



Conduction and Developing Disaster Management Plan at Upazila Level

Sharankhola Upazila, Bagerhat

Implemented By:
Upazila Disaster Management Committee



Area Development Organization (ADO)
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Overall Assisted by:
Comprehensive Disaster Management Program (CDMP II)
Ministry of Disaster Management and Relief

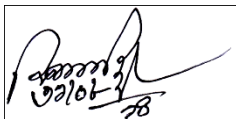


Foreword

Bangladesh is likely to be one of the most vulnerable countries in the world to disaster. From the historical period, the people of the deltaic region of this country are combating against various natural calamities. Among these disasters, some are creeping, redundant, sudden, vivid, and devastating features. These multifarious disasters occur for the geographic location of Bangladesh. On account of geographic location, abrupt weather change and riverine land, this country is vulnerable to natural disasters like flood, cyclone, drought, tornado, tidal surge, salinity and many others. Furthermore, periodic riverbank erosion and flood causes loss of millions of people's lives, homestead, and livelihood. Various anthropogenic hazards are constantly threatening human life. Among these deforestation, pollution of brick industry, use of harmful chemical fertilizer, shrimp virus etc. has caused extensive damage to properties and human lives. These create devastating impacts on local people and country economy.

Although Bangladesh is a severe disaster prone country, no long-term action plan was taken for reducing the disaster risk regarding people's life and assets by undertaking long-term program. Only relief and rehabilitation program was emphasized rather than disaster management plan.

However, in line of Comprehensive Disaster Management Programme (CDMP), recently the Disaster Management and Relief Ministry of Bangladesh has taken milestone program with the financial and technical assistance of UNDP, EU, UKAID, Australian Aid, Embassy of Sweden and Norway aiming to reduce the country disaster risk. Under this program, initiative of Disaster Management Plan (DMP) has been taken at district and upazila level. It is anticipated that the implementation of DMP will play a significant role to reduce the upcoming disaster risk. In this case, a private voluntary development organization, called Area Development Organization (ADO) has been assigned for conducting Disaster Management Plan at Sharankhola upazila of Bagerhat district. Later the diligence and honesty of ADO's staffs and the Upazila Disaster Management Committee (UzDMC) members have played a significant role for conducting and development of this plan. As a result a practical plan has been developed for managing disaster risk of this upazila. Under this disaster management plan, a pre disaster, during disaster and post disaster and for normal period risk reduction action plan has been developed in order to reduce disaster risk as well as ensuring the livelihood of the local people through proper implementation of this plan. I express welcome and thanks from the deep of my heart to all those relevant persons who helped for the development of "Upazila level Disaster Management Plan".



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Upazila Chairman
&
President,
Upazila Disaster Management Committee
Sharankhola upazila, Bagerhat

Preface

Bangladesh is the most disaster prone countries in the world for its geographic location, diversified weather conditions, and population density. Constantly, the disaster is causing death including threat to livelihood, environment, and economy. Cyclone, flood, water logging, drought, riverbank erosion, and increasing saline intrusion are the major disasters that threaten human life and assets spontaneously. Furthermore, the intensity of disaster risk is also increasing as the impact of climate change. For this reason, our local and national development is being impeded continuously.


The districts of south-west Bangladesh are the most vulnerable for its social, economic, and environmental fragile condition. Out of the districts, Bagerhat and its Sharankhola upazila is highly risk prone area. This sub-district is adversely affected by cyclone and existing salinity throughout the year. Although previously, Bangladesh Disaster Management and Relief Ministry has combated the disaster through short-term steps, but no long-term action plan was developed for reducing the disaster risk. However, in line of Comprehensive Disaster Management Programme (CDMP), recently the Disaster Management and Relief Ministry of Bangladesh has taken milestone initiative namely Development of Upazila level Disaster Management Plan. It is assumed that the implementation of Disaster Management Plan under the program of Disaster Management and Relief Ministry will play a significant role to reduce the upcoming disaster risk. Under this Disaster Management Plan, a pre disaster, emergency period, and post disaster and for normal period risk reduction action plan has been developed aiming to reduce disaster risk which will ensure the people's livelihood of the Sharankhola upazila.

I on behalf of the government of Bangladesh requesting to all members of UzDMC and UDMC for working altogether audiciously in order to reduce disaster risk and also bespeaking to all for performing their own roles and responsibilities. I also express welcome and thanks to all those relevant persons who were involved in conducting and development of Disaster Mangement Plan at Sharankhola upazila.



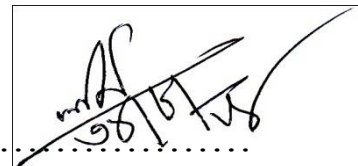
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Chapter One: Local Area Information

1.1 Background:

Including the risk reduction and contingency plan in the Standing Orders on Disaster (SOD), the disaster management plan has recommended to be undertaken at district, upazila, and municipal and city corporation level. CDMP has taken the disaster management plan with great importance. The sustainability and effectiveness of this plan depend on the close and result based working procedure of the relevant organizations, institutions, and people's participation. The disaster Management Plan will be implemented for 3-5 years.

Bangladesh is a disaster prone country in the world map. More or less almost every district of this country is affected by the disasters. Among these 64 districts, Bagerhat district is more disaster prone area. For geographic location and weather condition, cyclone, tidal flood, erratic rainfall, cold wave, arsenic contamination, and tornado are common in this area. Considering frequency and magnitude of disaster, cyclone is the devastating catastrophe which causes huge loss and damage to the community of this district. On the other hand, for being a riverine country, every year this district is affected by river erosion and floods more or less. Moreover, many anthropogenic hazards like deforestation, shrimp gher, utilization of chemical fertilizer, fire hazard etc. keep human life in danger regularly. Sharankhola upazila of this district is very risk prone area for disaster which is consisted of 4 unions. The life and livelihood of community in these unions are impacted negatively for any hazards like cyclone, salinity intrusion, shrimp virus, flood and tidal surge and water logging. Almost every year cyclone strikes this area in the month of April to May and October to November. Thereby extensive damage is happened in the agriculture, fisheries, livestock, and infrastructure and communication sectors. The risk of human life is increasing day by day for cyclone due to inadequate cyclone shelter. Besides, the risk of cattle is also increasing for not having earthen *Killa* in this locality. From another point of view, creeping disaster salinity is increasing in the locality causing displeasing damage to agricultural sectors including agriculture, livestock and fisheries. Flood occurs in this area for heavy rainfall as well as river water intrusion caused by breaching embankment for tidal surge. This flood causes severe damage to the fish cultivation of this area. Nowadays shrimp virus is found in every gher of this area which causes great economic losses to the shrimp cultivators.

Though this area is hit by severe disasters every year, no long-term action plan is induced to mitigate the risk of disaster and to save the lives and asset of local people. Considering all these, this disaster management plan is induced for Sharankhola upazila as a part of the comprehensive disaster management plan.

1.2 Main aim of this plan :

- To build awareness of household and community level on disaster risk and to invent/make practical/realistic risk reduction options at household, society, union, upazila and district administration level.
- To develop a method of implementing risk reduction and management utilizing local resources by local initiatives
- To practice and apply locally made plans for Evacuation, rescue, need assessment of relief and Immediate Rehabilitation measures
- To prepare strategic document for a particular area with specific period
- It will work as a comprehensive plan for the disaster management committee and the relevant sectors (Government, international and national NGOs and donors).

- To provide guidance to the partners of disaster management for ratifying and implementing plan of action.
- To rise/ensure/awake earnest participation, effective partnerships and ownership of the relevant community in the disaster management plan.

1.3 Local Area Information

1.3.1 Geographic Location of the Sharankhola Upazila

The Sharankhola Upazila of Bagerhat District is situated at the south-west of Bangladesh from 22°13' to 22°24' north latitude and from 89°46' to 89°54 east longitude. The total area of this upazila is 756.60 square kilometer including 594.58 sq.km reserve forest area (BBS, 2011). The upazila is bounded on the north by Morrelganj upazila, on the east by Mathbaria upazila of Pirojpur district and Patharghata upazila of Barguna district, on the south by the Bay of Bengal and on the west by Mongla upazila. This upazila is consisted of 45 villages and 12 mouzas. Dhansagar, Khontakata, Southkhali and Royenda these four unions are placed in this upazil. It location is 50 km south away from Bagerhat district and 85 km southeast from Khulna district.

According to the agriculture department, maximum soil of this area is sandy loam and clay loam. Climate of this upazila is warm and humid. Sometimes it appears to be identical. Here summer and winter season felt intense hot and cold respectively. It rains a lot during rainy season. As this area is not far from the Bay of Bengal, so river water of this area is saline for high and low tide. Side by side, more salinity exists in this area during summer season for intrusion of saline water in order to shrimp culture. Although, salt water is suitable for shrimp farming, but it causes extensive damage to crops. Presently, almost 55% people in this area depend on shrimp farming. Coconuts, Shiris, mahogany, nuts, acacia, etc. are the major vegetation in this area. 407 km road exists in this locality comprising 268 km for kacha, 55 km for semi-pucca and 84 km for pucca road. The Bolassore and Bhola River have flown along this upazila. To interrupt the entrance of salinity and flood water 6 embankments were built and the length of these embankments is 43 km. (source, Union and Upazila parishad office, Sharankhola Upazila)

1.3.2 Area

The total area of Bagerhat district is 3959.11 square km, of which the area of Sharankhola upazila is 756.60 square km. It is also reported that 594.58 square km. sundarban is located in this upazila (B.B.S, 2011). There are 4 unions, 45 villages and 12 mouzas in this Upazila. The statistics of union wise mouza and its location are enclosed in annexure 7. (Source: Union parishad, Sharankhola upazila)

1.3.3 Population

There are 119084 (One lakh nineteen thousand and eighty four) population in Sharankhola upazila. Among those 62400 persons are male, 56684 persons are female, 32362 are child, 5628 are old, and 496 are physically disable person. The number of inhabitants in per square kilometer is 157 (B.B.S, 2011). In this upazila the number of families is 28581 (twenty eight thousands five hundred eighty one) and the voters is 71246 here. Union wise different stage of population are enclosed in annexure 8. (Source: Union parishad and Statistics office, Sharankhola upazila)

1.4 Infrastructure and non-infrastructure related information:

1.4.1 Infrastructure

1.4.1.1 Embankment

To interrupt the entrance of the water of high tide and flood there are 6 embankments on the bank of the rivers and canals in Sharankhola upazila. The entire length of these embankments is about 43 km. The details statistics of union wise number and location of embankment is given in annexure 9. (Source: Union parishad and LGED office, Sharankhola upazila)

1.4.1.2 Sluice gate:

For the management of tidal water there are 22 sluice gates in the Sharankhola upazila. But most of them are now inactive and unfit to use. The Sluice gate are generally made by concrete. Union wise statistics number and location of sluicgate are given in annexure-10 Source: Union parishad and LGED office, Sharankhola upazila)

1.4.1.3 Bridge

There are 92 bridges in the Sharankhola upazila. These bridges are made by iron, concrete and wood. Union wise statistics of bridges are given in annexure11. Source: Union parishad and LGED office, Sharankhola upazila)

1.4.1.4 Culverts

There are 90 culverts in Sharankhola upazila. These culverts helps the flow of canal water under the roads. The detail statistics of union wise culverts are given in annexure 12. (Source: Union parishad and Upazila Engineering office, Sharankhola upazila)

1.4.1.5 Roads

There are 108 roads in Sharankhola upazila. The length of these roads is about 407 km. Among them number of kacha roads is 69 and length is 268 km, number of pucca roads is 24 and length is 84 km, number of semi-pucca roads is 15 and length is 55 km. The average height of these roads is between 3 to 3.5 ft. and width is between 6 to 12 ft. During flood around 55% roads including earthen, and semi-pucca road get flooded. Union wise statistics of road's number and location are given in Annexure 13. (Source: Union parishad and Upazila LGED Office, Sharankhola upazila)

1.4.1.6 Irrigation system :

There are 370 shallow machines in the Sharankhola Upazila which are using for irrigation purpose of Rabi crops. Moreover, these machines are also using for shrimp gher water management. The water of deep tube-wells are used for drinking and household chores. There are 2250 shallow tube-wells in the this upazila and its average depth is about 70-90 ft. There is no hand tubewell in this upazila. The details statistics of union wise irrigation sytem is given in annexure 14. (Source : Union parishad and DPHE, Sharankhola upazila)

1.4.1.7 Hat /Bazars

The number of hat-bazar in Sharankhola upazila is 19. Generally the hats set two days and the bazars everyday in a week. There is approximately 1805 shops in these hat-bazars. The detail statistics of the number and location of hat-bazars is given in annexure 15. (Source: Union parishad, Sharankhola upazila).

1.4.2 Social asset

1.4.2.1 Houses

There are 28457 number of houses in Sharankhola upazila. Among those 300 houses are pucca, 695 are semi pucca, 27462 are kacha. There are 28 families who do not have house and 28 families whose houses are located on other's land. Most of the kacha houses in the Upazila are made of wood, bamboo, fan palm, straw. Almost 60% of these houses are below flood level and these houses are also not cyclone resilient. The detail statistics of the number and location of houses is given in annexure 16. (Source : Union parishad, Sharankhola upazila)

1.4.2.2 Drinking water

The main source of drinking water in this upazila is pond and tube-well. About 60% people drink water from ponds, 30% people from tubewells and 10% people from buying drams water. It is reported that people have to buy dram's water from far distance. There are 2350 tubewells in this upazila. Though these tube-wells were set up by government and some doner agencies, but these tube-wells are almost unusable due to presence of high concentration of salinity. At present 1848 tubewells are suitable for drinking water out of 2350 tubewells. Among these tubewells 410 are above flood level and 410 are useable during flood. The detail statistics of the source and location of drinking water is given in annexure 17. (Source: Union parishad and DPHE, Sharankhola upazila)

1.4.2.3 Drainage System/ Sanitaion

There are 28445 latrines in Sharankhola upazila among which 640 are pucca and 27760 are kacha and unheathy open latrines are 45. Among these 7348 are above flood level and 21100 are unusabe during flood. Almost 70% people of Sharankhola upazila use sanitary latrines. It is noticed that kacha toilets are destroyed severely during cyclone. The detail statistics of the drainage system is given in annexure 18. (Source: Union parishad and Public health office, Sharankhola upazila).

1.4.2.4 Educational institutions

There are 114 government primary schools in Sharankhola upazila. Moreover there are also 17 secondary schools, 5 madrashas, and 5 college in Sharankhola Upazila. There are no government secondary school, madrasha and college in this upazila. The detail statistics of the educational institutions is given in annexure 19. (Source : Union parishad and Primary, Secondary education office, Sharankhola upazila).

1.4.2.5 Religious institutions

There are 317 mosques and 46 temples in Sharankhola Upazila but no church in this Upazila. Among cultural festival of different religions, every year the Muslims celebrate 2 eids, the traditional Hindus celebrate their religious festival in the temples, and the Christians celebrate their Christmas day. Different religious people live here friendly and they help each other. The detail statistics of the Religion institution is given in annexure 20. (source: Union parishad and Statistics office, Sharankhola upazila).

1.4.2.6 Religious gathering place

There are total 67 government and non-government Eidgah in Sharankhola upazila. However it is noticed that most of the eidgahs are relatively lower than the roads. The detail statistics of the eidgha is given in annexure 21. (Source: Union parishad and upazila statistics office)

1.4.2.6 Health service

There are total 21 health service centers in Saronkhola upazila. Among these, there is one upazila health center, four union health centers, and 16 community clinics. There are 22 doctors (Officer, consultant, and Deputy surgeon) and 24 nurses and staffs in this upazila. The detail statistics of the Hospital is given in annexure 22. (source : Union parishad and Upazila Health and Family Planning Office, Sharankhola)

1.4.2.7 Banks

There are 3 banks in this upazila. These banks are Agriculture, Sonali, and Janata. All these banks are located at Royenda union. These banks provide services like money exchange, deposit scheme, providing agricultural loan, SME loan and other services to the consumers. The detail statistics of the Bank is given in annexure 23. (Source : Sharankhola upazila parishad).

1.4.2.8 Post offices

There are 13 post offices in Sharankhola upazila. These post offices exchange money orders and letters for consumers, sell stamps, and give DPS, postal cash card service, mobile money order service, GEP service, savings bank service etc. The detail statistics of the post offices are given in annexure 24. (Source : Upazila parishad, Sharankhola).

1.4.2.9 Club/Cultural club

There are totally 8 clubs or cultural centers including big and small in Sharankhola Upazila. These clubs generally perform for organizing sports and various entertaining activities. Social service and other development activities are not performed by these clubs. Moreover these centers are used as volunteer's institution during disaster and help in rehabilitation programme after the disaster. The detail statistics of the Club/cultural club is given in annexure 25. (Source: Union parishad, Sharankhola Upazila).

1.4.2.10 Playground

There are 17 playgrounds in this upazila. Most of these play grounds are low. During flood these fields remain half drowned under water and are not useable during disasters. As a result during disaster these playgrounds can not be used as shelter center after disaster, these playgrounds are used for relief distribution, building temporary camp, and for conducting mock drill purposes. The detail statistics of these Playground is given in annexure 26. (Source: Union parishad, Sharankhola upazila)

1.4.2.11 Graveyard/ Burial ground

There is a government graveyard and burial ground in the Southkhali union which are known as Muktijoddha sarbojonin koborstan (ward # 4) and Rajessor sarbojonin soshanghat (ward # 9). There is no government graveyard in this upazila but there is a govt burial in this upazila. Due to lack of government graveyard people use their own lands as their family cemetery. Maximum graveyards of this upazila is on low land areas, as a result during rainy season/flood these remain submerged. (Source: Union parishad, Sharankhola upazila).

1.4.2.12 Communication and Transport media:

The inhabitants of Sharankhola upazila usually use the surfaceway and waterway as transport media. On surfaceway people usually use van, rickshaw, Bus, motorcycle, tempo, nosimon and on waterway ferry, launch, boat and trolar as transport media. At present there are about 520 vans, 1000 motorcycles, 140 nosimons, 400 boats and 460 trolars in this upazila. Union wise communication and transport statistics in details is given in annexure 27.

1.4.2.13 NGO/Volunteer organizations :

At present there are about 33 local, national, international NGOs are working here. These NGOs are performing activities like micro credit, education, health, water and sanitation, and awareness building of development. Besides, these NGOs are working in the disaster risk reduction and climate change adaptation. The detail statistics of these NGOs are given in annexure 28. (Source: Social welfare office, Sharankhola upazila)

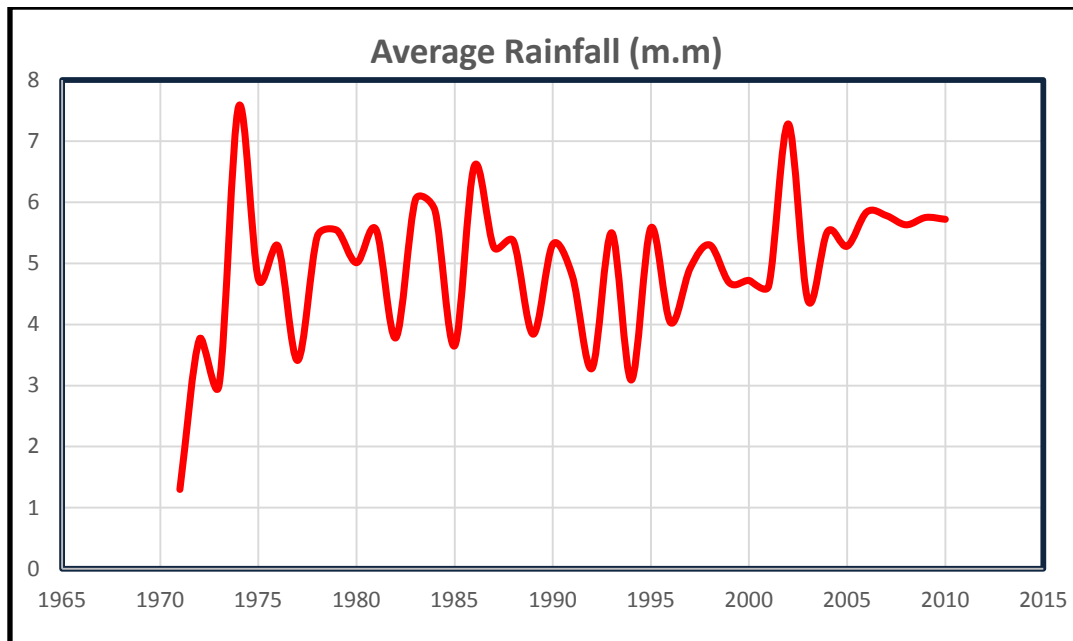
1.4.2.14 Forest and Afforestation:

There is 594.58 km natural/reserve forest (Sundarban) in Sharankhola upazila. Generally forest is located near Southkhali union. Moreover many trees are found beside the roads, on the bank of ponds, and in front of houses. Many NGOs working in this upazila and they are inspiring the common people about afforestation. There are 85 acres lands under afforestation. There is no natural forest in Dhansagar union but after the SIDR the NGOs working in this union are taking steps for afforestation. Moreover afforestation has been done over 7 km road by the union parishad itself. Moreover there are 7 nurseries here. Many different types of trees were planted on the both side of the Royenda union. Plantation of trees beside the all unions' roads has been taken already. Different types of fruit trees and wooden trees are planted in Southkhali union under the tree plantation programme. Tree plantation about 7 km on the both sides of the Bhola River's embankment has been taken under the social afforestation programme. Moreover many trees like *siris*, *chambol*, *coconut* etc. have planted under government initiative. In unions many different trees have been planted both sides of 10 km roads under government initiatives. It should be mentioned that the remarkable cyclone SIDR caused a terrible damage to the trees of this upazila and later no steps from the government or from the non-government organization was taken the preserve these trees. The detail statistical description of the union wise forest and a forestation is given in annexure 29. (Source: Union parishad and Forest office, Sharankhola upazila).

1.4.2.3 Climate and Weather

Trends of Rainfall

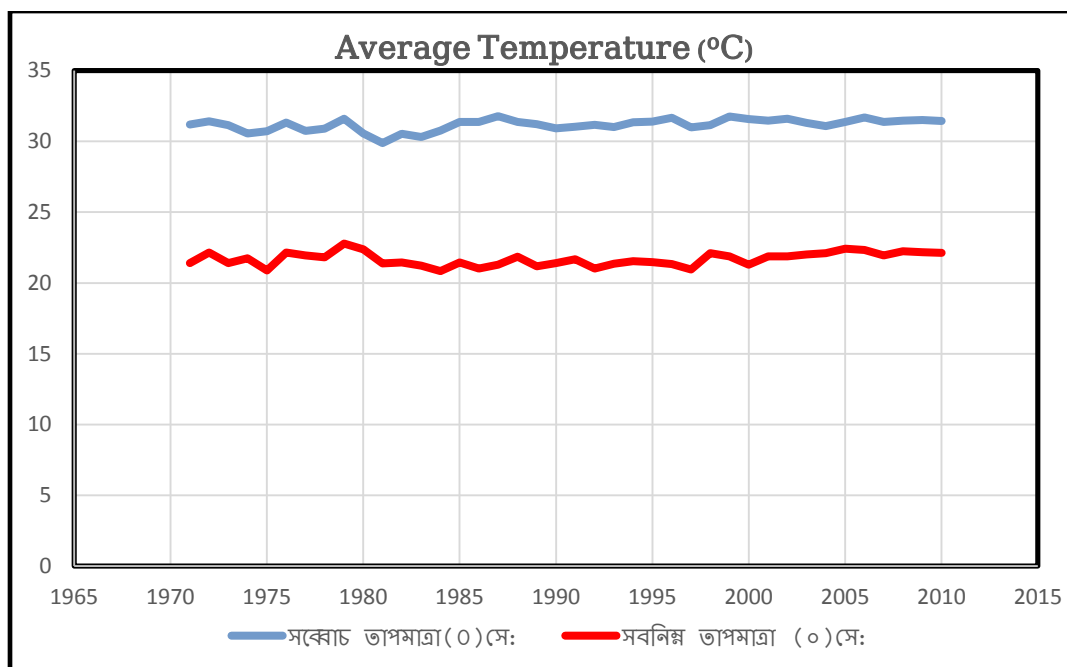
Analyzing the types of rainfall of this Upazila, it has been found that the average daily rainfall is almost the same over years. The average rainfall of this area is 1710 mm. The average daily rainfall after 1971, 1981, 1991, 2001, and 2011 is more than 1, 6, 5, 5 and 6 mm respectively. But more researches are necessary to find out whether this change signifies the climate change or not. Due to the change in the trend of rainfall the time of monsoon is lagging behind which is bringing change in agricultural process and increasing the production cost, moreover the amount of production is lessening. The diseases, infection and insecticides have also increased. It has appeared that rainfall is occurring in undue time. A huge amount of rainfall occurs until *Ashar-Ashin* which cause water logging. However, in winter season significant rainfall happen which is causing a great negative impact on the crops and livelihood of the inhabitants. (Source: Weather Office)



By analyzing the scientific information, it has found that the average rainfall of this area has increased.

Temperature:

Due to the location of this area near to the *Sundarban* and having adequate trees locally the temperature in this area is not much. The average highest and lowest temperature of this area is 33.5°C and 12.5°C. During rainy season the average temperature of this locality remains 28.30 °C and usually the temperature of this area remains normal. From the experience of the local community it is known that the temperature has been gradually increasing, especially the temperature during the last 7-8 years had been too high to normal living of the community people. One of the reasons of the increase of temperature may be attributed to both the increase of humidity in the air and salinity in the water, as both humidity and salinity decrease the tolerance level of the environment. This temperature increase has threatened the agricultural practices, especially, the increased salinity to the shrimp cultural lands increase the salinity in the soil. So is the vulnerability of the biodiversity. The risks, too, in future will increase, if this situation continues. Besides the trading in poultry farming and rearing of cattle as adopted by people as the alternative livelihood occupations have been threatened by the temperature increase. (Source: Weather Office).



