



Upazila Disaster Management Plan

Upazila: Mahadevpur, District: Naogaon

Plan Developed by

Upazila Disaster Management Committee, Mahadevpur, Naogaon

Coordinated by



July 2014

Supported by

Comprehensive Disaster Management Programme (CDMP-II)

Ministry of Disaster Management & Relief



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 **Mahadevpur** Upazilla 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 **Mahadevpur** Upazilla under **Naogaon** District have 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.

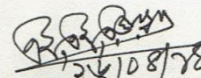
I am giving thanks from my core of heart to those very persons who have taken part and have given advice, like all Government and Non-Government Organizations and local persons to perform the conspicuous act in good manner. I am confident; this Disaster Management Plan which has prepared by the coherent 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

ভৌগলিক অবস্থান, ভূ-প্রকৃতিগত বৈশিষ্ট্য, জনসংখ্যার ঘনবসতি এবং আবহাওয়াগত কারণে বাংলাদেশ প্রাকৃতিক দুর্যোগের ক্ষেত্রে পৃথিবীর অন্যতম দুর্যোগ প্রবণ একটি দেশ। প্রায়শই এ সমস্ত দুর্যোগ বহুলোকের প্রাণহানি সহ জীবন ও জীবিকা, পরিবেশ এবং অর্থনৈতিক ক্ষতির কারণ হয়ে দাঁড়ায়। ঘূর্ণিঝড়, বন্যা, খরা, জলাবদ্ধতা, নদী ভাঙ্গন, টর্নেডো ও সমুদ্রের পানির লবনাক্ততা বৃদ্ধি ইত্যাদি কারণে মানুষের জীবন ও জীবিকা হুমকীর সম্মুখীন হচ্ছে। অপরিকল্পিত নগরায়ন, ঘনবসতি, ঝুঁকিপূর্ণ দালানকোঠা নির্মাণের কারণে শহর ও নগর এলাকায় ভূমিকম্পের বিপদাপন্নতা বৃদ্ধি পাচ্ছে। এ সকল প্রাকৃতিক দুর্যোগে টিকে থাকার লড়াইয়ে বাংলাদেশের অর্জন পৃথিবীকে বিস্মিত করে। দুর্যোগ ব্যবস্থাপনায় বাংলাদেশের ব্যাপক সাফল্য থাকলেও আমরা প্রতিনিয়ত নতুন নতুন হুমকি ও চ্যালেঞ্জের সম্মুখীন হচ্ছি। তবে সঠিক সময়ে সঠিক প্রস্তুতি এবং পরিকল্পনা দুর্যোগ ঝুঁকিহ্রাসে গুরুত্বপূর্ণ ভূমিকা রাখলেও দুর্যোগ ব্যবস্থাপনায় ত্রাণ ও পুনর্বাসনকেই অধিক প্রাধান্য দেওয়া হয়। সম্প্রতি সরকার ত্রাণ নির্ভর নীতি থেকে বের হয়ে ক্রমে দুর্যোগ ব্যবস্থাপনা পরিকল্পনা প্রণয়নের ব্যবস্থা গ্রহণ করেছে, যা সতিই যুগোপযোগী এবং প্রশংসার দাবী রাখে। Comprehensive Disaster Management Programe(CDMP-11) দুর্যোগ ব্যবস্থাপনা আইন ২০১২ এবং দুর্যোগ ব্যবস্থাপনা স্থায়ী আদেশাবলী (SOD) ২০১০ অনুসারে দুর্যোগ ব্যবস্থাপনা পরিকল্পনা প্রণয়নের কাজ হাতে নিয়েছে, এই কর্মসূচীর আওতায় প্রাথমিকভাবে সমাজের বিভিন্নস্তরের জনসাধারণ, ইউনিয়ন ও উপজেলা দুর্যোগ ব্যবস্থাপনা কমিটির সমন্বয়ে স্থানীয় ঝুঁকি চিহ্নিত করে তা পর্যালোচনার মাধ্যমে দুর্যোগ ব্যবস্থাপনা পরিকল্পনা প্রণয়ন করা হয়েছে যা স্থানীয় পর্যায়ে দুর্যোগ ঝুঁকি মোকাবেলায় সুদূর প্রসারী অবদান রাখতে পারবে বলে আমরা মনে করি।

কর্ম পরিকল্পনাটি প্রণয়নে এলাকার নারী- পুরুষ, কৃষক-ভূমিহীন, প্রবীণ ও তথ্য প্রদানে সক্ষম স্থানীয় জনগোষ্ঠীর প্রতিনিধি, ইউনিয়ন এবং উপজেলা দুর্যোগ ব্যবস্থাপনা কমিটির (UzDMC) সদস্যবৃন্দ সরাসরি সম্পৃক্ত ছিলেন। বিশেষ করে অত্র এলাকায় কর্মরত "সুশিলন" এর কর্মকর্তা ও গবেষকদের নিষ্ঠা ও অক্লান্ত পরিশ্রম স্থানীয় পর্যায়ে পরিকল্পনা প্রণয়নে যথাযথ অবদান রেখেছে। এ কর্মপ্রচেষ্টা ও অক্লান্ত পরিশ্রমের ফলে নওগাঁ জেলার মহাদেবপুর উপজেলা দুর্যোগ ব্যবস্থাপনা কমিটি একটি বাস্তবসম্মত দুর্যোগ ব্যবস্থাপনা কর্মপরিকল্পনা প্রণয়ন 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 গণসচেতনতা সৃষ্টি, স্থানীয় সম্পদ ব্যবহারের মাধ্যমে দুর্যোগ পূর্ব প্রস্তুতি গ্রহণ এবং দুর্যোগ কালীন সময়ে অপসারণ, উদ্ধার, চাহিদা নিরূপণ, ত্রাণ ও তাৎক্ষণিক পুনর্বাসন ব্যবস্থার জন্য স্থানীয়ভাবে প্রণীত পরিকল্পনার অনুশীলন ও প্রয়োগ, দুর্যোগ পরিকল্পনায় অংশ গ্রহণ 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 প্রস্তুতি গ্রহণ, দুর্যোগ ঝুঁকিহ্রাসে স্থানীয় অবকাঠামো ও অ-অবকাঠামো, সামাজিক সম্পদ ও নিরাপদ স্থান সমূহের তালিকা প্রণয়ন, ঝুঁকির কারণ সমূহ চিহ্নিত করণ, সর্বাধিক বিপদাপন্ন এলাকা চিহ্নিত করণ, ঝুঁকি নিরসনের উপায় চিহ্নিত করণ, জলবায়ু পরিবর্তন এবং তার সম্ভাব্য প্রভাব নিরূপণ, উন্নয়ন পরিকল্পনার প্রধান খাত সমূহ চিহ্নিত করণ এবং বিভিন্ন সামাজিক সংগঠন সমূহের সেচ্ছাসেবকের তালিকা প্রণয়ন করা হয়েছে।

দুর্যোগ ব্যবস্থাপনা পরিকল্পনাটি প্রণয়নে যে সকল সরকারী এবং বে-সরকারী সংস্থা ও ব্যক্তিবর্গ সক্রিয় অংশগ্রহণ ও পরামর্শ প্রদান করেছেন তাদেরকে আমরা আন্তরিকভাবে ধন্যবাদ জ্ঞাপন করছি। আমরা আশাবাদী, স্থানীয় জনগণ, স্থানীয় প্রশাসন ও বিভিন্ন সরকারী বে-সরকারী প্রতিষ্ঠানের সমন্বয়ে প্রণীত দুর্যোগ ব্যবস্থাপনা পরিকল্পনাটি দুর্যোগ ব্যবস্থাপনা কমিটি ও সংশ্লিষ্ট সেক্টরের (সরকারী, আন্তর্জাতিক ও জাতীয় এনজিও, দাতা সংস্থা ইত্যাদি) জন্য একটি সার্বিক পরিকল্পনা হিসাবে কাজ করবে।


২৬/০৪/১৮

(মোঃ সালাহ উদ্দিন-আল-ওয়াদুদ)

সদস্য সচিব

উপজেলা দুর্যোগ ব্যবস্থাপনা কমিটি ও

উপজেলা প্রকল্প বাস্তবায়ন কর্মকর্তা

মহাদেবপুর, নওগাঁ।

(মোঃ আমিনুর রহমান)

সভাপতি

উপজেলা দুর্যোগ ব্যবস্থাপনা কমিটি ও

উপজেলা নির্বাহী অফিসার

মহাদেবপুর, নওগাঁ।

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First Chapter

Introduction to Local Area

1.1 Background

In the world map, Bangladesh is one of the disaster prone areas. Each and every district of this country gets more or less affected by disasters. Mahadevpur upazilla under Naogaon district is one of these disaster prone zones. Low rainfall is the main problem for the Barindra (dry and high) zones and flood for the low areas. Every year Mahadevpur upazilla becomes a victim to disasters that badly affect life and livelihood of common people. Recently thunderstorm has become an acute problem in this upazilla. People are dying every year. Lightning is recurring because of the increase of sulphur and nitrogen in the atmosphere. In line with that the rate of human death is increasing. This death rate is higher than any given time in the past. That has made specialists along with common people of the country anxious. It has been found that; thunderbolt is falling even in modest rainfall or stormy wind because of the change in climate. And the number of death is mounting corresponding to lightning reasons. Although lightning are general phenomena in a stormy day, it has increased abnormally recently. Experts have accounted the increased amount of dark clouds for this abnormality. They are blaming the increase of gases like nitrogen and sulphur in the air for the formation of dark clouds. This increase of unsafe gases has happened because of climate change. In addition, experts have accounted the towers of different mobile companies for the unusual increase of lightning. According to the information given by Environment bureau, 78.09 percent nitrogen, 20.95 percent oxygen, 0.93 percent argon, 0.039 percent carbon-dioxide and sulphur exists in natural air along with other gases in a small amount. The most recent research project of 'Bangladesh Poribesh Andolan' (BAPA) shows that 64-143 microgram sulphur-di-oxide per cubic meter is present in the air of Dhaka. And there is 25-32 microgram nitrogen di oxide per cubic meter, which is a few times more than usual. Then again, although, May-June is the season of seasonal storm, thunderbolt is occurring in modest wind speed without any massive storm or rainfall. Many people are dying because of this. Thunderbolt is created due to the electron torrent formed by the friction or collision between speedy black clouds. This electron torrent is called lightning in scientific language. According to the specialists, most of the elements of white cloud are water vapor. But, in black cloud, due to the enormous existence of gases like nitrogen and sulfur huge amount of electron is produced when they collide. And these electrons are transported to earth through the water vapor of air and thunder is produced. The emission of nitrogen, sulfur and carbon has risen owing to global warming, industrialization and urbanization. These gases get mixed with water drops of cloud. Because of the seasonal change in the month of May and June, a great deal of water vapour is created in the atmosphere. These water vapours continue to move up towards the sky with the help of natural air flow. As a result, using those water vapours, the electron or electricity created by the friction of black clouds reaches to the ground. The compound gases come to the plasma (reaction favourable) form because of heat of the sun and the speed of wind. So reaction between them happens even with a slight

friction. That produces huge amount of electrons. The more the amount of these gases will increase in cloud vapours, the more this electron or creation of electricity will amplify. After the review of various newspapers, it is seen that, in May, 2014, the death rate by thunderbolt was alarming throughout the country. On 30th May, 2014, 7 people died by thunder stroke at Saraswatipur Bazar in Mahadevpur Upazilla of Naogaon zilla. 30 more people were injured in the same incident. The dreadfulness of thunderbolt can be understood with the study of the incidents of a few days in May. A renowned businessman said that it is possible to reduce the poverty of the region and develop the socio-economic state by self-employment with the help of fertile lands and raw materials available in Mahadevpur-Badalgachhi area. If they can make the most of the collaborated association, these two upazilla can be the best model of the country. The inhabitants of Mahadevpur are very simple and ingenuous and they don't have too much to ask for. But they do expect the proper price of the crops produced by them. In the bazaar of Mahadevpur, farmers sell Patol (kind of vegetable) tk. 5 per kilogram, whereas in Dhaka, its price is tk. 30 per kilogram. The farmers of this area are deprived because of the lack of planning and proper infrastructure. The Barindra zone is alluvial and lower areas are basin in Mahadevpur upazilla. The nature of the overall zone is included into plain land. Atraai River is flowing by one side of the upazilla. There are some wet lands and swamps in which rain water runs in the Rainy season. Once, there was the residence of many landlords in this area. The signs of their existence are not absolutely extinct yet. Many trees are there in this region. Some small ethnic groups live in six of the unions of Mahadevpur. The lower part of this region gets affected during enormous floods. The ethnic groups of northern region have their distinctive culture which is getting lost because of many unfavourable reasons. Though the ethnic groups are believer of Sanatan religion, they have magnificent cultural tradition. It is found from various organizations associated with ethnic groups that, currently there are 36 ethnic groups living in this region including Orrao, Saontal, Pahan, Bhuiyan, Malo, Mahali, Rajojar and Muishor. They all have their own civilization and traditional culture. In other words, these ethnic groups are the guardian of ancient culture. But, due to various reasons, their culture is now to the edge of extinction. They have not yet achieved the measure to cope up with the modern culture which is necessary to survive. As a result, their culture is gradually losing its folklore and if it continues, ethnic civilization and culture will die out in future. They are also not less responsible for this. Those, who are getting higher education and moving forward from ethnic groups, are not thinking about saving their traditions. Rather they are removing their ethnic surname and trying to merge with the current mainstream culture. Sometimes they even hesitate to be introduced as the member tribal groups. Once upon a time, Naogaon was notable as one of the subdivisions of Rajshahi Zilla. Mahadevpur Thana was included into Dinajpur Zilla until 1897. After 16 years of the birth of Naogaon subdivision in 1882, Mahadevpur subdivision was excluded from Dinajpur and got included into Naogaon. From then, Mahadevpur has been recognized as a remarkable place of Naogaon subdivision. In 1984, it was promoted as a Thana and later got the credit as an upazilla. The ministry of disaster management and relief has taken the decision of forming a multifaceted preparation program to ensure safety of poor and endangered mass people from the negative impact of climate change and simultaneously to maintain the continuity of the economic development of the country. The priority evaluation and application method of economic development and the development of education, health, accommodation and other

infrastructural factors has been defined in upazilla level disaster management to prepare for facing future risk of climate change. So, it is crucial to have knowledge about it for everyone associated.

1.2 Objectives of the Plan

Bangladesh is a very risky and highly disaster prone country. Therefore, to prevent disasters owing to climate change, noteworthy preparation plan on the field level is necessary to present at the national policy making level. At present, the Disaster Management and relief ministry has initiated a multifaceted work plan to assess and reduce the risk of local population through Complete Disaster Management Program (CDMP). Within this program, Bangladesh government has taken the enterprise to change the relief and rehabilitation based disaster risk management method into long-term risk management. The major objectives of that are -

- To create mass-awareness of the risk of disaster at family and community level, the pragmatic ways of risk reduction at the level of family, community, union administration, upazilla and district commission.
- To promote risk reduction and development of process implementation system ensuring the most possible utilization of local assets, practice and implementation of locally prepared plan for exclusion, rescue, need analysis, immediate relief and rehabilitation.
- To construct a methodological document for a particular time and place.
- To prepare an integrated plan for Disaster Management Committee and all other related sectors (national, international, NGO, donors etc.)
- To provide the participants involved in Disaster Management necessary directions for preparing and implementing plans.
- To ensure and persuade the sincere participation, effective cooperation, responsibility and sense of possession in the disaster plan of related community.

1.3 Introduction to Mahadevpur Upazilla

Mohadevpur mainly agro based upazilla. 78.66% income comes from agriculture.

Rice mill and auto rice milled established for huge rice production. Without that Mahadevpur have historical importance from ancient era.

1.3.1 Geographic Location of Mahadevpur

Mahadevpur upazilla is situated between 24.48' and 25.01' north latitude and 88.38' and 88.53' east longitude. Its area is 397.67 square kilometres. The nature of land is plain and high and the annual average rainfall is almost 77 cm. There is located Patnitala to its north, Manda upazilla to the south, and Naogaon Sadar upazilla to the south-east, Badalgachhi to the east and Neyamatpur and Porsha upazilla to the west. The river Atrai flows through this upazilla. Located in the centre of Naogaon district, Mahadevpur upazilla is 24 km. Away from Naogaon district sadar.

1.3.2 Area of Mahadevpur upazilla

There are 10 unions in Mahadevpur upazilla. Those are Mohadebpur, Enayetpur, Roygaon, Hatur, Chandas, Khajur, Uttargram, Bhimpur, Cheragpur and Safapur. This upazilla covers an area of 397.67 square kilometers. There are total 307 moujas and 298 villages in Mahadevpur upazilla.

Table1.1: Upazilla, Unions and Union-wise Mouza Names

Upazilla & GEO code	Name of Union with code	Union wise Mauja and Word
Mahadebpur Upazilla (50)	15-Bhimpur Union	Bagachara, Belghoria, Bandarpur, Bhimpur, Chak Dashra, Chak Raja,Daskhin Andarkota, Daskhin Laskmipur,Dashra, Gopal Baria, Gonashpur, Harish pur, Zarira, Khudro Narayanpur, Patna, Pira, Rasulpur, Bijaypur, Sawrosoti pur, Shekorpur, Sonapur, Tejbain. Total number of mouja=22
	19-Chandas Union	Akhirapara, Anantapur, Basra, Bagdab, Baripara, Chak kandarpur, Chakla, Chandas, Dimga, Gopinathpur, Gurharia, Haripur, hazrapukur, ecchapur, Zantail, Kanchon, Kondroppur, Laskmipur, Lawdanga, Pagha, Pondithpur, Ramchandrapur, amraypur,Tanghashipur. Total number of mouja=15
	28-Cheragpur Union	Alipur, Arjuni, Azipur, Bagdhan, Bando kurmail, Bara mohespur, Borujon, Bajitpur, Vabanipur, Vagabotipur,Boyra, Bujruk, Borial, Chak Doulat, Chargpur, Chumashia, Dahela Kohalipara, Dhaonpur,Dhanjoil, Fulbaria, Kacahil, Kashibari, Krishnapur, Koshalbari, Madhupur, Matia Dighi, Manaharpur, Nalobalo, Padmapukur, Rabna,Chalbari, Sona Dighi, Saruppur, Uttar Gram, Issharpur, Uttar Andhar kota. Total number of mouja=34
	38-Enayetpur Union	Ajul, Bijaypur, Bechara, Bishnupur, Brahamonpara, Bradabonpara, Bujruk Antopur, Chak Boloram, Chak Hariballov, Daborpur,deshkhirhin, Akdala, Anayatpur, Garua, Hellalpur, Hosanpur, Endai, Italy, Zianagar,Kalusahor, Kashurgara, Khanti, Khojagar, Kumirdaho, Madisahor, Maynagar,Mangul, Mullapara, Nurpur, Paita, Pachim Khanpur, Purba Gushaipur, Rahimapur, Rodail, Sarpur, Shibpur, SreeRampur, Sujail, Tentulpukur, and Tilna. Total number of mouja=40
	47-Hatur Union	Amaril, Bahazat, Belkuri, Belshakris, Bishnothpur, Chak Chaki, Chak Krishnapur, Chak Raghu, Dewanpur, Deora, Gahali, Gofanagar, Gopalpur, Harekrishnapur, Hatur, Jeuli, Kalu Para, Krishna Padma, Mahish Bathan, Malahar, Masidha Sultanpur, Mirzanagar, Mirzapur, Mohali, Mukhar,

Upazilla & GEO code	Name of Union with code	Union wise Mauja and Word
		Nasirpur, Nizampur, Paschim Gosainpur, Roypur, Sabul, Sagrail, Samaspur, Suranandapur, Shyampur, Tavoya and Ukri. Total number of mouja=36
	57-Khajur Union	Ali Dewana, Balarampur, Bangram, Barabila, Bil Mohammadpur, Chakhelencia, Chak Shibrampur, Dakshin Ora, Danga Para, Debipur, Deuli, Gobindapur, Hariramnagar, Harischandrapur, Helencha, Joypur, Khajur, Khurda Joypur, Khord Kalna, Kornator, Kumjaban, Kura Para, Lakshmanpur, Martuzapur, Natua Para, Parail, Ramchandrapur, Ronail, Rangtoil and Shazadpur. Total number of mouja=30
	66-Mahadebpur Union	Alankarpur, Bakapur, Bamonora, Barbakpur, Behar, Bishnupur, Chak Gobindapur, Dakshin Hossainpur, Fazilpur, Hasanpur, Hyderabad, Jaljhulia Moglishpur, Joinpur, Khapra, Khosalpur, Moglishpur, Mahadebpur, Natsal, Padma Pukur, Rahimpur, Saguna Gopalpur, Shalgaon, Sarason, Sarmoil, Sarota, Ceddikpur, Sreepukur and Talihora. Total number of mouja=31
	76-Roygaon Union	Abdullapur, Alta Dighi, Atharjani, Atura, Belot, Bet Biramgram, Betbahati, Bhabaninagar, Biramgram, Chak Bahati, Chhota Maheshpur, Daul, Dojatia, Ekdala Gosaipur, Fatehpur, Ghongra, Haripur, Kalna, Kalna, Chandra Para, Katabari, Khalishakuri, Kundana, Kundana, Malaipur, Kurail, Batkurail, Kurari Para, Kusumsahar, Maijora, Naikutti, Mara Pukuri, Naorail, Narayanpur, Raghunathpur, Rahatta, Roygaon, Mataji, Saharai, Salijan, Sherpur, Siali and Silimpu. Total number of mouja=35
	85-Safapur Union	Bakrabad, Banshbaria, Bindarampur, Binodpur, Chak Shyampur, Chak Gopi, Chak Gauri, Chak Siali, Chak Uzail, Dakshin, Gobindapur, Dakshin, Lakshmipur, Ghasiara, Durgapur, Gopal Krishnapur, Hamidpur, Hati Mandala, Ishwar Lakshmipur, Jot Bhagaban, Kachukuri, Krishna Gopalpur, Mathurapur, Maminpur, Mathur Krishnapur, Pabatair, Paharpur, Panthakata, Prasadpur, Safapur, Sreenagar and Tatarpur, Total number of mouja=31
	95-Uttargram Union	Bamansata, Bhalain, Chak Gora, Dariapur, Dohali, Shibganj, Hatbaral, Jothari, Karnpur, Shibganj, Sultanpur, Shibrampur, Sreerampur, Uttargram. Total number of mouja=13

Source: BBS 2013

1.3.3 Demography

The total number of thanas in Mahadevpur upazilla 75389 and the population is 292859 of which 146905 is male and 145954 is female and the male-female ratio is 100:101. The population growth rate is 1.9 per square kilometer and population density is 736 people (per square kilometer). History shows that the inhabitants of Naogaon have descended from Pundra race who laid the foundation of urban civilization in Bangladesh and Barendrabhumi was known as Pundranagar in ancient era. It has been found that, the present inhabitants of Mahadevpur have come from Beervum, Bordhoman and Rarh region of West Bengal. After the separation of 1947, countless people started to migrate to this area from Maldah, Murshidabad and Balurghat of West Bengal and Bihar. This migrated population has merged in the local culture and lifestyle with true synchronization. There are 233183 Muslims, 52571 Hindus, 417 Christians, 3 Buddhists and 6685 from different types of tribal communities like Saontal, Banua, Koch and Rajbanshi. Agricultural is the main source of livelihood in Mahadevpur. The earning from agriculture is 78.66%. In Mahadevpur, there are 48670 farmer families, 22630 landless families, 4200 marginal farmers, 9165 small farmers, 8108 middling farmers and 4567 large farmers. Besides there are some other sources of earnings. Those are- non-agricultural labor 2.52%, industry 0.86%, trade 8.011%, communication and transport 2.91%, service 2.93%, construction 0.6%, religious service 0.09%, remittance 0.07% and others 3.25%.

