



Upazila Disaster Management Plan

Upazila: Charghat, District: Rajshahi

Plan Developed by

Upazila Disaster Management Committee, Charghat, Rajshahi

Coordinated by



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Preface

Bangladesh is a disaster prone country in the world. Due to Geographical disadvantage, the environment, losing balance of power, are facing various catastrophe like inundation, Tornados, drought, Erosion of river, earthquake, various cyclone, fogginess, white squall and so on. Bangladesh is river mothered country. The erosion of river for over flow of water, destroy the location of river side and all the inhabitants lose their all sort of livelihood and livestock and took shelter being pauper in the hovel on the high land or roads. Not only that, but also, men and industries' created catastrophe become the bane for calamity and people use to live in alarming plight. And also, by the horrific effect, all sort of assets, lives, livelihood, livestock and other resources of the locality may fall in danger. It does not destroy only the located people, also create obstacle for National and economical resources of the country. Though it is a disaster prone country but long term 'Disaster Management plan' has not been prepared for saving the human being, their all sort of resources, livelihood, animals and other asset, rather have been given importance to rehabilitation and on relief. Recently Government of Bangladesh has taken an initiative on the subject 'Disaster Management Planning' through CDMP 2. To implement the plan in action, primarily has taken an initiative for indication 'Disaster Risk' through conversation with all sorts of local people, Union and Upazila Management Committee. For Preparedness and reducing risk 'Disaster Management Plan' has provided to Bagha Upazila by indicating 'local disaster risks' through 'Disaster Management Plan' which will be efficacy for the forthcoming days.

At the time to providing the Plan all classes of people like male, female, cultivator, landless people, aged person, local elite persons, Union and Upazila Disaster Management Committee Members (UzDMC) were congregated. Locally this conspicuous doings have been done by the hard toiling of Shushilan Staffs and related analysis individuals. Disaster Management Committee of Bagha Upazila under Rajshahi District has provided this plan by efficacy toiling and restless endeavor. All kinds of important heart rending calamities as, awareness creation among family members and locality, to take preparation for facing risk would have to use local recourses, replacement of living assets and people to a safety place, rescue impediment people, necessary goods indication, and relief distribution have been included in the Upazila 'Disaster Management Plan'. If that plan come into being all kinds of calamities would be reduce and all sorts of materials of the people would be safe. Not only that, but also have included preparation before and after disaster, mitigation disaster by using Local resources, social assets, safety places, indication the causes of disaster, disaster warning sign, mostly disaster prone location, climate changes and its horrific effect, development sectors and name of the local volunteers as well as organization.

I am giving thanks from my core of heart to those very persons who have taken part and have given advice, like all Government and Non-Government Organizations and local persons to perform the conspicuous act in good manner. I am confident; this Disaster Management Plan which has prepared by the coherent cooperation of local people, Local Governances and other local organizations should help to Disaster Management Committee and other sectors (Government, International and National NGO, as well as Donor) to perform all acts as a overall plan.

মুখবন্ধ

বাংলাদেশ একটি দুর্যোগ প্রবণ দেশ। ভৌগোলিক অবস্থান, জলবায়ু ও আবহাওয়ার তারতম্যের কারণে স্থানভেদে এদেশে প্রতি বছর বন্যা (নদীবাহিত/বৃষ্টিপাত জনিত), টর্নেডো (ঘূর্ণিঝড়), খরা/অনাবৃষ্টি, ভূমিকম্প, ঘন কুয়াশার মত বিভিন্ন ধরনের আপদ আঘাত হানে। বাংলাদেশ একটি নদীমাতৃক দেশ হওয়ায় প্রায় প্রতিবছর এলাকা ভিত্তিক নদী ডাঙ্কনের শিকার বহু লোক ডিটেম্যাটি ছাড়া হয়ে নিঃশ্বাস হয়ে পড়ে এবং নদী-খাল ভরাট জনিত কারণে এলাকা ভিত্তিক অধিবাসীদের সংশ্লিষ্ট নানা ধরনের আপদের সম্মুখীন হতে হয়। এ ছাড়াও মানব সৃষ্ট ও শিল্প কারখানা জনিত বিভিন্ন ধরনের আপদ প্রতিনিয়ত মানুষকে আতংকগ্রস্থ করে রাখে। এ সমস্ত আপদের প্রভাবে সহায় সম্পদসহ জান-মাল, পশু সম্পদ ও ফসলের ব্যাপক ক্ষতি সাধিত হয়। এর ফলে শুল্ক আক্রান্ত জনগোষ্ঠী-ই ক্ষতিগ্রস্ত হয় তা নয়, জাতীয় সম্পদ এবং অর্থনীতিতেও ব্যাপকভাবে এর প্রভাব পরিলক্ষিত হয়। দুর্যোগ প্রবণ দেশ হলেও পূর্বে দুর্যোগ ব্যবস্থাপনা পরিকল্পনার মাধ্যমে মানুষের সহায় সম্পদসহ জান-মাল, পশু সম্পদ ও ফসলের ক্ষয়ক্ষতি হ্রাস করার সুদূর প্রসারী কোন পরিকল্পনা গ্রহণ করা হয়নি। সৃষ্ট পরিকল্পনা ব্যতিরেকে শুধুমাত্র ত্রাণ ও পুনর্বাসনকেই বেশী প্রাধান্য দেয়া হয়েছে। সম্প্রতি বাংলাদেশ সরকার সমন্বিত দুর্যোগ ব্যবস্থাপনা কর্মসূচীর (CDMP-II) মাধ্যমে দুর্যোগ ব্যবস্থাপনা পরিকল্পনা বিষয়ক এক কর্মসূচী হাতে নিয়েছে। এই কর্মসূচীর আওতায় প্রাথমিকভাবে সমাজের বিভিন্ন স্তরের জনসাধারণ, ইউনিয়ন ও উপজেলা দুর্যোগ ব্যবস্থাপনা কমিটির সমন্বয়ে স্থানীয় ঝুঁকি চিহ্নিত করে তা পর্যালোচনার মাধ্যমে দুর্যোগ ব্যবস্থাপনা পরিকল্পনা প্রনয়ণের উদ্যোগ নেয়া হয়েছে। দুর্যোগ ব্যবস্থাপনা পরিকল্পনায় স্থানীয় আপদসমূহ চিহ্নিত করে দুর্যোগ পূর্ব প্রভুতি গ্রহণ ও ঝুঁকি নিরসনের জন্য চারঘাট উপজেলায় কার্যকরী একটি দুর্যোগ ব্যবস্থা পরিকল্পনা প্রনয়ণ করা হয়েছে যা স্থানীয় পর্যায়ে দুর্যোগ ঝুঁকি মোকাবেলায় সুদূর প্রসারী অবদান রাখতে পারবে বলে উপজেলা দুর্যোগ ব্যবস্থাপনা কমিটি মনে করে।

কর্মপরিকল্পনাটি প্রনয়ণে এলাকার নারী-পুরুষ, কৃষক-ভূমিহীন, প্রবীণ ও তথা প্রদানে সক্ষম অন্যান্য স্থানীয় জনগোষ্ঠীর প্রতিনিধি, ইউনিয়ন এবং উপজেলা দুর্যোগ ব্যবস্থাপনা কমিটির (UDMC) সদস্যবৃন্দ সরাসরি সম্পৃক্ত ছিলেন। বিশেষ করে অত্র এলাকায় কর্মরত 'সুশীলন' এর কর্মকর্তা ও গবেষকদের নিষ্ঠা ও অক্লান্ত পরিশ্রম স্থানীয় পর্যায়ে পরিকল্পনা প্রনয়ণে যথাযথ অবদান রেখেছে। এ কর্ম প্রচেষ্টা ও অক্লান্ত পরিশ্রমের ফলে রাজশাহী জেলার পবা উপজেলা দুর্যোগ ব্যবস্থাপনা কমিটি একটি বাস্তবসম্মত দুর্যোগ ব্যবস্থাপনা কর্মপরিকল্পনা প্রনয়ণ করতে সক্ষম হয়েছে। অত্র উপজেলায় প্রণীত দুর্যোগ ব্যবস্থাপনা পরিকল্পনায় দুর্যোগ মোকাবেলায় গুরুত্বপূর্ণ বিষয় সমূহ প্রাধান্য লাভ করেছে। তন্মধ্যে উল্লেখযোগ্য হচ্ছে পরিবার ও সমাজ পর্যায়ে দুর্যোগ ঝুঁকি সম্পর্কে গনসচেতনতা সৃষ্টি, স্থানীয় সম্পদ ব্যবহারের মাধ্যমে দুর্যোগ পূর্ব প্রভুতি গ্রহণ এবং দুর্যোগ কালীন সময়ে অপসারণ, উদ্ধার, চাহিদা নিরূপণ, ত্রাণ ও তাৎক্ষনিক পুনর্বাসন ব্যবস্থার জন্য স্থানীয়ভাবে প্রনীত পরিকল্পনার অনুশীলন ও প্রয়োগ, দুর্যোগ পরিকল্পনায় অংশগ্রহণ এবং কার্যকর অংশীদারীত্ব যা বাস্তবায়িত হলে আপদ সংশ্লিষ্ট স্থানীয় ঝুঁকি সমূহ অনেকাংশে হ্রাস পাবে এবং জনগণের সহায় সম্পত্তি, জানমাল এবং ফসলের ক্ষয়ক্ষতির পরিমাণ কমিয়ে আনা সম্ভব হবে। পাশাপাশি দুর্যোগ পূর্ব, দুর্যোগ কালীন ও দুর্যোগ পরবর্তী প্রভুতি গ্রহণ, দুর্যোগ ঝুঁকি হ্রাসে স্থানীয় অবকাঠামো ও অ-অবকাঠামো, সামাজিক সম্পদ ও নিরাপদ স্থানসমূহের তালিকা প্রনয়ণ, ঝুঁকির কারণসমূহ চিহ্নিতকরণ, সর্বাধিক বিপদাপন এলাকা চিহ্নিত করণ, ঝুঁকি নিরসনের উপায় চিহ্নিতকরণ, জলবায়ু পরিবর্তন এবং তার সম্ভাব্য প্রভাব নিরূপণ, উন্নয়ন পরিকল্পনার প্রধান খাত সমূহ চিহ্নিত করণ এবং বিভিন্ন সামাজিক সংগঠন সমূহের স্বেচ্ছাসেবক তালিকা প্রনয়ণ করা হয়েছে।

২০১৪ সালে সিডিএমপি'র সহায়তায় প্রনীত দুর্যোগ ব্যবস্থাপনা পরিকল্পনাটি প্রনয়ণে যে সকল সরকারী এবং বেসরকারী সংস্থা ও ব্যক্তিবর্গ সক্রিয়ভাবে অংশগ্রহণ ও পরামর্শ প্রদান করেছেন তাদেরকে আমি আন্তরিক ভাবে ধন্যবাদ জ্ঞাপন করছি। আমি আশাবাদী, স্থানীয় জনগন, স্থানীয় প্রশাসন ও বিভিন্ন সরকারী বেসরকারী প্রতিষ্ঠানের সমন্বয়ে চারঘাট উপজেলায় প্রণীত দুর্যোগ ব্যবস্থাপনা পরিকল্পনাটি দুর্যোগ ব্যবস্থাপনা কমিটি ও সংশ্লিষ্ট সেক্টরের (সরকারী, আন্তর্জাতিক ও জাতীয় এনজিও, দাতা সংস্থা ইত্যাদি) জন্য একটি সার্বিক পরিকল্পনা হিসেবে কাজ করবে।

সভাপতি

উপজেলা দুর্যোগ ব্যবস্থাপনা কমিটি ও
উপজেলা চেয়ারম্যান
চারঘাট উপজেলা
রাজশাহী জেলা

সদস্য সচিব

উপজেলা দুর্যোগ ব্যবস্থাপনা কমিটি এবং
প্রকল্প বাস্তবায়ন কর্মকর্তা
চারঘাট উপজেলা
রাজশাহী জেলা

Table of Content

Preface	i
Index	ii
List of Table	iv
List of Figure	iv
List of Graph	v
List of Map	v

Chapter one: Introduction to Local Area	1-12
1.1 Background	1
1.2 Objectives of Planning	2
1.3 Introduction to Charghat Upazila	3
1.3.1 Geographical Location of the Upazila	3
1.3.2 Dimension	3
1.3.3 Population	4
1.4 Structural and Non-structural Information	4
1.4.1 Infrastructure	5
1.4.2 Social Resource	6
1.4.3 Weather and Climate	9
1.4.4 Others	10

Chapter Two: Disaster, Hazard and Vulnerability	13-29
2.1 Overall History of Disaster	13
2.2 Hazards of the Upazila	14
2.3 Description of Different Types of Hazards with Present and Future Illustration	15
2.4 Vulnerability and Capability	16
2.5 Most Vulnerable Area	18
2.6 Main Sectors of Development Planning	19
2.7 Social Map	21
2.8 Hazard and Risk Map	22
2.9 Seasonal Calendar of Hazard	25
2.10 Seasonal Calendar of Livelihood	26
2.11 Sectorwise Life and Livelihood Related Vulnerability	26
2.12 Sector Based Risk and Hazard	27
2.13 Climate Change and Its Possible Effect	28

Chapter Three: Disaster Risk Reduction	30-39
3.1. Risk Reason identification	30
3.2. Ways of Risk Reduction	32
3.3. NGO Development Planning	33

3.4. Disaster Management Work Plan	34
3.4.1. Pre Disaster Preparation	34
3.4.2. During Disaster Preparation	35
3.4.3. Post Disaster Preparation	36
3.4.4. Preparation for Normal Period	37
<hr/>	
Emergency Response :Chapter Four	40-51
4.1. Emergency Operation Centre (EOC)	40
4.1.1. Emergency Control Room Management	41
4.2. Planning for Hazard Period	42
4.2.1. Preparing the Volunteers	44
4.2.2. Warning Announcement	44
4.2.3. Measures for Translocating People	44
4.2.4. Rescue and First Aid Service	44
4.2.5. Shelter Management	44
4.2.6. Preparing Boats	44
4.2.7. Measuring the Damage and Need of Disaster and sending Report	45
4.2.8. Management of Relief Activity	45
4.2.9. Collecting and Preserving Dry Food and Life-saving Medicines	45
4.2.10. Ailment/ Vaccin for Livestock	45
4.2.11. Arrenging Rehearsals	45
4.2.12. Emergency Control Room Management	46
4.2.13. Shelter Centres/ Safe Places	46
4.3. List and Description of Safe Places of Zilla/ Upazila	46
4.4. Formation of Shelter Management Committee	47
4.5 List of Resources of Zilla/ Upazila (usable during disaster)	49
4.6. Finance	49
4.7. Updating and Analizing Work Plan	50
Chapter Five: Rescue and Rehabilitation Plan	52-84
5.1 Damage Assessment	52
5.2 Rapid/ advance recovery	53
5.2.1 Administrative re-establishment	53
5.2.2 Wreckage Cleaning	53
5.2.3 Resumption of public services	53
5.2.4 Emergency Livelihood Assistance	54

Annex 1 Check List of Emergency Plan Implementation	55
Annex2 Upazila Disaster Management Committee	57
Annex3 List of Upazila Volunteers	58
Annex 4 List of Shelter Management Committee	59
Annex 5 Chorghat Upazila at a glance	60
Annex 6 List of some important Broadcast Programs by Bangladesh Betar	61
Annex 7 List of Educational Institutions	62
Annex 8 Feed Back of the Upazila Workshop	64
Annex 9 Hazard & Risk Map (Drought)	66
Annex 10 Hazard & Risk Map (Flood)	67
Annex 11 Hazard & Risk Map (Storm)	68
Annex 12 Hazard & Risk Map (River erosion)	69
Annex 13 Hazard & Risk Map (Heatwave)	70
Annex 14 Hazard & Risk Map (Drizzle)	71
Annex 15 Hazard & Risk Map (Arsenic)	72
Annex 16 Hazard & Risk Map (Water level)	73

List of Table

Table1.1: Upazila Union & Unionwise Name of Mouza	3
Table1.2: Union basis male, female child, cripple and cretin	4
Table1.3: Type-wise Number of Road & Length	5
Table1.4: 31Years Average Amount of Maximum &Minimum Temperature	9
Table2.1: Name of Disaster, Year, Amount of Loss	13
Table2.2 :Hazard & Hazard's Identification & priority	14
Table 2.3: Afflictions and Capability	16
Table 2.4: Affliction place, Causes, distressed people.	18
Table2.5: Coordination between development sector and disaster risk reduction	19
Table2.6: Month basis disaster calendar	25
Table2.7: Seasonal calendar of livelihood	26
Table2.8 Vulnerability on Life and Livelihood	26
Table2.9: Sector-wise Risks and Hazards	27
Table2.10 :Climate Change and Its Possible Effect	28
Table3.1: Identification of Risk Factors in Chorghatupazila	30
Table 3.2 Identification of Ways of Risk Reduction in Chorghatupazila	32
Table 3.3: NGOs' Development Plan	33
Table3.4:disaster Management Action Plan-Pre	34
Table3.5:During Disaster Preparation Management Action Plan	35

Table3.6: Post Disaster Preparation Management Action Plan	36
Table3.7: Regular Period Preparation Management Action Plan	37
Table4.1:Responsible person of Emergency Operation Center	40
Table4.2:Planning for Hazard Period	42
Table4.3: List and Description of Safe Places of Upazila	46
Table 4.4 List and Description of Safe Places of Upazila	48
Table 4.5 List of Resources at the Upazila (usable during disaster)	49
Table4.6:up Committee contain five member–Plan Follow	50
Table 4.7: 7–Member Plan Implementation and Management Committee	51
Table 5.1: Sector wise Damage Assessment in Upazila	52
Table 5.2: Administrative Restoration committee in upzila level.	53
Table 5.3: Wreckage cleaning committee in Upazila level.	53
Table 5.4 Public Service Resume committee in Upazila level	53
Table 5.5 Emergency Livelihood Support committee in Upazila level	54

List of Graph	Page
Graph1.1:Family wiseHousing system	9
List of Map	Page
Map1.1: Map of Charghat Upazila	12
Map2.1:Social Map of Charghat Upazila	23
Map2.2:Hazard & Risk Map of Charghat	24
Annex9: Hazard & Risk Map (Drought)	66
Annex10: Hazard & Risk Map (Flood)	67
Annex11: Hazard & Risk Map (Storm)	68
Annex12: Hazard & Risk Map (River errosion)	69
Annex13: Hazard & Risk Map (Heatwave)	70
Annex14: Hazard & Risk Map (Drizzle)	71
Annex15: Hazard & Risk Map (Arsenic)	72
Annex16: Hazard & Risk Map (Water Level)	73

Chapter One

Information about the locality

1.1 Background

Bangladesh is a disaster prone country in the World Map. It is the most vulnerable devastated country among others, caused by the effect of climate change.” Climate will be changed in future” this was the prediction. But it is not true. At present it is happening periodically in the country. The omens of the climate change horrific effects in future are now going to be apparent and it is surrounding with dreadful effect in the development act of the country and lives of human being. The atmospheres of the country are deteriorating day by day, The southern zone of the country is devastating by cyclone and inundation, North-west zone is by drought and storm wind, water layer in the ground of the country is very low, North-East and Middle zone of the country are devastating by overflow of water, Hill-tribe is devastating by declivity, soil collapse and erosion of river is becoming the bane to destroy the country with mournful and terrible plight. “In future the effect of climate change will be the horrific” has not been destined as well as have not taken step for probable prevention and disaster management.

Recommendation of ‘Disaster Management Plan including Risk Reduction and Contingency plan’ has delivered to City Corporation, Municipality and Upazila. CDMP has given more importance to Disaster Management Plan. Sustainability, efficacy, productivity, the line of action in connection with the subject are depends on related organization, institution and the masses participation. Disaster Management plan will be organized for three to five years. Every districts of the country have to face disaster in every year and among all Rajshahi district is the most disaster prone. Rajshahi district is situated beside Padma. As a result all the Upazila have to face disaster. Due to Geographical distinctiveness, sunray, erosion, cyclone, coldness, inundation and downpour are the main causes for climatic disaster. Historical place, Charghat Upazila of Rajshahi District is situated beside the river Padma. Here is a hearsay that once spiritual Hajrat Shah Dawla came here and lived beside Padma to circulate Islam religion in this location. Then there were many tigers used to live there. Henceforth, the name of the place is Charghat. Now the name is preserved there, though tiger is out of scene. Not only that but also this Upazila is very famous for mango in country and abroad.

Charghat Upazila is a disaster prone location. All the people survive there with risk of terrible calamity. Lack of preparedness on calamity and effective induction course on premonition of horrific disaster, any efficacy step yet had not been implemented, though the location is facing catastrophic calamity in every year as well as even has not been seen the scene of initiative for ‘Disaster Management Plan’ in the Upazila level for mitigate disaster. This ‘Disaster Management Plan’ has delivered to Charghat Upazila which will help the local people and institution to mitigate the risk of calamity by creating awareness and capability. This document will be alive there to enliven the people. This document will be renovated by considering ‘Scientific information, Priority of national development, perceiving the effect of climate change for the forth coming days. The social atmosphere, economical development,

natural history, short explanation of structural planning, internal framework, probably effect of climate change, explanation of different technique of Charghat Upazila have narrated in the document in chapter I to 2 as well as have cited the activities performance plan of 3-5 years for building up more capability to management disaster and power of protection. In chapter 4 and 5 have narrated the framework for developing capability and competency of general people, specially social worker, political person, development worker who will take part to in Disaster Management Plan.