By analyzing the scientific information, it has found that the average temperature of this area has increased.

The ground water level :

The DPHE conducts survey twice a year to measure the water table in the ground water aquifers. It has been observed that the table lies between 14 to 16 feet. In April and in May, this level goes between 15 to 17 ft. According to the respondents although this water level recession does not occur, the availability of drinking water has been decreasing as the saline water is balancing the water in the shallow layer. According to the local people, the layer of sweet drinking water is going down which is a great threat to the sustainable development. (Source: DPHE, Sharankhola upazila)

1.4.4 Others

Land and Land use:

There are about 15123 hectare lands in Sharankhola upazila. Among them, 9951 hectare lands are cultivatable land, 720 hectare's are fellow lands, 6000 hectares are single cropped lands, 2850 hectares are double cropped lands, 1101 hectares are triple cropped lands, and 2345 hectares are habitable lands. Union wise land and land use statistics in details is given in annexure 30. (Source: Upazila Agricultural Office, Sharankhola).

Livestocks:

Livestock is an important asset for every family. This sector acts as a subsidiary income and provides protein to the family. Almost every family rears some birds and livestock. Cows, goats, buffalo, sheep, ducks, and chickens exist in this upazila. Presently there are 43650 cows, 43100 goats, 71600 ducks and 98550 chickens in this upazila. Union wise livestock's statistics in details is given in annexure 31. (Source: Upazila Livestock office, Sharankhola)

Agriculture and Food:

The main economically helpful crops of Sharankhola upazila are *Aman*, *Aus*, and *Boro* paddy and shrimp. From the production statistics it is found that 25480 metric ton rice and 662 metric ton white fish and lobster have been cultivated here. Due to increasing rate of salinity the agricultural production is decreasing day by day. The main food of the local people is rice

and fish. Moreover the meat, vegetable and different fruits are the main elements of the local people's food habit. The main foods of this upazila are rice, fish, pulse and they take it once at morning, once at afternoon and once at night. Union wise Agriculture and Food statistics in details is given in annexure 31. (Source: Upazila Agriculture and Fisheries Office, Sharankhola Upazila)

Rivers:

There are five rivers in Sharankhola upazila. The names of the rivers are sequentially Bolassor, Bhola, Sharankhola, Royenda and Bhola Biskhali River. These rivers have flown almost every union of this upazila. Union wise Rivers statistics in details is given in annexure 32. (Union parishad and Upazila Fisheries Office, Sharankhola)

Canals:

There are 31 canals in Sharankhola upazila. Due to natural and anthropogenic activities especially for illegal possession and for shrimp cultivation by the powerful persons of the local area, many canals are in danger of extinction. Union wise canal statistics in details is given in annexure 33. (Source: Union parishad and Upazila Fisheries Office).

Ponds, Beels and Gher:

There are 2063 ponds in this upazila. Though there is water in these ponds around the year but in winter the ponds dry out. In maximum ponds are used to cultivate shrimp because of their high salinity. Moreover these pond's water also use for household chores, and drinking purpose. There are 373 ponds in Southkhali Union, 555 ponds in Royenda Union, 560 ponds in Khontakanta Union and 575 ponds in Dhansagar Union. Besides those, there are 1250 shrimp and lobster gher in this upazila. There is no beel in Sharankhola upazila. Union wise Ponds statistics in details is given in annexure 34. (Source: Union parishad and Upazila Fisheries Office, Sharankhola).

Salinity:

About 25-30 years before water upraised from November to June in the low land area of this upazila. There was regular tide and ebb, which was quite essential for the land formation. In that environment, salinity was not considered as a prime problem. It did not affect the live and livelihood of the community. Because of constructing embankment in the coastal area to grow more crops when the convention of double and triple crops initiated salinity appeared as a great hazard from then. Due to climate change and the convention of shrimp cultivation, the salinity hazard has become more severe than before. It seems alarming that for the location of the area on the bank of the river, the huge convention of shrimp cultivation and the change in the trend of livelihood salinity may not be marked as a great hazard but in terms of drinking water, biodiversity, environmental balance it may appears to be a devastating hazard. About 30% area of this upazila appears to be affected by second and third degree salinity. Due to river siltation and water logging at present though the percentage of salinity in the low land area is less the uprising of the sea level causing a great threat of submerging this area by the saline water. (**Source :** Union parishad, Upazila Fisheries Office)

Arsenic contamination:

As arsenic and iron is severe in the shallow tubewells of this locality the water of these tubewells becommne unuseable for drinking purpose. During chaitra and Baishakh the layer of water goes under lower region as aresult people can not get water from the non deep tubewell and it becomes difficult to get water from the deep tubewell. According to the

published map by Bangladesh Public health Engineering maximum tubewells of this area are severely affected by arsenic. As a result scarcity of pure drinking water should be considered as a main great hazard for this area.(Source : Public health office, Sharankhola upazila).

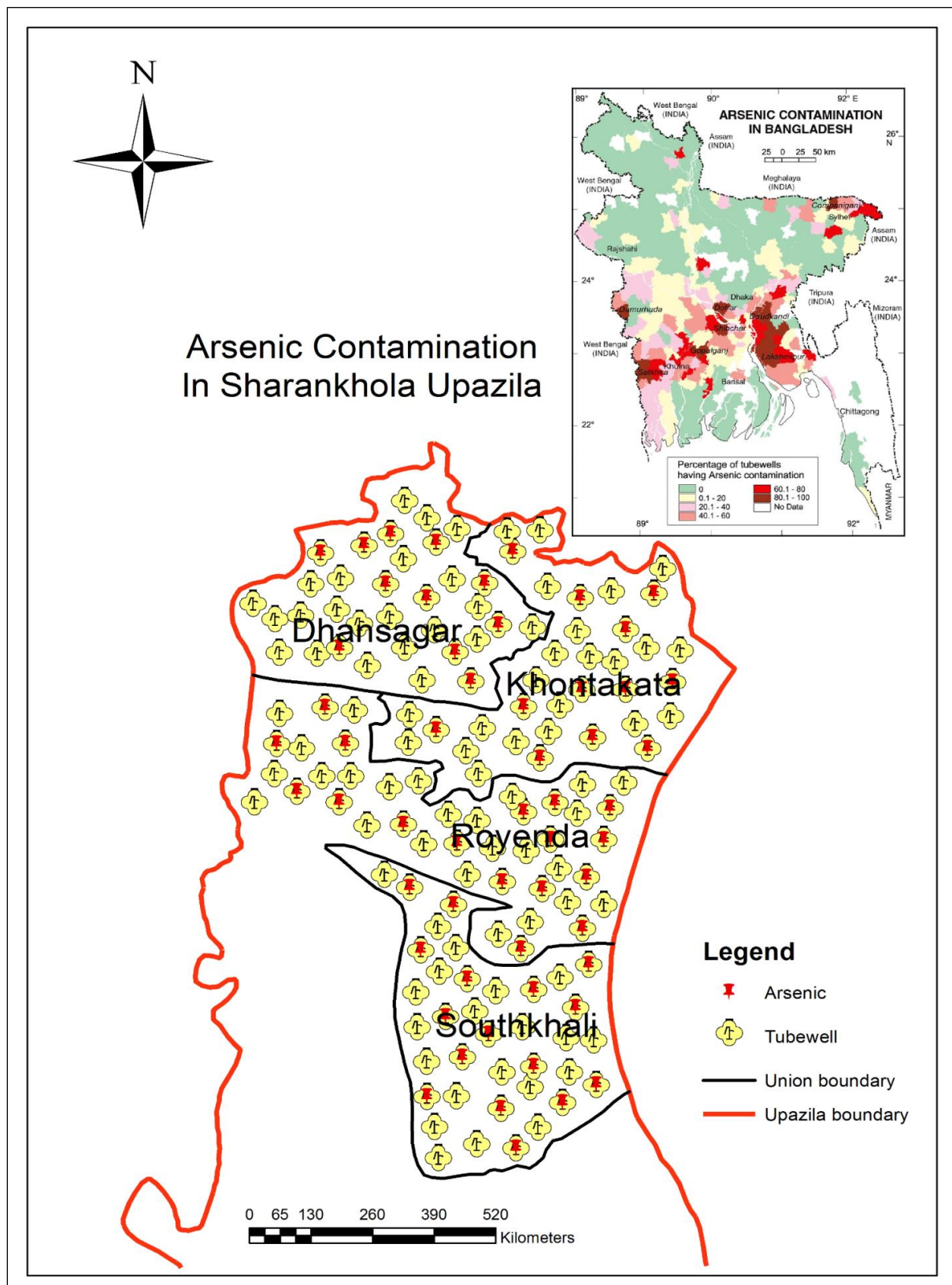


Figure 1: Arsenic contaminated area of Sharankhola Upazila

Chapter Two: Disaster, Hazard and Vulnerability

2.1 Overall Disaster History

Sharankhola is one of the most disaster prone upazila of Bagerhat district. Every year this upazila faces disaster at least once. Many disasters including salinity, river erosion, drought, cyclone, tidal surge, shrimp virus affect the human livelihood severely and cause great negative impact on assets. During rainy season the whole area get submerged as the depth of Bolessor, Bhola, Sharonkhola, Royenda, and Bishkhali rivers are decreasing day by day. Moreover, as the drainage system is not well improved during rainy season the low land areas of the upazila get under the water. This water logging remains for one month. Water logging and flood are increasing day by day as the rivers are being silted gradually.

As this area is located near the coastal region every year cyclone strikes this area. Cyclone and tidal surge strikes severely on human life and livelihood from the southwestern side. Moreover, the intrusion of saline water is increasing day by day, which is causing a great negative impact on trees and crops. Agriculture, livestock, health, trees, infrastructures are being damaged severely due to these hazards. Scarcity of food and employment affect the human life negatively. From the entire disaster history, it is known that every year small or big cyclone strikes this area. The cyclone of 2007, 2009 caused a devastating effect to the Southkhali, Khontakata, Royenda and Dhansagar unions. All the unions are also affected by salinity. As a result, the remarkable disasters caused a devastating impact over the human lives and livelihood. It is mentionable that during 2007 the devastating tidal surge, Sidr with 20-25 foot and 220-240 km/hour speed stroke the coastal areas of this upazilla which affected adversely to the local people. By a statistics of government statement, that 298 people died and 1 corer 2 lakh 11 thousand 780 people were severely faced casualties for this Cyclone. It is also damaged about 58 thousands 886 houses. (Upazila Project Implementation Office, Sharankhola)

Name of disasters and its casualties, frequency, and places are given by the following chart:

SL#	Hazard	Year	Magnitude	Affected element
1	Cyclone	1988, 2007, 2009	Severe	Crops, Human beings, Livestock, Infrastructure
2	Salinity	Every year	Severe	Crops, Trees, Infrastructure
3	Shrimp virus	Every year	Severe	Livelihood and Fisheries
4	Flood	2000, 2013	Severe	Livestock, Fisheries, Crops,
5	Water logging	Every year	Severe	Livelihood
6	River erosion	Every year	Severe	Roads, Lands, houses, Crops
7	Drought	Every year (2012)	Severe	Crops, Fisheries, Livestock
8	Tidal surge	2009	Severe	Crops, and Fisheries

2.2 Hazards of the upazila:

Serial	Hazard	serial	Ranking
1	River erosion	1	Cyclone
2	Flood	2	Salinity
3	Drought	3	Shrimp virus
4	salinity	4	River erosion
5	Cyclone	5	Drought
6	water logging	6	Flood
7	shrimp virus		

2.3 Different hazards and their present and future scenario

Cyclone:

The Sharankhola upazila is a disaster prone area. Every year from *Vadra* to *Ashin* cyclone strikes this region. For this the agricultural, fisheries, infrastructural sectors were terribly damaged. The deforestation and the destruction of the Sundarban enforced the damage of different sectors. It is considered that Due to the global warming thr number of cyclone is increasing day by day. Though every year cyclone visits this area the cyclone of 2007 and 2009 was remarkable. About 40-50 % Aman Paddy, 20% fruits garden and 90% vegetables were damaged.

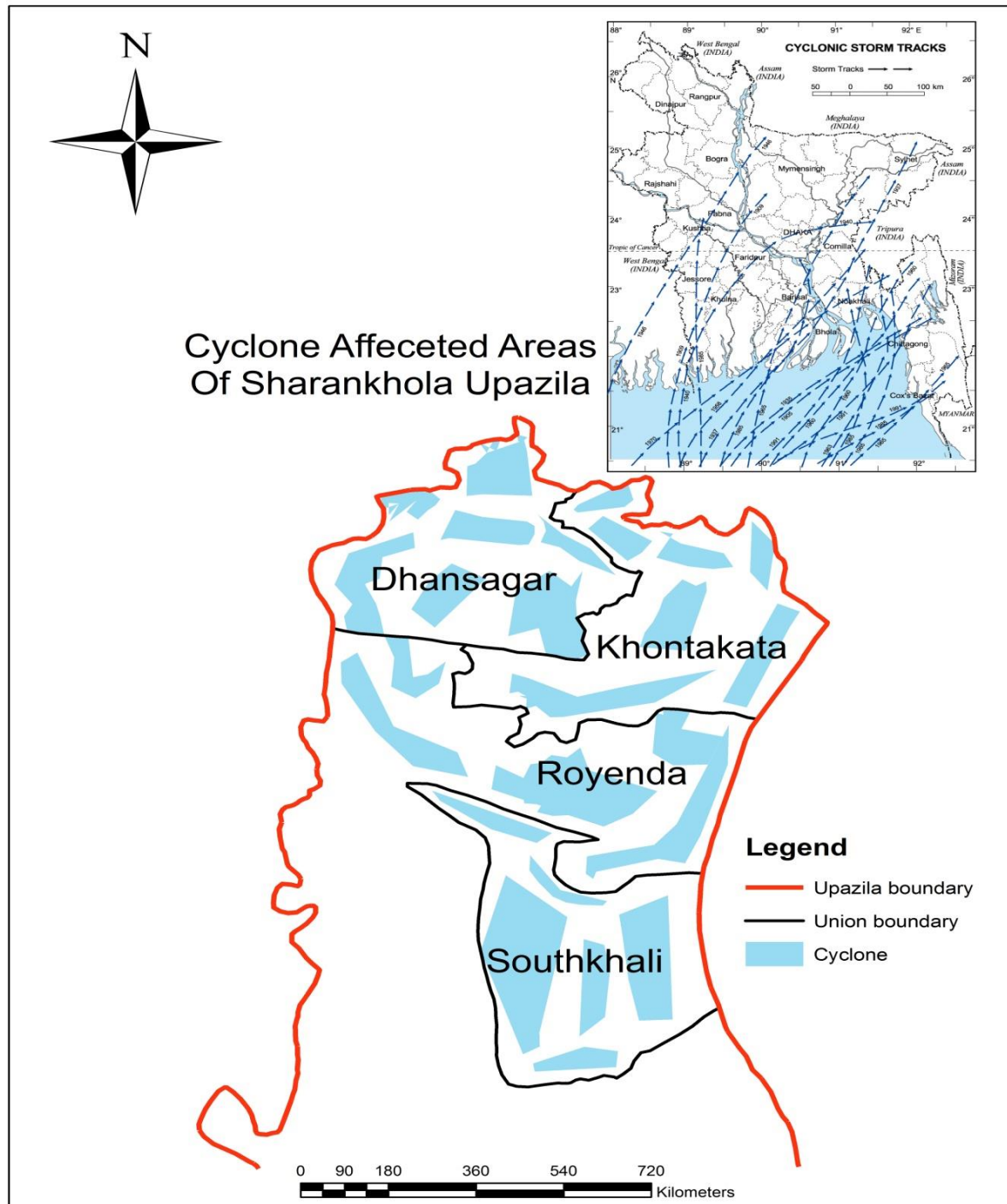
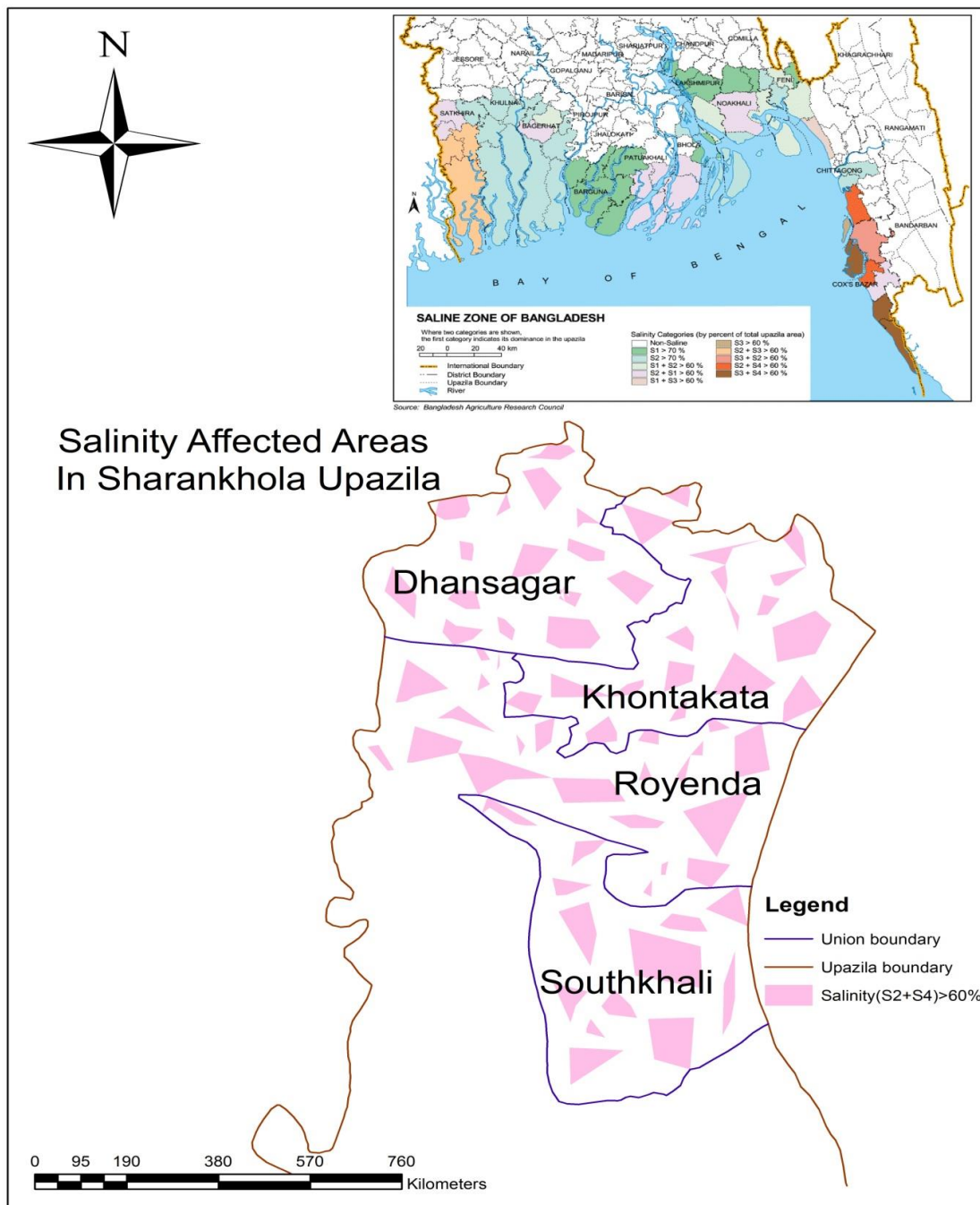


Figure 2: Cyclone and Tidal surge affected area of Sharankhola Upazila

Salinity: Salinity is a great hazard in Sharankhola upazila. The level of salinity is increasing day by day. From Poush to Josthe month there remains extreme salinity. The level of salinity decreases with the rainfall. During summer salinity causes a great negative on the agriculture. Due to the salinity there is scarcity of drinking water. Due to the increasing of sea level the salinity is increasing day by day. For cultivating shrimp the cultivators are making the salinity intrusion. Moreover due to not having embankment the saline water enters into the locality during the tidal surge. Due to salinity it has become impossible to cultivate Boro and Aush in the locality. Also there is scarcity of drinking water due to this hazrd. It is also causing a negative impact on the fruits and forests. If this goes on continue during summer the agricultural sector will be seriously damaged. Though every year there is salinity, the level of salinity during 2006 was remarkable.



Picture 3: Picture of Salinity Zone

River Erosion :

River erosion is a common hazard in this region. The Royenda and Khontakata is more river erosion prone union. River erosion continues every year in this upazila. River erosion continues from *Ashar* to *Ashwin* month. As a result the agricultural crops, households, roads and trees have drowned in the river. The river erosion is interrupted the food production. People also become shelter less for the impact of this hazard. If government does not take any step to build embankment along the river side and no large of root trees are planted then this hazard may appear more severely.



Figure 4: Picture of river bank erosion

Tidal surge :

The tidal of Bolassor and Bhola river which flows beside the Sharankhola upazila causes flood in this region. Flood causes terrible damage to the agricultural, fisheries and other livelihood sectors. As saline water enters in the locality during flood it causes great damage. Though every year tidal surge visits this area, the tidal surge of 1988, 2007 and 2009 were severe. Moreover due to the decreasing of river navigability tidal surge is increasing day by day.

Drought :

Due to irregularity in rainfall appears drought. Though in vogue rainfall should appear during *Ashar* due to climate change it appears lately even during rainy season rainfall does not appear for a long day continuously. Because of this severe drought in this locality people suffer from scarcity of water. As a result people have to drink the contaminated water and they suffer from many water borne diseases. Moreover the water of ponds and ghers dry out and causes a great damage to the fish cultivation. Scarcity of rainfall also causes damage to the fruit and forest trees. Due to climate change the negative impacts of drought may also appear more badly.

Shrimp virus :

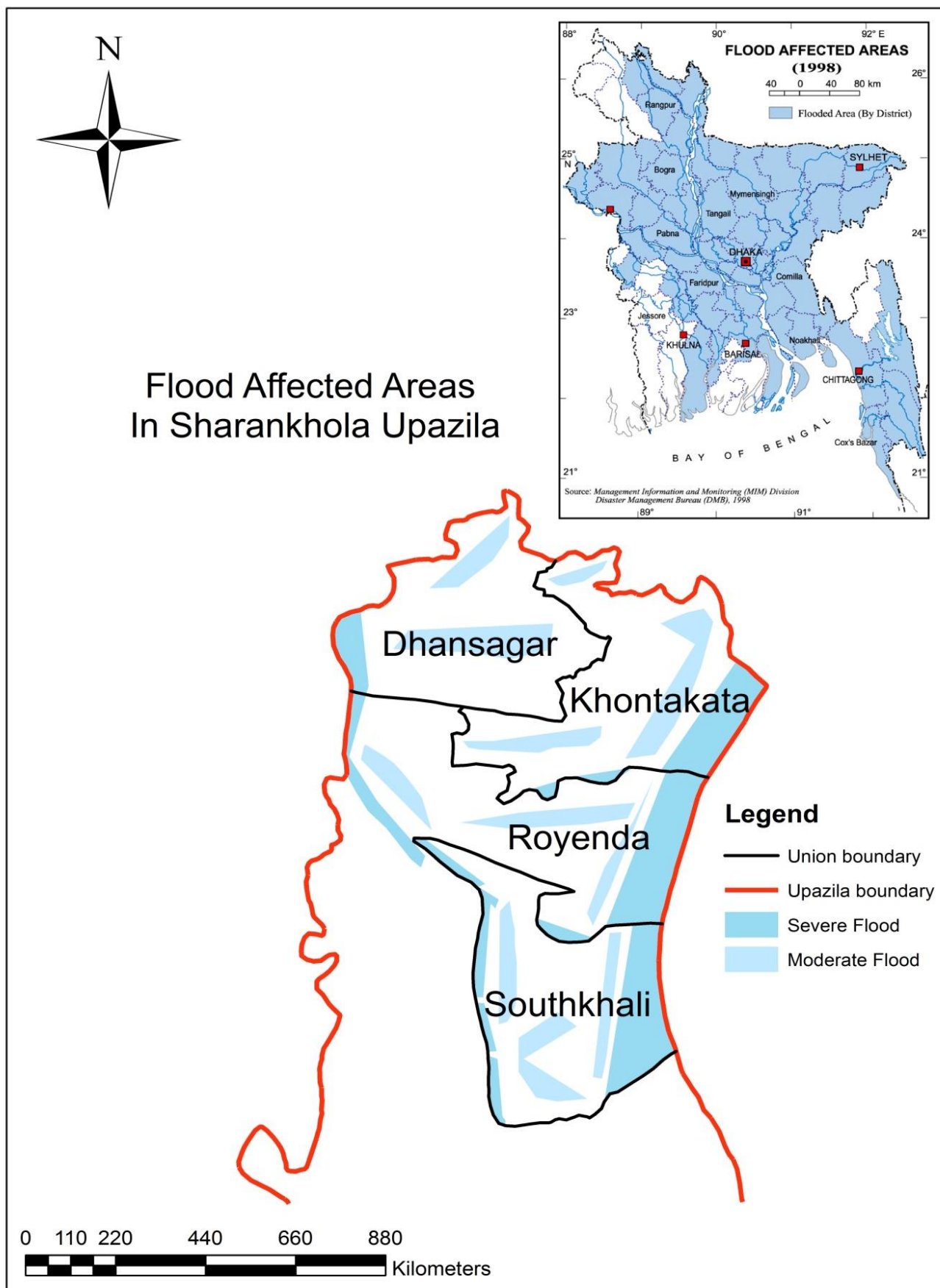
The main livelihood of Sharankhola upazila is shrimp virus. But due to the shrimp virus the shrimp cultivation is interrupting. As a result the shrimp cultivators are facing serious economic damage. Moreover people who are connected with shrimp cultivation becoming unemployed day by day. It is mentionable that shrimp virus also cause many skin diseases among the shrimp cultivators. If shrimp virus can not be stopped within the next few years then the whole shrimp cultivation will be stopped totally.