Table 1.2: Union-wise number of Male, Female, Children, Old, Disabled, Households and Voters

GO Code	Male	Female	Child (15-0)	Old (+60)	Autistic	Total Population	House Hold	Voter
15	14082	13767	29.1	8.6	1.5	27849	7142	18431
19	13121	13397	28	9.1	1.2	26518	7044	19301
28	12004	11919	28.8	8.9	1.7	23923	6112	16973
38	14788	14957	27.4	8.9	1.2	29745	7659	21199
47	13489	13616	27.7	7.7	2.1	27105	7197	19837
57	15924	15973	26.5	8.9	1.4	31897	8391	23361
66	20390	19558	27	7.8	1.3	39948	10190	26463
76	15891	15438	29.7	8.5	1.7	31329	7824	21410
85	12601	12705	27.2	9.6	1.8	25306	6196	19094
95	14615	14624	28.4	8.8	2.2	29239	7634	20488
Total	146905	145954				292859	75389	206557

Source: BBS, 2011

1.3.4 Livelihood in Mahadevpur

Agricultural is the main source of livelihood in Mahadevpur. The earning from agriculture is 78.66%. In Mahadevpur, there are 48670 farmer families, 22630 landless families, 4200 marginal farmers, 9165 small farmers, 8108 middling farmers and 4567 large farmers. Besides there are some other sources of earnings. Those are- non-agricultural labor 2.52%,

industry 0.86%, trade 8.011%, communication and transport 2.91%, service 2.93%, construction 0.6%, religious service 0.09%, remittance 0.07% and others 3.25%.

1.4 Structural and Non-structural Information

In Mahadevpur upazilla, the major industries include 1 auto-rice mill, 5 ice mill, 1 biscuit factory, 1 chocolate factory, 2 Birri factories, 15 soldering plants and 17 brick kilns. Besides there are various cottage industries which have created employment chances for many. There are 550 goldsmiths, 75 blacksmiths, 325 potters, 12 weaver, 140 Birri factory laborer, 350 embroidery workers and 250 bamboo industry laborers in Mahadevpur upazilla.

1.4.1 Infrastructure

Embankment

There are four embankments in Mahadevpur upazilla. The first one is 7.3 km. long starting from Mahadevpur alongside the western part of river Atrai to Mahishbathan. The second one is 9.88 km and set at Vola bazaar of Chandash alongside the western part of river Atrai up to Shibganjhaat. The third embankment has been established on the eastern side of the river Atrai from Mahadevpur to Sojailmor covering a total length of 11.50 km. And the fourth embankment is 14 km. and established alongside the eastern part of river Atrai from Mahadevpur to Pathakatahaat.

Sluice Gate

There are two sluice gates in this upazilla. One is established at Khordokalna of Khajur union and another is at Ramchandrapur of the same union.

Bridge

There are 24 bridges constructed by Roads and Highway Department in Mahadevpur upazilla.

Culvert

In Mahadevpur upazilla, there are 549 culverts constructed by LGED

Road

In Mahadevpur upazilla, the total length of roads is 658.18 km in which there is 316.7 km of pavement, 218.14 km HBB and 341.47 km earthen roads. There are in total 19 upazilla roads. In times of disasters, affected people takes shelter and the roads are used to shift people and their belongings swiftly in disastrous phase.

Irrigation System

There are 29425 hectares of lands under irrigation system in Mahadevpur upazilla. It covers 97% of the total land of the Mahadevpur.

table 1.3

Irrigation Instrument	Total number	Running	Irrigated land(Ha)
Deep Tubewell	516	516	8230
Shallow tubewell	8620	7650	15460

Irrigation Instrument	Total number	Running	Irrigated land(Ha)
Power Pump	24	24	270
Others	3320	3320	340
Total	12480	11510	24300

Source: upazilla-e-portal, 2014

Hat-bazaars/ Markets

There are 21 bazaars in Mahadevpur upazilla. An amount of 15 million BDT per yeas comes from these bazaars. Among these bazaars, Matajeu hat, Shati hat, Mahadevpur hat, Pathakata hat, Saraswathi hat and Chakgauri hat are especially notable. Annual fairs are celebrated in those bazaars. Different crops and agricultural products like rice, watermelon, sugarcane, banana, papaya, etc. are exported from these bazaars.

Mills and factories

In Mahadevpur upazilla, the major industries include 1 auto-rice mill, 5 ice mill, 1 biscuit factory, 1 chocolate factory, 2 Birri factories, 15 soldering plants and 17 brick kilns. Besides there are various cottage industries which have created employment chances for many. There are 550 goldsmiths, 75 blacksmiths, 325 potters, 12 weaver, 140 Birri factory laborer, 350 embroidery workers and 250 bamboo industry laborers in Mahadevpur upazilla.

Attractive places

Upazilla's historical monuments including ancient King's palace (at present, the desolated building adjacent with 'Jahangirpur Government College'), Adyabbari Temple (Khajur UP), Alta Deeghi Jolmohal (Cheragpur), Shibganj Kacharibari (Uttargram Safapur Union Land Office), the two-storied earthen house with 108 rooms of Alipur village in Cheragpur Union, Mahadevpur Auto Rice Mill, Atrai River, District Council Auditorium, and Central Jam-e-Masjid are part of its rich history.

Jamindar Palace

During the reign of Emperor Jahangir, there was a fortress of emperor's soldiers in Mahadevpur upazilla and some of the local person was the members of the soldiers. Ancestor of Bireshwar Ray Chaudhury, an army affiliate, named Narayan Ray Chaudhury gained 'Jamindari' and 'Ray Bahadur' title was given to him by British government. The wife of Ray Bahadur Narayan Ray Chaudhury was Raj Rajeshwari Devi Chaudhurani. At present, the main entrance and a part of Jamindar palace is being used as the property of Jahangirpur Government College.

1.4.2 Social resources

Households

Being under the Barindra tracts, the soil of this upazilla is sticky, hard and red coloured for which dihedral earthen houses have been made from ancient tomes. the structure of houses of this upazilla is different from that of other upazillas due .fferent vision and strategic framework of indigenou peopleto the diStructure of houses was made such to protect grown crops and to get relief from extreme weather.The houses of Mahadevpur upazilla are usually made of straw, bamboo, tiles, tin, bricks, soil and other materials. In Mahadevpur upazilla, 4.4% of these houses are made of concrete, 14.9% are half-concrete, 78.7% earthen and 2.0% are *jhupries* (thatched houses).

Water Sources

There are 39000 tubewells (supplied by Public Health Engineering) in Mahadevpur upazilla. In this upazilla, 0.37% water is collected from supplies, 96.73% from tubewells, 0.15% from pond and 2.75% from other sources. Barindra Multi-purpose Development Project has also arranged tanks to supply drinking water.

Sanitation System

15.95% people of Mahadevpur upazilla use water-sealed sanitary latrine (urban population 60.73% and rural population 14.12%). 18.77% people use non water-sealed latrine (urban population 13.13% and rural population 19%), and rest of 65.28% people do not have any kind of sanitation system.

Academic Institution and Library

There are 84 govt. primary schools, 42 reg. primary schools, 3 community primary schools, 39 high schools, a girls' high school and college, 24 dakhil, 2 alim and 3 fazil madrasas and a library in Mahadevpur upazilla. And there are 11 colleges among which there are 5 technical colleges, an agriculture diploma college and a women's college in Mahadevpur upazilla. In addition, there are 3 technical high schools, 9 *ebtedayee* madrasas and 88 *maktobs* here. Number of students in primary school is 27200 and in high school the number is 17845. In this upazilla, education rate is 60% (Literacy rate 98%).

Religious Institutions

There is majority of Muslims in this upazilla but there is also Hindu, Buddhists, Christians and tribal here. All of them lives here peacefully nurturing a strong bond of brotherhood and celebrates all the religious festivals in festive mood together. There are 395 mosques, 96 temples and 2 sacred places in Mahadevpur Upazilla.

Religious Place (*Eidgah*)

There are 250 holy Eidgahs in Mahadevpur Upazilla. Besides the day of occasions, these places are also used for emergency services at times of disaster. Usually, the higher eidgahs can be used as shelters in case of sudden floods.

Health Services

In Mahadevpur Upazilla, there is a Govt. hospital where one doctor and 10 nurses work for the best service of the hospital. There is a union sub-health center in each of Khajur, Chandas, Raigaon, Enayetpur and Safapur union. But there are no doctors and even nurses in these 5 health centers. Besides, there are four health and family welfare centers and 33 community clinics here.

Banks

There are 10 banks working in Mahadevpur Upazilla. Those are Sonali Bank, Janata Bank, Agrani Bank, Islami Bank, Alaarafat Islami Bank, Jamuna Bank, Rajshahi Krishi Unnayan Bank, Pubali Bank, Bank Asia and Prime Bank.

Post & Tele Communication

There is a head post office including 18 branch offices and a telephone exchange in Mahadevpur Upazilla.

Club/ Cultural Center

There are 15 clubs, 32 sports organizations and 02 women's organizations in Mahadevpur Upazilla.

NGOs/ Voluntary Organizations

There are some local NGOs working in Mahadevpur upazilla. BRAC, ASA, CCDB, TMMS, Proshika etc. are noteworthy among the organizations. Besides, there are 2 central co-operative associations, 159 farmers' co-operative associations, 103 deprived men's co-operative associations, 117 female co-operative associations, 02 fisheries co-operative associations and 42 other co-operative associations in Mahadevpur upazilla.

Play Grounds

There are 55 play grounds in Mahadevpur upazilla. These play ground used for play, and public gathering also like Fair. Some time it used for emergency rescu during disater priod.

Graveyard/ Crematorium

There are 105 graveyards and 25 crematoria in Mahadevpur upazilla. These are used to treat .the dead bodies according to the proper religious ritual

Communication and transportation

The distance of Dhaka to Madevpur by road is 335 km. Mahadevpur upazilla lies 80 km. away from Rajshahi district sadar. Here prevails improved communication system with surrounding upazillas and district cities. There are concrete roads in more or less every union. Common vehicles on these roads are bus, rickshaw, auto-rickshaw, van etc. There are 148.22 k.m. pavement, 1k.m. HBB road and 411.12 k.m. earthen roads in Mahadevpur upazilla and the length of total road is 560 km. Moreover, there are 24 bridges, 512 culverts and 186.75 km. canals in this upazilla.

Forest and Plantation

There is no natural forest. But there are adequate mango gardens in this area.

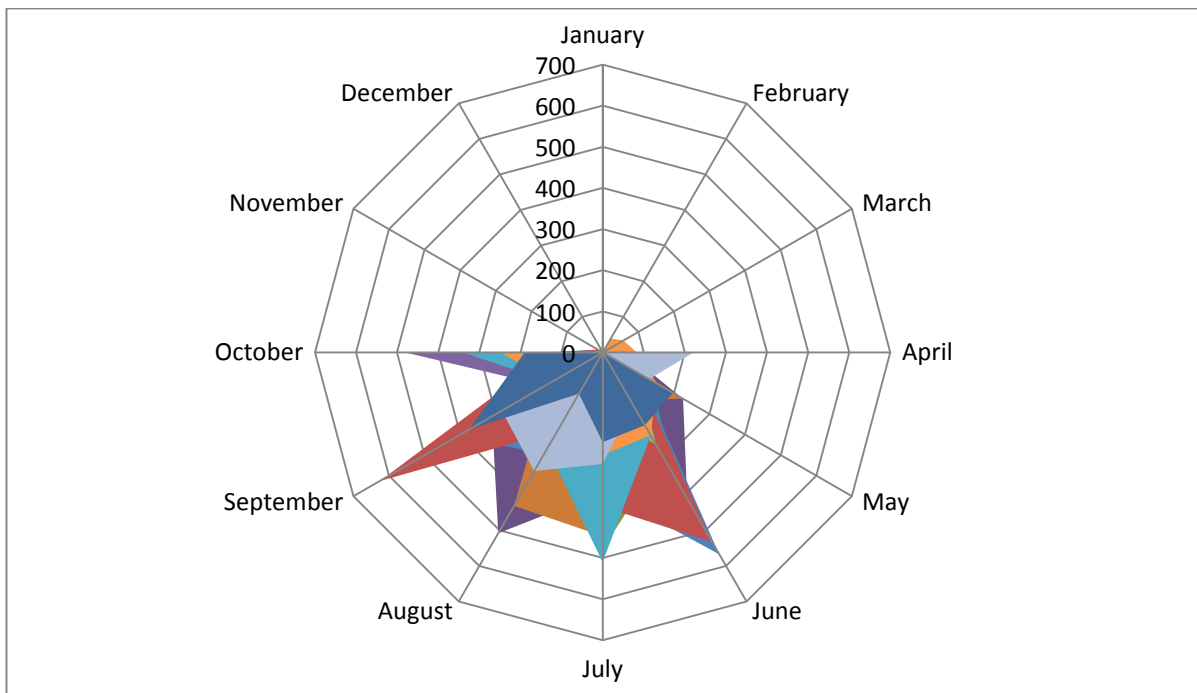
1.4.3 Weather and Climate

The annual average rainfall of this upazilla is below 45inches. Nevertheless, this rate is changeable. It will not be overstated if this area is called the ideal tropical monsoon area because of extreme warm weather, excess humidity, medium rainfall and seasonal variation. Summer starts from April and May. Then the maximum temperature remains 90 degree Fahrenheit and the minimum temperature remains 65 degree Fahrenheit. The highest

temperature remains within April, May and the first half of June and the lowest temperature remains within January. The average maximum temperature is 76 degrees Fahrenheit and the minimum average temperature is 30 degrees Fahrenheit.

Rainfall

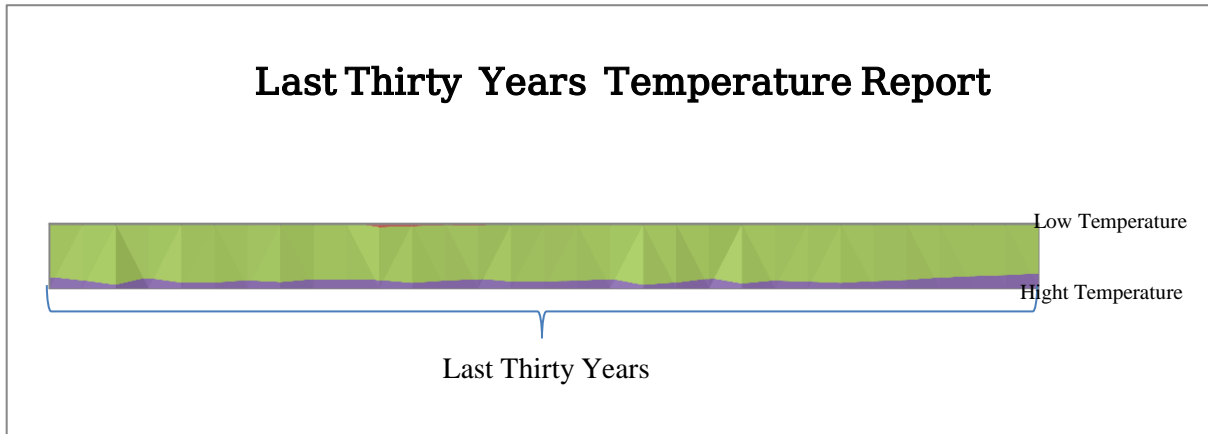
The rate of rainfall is quite low in Mahadevpur upazilla. While the average annual rainfall is above 100 inches in places like Sylhet, Chittagong, Noakhali, it was 1595 mm in Mahadevpur in 2012 and 1079 mm in 2013. In the year 2012 the average rainfall was 1595 mm and in the year of 2013 the rainfall was 1079 mm. According to BMDA graph 1.1 shows that, there is alarming no rain fall october to next april. Maximum rain occurred June to September.



Graph 1.1: Spider Diagram of Last fifteen years rainfall

Temperature

The average temperature is 8-10° Celsius in December and January, and the highest temperature prevails in April-May when the average temperature keeps above 41° Celsius. According to Bangladesh Meteorological department, Rajshahi, the analysis of surface Contour in Graph 1.2 shows that the highest temperature of last 30 years remains in between 30-40 degrees. But, in the last few years, temperature has become highest or lowest each 2-3 years later. The analysis also shows that in the last 6 years average temperature has risen by 2 degrees due to climate change. The bio-diversity of this upazilla will be affected if average temperature continues to rise.



Graph 1.2: The surface contour analysis of last 30 years' temperature *Source: Metereological Department, Rajshahi*

Ground water level

In Mahadevpur upazilla, ground water level is seen to be in between 19 feet and 23 feet. It keeps 19 feet till July-August and 23 feet till February-March.

1.4.4 Others

Land use pattern

The entire are of this upazilla is under Barindra (high & dry) land. But, it creates a charming environment when rain water increases and flows on small swamp areas like Alta dighi of Cheragpur in the lower part of land. Though most lands of this upazilla is under Barindra area, this lands are capable of growing paddy, jute, wheat, corn, sugarcane etc., crops. This place consists of different land types like high land, moderate high land, low land and extremely low land. The farmers of this area have much interest in cultivating hybrid paddy. The soil pattern of the upazilla is the combination of mainly loamy, sandy-loamy and clayey soil. The total amount of cultivated land is about 30350 hect or s wherein 4222 hect or s are ,crop lands-single 14471 hect or s double crop and 12671 hect or s triple cropland.s Crop density is 233% and land use density is 77% here. Annual food production is 172824 metric ton, food demand is 47208 metric ton and surplus food is 125616 metric ton.

Agriculture and Food

Among the main crops of this upazilla, paddy grows 166380 metric tons, wheat 6444 metric tons, potato 21600 metric tons, sugarcane 66500 metric tons and others 34703 metric tons. The annual food demand in Mahadevpur upazilla is 47208 matric tons, production is 172824 metric tons and surplus is 125616 metric tons per year. To preserve this extra food, there are storages with 3250 mertic ton capacity.

Rivers

Mahadevpur upazilla is situated beside the river Atrai. Though it is a flowing river, now-a-days it loses its navigability and gets even dry in some places during dry seasons. It is the only river of this upazilla. During monsoon, the navigability of river is 33 km., wet land 15 km. and canal 4 km.

Pond

There are 4776 (public & private) ponds in Mahadevpur upazilla. These ponds cover a total area of 1997.08 acres and produce 20430 quintal fish per year.

Canal

In Mahadevpur upazilla, there are 11 canals covering a total length of 186.75 km. Thoes canals are Pungi canal (Hatur), Mirzapur canal (Haur), Dewapur canal (Hatur), valain canal (Uttargram), Karnapur canal (Uttargram), Binodpur canal (Safapur), Sujail canal (Eneyet pur), Kalushahar canal (Enayetpur), Pirganj canal (Enayetpur), Mallikpur canal (Veempur) and Balihar canal (Cheragpur).

Fish and animal resources

In Mahadevpur upazilla there are total 121907 domestic animals which include 7640 buffalos, 54804 goats, 10440 sheeps, 512620 hens and roosters, 254326 ducks, 25 fish farms and 11 hatcheries. There are a total 1997.08 acres of ponds in Mahadevpur in which open Jolmohal are 3 and ponds are 4776 (Govt. and private). The annual fish production is 20430 quintal.

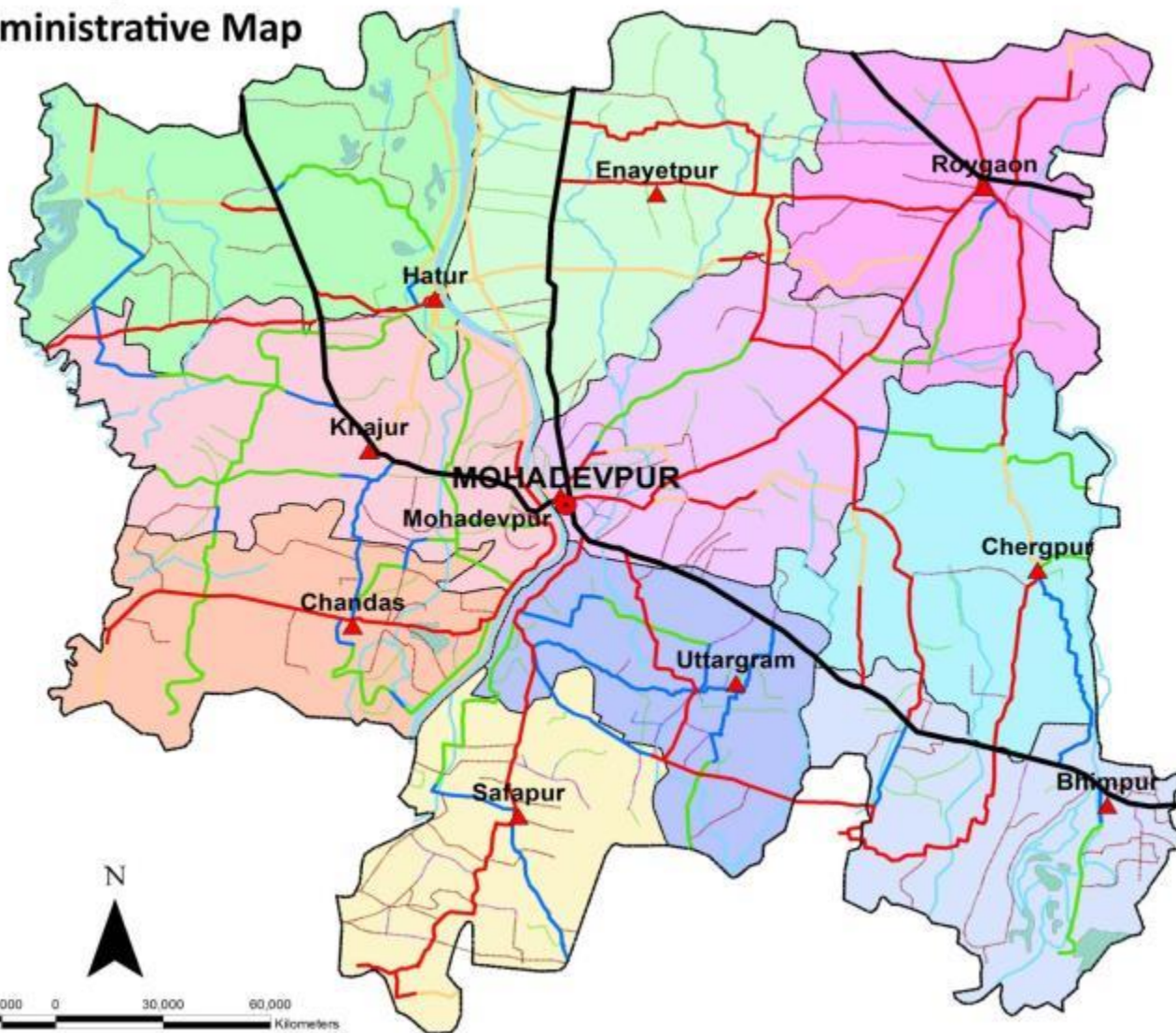
Wet lands

There are 6 wet lands and swamps in Mahadevpur upazilla. Those are Barolekha Natoapara bil (Khajur), Jharia bil (Veempur), Bil Shikari (Hatur), Kharpa bil (Mahadevpur), Naorail (Raigaon) and Shibrampur (Uttargram).