To keep up the consecutive of safe and protection policy of poor and imperil hapless people and integrating with development of country, the ‘Disaster Management and Ministry of Relief’ have taken an initiative as well as decision under “CDMP” to implement ‘Multipurpose Preparedness Plan’ as a part of the object to alleviate disaster. All aspect of the Upazila, like Upazila level Disaster Management Plan, economical development of the local people to face the forthcoming calamity caused by climate change, development of education, hygiene, dwelling place and indication priority to develop technically other structure have narrated in the document vividly. So, it is need of necessary for everybody to know the importance of the document.

1.2 The Main Object

The category of disaster probably may be changed. So, in this respect it is needed to include and exhibit into the Nationally Policy Specification all sort of efficacy initiative at field level to face the climatic disaster as well as reduce the risk. The Disaster Management and Ministry of Relief have taken an initiative of ‘Multiple Planning’ under “CDMP” for risk analysis and mitigation. Under the Multiple Planning the Government has taken a long term disaster facing initiative avoiding ‘Relief and Rehabilitation depending risk reducing performance.

The main objects are narrated bellow:

- To create awareness about risk of disaster among the people of the family and society by innovating practical existing way.
 - To mitigate risk by using local resources as well as establish the system permanently by the endeavor of local people.
 - Should have to need to follow and establish the plan locally for replacement, rescue, relief distribution and rehabilitation.
 - Needed a skilful planed document for a certain place and period.
 - This Document will help Disaster Management Committee and Related sector (Government, international and National NGO and Donor) to serve as an overall plan.
 - This Document will give direction to related partner for endorse plan and implementation.
 - This Document will enliven the community to take part in Disaster Management activities as well as to perform efficacy act.
-

1.3 Introduction of Charghat Upazila

Charghat Upazila was established on 14th September -1983. It is situated beside the river 'Padma'. There 6 Unions and 2 Municipalities are in the Upazila. Near about there are two lac various religion's people living here, also many aborigines (Saotal) living there. It is distance from Rajshahi 48 Km.

1.3.1. Geographical position of the Upazila.

- This Upazila is under Rajshahi District.
- Election Center-57, Rajshahi-6
- Short narration of river, road, embankment and so on of the Upazila:- Panoramas of the Upazila are very beautiful for its flowing river, various trees, paddy, various categories house, moving cattle and etc. Natural lands are high and plane. Two rivers are running through the Upazila. Embankment have established beside river in three Unions. Communication and transportation systems are maintaining by Motorcycle, Rickshaw, Van, Cycle, Bus, Boat and Railway carriage.

1.3.2 Dimension

As per assessment of Charghat Upazila in 2011 its dimensions are 185.16 sq.km.

Table1.1: Upazilla Union & Unionwise Name of Mouza

Name of Upazila & GO Code	Name of Union & No	Union wise Mouja Name
Charghat [25]	Usufpur [47]	Belgharia, Cakkapasiasia, fudkipara, Gobindapur, Guabasia, 1No Usufpur, joypur, Baduria, Mirkamari, shapur, Sibnagor, Srichondi. Number of Total Mouja - 12
	Slua [87]	Chokgocer, Samta, Daulatpur, Fatepur, Holdigasi, jaforpur, Maria, maogasi, Salia, Sibpur, Tatarpur, Bamondighi. Number of total Mouja - 12
	Sordha [94]	Bijair, Dhormohata, Hajorpara, Jhikra, Khurda gobindapur, Palahbari, Patikandi, Balidanga, Sadipur, Number of Total Mouja-9
	Nimpara [71]	Borkotpur, Basudebpur, Bosupara, Vatpara, vatpara arji, Cok krisnapur, Habibpur, Jotkattik, Kaluhati, Kharerbari, Mollikmaria, Molbhak, Baladiar. Number of Total Mouja-13
	Charghat [39]	Bamonpara, Bamnidha, Anupompur, Bilmeramotpur, Chardpur, Kankoramari, Gonra, Hajrahati, Mangali, Mohonpur, Milik ganra, Ponchobaria, Paranjpur, Pirojpur, Raota, Talbaria, Mollik maria, Baladiar, Nimpara, Paitkhali, Ramchondrapur. Number of Total Mouja -21
	Vialakmipur [31]	Bankesor, Bankara, Batkamari, Vialakmipur, Channagor, Dakra, Faridpur, Gopalpur, Guabari, Jhangirabad, Jogirgofa, Jotraghu,

Name of Upazila & GO Code	Name of Union & No	Union wise Mouja Name
		Lakmipur, Manik lakmipur, Mohonnagor, Pannapara, Raypur, Simulia. Number of Total Mouja - 18

Source: Upazila Parishad, 2014

1.3.3. Population

All kinds of religions (Muslim, Hindu and Khristian) are living from the ancient period in the Upazila together with peace and harmony. Person of every religion took part in other religion rite and do not neglect their activities, also not show antipathy, animosity and malignance. Total inhabitants of the locality are 184183 and among them 92010 are male and 92173 are female. There 900 person live in one sq.km and rate of growth of population is 2.53%. Numbers of person are narrated below:

Table 1.2: Union basis male, female child, cripple and cretin

Area	Male	Female	Child % (0-17)	Old % 60+	Cripple/ Cretin %	Total No- of person	Family	No of Voter
Usufpur	5170	5202	9.11	5.7	1.3	10382	2664	6989
Slua	7055	8828	15.13	7.45	1.8	13883	3618	9581
Sorda	14186	14211	21.26	11.18	1.7	28397	7529	18976
Nimpara	13973	13830	13.60	9.75	1.9	27803	6409	19167
Charghat	15919	15779	16.36	9.47	2.0	31698	8234	21452
Vialakmipur	13750	14097	21.63	9.05	2.3	27847	7184	16897
Total	92377	91806				184183	46711	102864

Source: BBS, 2011

1.4 Structure and Non-Structure

Charghat is originally agricultural Upazila. Almost people survive on agricultural products. So, many agricultural institutes have been built up. All the area of the Upazila is under electricity. There are few quantity of other industries and handicraft industries have established. Main productive institutes are hen- duck cultivation, cattle farm, rice mill, printing press, cold storage, brick field and various handicrafts. Communication systems are very well and that has assisted to increase business institutions.

1.4.1. Infrastructure

Embankment

Charghat Upazila is situated beside the river. Erosion of river is the main problem. So, to protect the location, 16 km roads, height 15 ft and broad 25 ft have built up. It have been protecting Mnigram, Pakuria and Gorgari Unions.

Sluice gate

There three sluice gate are situated beside in the Upazila. It is in Monigram, Pakuria and Gargari and it is also being used for evacuation water. Downpour, inundation and cyclone are always become bane in every year for the inhabitants. But change of climate its effect are being horrific and catastrophic. In this plight sluice gate is the most important for its effective services. It is helping to evacuate water at the time inundation.

Bridge / Calvert

There are 317 Bridge and Colbert in unions and Municipality of Charghat Upazila. Among them quantity of 84 are on the Upazila Road and 77 are on Union road, 110 are on village road "A" and on "B" village road are 46 Colbert.

Road / Communication system:

There are 460 km. roads are available in Charghat Upazila. Among them 294 km are concrete, 175.48 are semi concrete and 25.14 are brick roads. Not only that 30 km water ways are available there.

Table1.3: Type-wise Number of Road & Length.

Upazila	Type of roads	Quantity of Roads	Total length
Charghat (10)	Upazila Road	12	77.84 km
	Union Road	13	82.12 km
	Village Road "A"	86	176.93 km
	Village Road "B"	114	122.77

Source: Field Trip, 2014

Irrigation System:

Barendra Multiple Development Association (BMDA) has taken some important steps to save agricultural activities from the effect of climatic change and geographical circumstances. Through the project "Rain Water reservation and Irrigation" BMDA has taken an initiative it is narrated bellow: (a) Will have to take water from river Padma to the local cannel by pipe and should have to use in due time.(b) Should have to choice crop which is needed few quantity of water to cultivate as well as should have to encourage the farmers to follow instruction. (c) Should have to take initiative to reservation rain water in cannel, pond or selected place. BMDA is assisting in various aspect to the famers to run their activities with full of go. At present there are 14473 tubes well along with 45 deep tubes well in Charghat Upazila.

Hat & Bazaar:

Though Charghat upazila is a agricultural location, but industries like Auto rice mills, Oil mills, Coarse Flour mills, Saw mill, Brick field and etc. are available. There are 48 Bazaars in Charghat Upazila and those are supplying all sorts of daily usable essential goods and commodities for the people three times in a week. Not only that but also, many goods are being exported through the Bazaar.

Here is narrated about Bazaars in Union wise:

In BajuCharghat Union – 4 Bazars: - Jotraghob Bazaar, Barkhadia Bazaar, Amodpur Bazaar and Tepukuria Bazaar.

In Gargari Union – 8 Bazars:- Khaer Hat, Kanpur Hat, Chok Rajapur Hat, Chandpur Hat, Dadpur Hat, Sharer Hat, Polashi Fotaypur Hat and Sultanpur Hat.

In Pakuria Union – 11 Hat & Bazaar:- Pakuria Hat & Bazaar, Alaipur Gabtoli Para hat, Alaipur Mohajon Para hat, Chowmadia Hat, Kishorpur Hat & Bazaar, Keshobpur Hat & Bazaar and Panikamra Hat & Bazaar.

In Monigram Union – 5 Hat: - Mirganj hat, Monigram hat, Binodpur hat, Hilalpur Hat and Horirampur Hat.

In Bawsa union – 5 Hat & Bazaar: - Digha Hat, Bawsa Bazaar, Foteypur Hat, BishnuMondal hat and Horipur Bazaar.

1.4.2. Social Resources

Development of Social resources in a certain area depends on the monetary social position. Communications, Religion and Education Institute, ritual place, Field, monetary Institute. G.P.O. Office, Cultural Organization, plantation and so on are known as Social Resources. Various development activities of N.G.O. are also indicate Social Resources. All are available in the Upazila.

Houses

Almost houses of 6 Unions and 2 municipalities under Charghat Upazila are made of mud. Somewhere are seen brick-built house. But it is a few. Hovels are seen more in the rising sandy land of river. At present it is seen that somebody are trying to build up brick houses.

After analysis of Grape feature, it is seen that 3.9% of houses are brick-built, 36.5% are semi concrete, 51.0% are made of mud and 8.7% are hovels in all Unions and Municipalities. Sarada, Usufpur unions are situated beside the river 'Padma'. Many peoples of those unions are living on the rising sandy lands of river. As, almost houses of those unions are made of mud and hovels, so, by the effect of cyclone, inundation, storm, cold winds, sunray, erosion and other climatic disaster all the houses be destroyed and all the persons have to face various problem being distressed.

Water

Main sources of potable water of Charghat Upazila are nothing but tube-well. There 45 deep tube-wells and 14428 normal tube-wells have established in the Upazila. But due to Geographical circumstances, climatic change and catastrophic activities, the natural environments are changing horrifically and the dangerous aftermaths of the plight are forewarning presently. Arsenic is now being seen in tube-well water. As a result scarcity of

potable water is showing a bane for the inhabitants of the locality. In the dry season the layer of earth water go down. Then scarcity of water comes across. In that mournful plight the inhabitants use water for mitigation their need of necessary acts from ponds, cultivating lands, cannels and river. But want of awareness the people are doing pollution water by using chemical elements in all sources of water like ponds, in lands, cannels. Even they do not excavate ponds. So, day by day potable water crisis are now coming in front of locality a catastrophic bane of lives.

Water drainage system

Water drainage system has not been expanded as per expectation in Charghat Upazila. Though water drainage system in other area is appearing a certain position but in the place of sandy land of river is very bad. Engineering department of Upazila, personnel endeavoring, initiative of NGO and other Donor's organization has taken initiative but that are not enough for necessity.

Library/ Educational Institute.

Charghat Upazila is very attractive for its education level and historical events. There many reputed educational institutes of govt. and non Govt are available and also have Madrasa here. Not only that, but also have library in Bajju and Usufpur. The present position of educational institute is narrated.

It is cited that many school use to utilization as a shelter, but favorability and facility were not enough. Many institutions have damaged for erosion of river and others are not conducive for lack necessary goods and other facilities. Yet in that perplexing plight two Schools are using as safe shelter and its powers of retention are very low. Almost schools are one storied. So, men and cattle can live separately. Erenow those institutions were not used as safe shelter. Those schools are situated on the high land nearer to the household. As a result almost people of the location move around the schools. In that position those may be use as shelter for the local people in time of calamity. If those buildings be renovated by relinquishing all type of structural hindrances, building up separate latrines for male and female, securing of potable water, different high place for cattle then those should be indicated as a safe shelter for the well being of wretched people and goods, livestock and livelihood damage would be reduce.

Eidgah

There are 144 Eid-Gha Field located in the Charghat Upazila and those are 40 in Gargari,10 in Sarda Union, 11 in Usufpur Union,10 in Charghat Union,12 in Salua Union. As per version of the local people those were not used in the previous period of disaster. Those fields use to utilize in two times of the year.

Graveyard/ Crematorium

There are 33 Graveyards in Charghat Upazila. Among them, 4 in Gargari Union,7 in Sarda union,4 in Usufpur Union,3 in Charghat Union, 8 in Nimpara Union, 5 in Salua Union, 1 in Charghat Upazila. Also have one Crematorium in Gargari union. Those are situated on the remote and high place in the locality and those are covered by coppices. Those do not become submersed by inundation.

Health Services Centre.

There are few quantities of Health Service Centers available in the Charghat upazila, it is narrated below : In Charghat upazila- Health Complex centre is one and Sub-Centers are seven, Health and Family Planning Centre in 4 Unions are four, Community Clinic are 20 and Diagnostic Centers are 3 nos. Those do not indicate good health service delivery system in the remote places of the locality for the hapless people. Almost people of sandy lands of river get treatment from rural Doctors and Kabiraz. There 25 Doctors are appointed in the Upazila. But 12 Doctors, among them one Woman are serving there. Also there have 11 nurses and one Ambulance.

There are six thousand people live in sandy land of river. Death ratio of child and lactation mother are high than other place, because of communication, scarcity of medicines and proper doctors as they depend on rural doctors and Kabiraz. In time of moral crisis all sort of people run to Rajshahi Medical College Hospital and that takes more time which causes a heart rending plight. They have to face death or other crisis.

Bank

There are 6 Banks in Charghat Upazila. It give services to the denizen of the Upazila. There are 4 have Insurances Company like delta Life insurance, Fareast Life Insurance, Progressive Life Insurance and Meghna Life insurance.

Post Office

At present modern post office are available there. There are 16 Post Offices in the Upazila. Those Post Offices are delivering service in good manner. They also are serving monetary linkage services.

Club/Cultural Activities/ Enjoyable centre

There are 33 Clubs in Charghat Upazila. Among them 6 are in Gargari Union, 2 in Pakuria union, 13 in Arani Union, 4 in Bajucharghat Union, 2 in Bousha union, 7 in Monigram Union and 10 in Upazila Municipality.

Play Ground / Place

There are 42 Play Ground in the Upazila and those are situated in Gargari Union-4, in Arani Union-9, in Bajucharghat Union-6, in Bousha Union -4, in Monigram union-7 and in Charghat Municipality -5 nos. Almost Play Grounds are plain and smooth. Some grounds are on low land and becomes submersed in rainy season. If those were high land people would use in disaster period.

N.G.O /Voluntary Organization

There are 25 NGO existing in the Upazila. Charghat Upazila is disaster prone location. Those NGO are performing various activities in calamity to fetch off and fetch up from the devastated plight. In consecutive of the activities ASHA, SUCHANA, NODI and JIBON, SAWCHATAN, TANDA MARI MOHILA SABUJ SANGA, BRACK and others.

Forestation:

Social Forest Department of Rajshahi District has taken an initiative to build up forest in the raising sandy land of the river through the project 'Biodiversity conservation and poverty

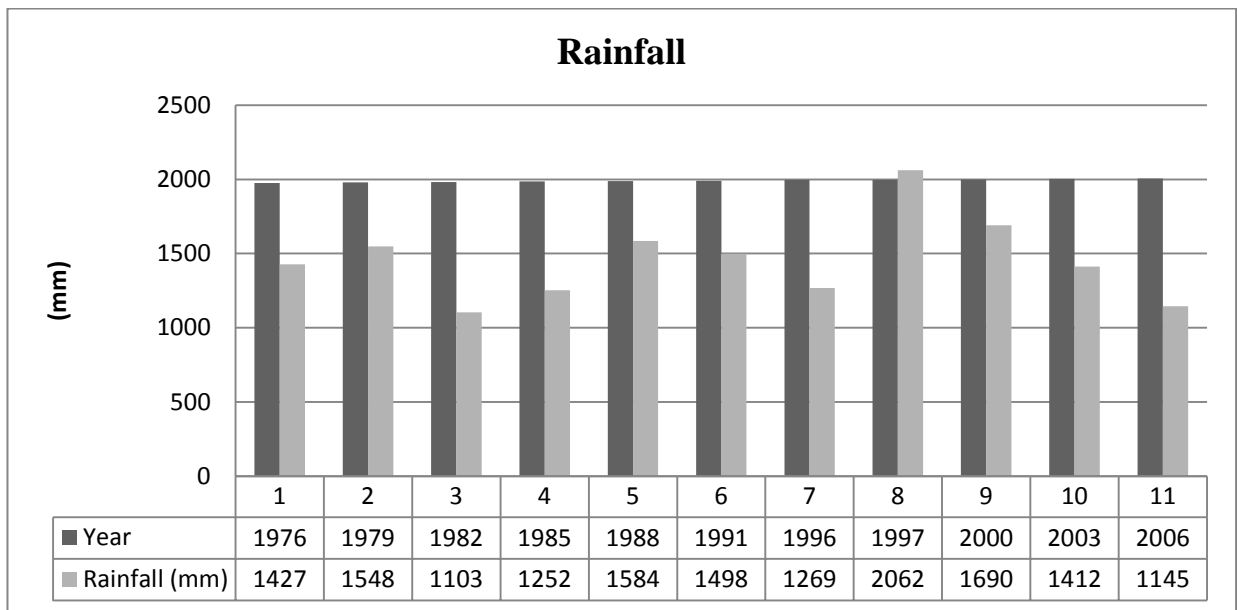
Rreduction’ and that is going on with full of go. In consecutive of the activities tree plantation on the road in every Union of the Upazila are going on. There are 50 KM. roads are covered with trees. Also people of the location have taken initiative to plant tree in their location.

1.4.3 Weather and Climate

Average rate of downpour of the Upazila is 45". Sometimes that comes up or down. Effect of diversity of seasons, heavy downpour or dryness is sustainable in the location. In dry season rate of temperature becomes high.

Stream of rain

As per Scientific information in the last 31 years, average rain fall in Rajshahi was 2241 mm. In the previous ten years that was 1639 mm. In the year 1993 that was 1623 mm. The lowest rate of rain fall was 843 mm. in 1992. From the year 1996 to 2005 the rain fall was very high. In 1997 that was 2062 mm.



Graph1.1: Yearly rainfall amount

Temperature

As per Scientific information in the last 15 years (from 1979 to 2004), average temperature in Rajshahi was recorded and that was – in 1979 was 31.1 ° and in 1983, the lowest was -20°.

Table1.4: 31 Years Average Amount of Maximum & Minimum Temperature.

Year	Highest Temperature	Lowest Temperature	Year	Highest Temperature	Lowest Temperature
1979	31.8°	21.1°	1995	31.2°	20.6°
1980	31.2°	20.9°	1996	31.5°	20.5°
1981	30.5°	20.5°	1997	30.5°	20.2°
1982	31.7°	20.3°	1998	30.9°	20.1°

Year	Highest Temperature	Lowest Temperature	Year	Highest Temperature	Lowest Temperature
1983	30.9°	20°	1999	31.6°	20.1°
1984	30.9°	20.2°	2000	30.7°	20.6°
1985	31.3°	20.3°	2001	31.2°	20.5°
1986	31°	20.1°	2002	31°	20.6°
1987	31.5°	20.5°	2003	30.8°	20.7°
1988	31.4°	20.4°	2004	31.1°	20.7°
1989	31.4°	19.4°	2005	31.3°	20.9°
1990	30.9°	19.6°	2006	31.7°	21°
1991	31.3°	19.8°	2007	32°	21.1°
1992	31.6°	19.7°	2008	32.2°	21.2°
1993	31.1°	20.1°	2009	32.5°	21.3°
1994	31.1°	20.°4			

Source: Field Trip, 2014

Water layer in the bowels of the earth

The water layer of the earth is continuously going down due to miss use of water and that is increasing day by day. As a result the effects of that are very alarming for the environment. The climate of the zone is not conducive. It is decreasing and going on to the horrific effect which would devastate the zone and it is ostensible. The balance of power of the environment is not sustainable. The rain fall in rainy season are very low, in dry season the temperature is raising high and in midnight have to face cold. This is the signal of tremendous horrific effect of the locality.

For the various causes water layer in the bowels of the earth is going down. The main causes of the plight are system less agricultural activities, water collection from earth for cultivation, dryness in the locality and etc. in the dry season people have to face scarcity of water horrifically.