Water logging :

Due to not having planned emankments, enough sluice gates and proper sewerage system the water logging is increasing in this area day by day. Moreover the habitation land is lower than the river bed as a result the water evacuation has become more difficult. If this goes on continue this hazard may appear severely. Around 2500 hectare land under water during the rainy season. As a result the agricultural work remain interrupted.

Flood :

The tidal water of Bolassor and Bhola rivers cause flood in the locality. Moreover heavy rainfall also brings flood. As there is no proper system of water evacuation here the rainfall causes flood which affects the live and livelihood of this area's people very badly. Flood may be increased in this region in the near future if the dewatering system and the height, construction of the embankments are not made properly. Though flood visits this area every year, the flood of 2013 was noticeable.



Picture-5: Flood affected area of Sharankhola Upazila

2.4 Vulnerability and Capacity

Vulnerability refers to the existing physical, social and environmental conditions which indicate fear of disaster loss and damage and the community are unable to deal with that situation. On the other hand, capacity refers to overall status or process combining with the natural, social, economic, and environmental conditions, by which people or organization/institutions combat adverse condition of disaster at maximum level by/through using its own/existing resources and reduce the terrible risk of disaster. Thus the Upazila vulnerable risk chart given below:

Sl	Hazards	Vulnerability	Capacity
1	cyclone	<ul style="list-style-type: none"> Poor infrastructure and unplanned house and its foundation Absence of bushes and having big trees around the houses Location of Upazila proximity to coastal area causing damages of agricultural, infrastructure, and water sectors Poor sanitation (kacha) infrastructure Absence of cyclone resilient animal house Inadequate cyclone shelter causes loss of human life during cyclone Absence of <i>Killa</i> for animal shelter causes loss of life during cyclone Lack facilities for women, children and disable people causes huge loss and damage of that vulnerable people 	<ul style="list-style-type: none"> Has opportunity to keep people aware and build cyclone resistant house in the locality Has opportunity for both bushes wood and fruits tree plantation around the house as wind barrier for cyclone risk reduction Has opportunity to strengthen polder along the river side by block and also opportunity for tree plantation on the both side of the river Has opportunity to strengthen sanitation infrastructure Has <i>Khas</i> land for constructing cyclone shelter and Kill Has opportunity to build and strengthen the animal (cows, goats, buffalo, sheep) cyclone resilient house Presence of active Disaster Management Committee and the volunteer team at Sharankhola Upazila.
2	Salinity	<ul style="list-style-type: none"> Lack of saline tolerances crops varieties causes damages of local crops for salinity intrusion Increase salinity during dry season causes crisis of drinking water Unplanned shrimp farming causes loss of agriculture production Sudden increase salinity causes loss of natural fish production Lack of natural feeder for livestock due to increase salinity Less susceptibility to sudden increasing salinity causes skin and other health diseases 	<ul style="list-style-type: none"> Has opportunity to aware people and demonstrate saline tolerant crop cultivation Has opportunity to cultivate saline tolerance grass for local cattle's on the fallow land Has opportunity to re-excavate pond for drinking water as well as ensuring community based water supply system Has opportunity to aware shrimp cultivators for shrimp cultivation in a planning way as well as accumulating them Has Upazila health complex and community clinic at union level

Sl	Hazards	Vulnerability	Capacity
			<ul style="list-style-type: none"> Has opportunity to build and strengthen existing polders Has opportunity to saline tolerance tree plantation in muddy area of char and near the house Has small fund and livestock sub-center at union level and veterinary office at upazila level
3	Shrimp Viru	<ul style="list-style-type: none"> Almost 50% shrimp fry having shrimp virus causes economic loss of shrimp cultivators for shrimp cultivation with increasing shrimp virus at gher 	<ul style="list-style-type: none"> Has skilled upazila fishery officer and people are becoming educated. NGOs are also working for awareness building. Has opportunity to install fish feed factory for ensuring nutrition of shrimp.
4	River bank ersion	<ul style="list-style-type: none"> House near the river causes loss of total property Weak and poor polders Unplanned and poor road near riverside Absence of mass rooted and bushes trees near riverside Inadequate polder in riverside of Sharankhola upazila 	<ul style="list-style-type: none"> Has opportunity for intensive bushes tree plantation on the both side of the road near the river which measure catches/hold soil tiedly Has opportunity to strengthen riverside by concrete blocking Has opportunity to rehabilitate landless people in the Khas land
5	Flood	<ul style="list-style-type: none"> Rivers and canals are silted Inadequate in number of polders weak and poor polders Absence of enough trees in both side of the polders Lack of drainage system 	<ul style="list-style-type: none"> Has good wish of the local administration for excavate rivers and canals Has dazing machine to excavate canals and rivers Has opportunity for tree plantation on the both side of the polders Has opportunity to strengthen and maintenance of polders Has open space for constructing polders
6	Heavy rainfall	<ul style="list-style-type: none"> Low land area Lack of drainage system inadequate number of sluice gate 	<ul style="list-style-type: none"> has opportunity to elevate low land area by dazing machine Has opportunity to install sluice gate
7	drought	<ul style="list-style-type: none"> Inadequate green coverage or vegetation in the locality 	<ul style="list-style-type: none"> Has opportunity for planting saline tolerance tree plantation
8	Tidal surge	<ul style="list-style-type: none"> Located near the coast causes loss of crops livestock and other sectors for saline water intrusion weak and poor polders 	<ul style="list-style-type: none"> Has opportunity for tree plantation on the both side of the road and canals Has elevated road which help

Sl	Hazards	Vulnerability	Capacity
			people to take shelter during full moon and off moon when high risk of tidal surge.
9	Water logging	<ul style="list-style-type: none"> Unplanned shrimp ghers Low land area Absence of sluice gate in the polders Lack of drainage system Lack of water logging adaptive agriculture 	<ul style="list-style-type: none"> Has opportunity to elevate low land with the help of dazing machine Has polder management committee Has opportunity to repair, maintain and construct sluice gate Has opportunity to dewatering by excavating canals and rivers

2.5 Most vulnerable areas:

Hazard	Most vulnerable areas	Reason of vulnerability	Vulnerable population
Cyclone	All wards of the Southkhali Union All wards of the Royenda Union All wards of the Khontakata Union All wards of the Dhansagar Union	<ul style="list-style-type: none"> .Costal Upazila Weak infrastructure and unplanned households. Lack of Cyclone adaptive infrastructure. Absence of Killa for livestock. Massive deforestation. 	About 20000 Families
Salinity	Southkhali Union 1 and 9 no. ward Royenda Union 1, 2, 3, 4 and 7 no. ward Every ward of Khontakata Union Every ward of Dhansagar Union	<ul style="list-style-type: none"> Location near to the coastal area Occupying Khas land illegally for cultivating shrimp. Holding saline water for shrimp cultivation. Lack of sweet water source. 	About 13000 Families
shrimp virus	Every wardof Southkhali Union 1, 2, 3, 4 no. wards Oof the Royenda Union Every ward of Khontakata Union Every ward of Dhansagar Union	<ul style="list-style-type: none"> Increasing shrimp gher day by day. Lack of awareness of shrimp cultivator. Lack of Virus free shrimp fry. Lack of local shrimp Research Center 	About 10000 Families
River ersion	4,5,6,7 no.wards of the Southkhali Union 5,8,9 no.wards of the Royenda Union 4,5,6 no wards of the Khontakata Union Every wardof Dhansagar Union	<ul style="list-style-type: none"> Building infrustructure near to the river and in the low land area. Building weak households and infrustructures. Weak embankment. Canal and river siltation. Inadequate number of Sluicegate. 	About 2000 Families
Tidal	Every ward of Southkhali	Coastal upazila.	About 4000

Hazard	Most vulnerable areas	Reason of vulnerability	Vulnerable population
surge	Union. Every ward of Royenda Union. Every ward of Khontakata Union. Every ward of Dhansagar Union.	<ul style="list-style-type: none"> Unplanned and weak households, institutions and infrastructures. Building infrastructures in the low land area. 	Families
Flood	Every ward of Southkhali Union. Every ward of Royenda Union. Every ward of Khontakata Union. Every ward of Dhansagar Union	<ul style="list-style-type: none"> Due to constructing households and infrastructures in the low land area Illegal shrimp cultivation. Inadequate number of Sluicgate. Hevy rainfall and incrising high tide Lack of drainage system 	About 5000 Families
Water logging	4, 5, 6, and 7 no.wards of the Southkhali Union 5, 6, 8, and 9 no.wards of the Royenda Union Every ward of Khontakata Union. Every ward of Dhansagar Union	<ul style="list-style-type: none"> Due to low land. Due to constructing embankment Illegal infrastructure in the canal and river Due to build infrastructure in the low land area. Unplanned shrimp cultivation 	About 6000 Families
Drought	Every ward of Southkhali Union. Every ward of Royenda Union. Every ward of Khontakata Union. Every ward of Dhansagar Union	<ul style="list-style-type: none"> Due to not having adequate green coverage Due to lack of drought adaptive agriculture technology Due to the climate change Due to increasing salinity 	About 5000 Families

2.6 Main sectors of the action plan:

Main sectors	Detail description	Action to be considered for risk reduction
Agriculture	<ul style="list-style-type: none"> In Sharankhola upazilla, about 5494 hectares out of 10671 hectares crop cultivation (kharif crops, Rabi crops, Papaya, Guava, betel leaf etc.) may be damaged for salinity If cyclone or Sidr like 2007 strikes in Sharankhola upazila then about 9494 hectares out of 10671 hectares crop (Kharif crops, Aman paddy, Papaya, Guava, betel leaf) cultivation may be destroyed. In Sharankhola upazila due to water logging about 4494 hectares out of 10671 hectares crop 	<ul style="list-style-type: none"> Cyclone resilient rice cultivation (Boro, Aman, and aush paddy) Supplying saline resilient jute and wheat. Utilizing rain water for cultivating Aman Paddy. Planting Grafting trees Dumping straight rice before cyclone and tidal surge.

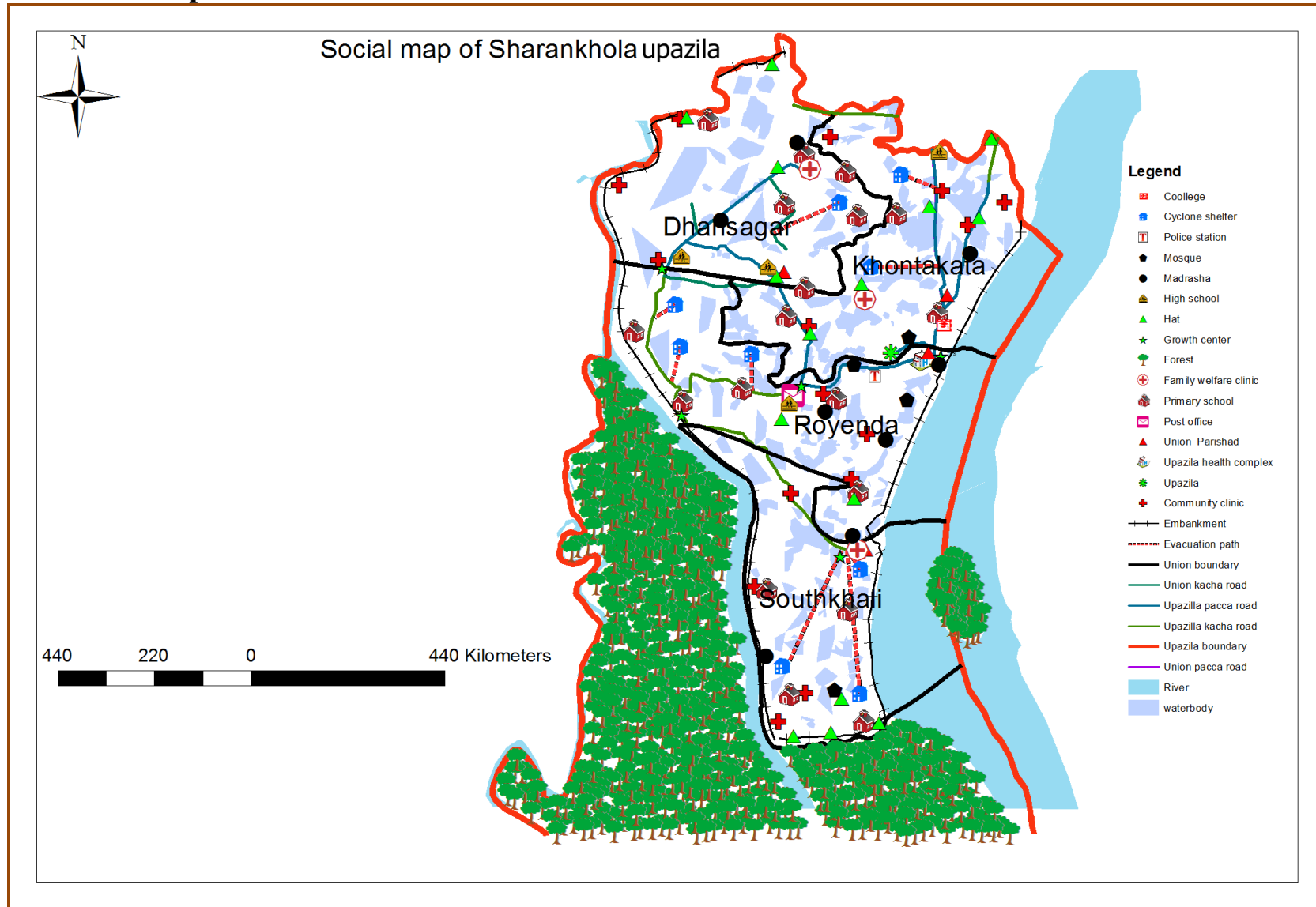
Main sectors	Detail description	Action to be considered for risk reduction
	<p>(Kharif crops, Aman paddy, Papaya, Guava, betel leaf) cultivation may be damaged</p> <ul style="list-style-type: none"> • In Sharankhola upazilla, about 4494 hectors out of 10671 hectors crop (Kharif crops, Aman paddy, Papaya, Guava, betel leaf) cultivation may be damaged for tidal surge • If flood like 1988 occurs in Sharankhola upazila then around 9494 hectares out of 10671 hectares crop (Kharif crops, Aman paddy, Papaya, Guava, betel leaf) cultivation may be destroyed. 	<ul style="list-style-type: none"> • Strengthening the polders. • Canal reexcavation and ensuring irrigation system. • Developing water sewerage system.
Fisheries	<ul style="list-style-type: none"> • In Sharankhola upazila, about 9494 hectares out of 10671 hectors fish cultivation (white fish, prwan, shrimp, crab etc.) may be interrupted for salinity. • Due to Cyclone in Sharankhola upazila, about 9494 hectares out of 10671 hectares fish cultivation (white fish, prwan, shrimp, crab etc.) may be interrupted. Moreover the indigenous fish species may be extinct. • Due to shrimp virus in Sharankhola upazila 9786 big and small gher about 9494 hectares fish cultivation including shrimp and lobster may be interrupted out of total 10671 hectares fish cultivation. Moreover the local fish species may be extinct. • In Sharankhola upazilla, about 22 hectares out of 10671 hectares fish cultivation (white fish, prwan, shrimp, crab etc.) may be interrupted for tidal surge. 	<ul style="list-style-type: none"> • Strengthening the gher's bank • Construction and repairation of the embankments. • Arranging training about sustainable gher for the fish cultivators • Elevating the bank of the gher, every year wash the black mud with bleaching powder if black mud comes after irrigation. • Cultivating 3 layer's fish • Surrounding the gher with protector (net) during flood or tidal surge • Providing help to the affected poor fish farmers. • Developing fish market
Livestocks	<ul style="list-style-type: none"> • Due to salinity in the Sharankhola Upazila about 1800 cows, 2200 goats, 1200 sheep, 300 buffalo and 450 pigs may be suffered from food insecurity. As a result livestock rearing may be cramped. However, agricultural production of every family may damage indirectly. • If cyclone or Sidr like 2007 strikes in Sharankhola upazila then about 2400 cows, 2700 goats, 1300 sheep, 40 buffalos, 4500 ducks, 5000 hens, 500 wild animal and 1000 pigs may die by the devastating impact of cyclone. As a result every family may suffer negatively and natural resource may destroyed • If flood like during Sidr 2007 occurs in Sharankhola upazila then about 2100 cows, 2200 goats, 1100 sheep, 40 buffalos, 3500 ducks, 4000 hens, 500 wild animal and 200 pigs may be affected adversely. 	<ul style="list-style-type: none"> • Constructing earthen killa • Creating grazing land of th livestock on the govt fallow land. • Inspiring the people to install local cattle food factory. • Creating integrating farming (ducks, vegetables and fish) • Inspiring farmers to cultivate disaster adaptive cross animals. • Ensuring adequate supply of veccination for livestock.

Main sectors	Detail description	Action to be considered for risk reduction
	<ul style="list-style-type: none"> • If tidal surge like during Sidr 2007 occurs in Sharankhola upazila then about 2100 cows, 2200 goats, 1100 sheep, 40 buffalos, 3500 ducks, 4000 hens, 500 wild animal and 200 pigs may be affected adversely. 	
Health	<ul style="list-style-type: none"> • Due to salinity in the Sharankhola Upazila 8% people by diarrhea, 10% people by dysentery, 2% people by typhoid, 4% people by Jaundice, 6% people by virus diseases and 6% people by skin diseases may be affected. As a result every family of this upazila may be suffered from economic loss • If cyclone like Sidr 2007 strikes in Sharankhola Upazila then 3% people by diarrhea, 2% people by dysentery, 2% people by Jaundice, 8% people by virus diseases and 4% people by skin diseases may be affected. As a result every family may be suffered from economic loss. • Due to tidal surge in the Sharankhola Upazila, 3% people by diarrhea, 2% people by dysentery, 2% people by Jaundice, 7% people by virus diseases and 8% people by skin diseases may be affected. As a result every family may be suffered from economic loss. • Due to water logging in the Sharankhola Upazila, 2% people by diarrhea, 1% people by dysentery, 1% people by typhoid, 2% people by Jaundice, 1% people by virus diseases and 5% people by skin diseases may be affected. As a result every family may be suffered from economic problem. 	<ul style="list-style-type: none"> • Increasing awareness about health • Arranging training for the doctors about the health risk during disaster. • Increasing the level of service in the health center and community clinics of the unions. • Supplying necessary medicine for primary treatment. • Ensuring safe drinking water. • Making rehabilitation for the disaster affected disable persons. • Making arrangement for adequate vaccination preventive kids.
Livelihood	<p>There are major four types of professions exists in Sharankhola Upazila. 22645 persons are fish farmers and 5000 are fishermen, 23108 persons are farmers, 9144 are small or middle businessman and 9114 are agriculture labor.</p> <ul style="list-style-type: none"> • Due to Cyclone in the Sharankhola Upazila about 4529 fish farmers out of 22645 and 1000 fishermen out of 5000, 6933 farmers out of 23108, 1371 small and middle businessmen out of 9144, and 2278 agriculture labor out of 9114 may be affected adversely partially or totally. • Due to salinity in the Sharankhola Upazila about 10398 agriculture farmers out of 23108 may be affected adversely. Beside due to salinity the Chaytro and Boishakh months total about 3396 fish farmers out of 22645 may be affected adversely. 	<ul style="list-style-type: none"> • Providing training to ensure the alternative sustainable livelihood. • Creating sustainable livelihood. • Making alternative arrangement of employment of the women • Ensuring livelihood by the proper utilization of the local resource. • Making afforestation on the basis of the community. • Increasing the social food safetines program. • Providing assistance to

Main sectors	Detail description	Action to be considered for risk reduction
	<ul style="list-style-type: none"> • Due to tidal surge 11322 fish farmers out of 22645, 9243 farmers out of 23108 and about 450 small and middle businessmen may be affected adversely. • Due to water logging 4621 agriculture farmers out of 23108 may be affected adversely. • Due to river erosion in the Sharankhola Upazila 5% of total 23108 farmer's agriculture land may be damaged by river erosion. In that circumstances 1155 farmers may be damaged partially or totally. • Due to flood in the Sharankhola Upazila 9058 fish farmers out of 22645, 6933 farmers out of 23108, 914 small and middle businessman may be damaged partially or totally. • Shrimp virus: Due to shrimp Virus in the Sharankhola Upazila, 9058 fish farmers out of 22645 may be damaged partially or totally. 	<p>ensure the livelihood of the vulnerable community.</p>
Trees	<ul style="list-style-type: none"> • Due to salinity in the Sharankhola Upazila 7000 fruit trees, 5000 forest trees, 12000 are medicinal trees and 300 nursery plants may be damaged • If Cyclone like SIDR 2007 strikes in the Sharankhola Upazila then about 10000 fruit trees, 12000 is forestry, 12000 are medicinal trees and 6000 nursery plants may be damaged. • Due to the tidal surge in the Sharankhola Upazila about are 5000 fruit trees, 5000 are forestry, 800 medicinal plants and 1000 nursery plants may be damaged • Due to water logging in the Sharankhola Upazila about are 3000 fruit trees, 2000 forest trees, 800 are medicinal trees and 800 nursery plants may be damaged. • Due to flood in the Sharankhola Upazila about are 7000 fruit trees, 3000 forest trees, 900 are medicinal trees and 1000 nursery plants may be damaged. 	<ul style="list-style-type: none"> • Tree plantation on the both side of the roads and polders • Insisting people to plant bushes trees around the houses. • Creating Mangrove forest. • Building awareness about the environment • Implementing law for controlling illegal deforestation. • Raising plinth of houses and planting trees on high lands in the muddy area • Planting trees like Caila, Kakra, Kaora in low land. • To mitigate the saline risk, cutting root of the long trees as its root not penetrate in the deep soil. • To protect the moisture constructing mulching on the bottom of tree's root. • To mitigate the cyclone risk, bushes trees should be planted around the houses.
Houses	<ul style="list-style-type: none"> • In Sharankhola upazila about are 1800 kacha houses. 30 pucca houses and 70 semi-pucca 	<ul style="list-style-type: none"> • Building cyclone resilient house.

Main sectors	Detail description	Action to be considered for risk reduction
	<p>houses may be demolished for salinity.</p> <ul style="list-style-type: none"> • If Cyclone or SIDR like 2007 strikes in the Sharankhola Upazila then total about 2563 Kacha houses, 10 Pucca houses and 176 semi-pucca houses may be damaged partially or totally • Due to river erosion in the Sharankhola Upazila about 465 Kacha houses, 18 pucca houses, 24 semi pucca houses may be damaged partially or totally. • If flood like flood of 1988 strikes in the Sharankhola Upazila then about 3000 kacha houses, 30 pucca houses, 200 semi pucca houses may be damaged partially or totally. 	<ul style="list-style-type: none"> • Construction and repairation of the polders. • Arranging interestless loan for constructing cyclone resilient house. • Building houses and infrustructures strongly far from the risk prone area. • Tree plantation around the roads, households, and canals.
Infrustructur es	<ul style="list-style-type: none"> • If Cyclone like SIDR 2007 strikes in the Sharankhola Upazila then total about 36 Junior Primary School, 8 Primary School, 6 Madrasa 30 Mosque, 50 Temples, 6 Churches, 6 Government and non government Offices, 1 Hospital, 6 Health care Center 2 Clinics, 15 Cyclone shelter, 15 Culvert, 20 Bridge, 14 Kim Pucca Road, 75 km Kacha Road, 12 km semi-pucca Road may be demolished Partially or totally. • Due to river erosion in the Sharankhola Upazila total about 10 Junior Primary School, 2 Primary School, 3 Madrasas, 8 Mosques, 5 Temples, 1 Church, 1 Government and nongovernmental Office, 1 Clinic, 2 Cyclone shelter, 2 Culverts, 2 pools, 25 km of Pucca Road, 5 km of semi-pucca Road may be damaged by river. 	<ul style="list-style-type: none"> • Elevation and construction of the roads. • Constructing and repairing polders. • Construction of the necessary culverts and bridges. • Construction of the sluice gates. • Building adequate cyclone shelters. • Tree plantation around the infrustructures, roads, and canals
Sanitation	<ul style="list-style-type: none"> • Due to salinity in the Sharankhola Upazila about 12 water reserved ponds, 50 pucca latrines may be damaged partially or totally • If Cyclone like SIDR 2007 strikes in the Sharankhola Upazila then about 800 kacha latrines, 120 semi pucca latrines and 15 water reserved ponds may be damaged partially or totally. • Due to tidal surge in the Sharankhola Upazila about are 10 water reserved ponds, 900 kacha latrines may be damaged partially or totally • Due to tidal surge in the Sharankhola Upazila about are 18 water reserved ponds, 4000 kacha latrines, 50 Rain water plants, 10 TPSFs may be damaged partially or totally. 	<ul style="list-style-type: none"> • Raising awareness about sanitation. • Pond and reserved pond excavation. • Installation of adequate pond sand filter and rain water hervest . • Cyclone resilient and healthy cyclone shelter construction. • Constructing cyclone shelters with ensuring water and sanitation facility.