Arsenic Contamination

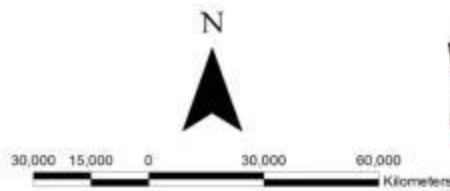
Arsenic level in this upazilla is 0-20%. Different tests of tubewell water like arsenic level, cloraid, iron, manganese, PH level, electric conductivity and other biological tests can be served in return of certain fees in the local laboratories. Besides, some free basic tests of water sources are executed with field kits.

Mahadevpur Administrative Map



Legend

- International Boundary
- District Boundary
- Upazila Boundary
- Union Boundary**
- Bhimpur
- Chandas
- Chergpur
- Enayetpur
- Hatur
- Khajur
- Mohadevpur
- Roygaon
- Safapur
- Uttargram
- Upazila
- ▲ Union
- 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
- Small River or Khal
- Wide River with Sandy Area
- Water Bodies



Chapter Two

Disaster, Hazard and Vulnerability

2.1 History of Disaster

Mahadevpur upazilla is one of the most vulnerable disaster prone areas. 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, old Wave, Heavy Mist, Pest Attack and Low Rainfall hamper normal way of life and cause huge damage of assets. The pressure of water descending from Indian hills flows away the banks of river Jamuna through canals and other inland waterways. 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 agricultural products, accommodation and infrastructure. Cold Wave and Heavy Mist cause a massive destruction for winter crops. Mahadevpur 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
River Erosion	,1985 ,1987 ,1988 ,1998 ,1999 ,2004,	Maximum	Agriculture, Fisheries, Livestock, Human Resource, Plantation
	2000 ,1994 ,2005 2006	Moderate	Livestock, Human Resource, Plantation
Flood	1986, 1987, 1988, 1992, 1995, 1998,	Maximum	Agriculture, Fisheries, Livestock, Human Resource, Infrastructure, Plantation
	1990, 2002, 2003	Moderate	Livestock, Human Resource, Infrastructure, Plantation
Drought	,1976 ,1979 ,1989 ,1992	Maximum	Agriculture, Fisheries, Livestock, Human Resource, Plantation
	,1996 ,1999 2004	Moderate	Agriculture, Fisheries, Livestock,
Seasonal Storm	,1988 ,1992 , ,1997	Maximum	Agriculture, Fisheries, Livestock, Human Resource, Plantation
	1995, 2005	Moderate	Agriculture, Fisheries, Livestock
Low Rainfall	,1976 ,1979 ,1989 ,1992	Maximum	Agriculture, Fisheries, Livestock, Human Resource,

Disaster	Years	Damage	Affected Sectors/ Elements
			Plantation
	,1996 ,1999, 2004	Moderate	Agriculture, Fisheries, Livestock, Human Resource
Cold Wave	2009, 2012,	Maximum	Agriculture, Fisheries, Livestock, Human Resource, Plantation
	2010, 2011, 2013	Moderate	Agriculture, Fisheries, Livestock,
Tornado	1986, 1988,	Maximum	Agriculture, Fisheries, Livestock, Human Resource, Plantation
	1995	Moderate	Agriculture, Fisheries, Livestock, Human Resource

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, Mahadevpur 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
Nature caused hazards		<ol style="list-style-type: none"> 1. Flood 2. River Erosion 3. Draught 4. Seasonal Storm 5. Low Rainfall 6. Cold Wave 7. Tornado
1. Flood	11. Ground Water	
2. Drought	12 Drizzling	
3. River Erosion	13. Low Rainfall	
4. Hail Rain	14. Seasonal Storm	
5. Heavy Mist	15. Tornado	
6. Cold Wave	16. Thunder	
7.Excessive rain	17. Rat Attack	
8. flatulency	18. Insect attacks at crops	
9.Arsenic		
10. Earthquake		
Man-made hazards		
19. Fire	21.Land Possession	

Hazards of the unions of this upazilla		Identifies hazards and priority of hazards
20. Unplanned Infrastructure Establishment	22. Paddy wastes emitted from rice mills	

Source: field Visit, Mahadevpur, 2014

2.3 Different types of Hazards and its present, future illustration

1. Flood

Mahadevpur 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. River Erosion

River erosion is a part and parcel of people of Mahadevpur upazilla. It is increasing day by day. The denizens 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.

3. 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.

4. Seasonal Storm

A few years ago, seasonal storms used to seem with a distance of 2/3 years. But, storms are attacking consecutively every year since 2004. It causes a huge damage for mango, lichee cultivation as well as other agricultural products. If this situation continues, severe environmental disaster would appear in near future.

5. Low Rainfall

According to the denizens of Mahadevpur upazilla, a drastic change in rainfall is observed in this area. Even a few years ago, it used to rain a lot in June and July. But, it is decreasing now. It seems like a negative effect in the weather pattern. It makes a huge damage in agriculture.

6. Cold Wave

Cold Wave occurs every year in Mahadevpur 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.

7. Tornado

10 years ago, a tornado occurred in Mahadevpur upazilla which caused huge losses for the upazilla.

2.4 Vulnerability and Capability

Vulnerability means material, socio-economic and existing environmental status, which, predict the probable damages by disasters and people fails to face those damages.

Capability is the complete situation or arrangement with the synchronization of natural, social, economic and environmental elements, which, people or any organization form to fight the hostile effect of disasters using their available resources.

Table 2.3: Hazard based vulnerabilities

Hazards	Vulnerabilities	Capabilities
1. Flood	<ul style="list-style-type: none">• Lack of navigability in rivers and canals.• Lesser embankments than demand.• Lack of trees on the sides of embankments.	<ul style="list-style-type: none">• There is Atrai River for water drive out.• There are 2800 high based tube wells.• To enhance the navigability in rivers and canals there are dredging machines.• The embankments can be strengthened by planting trees on either sides and by repair.• There are places for new embankments.
2. River Erosion	<ul style="list-style-type: none">• People loses everything because of river erosion• Agricultural products, roads, trees, households and human resources of Hatur, Mahadevpur, Khajur, Chandash, Safapur, Enayetpur and Uttargram vanish away into the river.• Weak embankments.• Insufficient forestation on the bank of the river.• Lack of enough embankments in Hatur, Mahadevpur, Khajur, Chandash, Safapur, Enayetpur and Uttargram zone and existing embankments are broken in many places.	<ul style="list-style-type: none">• There are 4 embankments in Mahadevpur.• It is possible to plant trees of bamboo family (spreads its roots) which would hold on to the soil.• Potential for tree plantation on the sides of embankments and roads.• Deprived people can be shifted to the public land of river bank.
3. Drought	<ul style="list-style-type: none">• Because of not having trees on the	<ul style="list-style-type: none">• There are potential of

Hazards	Vulnerabilities	Capabilities
	entire area.	planting salt enduring trees.
4. Seasonal Storm	<ul style="list-style-type: none"> • Storms affect because of weak infrastructure and unplanned household construction. • Having big trees rather than having small plants around households damages the trees and houses. • Sanitation system is frail which gets affected in seasonal storm. • There is no storm enduring refuge for animals by which animals are affected. • People dies as there don't have sufficient refuge center. • For the lack of sanctuary, animals get affected. Women, children and autistic people get mostly affected. 	<ul style="list-style-type: none"> • Households have potential to be cyclone tolerable. • It is feasible to sow small hedgy plants or bushy trees around households. • Embankments can be repaired and tree plantation is possible on the sides of embankments and roads. • Potential for the well-built sanitation. • Have governmental places for building shelter centers and sanctuaries. • Potential for making durable refuge for animals. • There are union-based disaster management committee and volunteer teams in Mahadevpur.
5. Low Rainfall	<ul style="list-style-type: none"> • As there is lesser trees than needed. 	<ul style="list-style-type: none"> • There are potential of planting salt enduring trees.
6. Cold wave	<ul style="list-style-type: none"> • Change of climate. 	<ul style="list-style-type: none"> • Potential for Govt. And NGO responses.
7. Tornado	<ul style="list-style-type: none"> • Change of climate. • Increase of sea level • Excessive melt down of ice. 	<ul style="list-style-type: none"> • There are some measures for pre, during and post- tornado period.

Source: field Visit, Mahadevpur, 2014

2.5 Most Vulnerable Areas

Due to geographical location, lack of water is seen in Mahadevpur 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 Population
1. Flood	Areas adjacent to river Atrai like Hatur, Enayetpur, Khajur, Mahadevpur, Chandas and some parts of Uttargram union	Many a piece of agricultural land is being swallowed by flood in these areas.	92226
2. River Erosion	Areas adjacent to river Atrai like Hatur, Enayetpur, Khajur, Mahadevpur, Chandas and some parts of Uttargram union	For long 10 years, a lot of cultivated lands have been consumed by river erosion that makes many people helpless. Besides, it also ruins agriculture, fisheries and human resource.	36890
3. Drought	Entire upazilla	Drought may cause a huge damage in the agriculture of these areas.	292859
4. Seasonal Storm	Entire upazilla	This areas of Mahadevpur grows the maximum amount of mangoes that may get spoiled by the seasonal storms. It is also a threat for human resource.	292859
5. Low Rainfall	Entire upazilla	Low rainfall ruins the land and it results in severe financial loss for the farmers.	255969
6. Cold wave	Entire upazilla	Cold wave may harm to agricultural products, livestock and human resource. It is also endangering for children, the pregnant, the disable and the old.	292859
7. Tornado	Entire upazilla	Tornado may cause a great harm to agriculture, infrastructure and human resource.	292859

Source: field Visit, Mahadevpur, 2014

2.6 Main Development Sectors

Mahadevpur 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	Detailed Description	Adjustment with Disaster Risk Reduction
Agriculture	<p>In Mahadevpur upazilla, 172824 metric tons of crops are produced in total 30350 hectares of land. Meeting the local demand, Mahadevpur has a surplus of 125616 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 Mahadevpur upazilla, agriculture is considered as one of the main sectors of development plan.</p>	<p>In Mahadevpur upazilla, 75% of people are involved in agriculture (30% day-laborers, 25 % petite farmers, 15% middle class farmers and 5% are affluent farmers). 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 disaster risk reduction.</p>
Fisheries	<p>There is a total of 1997.08 acres of ponds, canals, wet lands, rivers and swamps for fish production that 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 Mahadevpur Upazilla, fisheries can be considered as one of the main sectors of development plans.</p>	<p>A change in climate causing heavy rainfall and flood may harm agriculture severely. In that case, fisheries can serve with instant financial safety and solvency. So, fish cultivation is effective in disaster risk reduction.</p>
Livestock	<p>20-25 years ago, almost every family used to have cattle in Mahadevpur upazilla. Currently, because of lack of cow-food and pasture lands, livestock has decreased considerably. At present, there are 23 cattle farms, 38 broiler chicken farms and 30 duck 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 in disaster risk reduction.</p>
Health	<p>There are an upazilla health complex, 5 health sub-centers, 4 upazilla health and family welfare center and 33 community clinics. These institutions help continue the usual activities of people of Mahadevpur upazilla</p>	<p>In Mahadevpur upazilla, many diseases bring out in disaster period. Therefore, more advancement in health service is needed to be connected with disaster risk reduction.</p>

Main Sectors	Detailed Description	Adjustment with Disaster Risk Reduction
	ensuring health services.	
Livelihood	<p>In Mahadevpur upazilla, 75 % of people are involved in agriculture (30% day-labourers, 25 % petite farmers, 15% middle class farmers and 5% are affluent farmers). Among the people involved in other sectors, there are 2.52% in non-agricultural labour, 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.</p> <p>In Mahadevpur upazilla, financial condition is quite prosperous because of varied livelihoods. Most of the people are reliable because they are mostly engaged in any kind of dependable profession. Therefore lives of people of Mahadevpur go on improving.</p>	When disasters like flood, drought, river erosion, heavy rainfall, low rainfall etc. occur in Mahadevpur Upazilla, 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 livelihood is effective in disaster risk reduction.
Plantation	Mahadevpur upazila has considerable reputation for mango cultivation. In this Upazila, 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 Mahadevpur, 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 Mahadevpur 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 Mahadevpur upazilla, there are plenty of structural assets including 42.68 km. dam, 24 bridges and 549 culverts, an overall total of 658.18 km. of upazila, union and village roads and currently 516 deep tubewells and	When disasters like floods, droughts, river erosion and heavy rainfall happen in Mahadevpur upazilla, a variety of structural assets helps in many ways. The dams located on the banks of the

Main Sectors	Detailed Description	Adjustment with Disaster Risk Reduction
	11510 tubewells for irrigation purpose. There are also 21 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 Mahadevpur.	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 alternative but strengthening infrastructural resource to reduce risks of disasters.

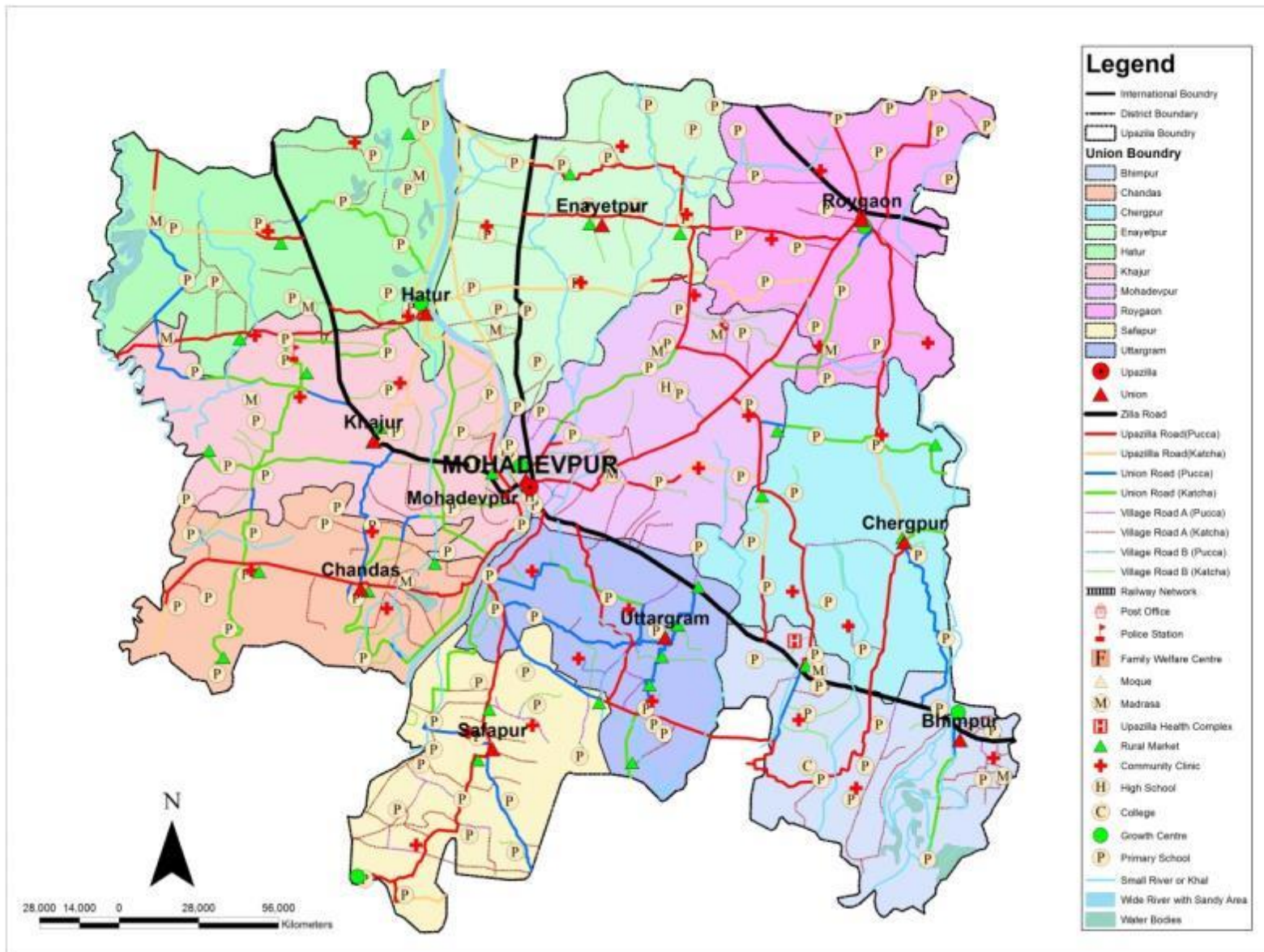
Source: field Visit, Mahadevpur, 2014

2.7 Social Map

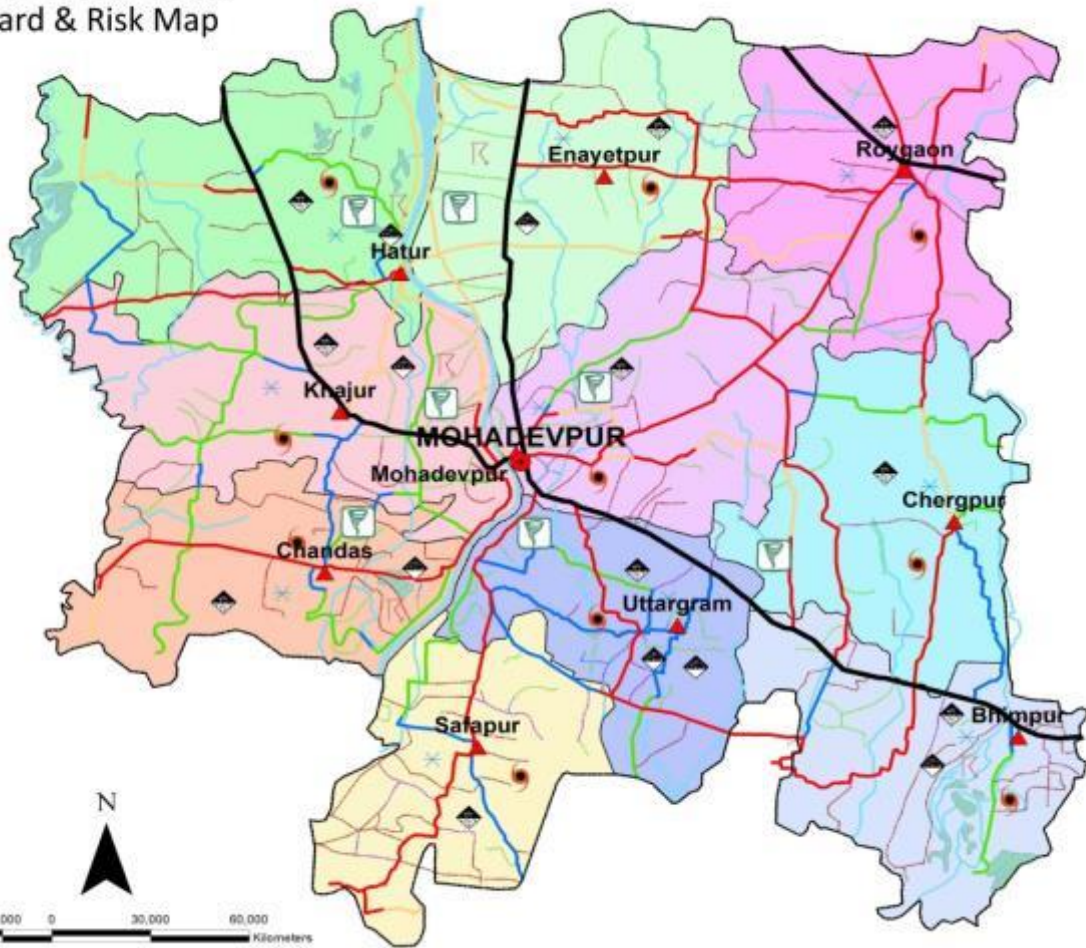
In context of the discussion of the Mahadevpur upazilla disaster management committee members' with the common people of various occupations of different villages describing the objectives and importance of making a social map, The social map of Mahadevpur upazilla has been prepared with their help. The location of unions, villages, infrastructures, 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 Mahadevpur upazilla disaster management committee members' with the common people of various occupations of different villages showing the map of Mahadevpur upazilla and describing the objectives and importance of making a Hazard and Risk Map, Hazard and Risk Map of Mahadevpur 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.

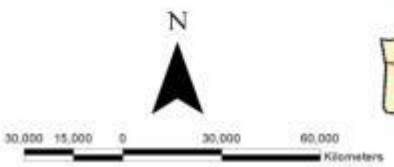


Mahadevpur Upzila Hazard & Risk Map



Legend

- International Boundry
- District Boundry
- Upazila Boundry
- Union Boundry**
- Bhimpur
- Chandas
- Chergpur
- Enayetpur
- Hatur
- Khajur
- Mohadevpur
- Roygaon
- Safapur
- Uttargram
- Upazila
- ▲ Union
- Zila Road
- Upazila Road(Pucca)
- Upazila Road(Katcha)
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- Village Road A (Pucca)
- Village Road A (Katcha)
- Village Road B (Pucca)
- Village Road B (Katcha)
- Railway Network
- Small River or Khai
- Wide River with Sandy Area
- Water Bodies
- ☼ Tomado
- ◆ Flood
- Storm
- ✱ Cold Wave
- ⌞ River Erosion
- ◆ Drought



2.9 Seasonal Calendar of Hazards

Although Mahadevpur 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 tie, ground water level is low; therefore water can be lifted only through deep tubewell. Besides, one river runs through Mahadevpur 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

No	Hazards	April	May	June	July	August	September	October	November	December	January	February	March
1	Flood												
2	Tornado												
3	River Erosion												
4	Draught												
5	Kalboisakhi												
6	Low Rainfall												
7	Cold Wave												

Source: field Visit, Mahadevpur, 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. Mahadevpur 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 Mahadevpur 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 Mahadevpur 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 Mahadevpur 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

No	Source of Livelihood	April	May	June	July	August	September	October	November	December	January	February	March
1	Agriculture												
2	Fisheries												
3	Daily Labor												
4	Businessman												

Source: field Visit, Mahadevpur, 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, Mahadevpur, 2014

2.12 Sector-wise Risks and Hazards

The vulnerable sectors of Mahadevpur 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 Mahadevpur 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"/>		

Hazard	Vulnerable Social Elements									
	Crops	Trees	Livestock	Fisheries	Homes	Roads	Bridges and Culverts	Educational institution	Health	Shelter
Hail rain	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	

Source: field Visit, Mahadevpur, 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 that affect 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 22762hectors 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 15175 hectores 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 20233 hectores that consequently may create financial loss for 175984 people of 43996 households. Low rainfall may destroy agricultural products of 20233 hectores that may create a scarcity of food in Mahadevpur upazilla. Heavy mist is also a threat that may ruin the production of a lot of mango trees (for dropping out buds) and 3525 hectores of cultivable lands.
Fisheries	Severe drought may ruin the fish cultivation in 4776 ponds that leads to financial loss and lack of protein supply in Mahadevpur upazilla. 3473 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 Mahadevpur upazilla. It is a great hamper for environmental balance. River erosion also may hamper environmental balance grasping many trees into the river in 5 unions.
Health	A flood like 1988's may create lack of safe place for 60% pregnant women during the flood in Mahadevpur 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 50% of the population of Mahadevpur upazilla.