1.4.4 Other resources

Land and its utilization

Total lands of Upazila in 6 Unions are narrated bellow;

Cultivation Lands are 45756 Accor.

Govt. acquired lands are 4048 Accor

Non cultivation lands are 35630 Accor

Cultivation lands under irrigation are 144 Accor

One term crops land are 2340 Accor

Two terms crops land are 3060 Accor

Three terms crops land are 290 Accor

Cultivation and victuals

The main victuals of the people in Charghat Upzila are price .mango, sugarcane and other various foods. They cultivate in a year paddy 9311.11 mt. Boro paddy -5173.86 mt. Ause paddy-2554.25 mt. Amon paddy-1583 mt and so on.

River

Two rivers in Charghat Upazila are running. Padma is Main River in the locality. Boral is another and that is running over the Upazila. Total river and in the locality are 410 Hector.

Pond/ Dighi

There are 1950 pounds in the Upazila. Among them in Gargari Union are 60, in Pakuria Union are 153, in Arani Union are 354, In BajuCharghat Union are 220, in Bousha Union are 530, in Monigram are 488 and in Municipality are 250.

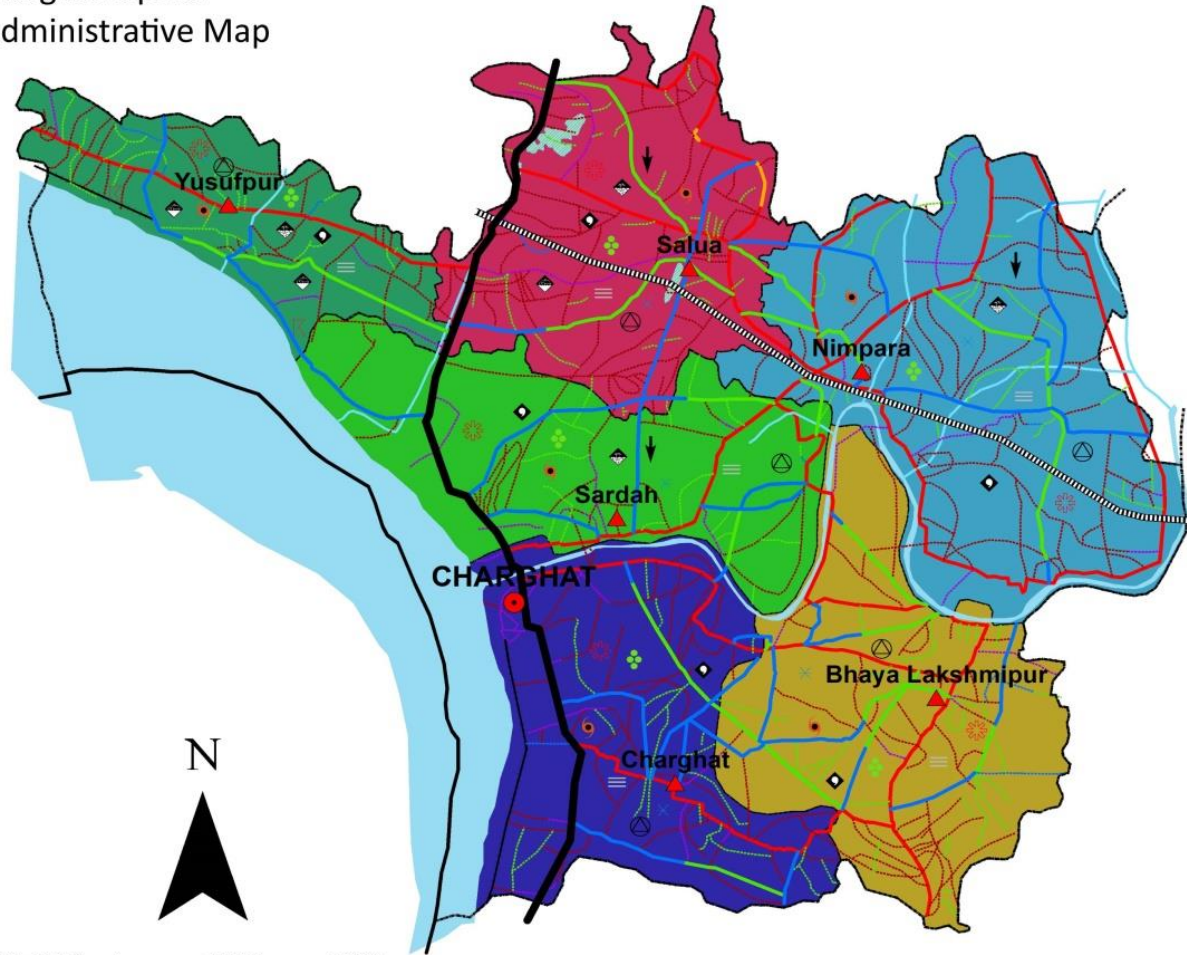
Haour/ Marshland

Total marshland in Charghat Upazila is 5 Hector.

Arsenic Pollution

It is ostensible that Pestilence of Arsenic is pervaded in everywhere in the Upazila. The water of the shallow tubes well is almost Arsenic polluted and not drinkable. In dry season water layer of the earth go down. Then people have to face scarcity of water. At present it is proved that 14864 pond of 16206 are free from Arsenic. There are many people suffering from Arsenic.

Charghat Upzila Administrative Map



Legend

- International Boundary
- - - - District Boundary
- · - · Upazila Boundary
- Union Boundary**
- Bhaya Lakshmpur
- Charghat
- Nimpara
- Salua
- Sardah
- Yusufpur
- Upazilla
- ▲ Union
- National Highways
- Regional Highways
- Zilla Road
- Upazilla Road(Pucca)
- Upazilla Road(Katcha)
- Union Road (Pucca)
- Union Road (Katcha)
- Village Road A (Pucca)
- Village Road A (Katcha)
- Village Road B (Pucca)
- Village Road B (Katcha)
- Railway Network
- Embankment
- ★ Arsenic
- × Cold Wave
- ◆ Drizzle
- ◆ Drought
- ↓ Fall of Water Tabel
- ◆ Flood
- ≡ Dense Fog
- ⊗ Heat Wave
- ★ Heavy Rain
- ⌋ River Erosion
- Storm
- Water Bodies
- Small River or Khal
- Wide River with Sandy Area
- Forest

Chapter Two

Disaster, Hazard and Vulnerability

2.1 History of Disaster

Not much severe effect of disasters is seen in Charghat upazilla. Every year; this area gets affected by either one or another disaster. Different types of hazards including Drought, low Water Level, Seasonal Storm, River Erosion, Flood, Cold Wave, Heavy Mist, Pest Attack, and other normal way of life and cause huge damage of assets. The pressure and Low Rainfall of water descending from Indian hills flows away the banks of river Jamuna through canals and other inland waterways and causes flood. As the river is shallow, it causes drought in the dry season. Owing to Seasonal Storm, both agricultural products and settlement get heavily damaged and a lot of people lose shelter too. River Erosion also spoils human lives damaging heavy Mist cause a agricultural products, accommodation and infrastructure. Cold Wave and Heavy Mist cause massive destruction for winter crops. But, the hazard which affects most to lead this upazilla to fatal crisis is too low water level. It is the most affecting hazard for the people of Charghat upazilla. This upazilla may be affected by any disaster because of deforestation, rapid growth of population and environmental imbalance. The level of damage, year of disasters and affected sectors are shown in a table below

Table 2.1: Name of Disaster, Year, Damage and Sector

Disaster	Years	Damage	Affected Sectors/ Elements
Flood	1981, 1988, 1998	Maximum	Agriculture, Fisheries, Livestock, Human Resource, Infrastructure, Plantation
	1986, 1991, 1995,	Moderate	Agriculture, Fisheries, Livestock,
River Erosion	,1981 1986, ,1987 ,1988 ,1998 ,2005 2006	Maximum	Agriculture, Fisheries, Livestock, Human Resource, Plantation
	,1999 ,1995 ,2000,2004	Moderate	Structure, Human Resource,
Draught	1976, 1979, 1992, 1996,	Maximum	Agriculture, Fisheries, Livestock, Human Resource, Plantation
	1989, 1999, 2004	Moderate	Livestock, Human Resource, Plantation
Hail Rain	1988, 1997,	Maximum	Agriculture, Fisheries, Livestock, Human Resource, Plantation
	1992, 1995, 2005	Moderate	Livestock, Human Resource,

Disaster	Years	Damage	Affected Sectors/ Elements
			Plantation
Heavy Mist	1976, 1996, 1999, 2004	Maximum	Agriculture, Fisheries, Livestock, Human Resource, Plantation, Livestock
	1979, 1989, 1992,	Moderate	Agriculture,
Cold Wave	2009, 2012, 2013	Maximum	Agriculture, Fisheries, Livestock, Human Resource, Plantation
	2010, 2011	Moderate	Livestock, Plantation

Source: field Visit, Charghat, 2014

2.2 Hazards of the Upazilla

Hazard is an unusual event, which can occur naturally or from man-made technical faults and can damage the lives and livelihoods of human beings. Despite of being under Barindra tracts, Charghat upazilla has some small and big swamps and Atrai and Lottle Jamuna River flows through it. The area was rough already due to geographical reasons but it is gradually losing sustainability because of climate change. People are suffering because of irregular water flow, downward water level and climate change. The hazards responsible for the suffering are given below following the priority of damages of people:

Table2.2: Hazards and Priority of Hazards

Hazards of the unions of this upazilla	Identifies hazards and priority of hazards
<p style="text-align: center;">Nature caused hazards</p> <p>1. Flood 2. Drought 2. Drought 3. River Erosion 3. River Erosion 4. Hail Rain 4. Hail Rain 5. Heavy Mist 5. Heavy Mist 6. Cold Wave 6. Cold Wave 16. Thunder 7.Excessive rain 17. Rat Attack 8. flatulency 18. Insect attacks at crops 9.Arsenic 10. Earthquake</p> <p style="text-align: center;">Man-made hazards</p> <p>19. Fire 21.Land Possession 20. Unplanned Infrastructure Establishment 22. Paddy wastes emitted from rice mills</p>	<p>1. Flood 2. Drought 3. River Erosion 4. Cold Wave 5. Heavy Mist 6. Hail Rain</p>

2.3 Different types of Hazards and its present, future illustration

1. Flood

Charghat upazilla is an extremely flood prone area. Flood prevails here from June to October. Consequently, agriculture, fisheries, infrastructure, households, education, communication and other sectors get heavily affected by flood. Though it happens each year, the floods in 1986, 1987, 1988, 1990, 1992, 1995, 1998, 2002, 2003, 2007 were the most terrific ones.

2. Drought

Drought commonly occurs in February, March, April and May. The acuteness and duration of drought are gradually increasing. It has not been raining even in June and July for last several years. As a result, damages are increasing because of drought. If this situation continues, severe environmental disaster would appear in near future. In context of Charghat upazilla, low water level is the most severe hazard which affects each sector of life and accelerates drought. People of this area have to fight continuously for the most basic need of life, water. This hazard affects every development sector of Charghat upazilla every year. Native people of here think that immediate government interference and private aid is necessary to remove this hazard.

3. River Erosion

River erosion is a part and parcel in the lives of people of Charghat upazilla. It is increasing day by day. The citizens believe that low navigability causing a raise of water and a fall of current speed and water capacity consequently leads to river erosion. They stated that it would further make people suffer devouring a lot more areas if this situation goes on.

4. Cold Wave

Cold Wave occurs every year in Charghat upazilla. It appears here so much because of close proximity to the river Chhota Jamuna. As a result, it affects common lives and ruins the production of mango, lichee, pees and other winter crops.

5. Heavy Mist

As a result of a variety of human-made reasons and climate change, heavy mist has been observed as a frequent occurrence in Charghat upazilla as well as nearby areas. Usually, heavy mist happens in November, December, January and February. As a result, it affects every sphere of life causing damage in agriculture and health sector and increasing street accidents.

6. Hail Rain

According to the denizens of Charghat upazilla, a drastic change in rainfall is observed in this area. Hail rain occurs quite frequently. It seems like a negative effect in the weather pattern. It makes a huge damage in agriculture.

2.4 Vulnerability and Capability

Vulnerability is the possibility of a population or parts of it to be affected by hazards and the level of possible damage to common lives and society due to the hazard. It has come into light through field meeting and analysis of various information and data that two-third of the population of Charghat upazilla are vulnerable to hazards like flood, river erosion, drought and cold wave. Moreover, animals, fisheries and infrastructures are not out of vulnerability. The objectives of removing hazards are to identify the possibility of a hazard, when a hazard will occur, how much area will be affected. Therefore by measuring the severity of a hazard and vulnerability, they are trying to achieve capability by adopting their own ways.

In which area is vulnerable for which reasons are shown below:

Table 2.3: Hazard based vulnerabilities

Hazards	Vulnerabilities	Capabilities
Flood	<ul style="list-style-type: none"> • It ruins agricultural products. • Graveyards go under water. • It harms human resource. • It damages infrastructure. • It washes away fisheries. • It causes lack of safe drinking water. • It destroys livestock. • It extremely endangers children, the pregnant, the disable and the old. 	<ul style="list-style-type: none"> • There are 96 high graveyards. • There are 28 tanks of pure drinking water. • There are 10 (158 hectors) effective embankments and cross dams. • There are 4 sluice gates. • There are 980 high based tubewells.
Drought	<ul style="list-style-type: none"> • It ruins agricultural products. • It harms human resource. • It washes away fisheries. • It causes lack of safe drinking water. • It destroys livestock. 	<ul style="list-style-type: none"> • There are 358 deep tubewells. • There are 1 health complex and 5 upazilla health and family welfare centers. • There is a 20 k.m. canal for irrigation purpose. • There is a veterinary hospital.
River Erosion	<ul style="list-style-type: none"> • It ruins agricultural products. • It hampers communication. • It harms human resource. • It damages infrastructure. • It ruins fisheries. • It destroys livestock. 	<ul style="list-style-type: none"> • There are 10 (158 hectors) effective embankments and cross dams.
Cold wave	<ul style="list-style-type: none"> • It ruins agricultural products. • It destroys livestock. • It harms human resource. • It extremely endangers children, 	<ul style="list-style-type: none"> • There are 1 health complexe, 20 community clinics and 5 upazilla health and family welfare centers.

Hazards	Vulnerabilities	Capabilities
	the pregnant, the disable and the old.	<ul style="list-style-type: none"> • NGO responses • There is a veterinary hospital.
Heavy Mist	<ul style="list-style-type: none"> • It ruins agricultural products. • It destroys livestock. • It harms human resource. • It extremely endangers children, the pregnant, the disable and the old. 	<ul style="list-style-type: none"> • There are 1 health complexe, 20 community clinics and 5 upazilla health and family welfare centers.
Hail Rain	<ul style="list-style-type: none"> • It ruins agricultural products. • It destroys livestock. • It harms human resource. • It destroys forest resources. 	<ul style="list-style-type: none"> • There are 1 health complexe, 20 community clinics and 5 upazilla health and family welfare centers. • NGO responses

Source: field Visit, Charghat, 2014

2.5 Most Vulnerable Areas

Due to geographical location, lack of water is seen in Charghat upazilla in dry seasons. So, all the fields and lands dry up and all the people, fisheries, animals and infrastructure become vulnerable. Again, farmlands and infrastructures submerge into water while water flowing down from hills causes sudden flood. Sometimes, people living nearby riverbanks become homeless because of river erosion. Vulnerability and causes of vulnerability are not the same for everywhere of the upazilla. So, most vulnerable areas and vulnerable population based on hazard are shown by the following table:

Table 2.4: most vulnerable areas, Reasons of Vulnerability and vulnerable population:

Hazards	Most Vulnerable Areas	Reasons of Vulnerability	Vulnerable nPopulatio
Flood	Usufpur and areas adjacent to rivers	Many a piece of agricultural land are being swallowed by flood in these areas.	127600 (Tentative)
Drought	Usufpur, Shalua, Nimpara	Drought may cause a huge damage in the agriculture of these areas.	169772 (Tentative)
River Erosion	Usufpur	For long 10 years, a lot of cultivated lands have been consumed by river erusion that makes many people helpless. Besides, it also ruins agriculture, fisheries and human resource.	127600 (Tentative)
Cold wave	Entire upazilla	Cold wave may harm to	169772

Hazards	Most Vulnerable Areas	Reasons of Vulnerability	Vulnerable nPopulatio
		agricultural products, livestock and human resource. It is also endangering for children, the pregnant, the disable and the old.	(Tentative)
Heavy Mist	Entire upazilla	This areas of Charghat grows the maximum amount of mangoes that may get spoiled by the Heavy Mist. It is also a threat for human resource.	169772 (Tentative)
Hail Rain	Entire upazilla	Hail Rain may cause a great harm to agriculture and human resource.	169772 (Tentative)

Source: field Visit, Charghat, 2014

2.6 Main Development Sectors

Charghat upazilla depends in agricultural production. Economy of this area depends on agriculture. So, although importance is given on agriculture in development planning, importance should be given on fisheries, livestock, health, livelihood and infrastructure to reduce hazard and risk.

It is discussed by the following table:

Table 2.5: Combination with Development Sector and Disaster Risk Reduction

Main Sectors	Detail Description	Adjustment with Disaster Risk Reduction
Agriculture	In Charghat upazilla, 150614 metric tons of crops are produced in total 23856 hectares of land. Meeting the local demand, Charghat has a surplus of 103311 metric tons which brought great success for the economy of this area. As a result of new initiatives in agriculture, farmers will come forward in cultivation. So in Charghat upazilla, agriculture is considered as one of the main sectors of development plan.	In Charghat upazilla, 90% of people are depended on agriculture (50% day-laborers, 25% petite farmers, 10% middle class farmers and 5% are affluent farmers). 78.66% income comes from agriculture. A change in climate causing drought, heavy rainfall, hail storm, cold wave, heavy mist and flood may cause severe financial loss damaging agricultural products. So, more modification and advancement is needed in agricultural sector to cope up with DRR.
Fisheries	There are total 3443 ponds wherein 590 are public ponds. In this upazilla,	A change in climate causing heavy rainfall and flood may harm

Main Sectors	Detail Description	Adjustment with Disaster Risk Reduction
	<p>annual fish production is 1267.24 metric tons and demand 1949.74 metric tons. There are four public wet lands covering 225.27 acres of area that is capable of fish production and helps people achieve financial success as well as livelihood. As a result, many people will be interested in fish cultivation that can bring huge progress in this upazilla. So in Charghat Upazila, fisheries can be considered as one of the main sectors of development plans.</p>	<p>agriculture severely. In that case, fisheries can serve with instant financial safety and solvency. So, fish cultivation is effective in DRR.</p>
Livestock	<p>20-25 years ago, almost every family used to have cattle in Charghat upazilla. Currently, because of lack of cow-food and pasture lands, livestock has decreased considerably. At present, there are 60 cattle farms, 30 broiler chicken farms and 30 hybrid chicken farms, which make people self-reliant and contribute to the economy of this area.</p>	<p>A change in climate causing heavy rainfall and flood may harm fisheries and agriculture severely. In that case, livestock can serve with instant financial safety and solvency. So, rearing livestock is effective DRR.</p>
Health	<p>There are an upazilla health complex, 5 upazilla health and family welfare center and 20 community clinics. These institutions help continue the usual activities of people of Charghat upazilla ensuring health services.</p>	<p>In Charghat upazilla, many diseases bring out in disaster period. Therefore, more advancement in health service is needed to be connected with disaster risk reduction.</p>
Livelihood	<p>In Charghat upazilla, 90 % of people are involved in agriculture (50% day-laborers, 25 % petite farmers, 10% middle class farmers and 5% are affluent farmers). Among the people involved in other sectors, there are 2.52% in non-agricultural labor, 0.86% industry, 8.01% trade, 2.91% transport and communication, 0.09% religious service, 0.07% remittance and 3.25% others. There are also 10% jobholders. In Charghat upazilla, financial system is quite</p>	<p>When disasters like flood, drought, river erosion, heavy rainfall, low rainfall etc. occur in Charghat Upazila, livelihood of common people gets affected by seriously damaged agriculture, fisheries and livestock. But, if people manage to alternative occupations, immediate recovery from disasters can be possible. It also help keep solvency in disaster period. So, alternative</p>

Main Sectors	Detail Description	Adjustment with Disaster Risk Reduction
	prosperous because of varied livelihoods. Most of the people are reliable because they are mostly engaged in any kind of dependable profession. Thereby lives of the people of Charghat go on improving.	livelihood is effective in disaster risk reduction.
Plantation	Charghat upazilla has considerable reputation for mango cultivation. In this Upazilla, there are many mango farms that keep this region filled with greenery. There are plenty of akashmoni, mango, rain-tree, water apple, eucalyptus, arjun, akasiya, babla and plum trees. According to official record, in Charghat, there are 10 hectares of plantation that plays a special role in the economy of this area.	Agriculture, fisheries, livestock are seriously damaged when disasters like flood, drought, river erosion, heavy rainfall, low rainfall etc. occur in Charghat Upazila. Apart from this, many houses, roads and other structures are smashed in storms, which affect lives and livelihoods of people as well as environment. Plantation has no alternative to prevent this. So a movement with a slogan like “Plant trees, save environment” can play role in disaster risk reduction.
Infrastructure	In Charghat upazilla, there are plenty of structural assets including 10 (158 hectors) embankments, 459 bridges and culverts, an overall total of 932.17 km. of upazilla, union and village roads and currently 358 deep tubewells and 11630 tubewells for irrigation purpose. There are also 24 hats/ bazaars meeting the needs of people by providing the basic necessities of goods. These assets of this area play leading role in economics as well as development activities in Charghat.	When disasters like floods, droughts, river erosion and heavy rainfall happen in Charghat upazilla, a variety of structural assets helps in many ways. The dams located on the banks of the river Jamuna protect the upazilla from river erosion. During floods and heavy rainfall, the culverts are used for communication and water supply. It also would benefit a lot in agriculture. The tubewells are used for water supply in irrigation during drought and thus help produce agricultural products. Roads connect different areas and develop communication. Bazaars are also essential for the people during disasters providing their necessary elements. Infrastructural resources play important role in coping with the disasters. So there is no

Main Sectors	Detail Description	Adjustment with Disaster Risk Reduction
		alternative but strengthening infrastructural resource to reduce risks of disasters.