2.7 Social Map



Picture 5: Social map in Shoronkhola Upazila

2.8 Hazards and Risks map

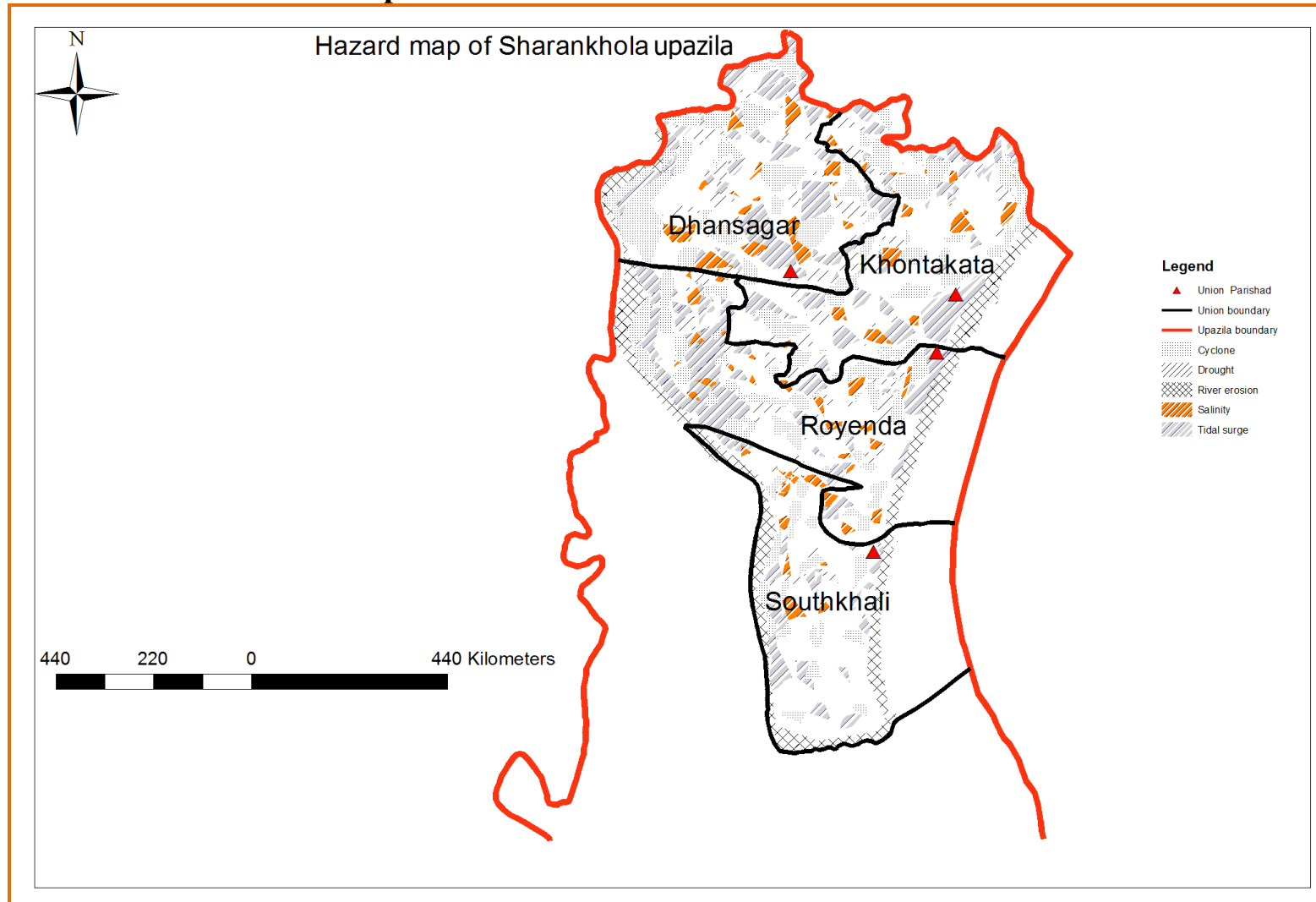


Figure 6: Hazard map of Sharankhola Union

Risks map

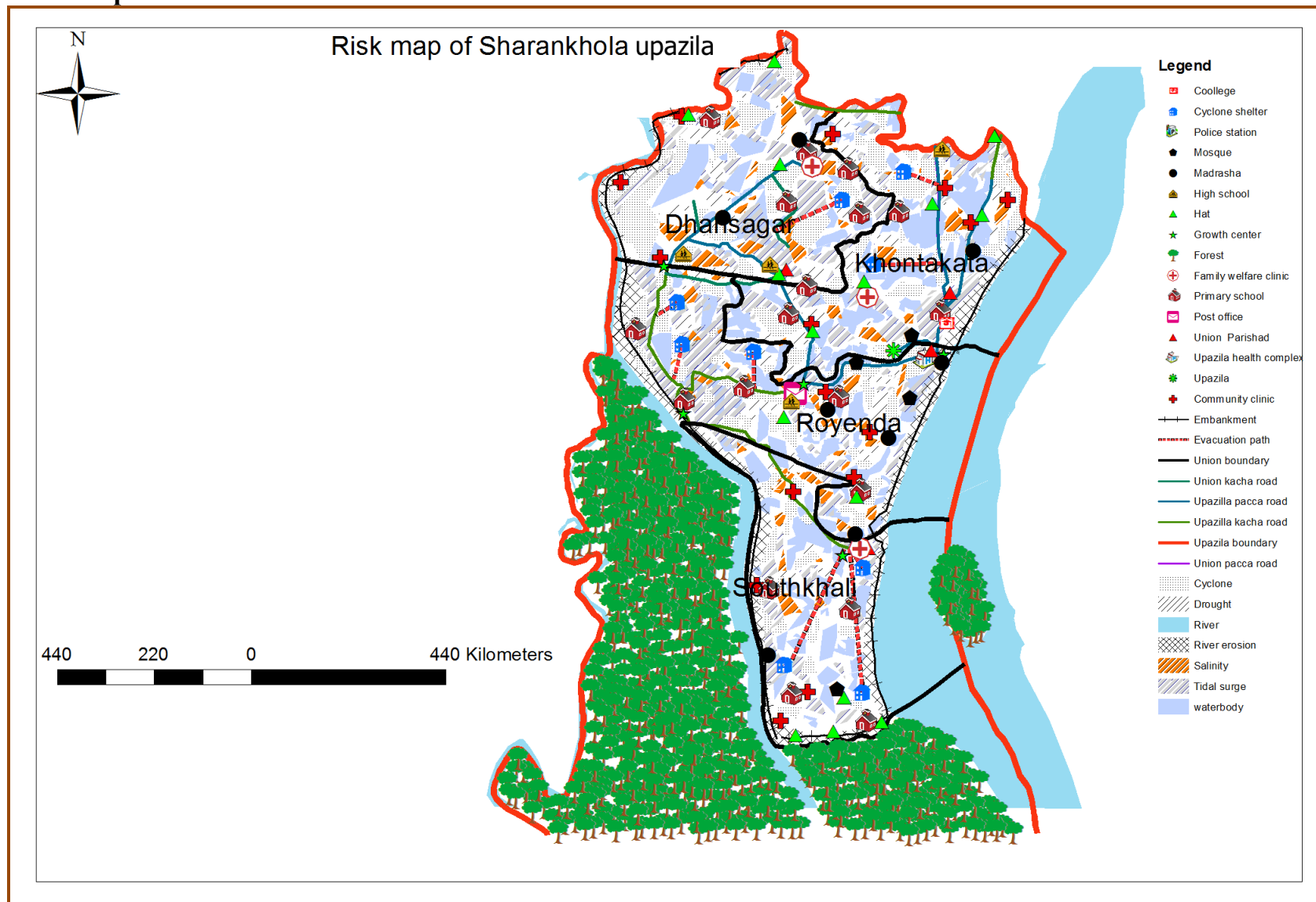


Figure 6: Risk map of Sharankhola Union

2.9 Seasonal calendar of Hazards:

SL #	Hazard	Name of the month											
		Baisakh	Jyestha	Ashar	Shrabon	Vadsho	Ashwin	Kartik	Agrahayon	Poush	Magsh	Falgun	Chaitro
		Apr	May	Jun	Jul	Aug	Sept	Oct	Dec	Jan	Feb	Mar	Apr
1	Salinity												
2	Cyclone												
3	Shrimp virus												
4	Tidal surge												
5	River erosion												
6	Flood												
7	Water logging												
8	Drought												

Analysis of the Seasonal Calendar of Hazards:

- In this area the main hazard is salinity. The intensity of salinity is observed from the middle of December and continuous up to first week of July. High intensity of salinity causes severe damage to the agricultural sector of this locality. In the rest of the time the intensity of salinity is less observe red.
- Tidal surge and flood occurs in this area for river bank siltation. Due to the high deposition of alluvia the rivers are getting silted day by day. River bank siltation appears from April and continuous up to the month of October.
- Shrimp virus has appeared as a great hazard in this area. One kind of virus causing great damage to the shrimp industry. It is observed from the middle of March and continuous up to middle of December.
- Another great hazard is cyclone. This hazard causes great destruction to the houses, communication system and trees of this area. This cyclone usually appears from the middle of March to the middle of May and from the middle of September to the middle of December.
- Local people think that tidal surge is another hazard of this area. The tidal surge is usually held from the middle of June and continues up to the middle of November.
- Every year the houses, roads, social and educational institutions, crops and cattle's are getting out due to river erosion. River erosion occurs in this area from the middle of March and continues up to October.
- Drought is the new phenomenal hazard of the Sharankhola Upazila. Due to drought many crops of this locality getting destroyed for lack of irrigation. On the other hand the crops

which grow are decreasing day by day due to lack of water. Moreover due to this drought as the water of the preserved ponds getting dried in consequences the level of the ground water in going to the lower side. For this, the local people are suffering from the scarcity of drinking water. Drought appears in this area from June to April in this area.

2.10 Seasonal Calendar of Livelihood:

SL #	Livelihood	Name of the month											
		Baisakh	Jyestho	Ashar	Shravan	Vadaro	Ashwin	Kartik	Agrahayana	Poush	Magha	Falgun	Chaitra
		Apr	May	Jun	Jul	Aug	Sept	Oct	Dec	Jan	Feb	Mar	Apr
1	Farmer												
2	Livestock rearing												
3	Livelihood (Sundarbans)												
4	Fish cultivator												
5	Fishermen												
6	Labour												
7	small business man												
8	Van and Nosimon drivers												

2.11 Life and Livelihood Related Vulnerability:

Main livelihood and its impact by different hazards are shown in the following table:

Serial	Livelihoods	Hazards/Disasters							
		salinity	Cyclone	Shrimp Virus	Tidal Surge	River erosion	Flood	Water Logging	Drought
01	Agriculture								
02	Livestocks								
03	Fisheries								
04	Daily labor								
05	Businessmaen								
06	Van and Nosimon drivers								
07	Livelihood (Sundarban)								

2.12 Description of the sector wise hazard and risk

The main hazards of the Sharankhola Upazila are Salinity, shrimp virus, cyclone, water logging, flood, river erosion, Drought that are affecting the human lives and livelihood negatively. On the other hand vulnerable social element like crops, fisheries, livestock, trees, assets, roads, bridges, houses, culverts, water and sanitation, educational institutions are prevailed in the locality. The figures of the hazard wise social elements are given below:

Identification of the vulnerable sectors of the Upazila

Hazard's	Vulnerable social sectors									
	Crops	Trees	Livestock	Fisheries	House	Road	Bridge and culverts	institutions	Health	Water and Sanitation
Cyclone										
Salinity										
Shrimp virus										
River erosion										
Flood										
Heavy Rainfall										
Drought										

1. If cyclone or Sidr like 2007 strikes in Sharankhola upazila then in Dhansagar union out of 2490 hectare crops land 1261.50 hectare land may be destroyed. In Khontakata Union out of 2733 hectare crops land 2121 hectare land may be destroyed. In Royenda union out of

2470 hectare crops land 1480 hectare land may be destroyed. In Southkhali union out of 1944 hectare crops land 1681 hectare land may be destroyed.

2. In Sharankhola upazila due to salinity out of 2490 hectare crops land 515 hectare land may be destroyed severely in Dhansagar union. Out of 2732 hectare crops land 923 hectare land may be destroyed severely in Khontakata union. Out of 2470 hectare crops land 639 hectare land may be destroyed severely in Royenda union. Out of 1945 hectare crops land 832 hectare land may be destroyed severely in Southkhali union.
3. In Sharankhola upazila due to flood out of 2490 hectare crops land 213 hectare land may be destroyed severely in Dhansagar union. Out of 2733 hectare crops land 1588 hectare land may be destroyed severely in Khontakata union. Out of 2470 hectare crops land 993 hectare land may be destroyed severely in Royenda union. Out of 1944 hectare crops land 1441 hectare land may be destroyed severely in Southkhali union.
4. In Sharankhola upazila due to heavy rainfall out of 2490 hectare crops land 202 hectare land may be destroyed severely in Dhansagar union. Out of 2732 hectare crops land 485 hectare land may be destroyed severely in Khontakata union. Out of 2470 hectare crops land 453 hectare land may be destroyed severely in Royenda union. Out of 1945 hectare crops land 379 hectare land may be destroyed severely in Southkhali union.
5. Due to drought out of 2490 hectare crops land about 206 hectare lands may be destroyed severely in Dhansagar union. Out of 2732 hectare crops land about 551 hectare lands may be destroyed severely in Khontakata union. Out of 2470 hectare crops land 311 hectare land may be destroyed severely in Royenda union. Out of 1945 hectare crops land 304 hectare land may be destroyed severely in Southkhali union.
6. If cyclone or sitar like 2007 strikes in Dhansagar union of Sharankhola upazila in 520 fisheries including big and small gher out of 220 hectare land fisheries gher may be damaged for cultivation, in Khontakata union in 315 fisheries including big and small gher out of 170 hectare land fisheries gher may be damaged for cultivation, in Royenda union in 265 fisheries including big and small gher out of 100 hectare land fisheries gher may be damaged for cultivation. In Southkhali union in 150 fisheries including big and small gher out of 85 hectare land fisheries gher may go under water or its cultivation may be interrupted by the breaking of the embankment. Moreover due to cyclone a bad impact may come over the livelihood of 1000 fisheries.
7. Due to salinity in Dhansagar union 520 fisheries including big and small gher out of 385 hectare land fisheries gher may be damaged for cultivation, in Khontakata union in 315 fisheries including big and small gher out of 351 hectare land's fisheries gher may be damaged for cultivation, in Royenda union in 265 fisheries including big and small gher out of 210 hectare land of 60 hectare land's fisheries gher may be damaged for cultivation. In Southkhali union in 150 fisheries including big and small gher out of 175 hectare land of 35 hectare land's fisheries gher may go under water or its cultivation may be interrupted by the breaking of the embankment. Besides the natural fishes of the locality may be destroyed.

8. Due to shrimp virus in Dhansagar union 520 fish farms including big and small gher about 90 hectare shrimp cultivation out of 385 hectare may be damaged, in Khontakata union 315 fisheries including big and small gher about 201 hectare shrimp cultivation out of 270 hectare gher may be damaged, in Royenda union 265 fisheries including big and small gher about 150 hectare shrimp cultivation out of 210 hectare may be damaged. In Southkhali union 150 fisheries including big and small gher about 65 hectare shrimp cultivation out of 175 hectare may be damaged for shrimp virus.
9. Due to flood in Dhansagar union 520 fish farms including big and small gher about 170 hectare fish cultivation out of 385 hectare may be damaged, in Khontakata union in 315 fisheries including big and small gher about 81 hectare fish cultivation out of 270 hectare may be damaged, in Royenda union in 265 fisheries including big and small gher about 60 hectare fish cultivation out of 210 hectare land may be damaged. In Southkhali union including big and small gher about 35 hectare fish cultivation out of 175 hectare land may be damaged for flood.
10. Due to drought in Dhansagar union 520 fish farms including big and small gher about 150 hectare fish cultivation out of total 385 hectare land may be damaged, in Khontakata union in 315 fisheries including big and small gher out of 120 hectare land of 30 hectare land's fisheries gher may be damaged for cultivation, in Royenda union in 265 fisheries including big and small gher about 60 hectare fish cultivation out of 210 hectare may be damaged. In Southkhali union 150 fisheries including big and small gher about 35 hectare fish cultivation out of 175 hectare may be damaged for drought.
11. If cyclone or Sidr like 2007 strikes in Dhansagar union of Sharankhola upazila about 5326 domestic animals and 11559 birds, in Khontakata Union about 3250 domestic animals and 11559 birds, in the Royande Union about 5295 domestic animals and 2700 birds, in the Southkhali Union about 7600 domestic animals and 16500 birds may be died.
12. Due to salinity of Sharankhola Upazila in Dhansagar Union about 1138 domestic animals, in the Khontakata Union about 1100 domestic animals, in the Royenda Union about 3295 domestic animals, in the Southkhali Union about 5600 domestic animals may be faced feeder problem.
13. Due to flood in Dhansagar Union of Sharankhola Upazila about 4255 domestic animals and 10817 birds, in the Khontakata Union about 1700 birds and 11500 birds, in Royenda Union about 2600 domestic animals and 43750 birds, in Southkhali Union about 4745 domestic animals and 26166 birds may be diedd.
14. Due to heavy rainfall in Dhansagar Union of Sharankhola Upazila about 1530 domestic animals and 5775 birds, in Khontakata Union about 1700 domestic animals and 11500 birds, in Royenda Union about 1224 domestic animals and 7050 birds, in Southkhali Union about 1550 domestic animals and 6125 birds may be diedd and destroyed.

15. Due to drought in Dhansagar Union of Sharankhola Upazila about 1759 domestic animals, in Khontakata Union about 1700 domestic animals, in Royenda Union about 935 domestic animals, in Southkhali Union about 1450 domestic animals and 6125 birds may be faced food crisis. As a result they may be diedd for malnutrition and diseases.
16. If Cyclone or SIDR like 2007 strikes in Sharankhola Upazila of Dhansagar Union then about 180575 trees may be damaged, in Khontakata union about 106000 trees may be damaged, in Royenda union about 95000 trees may be damaged, in the Southkhali union about 113000 trees may be damaged.
17. Due to salinity in Dhansagar Union of Sharankhola Upazila about 4580 trees and tress of 7 nurseries may be damaged, in Khontakata union about 13000 trees may be damaged, in Royenda union about 10275 trees may be damaged, in the Southkhali union about 19500 trees and 10 nurseries plants may be damaged.
18. Due to drought in Dhansagar Union of Sharankhola Upazila about 10500 trees may be damaged, in Khontakata union about 3500 trees may be damaged, in Royenda union about 2500 trees may be damaged, in Southkhali union about 6500 trees may be damaged.
19. If cyclone or SIDR like 2007 strikes in Sharankhola Upazila of Dhansagar Union about 3945 houses, in Khontakata union about 3850 houses, in Royenda union about 5263 houses, in Southkhali union about 4821 houses may be damaged.
20. Due to river erosion in Sharankhola upazila of Khontakanta union about 780 houses may be damaged partially or totally, in Royenda union about 423 houses may be damaged partially or totally, in Southkhali union about 680 houses may be damaged partially or totally.
21. If flood like 1988 strikes in the Sharankhola Upazila of Dhansagar union about 1500 houses out of 2500 houses and 51 km roads, in Khontakata union about 1800 kacha houses out of 2200 houses and 56 km roads, in Royenda union about 2300 kacha houses out of 2825 houses and 32 km roads, in Southkhali union about 2400 kacha houses out of 2700 houses and 13 km roads may be damaged partially or totally.
22. If Cyclone or SIDR like 2007 strikes in the Sharankhola Upazila of Dhansagar Union then about 67 Government and non-governmental Organization, 6 cultvert, 49 km roads, in Khontakata union about 91 Government and non-governmental organizations and 62 km roads, in Royendaunion about 46 Government and non-governmental organizations and 32 km roads, in Southkhali union about 64 government and non-governmental Organizations and 19 km roads may be damaged partially or totally.
23. Due to river erosion in Khontakata union about 41 Government and non-governmental Organization and 21 km roads, in Royenda union about 23 Government and non Governmental Organizations and 26 km roads, in Southkhali union about 28 Government and non-government Organizations and 25 km road may be damaged partially or totally.

24. If Cyclone or SIDR like 2007 strikes in the Sharankhola Upazila of Dhansagar Union about 14.8% of 35467 people may be suffered from different diseases, in Khontakata union about 14.6% of 27000 people may affected from different diseases, in Royenda union about 10% of 35535 people may be affected from different diseases, in the Southkhali union about 12% of 31550 people may be affected from different diseases.
25. Due to salinity in Dhansagar union of Sharankhola Upazila about 14.66% of 35467 population may be affected by water borne diseases and skin diseases, in Khontakata union about 5.66% of 27000 population may be affected by water borne diseases and skin diseases, in Royenda union about 10% of 35535 population may be affected by water borne and skin diseases, in Southkhali union about 18.36% of 31550 population may be affected by water borne and skin diseases.
26. If flood like 1988 strikes of Sharankhola Upazila in Dhansagar union about 8.16% 35467 population may die from different diseases, in Khontakata union about 5.33% of 27000 population may die from different diseases, in Royenda union about 11.2% of 35535 people may die from different diseases, in the Southkhali union about 5.2% of 31550 population may be affected from different diseases.
27. Due to drought of Sharankhola Upazila in Dhansagar union about 3.75% of 35467 people may die from different diseases, in Khontakata union about 2.6% of 27000 population may die from different diseases, in Royenda union about 3.8% of 35535 population may die from different diseases, in Southkhali union about 17.5% of 31550 population may be affected from different diseases.
28. If Cyclone or SIDR like 2007 strikes in Sharankhola Upazila of Dhansagar union about 950 latrines and 30 reserved ponds water, in Khontakata union about 2900 latrines and 142 water reserved ponds, in Royenda union about 2700 latrines, in Southkhali union about 1575 latrines may be damaged partially or totally.
29. Due to salinity in the Sharankhola Upazila of Dhansagar union about 3 water reserved ponds, and 1200 latrines, in Khontakata union about 4 shallow tube-wells, 4 water reserved ponds, and 1282 latrines, in Royenda union about 5 reserved ponds, and 378 latrines, in Southkhali union about 8 reserved ponds and 1003 latrines may be damaged partially or totally.
30. Due to flood in the Sharankhola Upazila of Dhansagar union about 10 shallow tube-wells, 6 reserved ponds, and 400 kacha latrines, in Khontakata union about 25 reserved ponds and 2050 latrines, in Royenda union about 12 reserved ponds, and 2500 latrines , in Southkhali union about 38 reserved ponds and 2000 latrines may be damaged partially or totally
31. Due to drought in the Sharankhola Upazila of Dhansagar union about 4 ponds, and 30 tubewells, in Khontakata union about 2 ponds, and 20 tubewells, in Royenda union about

6 ponds, and 40 tubewells, in Southkhali union about 3 ponds and 10 tubewells may be damaged and every union may be suffered from drinking water crisis.

32. Due to river erosion in the Khontakata union about 423 hectare land out of 2732 hectare agriculture land may be damaged, in Royenda union about 876 hectare land out of 2470 hectare agriculture land may be damaged, in the Southkhali union about 635 hectare land out of 1944 hectare agriculture cultivation may be damaged.

2.13 Climate change and its possible impacts

Bangladesh is known as the most vulnerable county in the world for climate change. Frequency and magnitude of Climatic hazards like as tidal surge, flood, salinity, heavy rainfall, drought and river erosion are incrising day by day. As a result the costal people's life and economic status are being affected negatively by the multifarious impacts of those disasters. Fishery, livestock, trees, houses, different infrustucture, health and sanitation can be damaged by the impact of salinity intrusion and cyclone including tidal surges. Exeessive rainfall and flood in the locality caused by climate change resulting massive damage in the livestock and agriculture sectors. Prolongated rainfall along with high tide of the river causes flood which may be adversely affected to the crops, fishries, houses, roads, health and sanitation. In the summer season, upstream river flow reduction and erratic rainfall along with anthropogenic activities causes reduction of river navigation, as a consequence adverse impact may appear in the agriculture and fishery sectors. Climate change also causes drought in the locality which may be advesely affected on the agriculture, fishry, livestock and human helath sectors. Thus the sectors wise hazards problem are explained in the following table:

Sector	Hazard	Description
Agriculture	Cyclone	<p>If cyclone strikes in Sharankhola upazila then about 6543.50 hectare Kharif crops, Aman Paddy, Jute, Potato, Rabi crops, Papaya, Guava, betel leaf production may be destroyed.</p> <ul style="list-style-type: none"> In Dhansagar Union about cultivation of 1261.50 hectare out of 2490 hectare crop land may be destroyed. As a result about 2130 families of this union may be affected negatively. In Khontakata Union about 2121 hectare out of 2733 hectare crop land may be destroyed. As a result about 3787 families of this union may be affected by economic problem partially or totally. In Royenda Union about 1480 hectare crop land of 2470 hectare crop land may be destroyed. As a result about 1760 families of this union may be affected by economic problem partially or totally. In Southkhali union about 1681 hectares crop land out of 1944 hectare crop land may be destroyed. As a result about 3900 families of this union may be affected by economic problem partially or totally.
	Salinity	<p>Due to salinity in Sharankhola upazila then about 2909 hectare Kharif crops, Jute, Potato, Rabi crops, Papaya, Guava, betel leaf production may be destroyed.</p> <ul style="list-style-type: none"> In Dhansagar Union about 515 hectare crop land out of 2490 hectare crop land may be destroyed. As a result about 1575 families of this union may be affected by economic problem partially or totally. In Khontakata Union about 923 hectare crop land out of 2732 hectare

Sector	Hazard	Description
		<p>crop land may be destroyed. As a result about 1720 families of this union may be affected by economic problem partially or totally.</p> <ul style="list-style-type: none"> • In Royenda Union about 639 hectare crop land out of 2470 hectare crop land may be destroyed. As a result about 1100 families of this union may be affected by economic problem partially or totally. • In Southkhali Union about 832 hectare crop land out of 1944 hectare crop land may be destroyed. As a result about 1325 families of this union may be affected by economic loss partially or totally.
	River erosion	<p>Due to river erosion in Sharankhola upazila then about 1934 hectare kharif crops, Aman Paddy, Jute, Potato, Papaya, Guava, betel leaf production may be destroyed.</p> <ul style="list-style-type: none"> • In Khontakata Union about 423 hectare crop land out of 2732 hectare crop land may be destroyed. As a result about 1300 families of this union may be affected by economic problem partially or totally. • In Royenda Union about 876 hectare crop land out of 2470 hectare crop land may be destroyed. As a result about 1625 families of this union may be affected by economic problem partially or totally. • In Southkhali Union about 635 hectare crop land out of 1944 hectare crop land may be destroyed. As a result about 1850 families of this union may be affected by economic problem partially or totally.
	Flood	<p>Due to flood in Sharankhola upazila then about 4235 hectare kharif crops, Aman Paddy, Jute, Potato, Papaya, Guava, and betel leaf production may be destroyed.</p> <ul style="list-style-type: none"> • In Dhansagar Union about 213 hectare crop land out of 2490 hectare crop land may be destroyed. As a result about 795 families of this union may be affected by economic problem partially or totally. • In Khontakata Union about 1588 hectare crop land out of 2733 hectare crop land may be destroyed. As a result about 3100 families of this union may be affected by economic problem partially or totally. • In Royenda Union about 993 hectare crop land out of 2470 hectare crop land may be destroyed. As a result about 2400 families of this union may be affected by economic problem partially or totally. • In Southkhali Union about 1841 hectare crop land out of 1944 hectare crop land may be destroyed. As a result about 3725 families of this union may be affected by economic problem partially or totally.
	Heavy Riainfall	<p>Due to heavy rainfall in Sharankhola upazila then about 1519 hectare Kharif crops, Aman Paddy, Jute, Potato, Papaya, Guava, betel leaf production may be destroyed.</p> <ul style="list-style-type: none"> • In Dhansagar Union total about 202 hectare crop lands out of 2490 hectare crop land may be destroyed. As a result about 1150 families of this union may be affected by economic problem partially or totally. • In Khontakata Union about 485 hectare crop land out of 2733 hectare crop land may be destroyed. As a result about 1050 families of this union may be affected by economic problem partially or totally.