Sectors	Description
Livelihood	Flood, drought, river erosion, heavy mist, low rainfall etc. seriously affect agriculture, fisheries, livestock and most importantly human resource. 38% people of Mahadevpur upazilla may become workless because of these hazards. As a result, it throws a terrible challenge towards the economic condition of Mahadevpur upazilla.
Water	Heavy drought and low level of water may cause a horrible scarcity of water in 10 unions of Mahadevpur upazilla. As a result damage of 22762 hectores 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.
Infrastruc ture	A sudden storm like 2003's may smash down 25% of stuctures 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 many people. A flood like 1988's may damage almost 329.75 km. roads which may impede communication. In six unions, approximately 70 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, Mahadevpur, 2014

Chapter Three

Disaster Risk Reduction

3.1. Identification of Risk Factors

The possibility of the adverse effect of 3 elements - any hazard or hazards, resources and environment, vulnerable population of Mahadevpur upazilla and their income that is to say the interaction of the possibility of a hazard and its degree is risk. Identified risks and risk factors of Mahadevpur upazilla is in the table below:

Table 3.1: Risk Factors

Description of Risk	Causes		
	Immediate	Moderate	Ultimate
Drought, as occurred in 2001, may ruin the agricultural products of approximately 15175 hectares and cause severe financial damage for 146429 people of 37694 families.	1. Lack of irrigation system	1. Lack of deep tubewell 2. Deforestation and short of plantation 3. Low ground-water level	1. Lack of necessary repair of canals 2. Shallowness of river Chhota Jamuna
A sudden attack of seasonal storm may destroy the agricultural products of 20233 hectares that consequently may create financial loss for 195230 people of 50259 families.	1. Lack of mass awareness	1. Interruption in weather reports	1. Deforestation and lack of policies in plantation
A sudden flood like 1988's may ruin the agricultural products of 22762 hectares of cultivable lands causing great loss for 56541 families.	1. Extreme water pressure destroying the dams 2. Heavy ascending wave	1. Decreased navigability because of river erosion 2. Lack of sufficient dams in required places	1. Lack of government policies of dredging system
River erosion may cause financial loss for many families destroying 38 square km. hectares of sugarcane and paddy lands.	1. Extreme water pressure 2. Heavy rainfall in the month of <i>Shraban</i>	1. Shallowness of rivers	1. Lack of depth of river and proper management 2. Lack of river dam monitoring and implementation committee

Description of Risk	Causes		
	Immediate	Moderate	Ultimate
Heavy mist is also a threat that may ruin the production of 21543 mango trees (dropping out buds) and agricultural products of 2583 hectors of cultivable lands.	1. Interruption in weather reports 2. Lack of mass awareness	1. lack of agricultural training 2. Lack of awareness in using pesticides	1. Inadequate govt. supply of pesticides 2. lack of awareness measures from national level
Cold wave is also a threat that may create loss for 18847 families ruining crops of 7587 hectors of cultivable lands.	1. Monsoon wind from the north-west corner	1. Climate change 2. Cold drizzling	1. Deforestation 2. Environment pollution
In several unions, approximately 6687 houses may be devoured by the river causing severe financial loss.	1. Extreme water pressure 1. Heavy rainfall in the month of <i>Shraban</i>	1. Shallowness of river	1. Lack of depth of river and proper management 2. Lack of river dam monitoring and implementation committee
Severe drought may ruin the fish cultivation in 3104 ponds that may lead to financial loss and spoil 13279 quintals of fish production in Mahadevpur upazilla.	1. Lack of irrigation system	1. Shallowness of ponds	1. Lack of govt. steps in necessary repairing of ponds
72% of earthen houses can be devastated by the flood that leads to suffering and economic loss for 43424 families.	1. Extra upstream water pressure	1. Housing in low lands 2. Unplanned housing	1. Lack of govt. policies in building infrastructure
Approximately many roads and 24 academic structures may be devoured by the river, which may result in unexpected disruption in education of 3900 students.	1. Soft river banks because of heavy rainfall	1. Shallowness of river	1. Not strengthening the river banks
.Cold wave seriously affects livestock12190cattle may die of cold wave that maycause severe financial damage for 7530 families.	1. Weather change 2. Cold drizzling	1. Cutting down big trees/ deforestation	1. Deficiency in management of forest department
Low rainfall may destroy agricultural products of 15175 hectors that may create a scarcity of food and financial loss for 146429 families in Mahadevpur upazilla.	1. Lack of sufficient drinking water	1. Unplanned cultivation	1. Lack of repairing of old tube wells 2. Lack of steps to set up deep tube wells

Description of Risk	Causes		
	Immediate	Moderate	Ultimate
Drought may cause different kinds of skin diseases and other problems among 50% of the population and financial loss for 56540 families of Mahadevpur upazilla.	1. Lack of mass-awareness	1. lack of hospitals/ health centers	1. Lack of govt. measures in health sector 2. Lack of rules and planning
A sudden storm like 2003's may smash down 120 of academic stuctures, which may result in unexpected disruption in education for 19500 students.	1. Interruption in weather reports	1. Lack of awareness measures 2. Deforestation	1. Lack of rules in plantation

Source: Upazilla disaster management committee, Mahadevpur, 2014

3.2. Ways of Risk Reduction Identification

The possible risks and ways to mitigate the risks from the discussion of Mahadevpur upazilla union wise field meetings and important persons are discussed in the table below:

Table 3.2: Possible ways of the risk reduction

Description of risk	Possible ways of the risk reduction		
	Short-term	Medium	Long-term
Drought, as occurred in 2001, may ruin the agricultural products of approximately 15175 hectares and cause severe financial damage for 146429 people of 37694 families.	1. Proper irrigation system	1. Sufficient deep tube wells 2. Avoiding deforestation and promoting plantation	1. Canal repairing 2. Dredging river <i>Baranoi</i>
A sudden attack of seasonal storm may destroy the agricultural products of 20233 hectares that consequently may create financial loss for 195230 people of 50259 families.	1. Arising mass awareness	1. Continuity in weather reports and proper explanation	1. Avoiding deforestation and promoting plantation by govt. policies
A sudden flood like 1988's may ruin the agricultural products of 22762 hectares of cultivable lands causing great loss for 56541 families.	1. Dam management	1. Dredging the rivers 2. Strengthening the river banks with closely set stones	1. Blocking the river edges imposing government policy
River erosion may cause financial loss for many families	1. Measures to prevent	1. Raising navigability of	1. River dredging and forming

Description of risk	Possible ways of the risk reduction		
	Short-term	Medium	Long-term
destroying 38 square km. hectors of sugarcane and paddy lands.	water pressure with tin, bamboo and sand piles	rivers 2. Setting dams	and managing of implementation committee 2. Constructing dams on rivers 3. Allotting budgets
Heavy mist is also a threat that may ruin the production of 21543 mango trees (dropping out buds) and agricultural products of 2583 hectors of cultivable lands.	1. Maintaining continuity in early weather reports 2. Creating mass awareness	1. Timely use of pesticides 2. Arranging training on agriculture	1. adequate govt. supply of pesticides 2. awareness measures from national level
Cold wave is also a threat that may create loss for 18847 families ruining crops of 7587 hectors of cultivable lands.	1. Measures for protecting crops from cold wave	1. Creating mass awareness	1. Sufficient plantation by forest department
In several unions, approximately 6687 houses may be devoured by the river causing severe financial loss.	1. Measures to prevent water pressure with tin, bamboo and sand piles	1. Raising navigability of rivers 2. Setting dams	1. River dredging and forming and managing of implementation committee 2. Constructing dams on rivers 3. Allotting budgets
Severe drought may ruin the fish cultivation in 3104 ponds that may lead to financial loss and spoil 13279 quintals of fish production in Mahadevpur upazilla.	1. Proper irrigation system	1. Allowing lone to fish cultivators for increasing depth of pond	1. Govt. steps in necessary repairing of ponds
72% of earthen houses can be devastated by the flood that leads to suffering and economic loss for 43424 families.	1. Prevent water pressure with sand piles	1. Building houses on high lands	1. Forming govt. policies in building infrastructure
Approximately many roads and 24 academic structures may be devoured by the river, which may result in unexpected disruption in education of 3900 students.	1. Protecting river banks with sand piles	1. Raising navigability of rivers through dredging	1. Setting govt. rules and planning and ensuring proper implementation
.Cold wave seriously affects livestock12190cattle may die of cold wave that maycause severe financial damage for 7530 families.	1. Talking care of cattle	1. Raising awareness among livestock cultivators	1. Constructing govt. policies in building veterinary hospitals

Description of risk	Possible ways of the risk reduction		
	Short-term	Medium	Long-term
Low rainfall may destroy agricultural products of 15175 hectares that may create a scarcity of food and financial loss for 146429 families in Mahadevpur upazilla.	1. Proper management of running deep tubewells	1. Planned cultivation with the help of local agriculture department	1. Repairing old tubewells and setting up new deep tubewells
Drought may cause different kinds of skin diseases and other problems among 50% of the population and financial loss for 56540 families of Mahadevpur upazilla.	1. Creating mass awareness	1. Arranging clinics/ health centers	1. Taking govt. measures in health sector And fixing rules and planning
A sudden storm like 2003's may smash down 120 of academic structures, which may result in unexpected disruption in education for 19500 students.	1. Maintaining continual supply of weather reports through radio, television	1. Taking awareness steps 1. Creating mass awareness	1. Making policies for the accommodation of cattle and allowing budget

Source: Upazilla disaster management committee, Mahadevpur, 2014

3.3. NGO's Development Plan

Because of slow paced disaster in Mahadevpur upazilla, mitigation by identifying hazard is seemed to be neglected. Recently, however, due to climate change tend to disasters has increased. So, few NGOs have started to work on disaster which is quite scarce than necessity.

Table 3.3: NGOs' Development Plan

Sl. No.	NGOs	Disaster related activity	Beneficiaries	Project duration
1	Bondhon Somaj Unnayan Songstha	Public awareness, micro-finance, academic lone and risk minimization	1600-1800	Running
2	Bohumukhi Somaj Unnayan Songstha	Public awareness, micro-finance, academic lone and risk minimization	1300-1500	Running
3	Adibasi Unnyan Kendro	Micro-finance, academic lone and risk minimization	1900-2100	Running
4	Borendra Bhumi Somaj Unnayan Songstha	Agricultural awareness, and risk minimization	3000-3400	Running
5	Borendra Polli Somiti	Agricultural awareness, and risk	2600-2800	Running

Sl. No.	NGOs	Disaster related activity	Beneficiaries	Project duration
		minimization		
6	Somonnito Polli Unnayan Songstha	Public awareness, micro-finance, academic lone and risk minimization	2200-2400	Running
7	Udoyon somiti	Public awareness, micro-finance, academic lone.	1200-1400	Running
8	Borsha Unnayan Songstha	Public awareness, micro-finance and risk minimization	1300-1400	Running
9	Bolaka Somaj Unnayan Songstha	Public awareness, micro-finance and risk minimization	1500-1600	Running
10	Protiva Grameen Unnayan Songstha	Public awareness, micro-finance, academic lone and risk minimization	1700-1900	Running
11	Saraswatipur Academy	Public awareness, micro-finance, academic lone and risk minimization	1500-1600	Running
12	Association for Social Organization (ASOD)	Public awareness, micro-finance, academic lone and risk minimization	2000-2100	Running
13	Polli Gram Unnayan Songstha	Public awareness, micro-finance and risk minimization	1500-1700	Running
14	Jonaki Somaj Unnayan Songstha	Public awareness, micro-finance, academic lone and risk minimization	1200-1400	Running
15	Jatio Kollan Songtha (JaKS)	Public awareness, micro-finance and risk minimization	2000-2300	Running
16	Center for Action Research Barindra (CARB)	Public awareness, micro-finance, academic lone and risk minimization	2100-2200	Running
17	Madishohor Child Development Sponsorship Program	Public awareness, micro-finance, academic lone and risk minimization	1700-1900	Running
18	Dulalpara Child Development Sponsorship Program	Public awareness, micro-finance, academic lone and risk minimization	2800-3000	Running
19	Proshika	Helps deprived agricultural and fish farmers	2000-2200	Running
20	BIZ	Public awareness, micro-finance and risk	2500-2700	Running

Sl. No.	NGOs	Disaster related activity	Beneficiaries	Project duration
		minimization		
21	Caritas	Disaster awareness, risk minimization and relief	1700-1900	Running
22	Association for Community Development	Public awareness, micro-finance and risk minimization	2400-2600	Running
23	Supoth	Public awareness, micro-finance, academic lone and risk minimization	1600-1800	Running
24	Child Sight Foundation	Public awareness, micro-finance, academic lone and risk minimization	3000-3200	Running
25	ASA	Public awareness, micro-finance, academic lone and 26risk minimization	1800-2000	Running
27	Ghashful	Microcredit program, social development	2100-2300	Running
28	Palli Shishu Foundation of Bangladesh (PSF)	Works on mother and child health awareness and family planning through “Surjer Hashi Clinic”	1700-1900	Running
29	Polli Shree	Public awareness, micro-finance and risk minimization	2000-2200	Running
30	Bangladesh Lutharen Mission- Finnis (BLMF)	Educational scholarship, health care service, tree plantation, Arsenic testing and provides training about awareness and developmental programs	2200-2400	Running
31	Resource Inatrigresana charity (RIC)	Runs microcredit program	2100-2200	Running
32	BRAC	Public awareness, micro-finance, academic lone and risk minimization	2600-2800	Running
33	TMSS	Runs microcredit program and training programs on employment	1500-1700	Running
34	Inborn Health Education	Public awareness, micro-finance, academic lone and risk minimization	1900-2000	Running
35	Bureau Bangladesh	Public awareness, micro-finance, academic	1700-1900	Running

Sl. No.	NGOs	Disaster related activity	Beneficiaries	Project duration
		lone and risk minimization		
36	Mahadevpur Development Foundation	Nursery, forestation, sanitation, fish farming, autism treatment and national days celebration	2800-3000	Running
37	S.D.F.	Public awareness, micro-finance and risk minimization	2000-2200	Running
38	Ashroy	Sanitation, preventing early marriage and stopping dowry	2500-2700	Running
39	Shiyali Arpon Unnayan Songstha	Public awareness, micro-finance and risk minimization	1700-1900	Running
40	WAVE Foundation	Democratic local regulation reinforcement program	2400-2600	Running
41	Brotee	Public awareness, micro-finance, academic lone and risk minimization	1600-1800	Running
42	Light House	Public awareness, micro-finance and risk minimization	3000-3200	Running
43	ARCO	Public awareness, micro-finance and risk minimization	1800-2000	Running

Source: Upazilla Parishad, Mahadevpur, 2014

3.4. Disaster Management Action Plan

3.4.1. Pre-disaster Preparation

Table 3.4: Pre-disaster preparation activities, target level, budget, Implementation and coordination

SL	Activities	Target Level	Possible Budget	Location	Possible Date	Who & How Far				Adjustment with Development Plan
						% Upazilla	% Community	UP%	NGO%	
1	River Dredging	12 km.	10-12 crores	It is from Sutanpur bazaar of Hatur union up to Shibganj of Chandas union	January-April	100				The operations will make the people in the area aware and enthusiastic to take pre-disaster preparation immediately In order to reduce the risk of disaster. As a result, damage to people's lives and property will be reduced. If the operations are properly implemented, it will contribute to the overall socio-economic and national development.
2	River Dams	12 km.	10-12 crores	It is from Sutanpur bazaar of Hatur union up to Shibganj of Chandas union	January-April	35	01	25	25	
3	Deep Tubewells	30 deep tubewells (220-250 feet deep)	5-6 lakhs	5 in Veempur, 4 in Khajur, 4 in Chandas, 5 in Mahadevpur, 2 in Hatur, 3 in Uttargram, 3 in Enayetpur, 2 in Cheragpur and 2 in Raigaon	Anytime of the year	60	1	10	30	
4	Agricultural Training	3 day training for ward wise	2-3 lakhs	Upazilla Agriculture Office	November-January	60	01	10	30	

SL	Activities	Target Level	Possible Budget	Location	Possible Date	Who & How Far				Adjustment with Development Plan
						% Upazilla	% Community	UP%	NGO%	
		groups each containing 30 members								
5	Proper Continuity of Weather Report	Public awareness through UP members	5-6 lakhs	Different wards of each union	April- May	40	5	15	40	
6	Public Involvement in Disaster report explanation	3 day training for ward wise groups each containing 20 members	30-35 lakhs	Different wards of each union	August-September	20	01	60	20	
7	Preserving Water by Digging ponds	20 feet deep (presently 10 feet)	50-60 lakhs	Different wards of each union	March-April	15	05	20	60	
8	Employment for the Disabled	Raising self-reliance of the disabled	15-20 lakhs	Different unions of Mahadevpurupazilla	Anytime of the year	19	01	70	10	
9	Mass Awareness through Govt.	3 day training for ward wise groups each	20-25 lakhs	All wards of each union	January-February	35	5	25	35	

SL	Activities	Target Level	Possible Budget	Location	Possible Date	Who & How Far				Adjustment with Development Plan
						% Upazilla	% Community	UP%	NGO%	
	Policy	containing 30 members								

Source: Upazilla disaster management committee, Mahadevpur, 2014

3.4.2 During disaster preparation

Table 3.5: During disaster preparation activities, target level, budget, Implementation and coordination

SL	Activities	Target Level	Possible Budget	Location	Possible Date	Who & How Far				Adjustment with Development Plan
						Upazilla %	Community %	UP %	NGO %	
1	Safe transfer of assets	Safety from damages	7-8 lakhs	Affected area	During disaster	10	20	40	30	The operations will make the people in the area aware and enthusiastic to take pre-disaster preparation immediately In order to reduce the risk of disaster. As a result, damage to people's lives and property will be reduced. If the operations are properly implemented, it will contribute to the overall socio-economic and national development.
2	Immediate and safe evacuation of pregnant women, children, the disabled and the old	Safety from damages	7-8 lakhs	Affected area	During disaster	10	20	40	30	
3	Immediate treatment facility	Instant life support	7-8 lakhs	Affected area	During disaster	39	1	20	40	

SL	Activities	Target Level	Possible Budget	Location	Possible Date	Who & How Far				Adjustment with Development Plan
						Upazilla %	Community %	%UP	%NGO	
4	Distributing dry food and safe water	Instant life support	10-12 lakhs	Affected area	During disaster	30	1	29	30	
5	Helping the affected	Safety for lives and assets	8-10 lakhs	Affected area	During disaster	20	1	19	60	
6	Safe sanitation system	Alleviation health problems	3-4 lakhs	Affected area	During disaster	25	5	30	40	

Source: Upazilla disaster management committee, Mahadevpur, 2014

3.4.3 Post Disaster Preparation

Table 3.6: Post Disaster preparation activities, target level, budget, Implementation and coordination

SL	Activities	Target Level	Possible Budget	Location	Possible Date	Who & How Far				Adjustment with Development Plan
						Upazilla %	Community %	%UP	NGO %	
1	Debris Cleaning	Enabling debris management and preventing diseases and suffering in post disaster period	60-70 lakhs	Affected areas	Post-disaster period	15	15	50	20	The operations will make the people in the area aware and enthusiastic to take pre-disaster preparation immediately In order to reduce the risk of
2	Road	Enabling	25-30	Affected	Post-	40		5	55	

SL	Activities	Target Level	Possible Budget	Location	Possible Date	Who & How Far				Adjustment with Development Plan
						Upazilla %	Community %	%UP	NGO %	
	construction and repairing	communication system in emergency rescue, damaged crop management and relief activities in post disaster period	crores	areas	disaster period					disaster. As a result, damage to people's lives and property will be reduced. If the operations are properly implemented, it will contribute to the overall socio-economic and national development.
3	Re-construction of academic institutions	Protection of lives and academic progress	60-70 lakhs	Affected areas	Post-disaster period	19	01	70	10	
4	Irrigation system	Protecting crops from water logging and food crisis alleviation	6-7 lakhs	Affected areas	Post-disaster period	35	5	25	35	
5	Housing management	Assuring the shelter for affected people	60-70 lakhs	Affected areas	Post-disaster period	55	5	20	20	
6	Relief activity	re-establishing regular life	8-10 crores	Affected areas	Post-disaster period	35	1	9	55	

Source: Upazilla disaster management committee, Mahadevpur, 2014

3.4.4 Preparation for Normal Period

Table 3.7: Normal time preparation activities, target level, budget, Implementation and coordination

SL	Activities	Target Level	Possible Budget	Location	Possible Date	Who & How Far				Adjustment with Development Plan
						Upazilla %	Community %	%UP	NGO %	
1	Setting dams	Protection of crops from flood	--	--	January - April	35	15	25	25	The operations will make the people in the area aware and enthusiastic to take pre-disaster preparation immediately In order to reduce the risk of disaster. As a result, damage to people's lives and property will be reduced. If the operations are properly implemented, it will contribute to the overall socio-economic and national development.
2	Establishing shelter house	Safety of lives from disasters	--	--	September-April	45	10	10	35	
3	Deep tubewells	Water supply in dry seasons	--	--	September-April	40	10	10	40	
4	Plantation	Environmental Balance	--	--	July-September	20	10	50	20	
5	Repairing houses	Safety of lives and assets from disasters	--	--	September-April	15	30	10	45	
6	Raising awareness	Environmental Balance	--	--	Entire year	19	20	20	40	

Source: Upazilla disaster management committee, Mahadevpur, 2014

Chapter Four

Emergency Response

4.1 Emergency Operation Centre (EOC)

In any kind of hazard, Emergency Operation Centre serves effective integration in giving response. During disaster period it keeps active for 24 hours and manages data and information collection, assessment, demonstration and asset management. There are an operation, a control room and a communication room in emergency operation center.

Table 4.1: Persons in charge of emergency operation center

Sl. No.	Name	Title	Cell Phone No.
1	Md. Riyasat Haider Tagar	Upazilla Chairman	01741 549493
2	Md. Aminur Rahman	Upazilla Executing Officer	01774914849
3	Md. Salahuddin-Al-Wadud	Project Execution Officer	01740884303
4	Mosa. Amina Khatun	Women Affairs Officer	01816311545
5	Md. Mohtasim Billah	Social Service Officer	01712296535
6	A. K. M. Mofidul Islam	Agricultural Officer	01716359051

4.1.1. Emergency Control Room Management

- Emergency control room has to be established by Upazilla/ 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/ upazilla are to be in charge of control room. Three groups each containing three volunteers are to guide the control room alternatively for 24 hours.
- Constant communication with divisional/zilla sadar is to be maintained.
- There must be a register in the control room. Persons acting in any sedule, data and information received by and sent to any persons in any specific time are to be written specifically in that register.
- Positions of zilla/ upazillas, 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 are at post-disaster period.
- For the sake of control room activities, it is important to preserve radio, charger light, 5 big torch lights, gum boots, life jackets, batteries, raincoats and other equipment.