Source: field Visit, Charghat, 2014

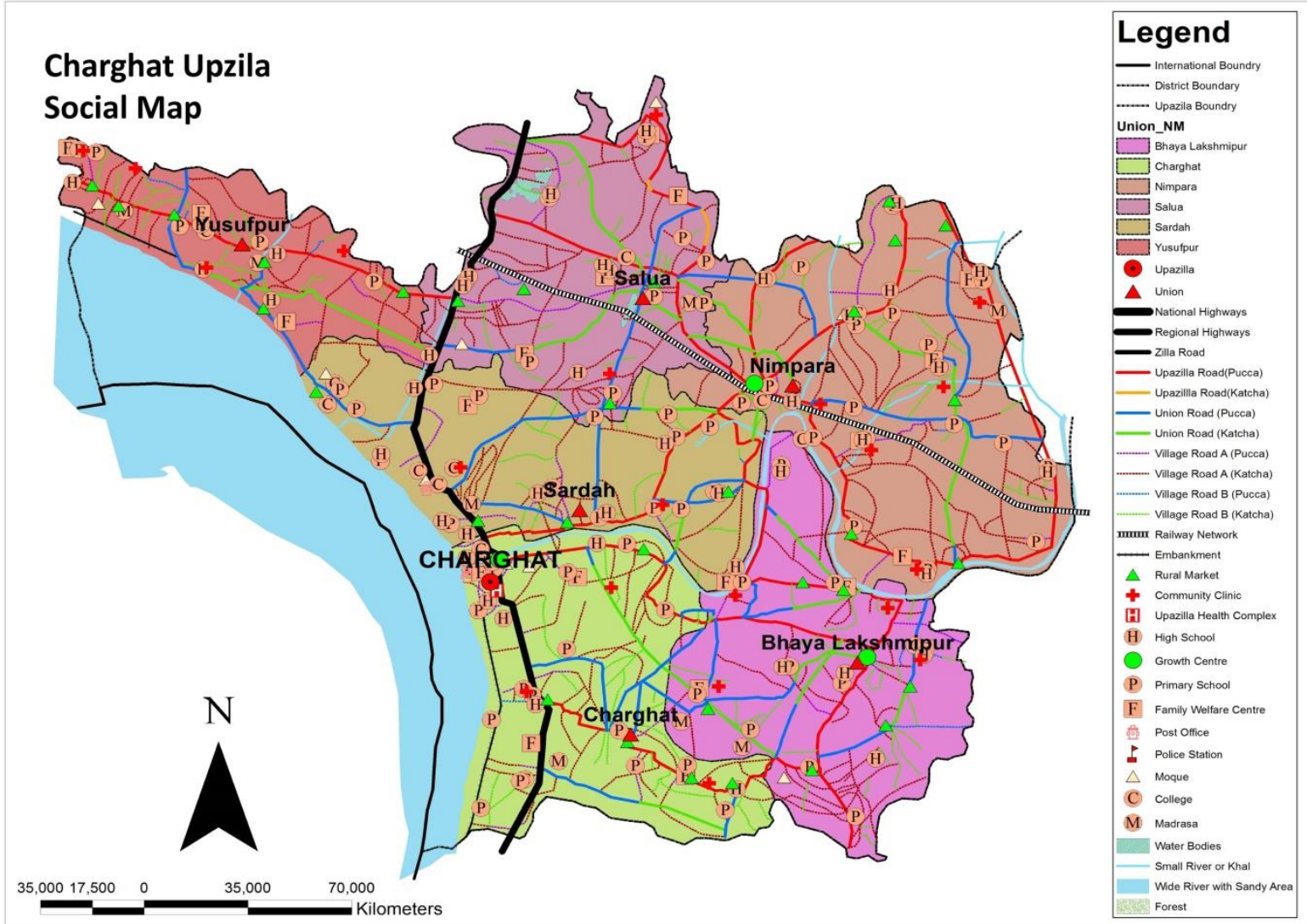
2.7 Social Map

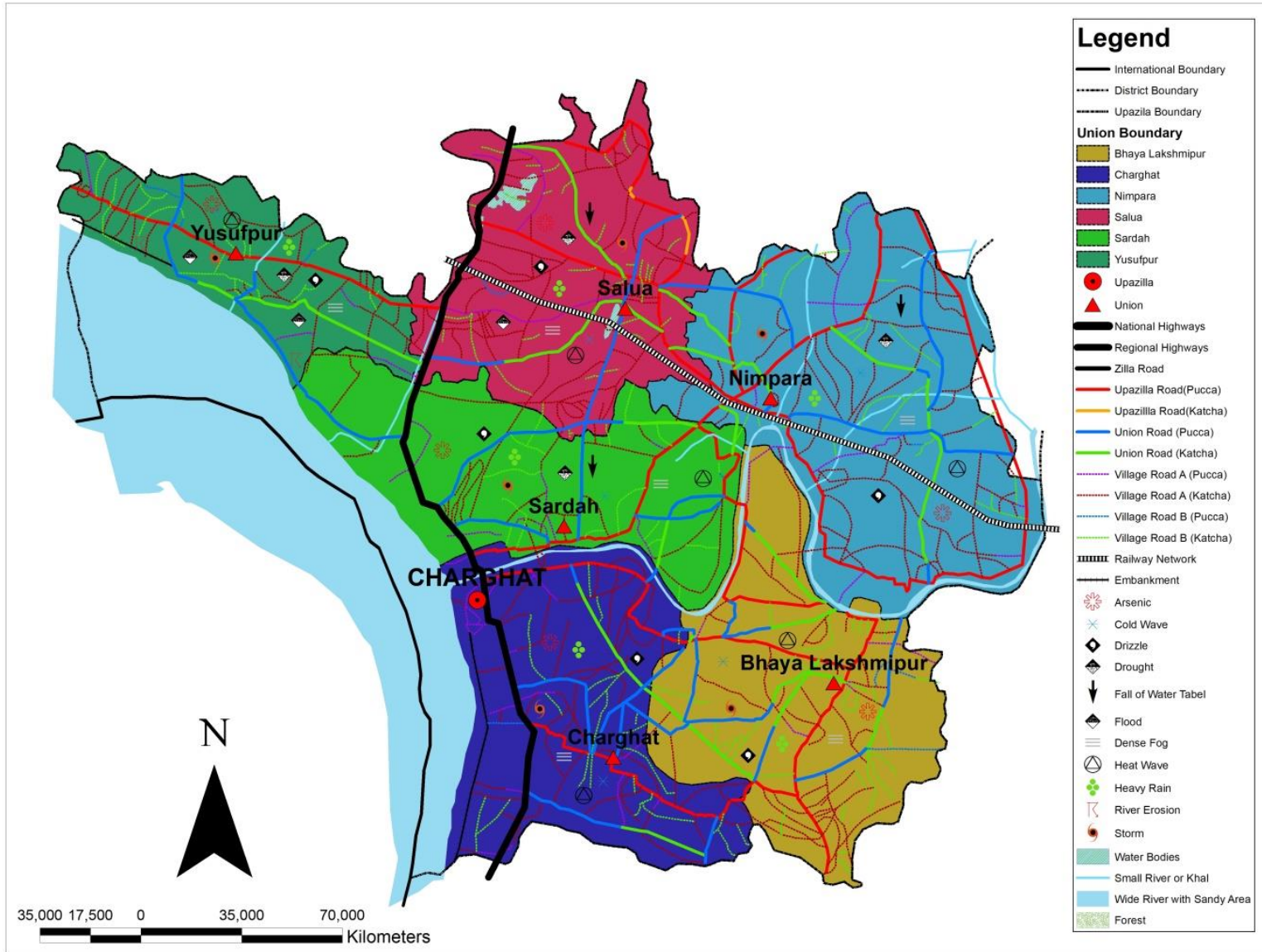
In context of the discussion of the Charghat upazilla disaster management committee members' with the common people of various occupations of different villages describing the objectives and importance of making a social map, The social map of Charghat upazilla has been prepared with their help. The location of unions, villages, infrastuctures, different institutions, land use, roads, rivers, canals, wet lands, buildings, hospitals, embankments and other important matters are included in the social map. The entire condition of this upazilla is shown in the social map.

2.8 Hazard and Risk Map

In context of the discussion of the Charghat upazilla disaster management committee members' with the common people of various occupations of different villages showing the map of Charghat upazilla and describing the objectives and importance of making a Hazard and Risk Map, Hazard and Risk Map of Charghat upazilla has been prepared with their help to identify the hazards. Which hazard affects which union is shown in the map by the participants. Moreover, land infertility, land utilization, movement of river such matters is considered here through geographical information management. The entire condition of this upazilla is also shown in the hazard and risk map.

Charghat Upzila Social Map





2.9 Seasonal Calendar of Hazards

Although Charghat upazilla is a drought prone area, different hazards are seen throughout the year. Drought continues to grow in the month of March, but it takes the extreme form in April. Field and lands dry up, no water remains in most of the tube well. At this time, ground water level is low; therefore water can be lifted only through deep tubewell. Besides, one river runs through Charghat upazilla. Areas and public adjacent to the river face a huge amount of losses at any time between the months June to October in case of sudden floods. Moreover, outbreak of cold wave and heavy mist prevails from November to February which hampers winter crops production.

Seasonal Calendar of Hazards is presented through the following table:

Table 2.6: Calendar of Hazards based on months

	Hazards	April	May	June	July	August	September	October	November	December	January	February	March
1	Flood												
2	Draugh												
3	River Erosion												
4	Cold Wave												
5	Heavy Mist												
6	Hail Rain												

Source: field Visit, Charghat, 2014

Seasonal calendar of Hazards analysis:

In which months of a year hazards occur in this area and in which months the effects are more or less are shown in the graph of the seasonal calendar. It is known through discussions with the participants as part of the Pre-C.R:

Flood: flood generally occurs due to river filling and the lack of drainage. Rivers fill up due to sediment accumulation in the riverbed and rising of chars which causes excess water pressure to overflow and cause flood. Charghat upazilla is flood prone from mid-July to the end of September.

Drought: Drought is the main hazard of this area. The presence of drought is seen from mid-March to mid-June. Excessive drought causes extensive damage to agriculture here. Though the effects of drought are moderate in early March and late June, but effects are somewhat lower during the rest of the year. Many of the crops are lost due to lack of irrigation as the effect of drought. Again, the production of crops which are getting irrigation is reduced due to lack of sufficient water. Again, water of stored pond dries up due to drought which leads to extreme shortages of drinking water.

River Erosion: homes, roads, crops, livestock and aosal and educational institution of Charghat upazilla are disappearing every year because of river erosion. River erosion is not

manifest From April to July here, but River erosion takes extreme form during early August to mid-September.

Cold Wave: Cold Wave occurs every year in Charghat upazilla. It appears here so much because of close proximity to the river Chhota Jamuna. As a result, it affects common lives and ruins the production of mango, lichee, pees and other winter crops.

Hill Rain: According to the denizens of Charghat upazilla, a drastic change in rainfall is observed in this area. Hail rain occurs quite frequently. It seems like a negative effect in the weather pattern. It makes a huge damage in agriculture.

2.10 Seasonal Calendar of Livelihood

Although this upazilla is dominated by agriculture, but fishing is also an income source here as some big and small canals are here. Besides, there are landless workers who earn their living as day laborers. As there are quite a few hats and bazars, the trader professions have arisen for exporting huge amount of agricultural products.

Seasonal Calendar of livelihood is presented through the following table:

Table 2.7: Seasonal Calendar of Livelihood

Source of Livelihood	April	May	June	July	August	September	October	November	December	January	February	March
1 Agriculture												
2 Fisheries												
3 Daily Labor												
4 Business man												

Source: field Visit, Charghat, 2014

2.11 Vulnerability on Life and Livelihood

Pre-discussed hazards and disasters hamper the normal lifestyle. Farmers, fishermen, day laborers, businessmen all become vulnerable.

Vulnerability on Life and livelihood is presented through the following table:

Table 2.8: Vulnerability on Life and Livelihood

Sl no:	Livelihood	Hazards/ Disasters						
		Low water level	Flood	River Erosion	Drought	Seasonal Storm	Lack of rain	Cold Wave
01	Agriculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

02	Fisheries	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
03	Daily Labor	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
04	Businessman	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

Source: Field Visit, 2014

2.12 Sector-wise Risks and Hazards

The vulnerable sectors of Charghat upazilla are crops, plants, livestock, fisheries, homes, roads, bridges, culverts, educational institutions, health care and shelter. The sectors are endangered because of the pre-discussed hazards. After performing hazard identification of each union and its corresponding vulnerable sector, elements and area selection, the list of risks have been prepared and written. Two representatives from each of the groups (farmers, landless, women and fishing) has been selected and divided into four groups. Risks have been given priority by voting on unacceptable risks (voting through Zipstick) after evaluating the risks described separately by each groups consisting of 6 members with a total of 24 representatives. The possible ways of reducing the risk to the local level including risk analysis has been set from the list of risks obtained by incorporating the highest risks voted by four groups. Following are the preferred risks. These risks have been validated later by the indirect stakeholders at the presence of the representatives of the group. The following table identifies vulnerable sectors of Charghat upazilla:

Table 2.9: Sector-wise Risks and Hazards

Hazard	Vulnerable Social Elements									
	Crops	Trees	Livestock	Fisheries	Homes	Roads	Bridges and Culverts	Educational institution	Health	Shelter
Flood	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Drought	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	
River Erosion	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Cold Wave	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	
Heavy Mist	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	
Hail rain	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	

Source: Field Visit, 2014

2.13 Climate Change and Its Possible Effect

Assessing the daily weather, the result of general condition of physical factors of wind sphere (air heat, air pressure, wind direction and speed, air humidity, amount and type of clouds and rainfall) of a place or region (30 years or more) is the climate of that place or region. Every day the sun reaches the earth, the earth absorbs it. Absorbed sunlight emits or reflects back to

space again. Therefore, any type of exploitation of natural laws creating obstacles or barriers to this radiation process leads to climate change.

Some sectors which are affected by climate change are described in detail below:

Table 2.10: Sector Related Climate Change and Impact

Sectors	Description
Agriculture	Owing to climate change, a flood like 1988's may ruin the agricultural products of 22561 hecters of cultivable land. River erosion may cause financial loss for numerous families destroying sugarcane and paddy lands of 6 unions. Drought, as occurred in 2001, may ruin the agricultural products of approximately 16600 hecters and cause severe financial damage for 43996 families. As a result of climate change, a sudden raise of hailrain may destroy the agricultural products of 18230 hecters that consequently may create financial loss for many households. Cold wave may destroy agricultural products of 12680 hecters that may create a scarcity of food in Charghat upazilla. Heavy mist is also a threat that may ruin the production of a lot of mango trees (for dropping out buds) and 11925 hecters of cultivable lands.
Fisheries	Severe drought may ruin the fish cultivation in 2750 ponds that leads to financial loss and lack of protein supply in Charghat upazilla. 2582 cultivable ponds may get washed away by a flood as occurred in 1988. As a result, it is obvious to bring about a scarcity of food, nutrition and protein.
Plantation	As a result of climate change, a flood like 1988's may smash down many a tree in Charghat upazilla. It is a great hamper for environmental balance. River erosion also may hamper environmental balance grasping many trees into the river in 6 unions.
Health	A flood like 1988's may create lack of safe place for 60% pregnant women during the flood in Charghat upazilla. It may even cause death because of vulnerable communication. Besides, different epidemic may bring out. Drought like 2001's may cause different kinds of skin diseases and other problems among 65% of the population of Charghat upazilla.
Livelihood	Flood, drought, river erosion, heavy mist, low rainfall etc. seriously affect agriculture, fisheries, livestock and most importantly human resource. 48% people of Charghat upazilla may become workless because of these hazards. As a result, it throws a terrible challenge towards the economic condition of Charghat upazilla.
Water	Heavy drought and low level of water in Aranagar and Umar unions may cause a horrible scarcity of water in several unions of Charghat upazilla. As a result, damage of 20862 hecters of cultivable land may

Sectors	Description
	cause financial loss of numerous families. Besides, different diseases like skin disease can spread all over and agriculture, fisheries and livestock can be severely spoiled.
Infrastruc ture	A sudden storm like 2003's may smash down 42% of structures including academic and religious institutions, which may result in unexpected disruption of education. 80% of earthen houses can be devastated by the storm that leads to suffering and economic loss for many people. A flood like 1988's may damage almost 349.05 km. roads which may impede communication. In six unions, approximately 89 kilometers road and some schools, colleges and other structures also may be devoured by the river. 32% of earthen houses may get submerged in water leading many families to be homeless and economically fallen.

Source: Field Visit, 2014

Chapter Three

Disaster Risk Reduction

3.1. Identification of Risk Factors

Table3.1: Identification of Risk Factors in Charghat upazila

Narration of risk	Causes		
	Preliminary	Medium	Longterm
People have to face scarcity of victuals losing all sorts of livestock and livelihood. Effect of sunray in Charghat Upazila is a horrific and that may devastate all.	*Lack of irrigation system. *Due to extreme sunray and temperature.	*The poor cultivators Cannot bear the expenditure of irrigation * Want of shallow and deep /tube-well * Small scale forestation * Lack of water in cannels.	* Lack of excavation of cannels. * Due to filling of river *Down fall of the Layer of water
Almost family of the location would be homeless and distress for over flow of water causes of embankment demerging. If the disasters appear like the year 1998 that would be a horrific plight in the location.	Due to over flow of water	-Build up houses on low land -Un planned house building up	Lack initiative of Government for building up sustainable house.
Losing all sort of fishes due to dryness of ponds and marshland people will be distressed. Earning sources will be decreased.	-Deficiency of rain fall. -Want of reservation water in pond. -	Lack of alternative way to reserve water. -Due to dryness of pond and cannels -Want of trees	Lack of awareness of Local Governance *Lack of necessary budget.
In the month from Ashar to Vedra (Bengali month) over flow of water submersed overall land of the territory. As a result people have to face terrible plight.	*Lack of initiative for extraction water. * Heavy downpour	Filling up of cannels	Lack of Government initiative.

Due to extreme sunray the moving places of cattle becomes unmovable and deficiencies of grass becomes ban to destroy cattle. Not only that but also people have to face various diseases.	Lack of awareness	Lack of initiative of cattle treatment	Lack treatment centre of cattle.
Inundation can devastate all sort of resources, as a result people will be distressed. Scarcity of victuals will be part and parcel of their daily lives.	*Over rain fall. *Damaging of embankment *Causes the opening of Farrakka embankment. * Effect of climate	*Lack of extraction system of water. *Lack of sluice gate> *Filling up cannels	*Lack of proper initiative of governance. *Lack of drainage system
Sustained sunray will destroy water sources as well as water layer will go more below. Scarcity of water will be causes of more deadly diseases.	*Scarcity of rain fall and dryness * Want of reservation system of water.	*Want of deep tube-well. *Want of trees.	*Lack of awareness of people. * Population increasing
Due to inundation all educational institutes go under water and student cannot attend in the school. Business of all kinds will be damage..	*Due to over down pour. *Lack of extraction system of water *	*Lack of extraction water system. *Causes of cannel filling	Lack of initiative to excavate of filling cannels and ponds
Erosion of river is a great problem in the Upazila. All sort of trees and house go under water by the effect of erosion and people become distress.	Stream of water is the main cause.	Lack of deepness of river	Lack of carefulness

Source: Field Trip, 2014

3.2. Identification of Ways of Risk Reduction

Table3.2 Identification of Ways of Risk Reduction in Charghat upazila

Narration of risk	Probable way of risk reducing		
	Preliminary	Medium	Longterm
Sunray destroys all sort of trees and other live saving sources which caused the dearth in the Upazila	*To run irrigation system * For the rain needed forestation * Needed water reservation * Needed deep Tube-well set up	* Reduce cost of agricultural materials. *Tree plantation *Excavation cannels	* Needed Govt. Initiative. *Needed materials supply to cultivators through low price
Over flow of water becomes the cause of devastation house and other goods.	*To build up embankment.	Building up houses on high place	To needed to follow the rules of Govt. For build up house
Lack of water becomes the ban to destroy fish farm. As a result people have to face scarcity of victuals.	*Needed to reserve water in the pond or fish farm	* Needed to find out alternative way to reserve water.	Needed Govt. Initiative to prevent the problem
Due to heavy down pour in rainy season become the causes of inundation.	Needed deplete of water.	Needed excavation cannels	Needed to plantation
Extreme sunray becomes the ban for various diseases.	Needed to create awareness among the people.	Needed animals treatment	Needed to build up animals hospital
Extreme sunray becomes the ban for scarcity of water as well as diseases. Not be possible to fetch water from tube- well	Needed to create awareness among the people	Needed to set up Health centre	Needed Govt initiative.
Due to inundation all educational institutes go under water and student cannot attend in the school. Business of all kinds will be damage.	Needed forecast about disaster	Needed to create awareness among the people as well as build up safety place	Needed to build up embankment and Sluice gate.