Sector	Hazard	Description
		<ul style="list-style-type: none"> In Royenda Union about 453 hectare crop land out of 2470 hectare crop land may be destroyed. As a result about 550 families of this union may be affected by economic problem partially or totally. In Southkhali Union about 379 hectare crop land out of 1944 hectare crop land may be destroyed. As a result about 450 families of this union may be affected by economic problem partially or totally.
	Drought	<p>Due to flood in Sharankhola upazila then about 1735 hectare kharif crops, aman paddy, rabi crops, papaya, guava, and betel leaf production may be destroyed.</p> <ul style="list-style-type: none"> In Dhansagar Union about 206 hectare crop land out of 2490 hectare crop land may be destroyed. As a result about 1125 families of this union may be affected by economic problem partially or totally. In Khontakata Union about 551 hectare crop land out of 2733 hectare crop land may be destroyed. As a result about 1550 families of this union may be affected by economic problem partially or totally. In Dhansagar Union about 311 hectare crop land out of 2470 hectare crop land may be destroyed. As a result about 740 families of this union may be affected by economic problem partially or totally. In Southkhali Union about 304 hectare crop land out of 1944 hectare crop land may be destroyed. As a result about 1175 families of this union may be affected by economic problem partially or totally.
Fisheries	Cyclone	<p>If cyclone strikes in Sharankhola upazila then about 1250 fish ghers approximately 575 hectare white fish, lobster, and shrimp cultivation may be destructed.</p> <ul style="list-style-type: none"> In Dhansagar union 520 fish farms about 220 hectare fish cultivation may go under water or its cultivation may be interrupted by breaking the embankment. As a result about 300 families of this union may be damaged partially or totally. In Khontakata Union 315 fisheries about 170 hectare fish cultivation may go under water or its cultivation may be interrupted by breaking the embankment. As a result about 270 families of this Union may be damaged partially or totally. In Royenda Union 265 fish farms about 100 hectare fish cultivation may go under water or its cultivation may be interrupted by the embankment breaking. As a result about 250 families of this Union may be damaged partially or totally. In Southkhali Union 150 fish farms about 85 hectare fish cultivation may go under water or its cultivation may be interrupted by breaking the embankment. As a result about 200 families of this Union may be damaged partially or totally. <p>Beside about 1100 fishermen families may be affected negatively by Cyclone.</p>
	Salinity	<p>Due to salinity in Sharankhola upazila about 1250 fish farms including big and small approximately 616 hectare white fish and lobster cultivation may be destructed.</p>

Sector	Hazard	Description
		<ul style="list-style-type: none"> • In Dhansagar union 520 fish farms about 170 hectare out of 385 hectare fish cultivation may be damaged. As a result about 300 families of this union may be damaged partially or totally. • In Khontakata Union 315 fish farms about 351 hectare fish cultivation may be damaged. As a result about 270 families of this Union may be damaged partially or totally. • In Royenda Union 265 fish farms about 60 hectare out of 210 hectare fish cultivation may be damaged. As a result about 250 families of this Union may be damaged partially or totally. • In Southkhali Union 150 fish farms about 35 hectare out of 175 hectare fish cultivation may be damaged. As a result about 200 families of this Union may be damaged partially or totally.
	Flood	<p>Due to flood in Sharankhola upazila about 1250 fish farms including big and small approximately 345 hectare white fish, lobster, and shrimp cultivation may be destructed.</p> <ul style="list-style-type: none"> • In Dhansagar Union 520 fish farms about 170 hectare out of 385 hectare fish cultivation may be damaged. As a result about 300 families of this Union may be damaged partially or totally. • In Khontakata Union 315 fish farms about 81 hectare out of 270 hectare fish cultivation may be damaged. As a result about 270 families of this union may be damaged partially or totally. • In Royenda Union 265 fish farms about 60 hectare out of 210 hectare fish cultivation may be damaged. As a result about 250 families of this Union may be damaged partially or totally. • In Southkhali Union 150 fish farms about 35 hectare out of 175 hectare fish cultivation may be damaged. As a result about 200 families of this Union may be damaged partially or totally.
	Drought	<p>Due to drought in Sharankhola upazila about 1250 fish gheres including big and small approximately 275 hectares white fish, prawn, and shrimp cultivation may be damaged.</p> <ul style="list-style-type: none"> • In Dhansagar union 520 fish gheres about 150 hectare out of 385 hectare fish cultivation may be damaged. As a result about 300 families of the union may be incurred financial loss partially or totally. • In Khontakata union 315 fish gheres about 30 hectare out of 120 hectare fish cultivation may be damaged. As a result about 270 families of the union may be damaged partially or totally. • In Royenda union 265 fish gheres about 60 hectare out of 210 hectare fish cultivation may be damaged. As a result about 250 families of this union may be damaged partially or totally. • In Southkhali union 150 fish gheres about 35 hectare out of 175 hectare fish cultivation may be damaged. As a result about 200 families of this Union may be damaged partially or totally.
Trees	Cyclone	If Cyclone strikes in Sharankhola Upazila then about 494575 fruit trees, forest trees and medicinal trees may be damaged.

Sector	Hazard	Description
		<ul style="list-style-type: none"> In the Dhansagar union about 180575 trees may be damaged. In the Khontakata union about 106000 trees may be damaged. In the Royenda union about 95000 trees may be damaged. In the Southkhali union about 113000 trees may be damaged. <p>Besides every family in this Upazila may be affected by economic problem partially or totally.</p>
	Salinity	<p>Due to salinity in Sharankhola Upazila about 47355 trees and trees of 17 nurseries may be damaged.</p> <ul style="list-style-type: none"> In the Dhansagar Union about 4580 trees and 7 nursery plants may be damaged. In the Khontakata Union about 13000 trees and plants may be damaged. In the Royenda Union about 10275 trees may be damaged. In the Southkhali Union about 19500 trees and 10 nursery plants may be damaged. <p>Besides almost every family of upazila may be affected by economic problem partially or totally.</p>
	Drought	<p>Due to drought in Sharankhola Upazila about 23000 trees may be damaged.</p> <ul style="list-style-type: none"> In the Dhansagar Union about 10500 trees may be damaged. In the Khontakata Union about 3500 trees may be damaged. In the Royenda Union about 2500 trees may be damaged. In the Southkhali Union about 6500 trees may be damaged. <p>Besides almost every family of the upazila may be affected by economic problem partially or totally.</p>
Livestock	Cyclone	<p>If Cyclone strikes in Sharankhola Upazila then about 67489 domestic animals may be affected adversely.</p> <ul style="list-style-type: none"> In the Dhansagar Union about 5326 domestic animals and 11559 birds may be affected and died. In the Khontakata Union about 3250 domestic animals and 110759 birds may be affected and died. In the Royenda Union about 5295 domestic animals and 7200 birds may be affected and died. In the Southkhali Union about 7600 domestic animals and 16500 birds may be affected and died.
	Salinity	<p>Due to salinity in Sharankhola Upazila about 11133 domestic animals may be suffered by cattle feed problem.</p> <ul style="list-style-type: none"> In the Dhansagar Union about 1138 domestic animals may be suffered by feed problem. In the Khontakata Union about 1100 domestic animals may be suffered by feed problem. In the Royenda Union about 3295 domestic animals may be suffered by feed problem. In the Southkhali Union about 5600 domestic animals may be suffered

Sector	Hazard	Description
		by feed problem.
	Flood	<p>Due to flood in Sharankhola Upazila about 105533 livestock animals may be died.</p> <ul style="list-style-type: none"> • In the Dhansagar Union about 4255 domestic animals and 10817 domestic animals may be died. • In the Khontakata Union about 1700 domestic animals and 11500 domestic animals may be died. • In the Royenda Union about 2600 domestic animals and 43750 domestic animals may be died. • In the Southkhali Union about 4745 domestic animals and 26166 domestic animals may be died.
	Drought	<p>Due to drought in Sharankhola Upazila about 11969 domestic animals may be died from different diseases.</p> <ul style="list-style-type: none"> • In Dhansagar Union about 1759 domestic animal may be affected • In the Khontakata Union about 1700 domestic animal may be affected • In the Royenda Union about 935 domestic animal may be affected • In the Southkhali Union about 1450 domestic animal may be affected <p>As a result domestic animal may be died from food and water crisis.</p>
Health	Cyclone	<p>Due to Cyclone in Sharankhola Upazila about 12.5% of total population may be affected by diarrhea, dysentery, typhoid, Jaundice and skin diseases.</p> <ul style="list-style-type: none"> • In Dhansagar Union about 14% of 28244 populations may be affected by different diseases. • In the Khontakata Union about 14% of 42404 populations may be affected by different diseases. • In the Royenda Union about 10% of 40064 populations may be affected by different diseases. • In the Southkhali Union about 12% of 30000 populations may be affected by different diseases. <p>As a result every family of the unions may be suffered by economic problem. Besides about 1% of total population may be died for cyclone</p>
	Salinity	<p>Due to salinity in Sharankhola Upazila about 11.75% of total population may be affected by diarrhea, dysentery, typhoid, Jaundice and skin diseases.</p> <ul style="list-style-type: none"> • In the Dhansagar Union about 14% of 28244 populations may be affected by waterborne diseases and skin diseases. • In the Khontakata Union about 5% of 42404 populations may be affected by water borne diseases and skin diseases. • In the Royenda Union about 10% of 40064 populations may be affected by water borne diseases and skin diseases. • In the Southkhali Union about 18% of 30000 populations may be affected by water borne diseases and skin diseases. <p>As a result every family of the unions may be suffered by economic problem.</p>

Sector	Hazard	Description
	Flood	<p>Due to flood in Sharankhola Upazila about 7.25% of total population may be affected by diarrhea, dysentery, typhoid, Jaundice and skin diseases.</p> <ul style="list-style-type: none"> • In the Dhansagar Union about 8% of 28244 populations may be affected by water borne diseases and skin diseases. • In the Khontakata Union about 5% of 42404 population of may be affected by water borne diseases and skin diseases. • In the Royenda Union about 11% of 40064 populations may be affected by water borne diseases and skin diseases. • In the Southkhali Union about 5% of total 30000 populations may be affected by water borne diseases and skin diseases. <p>As a result every family of the all unions may be suffered by economic problem.</p>
	Drought	<p>Due to drought in Sharankhola Upazila 6.91% of total population may be affected by diarrhea, dysentery, typhoid, Jaundice and skin diseases.</p> <ul style="list-style-type: none"> • In the Dhansagar Union total 3.75% of 28244 populations may be affected by water borne diseases and skin diseases. • In the Khontakata Union about 2.6% of 42404 people may be affected by water borne diseases and skin diseases. • In the Royenda Union about 3.8% of 40064 populations may be affected by water borne diseases and skin diseases. • In the Southkhali Union about 17.5% of 30000 populations may be affected by water borne diseases and skin diseases. <p>As a result every family of the unions may be suffered by economic problem.</p>
Water and sanitation management	Cyclone	<p>If cyclone or SIDR like 2007 strikes that about 8125 latrines and 172 reserved ponds may be may be damaged in partially or totally</p> <ul style="list-style-type: none"> • In the Dhansagar Union about 950 latrines and 30 water ponds. • In the Dhansagar Union about 2900 latrines and 142 water ponds may be damaged in partially or totally. • In the Royenda Union about 2700 latrines may be damaged in partially or totally. • In the Southkhali Union about 1575 latrines may be damaged in partially or totally. <p>For this every family of this Upazila may be affected by several diseases.</p>
	Salinity	<p>Due to salinity in Sharankhola Upazila about 20 water reserve ponds and 3866 latrines may be damaged partially or totally.</p> <ul style="list-style-type: none"> • In the Dhansagar Union about 3 water reserved ponds and 1200 latrines. • In the Khontakata Union about 4 water reserved ponds and 1282 latrines. • In the Royenda Union about 5 water reserved ponds and 378 latrines. • In the Southkhali Union about 8 water reserved ponds and 1003 latrines may be damaged in every union partially or totally. <p>As a result all union's people or families may affected by water borne</p>

Sector	Hazard	Description
		diseases and different kinds of diseases.
	Drought	<p>Due to drought in the Sharankhola Upazila about 15 ponds and 100 tubewells may be damaged. As a result every Union of this Upazila may be suffered by water problem.</p> <ul style="list-style-type: none"> • In the Dhansagar Union about 4 ponds and 30 tube-wells. • In the Khontakata Union about 2 ponds and 20 tube-wells. • In the Royenda Union about 6 ponds and 40 tube wells. • In the Southkhali Union about 3 ponds and 10 tube wells. <p>As a result every family of the unions may be suffered from drinking water crisis.</p>
Infrastru cture	Cyclone	<p>If Cyclone strikes in Sharankhola Upazila about 17879 houses, 223 Government and non-government Organization and 162 km road may be damaged partially or totally.</p> <ul style="list-style-type: none"> • In Dhansagar Union about 3945 kacha houses, 60 Government and non-government Organization, 6 culverts, 49 km road may be damaged partially or totally. • In Khontakata Union about 3850 houses, 50 Government and non-government Organization, 62 Km road may be damaged partially or totally. • In Royenda Union about 5263 houses, 55 Government and non-government Organization, 32 Km road may be damaged partially or totally. • In Khontakata Union about 4821 houses, 58 Government and non-government Organization, 19 Km road may be damaged partially or totally. <p>In this reason about 15298 families in this Upazila may be suffered by economic problem.</p>
	Flood	<p>If flood strikes in Sharankhola Upazila than about 8000 houses and 162 km road may be damaged partially or totally</p> <ul style="list-style-type: none"> • In Dhansagar Union about 1500 houses out of 2500 houses and 51 Km road may be damaged partially or totally. • In Khontakata Union about 1800 houses out of 2200 houses and 66 Km road may be damaged partially or totally. • In Royenda Union about 2300 houses out of 2825 houses and 32 Km road may be damaged partially or totally. • In Southkhali Union about 2400 houses out of 2700 houses and 13 Km road may be damaged partially or totally.

Chapter Three: Risk Reduction

3.1 Identification the reasons of risk

Description of the risk	Reason		
	Primary	secondary	Final
<p>Impact of Cyclone on Agriculture:</p> <p>If cyclone or Sidr like 2007 strikes in Sharankhola upazila then in Dhansagar union out of 2490 hectare crops land 793 hectares Aman Paddy, 10.50 hectares jute, 32 hectares potato, 231 hectares Rabi crops, 147 hectares kharif crops, 17 hectares sugarcane, 16 hectares papaya, 8 hectares betel-leaf and 7 hectares guava cultivation land may be destroyed. As a result 2130 may be affected negatively directly or indirectly. In Khontakata union out of 2733 hectare crops land 1185 hectares land Aman Paddy crops, 200 hectares boro crops, 50 hectares potatoes, 216 kharif crops, 339 hectares Rabi crops, 60 hectares sugarcane, 30 hectares papaya, 24 hectares betel-leaf, 17 hectares guava cultivation may be destroyed. As a result 3787 may be affected negatively directly or indirectly. In Royenda out of 2470 hectare 825 hectares land's Aman Paddy crops, 258 hectares boro, 153 hectares land's rabi crops, 40 hectares sugarcane, 6 hectares colloq, 64 hectares land's kharif crops, 40 hectares land's papaya, 41 hectares betel leaf, 17 hectares mangoes, 8 hectares land's guava cultivation may be destroyed. As a result 1760 families may be affected negatively. In Southkhali union out of 1940 hectare crops about 1012 hectare land's Aman Paddy, 189 hectares rabi crops, 212 hectare land's kharif crops, 23 hectares sugarcane, 13 hectare land's papaya, 14 hectare papaya, 7 hectare land's guava cultivation may be destroyed severely. As a result about 3900 families may be affected negatively.</p>	<ul style="list-style-type: none"> • Due to low pressure of the river • Due to the increasing temperature in the environment • Due to the green house effect • Due to the air pollution • Due to the natural imbalance • Due to the climate change 	<ul style="list-style-type: none"> • Due to not having adequate trees in the local areas • Due to lack of social forestry • Due to not having cyclone resilient trees • Due to the emission of smoke from industries • Due to not having early warning dissemination signal of cyclone for agriculture protection • Due to not having strong embankment to protect tidal surge 	<ul style="list-style-type: none"> • Lack of proper attention of agriculture department. • Due to not having any local agriculture research center in this area. • Lack of government policies related to disaster risk reduction • Lack of proper training among the farmers • Lack of awareness among the member of UDMC

Description of the risk	Reason		
	Primary	secondary	Final
<p><u>Impact of Cyclone on Fisheries:</u></p> <p>If cyclone or Sidr like 2007 strikes in Dhansagar union of Sharankhola upazila in 520 fisheries including big and small gher 150 hectares shrimp, 70 hectares lobster cultivation may be interrupted by the breaking the embankment. As a result 300 families may be affected negatively. In Khontakata union in 315 fisheries including big and small gher 50 hectares lobster, 120 hectares shrimp cultivation may go under water or may be interrupted by the breaking of the embankment. As a result 270 families may be affected negatively. In Royenda union in 265 fisheries including big and small gher 40 hectares lobster, 60 hectares shrimp cultivation may go under water or may be interrupted by the breaking of the embankment. As a result 250 families may be affected negatively In Southkhali union in 150 fisheries including big and small gher 30 hectares lobster, 55 hectare shrimp cultivation may go under water or may be interrupted by the breaking of the embankment. As a result 200 families may be affected negatively. Moreover 1000 fishermen families of the upazila may be affected negatively for cyclone.</p>	<ul style="list-style-type: none"> • Due to not having adequate embankments on the river side • Lack of fish cultivators awareness. • Fishfarms are near to the coastal line • Due to low pressure of sea in the coastal region • Due to Climate change and green house effect • Lack of infrastructure of fish farmers and fishermen 	<ul style="list-style-type: none"> • Due to not getting the early warning signal of cyclone in time for fish cultivators and fishermen • Due to unplanned gher • Due to lack of green belt in the coastal area • 	<ul style="list-style-type: none"> • Due to not implementing social tree palntation • Due to not having proper attentation of the fisheries depatment • Due to not having local fish research center • Indifferentness of the Member of UDMC •
<p><u>Impact of Cyclone on Livestocks:</u></p> <p>If cyclone or Sidr like 2007 strikes in Dhansagar union of Sharankhola upazila then 1625 cows, 3250 goats, 193 sheaps, 255 buffalo's, 3 horses, 3700 ducks, 3475 hens, 4384 wild animals, In Khontakata union 750 cows, 1500 goats, 10000 ducks, 10000 hens, 2000 wild animals, In Royenda union 11900 cows, 3275 goats, 120 buffalos. 1700 ducks, 3500 hens and In Southkhali union 2750 cows, 4750 goats, 100 buffalos, 6500 ducks, 6750 hens,</p>	<ul style="list-style-type: none"> • Due to having weak and kacha cattle house • Due to not having cyclone resilient cattle house • Due to not having strenth of element • Not having any killa to take shelter during 	<ul style="list-style-type: none"> • Lack of safe places • Lack of proper treatment of the wounded animals. • Lack of social forestry • Not having adequate trees in the locality • Not getting early warning dessimation signal for animal 	<ul style="list-style-type: none"> • Lack attention of livestock department • Lack of cattle protection policies of the livestock related ministry. •

Description of the risk	Reason		
	Primary	secondary	Final
3250 wild animals may die by submerging of tidal surge . Moreover every family and the natural beauty of this upazila may be affected negatively.	cyclone • Lack of awariness of the farmers (cattles)	protection	
<u>Impacts of cyclone on the water and sanitation:</u> If cyclone or Sidr likes 2007 strikes in Dhansagar union of Sharankhola upazila about 50 pit, 600 kacha, 300 semi pucca toilets, 30 pond's water, In Khontakata union totally about 2500 kacha, 400 semi pucca, 142 ponds water; In Royenda union 200 pit, 2300 kacha, 200 semi pucca toilets; In Southkhali union 1475 kacha, 100 semi pucca toilets may be totally or partially damaged. As a result every family of these unions may be affected negatively.	<ul style="list-style-type: none"> • Due to high wind speed • Due to depression of the sea near coastal area • Climate change • Due to not having cyclone resilient toilets • Due to not having cyclone resilient water system • Due to lack of awariness of the people 	<ul style="list-style-type: none"> • Weak infrustructure of the toilets • Due to deforestation • Lack of capacity of the community people 	<ul style="list-style-type: none"> • Lack of keen attention of government and local government engineering department. • Lack of indifferentness and capacity of the UDMC
<u>Impacts of cyclone on Vegetation:</u> If cyclone or Sidr like 2007 strikes in Sharankhola upazila then in Dhansagar union, 80000 fruit trees, 100000 forest trees, 575 medicinal trees may be destroyed. In Khontakata union 35000 fruit trees, 65000 forest trees, 6000 medicinal trees may be destroyed. In Royenda union 36000 fruit trees, 41000 forest trees, 18000 medicinal trees may be destroyed. In Southkhali union totally about 50000 fruit trees, 65000 forest trees, 2000 medicinal trees may be destroyed. As a result every family of Sharankhola upazila may face economic lose directly or indirectly.	<ul style="list-style-type: none"> • Due to the environmental imbalance • Due to air pollution • Due to the increase temperature. • Due to the climate change • Due to the Green House effect. • 	<ul style="list-style-type: none"> • Due to having inadequate trees in the locality. • Lack of people awareness abot the social forestry. • Due to severe deforestation • Due to not planting trees on personal effort. 	<ul style="list-style-type: none"> • Need proper attainment of the forest department. • Due to lack of government effort for social afforestation • Due to not having big trees in the locality.
<u>Impacts of Cyclone on Infrastructure (house):</u> If cyclone or Sidr like 2007 strikes in Sharankhola upazila in Dhansagar union about 3100 kacha houses, 45 pucca houses, 800 semi pucca houses, 10 primary schools, 5 secondary schools, 4 madrashas, 35 mosques,	<ul style="list-style-type: none"> • Due to having inadequate trees in the local area • Due to climate change • Due to not having 	<ul style="list-style-type: none"> • Due to living near to the coastal area • Due to environment pollution • Weak infrustructure of 	<ul style="list-style-type: none"> • Due to not taking tree plantation program • Due to not making cyclone resilient house

Description of the risk	Reason		
	Primary	secondary	Final
5 temples, 6 government and non-government institutions, 1 hospitals, 1 health center, 6 culverts, 3 km pucca road, 37 km kacha road, and 5 km semi-pucca road may be destroyed. In Khontakata union about 3250 kacha houses, 100 pucca houses, 500 semi pucca houses, 20 primar schools, 4 secondary schools, 8 madrashas, 55 mosques, 4 temples, 10 km pucca road, 40 km kacha road, and 12 km semi pucca road may be partially or totally destroyed. In Royanda union 4950 kacha houses, 313 semi pucca houses, 7 primary schools, 4 secondary schools, 30 mosques, 5 temples, 25 km kacha road, and 7 km semi pucca road may be partially or totally destroyed. In Southkhali union about 4675 kacha houses, 10 pucca houses, 136 semi-pucca houses, 10 primary schools, 3 secondary schools, 7 madrashas, 40 mosques, 4 temples, 14 km kacha road, 5 km semi pucca road may be partially or totally damaged. In consequences about 15298 families of the upazila may become shelter less and may face economic loses.	<ul style="list-style-type: none"> adequate bush trees around houses Maximum houses are kacha Maximum persons area poor Unplanned house 	<ul style="list-style-type: none"> the houses Due to not having any disaster management activities Due to lack of strong embankment Due to not having cyclone resilient institutional infrastructure 	<ul style="list-style-type: none"> Due to not having adequate forestry Lack of necessary donor sanctions Lack of government policy to build cyclone resilient house Lack of capacity of the local government institutions
Impacts of cyclone on human health: If cyclone or sidar like 2007 strikes in Sharankhola upazila then in Dhansagar union out of 35467 population 6% diarrohea, 7% decency, 2% typhoid, 4% jaundice & 16% people may be affected by virus diseases. As aresult 3% people may be affected by various diseases & die a premature death. In Khontakata union out of 2700 population 1% diarrohea, 1% decency, 1% typhoid, 2% skinborne disease, 1% people may be affcted by various diseases & die a premature death. In Royenda union out of 35535 population 10% may be affected by virus diseases. In southkhali union out of 31550	<ul style="list-style-type: none"> Sea depression/ low pressure Increase temperature of the environment Due to green house effect Due to climate change Due to air pollution Lack of public awareness about health 	<ul style="list-style-type: none"> Not having adequate trees in the locality Not having social forestry plan Not having early dissemination signal of disaster Due to black smoke of the imdustries and cars Lack of modern hospital and adequate medecine and health professional 	<ul style="list-style-type: none"> Lack of the keen attention of Health department Not having local health research institute Lack of capcity of the union disaster management committe and health professional Not having proper