4.2. Planning for Hazard Period

Table 4.2: During Hazard Activities Implementation

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 warning announcement in disaster period	Local Govt.	Disaster Management Committee	Through Emergency Control Room	UzDMC
2	Warning Announcement	Every UP member is to personally ensure the matter of warning announcement in his/ her ward.	From warning announcement in disaster period	Local Govt.	Volunteer groups	Through Emergency Control Room	UzDMC
3	Preparing Boats/ cars/ vans	Sufficient numbers of boats, motor vessels, vans are to be preserved to be used in emergency.	From warning announcement in disaster period	Local Govt.	Volunteer groups	Through Emergency Control Room	UzDMC
4	Rescue Activity	preparing sufficient equipments and human resource for rescue activity assessing accurate loss of disaster	Immediately after disaster	Local Govt.	Volunteer groups	Through Emergency Control Room	UzDMC
5	First Aid/ health/ dead management	Organizing necessary treatment/ medicines/ health services assessing accurate loss of disaster	Immediately after disaster	Local Govt.	Volunteer groups	Through Emergency Control Room	UzDMC
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.	Immediately after disaster	Local Govt.	Volunteer groups, Health assistant, Family welfare assistant	Through Emergency Control Room	UzDMC

Sl. no	Activity	Target level	When	Who	Who to Help	How	Contact
7	Treatment/ Vaccine for Cattle	Collecting necessary medicines	Immediately after disaster	Local Govt.	Volunteer groups, Upazilla veterinary hospital and Health centre	Through Emergency Control Room	UzDMC
8	Shelter Management	To keep the shelter house usable maintaining necessary repairing before the disaster prone season	Pre and during disaster period	Local Govt.	Volunteer groups	Through Emergency Control Room	UzDMC
9	Relief Activity	UP chairman has to supervise the relief activity of different relief and rehabilitation assisting groups.	during and post disaster period	UP Chairman	Volunteer groups	Through Emergency Control Room	UzDMC
10	Arranging Rehearsals	Arranging continual rehearsals in cyclone/ flood prone areas	April and September of each year	UP	Volunteer groups	UP	UP
11	Emergency Control Room Management	Emergency control room has to be established by Upazilla/ 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 and post disaster period	Local Govt.	Volunteer groups	UP	UP

4.2.1. Preparing volunteers

- Forming volunteer groups under the guidance of UP members at ward level.
- Spreading announcement and information to every village 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 signals are 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/upazilla disaster management committee.
- A fixed deposit has to be run by Zilla/ upazilla 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

- Upazilla 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 upazilla disaster management committee within the next 12 hours.

4.2.8 Management of 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 Ailment/ Vaccin for Livestock

- Collecting necessary medicines from upazilla veterinary hospital and preserving those in UP building or health centre 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 centres.
- 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 Upazilla/ 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 centres.
- Selected shelter centres, local schools, colleges, govt. and non-govt., organizations, high roads and dams can be used as shelter centres.

4.3 List and Description of Safe Places of Mahadevpur Upazilla

Table 4.3: List of Safe places of Mahadevpur Upazilla

Shelters	Name	Union	Capacity	Comment
Mound Shelter				
Cyclone shelters	Not Applicable			
School cum Shelter				
Public / Private Institutions	Upazilla Parishad Building	Mahadevpur		
Union Parishad Building	Mahadevpur Union Parishad Building	Mahadevpur	500-1000	
	Hatur Union Parishad Building	Hatur		
	Khajur Union Parishad Building	Khajur		
	Chandas Union Parishad Building	Chandas		
	Raygaon Union Parishad	Raygaon		

Shelters	Name	Union	Capacity	Comment
	Building			
	Anayatpur Union Parishad Building	Anayatpur		
	Safapur Union Parishad Building	Safapur		
	Uttargram Union Parishad Building	Uttargram		
	Charagpur Union Parishad Building	Charagpur		
	Bhimpur Union Parishad Building	Bhimpur		
Elevated road	Moheisbathan	Mahadebpur	7.3 km	
	Sujail turn	Mahadebpur	4.5 km	
	Pathakata	Mahadebpur	14 km	
	Sibganj hata	Chandas	9.88 km	
Embankment	Moheisbathan	Mahadebpur	7.3 km	
	Sujail turn	Mahadebpur	4.5 km	
	Pathakata	Mahadebpur	14 km	
	Sibganj hata	Chandas	9.88 km	
Others				

Source: UzDMC, 2014

The detailed description of each shelter centre should be written. Information like foundation, date of latest repairing, number of floors, present use, number of tube wells, number of latrines, present condition of those, list and description of equipments of shelter volunteers and other necessary information should be mentioned. If possible, pictures of every shelter centres and safe places are to be attached.

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 centres 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 centre 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 centres:

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

Things to be noticed in shelter centre are:

- Preserving tent/ polyether/ ORS/ filter/ necessary medicines (Paracetamol, Flagil etc.)/ water purifying tablets/ bleaching powder etc. in shelter centres
- 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 Centre:

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

Shelter centre Management:

- Every shelter centre should be properly supervised.
- Local steps should be taken to protect the shelter centres from being ruined.

- Plantation should be maintained surrounding shelter centres in a planned way.
- Shelter centre 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 of Shelters

Shelter	Name	Responsible Person	Mobile	Comment
Mound Shelter				
School cum Shelter				
Public / Private Institutions	Upazila Parishad Building			
	Mahadebpur Union Parishad Building	Md. Abdul Mannan Chowdhury	01717 899287	
	Hatur Union Parishad Building	Md. Akbar Ali Mondal	01719 728126	
	Khajur Union Parishad Building	Md. Belal Uddin	01733 131866	
	Chandas Union Parishad Building	Md. Abdus Sattar	01712 255157	
	Raygaon Union Parishad Building	Md. Mophakharula Hossain	01712 218021	
	Anayatpur Union Parishad Building	Md. Mehdi Hasan	01713 730423	
	Safapur Union Parishad Building	Md. Shamsul Alam	01711 451809	
	Uttargram Union Parishad Building	Sheikh Shah Alam Faisal	01711 463530	
	Charagpur Union Parishad Building	Ram Prasad Kundu	01740 846032	
	Bhimpur Union Parishad Building	Ram Prasad is Vadra	01715 605196	
Elevated Road	Moheisbathan	Md. Abdul Mannan Chowdhury	01717 899287	
	Sujail turn	Md. Abdul Mannan Chowdhury	01717 899287	
	Pathakata	Md. Abdul Mannan Chowdhury	01717 899287	
	Sibganj hata	Md. Abdus Sattar	01712 255157	
Embankment	Moheisbathan	Md. Abdul Mannan Chowdhury	01717 899287	
	Sujail turn	Md. Abdul Mannan Chowdhury	01717 899287	
	Pathakata	Md. Abdul Mannan Chowdhury	01717 899287	
	Sibganj hata	Md. Abdus Sattar	01712 255157	

4.5 List of Upazilla resources (During Disaster time)

of Resources of Upazilla Table 4.5: List

Infrastructure/ resources	Number	Responsible Person	Short explanation
Shelter	--	--	--
Storage	--	--	--
Boat	--	--	--
Mound Shelter	--	--	--
Transport	--	--	--
Speed Boat	--	--	--

Source: UzDMC, 2014

4.6. Finance

The income of Union Parishad comes from collecting local tax, approving lease for hat/bazaars and canals/swamps and approving trade licenses for businesses and trades. But, recently 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 village 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 Upazilla 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

- **Plan Follow-up Committee**

- **5 member plan recording and presentation committee**

1. Chairman
2. Secretary
3. NGO representative
4. 2 members (from general committee)

Table 4.6: List of Plan Follow-up Committee

Sl. No.	Name	Title	Mobile
1	Md. Riyasat Haider Tagar	Chairman	01741 549493
2	Md. Aminur Rahman	Secretary	01774914849
3		NGO representative	
4	A K M Mofidul Islam	General Member	01740884303
5	Md. Salahuddin-Al-Wadud	General Member	01740884303

Source: UzDMC, 2014

Tasks of 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

7-Member Plan Implementation and Management Committee

1. Chairman
2. Secretary
3. Female Member
4. Govt. Representative
5. NGO Representative
6. 2 Members (from general committee)

Table 4.7: List of Plan Implementation and Management Committee

Sl. No	Name	Designation	Mobile
1	Md. Riyasat Haider tagar	Chairman	01741 549493
2	Md. Aminur Rahman	Secretary	01774 914849
3	Mosah Begum Hasina Biswas	Female Member	01717 363313
4	Md. Mohtasim Billah	Govt. Representative	01712296535
5		NGO representative	
6	Md. Ekramul Haque	Normal member	01754 347257
7	Md. Salahuddin-Al-Wadud	General Member	01740884303

Source: UzDMC, 2014

Tasks 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: Damage Assessment

Main Sectors	Description
Agriculture	As an effect of climate change, if a flood like 1988 occurs in Mahadevpur upazilla, 22762 hectors of farming land can be damaged and numerous people of the upazilla can become vulnerable. Because of river erosion in 6 unions, many families can be economically harmed as a result of the damage of crops across 35 square kilometer farmland. If a drought similar to 2001 happens then crops of 15175 hector lands can be damaged and many families can be economically harmed. A sudden seasonal storm caused by climate change in Mahadevpur upazilla can ruin crops of 20233 hector farmlands and many families can be economically harmed. Food deficit may arise if crops of 20233 hector land get affected by low rainfall. Because of heavy mist, mango (as a result of shedding the buds) and other fruit gardens and 3525 hectors of farming land can be damaged.
Fisheries	Because of acute drought, 4776 fish ponds can be affected and financial loss may take place. As a result deficiency of protein may come up. If a flood like 1988 occurs in Mahadevpur upazilla, 3473 fish ponds may flood away. As a result, deficiency of food, nutrition and protein may arise.
Plantation	If a storm similar to 2003 recurs in Madevpur, a lot of trees mat break down. That may ruin the balance of nature. Because of rever erosion, trees of 5 unions may flood away in the river. That will spoil the balance of nature.
Health	If a flood like 1988 occurs in Mahadevpur upazilla, 60% pregnant women can face a life risk as a result of lack of proper delivery place and weak communication system. Besides, water borne diseases may spread out. If a drought similar to 2001 re-appears, 50% of the population may become exposed to skin diseases. Also many other diseases can break out because of drought.
Livelihood	As an effect of climate change, if hazards like flood, drought, river erosion, heavy mist, low rainfall, etc. causes disasters in Mahadevpur upazilla, agricultural, fisheries and livestock resources along with human livelihood get severely affected. 38% of the population of Mahadevpur upazilla can become jobless because of these hazards. So harsh condition may be created in the economic state of the upazilla.
Water	As an effect of climate change, acute drought and water deficiency (related to water level drop into the ground) may arise in 10 unions of Mahadevpur upazilla. So crops of 22762 hectors land can be damaged and many families

Main Sectors	Description
	may be affected. Other than that, many diseases including skin infections can spread out and agricultural, fisheries and livestock resources may get affected.
Infrastructure	If a sudden storm akin to 2003 recurs as an effect of climate change, 25% educational and religious institutions and other infrastructures may be affected which might result into disruption of education system. Countless people may become homeless and economically affected because of the destruction of 60% unmetalled houses by the violence of storm. A flood like 1988 can affect about 329.75 km road. 70 km roads, schools, colleges and other structures may drown into river as a result of river erosion in 6 unions. In addition, a lot of families may be homeless and exposed to economic risk caused by drowning of 16% unmetalled houses into the river.

Source: UzDMC, 2014

5.2 Rapid/ advance recovery

5.2.1 Administrative re-establishment

Table 5.2: Administrative re-establishment

Sl. No.	Name	Title	Mobile
1	Md. Riyasat Haider Tagar	Chairman	01741 549493
2	Md. Aminur Rahman	Secretary	01774 914849
3	Md. Mohtasim Billah	Member	01712296535
4	Md. Abdul Mannan Choudhury	Member	01717899287
5	Md. Akbar Ali Mandal	Member	01719728126
6	Md. Belal Uddin	Member	01733131866
7	Md. Abdus Sattar	Member	01712255157
8	Md. Mofakkarul Hossain	Member	01712218021
9	Md. Mehedy Hasan	Member	01713730423
10	Md. Shamsul Alam	Member	01711451809
11	Shaikh Shah Alam Faisal	Member	01711463530
12	Shri Ram Prasad Kundu	Member	01740846032
13	Shri Ram Prasad Vadra	Member	01715605196
14	Md. Salahuddin-Al-Wadud	General Member	01740884303

Source: UzDMC, 2014

5.2.2 Garbage cleaning

Table 5.3: Garbage cleaning

Sl. No.	Name	Title	Mobile
1	Md. Riyasat Haider Tagar	Chairman	01741 549493
2	Md. Aminur Rahman	Secretary	01774 914849
3	Md. Mohtasim Billah	Member	01712296535
4	Md. Abdul Mannan Choudhury	Member	01717899287

Sl. No.	Name	Title	Mobile
5	Md. Akbar Ali Mandal	Member	01719728126
6	Md. Belal Uddin	Member	01733131866
7	Md. Abdus Sattar	Member	01712255157
8	Md. Mofakkharul Hossain	Member	01712218021
9	Md. Mehedy Hasan	Member	01713730423
10	Md. Shamsul Alam	Member	01711451809
11	Shaikh Shah Alam Faisal	Member	01711463530
12	Shri Ram Prasad Kundu	Member	01740846032
13	Shri Ram Prasad Vadra	Member	01715605196
14	Md. Salahuddin-Al-Wadud	General Member	01740884303

Source: UzDMC, 2014

5.2.3 Resumption of public services

Table 5.4: Resumption of public services

Sl. No.	Name	Title	Mobile
1	Md. Riyasat Haider Tagar	Chairman	01741 549493
2	Md. Aminur Rahman	Secretary	01774 914849
3	Md. Mohtasim Billah	Member	01712296535
4	Md. Abdul Mannan Choudhury	Member	01717899287
5	Md. Akbar Ali Mandal	Member	01719728126
6	Md. Belal Uddin	Member	01733131866
7	Md. Abdus Sattar	Member	01712255157
8	Md. Mofakkharul Hossain	Member	01712218021
9	Md. Mehedy Hasan	Member	01713730423
10	Md. Shamsul Alam	Member	01711451809
11	Shaikh Shah Alam Faisal	Member	01711463530
12	Shri Ram Prasad Kundu	Member	01740846032
13	Shri Ram Prasad Vadra	Member	01715605196
14	Md. Salahuddin-Al-Wadud	General Member	01740884303

Source: UzDMC, 2014

5.2.4 Emergency Livelihood Assistance

Table 5.5: Emergency Livelihood Assistance

Sl. No.	Name	Title	Mobile
1	Md. Riyasat Haider Tagar	Chairman	01741 549493
2	Md. Aminur Rahman	Secretary	01774 914849
3	Md. Mohtasim Billah	Member	01712296535
4	Md. Abdul Mannan Choudhury	Member	01717899287
5	Md. Akbar Ali Mandal	Member	01719728126
6	Md. Belal Uddin	Member	01733131866
7	Md. Abdus Sattar	Member	01712255157
8	Md. Mofakkharul Hossain	Member	01712218021
9	Md. Mehedy Hasan	Member	01713730423

Sl. No.	Name	Title	Mobile
10	Md. Shamsul Alam	Member	01711451809
11	Shaikh Shah Alam Faisal	Member	01711463530
12	Shri Ram Prasad Kundu	Member	01740846032
13	Shri Ram Prasad Vadra	Member	01715605196
14	Md. Salahuddin-Al-Wadud	General Member	01740884303

Source: UzDMC, 2014

Attachment 1

Plan Implementation Checklist of Hazard Period

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.

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

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 Upazilla Nirbahi Officer and District Commissioner discussing in the meeting of Disaster Management Committee within 15th of April/May each year.

Sl. no	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 tube well 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	

Attachment 2**Upazilla Disaster Management Committee**

Sl. no	Name	Designation	Member	Mobile
1	Md. Riyasat Haider Tagar	Upazilla Chairman	President	01741 549493
2	Md. Sajjad Hossain	Chairman-Upazilla Vice	secretary	
3	Mosah Begum Hasina Biswas	Chairman-Upazilla Mohila Vice	Member	01717 363313
4	Md. Aminur Rahman	UNO	Member	01774 914849
5	Dr. Md. Abdul Jabbar	Upazila Health and Family Planning Officer	Member	01712233574
6	A. K. M. Mofidul Islam	Upazila Agriculture Officer	Member	01716359051
7	Firoz Alam	Upazilla engineers	Member	01822805027
8	Dr. Md. Mahfuzar Rahman	Upazila Livestock Officer	Member	01711972334
9	Md. Almas-Ud-Bil-Haq	Food Control Officer	Member	01712206554
10	Md. Enayet Uddin	Officer-in-Charge, Badalagachi	Member	01713373841
11	Md. Ashraful Islam	Upazila Education Officer	Member	01714603894
12	Abdul Awal	Upazila Ansar and VDP officer	Member	01712624513
13	Heerendranath Sarkar	Upazila Cooperative Officer	Member	01720245444
14	Md. Alam Ali	Upazila Youth Development Officer	Member	01712213141
15	Md. Noore Alam	Sub-assistant engineer of public health	Member	01718775188
16	Mosah Amina Khatun	Upazila Women Affairs Officer	Member	01816311545
17	Md. Salahuddin-Al-Wadud	Upazila Project Implementation Officer	Member	01740884303
18	Mohammad Jahidul Haque	Upazila Education Officer	Member	01716964851
19	Md. Mahabubur Rahman	Upazila Fisheries Officer	Member	01711968678
20	Md. Jillur Rahman	Upazila Rural Development Officer	Member	01712226882
21	Md. Mohtasim Billah	Upazila Social Welfare Officer	Member	01712296535
22	Md. Abdul Mannan Chowdhury	Mahadebpur Union Parishad Building	Member	01717 899287
23	Md. Akbar Ali Mondal	Hatur Union Parishad Building	Member	01719 728126
24	Md. Belal Uddin	Khajur Union Parishad Building	Member	01733 131866
25	Md. Abdus Sattar	Chandas Union Parishad Building	Member	01712 255 157
26	Md. Mofakkarul Hossain	Raygaon Union Parishad	Member	01712 218021

Sl. no	Name	Designation	Member	Mobile
		Building		
27	Md. Mehdi Hasan	Anayatpur Union Parishad Building	Member	01713 730423
28	Md. Shamsul Alam	Safapur Union Parishad Building	Member	01711 451809
29	Sheikh Shah Alam Faisal	Uttargram Union Parishad Building	Member	01711 463530
30	Ram Prasad Kundu	Charagpur Union Parishad Building	Member	01740 846032
31	Ram Prasad Vadra	Bhimpur Union Parishad Building	Member	01715 605196
32	Shahidul Islam	Forest department	Member	01712190642
33	Manotosh Kumar	Upazilla Statistics Officer	Member	01722403978

Source: UzDMC, 2014

Attachment 3**List of Union volunteers**

Sl. no.	Name	Father/ Husband	Word no	Training	Mobile
1	Md. Najimuddin Sarkar	Md. Narim Uddin Sarkar	1		01712 959705
2	Md. Abu Hassan, Cheragpur		8		01724 384540
3	Mosah Moara Begum	Wahidur Islam	Reserved- 4,5,6		01740 167371
4	Md. Majaphar Hossain, Mahadevpur	Md. Maphej Sardar	2		01713 744740
5	Md. Inusara Rahman	Lutfar Rahman	4		01714 460400
6	Mosah Dilruba Khanam	Dr. Lutfar Rahman	Reserved- 4,5,6		01753 615696
7	Md. Rais Uddin, Uttaragram	Md. Ismail Hossain	1		01734 682034
8	Md. Mizanur Rahman	Kajimuddin	7		01731 721869
9	Mosah Rebecca Khatun	Md. Miyaj Uddin	Reserved- 1,2,3		01735 946160
10	Md. Ayub Ali, khajur	Md. Samser Ali	7		01745 172823
11	Md. Ariful Islam	Md. Habbibur	8		01733 288408
12	Mosah Alaphula Nessa	Md. Sulaiman	Reserved- 1,3,6		01726 325155
13	Md. Rezaul Karim, Raygaon	Abdus Satter	9		01735 621280
14	Md. Abdur Rahim	Abdul Mondal	8		01739 569565
15	Mosah Reshma Akhter	Abdus Salam	Reserved- 7,8,9		01719 751374
16	Md. Abdul Hannan, Enayetpur	Abdur Rahman	6		01740 869667
17	Mohammad Ayub Hossain	Bachir Uddin	1		01724 840615
18	Mosah Rehena Parvin	Harun-Ur-Rashid	Reserved- 7,8,9		01743 449187
19	Mohammad Ekramul Haq, Chandash	Md. Ichamuddin Dewan	1		01754 347257
20	Md. Samser Ali	Noor Mohammad	2		01929 143644
21	Mosah Taslima	Md. Shaikul Islam	Reserved- 7,8,9		01749 787813
22	Mohammad Alamuddin Sarkar, Bhimpur	Md. Mofiz Uddin	6		01713 787483

23	Md. Anowara Hosen	Md. Karmul Islam	9		01733 100522
24	Sree Adhir Chandra	Raghu Mondol	4		01725 020292
25	Md. Abdul Hakim, Safaour	Basir Uddin	9		01912 447953
26	Md. Mophajjel Hossain	Fakir Uddin	8		01719 866146
27	Mosah Rahima Begum	Muslim Uddin	Reserved- 7,8,9		01739735312
28	--	--	--	--	--
29	--	--	--	--	--
30	--	--	--	--	--

Source: Union Parishad's, 2014

Attachment 4

List of Shelters Management Committee

Mound Shelter

Name of Shelter	Person Responsible	Mobile	Comment
--	--	--	--

School cum Shelter

Name of Shelter	Responsible Person	Mobile	Comment
--	--	--	--

Public/ Private Institutions

Name of Shelter	Responsible Person	Mobile	Comment
Upazila Parishad Building	Upazilla Chairman		
Mahadevpur Union Parishad Building	Md. Abdul Mannan Chowdhury	01717 899287	
Hatur Union Parishad Building	Md. Akbar Ali Mondal	01719 728126	
Khajur Union Parishad Building	Md. Belal Uddin	01733 131866	
Chandas Union Parishad Building	Md. Abdus Sattar	01712 255157	
Raygaon Union Parishad Building	Md. Mophakharula Hossain	01712 218021	
Enayatpur Union Parishad Building	Md. Mehdi Hasan	01713 730423	
Safapur Union Parishad Building	Md. Shamsul Alam	01711 451809	
Uttargram Union Parishad Building	Sheikh Shah Alam Faisal	01711 463530	
Charagpur Union Parishad Building	Ram Prasad Kundu	01740 846032	
Bhimpur Union Parishad Building	Ram Prasad Vadra	01715 605196	

Source: UzDMC, 2014

Elevated Road or embankment

Name of Shelter	Responsible Person	Mobile	Comment
Mohishbathan	Md. Abdul Mannan Chowdhury	01717 899287	
Sujail turn	Md. Abdul Mannan Chowdhury	01717 899287	
Pathakata	Md. Abdul Mannan Chowdhury	01717 899287	
Sibganj hata	Md. Abdus Sattar	01712 255157	