Source: Field Trip, 2014

3.3. NGOs' Development Plan

Table3.3: NGOs' Development Plan

Sl	NGO	Disaster Management	Beneficiaries No.	Amount(TK)	Duration
1	BLMF	Public Consciousness	2800	.....	01-05 years
2	PSF	Treatment by Sourjer Hasi Clinic	1000	.....	01-05 years
3	River & Life	Micro credit	5200	4500	01-05 years
4	BRAC	Micro credit	3800	2500-10000	01-05 years
5	ASA	Micro credit	1550	2500-15000	01-05 years
6	SARS	Micro credit	500	3000-5000	01-05 years
7	Grameen Bank	Micro credit	2400	5000-50000	01-05 years
8	ADOB	Livelihood	1700	-----	01-05 years
9	Prodipon	Economic support & Sanitation	630	Latrin	01-05 years
10	Proshika	Micro credit	1380	2500-7000	01-05 years
11	RRF	Micro credit	700	2500-10000	01-05 years
12	ADAMS	Livelihood	932	-----	01-05 years
13	ASOD	Public Consciousness	600	Training 5 Batch	01-05 years
14	BUREAU, Bangla desh	Micro credit	890	2500-10000	01-05 years
15	Caritash	Public Consciousness	540	Training 3 Batch	01-05 years
16	Joypurhat Rural Development Movement	Public Consciousness	670	Training 5 Batch	01-05 years
17	Domean Foundation	Treatment	600	-----	01-05 years

Source: Field trip, 2014

3.4. Disaster Management Action Plan

3.4.1. Pre-disaster Preparation

Table 3.4: Pre-disaster Management Action Plan

SL	Activities	Goal	Possible Budget (taka)	Location	Possible Time of Implementation	Who & How done (%)				Cooperation with Developmental Planning
						Upazila Administration	Community	UP	NGO	
1	Signal transfer	7 Teams	50,000	Union parisad	feb-March	35	5	30	30	Such activities will help to the local people to reduce loss of disaster due to pre awareness and for take initiative
2	ward level team	85 Teams	140,000	Union parisad	feb-march	35	5	30	30	
3	Identification of information transfer place in local level	70 places	7,000	union, ward village & municipality	feb-march	35	5	30	30	
4	Flag management development for advance alarm of disaster	7 places	70,000	union, ward village & municipality	feb-march	35	5	30	30	
5	Transfer of temporary property	85 Teams	100,000	union, ward village & municipality	feb-march	35	5	30	30	
6	Management of mobile health clinic	7 Teams	80000	Union,municipality	oct-may	35	5	30	30	
7	Drill arrangement	1 in each month	120,000	Union,municipality	feb-march	35	5	30	30	
8	Training opf primary treatment	7 teams	24,000	Union,municipality	feb-march	35	5	30	30	

9	Dry food, medicine supply	dry-3 tons Rice/pulse-5 tons	350,000	union, ward village & municipality	feb- april	35	5	30	30	
10	Training of students about disaster	85 school	85,000	Education institution	feb-april	35	5	30	30	
11	collect the phone no of related organizations & persons	UZDMC, UDMC 7 various donor organizations		union parisad & upazila	feb-april	35	5	30	30	

3.4.2. During Disaster Preparation

Table 3.5 During Disaster Preparation Management Action Plan.

Program	Target level	Probable budget	Where to do	Probable date of implementation	Who & How will do (%)				Cooperation with Developmental Planning
					Upazila administration	Community	UP	NGO	
EOC	1	Budget will be fixed according to the planning	Upazila Parisad	Emergency period	35	5	30	30	Such activities will help to the local people to reduce loss of disaster due to pre awareness and for take initiative
Signal dissemination	Regular (everyday/every hour)		Throught the Union	Do	35	5	30	30	
Emergency meeting call during possible upcoming hazards	As required		In every word of all union	Do	35	5	30	30	
keeping useable shelter houses	8 groups		Do	Do	35	5	30	30	
Rescue the victims	According to the population of the		Do	Do	35	5	30	30	

Program	Target level	Probable	Where to do	Probable	Who & How will do (%)				Cooperation
	damaged area								
Ensuring health service	Do		Do	Do	35	5	30	30	
Preliminary relief distribution	Do		Do	Do	35	5	30	30	
Bring the people remaining in the risk zone to the secured place	Do		Do	Do	35	5	30	30	
Ensure emergency food supply	Do		Do	Do	35	5	30	30	
Ensure emergency water supply	Do		Do	Do	35	5	30	30	

3.4.3 Post Disaster Preparation

Table 3.6: Post Disaster Preparation

3.4.4. Regular Period Preparation

Table3.7: Regular Period Preparation Management Action Plan

SL	Program	Target level	Probable budget	Where to do	Probable date of implementation	Who & How Far				Adjustment with Development Plan
						Upazila%	Community%	UP%	% NGO	
1	Quickly Rescue	According to the population of affected area & Amount of damage	According to the Amount of damage	UP,Municipality	Immediately after Disaster	40	0	30	30	Reduce the damage of livelihood by quick rehabilitation
2	First Aid of the wounded	Do		UP,Municipality	Do	40	0	30	30	
3	Dead body Buried & Carcass Management	Do		UP,Municipality	Do	40	0	30	30	
4	Compensation Within 72 Hours	Do		UP,Municipality	Do	40	0	30	30	
5	Rehabilitation of the economic hampered	Do		UP,Municipality	Do	40	0	30	30	
6	Debris Cleaning	Do		UP,Municipality	Do	40	0	30	30	
7	Reestablishment of Administration	Do		UP,Municipality	Do	40	0	30	30	
8	Emergency livelihood	Do		UP,Municipality	Do	40	0	30	30	
9	Public welfare	Do		UP,Municipality	Do	40	0	30	30	
10	Road construction & repairing	Do		UP,Municipality	Do	40	0	30	30	
11	Stop Installment	Do		UP,Municipality	Do	40	0	30	30	
Serial	Program	Target	Probable	Where to do	Probable	Who & How will do (%)				

No		level	budget		date of implemantation	Upazila administration	Community	UP	NGO
1	Pond repairing and ridge lifting and digging pond for water conservation management	5	Budget will be fixed according to detail planning and volume	Bajubagha Union	December-April	20	10	20	50
		--		Gorgori Union	Do	20	10	20	50
		--		Pakuria Union	Do	20	10	20	50
		--		Arani Union	Do	20	10	20	50
		4		Monigram Union (Abaspur, Bolohar, Monigram, Horirampur)	Do	20	10	20	50
		3		Bausa Union (Digahbazar and West Donhoh)	Do	20	10	20	50
2	Cannel dredging	5km	Budget will be fixed according to detail planning	From Moshidpur to Forajipara under Bajubagah Upazila	December-April	30	10	20	40
		2km		From Moshidpur to Chondrogati under Bajubagah Upazila	Do	30	10	20	40
		3km		From Word No 8 to Word No 9 through the end of Bosonto bill under Bajubagah Upazila	Do	30	10	20	40
		9km		From Parsauta Araji to Soudpur under Monigram Upazila	Do	30	10	20	40
		4km		From Binodpur to Bolihar under Monigram Upazila	Do	30	10	20	40
		3km		From Varalipara to Digha Dhorbila under Bausa Upazila	Do	30	10	20	40
		5km		From Aampara field to Loutica kalvert under Bausa Upazila	Do	30	10	20	40

Serial	Program	Target	Probable	Where to do	Probable	Who & How will do (%)				
3	Field raising		3-7 lac taka for every field fill up	Atleasr 1 for Eidgah, Graveyard, Play ground in all union and Municipal	December-April			20		40
4	Construction of shelter house	1	According to Gov.wage rate	Beside the Pakuria Union parisad building	September-May	30	10	20		40
5	Construction / Repairing of sluicagate	1		Construction of sluice gate in Moshidpur under Bajubagha Upazila	Do	30	10	20		40
		1		Construction of sluice gate in Alaipur under Pakuria Upazila	Do	50	--	--		50
6	Construction of damage resistant house	According to the population of the risk zone	Budget will be fixed according to detail planning	Monigram, Gorgori, Pakuria	Do	60	--	15		25
7	Raising up of house	Do			Do	60	--	15		25
8	Sufficient plantation around the house	Do		Monigram, Gorgori, Pakuria, Arani, Bajubagha, Bausa Union	Do	20	--	--		80
9	Early cultivation and sowing of short durated crops	Do			Do	35	5	30		30
10	Tree plantation	Do			On the riverside and mars of Bagha Upazila	Do	35	5	30		30

Chapter Four

Emergency Response

4.1. Emergency Operation Center(EOC)

In any kind of hazard, Emergency Operation Centre serves any type of active integration. During the disaster period it works 24 hours and data collection, observation, monitoring and asset management. There are an operation room, control room and a communication room in emergency operation centre.

Table4.1:Responsible person ofEmergency Operation Center

Serial	Name	Designation	Contact no
1	Md. Abu Syed Chand(Upazila Chairman)	Conveyner	01713769270
2	Md. RaselSabrin(UNO)	Chairman	01761708153
3	M d.NAzmulHAque(Upazila vice chairman)	Member secretary	01712542319
4	Mst.TahminaKhatun(upazila women vice chairman)	Member	01916534141
5	Dr.Md. Shamsul Alam(UH&FPO)	Member	01718091243
6	Md. Abdur Rajjak (Upozila Ansar and VDP Oficer)	Member	01719613241
7	Md. A K M NasirUddin (Sub assistant engineer Publichealth)	Member	01712172010
8	Mrs.Monirakhatun(Upozila social welfare officer)	Member	01711380612
9	Fatemakhatun(Upozila women concern officer)	Member	0178880839
10	Mr. Md.Alamgirkobir (Assistent commissioner (Land)	Member	01711909646
11	A K M Monjure Maola (Upozila agriculture oficer)	Member	01712997366
12	Md. Abu Basir (UPO)	Member	01719475226
13	Mr.Md.Khalekujjaman Sarker (upozila fisheries oficer)	Member	01716535505
14	Md. Abdur rajjak (upozila educational oficer)	Member	01712559909
15	Dr. Md. Humayunkabir (upojila livestock officer)	Member	01711468892
16	AK M Fajlul Bari (upzila food control officer)	Member	01712247776
17	Md. Ruhul Amin (Upozila youth development oficer)	Member	01718789174
18	Mr. Md. Monsur ali (Upozila engineer)	Member	01713358752
19	Joyonti rani sarker (Upozila village deploiment oficer)	Member	01726163710
20	Mr. Md. Mobassir hossain (Upozila co-oparetive oficer)	Member	0173149013

4.1.1. Emergency Control Room Management

- Emergency control room has to be established by Upazila/ Union Parishad Office immediately after disaster. It has to be ensured that there are at least 3/ 4 volunteers and village policemen always in emergency control room.
- Responsible persons of zilla/ Upazila are to be in charge of control room. Three groups each containing three volunteers are to guide the control room alternatively or 24 hours.
- communication with divisional Constant/ zilla sadar is to maintained.
- There must be a register in the control room. Persons acting in any sedule, data and information recieved by and sent to any persons in any specific time are to be written egisterspecifically in that r.
- Positions of zilla/ Upazilas, doads, canals, dams are to be marked on a map hung on the wall of control room so that it may help in identifying the most damaged ares at post-disaster period.

4.2. Planning for Hazard Period

Table 4.2: Hazard Period Planning

Sl. no	Activity	Target level	When	Who	Who to Help	How	Contact
1	Preparing volunteers	Volunteer groups should be formed under the guidance of UP members at union level	From February to March	Union Pairsad Chairman	Union Disaster Management Committee	Through Emergency Control Room	UzDMC & UDMC
2	Warning Announcement	Every UP member is to personally ensure the matter of warning announcement in his/ her ward.	From February to March	volunteers	Volunteer groups and Rural Police	Through Emergency Control Room	UzDMC & UDMC
3	Preparing Boats/ cars/ vans	Sufficient numbers of boats, motor vessels, vans are to be preserved to be used in emergency.	From February to March	Local Govt.	Volunteer groups	Through Emergency Control Room	UzDMC & UDMC
4	Rescue Activity	preparing sufficient equipments and human resource for rescue activity assessing accurate loss of disaster	From February to March	Local Govt.	Volunteer groups	Through Emergency Control Room	UzDMC & UDMC
5	First Aid/ health/ dead management	Organizing necessary treatment/ medicines/ health services assessing accurate loss of disaster	From February to March	Local Govt.	Volunteer groups	Through Emergency Control Room	UzDMC & UDMC
6	Collecting and Preparing Dry Food and Life-saving Medicine	Dry food like flatten rice, puffed rice etc. is to be collected from local markets for instant distribution.	From February to March	Local Govt.	Volunteer groups, Health assistant, Family welfare assistant	Through Emergency Control Room	UzDMC & UDMC
7	Treatment/ Vaccine for Cattle	Collecting necessary medicines	From February to March	Local Govt.	Volunteer groups, Upazila veterinary hospital and	Through Emergency Control Room	UzDMC & UDMC

Sl. no	Activity	Target level	When	Who	Who to Help	How	Contact
					Health centre		
8	Shelter Management	To keep the shelter house usable maintaining necessary repairing before the disaster prone season	From February to March	Local Govt.	Volunteer groups	Through Emergency Control Room	UzDMC & UDMC
9	Relief Activity	UP chairman has to supervise the relief activity of different relief and rehabilitation assisting groups.	From February to March	UP Chairman	Volunteer groups	Through Emergency Control Room	UzDMC & UDMC
10	Arranging Rehearsals	Arranging continual rehearsals in cyclone/ flood prone areas	From September to May	UP	Village people and Volunteer groups	UP	UzDMC & UDMC
11	Emergency Control Room Management	Emergency control room has to be established by Upazila/ Union Parishad Office immediately after disaster. It has to be ensured that there are at least 3/ 4 volunteers and village policemen always in emergency control room.	during disaster period	Local Govt.	Volunteer groups	UP	UzDMC & UDMC

Source:Field trip, 2014

4.2.1. Preparing volunteers

- Forming volunteer groups under the guidance of UP members at ward level
- Spreading announcement and information to every villages through volunteers
- Distributing duties signals, data collection, rescue, evacuation, shelter management and arranging training on disaster risk reduction among all volunteers

4.2.2. Warning Announcement

- Every UP member is to personally ensure the matter of warning announcement in his/her ward.
- Once in every hour, mike announcements have to be arranged up to 5 no. signals transmitted by radio, television. As soon as the great danger signal (8-9 no. signals) is announced by radio and television, mike announcement and school bell ringing have to be done constantly as danger alarm.

4.2.3. Evacuation Activity

- Every UP member is to start evacuating people to safer places with the help of volunteer groups of that ward as soon as it is announced to evacuate the people of risky areas by radio, television.
- As soon as 8 no. great danger signal is declared, mike announcements and volunteer activities have to be ensured toward every home to direct the vulnerable people to safe places. The vulnerable people must be well-informed of the shelter they belong to.

4.2.4. Rescue and First Aid

- The people of extreme risk zone are to be under the supervision of members of Zilla/ Upazila disaster management committee.
- A fixed deposit has to be run by Zilla/ Upazila disaster management committee for rescue management.
- Temporary health camps have to be set up and directed.
- The sick, the old, children and pregnant women are to be sent toward hospitals immediately.
- Every UP member together with volunteers is in charge of dead body management as well as burial of cattle.

4.2.5. Shelter Management

- To keep the shelter house usable maintaining necessary repairing before the disaster prone season
- To fix the specific shelters to be chosen by specific people in emergency
- To ensure complete safety of women, children and disable persons (in taking shelter)
- To ensure safe water supply and other services
- To help people carry their necessary assets (cattle, poultry, food etc.) to safe places

4.2.6. Preparing Boats

- Zilla/ Upazila disaster management committee is to keep the account of motor-boats and settle on which ones are to be used in emergency.
- The owners of boats are to help them in this task.
- The names and mobile numbers of owners of boats are to be preserved.

4.2.7. Measuring the Damage and Need of Disaster and Sending Report

- Immediately after the disaster, 'SOS Form' is to be sent within 24 hours and 'D Form' is to be sent within 7 days to the UP chairman.
- With the help of UP secretary, UP chairman is to collect the reports of every ward and send those to the chairman of Upazila disaster management committee within the next 12 hours.

4.2.8. Relief Activity

- UP chairman has to supervise the relief activity of different relief and rehabilitation assisting groups.
- If any other relief distributor groups come from outside, it is ordered to keep a record of the amount and category of relief and rehabilitation materials and to inform control room of the groups and their assigned areas.
- Union disaster management committee is to fix and distribute the amount/ number of relief materials among people based on vulnerability and damage at ward level.

4.2.9. Collecting and Preparing Dry Food and Life-saving Medicine

- Dry food like flatten rice, puffed rice etc. is to be collected from local markets for instant distribution.
- Food materials like rice, peas, flour, oil etc. and house-building materials like tin, nylon string etc. are to be collected from local markets.
- With the help of health assistant and family planning assistant, all necessary medicines are to be listed and collected at union level.
- Union chairman is to be in charge of assimilation of necessary transportations like rickshaws, taxies and other vehicles to transport relief materials as well as relief workers.

4.2.10. Treatment/ Vaccine for Livestock

- Collecting necessary medicines from Upazila veterinary hospital and preserving those in UP building or health center according to situations
- Arranging necessary trainings on veterinary treatment for the members of union disaster management committee
- Relating experienced persons to veterinary treatment if it is necessary in disaster period

4.2.11. Arranging Rehearsals

- Arranging rehearsals on signal/ warning announcement, evacuation, rescue and primary relief management
- Arranging continual rehearsals in cyclone/ flood prone areas
- Assessing disaster preparation through rehearsals involving the population in April and September each year
- Mentioning in the rehearsals to take the sick, the disable, pregnant women and children to shelter center
- Executing rehearsals, for teaching people of risky areas, in risky villages instead of UP office

4.2.12. Emergency Control Room Management

- Emergency control room has to be established by Upazila/ Union Parishad Office immediately after disaster. It has to be ensured that there are at least 3/ 4 volunteers and village policemen always in emergency control room.
- Union Parishad secretary and responsible persons are to be in charge of emergency control room.

4.2.13. Shelter Centres/ Safe Places

- Places that do not get washed away in flood and lie away from river erosion can be used as shelter centers.
- Selected shelter centers, local schools, colleges, govt. and non-govt., organizations, high roads and dams can be used as shelter centers.

4.3 List of Upazila's safe Place

Table 4.3: List and Description of Safe Places of Upazila

SHALTER CENTER	NAME	NAME OF UNION	CAPACITY	REMARK
Union parishad complex	Vayalakshmipur union complex	Vayalakshmur		
	Sholuya union complex	Sholuya		
	Yusufpur union complex	Yusufpur		
	Charghat union complex	Charghat		
	Nimpara union complex	Nimpara		
	Sardah union complex	Sardah		
School cum shelter	Tangon govt. primary school	Yusufpur	100	
	Yusufpur govt. primary school	Yusufpur	150	
	Mariya govt. primary school	Sholuya	60	
	Tatarpur govt. primary school	Sholuya	50	
	Chak Jhikra govt. primary school	Sardah	120	
	Jhikra govt. primary school	Sardah	130	
	Nimpara govt. primary school	Nimpara	400	
	Kamini govt. primary school	Nimpara	300	
	Moktarpur govt. primary school	Charghat Municipal	500	
	Poranpur govt. primary school	Charghat	600	
	Routha govt. primary school	Charghat	200	
	Dakar govt. primary school	Vayalakshmur	400	
	Bakra govt. primary school	Vayalakshmur	500	
Pirojpur-2 govt. primary school	Dorshonpara	300		
Government/non government institution	Charghat upozila Parishad complex	Charghat	2000-3000 people	
	Charghat upozilla health complex	Hogripara	1000-2000 people	
High road	Chandan Shohor to Routha	Charghat and horiana	5000 people	
Embankment	Embankment road From Sahapur		5000-	

SHALTER CENTER	NAME	NAME OF UNION	CAPACITY	REMARK
	to Routha		6000 people	

Source: Field Visit, 2014

4.4. Formation of Shelter Management Committee

Shelter management is a very significant part of disaster management. Because of lack of proper and suitable management, many shelter centers get useless. Shelter management:

- Saves life and assets during disasters
- Saves livestock during disasters
- Ensures proper use and management of shelter centers

Shelter Management Committee

- There are 7-9 members in shelter management committee.
- The 7-9 member committee consists of UP chairman/ members, responsible persons, social workers, teachers, NGO staffs, land provider, volunteers etc.
- This committee can act as this management committee according to approval of the denizens.
- Half of the committee members have to be females.
- This committee fixes the responsibilities of shelter management.
- It performs the complete supervision and management of shelter center with the help of the denizens.
- It arranges meetings, keeps records of decisions and fixes responsibilities and deadlines for implementation of those decisions.
- The list of shelter management committee is to be attached to Disaster Management Plan.