Description of the risk	Reason		
	Primary	secondary	Final
population 15% diarrhoea, 20% dencity, 5% typhoid, 5% jaundice & 15% virus affected diseases & 20% people may be affected by skin borne diseases.As result 80% people may be affected by various peiople out of total population & 2% may die a premature death.			implementation of government rules
<p>Impacts of salinity on agriculture:</p> <p>Due to salinity in Dhansagar union of Sharankhola upazila out of 2490 hectares land 112 hectares amon,115 hectares boro,7 hectares jute, 18 hectares potato, 112 hectares robi crops, 116 hectares kharip crops, 19 hectares sugar cane, 5 hectares papia, 2 hectares guava cultivation may be affected negatively.As aresult 1575 families of this union may beaffected negatively.In Khontakata union out of 2732 hectares land 455 hectares amon crops,162 hectares boro, 50 hectares potato, 116 hectares robi crops, 70 hectares kharip crops, 35 hectares sugarcane, 18 hectares papia, 22 hectares betel leaf & 5 hectares guava cultivation may be affected negatively. As aresult 1720 families of this union may be affected negatively. In Royenda union out of 2470 hectares land 265 hectares amon,127 hectares boro, 125 hectares robi crops, 52 hectares kharip crops, 21 hectares sugarcane, 12 hectares mango & 35 hectares betel leaf cultivation may be affected negatively. As a result 1100 families of this union may be affected negatively. In Southkhali union out of 1945 hectares land 507 hectares amon,162 hectares boro, 102 hectares robi,1 hectares kharip crops, 19 hectares sugarcane, 7 hyectares papia, 21 hecatres betel leaf, 13 hectares guava cultivation may be destroyed. As a result 1325 families of this union may be affected negatively.</p>	<ul style="list-style-type: none"> • Location of agricultural land near to the coastal area • Due to not having embankment beside the river • Due to not having proper sewerage system • Due to unplanned fish cultivation • Due to intrusion of saline water to the agricultural land from canals • Due to want of saline adaptive agriculture 	<ul style="list-style-type: none"> • due to intrusion of saline water during tidal surge • Due to not having proper maintainence of the sluice gates • Due to holding saline water willingly. • Due to not having sluice gates at the intersection of rivers and khals • Due to increase of high tide in the river • Due to having huge water during high tide 	<ul style="list-style-type: none"> • Due to not having any proper steps to remove the Farakka barage from the government • Due to not having proper attention of the water development board • Due to lack awareness of the community people • Due to lack attention of the donor agencies

Description of the risk	Reason		
	Primary	secondary	Final
Impacts of salinity on fisheries sector: Due to salinity in Dhansagar union of Sharankhola upazila in 520 ghers including big & small out of 385 hectares 80 hectares white fish & 90 hectares prawn cultivation may be destroyed. Moreover the local fish may also extinct. In Khontakata union in 315 ghers including big & small out of 270 hectares 81 hectares white fish & prawn cultivation may be destroyed. In Royenda union in 265 ghers out of 210 hectares 60 hectares white fish & prawn cultivation may be affected negatively. In Southkhali union in 150 ghers out of 175 hectares 35 hectares white fish, prawn cultivation may be affected negatively.	<ul style="list-style-type: none"> • Due to unplanned shrimp cultivation • Due to water logging • Due to lack of awareness of the fish farmers • Due to holding saline water willingly • Due to having much saline in the soil 	<ul style="list-style-type: none"> • Not having embankments beside the rivers and khals • Not having adequate sluice gates • Not having proper water sewerage system • Due to sea level rise 	<ul style="list-style-type: none"> • Not having proper attention of the fish sector • Not having attention of the water development board • Lack co-operation of the donor agencies • Lack awareness of the greedy fish cultivators • Absence of local fish research center
Impacts of salinity on trees: Due to salinity in Dhansagar union of Sharankhola upazila about 1205 forest trees, 2750 fruit trees & 805 medicinal trees, 7 nursery trees may be destroyed. In Khontakata union about 5500 fruit trees, 5000 forest trees, 2500 medicinal trees may be destroyed. In Royenda union about 6650 fruit trees, 100 medicinal trees, 2625 forest trees may be destroyed. In Southkhali union about 12000 fruit trees, 4000 forest trees, 3500 medicinal trees, 10 nursery plants may be destroyed. As a result every family of this upazila may be affected negatively.	<ul style="list-style-type: none"> • Due to unplanned fish cultivation • Due to saline water logging • Due to lack of sluice gate in the river • Due to holding saline water willingly • Due to having much saline in the soil • Lack sewerage system 	<ul style="list-style-type: none"> • Not having embankments beside the rivers and khals • Not having adequate sluice gates • Not having proper water sewerage system • Deposition of the saline water at the root of the trees • Due to increase of high tide of the river 	<ul style="list-style-type: none"> • Not having proper attention of WAPDA • Lack co-operation of the donor agencies • Lack of capacity of the UzDMC and community people

Description of the risk	Reason		
	Primary	secondary	Final
<u>Impacts of salinity on livestock:</u> Due to salinity in Dhansagar union about 325 cows, 550 goats, 170 sheep, and 93 buffalos; In Khontakata union about 100 cows, and 1000 goats; In Royenda union 900 cows, 2275 goats, and 120 buffalos; In Southkhali union 1750 cows, 3750 goats, and 100 buffalos may be affected negatively for scarcity of food.	<ul style="list-style-type: none"> • Due to having unplanned saline water gher • No drainage system for dewatering of saline water • Due to not having salinity resilient grass land. 	<ul style="list-style-type: none"> • No embankment along the river side. • Congestion of saline water due to tidal surge • Not having any sluice gate or main gate • Decreasing of river's navigability 	<ul style="list-style-type: none"> • Lack awareness of the water development board • Lack help of the donar agencies
<u>Impacts of salinity on human health:</u> Due to salinity in Dhansagar union of Sharankhola upazila out of 35467 population 15% diarrhoea, 13% decency, 16% may be affected by skin borne diseases, In Khontakata union out of 2700 population 2% diarrhoea, 10% decency & 5% may be affected by skin borne diseases, In Royenda union out of 35535 population 10% may be affected by skin borne diseases, In Southkhali union out of 31550 population 15% diarrhoea, 20% may be affected by skin borne diseases.	<ul style="list-style-type: none"> • Excess od salinity in the locality and scarcity of drinking water • Lack of people awarness about water and health • Due to saline water intrusion in the locality • Poor health management 	<ul style="list-style-type: none"> • Due to saline water logging • Due to not having proper water sewerage system • Low land • Intrusion of saline water from river to fresh water resources • Due to not having polder around river • Due to increase of Saline water gher 	<ul style="list-style-type: none"> • Not having proper attention of the local government and engineering department and WAPDA • Due to lack awareness of the greedy fish cultivators • Due to lack of help of the donor agencies • Lack of proper attension of the health professional
<u>Impacts of salinity on water& sanitation:</u> Due to increasing salinity in Dhansagar union Sharankhola upzila 3 reserved pond's water, 15 pucca toilets, In Khontakata union 8 shallow tubewells, 4 reserved pond's water, 125 katcha toilets, 15 semipucca toilets, 42 puccatoilets, In Royenda union 5 reserved pond's water, 367 katcha toilets, 3 semipucca toilets, 4 pucca toilets, In Southkhali union 8 reserved pond's	<ul style="list-style-type: none"> • Scarcity of fresh water • Availabiity of saline water allover the locality • Low land and saline water logging • Not having polders beside the rivers 	<ul style="list-style-type: none"> • Not having polder beside the river • Not having sluice gates beside the rivers • Due to unplanned fish cultivation • Not having any system 	<ul style="list-style-type: none"> • Not having proper attention of the local government and engineering department • Lack of donor assistance • Lack of capacity of

Description of the risk	Reason		
	Primary	secondary	Final
water, 966 katcha toilets, 37 pucca toilets may be totally or partially damaged. As a result every family members of this union may be affected by water borne diseases.	<ul style="list-style-type: none"> • Lack of awareness of local people 	<ul style="list-style-type: none"> to dewatering saline water 	UDMC
<p>Impacts of flood on agriculture:</p> <p>Due to flood in Dhansagar union of shaeankhola upazila out of 2490 hectares cultivable land 84 hectares among, 25 hectares kharip crops, 9 hectares papia, 14 hectares guava cultivation may be destroyed. As a result 795 families may be affected negatively. In Khontakat union out of 2733 hectares land 1025 hectares among, 254 hectares kharip crops, 80 hectares sugarcane, 28 hectares papia, 21 hectares betel-leaf, 52 hectares guava cultivation may be destroyed. As a result 3100 families may be affected negatively. In Royenda union out of 2470 hectares cultivable land 802 hectares among, 152 hectares kharip crops, 21 hectares sugarcane, 10 hectares papia, 8 hectares betel-leaf, 30 hectares guava cultivation may be destroyed. As a result 2400 families may be affected negatively. In Southkhali union out of 1944 hectares cultivable land 1255 hectares among, 142 hectares kharip crops, 18 hectares sugarcane, 9 hectares papia, 17 hectares betel-leaf, 5 hectares guava cultivation may be destroyed. As a result 3725 families may be affected negatively</p>	<ul style="list-style-type: none"> • Due to lack of immediate dewatering system • Due to unplanned fish cultivation • Lack of early warning dissemination signal for flood • Submerging of crops land due to sudden flood water • Lack of flood adaptive agriculture 	<ul style="list-style-type: none"> • Due to lease out of government canals • Due to canal siltation • Not having proper knowledge about post flood management • Due to reduction of river navigation for siltation • Due to inadequate trees 	<ul style="list-style-type: none"> • Due to not having proper steps to re-excavate the government khals and rivers • Due to not implementing the Farakka Barage

Description of the risk	Reason		
	Primary	secondary	Final
<p><u>Impacts of flood on fisheries sector:</u></p> <p>Due to flood in Dhansagar union of Sharankhola upazila in 520 ghers including big and small about 80 hectares out of 385 hectares white fish, and 90 hectares prawn cultivation may be affected negatively. As a result 300 families of this union may face various problems. In Khontakata union about 81 hectares out of 270 hectares white fish and prawn cultivation may be affected negatively. As a consequence 270 families of this union may be affected negatively. In Royenda union 265 ghers including big and small about 60 hectares out of 210 hectares white fish and prawn cultivation may be destroyed. As a result 250 families of this union may be affected negatively. In Southkhali union 150 ghers including big and small about 35 hectares out of 175 hectares white fish and prawn cultivation may be destroyed. In consequences 200 families of this union may be affected negatively.</p>	<ul style="list-style-type: none"> • Low height & weak condition of the gher's boundary. • Lack of techniques to protect fish during flood. • Low land location • River siltation • Not having flood forecasting news in time 	<ul style="list-style-type: none"> • Due to not having polders • Due to not having drainage system • Due to the problem in the sluice gates • Lack effort of the fisheries community. 	<ul style="list-style-type: none"> • Due to river siltation • Lack attention of the water development board and fisheries department
<p><u>Impacts of flood on livestock</u></p> <p>Due to flood in Dhansagar union of sharankhola upazila 575 cows, 750 goats, 70 sheeps, 2 horses, 135 buffalos, 5500 ducks, 275 hens; In Khontakata union 437 cows, 787 goats, 3125 ducks, 3925 hens; In southkhali union 300 cows, 1200 goats, 50 buffalos, 2250 ducks, 3875 hens may be affected by various diseases. As a result every family of this upazila may be affected negatively & the natural beauty of this upazila may be diminished.</p>	<ul style="list-style-type: none"> • Due to river siltation • Due to lack of river navigability • Due to not any system for removing siltation • Low location of the cattle's shelter. • Not having flood shelter for the animals • Not having proper sewage system for flood water management 	<ul style="list-style-type: none"> • Unplanned fish cultivation • Not having any steps for canal reexcavation • Due to water logging • Due to giving illegal embankments in the government khals • Reducing depth of the river and canal 	<ul style="list-style-type: none"> • Lack attention of livestock department • Not having any government step • Not having river current • Due to farakha Barrage • Due to not having proper attention of water development

Description of the risk	Reason		
	Primary	secondary	Final
	<ul style="list-style-type: none"> Insufficient veterinary doctor and medicine 		board
<p>Impacts of flood on infrastructure (house): If flood like 1988 strikes at Sharankhola upazila then in Dhansagar union out of 2500 katcha houses 1500 houses, 6 k.m pucca roads, 25 k.m katcha roads, 20 km semipucca roads; In Khotakata union out of 2200 katcha houses 1500 houses, 6 k.m pucca roads, 40 km katcha roads, 20 km semipucca roads; In Royenda union out of 2825 katcha houses 2300 houses, 6 km semi pucca roads, 26 km katcha roads; In Southkhali union out of 2700 katcha houses 2400 houses, 13 km katcha roads may be partially or totally damaged.</p>	<ul style="list-style-type: none"> Water logged & low land area Economic insolvency of the local people Infrastructures are not flood adaptive Lack of public awareness 	<ul style="list-style-type: none"> Not having sluice gate Lack of khals depth Not having system of water evacuation by excavating khals Reducing the depth of the canal Deposition of alluvia in the river Due to not having sluice gate No drainage system through excavating canal 	<ul style="list-style-type: none"> Not having any government steps Lack of keen attention of Union parishad and LGED
<p>Impacts of flood on water & sanitation: Due to flood in Dhansagar union of Sharankhola upazila 10 shallow tubewells, 6 reserved pond's water, 400 katcha toilets; In Khontakat union 25 reserved pond's water, 1600 katcha toilets, 400 semipucca toilets, 50 pucca toilets; In Royenda union 12 reserved pond's water, 1200 katcha toilets, 1200 semipucca toilets, 100 pucca toilets; In Southkhali union 38 reserved pond's water, 1950 katcha toilets, 50 semipucca toilets may be partially or totally damaged. As a result every family members of this union may be affected by water borne diseases.</p>	<ul style="list-style-type: none"> Not having culverts and sluice gates Due to river siltation Maximum toilets are kacha and located on low land Lack of public awareness Scarcity of the drinking water Lack of flood adaptive WATSAN technology 	<ul style="list-style-type: none"> Deposition of alluvia in the river Low depth of the khal Not having sluiceway and main gate Inadequate polders along the river side Not having dewatering system by reexcavating canal 	<ul style="list-style-type: none"> Not having any government steps Lack of keen attention by the DPHE Lack of awareness of UDMC

Description of the risk	Reason		
	Primary	secondary	Final
<p><u>Impacts of shrimp virus on fisheries sector:</u></p> <p>Due to shrimp virus in Dhansagar union of Sharankhola upazila 520 gher including big and small about 90 hectares out of 385 hectares prawn and lobster cultivation may be affected negatively. As a result 300 families of this union may face problems directly or indirectly. In Khontakata union 315 gher including big and small 81 hectares shrimp and 120 hectares shrimp and lobster cultivation may be affected negatively. As a result 270 families of this union may face problems directly or indirectly. In Royenda union in 265 gher including big and small 60 hectares shrimp and 90 hectares lobster cultivation may be affected negatively. As a result 250 families of this union may face problems directly or indirectly. In Khontakata union union in 150 gher including big and small 25 hectares shrimp and 40 hectares lobster cultivation may be affected negatively. As a result 200 families of this union may face problems directly or indirectly. Moreover the natural fish of this upazila may extinct.</p>	<ul style="list-style-type: none"> • Local people are not aware about shrimp virus. • They cannot identify hurriedly when virus affects. • Due to high intensity of salinity. • Due to water pollution. • Due to enclose the saline water for long time. • Unplanned fish cultivation • Lack awareness about virus about the common people 	<ul style="list-style-type: none"> • Due to soil contamination. • Due to lack of arrangement for quality testing of shrimp fry. • Because of high intensity of chemical fertilizer using in croplands. • Due to lack of arrangement of diminution of gher's water. • Due to the destroying of soil nutrition. 	<ul style="list-style-type: none"> • Lack of proper arrangement of fish department. • Due to not having any shrimp research institution in this area. • Due to selling shrimp fry in the market from fish's immature egg. • Lack of government co-effort.
<p><u>Impacts of river erosion on agriculture sector:</u></p> <p>Due to river erosion in Khontakata union of Sharankhola upazila out of 2732 hectare crops land 350 hectares Aman Paddy, 41 kharif, 10 hectares papaya, 20 hectares sugarcane, and 2 hectares betel leaf cultivation may be destroyed severely. As a result about 1300 families may be affected negatively. In Royenda union out of 2470 hectare crops land 618 hectares Aman Paddy, 202 hectares kharif crops, 30 hectares sugarcane, 10 hectares betel-leaf, 20 hectares spice crops, 8 hectares guava 8 hectares papaya cultivation may be destroyed severely.</p>	<ul style="list-style-type: none"> • Due to the weak embankment • Due to the pressure increasing of the rivers water. • Due to not having adequate trees beside the river. 	<ul style="list-style-type: none"> • Due to the decreasing of the river's navigability • The decreasing river's depth due to siltation • Lack of farmers awareness 	<ul style="list-style-type: none"> • Due to lack of proper attention of water development board. • Due to not having any govt step for river erosion •

Description of the risk	Reason		
	Primary	secondary	Final
As a result about 1625 families may be affected negatively. Out of 1944 hectares crops land 513 hectares Aman Paddy, 300 hectares Rabi crops, 81 hectares kharif crops, 9 hectares papaya, 12 hectares sugarcane, 13 hectares betel-leaf, 7 hectares guava cultivation may be destroyed severely in Southkhali union. As a result about 1850 families may be affected negatively.			
Impacts of flood on agriculture: Due to flood in dhansagar union of Sharankhola upazila out of 2490 acre crops land 161 hectares amon, 20 hectares sugarcane, 7 hectares papia, 18 hectares betel-leaf cultivation land may be destroyed. As a result 1150 may be affected negatively directly or indirectly. In Khontakata union out of 2733 acre crops land 370 hectares land Amon crops, 9 hectares sugarcane, 25 hectares papia, 18 hectares betel-leaf cultivation may be destroyed. As a result 1050 families may be affected negatively directly or indirectly. In Royenda out of 2470 acre 165 hectares land's amon crops, 108 hectares land's kharip crops, 4 hectares sugarcane, 15 hectares land's papia, 7 hectares betel leaf, 7 hectares land's guava cultivation may be destroyed. As a result 550 families may be affected negatively. In Southkhali union out of 1943 acre crops about 124 acre land's amon, 250 acre land's kharip crops, 8 hectares sugarcane, 8 acre land's papia, 1 hectares papia cultivation may be destroyed severely. As a result about 450 families may be affected negatively.	<ul style="list-style-type: none"> • Not having quick dewatering system • Unplanned fish cultivation • Submerge of crops land due to sudden rainfall • Lack of Early warning dissemination signal of heavy rainfall 	<ul style="list-style-type: none"> • Due to giving lease out of the government canals • Due to the canals siltation • Due to not having adequate trees • Lack of knowledge about the post disaster management • Due to lack of river navigability and depth for siltation 	<ul style="list-style-type: none"> • Not having any proper steps from the government about the re-excavation of the khals and rivers • Due to not having implementation of Farakka barrage
Impacts of flood on livestock Due to flood in Dhansagar union of Sharankhola upazila	<ul style="list-style-type: none"> • Low land location • Not having flood 	<ul style="list-style-type: none"> • Not having polders along the river side 	<ul style="list-style-type: none"> • Lack attention of the livestock

Description of the risk	Reason		
	Primary	secondary	Final
575 cows, 750 goats, 70 sheeps, 2 horses, 135 buffalos, 5500 ducks, 275 hens; In Khontakata union 437 cows, 787 goats, 3125 ducks, 3925 hens; In Southkhali union 300 cows, 1200 goats, 50 buffalos, 2250 ducks, 3875 hens may be affected by various diseases. As a result every family of this upazila may be affected negatively and the natural beauty of this upazila may be diminished.	<ul style="list-style-type: none"> resilient cattle shelter Natural imbalance Lack of public awareness 	<ul style="list-style-type: none"> Not having proper sewage system Ineffective sluice gate River siltation 	<ul style="list-style-type: none"> department Lack of supervision of the water development sector
<p>Possible damage of agriculture by draught:</p> <p>Due to draught in Dhanasagar union of sharankhola upazila out of 2490 hectares land about 116 hectares amon crops, 6 hectares jute, 62 hectares kharip crops, 1 hectares sugarcane, 20 hectares papia, 2 hectares betel leaf, 1 hectares guava cultivation may be destroyed. As a result 1125 families of the union may be affected negatively. In Khontakata union out of 2733 hectares land about 495 hectares amon crops, 51 hectares amon crops, 51 hectares kharip crops, 8 hectares sugarcane, 5 hectares betel leaf cultivation may be destroyed. As a result 1150 families of this union may be affected negatively. In Royenda union out of 2470 hectares land 230 amn crop, 69 hectares kharip crops, 8 hectares sugarcane, 2 hectares papia, 2 hectares guava, 8 hectares betel leaf cultivation may be destroyed. In consequences 740 families may be affected negatively. In Southkhali union out of 1944 hectares 260 hectares amon crops, 40 hectares kharip crops, 4 hectares sugarcane, 1 hectares papia, 1 hectares betel leaf, 2 hectares gava cultivation may be destroyed. As a result about 1175 families may be affected negatively.</p>	<ul style="list-style-type: none"> Due to climate change Due to not having rainfall in time Not having adequate trees Lack of drought adaptive agriculture Insufficient irrigation system 	<ul style="list-style-type: none"> Not having deep tubewells Lack awareness about agriculture Increasing salinity rate Inadequate trees in the locality River and khal siltation 	<ul style="list-style-type: none"> Lack awareness of the agriculture department Lack awareness of local government and engineer department

Description of the risk	Reason		
	Primary	secondary	Final
Impacts of drought on human health : Due to drought in Dhansagar union of Sharankhola upazila out of 35467 population 3% people diarrhea, 2% dysentery, 5% people typhoid, 5% Jaundice may die a premature death. In Khontakata union out of 27000 population 4% people diarrhea, 2% dysentery, 1% typhoid, 1% Jaundice, 5% people skin diseases may die a premature death. As a result 3% of total population may die a premature death. In Royenda union out of 35535 population 3% people diarrhea, 2% dysentery, 10% Jaundice, 1% typhoid, 3% skin diseases may die a premature death. In Southkhali union out of 3150 population 15% people diarrhea, 20% may be affected by Jaundice. As a result out of total population 35% may be affected by various diseases and 2% may die a premature death. As a result every family member of these unions has a possibility of facing various losses including financial.	<ul style="list-style-type: none"> • Due to climate change • Due to not having rainfall in time • Not having adequate trees • Lack public awareness 	<ul style="list-style-type: none"> • Not having deep tubewells • Being not careful about health • Lack of medicine and modern hospitals and expert health professional 	<ul style="list-style-type: none"> • Lack of keen attention by the local government and DPHE and health department • Lack of capacity of UDMC and health professional • Lack of Modern hospital
Possible damage of livestock by drought: Due to drought in Dahansagar union of Sharankhola upazila 650 cows, 800 goats, 260 sheep, 58 buffalos; In Khontaka union 650 cows, 1000 goats, 50 buffalos, 5000 ducks, 6500 hens; In Royenda union 337 cows, 587 goats, 2125 ducks, 2925 hens; In Southkhali union 400 cows, 1000 goats, 50 buffalos, 2250 ducks and 3875 hens may die due to scarcity of food or various diseases.	<ul style="list-style-type: none"> • Due to not having adequate trees • Lack of environmental balance • Lack of Public awareness 	<ul style="list-style-type: none"> • Due to not having implementation of social forestry program • Insufficient veterinary centre and vaccine and medicine 	<ul style="list-style-type: none"> • Due to climate change • Insufficient modern veterinary centre • Lack of capacity of animal health professional on disaster

3.2 Identification of possible solutions for risk reduction

Description of the risks	Possible solution for risk mitigation		
	Short term (1-2)	Middle term (3-5)	Long term (5+)
Potential damage of the agriculture sectors due to the Cyclone	<ul style="list-style-type: none"> • Ensure accurate and right time weather forecasts. • Harvest ripen crop after getting cyclone warning signal • Need to get importance on the weather forecasting • Rice Seeds should be stored in a safe place. • Crop cultivation following crop calendar 	<ul style="list-style-type: none"> • Sufficient Tree plantation and social forestry in the appropriate places • Aware farmers through appropriate training by the government initiatives • Cutting big trees in front of the house • Arranging myking in order to aware people about weather forecasts 	<ul style="list-style-type: none"> • Need to keen attention of the forest and agriculture department • To initiate government reafforestation program • Increase capacity of UzDMC and UDMC
Potential damage of the fisheries sectors due to the Cyclone	<ul style="list-style-type: none"> • Strengthening and heightening bank of the gher • Awareness building of fish farmers • Catching fish after getting cyclone signal • Arranging dewatering system of the gher water after cyclone and tidal surge • Provide support (net and boat) to the victimized fisherman • Ensure accurate and right time weather forecasts. 	<ul style="list-style-type: none"> • Strengthen existing embankment of the Boleshor River • Reexcavate Canals and removing illegal infrastructure • Disseminate advance early warning system to the fisherman and fish farmers • Erecting shrimp gher in a plan way • Have to tree plantation in the island of Boleshor River by the government and non-government initiatives • Arranging interest 	<ul style="list-style-type: none"> • Need to keen attention by the government and donor for constructing embankment • Arranging interest free loan by the government for the fishermen and fish cultivators • Need to financial supports by the donors and government • Improve capacity of UzDMC and UDMC