Source: UzDMC, 2014

Health Management Committee

Name of Health center	Responsible Person	Mobile	Comment
Satra Sub-Health Center, Mahadebpur	Md. Abdur Razzak	01710 140278	
Daud Sub-Health Center, Mahadebpur	Md. Sazudul	01712 398029	
Bisnupur Sub-Health Center, Mahadebpur	Mosah Monowara Khatun	01725 538116	
Bakapur Sub-Health Center, Mahadebpur	Mithun Kumar	01773 369191	
Gahali Sub-Health Center, Hatur	Shefali	01721 766262	
Mahishbathan Sub-Health Center,	Safiul Alam	01742 817383	

Name of Health center	Responsible Person	Mobile	Comment
Hatur			
Jaypur Sub-Health Center, Khajur	Mst. Sumi Akther	01723 746824	
Dabipur Sub-Health Center, Khajur	Md. Sumon Sardar	01728 030608	
Ranail Sub-Health Center, Khajur	Md. Jewel Rahman	01725 318083	
Khordd Kalna Sub-Health Center, Khajur	Md. Akram Hossain	01728 401903	
Chandas Sub-Health Center, Chandas	Bilkis	01733 847531	
Dimajauna Sub-Health Center, Chandas	Lucky Rani	01763 889033	
Lakshmipur Sub-Health Center, Chandas	Bikash Chandra	01725 018959	
Kalna Sub-Health Center, Raygaon	Tuhin Akter	01725 677070	
Alatadighi Sub-Health Center, Raygaon	Md. Al-Mamun	01775 370499	
Narayanpur Sub-Health Center, Raygaon	Md. Arshad Ali	01736 531017	
Haripur Sub-Health Center, Raygaon	Md. Shaheen Alam	01737 115052	
Chak Balram Sub-Health Center, Enayatpur	Minara Ferdous	01763 185916	
Mahinagar Sub-Health Center, Enayatpur	Nityananda Saha	01710 718025	
Bilachara Sub-Health Center, Enayatpur	Md. Shah Alam	01736 453647	
Bijoypur Sub-Health Center, Enayatpur	Samsunnahar	01725 100885	
Binodpur Sub-Health Center, Safapur	Princes	01768 301610	
Maminapur Sub-Health Center, Safapur	Farzana Mitali	01768 876700	
Safapur Sub-Health Center, Safapur	Sukendu Kumer	01721 692244	
Sibaramapur Sub-Health Center, Uttargram	Md. Mahabub Alam	01710 764063	
Sultanpur Sub-Health Center, Uttargram	Konika	01746 180248	
amanchata Sub-Health Center, Uttargram	Lakshmi Rani	01761 324833	
Bhalain Sub-Health Center, Uttargram	Shahnaj	01763 192380	
Salabari Sub-Health Center, Charagpur	Julekha Banu	01736 350151	
Ajipur Sub-Health Center, Charagpur	Md. Jahanggir Alam	01772 247952	
Phulbari Sub-Health Center, Charagpur	Sonta Rani	01745 247952	
Bhimpur Sub-Health Center, Bhimpur	Sultana Najnin Chowdhury	01744 392408	
Dakshin Lakshmipur Sub-Health Center, Bhimpur	Krishna Kumar Mahanta	01746 405807	
Bagacara Sub-Health Center, Bhimpur	Nargis Parvin	01729 970109	

Source: UzDMC, 2014

Fire Safety Committee

Name of Fire Station	Responsible Person	Mobile	Comment
Not Applicable	Not Applicable	Not Applicable	

Motor Boat

Union/ word	Responsible Person	Mobile	Comment
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Source: UzDMC, 2014

Local Dealers

Ward/Union	Name of Local Merchant	Mobile	Comment
Mahadevpur	Md. Abdul Mannan Chowdhury	01717 899287	--
Hatur	Md. Akbar Ali Mondal	01719 728126	--
Khajur	Md. Belal Uddin	01733 131866	--
Chandash	Md. Abdus Sattar	01712 255 157	--
Raygaon	Md. Mofakharul Hossain	01712 218021	--
Enaytpur	Md. Abu Emran Raju	01725675155	--
Safapur	Md. Shamsul Alam	01711 451809	--
Uttargram	Md. Ramzan Ali	01713716637	--
Cheragpur	Md. Rahmatullah Fazar	01711412524	--
Bheemur	Ram Prasad Vadra	01715 605196	--

Source: UzDMC, 2014

Attachment 5
Mahadevpur at a Glance

Area	397.67 sq. km	Eidgaah	250
Union	10	Bank	10
Mouja	307	Post Office	19
Village	298	Club	49
Household	75389	Hats/ Bazaar	21
Total Population	292859	Graveyard	105
Male	146905	Crematorium	25
Female	145954	Poultry farm	38
Educational Institute	321	Weaving Industry	
Govt. Primary School	84	Deep tubewell	516
Reg: Primary School	42	Shallow Tube Well	8620
School Secondary	52	Hand Tube Well	39000
College	5	River	1
Madrasa (Dakhil, Fazil, Ebtedaiyee)	29	Canal	186.75 km
Literacy Rate	60%	Wet Land	6
Community Clinic	33	Pond	4776
Embankment	4	Water reservoir	
Sluicagate	2	Earthen Road	437.58 km
Bridge	24	Pavement Road	220.63 km
Culvert	549	Mobile Tower	
Mosque	395	Play Ground	55
Temple	96		

Attachment 6

List of Some Important Broadcast Programs of 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

* Weather news is broadcast to all stations at 6.50 pm.

Some Important Broadcast Programs of Community Radio

Radio Centre	Program	Time	Day
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Interactive Voice Response (IVR)

Interactive Voice Response (IVR) refers to disaster early warning system that spreads disaster early warnings to common people via mobile phone. One can get weather news and early warning for flood and river ports dialing 10941.

Annex – 7

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

Introduction:

The disaster management plan has been shared with the Mahadevpur Upazila Disaster Management Committee (UzDMC) through a validation workshop in 16 April 2014 at the Upazila Auditorium at Mahadevpur. 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. Riasat Haider Tagor.

Major Activities:

The validation workshop started from 10.20 am through permission from the Chairperson Md. Riasat Haider Tagor by senior the senior management 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 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 include Thunder storm, insect as crop pest, fire, unplanned infrastructures, rice husk & coal from rice mill, illegal land occupation and earth quake.
- In the upazila level report hare need to include dazing machine and 35.68 km raised embankments (need to rehabilitate) as a part of disaster management capacity.
- Rooted plant forestation activities like bamboo tree plantation have an opportunity beside the river bank as a part of river erosion risk mitigation in the upazila.
- Have a opportunity to cultivate saline tolerant crop as a part of drought mitigation
- There were 11 numbers of canals for irrigation.
- The acute vulnerable river bank erosion areas were Hatur, Anayetpur, Mahadevpur, Chandas, Uttargram, Khajur and Sapapur more in the upazila.
- In the upazila were moderate vulnerable, not chance such heavy disaster.
- In the upazila have disaster management formed committee and disaster volunteer.

Open Discussion & Closing Remarks:

In the open discussion session Upazila Chairman Md. Riasat Haider Tagor 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 for the all members of the meetings as well as Shushilan and conclude the validation workshop.

Annex 8

Type of Institute	SL. No	School/Collage/Madrassa	Number of teachers	Students	Location of the institute
Primary School	1	Mahadevpur Model Primary School	11	394	No
	2	Natshal Govt. Primary School	6	239	No
	3	Fajilpur Govt. Primary School	7	307	No
	4	Daul Govt. Primary School	5	229	No
	5	Bakapur Govt. Primary School	7	297	No
	6	Joanpur Govt. Primary School	6	296	No
	7	Jontigram Govt. Primary School	6	283	No
	8	Akhera Govt. Primary School	7	162	No
	9	Mohishbathan Govt. Primary School	9	373	No
	10	Belkurri Govt. Primary School	4	220	No
	11	Mirjapur Govt. Primary School	5	187	No
	12	Chawk Krishnapur Govt. Primary School	6	152	No
	13	Bilshikari Govt. Primary School	6	249	No
	14	Gahli Govt. Primary School	4	203	No
	15	Chokchoki Govt. Primary School	3	136	No
	16	Enayetpur Govt. Primary School	7	243	No
	17	Poita Govt. Primary School	4	119	No
	18	Bijoypur Govt. Primary School	7	332	No
	19	Moheenagar Govt. Primary School	6	202	No
	20	Kalushohor Govt. Primary School	6	268	No
	21	Kalna Govt. Primary School	5	151	No
	22	Sujailhat Govt. Primary School	6	191	No
	23	Hosenpur Govt. Primary School	6	238	No
	24	Debarpur Govt. Primary School	4	128	No
	25	Khajur Govt. Primary School	11	510	No
	26	Joypur Govt. Primary School	4	291	No
	27	Mortujapur Govt. Primary School	4	169	No
	28	Ramchandrapur Govt. Primary School	4	158	No
	29	Kurapara Govt. Primary School	3	172	No
	30	Khorddokalna Govt. Primary School	6	194	No
	31	Debipur Govt. Primary School	7	185	No
	32	Bongram Govt. Primary School	4	125	No
	33	Gopalpur Govt. Primary School	7	266	No
	34	Durgapur Govt. Primary School	4	103	No
	35	35-Luxmipur Govt. Primary School	5	126	No
	36	Pathakata Govt. Primary School	6	287	No
	37	Paharpur Govt. Primary School	7	257	No
	38	Hamidpur Jigatola Govt. Primary School	6	256	No
	39	Binodpur Govt. Primary School	5	190	No
	40	Pobatoir Govt. Primary School	4	97	No
	41	Chandash Govt. Primary School	7	234	No
	42	Gangarampur Govt. Primary School	7	367	No
	43	Brindarampur Govt. Primary School	4	205	No
	44	Pagha Govt. Primary School	6	160	No

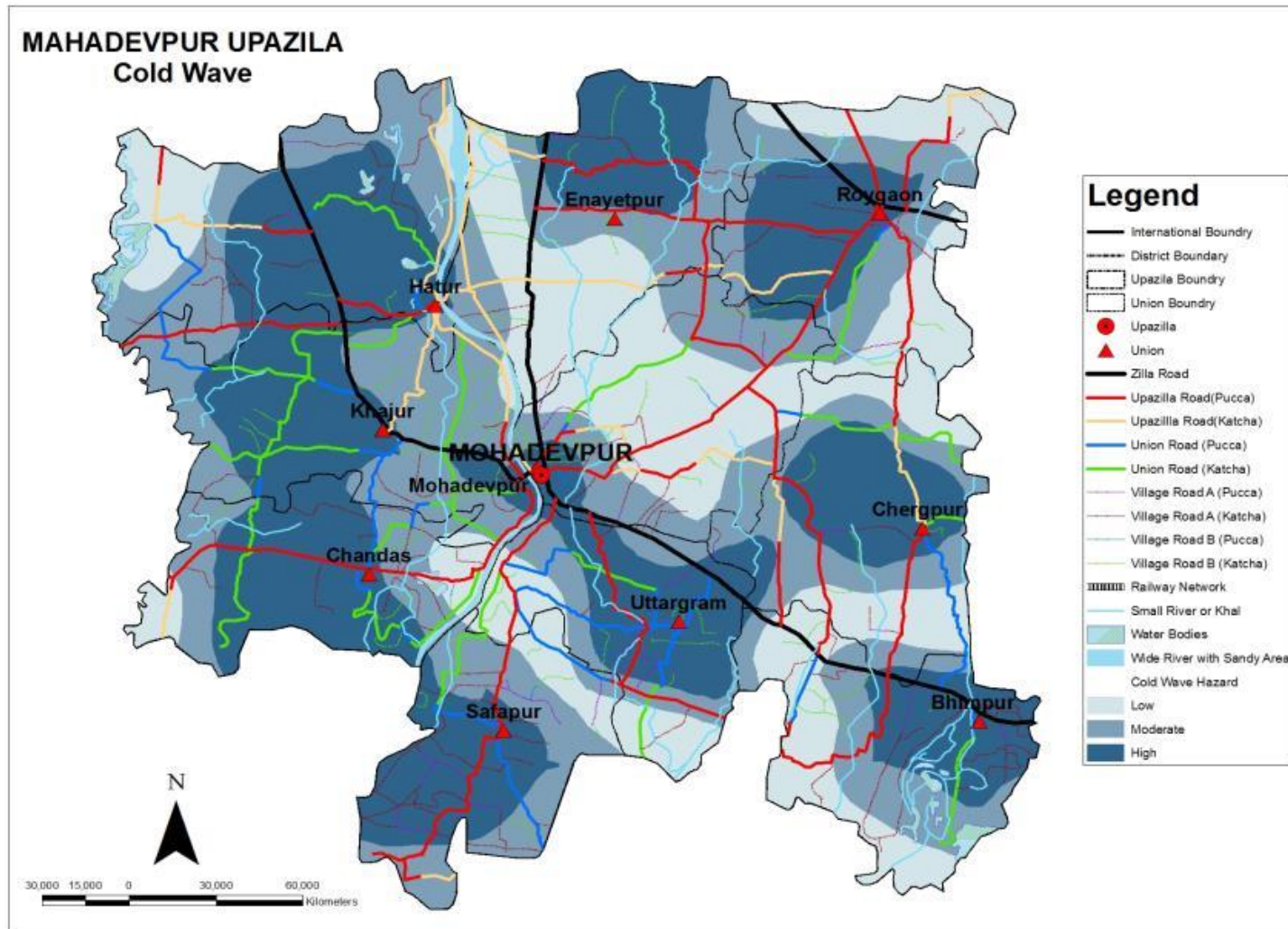
Type of Institute	SL. No	School/Collage/Madrassa	Number of teachers	Students	Location of the institute
	45	Bagdob Govt. Primary School	7	280	No
	46	Bachhra Govt. Primary School	4	173	No
	47	Kanchan Govt. Primary School	4	166	No
	48	48-Luxmipur Govt. Primary School	5	147	No
	49	Raigaon Govt. Primary School	8	378	No
	50	Kurail Govt. Primary School	4	125	No
	51	Haripur Govt. Primary School	7	200	No
	52	Birompur Govt. Primary School	5	139	No
	53	Sherpur Govt. Primary School	5	170	No
	54	Kundana Govt. Primary School	6	188	No
	55	Sohrai Govt. Primary School	6	208	No
	56	Kadial Naurail Govt. Primary School	5	139	No
	57	Ghongra Govt. Primary School	4	97	No
	58	Uttargram Govt. Primary School	10	444	No
	59	Bamansata Govt. Primary School	8	352	No
	60	Dohalee Govt. Primary School	7	168	No
	61	Sultanpur Govt. Primary School	6	174	No
	62	Shibganj Govt. Primary School	10	430	No
	63	Shibrampur Govt. Primary School	6	252	No
	64	Valain Govt. Primary School	7	291	No
	65	Karnapur Govt. Primary School	5	193	No
	66	Shrirampur Govt. Primary School	4	95	No
	67	Cheragpur Govt. Primary School	6	136	No
	68	Ajipur Govt. Primary School	6	165	No
	69	Manoharpur Govt. Primary School	7	198	No
	70	Bajitpur Govt. Primary School	4	152	No
	71	Dhanjoil Govt. Primary School	6	233	No
	72	Shalbari Govt. Primary School	7	321	No
	73	Bagdhana Govt. Primary School	4	134	No
	74	Alipur Govt. Primary School	6	183	No
	75	Saraswatipur Govt. Primary School	7	236	No
	76	Patna Govt. Primary School	10	416	No
	77	Rasulpur Govt. Primary School	8	246	No
	78	Sonapur Govt. Primary School	7	235	No
	79	Khorddonarayanpur Govt. Primary School	6	212	No
	80	Chawk Gouri Govt. Primary School	8	315	No
	81	Jharira Govt. Primary School	3	60	No
	82	Chawk Shyampur Sarta Govt. Primary School	4	103	No
	83	Sarta Govt. Primary School	5	134	No
	84	Bakherabad Govt. Primary School	4	261	No
Govt. Primary School	1	Jothari Govt. Primary School	4	147	No
	2	Chawkraja Govt. Primary School	4	155	No
	3	Gurharia Govt. Primary School	3	91	No
	4	Bilchhara Govt. Primary School	4	187	No
	5	Noorabad Govt. Primary School	4	187	No
	6	Dewanpur Govt. Primary School	3	208	No

Type of Institute	SL. No	School/Collage/Madrassa	Number of teachers	Students	Location of the institute
	7	Sahajadpur Govt. Primary School	4	130	No
	8	Bujorkantopur Govt. Primary School	4	175	No
	9	Chawkbaram Govt. Primary School	4	150	No
	10	Shalgram Govt. Primary School	4	173	No
	11	Panditpur Govt. Primary School	4	118	No
	12	Mahadevpur Govt. Primary School	4	260	No
	13	Akhirapara Govt. Primary School	4	128	No
	14	Jahangirpur Govt. Primary School	4	299	No
	15	Ranail Govt. Primary School	4	185	No
	16	Deshkhirshin Govt. Primary School	4	166	No
	17	Swabubpur Govt. Primary School	4	127	No
	18	Boyrra Govt. Primary School	4	104	No
	19	Shiyali Govt. Primary School	4	144	No
	20	Mukharbiswanathpur Govt. Primary School	4	145	No
	21	Tantarpur Govt. Primary School	4	111	No
	22	Khoshalpur Govt. Primary School	4	226	No
	23	Mugoil Govt. Primary School	4	122	No
	24	Jontoil Govt. Primary School	4	180	No
	25	Gobindapur Govt. Primary School	4	132	No
	26	Khorddojoypur Govt. Primary School	4	130	No
	27	Joypur Sardarpara Govt. Primary School	4	174	No
	28	Ghashiara Govt. Primary School	4	164	No
	29	Rohotta Govt. Primary School	3	177	No
	30	Mojjora Govt. Primary School	4	113	No
	31	Safapur Govt. Primary School	4	135	No
	32	Saboil Govt. Primary School	4	133	No
	33	Belot Govt. Primary School	4	190	No
	34	Kalna-2 Govt. Primary School	4	121	No
	35	Kalna-1 Govt. Primary School	4	85	No
	36	Chawkujal Behulatala Govt. Primary School	4	166	No
	37	Ichhapur Govt. Primary School	4	112	No
	38	Veempur Govt. Primary School	4	105	No
	39	Chhilimpur Govt. Primary School	4	100	No
	40	Hariramnagar Govt. Primary School	4	135	No
	41	Shibpur Govt. Primary School	4	236	No
	42	South Luxmipur Govt. Primary School	4	128	No
	43	Hasanpur Chaumuhoni Govt. Primary School	4	118	No
School	1	Jahangirpur Girls School & College	9	495	No
	2	Mahadevpur Sarbomongal High School	13	1065	No
	3	Jahangirpur Model High School	11	554	No
	4	Raygaon High School	24	960	No
	5	Khajur UP High School	13	436	No
	6	Sawrosathipur High School	14	694	No
	7	Jaypur Dangapara High School	14	532	No
	8	Hat Chak Gouri High School	10	660	No
	9	Shibganj High School	12	416	No

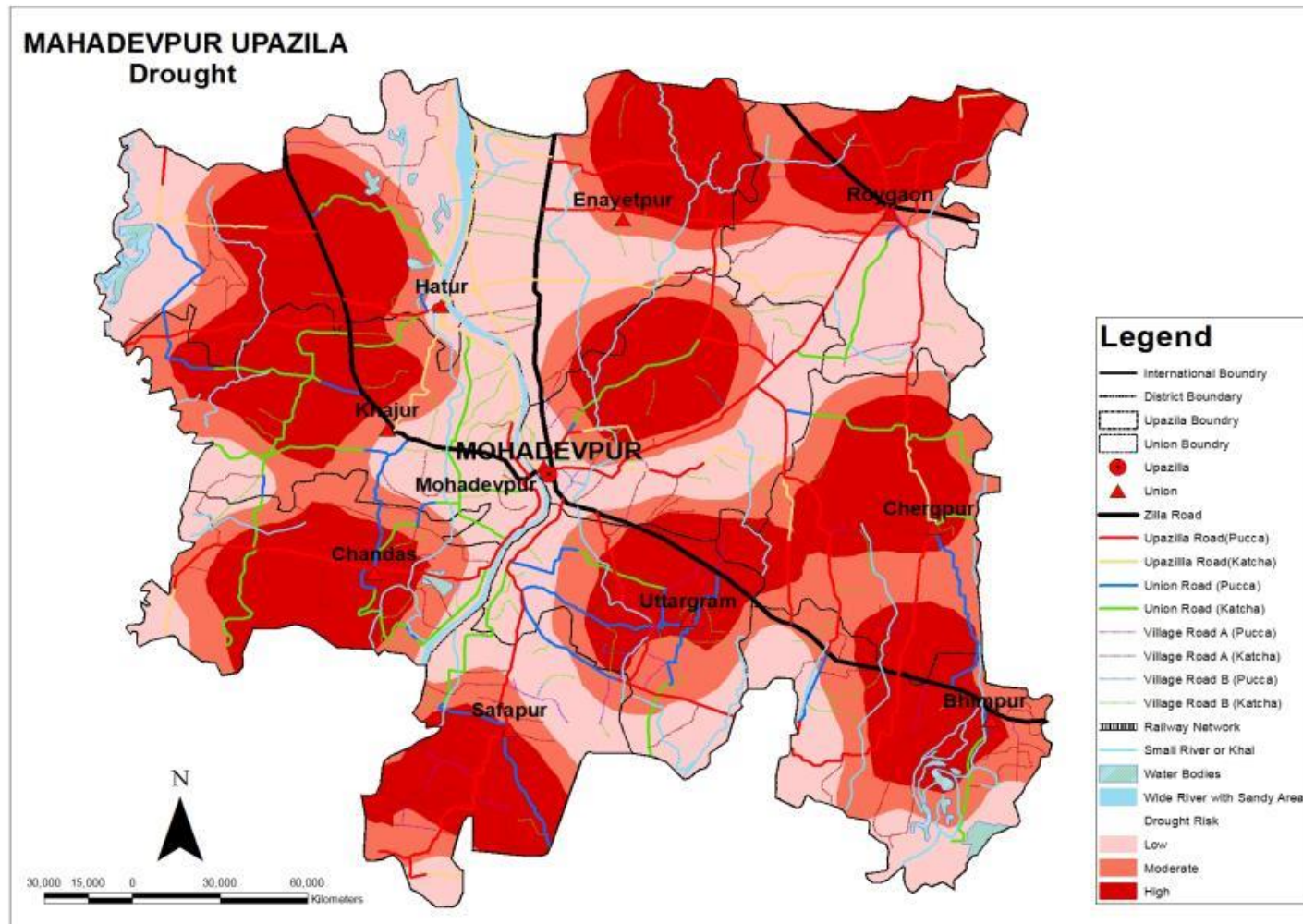
Type of Institute	SL. No	School/Collage/Madrassa	Number of teachers	Students	Location of the institute
	10	Hamidpur Jigatala High School	11	295	No
	11	Patakata High School	10	327	No
	12	Krishna Gopal High School	12	235	No
	13	Bharadoba Akther Hamid Seddiki High School	9	191	No
	14	Uttargram Demukhi High School	11	243	No
	15	Rasulpur High School	12	261	No
	16	Dhanjail High School	12	255	No
	17	Shalbari High School	12	300	No
	18	Jantigram TA High School	11	175	No
	19	Jayanpur Demukhi High School	11	183	No
	20	Bakapur High School	9	225	No
	21	Dahul Barbakpur High School	11	180	No
	22	Kurail Sera-Bangla High School	9	201	No
	23	Kalusahar High School	11	225	No
	24	Khapur Hazi Dhanes Uddin High School	11	413	No
	25	Daburpur D.N.G High School	10	105	No
	26	Bilchara R.C.P High School	9	245	No
	27	Mohinagar High School	9	219	No
	28	Mohisbathan High School	15	480	No
	29	Gaholi Demukhi High School	10	340	No
	30	Belkuri High School	11	225	No
	31	Murtazapur High School	10	300	No
	32	Chandas M.S High School	12	372	No
	33	Bagdob High School	11	405	No
	34	Kunjoban Bandor Technical Girl's High School	7	107	No
	35	Paharpur J.N Girl's High School	9	187	No
	36	Gangarampur High School	11	325	No
	37	Malahar Girl's High School	8	107	No
	38	Akhtar Siddiki Girl's High School	9	166	No
	39	Borandro Bidha Nikaton	9	206	No
	40	Valain Ideal Memorial High School	7	123	No
	41	Bilshkari High School	8	246	No
	42	Bamonchata Ideal High School	9	234	No
	43	Matrimongal Junior Secondary Girl's School	9	108	No
	44	Chanda Ideal High School	10	370	No
	45	Formanpur Junior Secondary School	8	84	No
	46	Kanchhon Girl's High School	9	189	No
	47	Bagdaba Junior Secondary Giel's School	7	39	No
	48	Chandas Girl's High School	11	161	No
	49	Sagarail Ideal Junior Secondary School	7	84	No
	50	B.S Junior Secondary School	8	105	No
	51	Moyjora Junior Secondary School	7	99	No
	52	Paharpur Junior Secondary School	6	33	No
	53	Dr. Afaz Uddin Memorial Junior Secondary Girl's School	9	90	No
	1	Chomashea Rahomania Dakhil Madrasha	9	197	No

