Sadar	Aftabnagar	Kalarkanda	128	147	Khaimtoir-Gudargoan-Brammangaon road to Kalarkanda road	No ID	VRB	Submersible	2.50			2.50	2.50	2.50	450.00	0.00	0.00	450.00	59	3068.37	37.50	15	10	10	12	47	13

*** 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)