Description of the risks	Possible solution for risk mitigation		
	Short term (1-2)	Middle term (3-5)	Long term (5+)
		free loan for the fishermen and fish cultivators	
Potential damage of the vegetation due to the Cyclone	<ul style="list-style-type: none"> • Have to abstain from cutting large trees of the garden • Strengthen trees through earth filling on the plant root • Arrange of adequate number of local forestry • Create coastal green belt through intensive tree plantation 	<ul style="list-style-type: none"> • Need to adequate number of tree plantation in a planning way • Arranging Awareness building event for the importance of social forestry • Take initiatives to save Mangrove Forest, Sundarban 	<ul style="list-style-type: none"> • Need to keen attention by the Local forest deptment • Need to take steps for social forestry by the government initiatives • Set up nursery by the government initiatives • Planting cyclone adaptive trees by the government initiatives
Potential damage to human health due to Cyclone	<ul style="list-style-type: none"> • Improving awareness building of the community about harmful effects of the water pollution • Setting disaster adaptive Deep tube-wells • Rapping the mouth of the tube-wells tidily during emergency period • Ensuring adequate medicine supply at union level • Arranging training on first aid and primary treatment • Emphasizing old, pregnant mother, and disable person in all aspects of support of disaster risk reduction • Constructing community grave 	<ul style="list-style-type: none"> • Arranging at least four reserve ponds for each union • Preserve the reserved pond by the community people • Stop leasing out reserved pond of government • Stop mixing chemical materials in the reserved pond water • Construct three Pond sand Filters (PSFs) per ward and 50 Rain water Harvestors per 50 households • Arranging ToT for the community people on health and disaster 	<ul style="list-style-type: none"> • Setting disaster adaptive Deep tube-wells by the government initiative • Improving awareness building of the stakeholders about harmful effects of the water pollution by government initiative • Need to support of government and donors • Improve capacity of UzDMC and UDMC

Description of the risks	Possible solution for risk mitigation		
	Short term (1-2)	Middle term (3-5)	Long term (5+)
Potential damage of the water and sanitation sectors due to the Cyclone	<ul style="list-style-type: none"> • Awareness building to community on health, water and sanitation • Construct cyclone adaptive sanitary latrine • Arrange safe water source • Cleaning polluted reserve ponds 	<ul style="list-style-type: none"> • Construct cyclone adaptive house with latrine facilities • Planting trees around the homestead • Ensure sweet water and construct community latrines by the government initiatives • Improve Water drainage system • Emphasizing weather forecast 	<ul style="list-style-type: none"> • Increase awareness of the volunteers about their role and responsibility • Construct at least one cyclone resilient house for each ward by the government initiative as the community replicate it • Provide financial assistance by the donors agency • Need to keep attention by the DPHE
Potential damage of the infrastructure due to the Cyclone	<ul style="list-style-type: none"> • Construct cyclone resilient house • Planting bushes trees around the homestead aiming to reduce the risk of cyclone • Strengthening institutional infrastructure • Earth filling of the playground of the institution • Ensuring dewatering system immediate after disaster and tidal surge • Cutting large trees in front of the institutions • Solidifying the kacha road and strengthening it 	<ul style="list-style-type: none"> • Construct embankment on the bank of Bolleshor River • Planting trees around institution in a planning way • Reexcavating canals and removing illegal infrastructure of the river and canal • Constructing cyclone adaptive institutions • Constructing three cyclone shelters per ward and with capacity of 1500 persons per shelter • Arranging disabled friendly place in the cyclone shelter 	<ul style="list-style-type: none"> • Disaster management activities will be introduced. • Ensure demand based relief materials • Need to keep attention by the relevant government department for constructing cyclone adaptive infrastructure • Need to take appropriate step by the government for implementing policy of infrastructure construction • Improve capacity

Description of the risks	Possible solution for risk mitigation		
	Short term (1-2)	Middle term (3-5)	Long term (5+)
			<p>of UzDMC and UDMC</p> <ul style="list-style-type: none"> • Need to keep attention by the donor and government
Potential damage of the Livestock sectors due to the Cyclone	<ul style="list-style-type: none"> • Ensure accurate and right time weather forecasts. • Construct cyclone adaptive livestock shelter • Keep free of the cattle during disaster for safe shelter • Construct Killa for livestock at union level • Creating alternative livelihood (handicraft and small business) 	<ul style="list-style-type: none"> • Construct animal shelter in a planning way • Planting tree around the animal shelter in a planning way • Building awareness of the volunteer about their role and responsibility • Arrange animal Physicians and adequate drugs for treatment of injured animals 	<ul style="list-style-type: none"> • Constructing Killa by the government initiative for taking shelter during disaster • Arranging interest free loan for the victimized farmers aiming to rearing animal • Developing and implementing of policies for the protection of livestock by the livestock department
Potential damage to the agricultural sector due to Salinity	<ul style="list-style-type: none"> • Saline tolerance crop cultivation • Training to the farmers for improving their capacity • Arrange soil salinity test for better agriculture production from the relevant department in the Upazila • Constructing embankment in order to stop saline water intrusion to the agriculture land • Practices Salt tolerant plants of horticultural 	<ul style="list-style-type: none"> • Install sluice gate with the assistance of LGED • Constructing embankment beside the Balessor rivers • Reexcavating canal in order to store sweet water in the canal • Cultivating fish and shrimp in a planning way 	<ul style="list-style-type: none"> • Need to construct embankment by the government in order to stop saline water intrusion to agriculture land • Need to take steps by Upazila administrative for stopping illegal and unplanned shrimp cultivation • Need to assistance from donors • Increase consciousness among UzDMC

Description of the risks	Possible solution for risk mitigation		
	Short term (1-2)	Middle term (3-5)	Long term (5+)
	gardens <ul style="list-style-type: none"> Grafting high yielding fruit varieties with local trees. 		and UDMC
Potential losses of vegetation due to salinity	<ul style="list-style-type: none"> Shrimp cultivation in a planning way Take initiative to stop saline water intrusion and use appropriate fertilizer and insecticide Saline tolerance vegetation practices Grafting of High yielding fruit trees with local variety 	<ul style="list-style-type: none"> Fish farming in a planning way Constructing polders beside the Bolessor river bank Construct sluice gate in the conjunction between canal and rives Apply appropriate fertilizer and insecticide in order to improve soil health Improve drainage system for water management 	<ul style="list-style-type: none"> Need to take appropriate steps for protecting environmental balance by the water development authority and forest department Need to assistance of both government and donors agency
Potential damage to livestock due to salinity	<ul style="list-style-type: none"> Building awareness of farmers on livestock rearing Appropriate training for farmers on the livestock rearing Saline resilient grass cultivation on the khas land Saline adaptive livestock rearing Arrange vaccination for the livestock 	<ul style="list-style-type: none"> Drazzing for improve navigation stytem of river Construct, strenthen of the union embankment beside river bank Construct sluice gate on the conjunction between river and canals Fish cultivation in a planning way Install livestock feed factory at local level Ensure saline adaptive grass 	<ul style="list-style-type: none"> Need to keen attention of the upazila livestock department Need to take appropriate steps by the water development board Need to cordial assistance of both government and donors agency Need to great importance of the saline adaptive grass cultivation by the government

Description of the risks	Possible solution for risk mitigation		
	Short term (1-2)	Middle term (3-5)	Long term (5+)
		supply	
Potential damage to human health due to salinity	<ul style="list-style-type: none"> • Must be aware of not to drink contaminated water. • Must be arranged for installing Deep tube-well • Must be arrange for installing Pond sand filter (PSF) and rain water harvesters • Excavate four reserved pond per ward for ensuring drinking water • Supply drinking water at household level through reexcavating pond and installing PSF along with solar system 	<ul style="list-style-type: none"> • Constructing pond in selected river side • Managing the reserved pond by the community people • Stop leasing out reserved pond of government • Stop mixing chemical materials in the reserved pond water • Construct three Pond sand Filters (PSFs) per ward and 50 Rain water Harvestors per 50 households • Strengthen health services at community clinic as well as union level 	<ul style="list-style-type: none"> • Need to take appropriate steps by the Upazila Health Department • Managing the reserved pond by the Government • Improving awareness building of the stakeholders about harmful effects of the water pollution by government initiative • Need to support of government and donors
Potential loss of the fisheries sector due to the salinity	<ul style="list-style-type: none"> • Saline adaptive fish cultivation • Increase awareness building of the fish cultivators • Training for the fish cultivators on saline adaptive fish cultivation • Integrated fish cultivation (fish and vegetable) • Stop illegal shrimp farming 	<ul style="list-style-type: none"> • Construct embankment beside river bank for stopping saline water intrusion • Construct adequate number of sluice gate in the appropriate places of both river and canals • Improve drainage system • Re-excavate canal for storing sweet water 	<ul style="list-style-type: none"> • Need to keep attention of upazila fishery department and water development board • Set up fishery research center at upazila level with the assistance of donors agency • Need to keep attention of both Government and donors agency • Need to get importance by the

Description of the risks	Possible solution for risk mitigation		
	Short term (1-2)	Middle term (3-5)	Long term (5+)
		<ul style="list-style-type: none"> • Ensure supply of saline adaptive fish fry 	government for producing saline adaptive fish fry
Potential damage of the water and sanitation due to the salinity	<ul style="list-style-type: none"> • Ensure sweet water for the local community • Declare reserve pond and reexcavate pond for supply drinking water • Install Pond sand filter (PSF) with solar system • Install rainwater harvesters • Awareness building to the community on water supply and sanitation 	<ul style="list-style-type: none"> • Construct sluice gate by the government initiatives • Increase awareness building of/meeting with fish farmers for farming in a planning way • Ensure sweet water for the local community by the government initiatives • Construct polders beside river 	<ul style="list-style-type: none"> • Need to keep attention of the public health department • Increase awareness building of fish farmers for farming in a planning way • To provide improved water and sanitation system. • Arranging appropriate water management system by the water development board
Potential damage of the fisheries sectors due to the shrimp virus	<ul style="list-style-type: none"> • Build appropriate awareness building to the fish farmers for identifying shrimp virus and its management • provide training to the fish farmers for identifying shrimp virus and its management • Arrange purifying water system and ensuring supply pure water to the shrimp farmers • Ensuring supply of virus free shrimp fry 	<ul style="list-style-type: none"> • Fish farming in the scientific and planning way • Arrange dried out of water and purifying soil in the gher • Install nutritious fish feed factory at local level • Arranging interest free loan to the victimized shrimp farmers 	<ul style="list-style-type: none"> • Need to take keen attention by the Fisheries Department • Need to provide appropriate training to fish farmers by the government initiative • Need to support by the government in order to remedy of shrimp virus. • Install shrimp research center at local level Fisheries Department will be aware to all fish

Description of the risks	Possible solution for risk mitigation		
	Short term (1-2)	Middle term (3-5)	Long term (5+)
			farmers.
Potential damage of the agriculture sectors due to the flood	<ul style="list-style-type: none"> Disseminating flood forecasting in the right time Remove water faster during post flood situation and improve drainage system Cultivate Flood adaptive agriculture Arranging training for the farmers Harvest 80% ripen paddy after getting signal of flood Cultivate crop following crop calendar 	<ul style="list-style-type: none"> Construct and strengthen polders with green coverage along the river side of Bolessor Removing illegal infrasturcture from the river and canal Construct and repair sluice gate Recxcavate canals/river for improving navigation 	<ul style="list-style-type: none"> Need to strenthen agriculture department's assitance for working at the field level Need to improve water distribution aggrement of Farakka barage Need to get necessary steps by the donors agency
Potential damage of the livestock due to the flood	<ul style="list-style-type: none"> Disseminating flood forecasting signal in right time Constructing, Strengthening and heightening the livestock shelter Arranging dewatering system after immediate flood aiming to solve the problem of water logging Crating alternative livelihood (small traders and small business) 	<ul style="list-style-type: none"> Have to aware of the CPP and UDMC member for executing their role and responsibility Constructing embankment beside the Boleshor River Constructing animal shelter in a planning way Arranging vaccination program for the animal and also medicine for affected animal Construcing animal shelter for each household 	<ul style="list-style-type: none"> Need to keen attention by the Upazila Livestock department Arranging appropriate loan for livestock rearing
Potential damage of the fishery sectors due to the	<ul style="list-style-type: none"> Ensuring dewatering system of the fish farm for removing excess 	<ul style="list-style-type: none"> Re-excavate canals and river Remove illegal 	<ul style="list-style-type: none"> Need to keen attention of fishery

Description of the risks	Possible solution for risk mitigation		
	Short term (1-2)	Middle term (3-5)	Long term (5+)
flood	<ul style="list-style-type: none"> water Ensuring supply of canal water Ensuring dazing system for re-excavating river in order to improve water flow of the river Protecting fish farm using net before flood Disseminate early warning system at right time Construct separate flood adaptive animal shelter for each household 	<ul style="list-style-type: none"> infrastructure from the river Prepare shrimp farm in a planning way and ensuring irrigation through shallow machine Provide financial/technical assistance to the affected fish farmers Construct and repair embankment 	<ul style="list-style-type: none"> department Need to take proper initiative by the government and donors for reexcavating river
Potential damage of the water and sanitation management due to the flood	<ul style="list-style-type: none"> Awareness building of local community on hygiene, water and sanitation Ensure community based water supply and sanitation system Stop illegal and unplanned shrimp farming Reexcavate canal and river 	<ul style="list-style-type: none"> Construct Sluice gate at the mouth of canals and rivers Construct culvert at appropriate places of canals and rivers Remove silt from the mouth of sluice gate by the government initiative Construct flood adaptive latrine Arrange local level advocacy 	<ul style="list-style-type: none"> Need to keen attention by the LGED and DPHE Awareness building of local community by the government Construct infrastructure following government policy Need to donor assistance
Potential risk of the Human Health due to the flood	<ul style="list-style-type: none"> Improving awareness building of the community about harmful effects of the water pollution Setting flood adaptive Deep tube-wells Managing reserved pond in order to stop entrance 	<ul style="list-style-type: none"> Arranging at least two flood adaptive reserve ponds for each union Stop leasing out reserved pond of government Stop mixing chemical materials 	<ul style="list-style-type: none"> Preserve the reserved pond by the government initiative Need to keen attention by the Upazila Health department Improving

Description of the risks	Possible solution for risk mitigation		
	Short term (1-2)	Middle term (3-5)	Long term (5+)
	<p>of polluted water and ensuring drinking water availability</p> <ul style="list-style-type: none"> • Cleaning polluted pond water appropriately after flood • Ensuring adequate medicine supply at union level 	<p>in the reserved pond water</p> <ul style="list-style-type: none"> • Construct three Pond sand Filters (PSFs) per ward and 1 Rain water Harvestors per 50 households • Arranging ToT for the community people on health and disaster 	<p>awareness building of the stakeholders about harmful effects of the water pollution by government initiative</p> <ul style="list-style-type: none"> • Need to support of government and donors
Potential risk of the infrastructure due to the flood	<ul style="list-style-type: none"> • Construct flood adaptive house • Concreting the kacha road and strengthening it • Plinth raising of the house • Repairing cyclone/flood shelter • Strengthening institutional infrastructure • Ensuring dewatering system immediate after flood 	<ul style="list-style-type: none"> • Construct house and institution in a planning way • Construct embankment on the bank of Bolleshor River 	<ul style="list-style-type: none"> • Need to keep attention by the relevant government department for constructing flood adaptive infrastructure • Building awareness of the people for constructing flood adaptive house • Improve capacity of UzDMC and UDMC
Potential damage of the agriculture sectors due to the river bank erosion	<ul style="list-style-type: none"> • Take Pilling initiatives and strengthen the breaching/cracking embankment beside the river • Bushes and intense rooted type Tree plantation (bio-engineering) both side of the embankment 	<ul style="list-style-type: none"> • Protect river bank from Royeda canal to Kumarkhali canal by introducing block system • Reexcavate canal and rivers • Crop cultivation considering risk prone area 	<ul style="list-style-type: none"> • Need to strengthen cooperation of water development board and donors agency • Take initiatives of government for protecting river bank erosion • Tree plantation program introduction by the government initiative
Potential damage of agriculture due to the Excess	<ul style="list-style-type: none"> • Arranging water management system for remove water 	<ul style="list-style-type: none"> • Reexcavate canal and river • Remove illegal 	<ul style="list-style-type: none"> • Need to keep attention by the Upazila agriculture

Description of the risks	Possible solution for risk mitigation		
	Short term (1-2)	Middle term (3-5)	Long term (5+)
rainfall	<ul style="list-style-type: none"> logging Introduce water logging agriculture Cultivate agriculture/crop following hazard calendar 	infrastructure from river and canal	<ul style="list-style-type: none"> department Need to take government initiative for removing illegal infrastructure from river
Potential damage of Agriculture due to the erratic/drought	<ul style="list-style-type: none"> Apply irrigation system for crop cultivation Excavate minipond in the agriculture land Drought tolerance crop cultivation Capture moisture following mulching method 	<ul style="list-style-type: none"> Reexcavate river and canal Shrimp cultivation in a planning way Arrange adequate number of pond in the beel Repair culvert and sluice gate of the union 	<ul style="list-style-type: none"> Arrange shallow machine for irrigation by the government initiative Need to keep attention by the Upazila agriculture department
Potential damage of vegetation due to the drought	<ul style="list-style-type: none"> Adequate tree plantation for balancing environment Ensure appropriate irrigation for forestry and horticulture Excavate minipond in the forest land 	<ul style="list-style-type: none"> Reexcavate river and canal Tree plantation in a planning way Arrange adequate number of pond in the beel Repair culvert and sluice gate of the union 	<ul style="list-style-type: none"> Arrange shallow machine for irrigation by the government initiative Need to keep attention by the Upazila forest and agriculture department
<ul style="list-style-type: none"> Potential damage of human health due to the drought 	<ul style="list-style-type: none"> To raise public awareness. About health and epidemiology Ensure at least one reserve ponds in order to get drinking water for each village Construct reserve osmosis plant Distribute plastic tank for capturing rain water. 	<ul style="list-style-type: none"> Set up Deep tube-well at appropriate places Tree plantation in the locality Provide training to the doctors on disaster and health 	<ul style="list-style-type: none"> Need to keep attention of Upazila health department Need to keep attention of Upazila and Union Parishad

Description of the risks	Possible solution for risk mitigation		
	Short term (1-2)	Middle term (3-5)	Long term (5+)
Potential damage of livestock due to the drought	<ul style="list-style-type: none"> Constructing, Strengthening and heightening the livestock shelter and house Arrange training to the farmers for livestock rearing Re-excavate canal for water management Ensure adequate medicine supply 	<ul style="list-style-type: none"> Have to aware of the CPP and UDMC member for executing their role and responsibility Arranging adequate vaccine and medicine for animal Arranging culvert and Removing silt from the mouth of sluice gate for water management Conducting advocacy activities 	<ul style="list-style-type: none"> Need to keep attention by the Upazila Livestock department Arranging appropriate loan for livestock rearing Arranging sluice gate by the LGED initiative Arranging training by the government initiative for building community awareness Install local livestock research center by the donor assistance
Potential damage of water and sanitation due to the drought	<ul style="list-style-type: none"> Excavate and reexcavate of pond in the locality Set up one deep tube-well per village Construct rainwater harvester (RWH) and pond sand filter (PSF) 	<ul style="list-style-type: none"> Ensure at least one reserved pond per village Reexcavate canal Tree plantation in the locality 	<ul style="list-style-type: none"> Need to keep attention of Water development Board and DPHE Need to keep attention of Upazila and Union Parishad

3.3 Development plans of the NGO's

Serial no:	Name of the ngo and executive	Sector of working	Number of beneficiaries	Number of projects	Duration of projects
1	Rupantor	Awareness on disaster, Risk reduction and relief distribution	1400- 1500	1	Ongoing
2	Kodak	Awareness on disaster, Risk reduction and relief distribution	1600- 1700	2	Ongoing
3	Nobolok	Awareness on disaster	2500- 2700	1	Ongoing
4	Muslim Aid	Awareness on disaster, Risk reduction and relief distribution	1700- 1800	1	Ongoing
5	JJS	Awareness on disaster	2000- 2200	1	Ongoing
6	Prodipon	Awareness on disaster	2500- 3000	1	Ongoing

Serial no:	Name of the ngo and executive	Sector of working	Number of beneficiaries	Number of projects	Duration of projects
7	Dhaka Ahsania Mission	Awareness on disaster, Risk reduction and relief distribution	2500- 2700	1	Ongoing
8	Asroy Foundation	Awareness on disaster	2500- 2200	1	Ongoing
9	Vosed	Awareness on disaster	1500- 1700	1	Ongoing
10	Coastal Foundation	Awareness on disaster	1600- 1700	1	Ongoing
11	Public health center	Awareness on disaster	1000- 1500	1	Ongoing
12	Acid Voka	Awareness on disaster	2000- 2200	1	Ongoing
13	Karitas	Awareness on disaster	2100- 2200	1	Ongoing

3.4 Disaster Management Plan

3.4.1 Pre disaster preparation

SL . #	Activities	Target	Possible budget	Where will do	Implementation date	Who & How much will do			
						Upazila Parishad	Community	UP	NGO
1	Organizing volunteer team at ward level and provide them proper training.	36 teams	1,80,000	UP	February-March	√	-	√	-
2	Selection of the places at local level to disseminate the disaster news.	36 teams	-	UP, wards	February-March	.	.	√	.
3	Develop plan to disseminate early local disaster alert.	36 teams	20,000	UP, ward, Villages	February-March	√	-	√	-
4	Repairing cyclone shelter.	37	1080000	UP	February-March	√	-	√	-
5	Executing mobile health clinic	4	200000	UP, ward, Villages	February-March	√	.	√	√
6	Organizing mock drill	12	60,000	UP	February-March	-	√	√	√
7	Training on disaster and primary treatment	4	40000	UP	February-March	-	-	√	√

SL	Activities	Target	Possible	Wher	Impleme	Who & How much will do			
8	Supply Dry food and live savings medicine	rice/pulse 4 tons	800000	UP, ward & Villages	February-April	√	-	√	√
9	Provide training to the local students about the disaster.	112 schools	224000	School	February-April	-	-	-	√
10	Collecting the phone number of the volunteer and NGO workers for disaster management.	-	-	UP and upazila	February-April	-	-	√	√
11	Early warning and emergency warning dissemination before disaster. Necessary materials including deeds, ornaments should be dumped under ground	36	-	All the wards of the union	Just before the disaster	-	√	√	√

Coordination with Development Plan- These activities will help to take pre disaster preparation to make the local people aware and enthusiastic to reduce the instant disaster risk. If the activities come out successfully then it will reduce the risk of livelihood and will have a positive impact on the social and national economy.

3.4.2. During Disaster

#SL	Activities	Target	Possible budget	Where will do	Implementation date	Who & How much will do			
						UPz Parishad	Community	UP	NGO
1	Making arrangement to rescue the child, woman physically disable people to a safe place	36	-	All unions	During disaster	-	√	√	√
2	Rescuing affected people and shift them to cyclone shelter and hospital	800 families	80000	Same	During disaster	-	.	.	.
3	If the water level cross the near the high tide cross the	36	-	Same	During disaster	√	-	√	√

#SL	Activities	Target	Possible	Where	Implementat	Who & How much will do			
	danger limit or if there is possibility of cyclone then making immediate disaster dissemination and meeting								
4	Arranging drinking water and safe toilet	16000 families	-	Same	During disaster	√	-	√	√
5	Distributing dry food	36	180000	Same	During disaster	√	-	√	√
6	Arranging and activating the law/enforcement and social safety team	36	-	Same	During disaster	√	-	√	-
7	Making immediate arrangement for treatment of better the seriously wounded people	36	-	Same	During disaster	√	-	√	√
8	Observing situation everyday carefully	36	-	Same	During disaster	√	-	√	-
9	Rescuing or transporting to cyclone shelter	-	-	Same	During disaster	-	√	√	√
10	Food supply and Relief distribution	36	360000	Same	During disaster	√	-	√	√
11	Transporting hospital for primary treatment or immediate treatment.	36	-	Same	During disaster	-	√	√	-
12	Supplying immediate rescuing tools	36	-	Same	During disaster	√	-	√	-
13	Preparing disaster adaptable vehicle for safe and fast transportation during disaster.	36	-	Same	During disaster	-	√	√	√
14	Arranging different room and medical treatment for the pregnant	36	-	Same	During disaster	√	-	√	-

#SL	Activities	Target	Possible	Where	Implementat	Who & How much will do			
	woman								

3.4.3 Post Disaster Risk Reduction Action Plan

SL#	Activities	Target	Possible budget	Where will do	Implementation date	Who and How much will do			
						Upazila	Community	UP	NGO
1.	Immediate starting of the rescue work	36	180000		after disaster	√	√	√	√
2.	Rescuing wounded people and making arrangement of primary treatment and provide better treatment if necessary	36	130000	UP	after disaster	√	-	√	-
3.	Making arrangement of dead human burying and evacuate the wounded cattles	6000	120000	UP	after disaster	-	√	√	√
4.	Estimating damage, need assessment and provide recusion within 72 hours	36	- - -	UP, Paurashava	after disaster	√	-	√	√
5.	Providing rehabilitation to the worst damaged persons	6000	120,00,000	UP	after disaster	√	-	√	√
6.	Cleaning the debris	36	2,85,000	UP	after disaster	√	√	√	-
7.	Reconstruction of the administration	36	-	UP	after disaster	√	-	√	-
8.	Providing immediate rehabilitation and livelihood facilities	36	-	UP	after disaster	√	-	√	-
9.	Provide loan without interest .	8000 families			after disaster	√	-	√	√

Coordination with Development plan: If the post disaster activities are implemented then the damage of human life and livelihood will be minimized. If immediate rehabilitation and livelihood facilities are provided then affected people will be able to reduce their risk and will keep a positive impact on the national economic and social sector.