Type of Institute	SL. No	School/Collage/Madrasha	Number of teachers	Students	Location of the institute
	2	Luxmipur Khayrul Ulum Fazil Madrasha	10	132	No
	3	Joyanpur Fazil Madrasha	8	174	No
	4	Sarota Nomania Dakhil Madrasha	9	249	No
	5	Kholbari Islamia Dakhil Madrasha	10	152	No
	6	Mirjapur Islamia Alim Madrasha	9	155	No
	7	Ali Dauna Alim Madrasha	8	141	No
	8	Anayatpur Fazil Madrasha	8	156	No
	9	Pagha Boshir Islamia Dakhil Madrasha	7	175	No
	10	Gofanagar Islamia Dakhil Madrasha	6	117	No
	11	Jahangirpur Islamia Alim Madrasha	8	194	No
	12	Ramchandrapur Islamia Alim Madrasha	7	157	No
	13	Sherpur Kuripara Dakhil Madrasha	7	188	No
	14	Safapur Union Alim Madrasha	9	156	No
	15	Fatapur Rahamina Dakhil Madrasha	8	125	No
	16	Proshadpur Islamia Dakhil Madrasha	9	138	No
	17	Kundona Dakhil Madrasha	7	146	No
	18	Uttargram Polipara Dakhil Madrasha	8	117	No
	19	Uttargram Hatkhola Dakhil Madrasha	8	144	No
	20	Ramraypur Islamia Dakhil Madrasha	6	112	No
	21	Jaypur Dangapara dakhil Madrasha	5	100	No
	22	Chakraja Ahammadia Dakhil Madrasha	7	200	No
	23	Binodpur Islamia Dakhil Madrasha	7	139	No
	24	Binodpur Dakhil Madrasha	8	120	No
	25	Sonakuri Malahar Mohila Dakhil Madrasha	9	148	No
	26	Samaspur Islamia Dakhil Madrasha	7	100	No
	27	Pachim Goshaiapur Islamia Dakhil Madrasha	6	128	No
	28	Farmanpur Islamia Dakhil Madrasha	9	121	No
	College	1	Jahangirpur Govt. Collage	17	283
2		Jahangirpur Girl's School & Collage	19	294	No
3		Chandas Degree Collage	21	355	No
4		Raygaon Collage	17	267	No
5		Arif Memorial Collage	17	279	No
6		Mahadevpur Technical & B.M Collage	16	268	No
7		Matazi Technical & B.M Collage	16	277	No
8		Rodail Technical & B.M Collage	18	292	No
9		Mahadevpur Agr. & Technical Collage	17	287	No
10		Binodpur Akther Hamid Siddiki Technical & B.M Collage	16	260	No
11		Jahangirpur Technical & B.M Collage	15	259	No
12		Mahadevpur Technical & B.M Collage	17	245	No

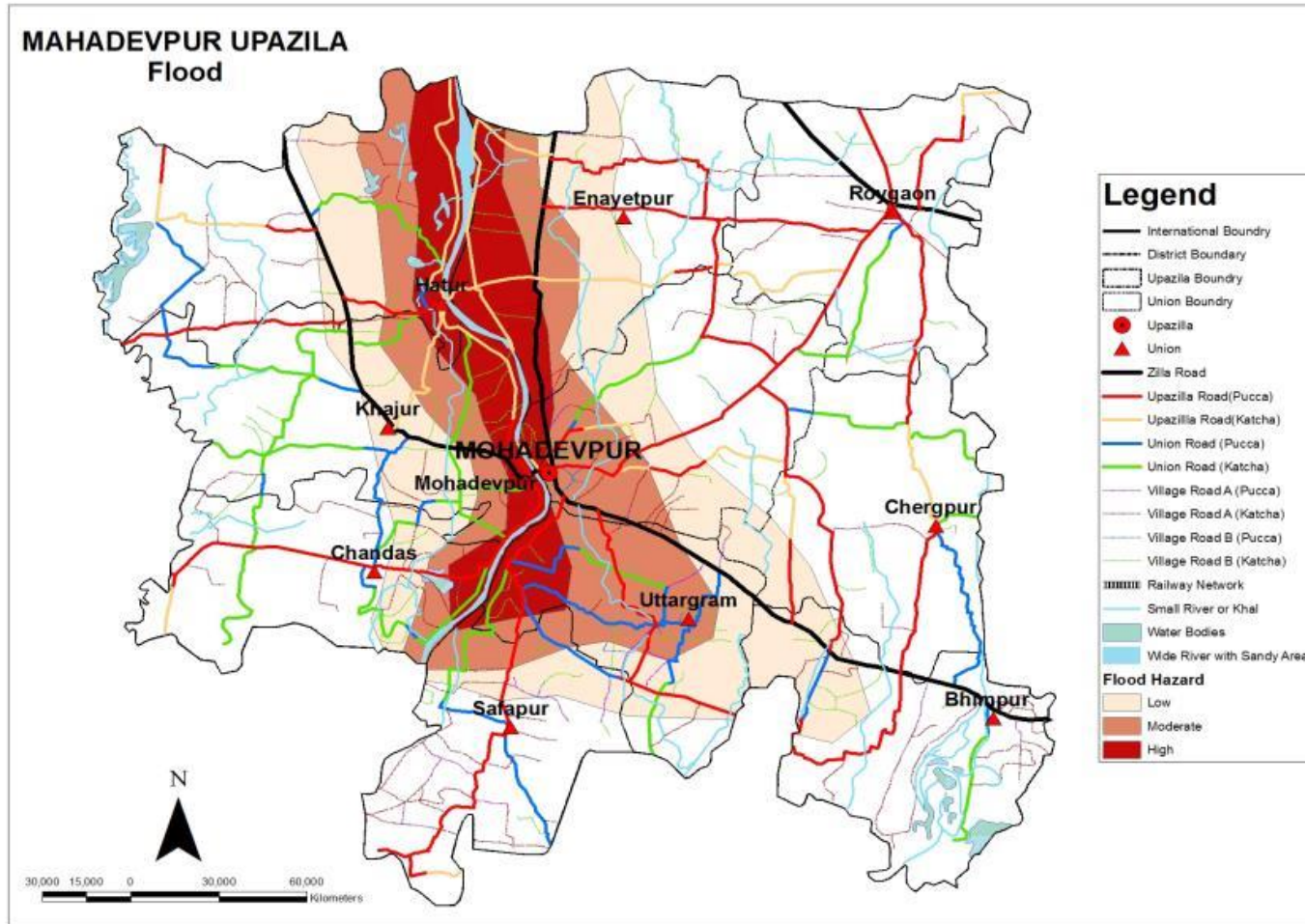
Annex9Hazard Map : (Cold



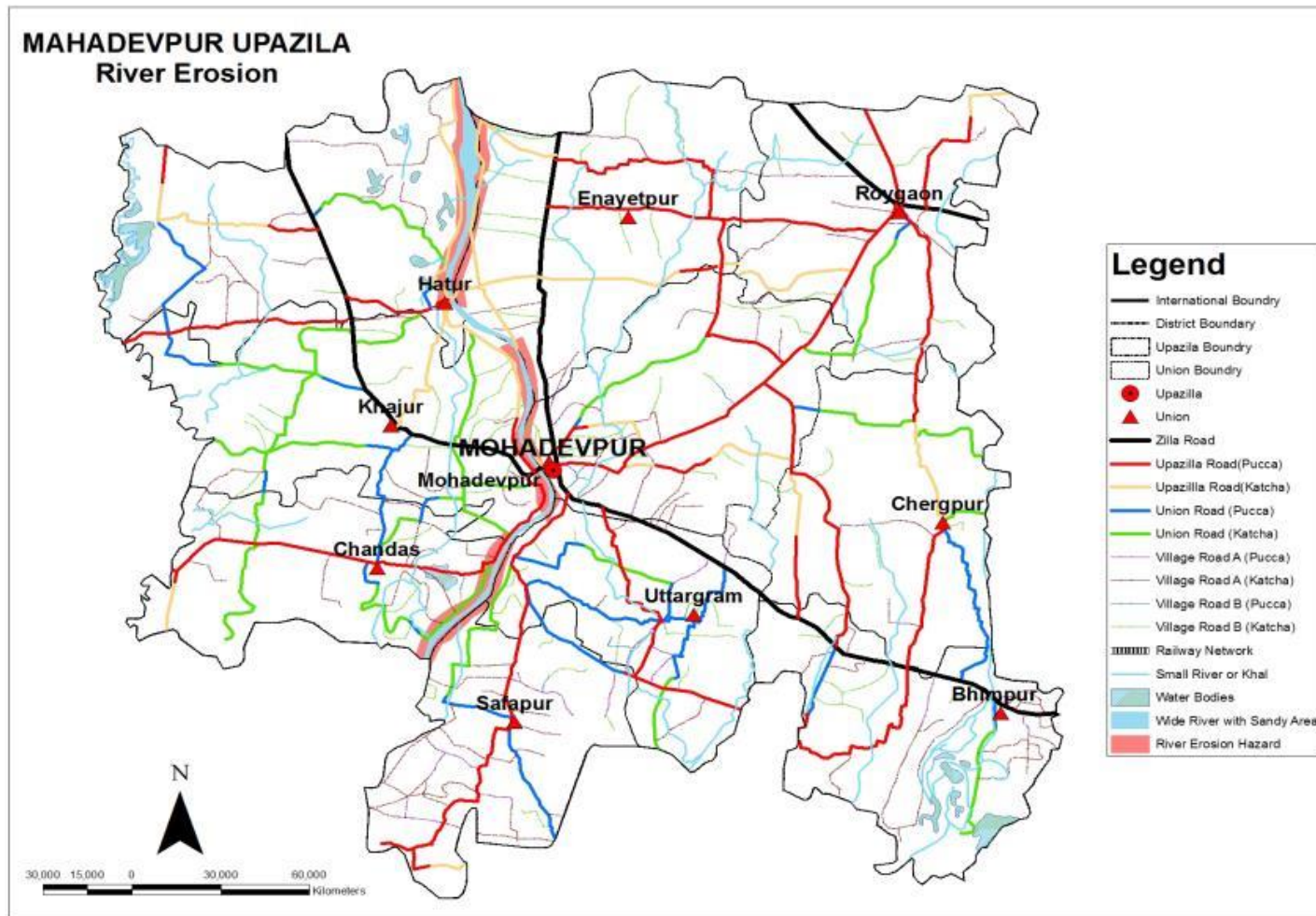
Annex10Hazard Map : (Drought)



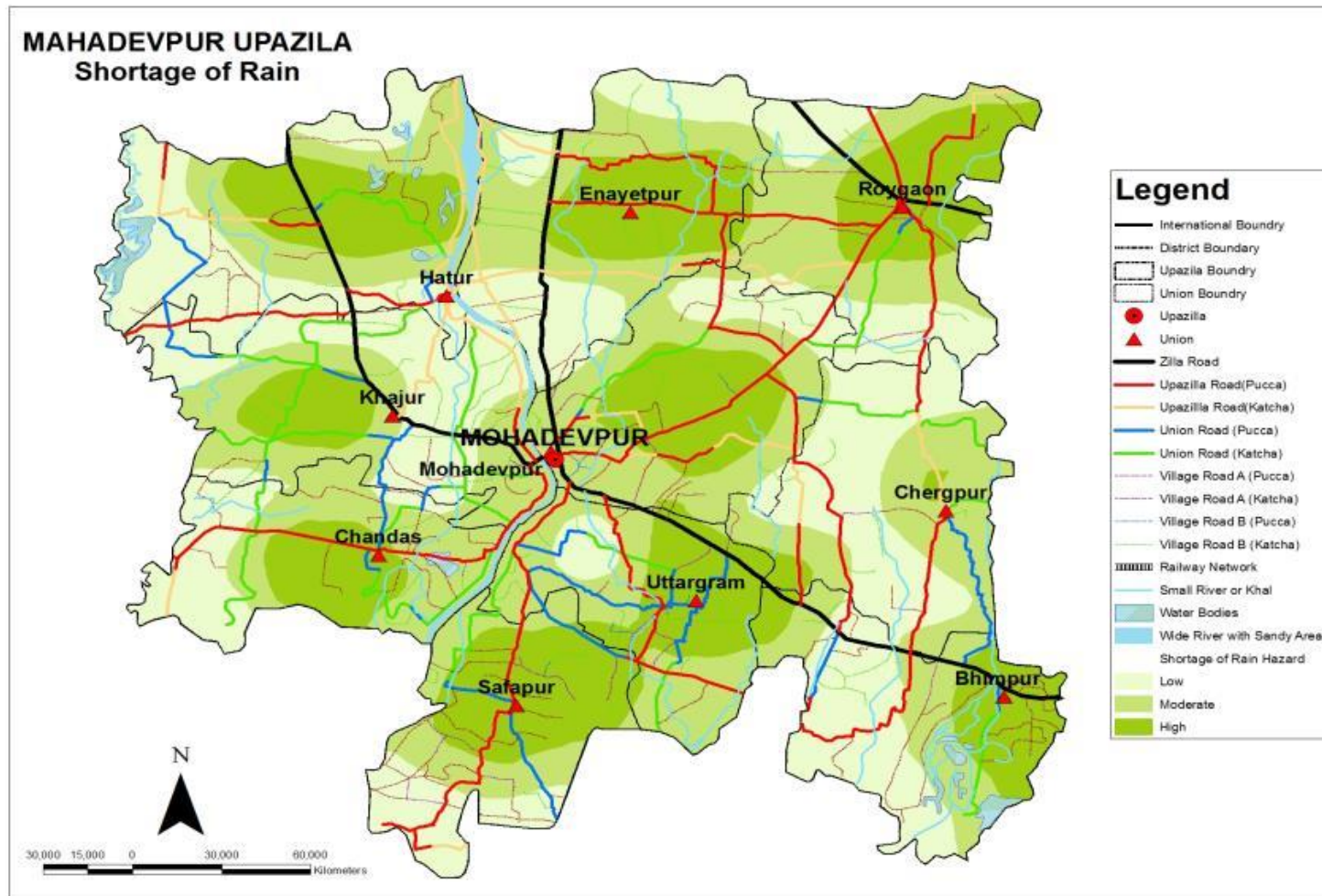
Annex11Hazard Map : (Flood)



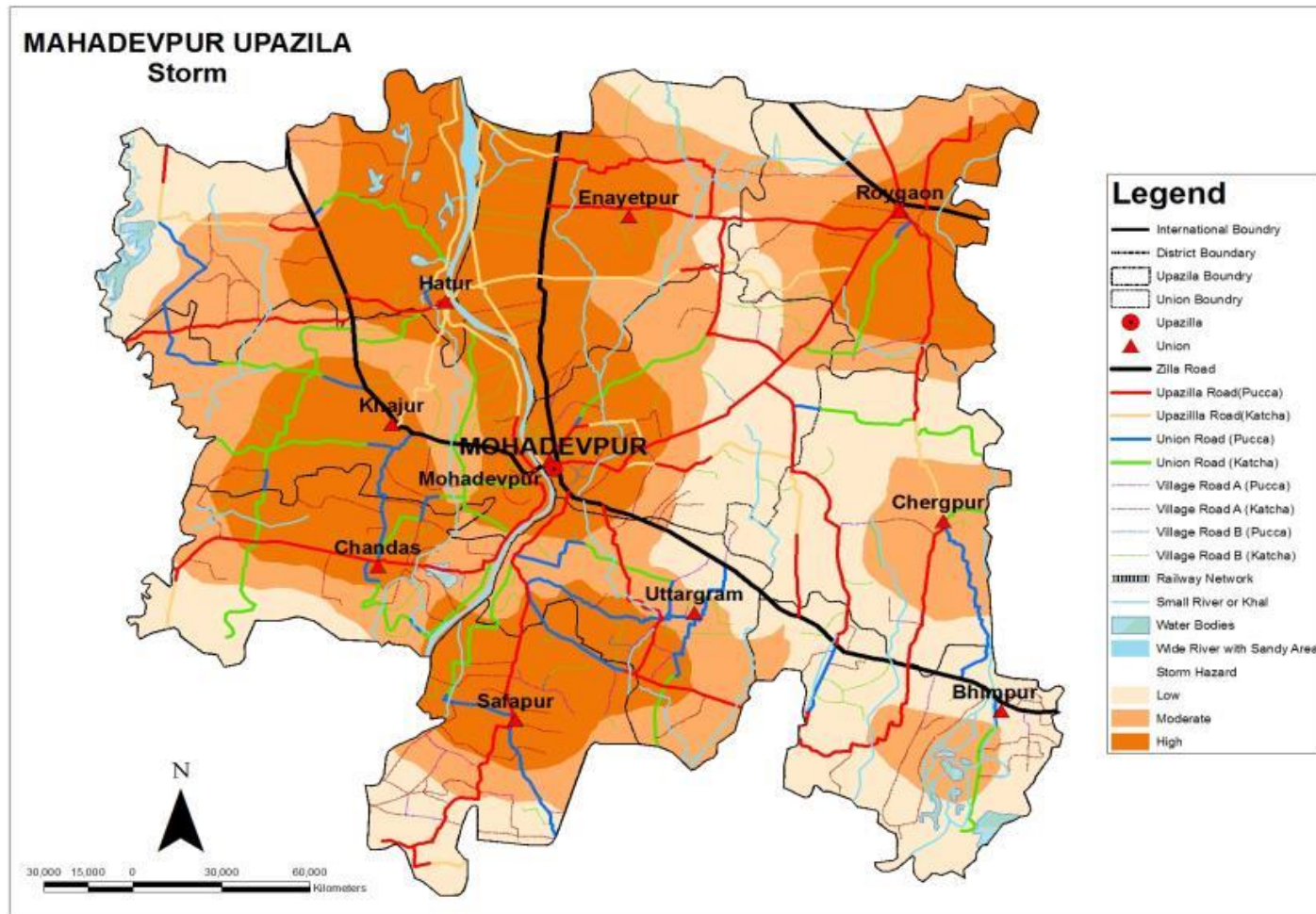
Annex12Hazard Map : (River Erosion)



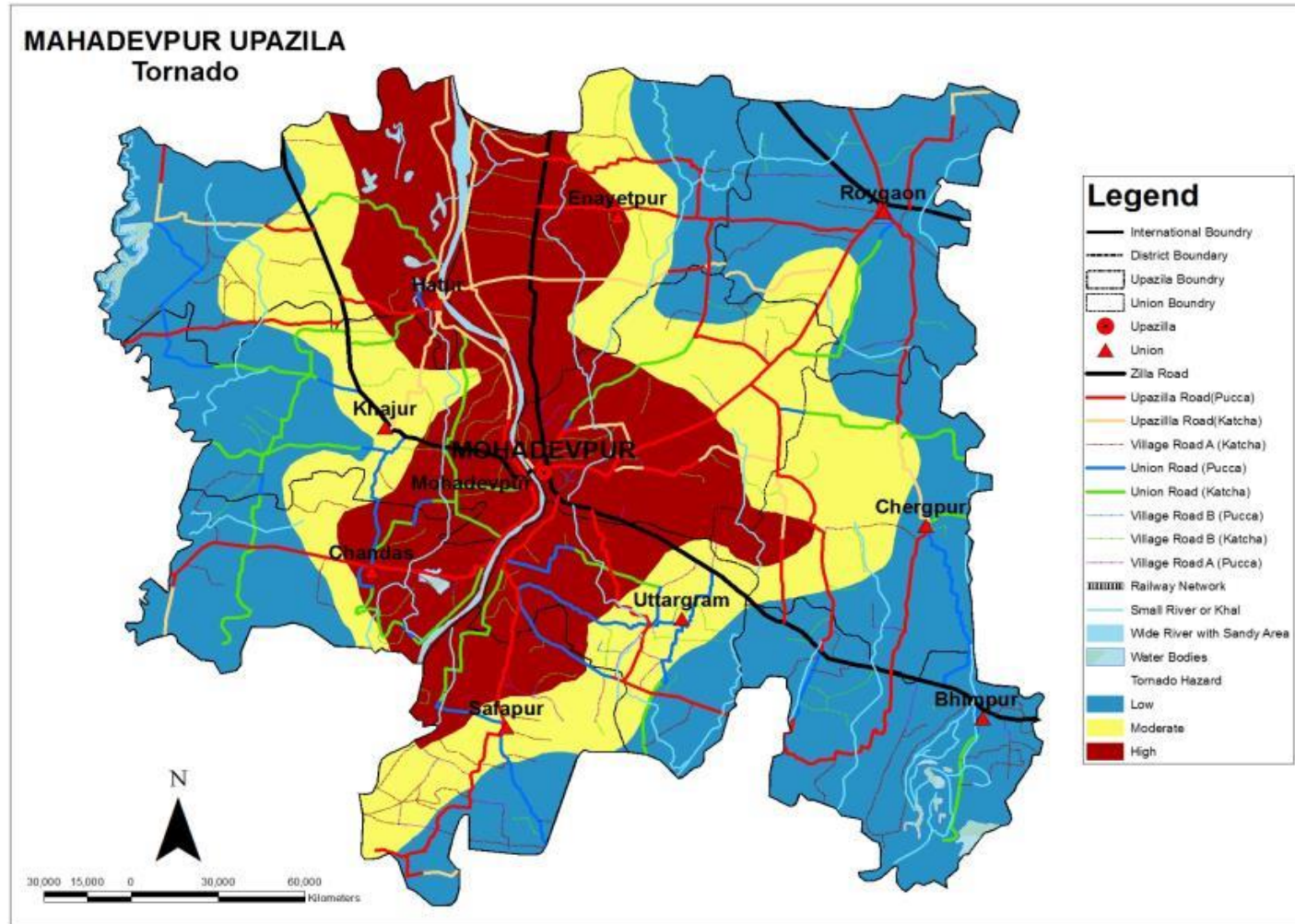
Annex13Hazard Map : (Shortage of Rain)