The places to be used as shelter centers:

- Selected shelter centers
- Local schools, colleges
- Govt. and non-govt. organization
- High roads and dams

Things to be noticed in shelter center are:

- Preserving tent/ polyether/ ORS/ filter/ necessary medicines (Paracetamol, Flagil etc.)/ water purifying tablets/ bleaching powder etc. in shelter centers
- Measures for drinking water and cooking
- Sanitation system (male-female specified)
- Bathing place (male-female specified)
- Keeping clean and waste free
- Safety
- Light
- Hygiene
- Registration of protected people, enlisting and storing of their reserved assets and returning those properly while discharging
- Distributing duties among particular staffs and volunteers for shelter management
- Managing food and treatment for the protected

- Special care for pregnant women, the old and the disable

Use of Shelter Center:

- Shelter centers are mainly used for safe shelter for vulnerable people during disasters.
- Shelter centers can be used in community development activities except disaster period.
- It can also be used as primary ailment center.
- It can be used as school and education center for elderly people.
- It can be used as wireless station.

Shelter Center Management

- Every shelter center should be properly supervised.
- Local steps should be taken to protect the shelter centers from being ruined.
- Plantation should be maintained surrounding shelter centers in a planned way.
- Shelter center should be locked except disaster period.
- Shelter Management committee should be formed according to guideline.
- The list of Shelter Management committee is to be attached to Disaster Management Committee.

Table 4.4: List and description of Upazila Shelter Place

Shelter Center	Name of Shelter Center	Responsible person	Mobile	Comment
School cum Shelter	Tangon govt. primary school	Mst. ArginaKhatun	01837665885	-
	Yus ufpur govt. primary school	Abdul Kuddus	01814910033	-
	Mariya govt. primary school	Mst. Nilufar Yasmin	01911192873	--
	Tatarpur govt. primary school	Md. Abdul Hamid	017152725871	-
	Chak Jhikra govt. primary school	Mst. Sultana Rigia	01713363800	-
	Jhikra govt. primary school	Mst. Jesmin Akter	01710001686	-
	Nimpara govt. primary school	Md. Ikiar Hisen	01711320612	-
	Kamini govt. primary school	Mst Akter banu	0178884839	-
	Moktarpur govt. primary school	Mala rani	01711919646	-
	Poranpur govt. primary school	Fozol Ali	01712997366	-
	Routha govt. primary school	A abdur Rahim	01719474226	-
	Dakar govt. primary school	Nur Uddin	01716538505	-
	Bakra govt. primary school	Rabiul Islam	01740979720	-
	Pirojpur-2 govt. primary school	Nurul Islam	01745171191	-

Government/ Non- Government Organization	Charghat Building Upazila	Md. Aminul Haq	01712279017	-
Elevated Road	Embankment road of Charghat and Nauhata	Forad Reja	0721-761061	-
Embankment	River embankment road of Padma	Sudhir Sarker	01711379181	-

Source: Field trip, 2014

4.5. List of Resources of Upazila (usable during disaster)

Table 4.5: List of Resources at the Upazila (usable during disaster)

Structure/ Assets	Number	Responsible Persons	Brief Description
Storage	3	--	Total Capacity 500 Metric ton
Shelter House	2	--	--
Boat	45	Md. Piar Ali	Use for delivering
	14	Md. Aliur Rahoman	Use for delivering and fishing
Car	945 Rikshaw, 190 Van, 160 Eace Bike, 965 Nosimon	Md. Nurul Islam	Member in owner Somity

Source: Field Trip, 2014

4.6. Finance

The income of Union Parishad arises from collecting local tax, approving lease for hat/ bazaars and canals/ swamps and approving trade licenses for business and trade. But, this authority has been taken away from Union Parishad. As a result, its income sources have been reduced. Nonetheless, Govt. is presently allowing Union Parishad 1% of land registration fee that UP used to have the whole of it before. Moreover, after the salaries of gram polices and UP secretary are paid with this money, the rest is seldom sent to UP. Very recently, govt. has taken measures to allow 4/5 lakes taka per year directly to UP.

Income of Parishad

There must be a deposit for every Union Prishad.

(a) Local Sources (union tax, rate & fees)

- Tax on yearly fiscal value of household
- Tax on business, trade and profession (trade license)
- Licenses and Permit fees issued by UP
- Lease money
 - Hat/ bazaar leasing
 - Moorage (ghat) leasing
 - Public pond leasing
 - Khoarr (cattle detention place) leasing
- Tax on vehicles except motor cars

- Income from properties
 - General deposit of UP
- (b) Govt. donation
- Development sector
 - Agriculture
 - Health and sanitation
 - Road construction and repairing
 - Development assisting deposit (LGSP)
 - Adjustment
 - Honorary bills for chairman and members
 - Salaries and bills for secretary and other staffs
 - Others
 - 1% of and registration tax
- (c) Local govt. sources
- Money allowed by Upazila Parishad
 - Money allowed by Zilla Parishad
- (d) Non-govt. development organization
- NGOs
 - CDMP

Various donor organizations and non- govt. development organizations are financing directly to UP to strengthen local govt. A better achievement depends on efficiency, sincerity and, most importantly, good-governance of Union Parishad. UP is supposed to manage the finance considering all the hazards and promoting those that are the major obstacles for the development of the union. UP should prepare, finance and implement every development project relating disaster risk reduction to it.

4.7. Updating and Analyzing Work Plan

2 follow-up committees are to be structured to devise plan.

1. Plan Follow-up Committee
2. Plan Implementation and Management Committee

Actionplan Follow-up Committee

5 members plan preparation and presentation committee

Table4.6: Plan Follow-up Committee contain five member

S. L.	Name	Designation	Mobile number
1	Upazila Chairman	Chairman	01713769270
2	Upazila Project Implementation Officer	Secretary	01719475226
3	Will be select by Chairman	NGO Representative	01961308747
4	Upazila Vice Chairman	General Member	01712542319
5	Upazila Women Vice Chairman	General Member	01916534141

Source: Charghat Upazila Disaster Management Committee, 2014

Responsibilities of the committee:

- Assessing rough plan and devising final plan
- Sector-wise planning activity e.g. consulting Deputy Assistant Agriculture Officer for planning on agriculture, livestock and fishery
- Making the plan pragmatic signifying specific tasks and finance

Plan Implementation and Management Committee

Table4.7: 7-Member Plan Implementation and Management Committee

S. L.	Name	Designation	Mobile number
1	UNO	Chairman	01761708153
2	Upazila Project Implementation Officer	Secretary	01719475226
3	Upazila Women Affairs Officer	Female Member	01718880839
4	Officer In-charge, Bhagha Thana	Govt. Representative	01713373807
5	Selected by Chairman	NGO Representative	01710061686
6	Asst. Engineer (Public Health)	Member	01733255903
7	Uazila Food Controler	Member	01712247776

Source: Chorghat Upazila Disaster Management Committee, 2014

Responsibilities of the committee:

- Every year in April/ May, present work plan must be updated through complete assessment, essential modification and addition. Committee member secretary is personally liable for taking the steps. All necessary amendments must be implemented assessing the flaws of current plan immediately after any disaster.
- Every year in April/ May, disaster management rehearsal must be celebrated by the direction of Management Bureau on national disaster day.
- Disaster management plan has to be approved by District Disaster Management Committee.
- Plan implementation should be supervised.
- Communication with different organization should be maintained.

Chapter Five

Rescue and Rehabilitation Plan

5.1 Damage Assessment

Table 5.1: Sector wise Damage Assessment in Upazila

Sectors	Description
Agriculture	Owing to climate change, a flood like 1988's may ruin the agricultural products of 14746 acres of cultivable land. River erosion may cause financial loss for 33683 families destroying sugarcane and paddy lands of 5 unions. Drought, as occurred in 2001, may ruin the agricultural products of approximately 16454 hectares and cause severe financial damage for 43996 families. As a result of climate change, a sudden attack of seasonal storm may destroy the agricultural products of 39063 hectares that consequently may create financial loss for 175984 people of 43996 households.
Fisheries	Severe drought may ruin the fish cultivation in 3827 ponds that leads to financial loss and lack of protein supply in Charghat Upazila. 1543 cultivable ponds may get washed away by a flood as occurred in 1988. As a result, it is obvious to bring about a scarcity of food, nutrition and protein.
Plantation	As a result of climate change, a storm like 2003's may smash down many a tree in Charghat Upazila. It is a great hamper for environmental balance. River erosion also hampers environmental balance grasping many trees into the river.
Health	A flood like 1988's may create lack of safe place for 60% pregnant women during the flood in Charghat Upazila. It may even cause death because of vulnerable communication. Besides, different epidemics may bring out. Drought like 2001's may cause different kinds of skin diseases and other problems among 50% of the population of Charghat Upazila.
Livelihood	Flood, drought, river erosion, heavy mist, low rainfall etc. seriously affect agriculture, fisheries, livestock and most importantly human resource. 38% people of Charghat Upazila may become workless because of these hazards. As a result, it throws a terrible challenge towards the economic condition of Charghat Upazila.
Water	Heavy drought and low level of water may cause a horrible scarcity of water in 5 unions of Charghat Upazila. As a result damage of 12344 hectares of cultivable land may cause financial loss of almost 33683 families. Besides, different diseases like skin disease can spread all over and agriculture, fisheries and livestock can be severely spoiled.
Infrastructure	A sudden storm like 2003's may smash down 25% of structures including academic and religious institutions, which may result in unexpected disruption of education. 60% of earthen houses can be devastated by the storm that leads to suffering and economic loss for 120806 people. In five unions, approximately 30 kilometers road and some schools, colleges and other structures also may be devoured by the river. 16% of earthen houses may get submerged in water leading 33684 families to be homeless and economically fallen.

Source: Field Visit, 2014

5.2 Rapid/ Early Recovery

5.2.1 Administrative Restoration

SL	Name	Designation	Contact No
1	UNO	Chairman	01912872616
2	Upazila Project Implementation Officer	Member Secretary	01711192877
3	Upazila Vice Chairman	Member	01712712037
4	OC, Charghat Thana	Govt.Representative	01713373800
5	Upazila Women Affairs Officer	Women Representative	01914950933
6	Related Union/Pourashava/Mayor	Member	.....
7	Related Tag Officer	Member	.....

Source: CharghatUpazila Disaster Management Committee, 2014

5.2.2 Wreckage cleaning

Table5.3: Wreckage cleaning committee in Upazila level

SL	Name	Designation	Contact No
1	UNO	Chairman	01710068615
2	Upazila Project Implementation Officer	Member Secretary	01712279017
3	Upazila Vice Chairman	Member	01712712037
4	Upazila Engineer	Govt.Representative	01711314769
5	Upazila Women Affairs	Women Representative	01914950933
6	Related Union/Pourashava/Mayor	Member	.....
7	Respective Union's Tag Officer	Member	.....

Source: CharghatUpazila Disaster Management Committee, 2014

5.2.3 Public Service Resume

Table5.4 Public Service Resume committee in Upazila level

SL	Name	Designation	Contact No
1	UNO	Chairman	01912872616
2	Upazila Project Implementation Officer	Member Secretary	01711192877
3	Upazila Vice Chairman	Member	01712712037
4	Upazila health and family planning officer	Govt.Representative	01711173845
5	Upazila Project Officer	Member	01711484161
6	Related Union/Pourashava/Mayor	Member	.....
7	RelatedTag Officer	Member	.....

Source: CharghatUpazila Disaster Management Committee, 2014

5.2.4 Emergency Livelihood Assistance

Table 5.5 Emergency Livelihood Support committee in upzilla level

SL	Name	Designation	Contact No
1	UNO	Chairman	01912872616
2	Upazila Project Implementation Officer	Member Secretary	01711192877
3	Upazila Vice Chairman	Member	01712712037
4	Upazila Public Health Engineer	Govt. Representative	01711173845
5	Upazila Education Officer	Member	01719613241
6	Related Union/Pourashava/Mayor	Member	.....
7	Related Tag Officer	Member	.....

Source: Charghat Upazila Disaster Management Committee, 2014

Annex 1

Check List of Emergency Plan Implementation

Checklist

The following 'Table' (checklist) has to be checked out immediately after the broadcast of 5 number danger signal by radio/ television and necessary measures have to be taken.

SL	Subject	Yes/ No
1.	If the selected members of volunteer group assigned for warning announcement have been ordered to declare the coming hazard	No
2.	If the responsible persons/ groups are prepared to rescue the people of vulnerable areas	No
3.	If the declaration to keep dry food and drinking water buried under ground for 2/1 days is announced	No
4.	If life jackets for the safety of volunteer groups are provided	No
5.	If the necessary manpower is prepared to keep Union Control Room open constantly	No
6.	If the necessary safety measures for union food storage/ relief storage are ensured	No
7.	Others	Yes

N. B.

- Assessing the checklist, immediate measures should be taken for the flawed sectors.
- It is very necessary to manage life jackets for volunteer groups with union parishad deposit or any other source/ organization.

Checklist

- The following 'Table' (checklist) must be filled and sent to Upazila Nirbahi Officer and District Commissioner discussing in the meeting of Disaster Management Committee within 15th of April/May each year.

Sl	Subject	Mark (√)
1	If sufficient food is reserved in Union food storage	✓
2	If the children of risk zones have been served with vaccines	✓
3	If the children (1-6) and their mothers are served with vitamins	✓
4	If sufficient amount of oral saline is reserved in UP Clinic/ Hospital	✓
5	If the members of volunteers group are served with annual training	-
6	If there are necessary drugs and first aid equipments for each shelter	-
7	If there is selected village doctor for each shelter	✓
8	If there is tubewell for each shelter	✓
9	If the doors and windows of each shelter are in proper condition	-
10	If the alternative care taker is present in each shelter	-
11	If there are separate facilities for women in each shelter	✓
12	If there are selected midwives for the taking care of pregnant women in each	✓

	shelter	
13	If mound shelters are selected for the cattle	-
14	If the member of volunteers group are aware of their assigned responsibilities.	-
15	If there is sanitation facilities each shelter	✓
16	If the microphones are activated to spread weather announcement and danger signals	-
17	If the people are made aware to preserved dry food and drinking water for at least 2/1 days	-
18	Others	-

Annex: 2**Upazila Disaster Management committee**

Sl	Name	Designation	Member	Contact
1	Md. Mokbul Hossain	Upazila -Chairman	Chairperson	01713991355
2	Rezzakul Islam	UNO	Co-chairperson	01912 872616
3	S M Ashraful Haque	Upazila vice-Chairman	Memver	01712712037
4	Mrs. Khairunnesa	Upazila Mohila Vice-Chairman	Memver	01935046188
5	Dr. Md. Shamsul Alam	Upazila Health and Family Planning Officer	Memver	01711 189543
6	Md.Saleh Ahmed	Upazila Agriculture Officer	Member	01716 508560
7	SM Mizanur Rahman	Upazila Engineers	Member	01715 772750
8	Dr.Md.Shofikul Islam	Upazila Livestock Officer	Member	01733 157274
9	Md Rofikuzzaman	Food Control Officer	Member	01713 646828
10	Md. Motier Rahman	Officer-in-Charge, badalagachi	Member	01711 303067
11	Md Muktadir Rahman	Upazila Education Officer	Member	01713 723044
12	Md Aorangajeb	Upazila Ansar and VDP officer	Member	01945177911
13	Md Altab Hossain	Upazila Cooperative Officer	Member	01827558283
14	Md.Saied Ali Reza	Upazila Youth Development Officer	Member	01716987131
15	Md.Mukhlesur Rahman	Sub-assistant engineer of public health	Member	01728174045
16	Mrs.Hosne Laila	Upazila Women Affairs Officer	Member	01716279017
17	Md. Mokhlesur Rahman	Upazila Education Officer	Member	01711192877
18	Md Sayed Ali	Upazila Fisheries Officer	Member	01714602346
19	Md. Mokhlesur Rahman	Upazila Education Officer	Member	01746054210
20	Md. Rafiquel Islam	Upazila Rural Development Officer	Member	01715507756
21	Md. Sahadat Hossain Vuiya	AC Land	Member	01712063089
22	Md.Abdul Khalek	UFC	Member	018712076310
23	Md.Abdul Latif	Chairman, Charghat, Press club	Member	017225551004
24	Md. Abdul Gafur Sarder	Mayor, Nohata Pourashava	Member	01711189543
25	Md Miktadir	Mayor, Charghat Muni Pourashava	Member	01716143064
26	Md. Romjav Ali	Chairman, Yusufpur UP	Member	01714257892
27	Md Golam Mostafa	Chairman,Sardah UP	Member	01711578553
28	Md. Sajahan Ali	Chairman,Vayalakshampur UP	Member	01715577776
29	Md. Nozrul Islam	Chairman, Haripur UP	Member	01711349295
30	Md. Abul Kalam Azad	Chairman, Horogram UP	Member	01711241509
31	Md. Saiful Bari Vulu	Chairman, Charghat UP	Member	01716684533
32	Md. A.Kader	Manager,River & Life,Charghat	Member	01945177911
33	Md.Abukkar Siddique	MP Representitive	Member	01827558283
34	Md.Ashraful Islam	MP Representitive	Member	01716987131

35	Md.Ali Dewan	Principal Charghat High School	Member	01728174045
36	Md.Shahidul Islam	Chairman,B.Bazar committee	Member	01716279017
37	Md.Aminul Haq	Upazila Project Implementation Officer	Member Secretary	01711192877

Source: CharghatUpazila Disaster Management Committee, 2014

Annex 3

List of Upazilla Volunteers

Sl	Name	Designation	Member	Training	Contact
1	Md Abdur Rahman	Md Kubed Ali	Yusufpur	No	01716249785
2	Md Abdul Hakim	Late. Jesar Ali	Yusufpur	No	01739031262
3	Md. Nazrul Islam	Late. Hazrat Ali	Yusufpur	No	01716960698
4	Md. Ramjan Ali	Md. Atahar Ali	Yusufpur	No	01715649997
5	Lal Mohammad	Siraz Uddin	Yusufpur	No	0155652213
6	Md Nazmul Haq	Md. Samsul Haq	Yusufpur	No	01716162641
7	Mst. Rehana Begum	Md. Mamun Al Haq	Yusufpur 4,5,6	No	01718911442
8	Sahara Banu	Md. Mohosin Ali	Yusufpur 1,2,3	No	01722920428
9	Johora Khatun	Md. Moktar Hosen	Yusufpur 7,8,9	No	01726190182
10	Abdul Karim	Md Iad Ali	Charghat	No	01737521567
11	Md Jasim Uddin	Late. Anar Uddin	Charghat	No	01710602813
12	Md. Abdul Malek	Md. Rahmatullah	Charghat	No	01723735472
13	Md. Tijammel Haq	Late. Oaz Uddin	Charghat	No	01714972432
14	Rezaul Karim	Late. Akkel Bapery	Charghat	No	01717968157
15	Md. Sahidul Islam	Md. Robbad Pramanik	Charghat	No	01722095111
16	Arman Ali	Late. Momin Uddin	Charghat	No	01713767642
17	Md. Rofikul Islam	Md. Jamal Uddin	Charghat	No	01725736831
18	Md. Jahangir Alam	Md. Yakub Ali	Charghat	No	01713723288
19	Md. Kamal Hossain	Late. Momtaj Ali	Charghat	No	01742561503
20	Md. Akсед Ali	Late. Akram Ali	Charghat	No	01729452653
21	Md. Ziaul Haq	Md. Moyej Uddin	Charghat	No	01749155460
22	Md. Abdur Rahman	Late. Obaidur Rahman	Charghat	No	01761323288
23	Mst. Jemi Khatun	Md. Jalal Uddin	Charghat 1,2,3	No	01754557663
24	Mst. Rupjan Begum	Md. Sahab Ali	Charghat 4,5,6	No	01736539693
25	Md. Abdur Samad Sarkar	Late. Abdul Jalil Sarkar	Vayalakshmipur	No	01721877186
26	Md. Saniul Haq Malitha	Late. Abdul Haq Malitha	Vayalakshmipur	No	01718140961
27	Md Abdus Samad Sarkar	Late. Noub Ali	Vayalakshmipur	No	01716550393
28	Md. Abdur Rauf	Late. Khoka	Vayalakshmipur	No	01736498518
29	Md. Abdul Aziz	Nur Mohammad	Vayalakshmipur	No	01726964190
30	Md. MOjjamel Haque	Md. Alim Uddin	Vayalakshmipur	No	01716665110
31	Md. Sier Uddin	Md Asar Ali	Vayalakshmipur	No	01726214794
32	Md. Abdur Rahman	Late. Sikim Ali	Vayalakshmipur	No	01732443392
33	Mst Rokeya Begum	Hus. Md. Harunur Rasid	Nouhata 1,2,3	No	01714762480

34	Mst. Ambia Begum	Md. Alauddin	Nouhata 4,5,6	No	01761240780
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Source: Charghat Upazila Disaster Management Committee, 2014

NB: Volunteer groups have not been formed in Charghat Upazila. So there are not any training provided for the purpose of this subdistrict served as a volunteer. According to the Upazila Disaster Management Committee all Union members should be listed and volunteer training can be arranged.

Annex 4

List of Shelter management committee

Name of Shelter	Responsible Person	Mobile	Remarks
Jot Ragav Govt. Primary School	Most. Jahanara Khatun	01737665885	
Plassey phatepura Govt. Primary School	Md Golam mostafa	01714910033	|

Public / private institutions

Name of Shelter	Responsible Person	Mobile	Remarks
Dorshonpara union complex	Md. Romjav Ali	01714257892	-
Hogripara union complex	Md Golam Mostafa	01711 241509	-
Vayalakshmipur union complex	Md. Sajahan Ali	01711 578553	-
Sholuya union complex	Md. Nozrul Islam	01711349295	-
Haragram union complex	Md. Abul Kalam Azad	01715577776	-
Horian union complex	Md. Saiful Bari Vulu	01716684533	-
Vayalakshmipur union complex	Akkas Ali	01731505281	-
Charghat union complex	Shohidul Islam	0723356002	-

Elevated road or dam

Name of Shelter	Responsible Person	Mobile	Remarks
Embankment road up Ammtola to Sholuya	Md Fakhruul Hasan	01715577776	-
Charghat upazila roads and adjacent Nouhata	Mr. Shahidul Islam	01716934348	-
Padma River adjacent to the dam road	Aseka Ali	01711379181	-

Annex 5

Outline Charghat Upazila

Family	15324	Post Office	15
Male	159452	Club	28 (reg)
Female	154744	Hats-market	20
Total Population	314196	Crematorium	12
Votar	201857	Cemetery	151
Educational Institute	182	DTW	288
Bridges and culverts	35	Shallow tube wells	5294
Fire Station	1	Tube-wells with arsenic	1350
Dam	48 km	Forests	178km
Sluice gate	30	Nursery	11
School kama Shelter	2	Poultry Farm	167
Community Clinic	33	Dairy Farm	82
Upazila Health Complex	01	River	3
Union FPO	8	Khal	35
Total agricultural land	43683 A	Pond	6538
One-crop land	3845 H	Dighi	358
Two-crop land	7200 H	Mud road	695.12 km
Three crop land	5180 H	Adha paka road	933.23 km
More than three-crop land	152 H	Paka Road	409.06 km
Amount of land under irrigation	11608 H	NGO	25
Electoral Area	57, Rajshahi -6	Mosque	470
Area	185.16 sq km	Temple	18
Union	08	Churches	9
Pouroshova	02	Eidgah	213
Mouja	216	Bank	32
Village	262	Insurance institutions	5

Annex 6**List of some important Broadcast Programs by Bangladesh Betar**

Radio Centre	Program	Time	Day
Dhaka-Ka	Krishi Shamachar	6.55-7.00 am	Everyday
	Shukher Thikana	7.25-7.30 am	Everyday
	Shasthoi Shukher Mul	11.30-1200 am	Everyday except Friday
	Shonali Foshol	6.05-6.35 pm	Everyday
	Weather News	6.50-7.00 pm	Everyday
Chittagong	Krishi Kotha	6.55-7.00 pm	Everyday
	Krishi Khamar	6.10-6.50 pm	Everyday except Monday
	Shukhi Saongshar	8.10-8.30 pm	Everyday except Friday
Rajshahi	Khet Khamar Shamachar	6.55-7.00 am	Everyday
	Shabuj Bangla	6.05-6.50 pm	Everyday
Khulna	Shastho Tatthyo	6.55-7.00 am	Everyday
	Krishi Shamachar	4.20-4.30 pm	Everyday
	Chashabad	6.10-6.50 pm	Everyday
Rangpur	Shukher Thikana	7.25-7.30 am	Everyday
	Khet Khamare	6.05-6.35 pm	Everyday
Shylet	Ajker Chashabad	6.55-7.00 am	Everyday
	Shukher Thikana	7.25-7.30 am	Everyday
	Shymol Shylet	6.05-6.50 pm	Everyday except Friday
Thakurgaon	Kishan Mati Desh	6.05-6.25 pm	Suterday, Monday & Wednesday
Cox's Bazar	Ajker Krishi	3.07-3.45 pm	Everyday
	Sonali Prantor	3.40-3.45 pm	Tuesday & Thursday
Barishal	Krishi Kotha	3.15-3.30 pm	Everyday except Sunday, Wednesday & Friday
	Chhoto Paribar	3.35-3.50 pm	Everyday except Monday, Wednesday & Friday
Rangamati	Jiboner Jonno	1.50-1.55 pm	Everyday
	Khamar Bari	3.05-3.15 pm	Everyday

Annex 7

List of Educational Institutions

	বিদ্যালয়/ মাদ্রাসা/কলেজ	শি ক্ষার্থী	শি ক্ষক/ শিক্ষ কা	অবস্থান/ ওয়ার্ড	আগ্রয়কেন্দ্র হিসেবে ব্যবহৃত হয় কিনা
1	Charghat Alhaj MA Hadi Digree Collage	418	9	Charghat	No
2	Charghat Women Collage	477	11	Charghat	No
3	sardhaho Degree college	310	7	Charghat	No
4	sardhaho Mahila college	280	6	Charghat	No
5	Charghat Technical college	328	7	Charghat	No
6	Sardhaho Govt. pilot High school	187	5	Charghat	No
7	Charghat pilot high School	258	4	Charghat	No
8	Charghat girl's school	154	4	Charghat	No
9	PADma high School	250	4	Charghat	No
10	Uttar Meramatpur high School	193	4	Charghat	No
11	Meramatpur Ershad ali high School	226	4	Charghat	No
12	Mokteoolrpur High Sch	192	4	Charghat	No
13	Sardhaho Girl' s high school	177	4	Charghat	No
14	meramtapur lower Secondary School	154	4	Charghat	No
15	SARDhaho Ideal Lower Secondary High School	336	4	Charghat	No
16	Usufpur Govt. primary School	283	4	Usufpur	No
17	Tangoan Govt. Primary School	154	4	Usufpur	হ্যাঁ
18	Shahid Geaur Rahman College	240	4	Usufpur	No
19	Usufpur Agriculture High School	177	3	Usufpur	No
20	Saleh Shah mohammad High Sch001	186	4	Usufpur	No
21	Badhurea High SCHOOL	173	4	Usufpur	No
22	Chamuhoni High School	167	4	Usufpur	No
23	Belgharea High School	235	4	Usufpur	No
24	C.B jaeda Jalil Girl's High School	156	4	Usufpur	No
25	Joypur Lower Secondary	165	4	Usufpur	No
26	Gobindhoper Islamea Dhakil madrasha	181	4	Usufpur	No
27	Padma Technical School And College	152	4	Usufpur	No
28	Marea Govt. primary school	221	9	Shalua	Yes
29	Tatarpur Govt.Primary School	237	12	Shalua	Yes
30	Shalua Degree college	157	4	Shalua	No
31	Baludear Technical College	172	4	Shalua	No
32	Shibpur Technical College	137	2	Shalua	No
33	Marea High School	249	6	Shalua	No
34	Halidhagachi D	199	5	Shalua	No
35	Naodapara High School	458	9	Shalua	No
36	shalua High School	381	9	Shalua	No
37	Bamondhighi High School	313	7	Shalua	No
38	Jaforpur High Girl's School	417	8	Shalua	No
39	Baludear dhakil Madrasha	119	5	Shalua	No

40	Halidhagachi lower secondary Girl's School	353	7	Shalua	No
41	Shiraj uddin shah Lower Girl's School	261	6	Shalua	No
42	Baludear Dhakil Madrasha	300	6	Shalua	No
43	Tatarpur technical High School	376	6	Shalua	No
44	khoddhogavindhapur tech; and B. High School	505	9	sardhaho	No
45	patiakandi High School	336	8	sardhaho	No
46	sardhaho High School	201	6	sardhaho	No
47	Chakjhikra Public Primary school	306	9	sardhaho	Yes
48	jhikra Go vt. Primary School	411	9	sardhaho	No
49	Khoddhogovindhapur High School	434	8	sardhaho	No
50	dharmohata lower secondary School	200	5	sardhaho	No
51	West jhikra High School	308	7	sardhaho	No
52	Raotha College	231	7	Charghat	No
53	Westbarea Ershadea Alia Madrasha	222	6	Charghat	No
54	Mungli Darus Shunnah Dhakil Madrashah	152	4	Charghat	No
55	Mungli anupompur Ideal high school	157	4	Charghat	No
56	Onupompur High School	172	4	Charghat	No
57	Barobarea High School	137	2	Charghat	No
58	Paraqnpur Govt, Primary School	249	6	Charghat	Yes
59	Raotha govt Primary School	299	5	Charghat	yes
60	Talbarea lower secondary school	485	9	Charghat	NO
61	Chadpur Al Madina Tech college; High School	381	9	Charghat	NO
62	Nandanghachi Degree C	313	7	Nimpara	NO
63	Baral Ideal High School	417	8	Nimpara	NO
64	Vatipara Mahila High School	152	4	Nimpara	NO

Annex 8

Feedback through Sharing/Consultation with Upazila Disaster Management Committee (Validation Workshop/Meeting) Charghat Upazila

Introduction:

The disaster management plan has been shared with the Charghat Upazila Disaster Management Committee (UzDMC) through a validation workshop in 6 July 2014 at the Upazila Auditorium at Charghat, Rajshahi. In this workshop the Upazila Chairman, UNO, PIO as well as other members of UzDMC with Shushilan staffs were present in this sharing workshop. The workshop chaired by Upazila Chairman named Md. Mokbul Hossain.

Major Activities:

The validation workshop started from 10.20 am through permission from the Chairperson Md. Jinnat Ali by the staff of Shushilan. Here mainly presented the report and discussed. In the workshop disaster management plan and shown different data/information through multimedia projector. Here shown different findings i.e. hazards, vulnerability, risk map, different committees, planning for disaster management. And at the same time in the meeting has been shared findings sharing, reviewed and feedback taken to add in the report.

Recommendations/List of Feedback:

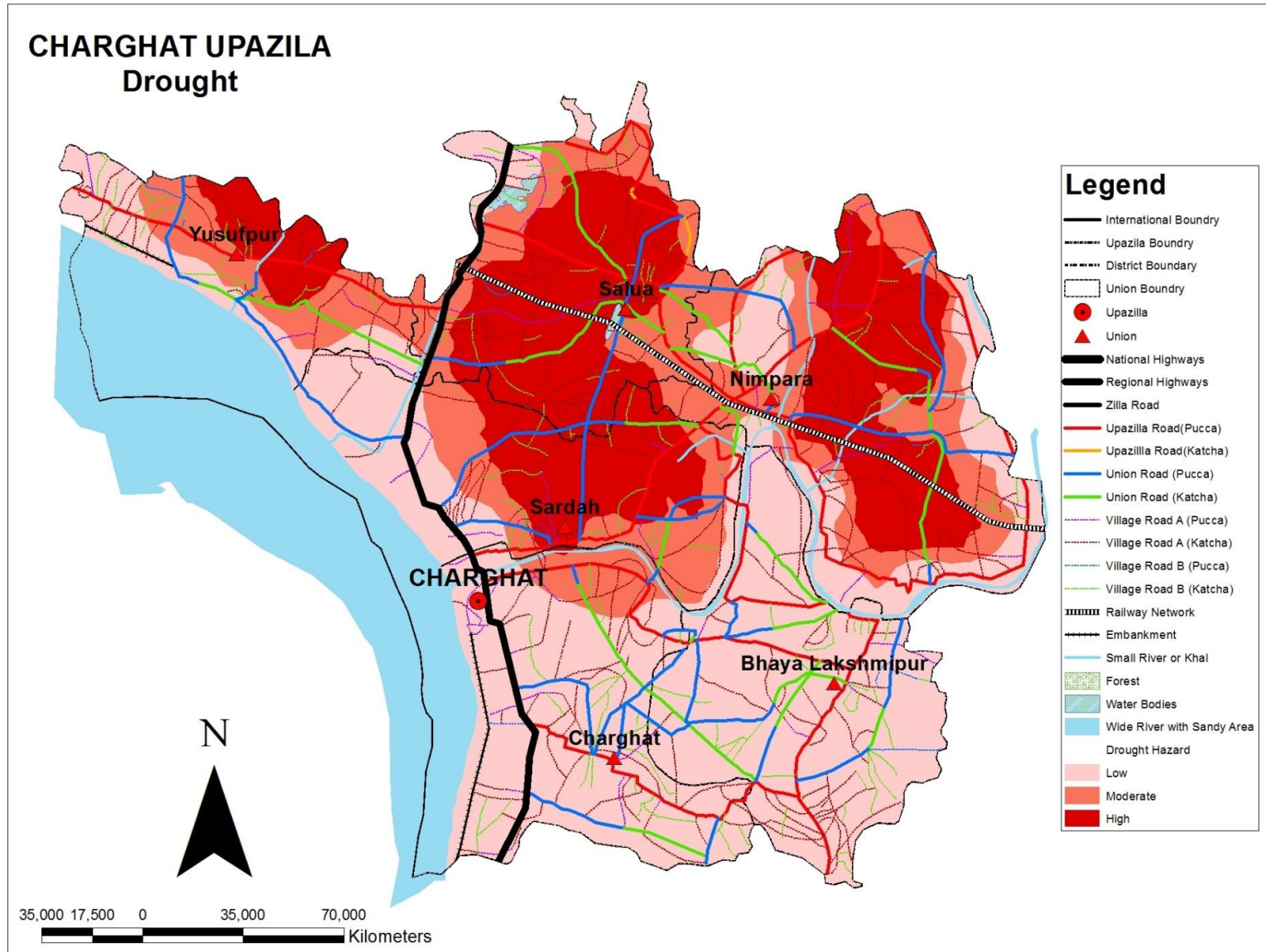
Through the sharing of the draft DM plan report the recommendations are listed below

- In the hazard list of the upazila have to consider drought, hilly storm, river bank erosion, water scarcity, heat wave and arsenic.
- Explain the process of risk ranking in brief within the report
- In the upazila level report here need to include 14 number of school cum cyclone shelter, 08 sluice gates, 48 km embankment in 13 ft height as a part of flood management capacity.
- There were 64 number of DTWs, 3687 numbers of STWs, 3668 numbers of ponds and 20.90 ha water bodies which consists as a part of drought risk management.
- In the seasonal calendar have to mention the monthly name as Bangla name.
- In the EOC, the upazila level different officers will be the responsible
- Emergency follow up committee will be the lead by the Upazila Chairman
- Emergency operation committee will be the lead by the UNO
- Emergency committees will be comprise by 5 members, if needed we can include more members under each subcommittee.
- For the disaster management planning the activities may be concern 20-60% by the Upazila Parisad, 05-10% by the community, 20-30% by the Union Pasisad and different NGO 25-80%.
- In the upazila have no any volunteer on disaster management activities and from the project we can start volunteer skill/capacity building activities through training.

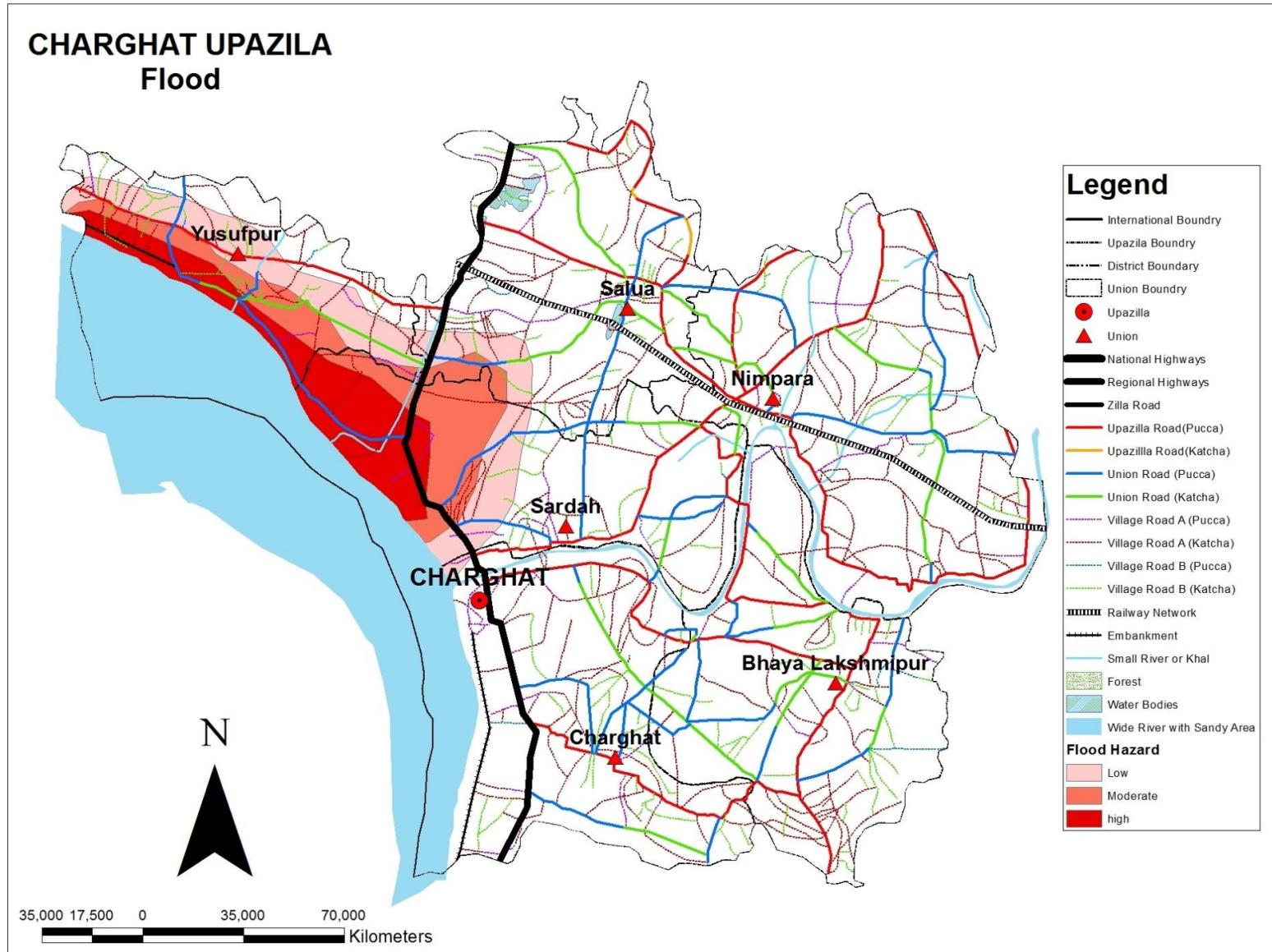
Open Discussion & Closing Remarks:

In the open discussion session Upazila Chairman Md. Jinnat Ali has given thanks to the participants and the presented report as disaster management plan. He has also mentioned its importance to prepare plan for disaster management. He told that all the information has nicely articulated & clearly presented and overall report were excellent. Also mentioned about reviewed as incorporate feedbacks from this workshop. UNO and other members were discussed about the presented report with its risk mapping areas and given his thanks for such reporting activities. Finally, the Chairperson thanks to CDMP-II for such initiatives and the all members of the meetings as well as Shushilan and conclude the validation workshop.