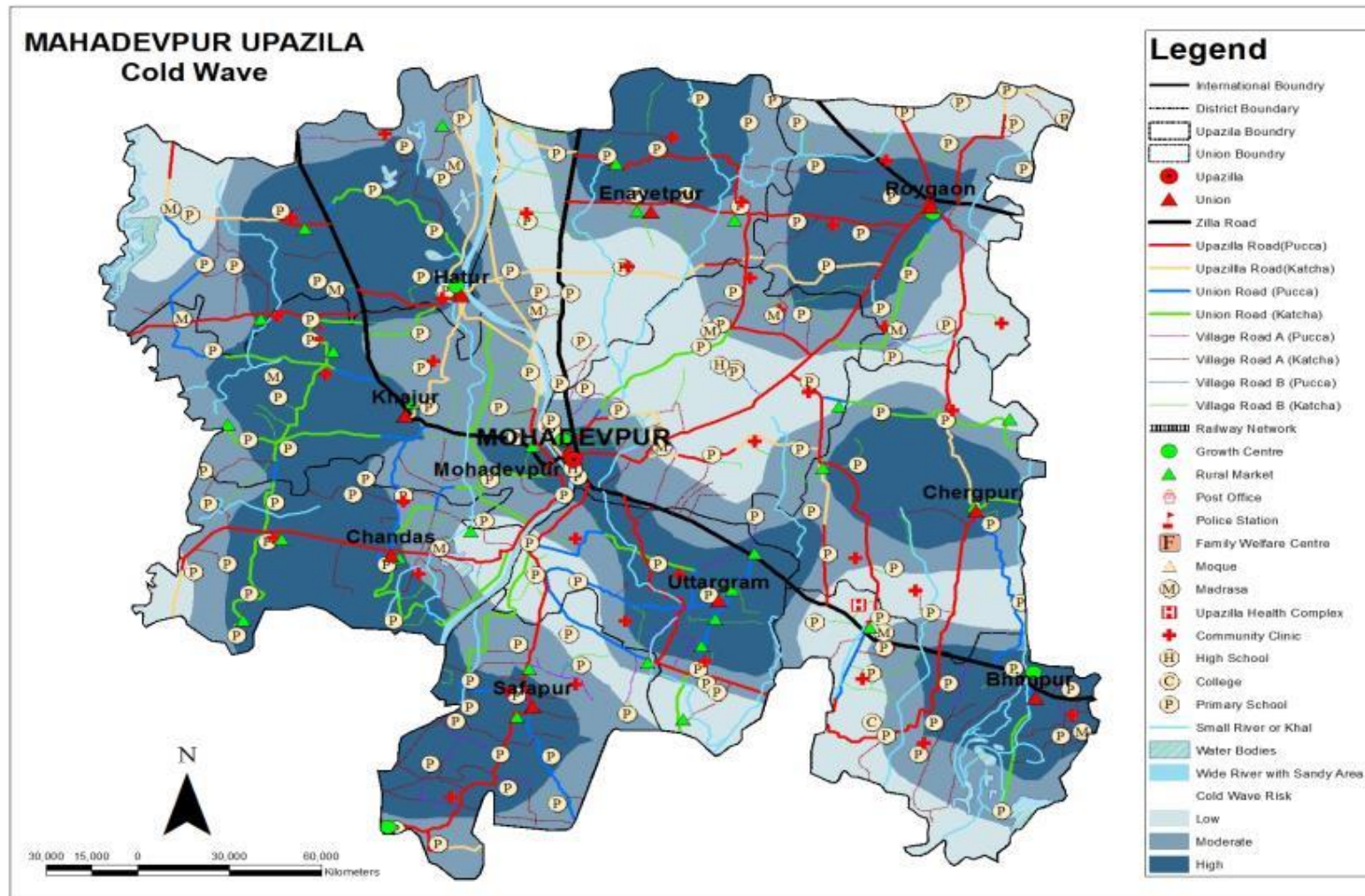
Annex14Hazard Map : (Storm)



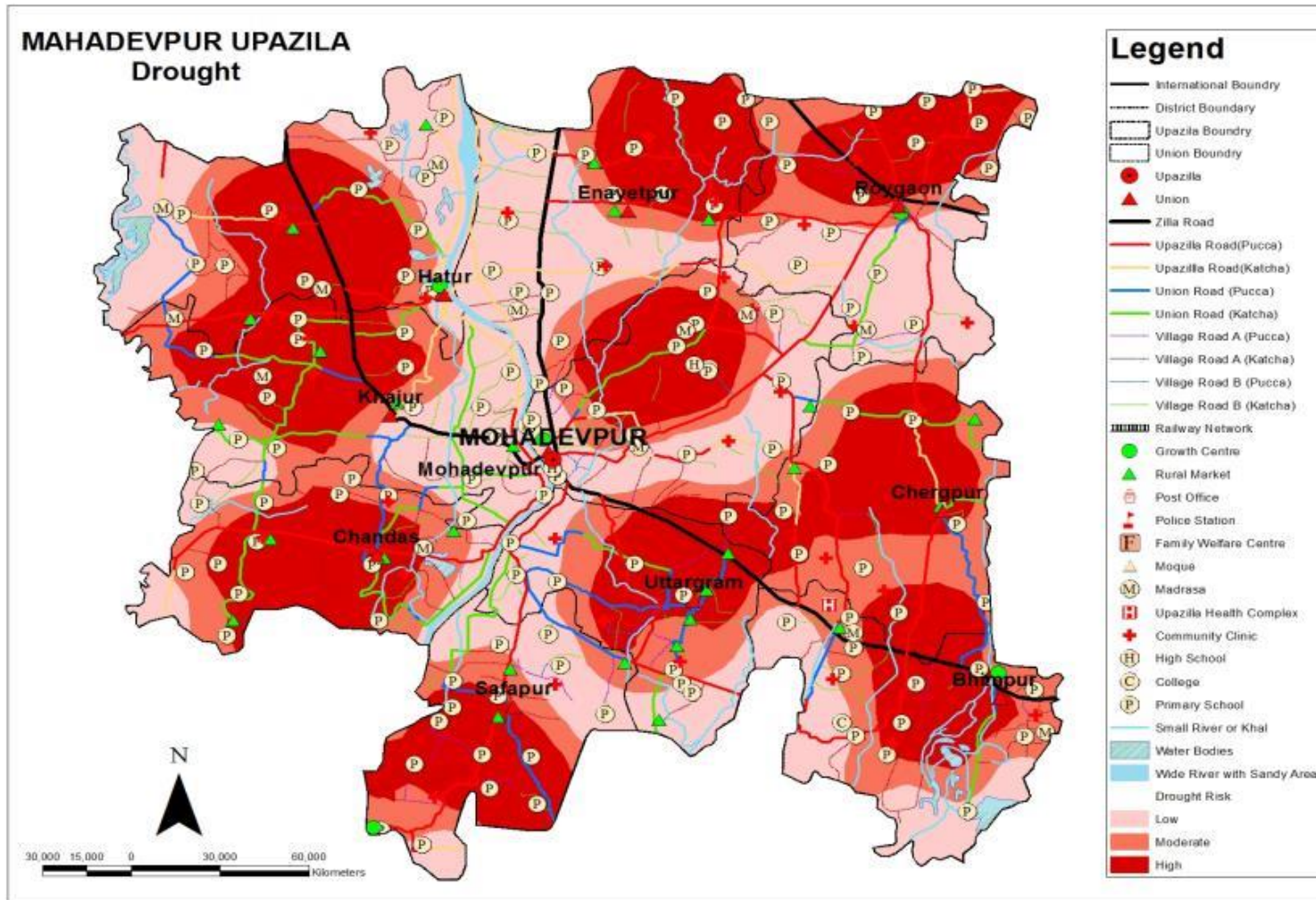
Annex15Hazard Map : (Tornado)



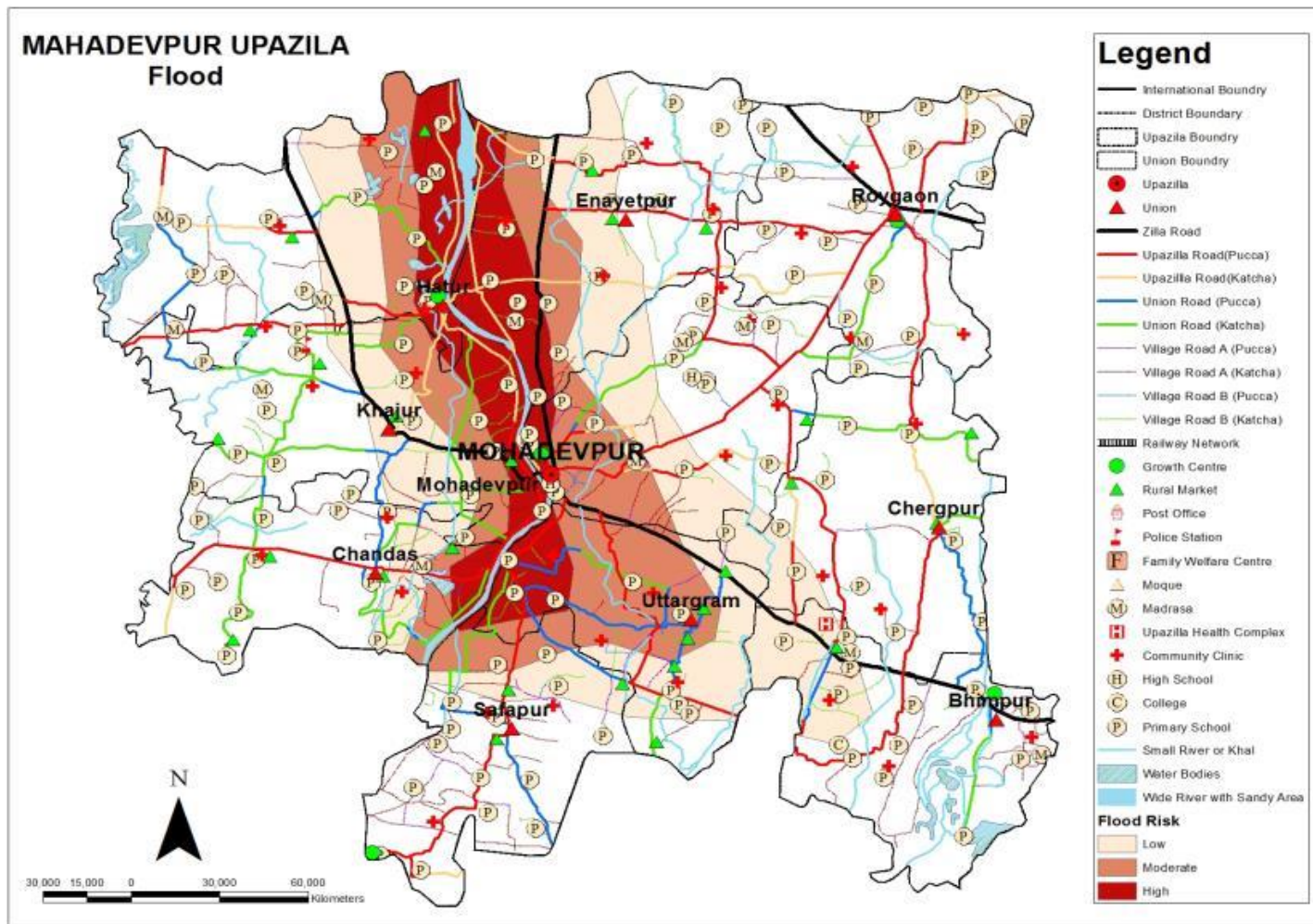
Annex16Risk Map : Cold Wave)



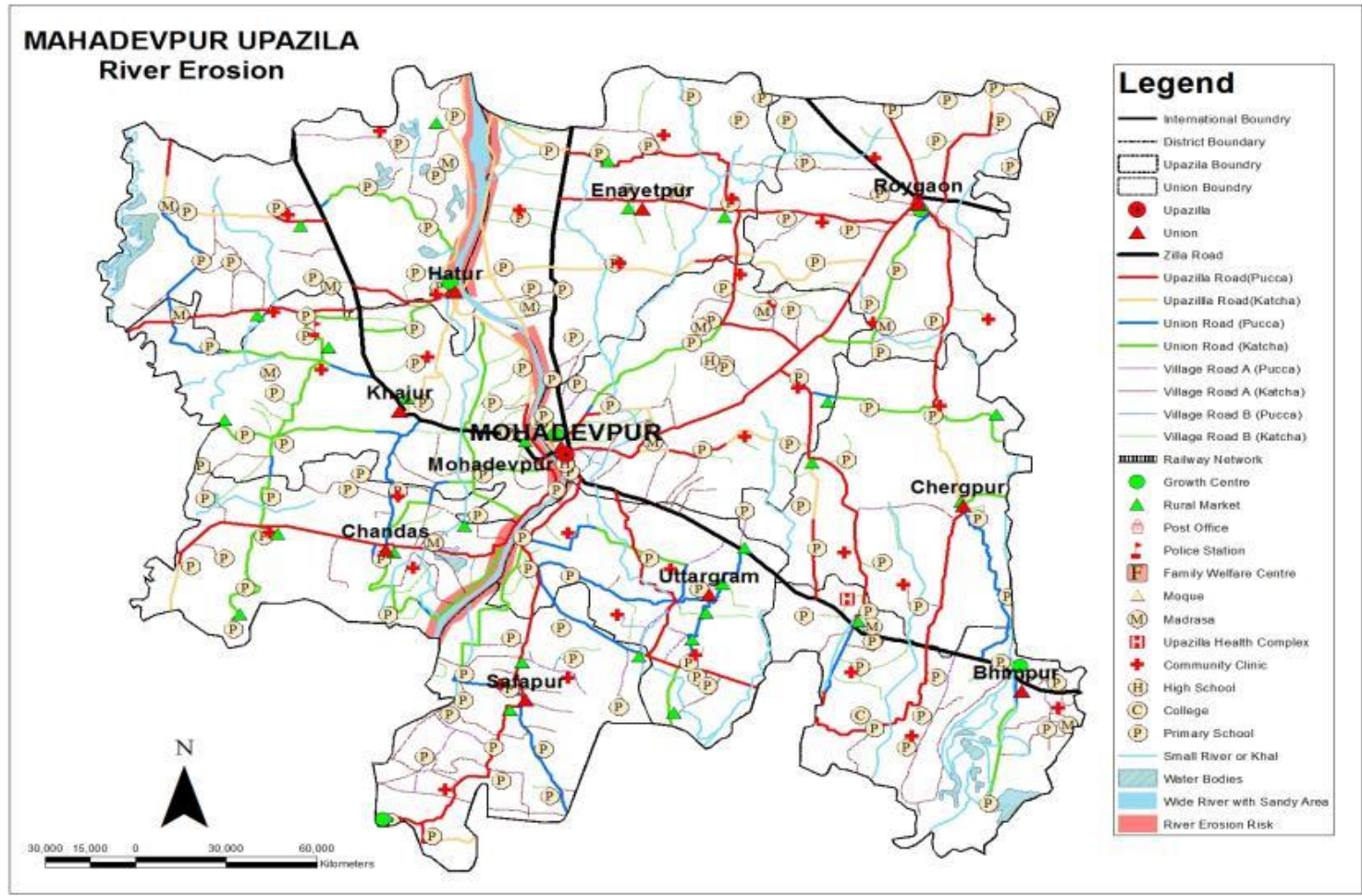
Annex17Risk Map : Drought))



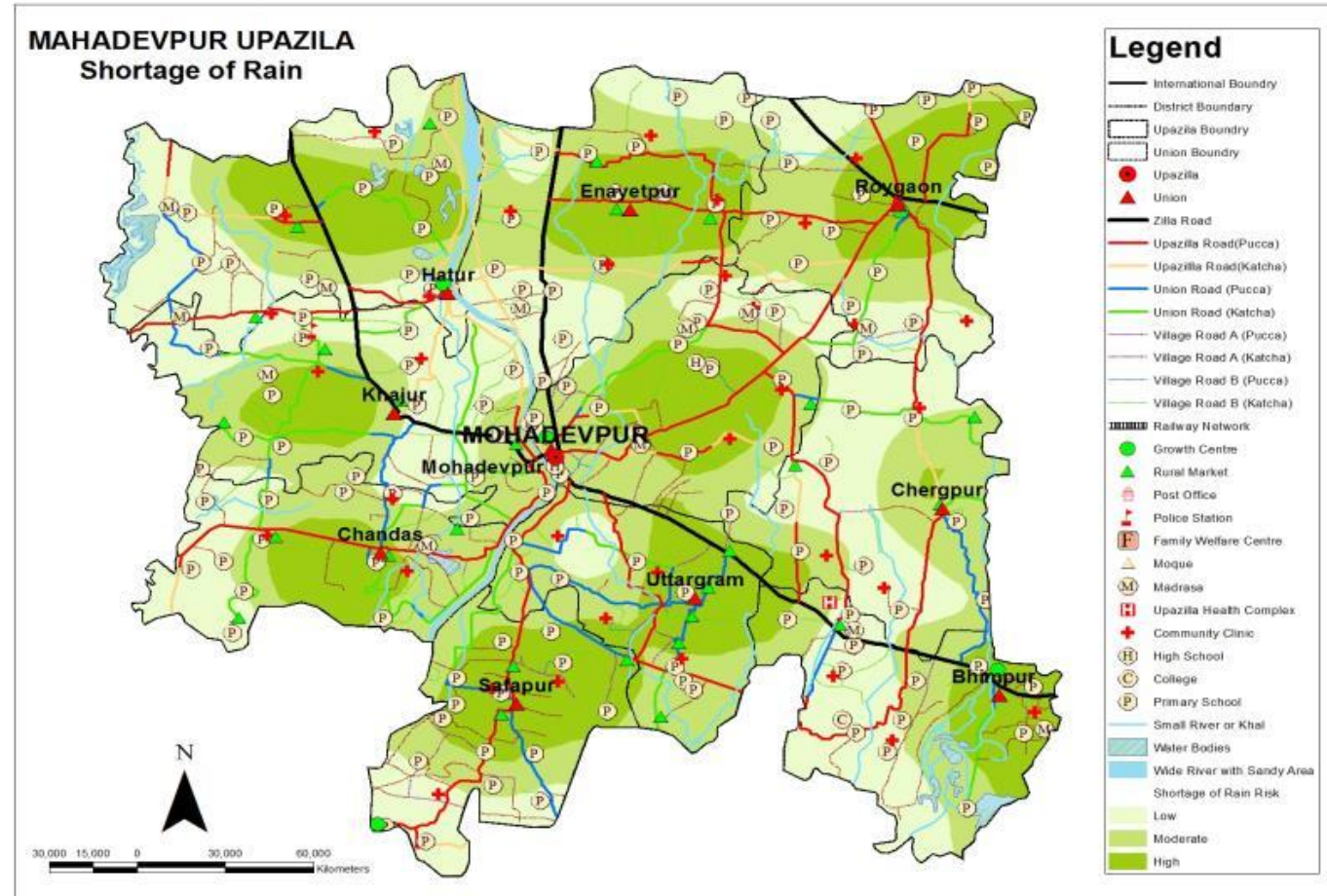
Annex18Risk Map : Flood))



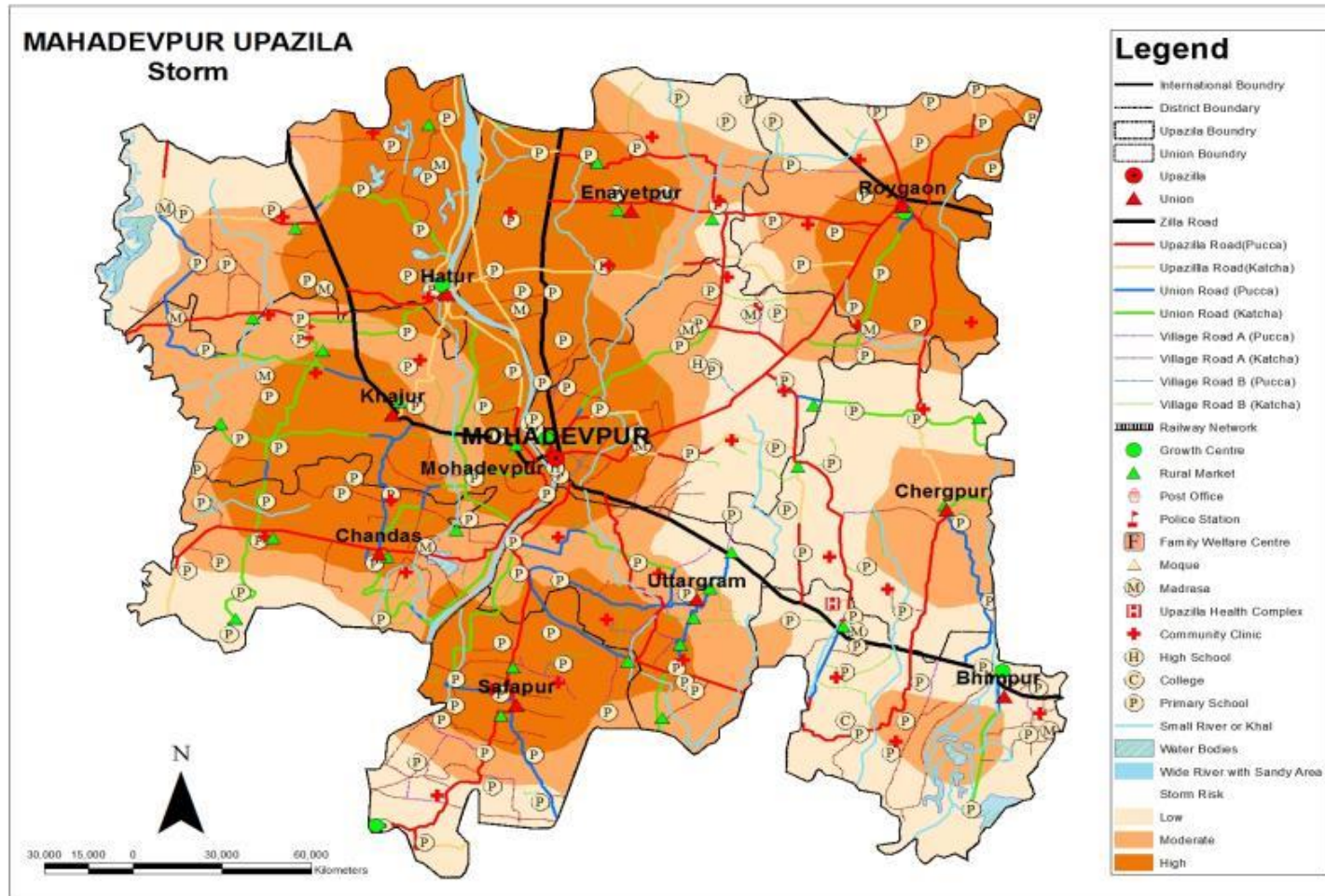
Annex19Risk Map : River Erosion))



Annex20Risk Map : Shortage of Rain))



Annex21 Risk Map : Storm))



Annex22Risk Map : Tornado))