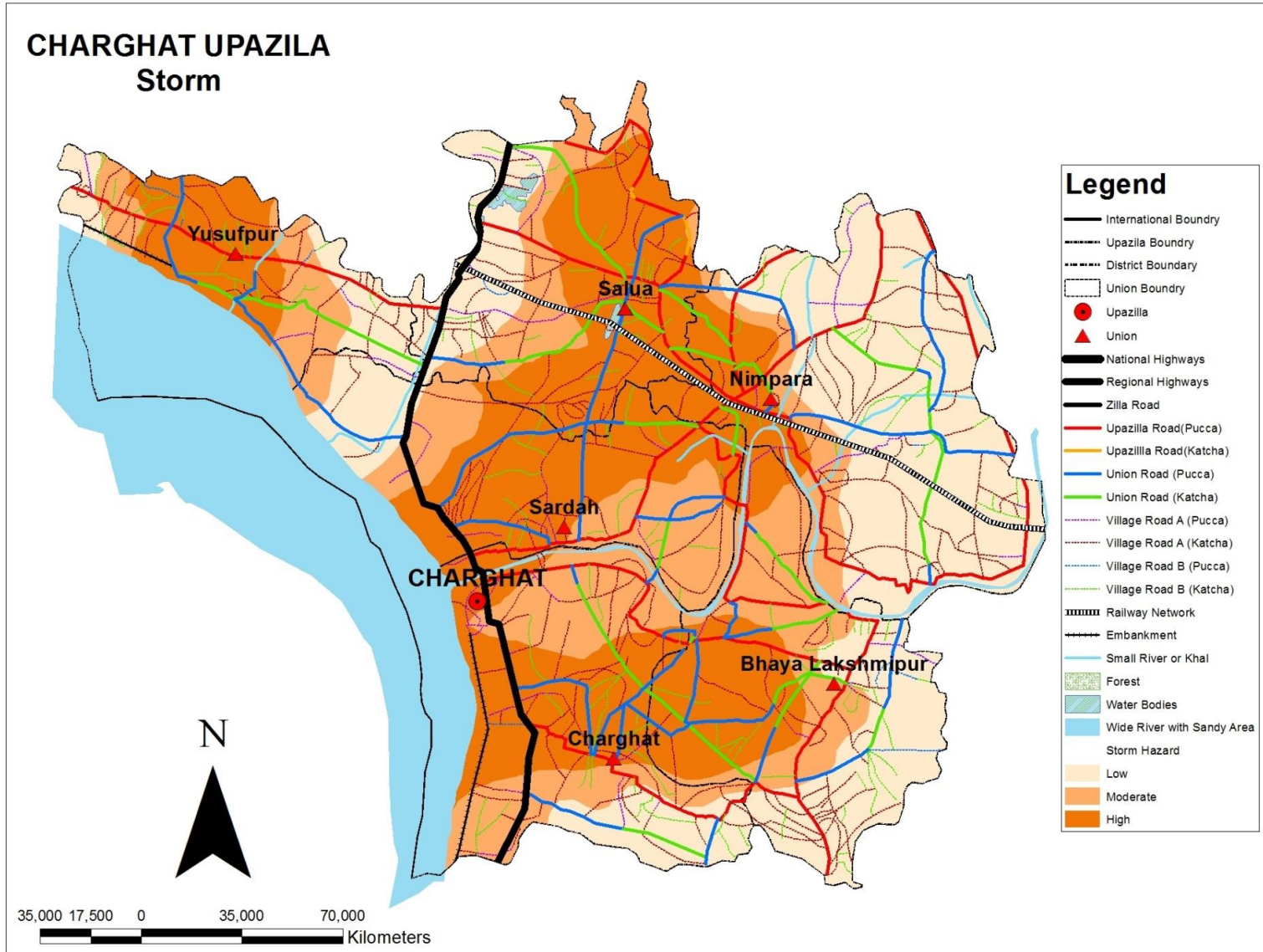
Annex 9: Hazard & Risk Map (Drought)



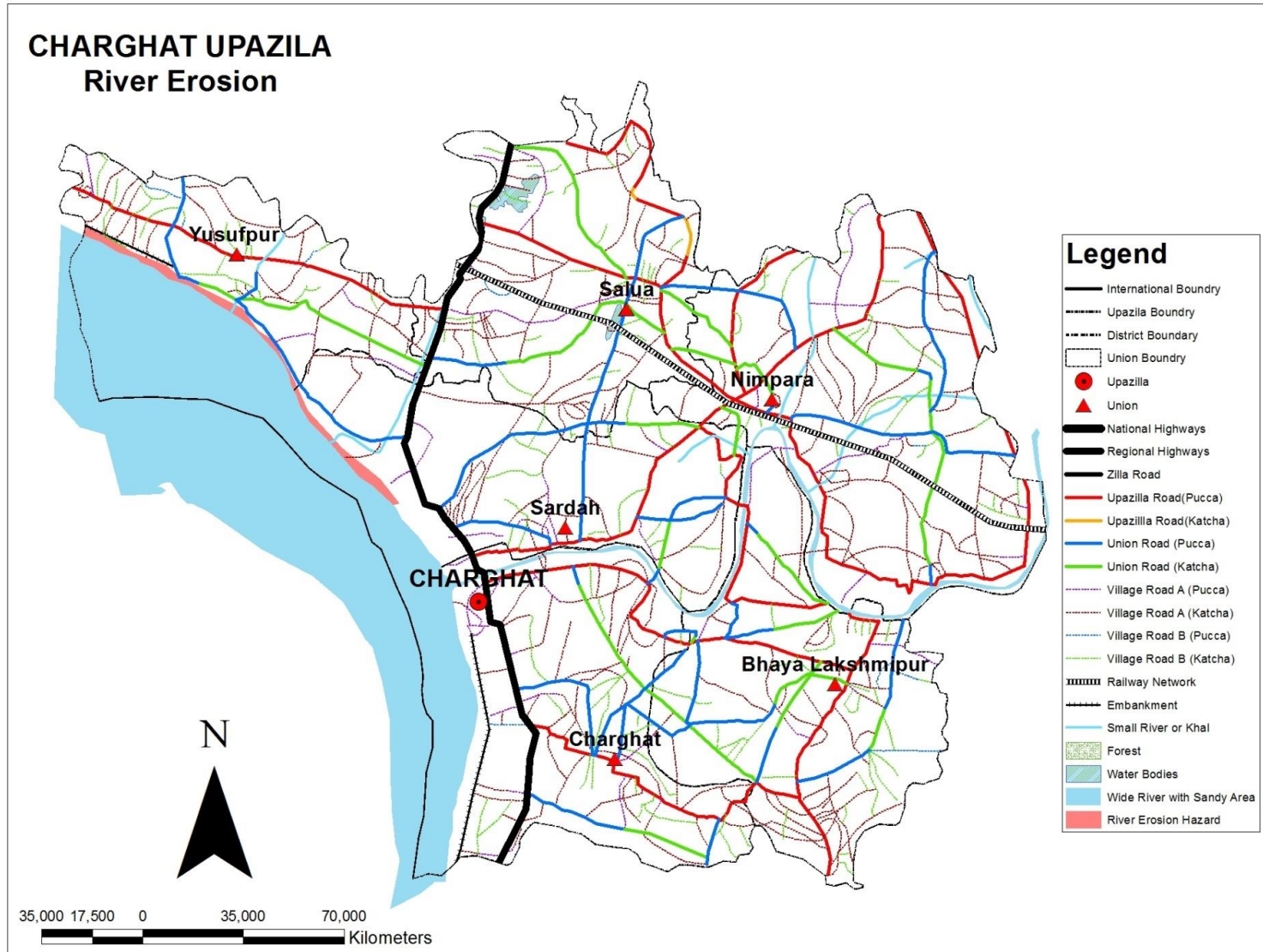
Annex 10: Hazard & Risk Map (Flood)



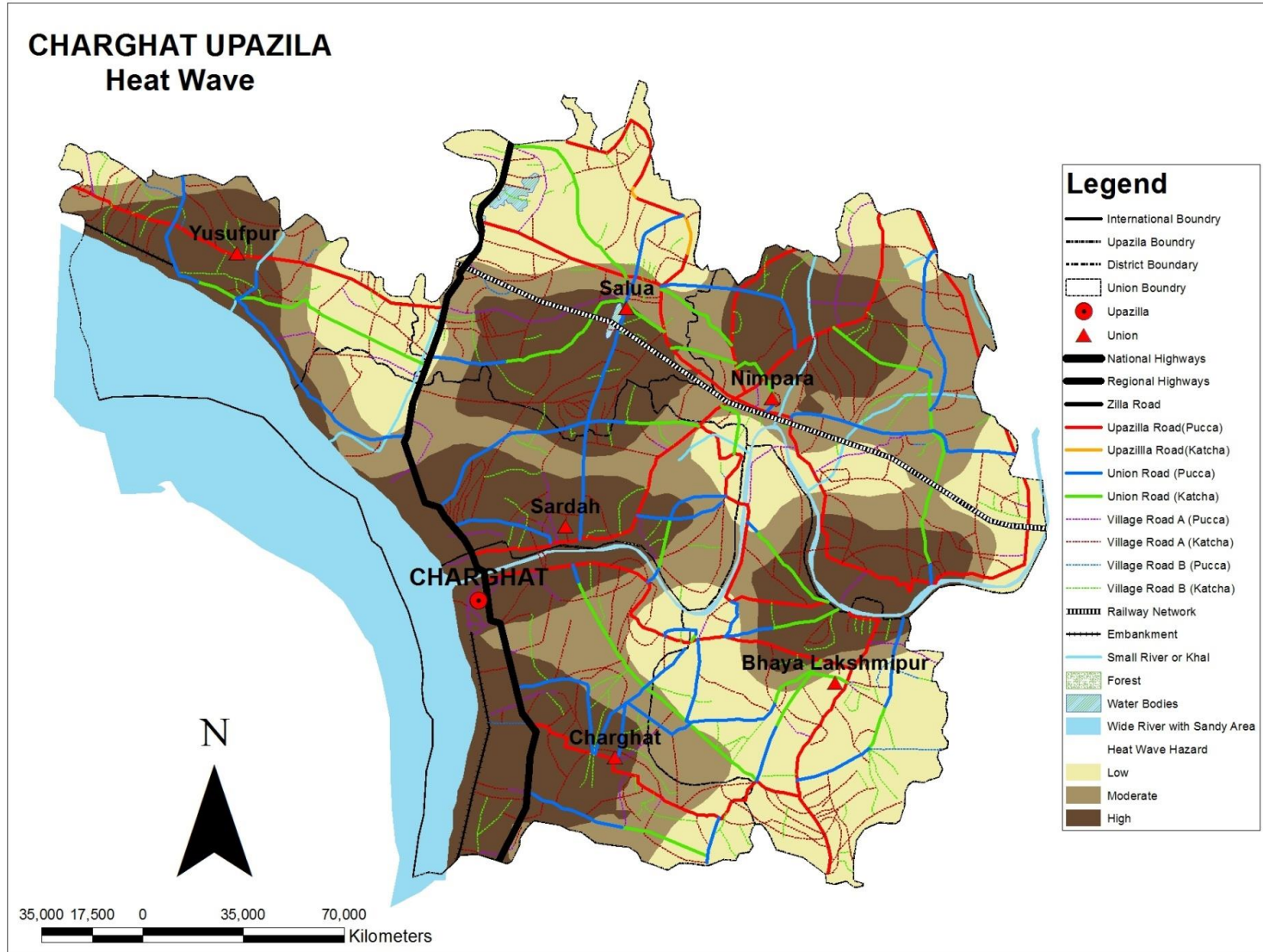
Annex 11: Hazard & Risk Map (Storm)



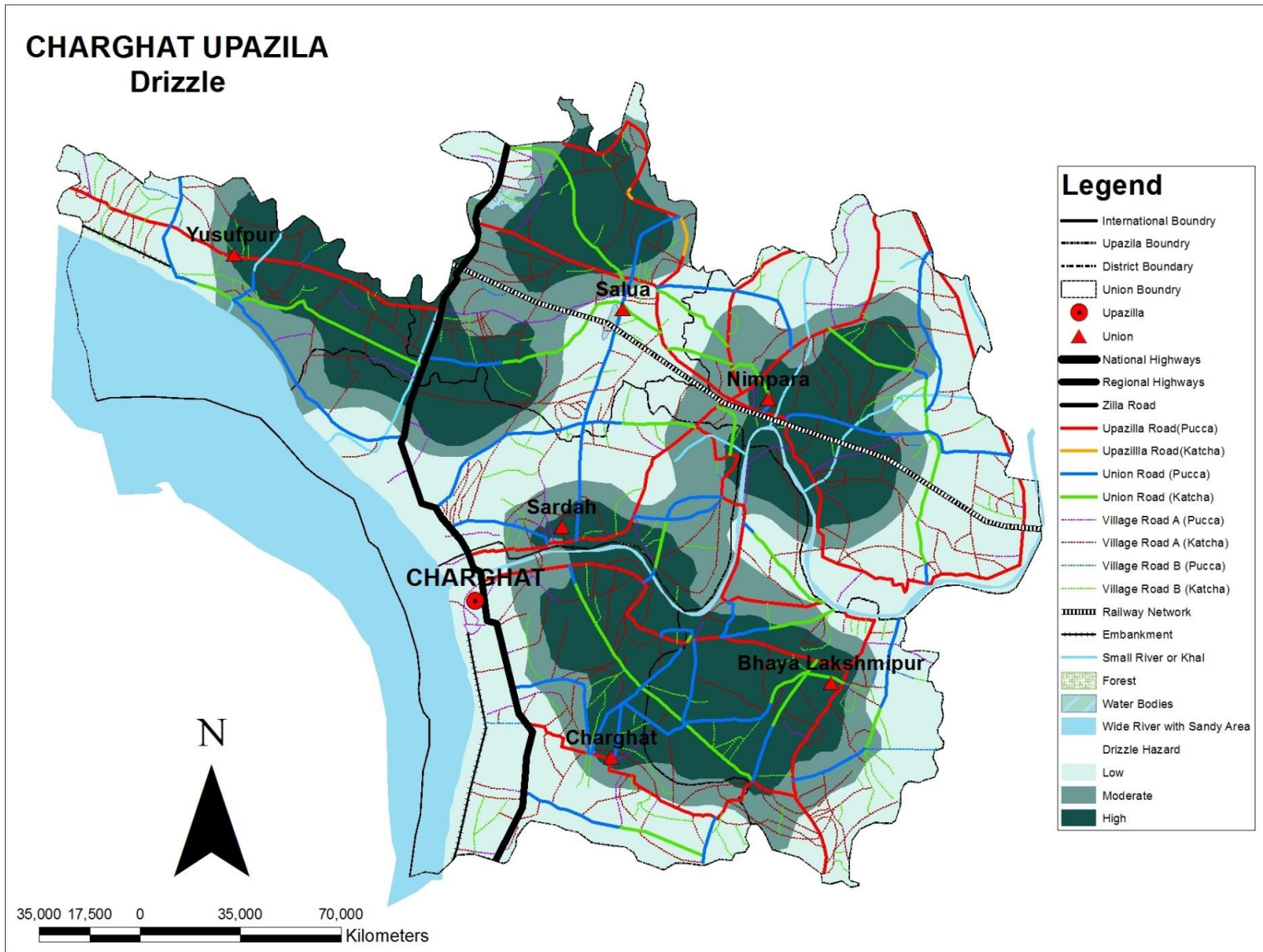
Annex 12: Hazard & Risk Map (River erosion)



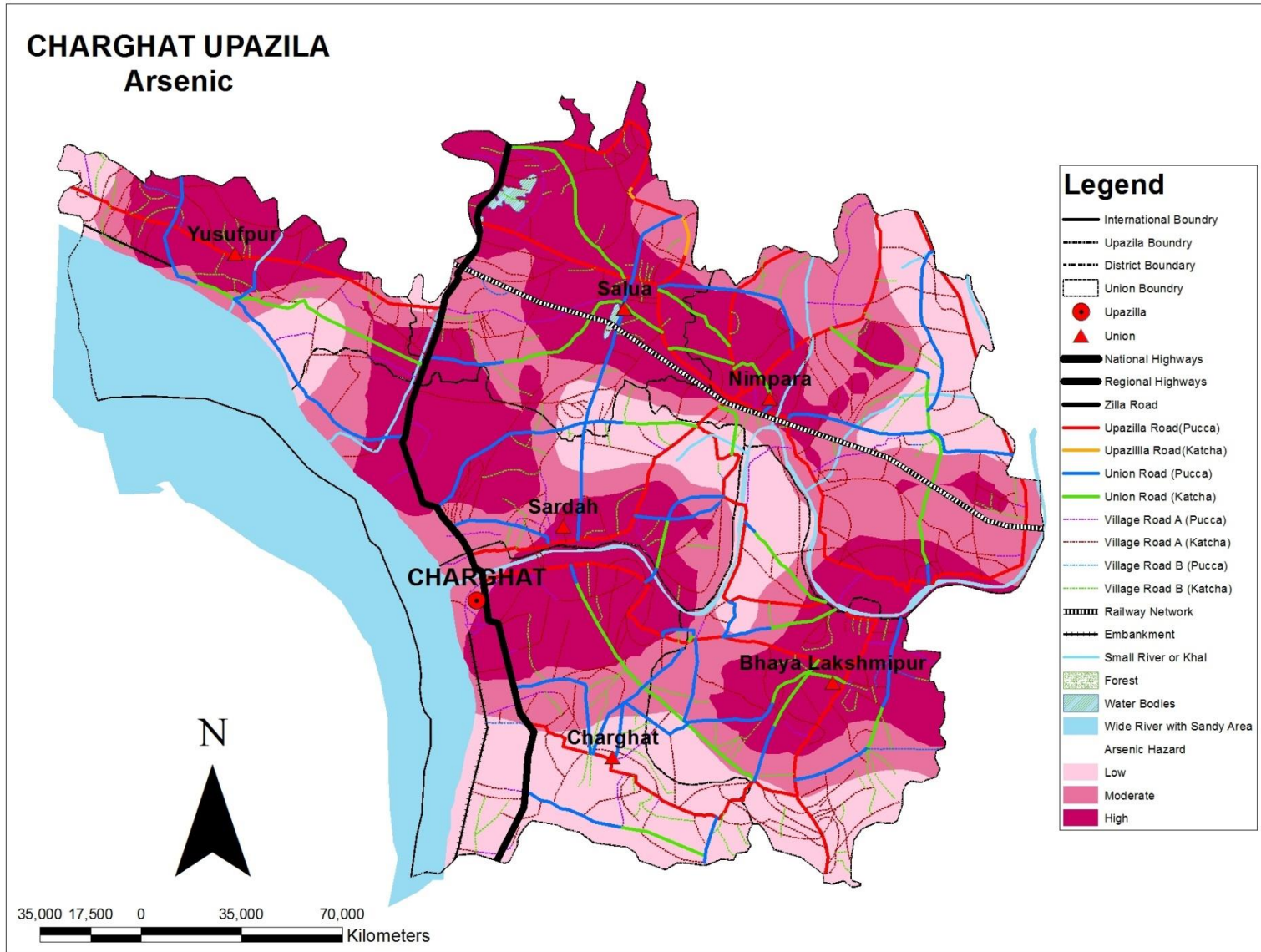
Annex 13: Hazard & Risk Map (Heat wave)



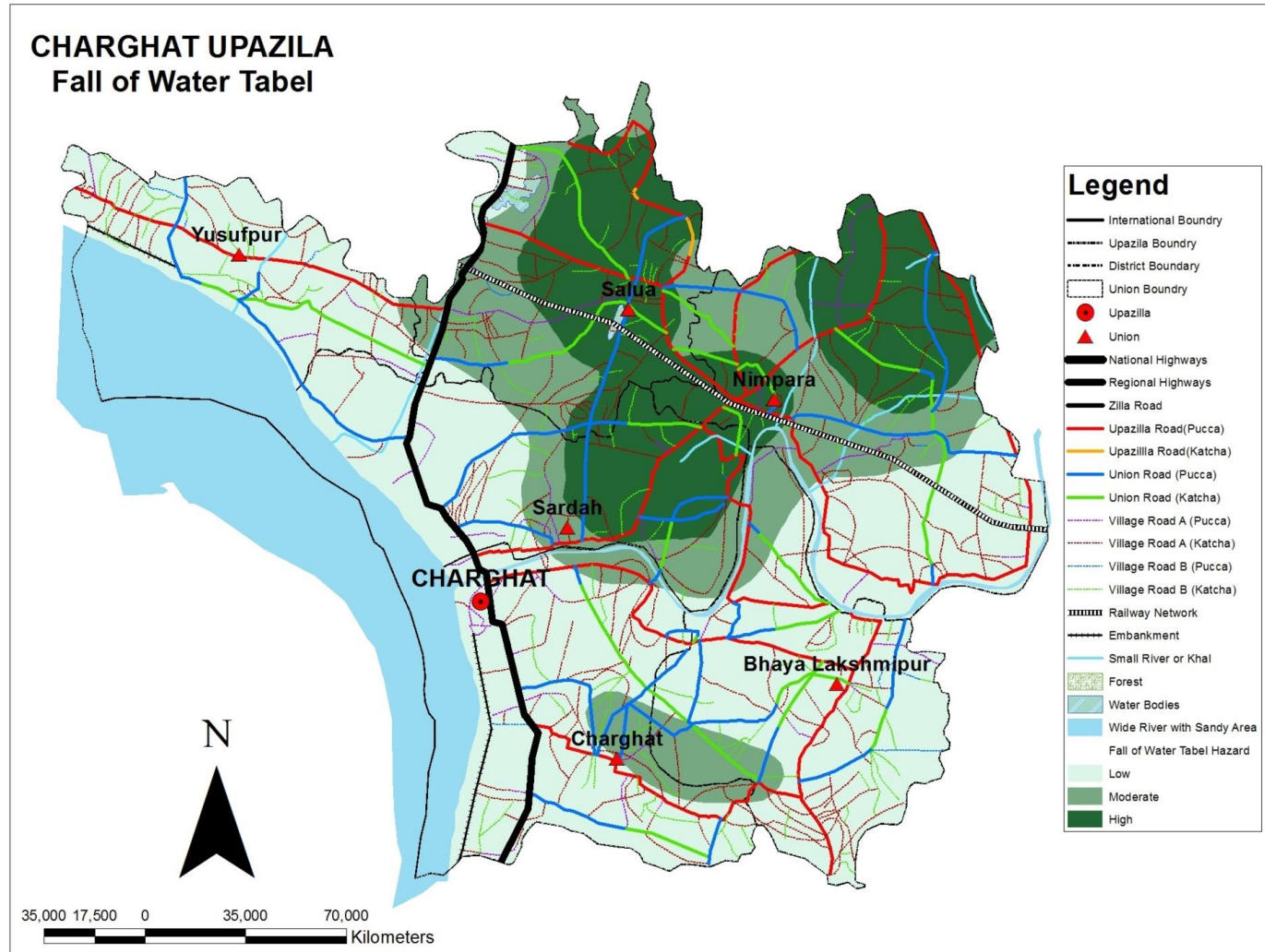
Annex 14: Hazard & Risk Map (Drizzle)



Annex 15: Hazard & Risk Map (Arsenic)



Annex 16: Hazard & Risk Map (Fall of Water table)





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