3.4 Action Plan during normal period

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
1	2	5	7	8	9	10
1	Construct embankment/polders (Target- 44 km; Tentative Budget-BDT 22 lakh/km; Implementation month-April-November)	Khontakata Union <ul style="list-style-type: none"> From Markaz Mosque adjacent to the WAPDA-polder to Bandaghat near Upazila Parshid about 2 km Dhansagar Union <ul style="list-style-type: none"> River side of the Southkhali Rayanda and about 3 km -union Royenda Union <ul style="list-style-type: none"> Construct embankment over the bank of Bhola river from the canal of Daser house at Dhakkin Razapur to Abdul malek howlader km 10-house at Utter Razapur (ward no. 2) From wood cutter Mill of Royenda Bazar to Sunil sikder house then jolbuniya sluicgate at km1 –ward no. 5 From Razeshor khan house to north Zilbuniya sluicgate at at ward no. 9 - 1 km Southkhali <ul style="list-style-type: none"> Construct embankment At Southkhali union - about 12 km From North Sonatola bat-tala to Solaiman master house at ward no. 1-1.5 km From Soronkhola bazar to Terabeka bazar at ward no. 9- about 1 km 	√	-	√	√
2	Repair embankment (Target- 18 km; Tentative Budget-BDT 10 lakh/km; Implementation month-April-November)	Khontakata Union <ul style="list-style-type: none"> From the last side of Khontakata canal to the last part of Kumarkhali canal at ward no. 5 Southkhali <ul style="list-style-type: none"> Reconstruction of embankment in the southkhali union at ward no-5, length in 8km and height 6ft 	√	√	√	√
3	Construct Sluicgate (Target- 15; Tentative Budget-BDT 15 lakh/each; Implementation month-	Dhansagar Union <ul style="list-style-type: none"> On the canal of Gopy at ward # 2 On the Ghoher canal of water development board at ward # 2 On the Rotier canal at ward # 1 On the canal of WAPDA at ward # 6 Royenda Union <ul style="list-style-type: none"> On canal of kaliquar at ward # 9 	√	-	√	√

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
	April-November)	<p>On the canal of Dasher Varani at ward # 2 On the canal of Rasul bazer at ward # 2 On the canal of Chargasia at ward # 2 On the canal of Mazher char at ward # 2 The canal In front of Harez Khan house at ward # 5 On the canal of Jony at ward # 7 On the canal in front of the house of momin meer at ward # 7</p> <p>Southkhali Union Adjacent to the house of Shahajan helder and Ashraf Ali house at ward # 2 In front of the house of Abdur Rob house at ward # 9 Khontakata Union On the canal of Golbuniya near the Bandhaghata at ward # 8</p>				
	Repair and maintenance Sluice gate (Target- 9; Tentative Budget-BDT 5 lakh/km; Implementation month-April-November)	<p>Dhansagar Union On the Khezurbaria canal of Water Development Board at ward # 2 Near the Razapur WAPDA Sluice gate</p> <p>Khontakata Union On the canal of Kumarkhali at ward # 4 Near the Razapur WAPDA Sluice gate at ward # 7 on the Khontakata canal of WAPDA Sluice gate at ward # 5</p> <p>Southkhali Union Repair sluice gate in the Sonatola village at Boraitola, ward # 1 Near the canal of mazhir house at ward # 8 • on the canal near Gabtoli Bazar at Dakkin Southkhali at ward # 6</p>	√	√	√	-
3	Construct road (Target- 268km; Tentative Budget-BDT 10 lakh/km; Implementation month-April-November)	<p>Dhansagar Union</p> <ul style="list-style-type: none"> From Sultan Sarder house to Rashid Sarder house at ward # 1- 1 km long HSB road From Rashid talukder house to Rashid howlader cyclone shelter at ward # 1-2 km long HSB road From Joynal master house to Alep khar house cyclone shelter at ward # 1- 1.5km long HSB road From Hydar house to United cyclone shelter at ward # 2- 2km long HSB road From Dhiren Jomaddar house to Matri vasha college at ward # 2- 1km long HSB road 	√	-	√	√

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		<ul style="list-style-type: none"> From Azaher house to Nolbuniya cyclone shelter at ward # 3- 1 km long HSB road From Dalim house to Nolbuniya cyclone shelter at ward # 3- to be constructed 2km long HSB road From Hemayat hawlader house to Rob Mridha housen at ward # 3- to be constructed 1km long HSB road From Habib house to Latif hawlader house of Khazurbaria at ward # 3- to be constructed 1km long HSB road From Dhakkin Badal Salehiya cyclone shelter to Chowrastha Rustom Foqir house at ward # 4- to be constructed 2km long HSB road From Hawalder para to D N politecnical collage at ward # 4- to be constructed 1 km long HSB road From Singh house cyclone shelter to Shirajul master house m at ward # 5- to be constructed 2km long HSB road From Singhbari cyclone shelter to Monindro Fulur house at ward # 5- to be constructed 1.5 km long HSB road long From Bedhdi house to Razapur at ward # 6 - to be constructed 1.5 km long HSB road From Orez hawlader house to Satter howlader house at ward # 6 - to be constructed 2 km long HSB road From the bridge of Shipie bari to kana Ghony house then to Jobber mathbor house at ward # 6- to be constructed 1 km long HSB road From Razapur WAPDA to Mannan Bapari house at ward # 6- to be constructed 0.5 km long HSB road From Birer Boyragi house to Awyal kha house at ward # 6 -to be constructed 1 km long HSB road From Razapur bazer cyclone shelter to Razapur juniour school at ward # 7- about 1km long HSB road From Delowar hawlader house to Habib Mowlana madradsa at ward # 7 – about 2km HSB road From Razapur bazer culvert to Shagir howlader house at ward # 7-about 1km long HSB road 				

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Com munit y	UP	NG O
		<ul style="list-style-type: none"> • From Rafiq hawlader house to WAPDA at ward # 7 – about 1km HSB road • From Razaspur hafizia Madrasa to Nurul Islam Mridha house at ward # 7 – 1km long HSB road • From Dulal Kundu house to Mozid aqon house then to Kamal howlader house at ward # 7- about 1km long HSB road • From Nuru master house to Dhali's house at ward # 7- about 1km HSB road • From Aziz kari house then Baour to Badol master house at ward # 7-about 1km HSB road • From Moti's house to Nirmol house at ward # 7- about 1km HSB road • From Sorowar jomadder house to Razapur Habib jouairder new house at ward # 7- about 1 km HSB road • From Baour primary school to Sikder house at ward # 8 – about 2 km long HSB road • From Razapur Sahelia Dhakil madrasa to Biomol sadhur house at ward # 8- about 2km HSB road • From Hanif kha house to Nurul islam mirdha house at ward # 8- about 1 km HSB road • From Saquait munshi house to Aysher school at ward # 8- about 1.5 km HSB road • From Nasir foqir house of Saver to Anowar khalifer house at ward # 8- about 1km HSB road • From Mohammed house then Baour Zama house and Siddiq aqon Mosque to Razzak sufir house at ward # 8- about 1km HSB road • From Amragasia high school to Salamart Ali house at ward # 9- about 3 km HSB road • From Amragasia UP to Shahajan Mollah's house at ward # 9- about 1.5km HSB road • From Babul chaqlader house to Moqbul Meer house at 9 no. ward- 1km HSB road • From Hossain Faraji house to Mondol house at 9 no. ward - 1 km HSB road • From Sobder faraji house to Badsha halder house at ward # 9 – about 1 km HSB road • From Salam mollar house to Siddik halder house at ward # 9- 1 km HSB road • From Faraji house to Moslem hawlader house at ward # 9 - 1 km HSB road • From Jobber halder house to Kader Sharif house at ward # 9- about 1.5 km HSB road 				

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		<ul style="list-style-type: none"> From Rahaman Boyati house to main HSB road at 9 no. ward- 2 km long HSB road <p>Khontakata Union</p> <ul style="list-style-type: none"> From Akubber house to Foqir house at 1 no. ward - 1 km HSB road From Ishaq meer house to Rahaman hawlader house at 1no. ward - 1 km HSB road From Omar Ali house to govt. primary school at 1 no. ward- long 1 km HSB road From Yaqub kha house of Zaner par to Chandmia Sarker house at ward # 2 – about 2 km long HSB road From Talukder house in Nalbuniya to Yasin howlader house at ward # 2 – about 1 km long HSB road From Zaner-par Govt. primary school to Moharaz hawlader house at ward # 2- about 1.5 km long HSB road From Gaffer aqon house of khontakata to Abdul hai howlader house at ward # 3- about 1 km HSB road From Ashraful Mohila Dhakhil madrasa to Moriur rahaman house at ward # 3- about 1 km HSB road <p>From Asraful kalam madrasa in the chowmohani to Chairman bari at ward # 3- about 2km HSB</p> <p>From Isharath kha house of west khontakata to HSB road of chowmohani at ward # 3 - about 1.5 km long HSB road</p> <p>From Jobber hat to shelter house of east khontakata at ward # 4- about 2km HSB road</p> <p>From Zimtola of east khontakata to Delour khan house at ward # 4- about 1 km HSB road</p> <p>From Ibrahim Faraji house to Jobber hat then to Kalam mowlana house at 4 no. ward - 2 km HSB road</p> <p>From Bapari house to Dakkin khontakata govt. primary school at ward # 5- about 1.5 km HSB road</p> <p>From Khontakata Foqir house to Zakir khan house at ward # 5- about 1.5km HSB road</p> <p>From Abdur Rahaman aqon house to Hamayath munshi house at ward # 5- about 1.5km HSB road</p> <p>From Khalil talukder house to Akonda para madrasa at ward # 6- 1km HSB road</p> <p>From Sultan khan house to Chand khan house at ward #6- 0.5km HSB road</p> <p>From Razzer primary school to bus stand at ward # 7- about 1km HSB road</p> <p>From Moti dellar house to Bandaghata at ward # 7- about 1km HSB road</p> <p>From west Razzer to Aziz boyati house at 7 no.</p>				

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		<p>ward- 1.5km HSB road From Taltoli Ullasi govt. primary school to Delower member house at ward # 8- about 1km HSB road From CMB bridge to Habib shop at ward # 8 – about 1km HSB road From Montu Faraji house of Golbuniya to Shahajalal house at 8 no. ward -1km HSB road From Kabir khan house to Hassan ali house at ward # 9- about 1km HSB road At ward # 9, from Lal aqon house to Sultan aqon house 0.5km HSB road From Talukder house of Amragasia to Dipchar at ward # 9- about 1.5km HSB road From Gazi house to Harun Huzur house at ward # 9 – about 1km HSB road From sultan aqon house to Jalal uddin howlader house at ward 9- about 1km HSB road From Samad kari house to Zakir member at ward # 9- about 1km HSB road</p> <p><u>Southkhali Union</u></p> <p>From Ismail khan house to Latif khan house at 1 no. ward – about 1km HSB road From Jabber munsir house to Kasem ali jouarder house at ward # 1- about 1km HSB road From Model bazer to Sonatola primary school at ward # 1- about 2km HSB road From Rofiq mistry house of Malia Razapur to Kollan bari bridge then Razapur bazer at ward # 1- about 10km HSB road From Afser meer house to Tazem mollar house at ward # 2- about 0.5km HSB road From Rustom ali khan house to Tasim munsir house at ward # 2- about 1km HSB road From Goni gazi house to Saqander house at ward # 2- about 1km HSB road From Rasulpur bazer to Ismail kha house then Mridha house at ward # 2 – about 8 km HSB road From Jalal mir house to Answer mir house at ward # 3- about 0.5km HSB road From the Tample of Tafal bari to Ismail guard house at ward # 3- about 1km HSB road From Aqundi houose of Maser canal to Kalam house at ward # 3- about 5km HSB road From Nurul Islam halder house of Volar par to</p>				

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		<p>Sultan Mridha house at ward # 3- about 3km road From City cell tower to Nuro Mridha house at ward # 5- about 5km HSB road From Moqter house to Unus kobiraz house at ward # 6- about 1km HSB road From Zakir member house to commender bari at ward # 6- about 1km HSB road From Sundorban madrasa bari to new sluice gate at ward # 7- About 0.5km HSB road From Lal khan house to Mannan faraji house at ward # 7 about 1km HSB road From Chandmia house to Mozid khan house at ward # 7- About 1 km HSB road From Abdul hamid aqon house to Nanna minger house at ward # 7- About 2km HSB road From the bridge of Kamal talukder house to Monzur poholan house at ward # 7- about 4km HSB Road From Gonybalir house to Monir talukder house at ward # 8 about 1km HSB road From Mozammel member house to Foqir bari at ward # 8- About 1km HSB road From Sebamed talukder house to Jahangir aqon house at ward # 8- about 3km HSB road From Hafiz kha house to the border of 4 no. Southkhali union at ward # 8 – About 2km HSB road From Habib Howlader house to Unis mollar house at ward # 9- aboout 1km HSB road From Munsibari Mosque to Tazen house at ward # 9- about 1km HSB road From Utter tafalbari west side primary school to Taizul Poholan house at ward # 9- About 2km HSB road From Sequnder sikder house to embankment of Vhola at ward # 9-about 4km HSB road From Laqurtola mosque to Abdus satter member house at ward # 9 - about 1.5km HSB road</p> <p><u>Royenda Union</u></p> <p>From Tafalbari Mira shelter house to Tulatola to be construct HSB road long 4 km From hatem pur village to Ghar of Ruhul to be construct HSB road long 2 km From Melay shelter house to Jogodish member house to be construct HSB road long 3 km From Gavi Harez house to bridge of kuddus member</p>				

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		to be construct HSB road long 4 km From the pond of Jomadder bari to Vote centre of Khada to be construct HSB road long 2 km From Char rasta to polerhut then dewar bari to be construct HSB road long 4 km From Uttar Razapur to Malay cyclone shelter to be construct HSB road long 6 km From Kuddus member house to Utter Razapur cyclone shelter to be construct HSB road long 5 km From Rasulpur bazer house to Charer cyclone shelter to be construct HSB road long 4 km From Modho kodomtola to Ula cyclone shelter to be construct HSB road long 6 km From Gony master house cyclone shelter to Gazi house to be construct HSB road long 5 km From Jibonto house to Mofez moller hluse cyclone shelter to be construct HSB road long 4 km From Sadder chairman house to Rashid talukder house to be construct HSB road long 2 km From Kamal talukder house to Mouroshi bazer to be construct HSB road long 5 km From Soto tafalbari to Mirabari to be construct HSB road long 3 km From Kawsar member house to Laqurtola bazer to be construct HSB road long 5 km				
4	Build of earthen (Target- 7; Tentative Budget-BDT 60 lakh/kill; Implementation month-April-November)	Dhansagar Union One eathen Killa at Ward number 7 Royenda Union One eathen Killa at Ward number 1 One eathen Killa at Ward number 2 Khontakata Union One eathen Killa at Ward number 4 One eathen Killa at Ward number 5 Southkhali One eathen Killa at Ward number 7 One eathen Killa at Ward number 3	√	-	-	√
5	Re-excavate river/canal (Target- 32km; Tentative Budget-BDT 15 lakh/km; Implementation	Dhansagar Union Re-excavate Dhansagar doctor canal 1.5 km at ward no. 2 • Re-excavate Dhansagar Ghop canal 2 km at ward no. 2 • Re-excavate Malsa canal 1.5 km at ward no. 4 • Re-excavate Dhansagar Varany canal 2.5 km at	√	√	√	√

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
	n month- Jan.- Dec.)	ward no. 2 • Re-excavate Razapur bazar canal 2km at ward no. 7 • Re-excavate Nolbuniya canal 1.5km at ward no. 3 • Re-excavate singbari canal 2 km at ward no. 5 • Re-excavate Kalibari canal 2.5 km at ward no. 9 • Re-excavate Amragasia canal 3 km. at ward no. 5 • Re-excavate Nolbuniya Gazi canal 2 km at ward no. 3 • Re-excavate pollanbari canal 2.5km at ward no. 3 • Re-excavate Zaliya chuta canal 1km at ward no. 2 • Re-excavate Saliyabunia canal 1km at ward no. 9 • Re-excavate Bandaghata canal 2km at ward no. 2 • Re-excavate Dhakkin badal canal 2.5 km at ward no. 4 Khontakata Union • Re-excavate kumar khali canal 2 km at ward no. 1,3,4 • Re-excavate Nolbuniya canal 2.5 km at ward no. 1,2,8 • Re-excavate Khontakata canal 3km at ward no. 5 Royenda Union • Re-excavate Khader canal 2.5 km at ward no. 4 • Re-excavate Doctor bari canal 1.5km at ward no. 6 • Re-excavate Kazi canal 2 km at ward no. 4 • Re-excavate poler hut canal 2 km at ward no. 7 • Re-excavate Bangla bazar canal 2.5km at ward no. 4 • Re-excavate Mondol bari canal 1 km at ward no. 3 • Re-excavate Khada char ghata canal 2 km at ward no. 4 • Re-excavate Khada Jomadder bari canal 2 km at ward no. 4 • Re-excavate Tadalbari canal 2.5 km at ward no.				

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		8 • Re-excavate Varany canal 3 km at ward no. 2 Southkhali • Re-excavate Tafalbari canal 8 km . at ward no. 1 to 9 • Re-excavate Chaltabuniya canal 6 km . at ward no. 1 to 9 • Re-excavate Utter Tafalbari canal 7 km . at ward no. 1 to 9				
6	Cyclone shelter construction (Target- 44; Tentative Budget-BDT 20 lakh/shelter; Implementation month-October-May)	Dhansagar Union • One cyclone shelter at Togorbari govt. primary school at ward # 1 • One cyclone shelter at D N juniour school at ward # 1 • One cyclone shelter at Infront of Awal aqon house at ward # 4 • One cyclone shelter at Dhakkin badal govt. primary school at ward # 5 • One cyclone shelter at Infront of police station at ward # 6 • One cyclone shelter at Attach Habib mowlana madrasa at ward # 7 • One cyclone shelter at Nesaria govt. primary school at ward # 8 • One cyclone shelter at Hogol pati govt. primary school at ward # 9 • One cyclone shelter at Amragasia high school at ward # 9 Royenda Union • Volarper school at ward # 1 = one • Vote centre school at ward # 1 =one • Pangasia school at ward # 1= one • Rasulpur Polly primary school ar ward # 2=one • Sonaitola primary school at ward # 2 =one • Attach Khanar bazer at ward # 2 = one • Rayanda mohila madrasa at ward # 5=one • Infront of Utter kodomtola Foqir house at ward # 5 =one • Tafalbari vote centre school at ward # 7= one • Infront of Khaleq commender house at ward # 7	√	-	-	√

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		<p>= one</p> <ul style="list-style-type: none"> • Mourasi bazer at ward # 7 =one • Infront of Kobir khan house at ward # 9 =one • Infront of Mostafa Molla house at Ward # 9 = one • Beside mosque of Khan house at ward # 9 <p>Khontakata Union</p> <ul style="list-style-type: none"> • Infront of Khontakata Malek chowqider house at ward # 3 • Khontakata Govt. primary school at ward # 3 • Infront of Khontakata Ali hossain house at ward # 5 • Infront of Khontakata Hakim howlader house at ward # 5 • Attach Latifia Dhakil madrasa at ward # 5 • Dipchor Govt. primary school at ward # 8 • Taltoly Govt. primary school at ward # 8 • Infront of Jobber house at ward # 4 <p>Southkhali Union</p> <ul style="list-style-type: none"> • Attach Boqultola Mir house mosque at ward # 2 • Infront of utter Boqultola Mridha house at ward # 2 • Infront of Hang house at ward # 6 • From Gabtola to be build cyclone shelte at ward # 6 • Infront of East sonatola Nesser Dorbesh house at ward # 1 • Infront of Motasleb khan house at ward # 8 • Infront of Kasem Ghacher house at ward # 9 • Infront of Moti mollik house at ward # 7 • Dakkin Boraytola at ward # 3 				
	Repair and maintenance cyclone shelter (Target- 40; Tentative Budget-BDT 10 lakh/shelter;	<p>Dhansagar Union</p> <p>To repair Cyclone shelter at ward no. 7 Razapur govt. primary school</p> <ul style="list-style-type: none"> • To repair Cyclone shelter at ward no. 3 Yasin mamorial govt. primary school • To repair Cyclone shelter at ward no. 5 Amragasia govt. primary school • To repair Cyclone shelter at ward no. 3 west Nalbuniya govt. primary school 	√	-	√	√

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
	Implementation month-October-May)	<ul style="list-style-type: none"> To repair Cyclone shelter at ward no. 2 Radha laxmi girls school To repair Cyclone shelter at ward no. 2 Matrivasha college-1 To repair Cyclone shelter at ward no. 2 Matrivasha college-2 To repair Cyclone shelter at ward no. 8 Sahalia madrasa <p>Royenda Union</p> <ul style="list-style-type: none"> To repair Cyclone shelter at ward no. 9 Razzer govt. school To repair Cyclone shelter at ward no. 8 Chal rayanda govt. primary school To repair Cyclone shelter at ward no. 1 west Razapur govt. primary school To repair Cyclone shelter at ward no. 2 North Razapur govt. primary school To repair Cyclone shelter at ward no. 3 Debir par govt. primary school To repair Cyclone shelter at ward no. 4 east Khada govt. primary school To repair Cyclone shelter at ward no. 5 Rayanda govt. primary school To repair Cyclone shelter at ward no. 6 Uter kodomtola govt. primary school To repair Cyclone shelter at ward no. 4 Janata govt. primary school To repair Cyclone shelter at ward no. 6 kodomtola govt. primasrui school To repair Cyclone shelter at ward no. 8 Kodomtola govt. primary school To repair Cyclone shelter at ward no. 6 attach Laqurtola and kodomtola govt. primary school <p>Khontakata Union</p> <ul style="list-style-type: none"> To repair Cyclone shelter at ward no. 5 near khontakata bazar To repair Cyclone shelter at ward no. 6 Moterper govt. primary school To repair Cyclone shelter at ward no. 2 Bizoner par govt. primary school To repair Cyclone shelter at ward no. 1 BiDhansagar govt. primary school 				

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		<ul style="list-style-type: none"> To repair Cyclone shelter at ward no. 5 Khontakata govt. primary school To repair Cyclone shelter at ward no. 6 Moter par govt. girls school To repair Cyclone shelter at ward no. 7 Razzer govt. primary school To repair Cyclone shelter at ward no. 8 Golbunia govt. primary school To repair Cyclone shelter at ward no. 8 T T and C D govt. primary school To repair Cyclone shelter at ward no. 3 Baniya khali govt. primary school To repair Cyclone shelter at ward no. 4 khontakata united govt. primary school <p>Southkhali</p> <ul style="list-style-type: none"> To repair Cyclone shelter at ward no. 2 Boqultola govt. primary school To repair Cyclone shelter at ward no. 7 Infront of Lalon khan house To repair Cyclone shelter at ward no. 4 Tafalbari govt. primary school To repair Cyclone shelter at ward no. 6 southkhali govt. primary school To repair Cyclone shelter at ward no. 7 Bogy govt. primary school To repair Cyclone shelter at ward no. 3 Tafalbari primary school To repair Cyclone shelter at ward no. 1 Sonatola govt. primary school To repair Cyclone shelter at ward no. 8 Chaltabuniya govt. primary school To repair Cyclone shelter at ward no. 9 Dakkin Khuriakhali govt. primary school 				
7	Construct Govt. grave yard (Target- 5; Tentative Budget-BDT 5 lakh/shlter; October-May)	-construct grave yard capacity minimum 300 person at Upazila porishod Construct grave yard capacity minimum 300 person at Dhansagar union Construct grave yard capacity minimum 300 person at Armanda union Construct grave yard capacity minimum 300 person at khontakata union Construct grave yard capacity minimum 300	√	√	√	√

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		person at Southkhali union				
8	Construct Pucca Latrine (Target- 3600; Tentative Budget-BDT 25000/latrine; Dec.-April)	Dhansagar Union 900 latrines considering 100 latrines per ward Royenda Union 900 latrines considering 100 latrines per ward Khontakata Union 900 latrines considering 100 latrines per ward Southkhali union 900 latrines considering 100 latrines per ward	√	√	√	√
9	Establishing rain water harvesting plant, with pipe line fitting (Target- 360; Tentative Budget-BDT 75 000/RWH; Dec.-April)	Dhansagar Union 90 Rain Water Harvesters (RWH) considering 10 RWHs per ward (capacity 1000 liters) Royenda Union 90 Rain Water Harvesters (RWH) considering 10 RWHs per ward (capacity 1000 liters) Khontakata Union 90 Rain Water Harvesters (RWH) considering 10 RWHs per ward (capacity 1000 liters) Southkhali union 90 Rain Water Harvesters (RWH) considering 10 RWHs per ward (capacity 1000 liters)	√	√	√	√
10	Re-excavation of Pond with PSF connecting with solar system (for drinking water purpose) (Target- 98; Tentative Budget-BDT 3 lakh/pond; Implementation month-Nov.-April)	Dhansagar Union The pond at Hasan Uddin Hawlader House ward , no. 1 The pond at Sarder Houseward no. 2 , The pond at Shohel Akon Houseward no. 3 , The pond of Nalbuniya cyclone shelter atward no. 3 The Govt. pond at Shiddikur Rahman Houseward , no. 4 The pond of Dizen Roy House at ward no. 4 The pond of Zamaddar House at Rajapur, ward no. 5 The pond of Sarawar Hussain House rd no. 5at wa The pond of Salam Khan House at ward no. 6 The pond of Hazi Amir Ali Akon House at ward no. 6 The pond of mosque of Auwal Munsir House at ward no. 6 The pond of Mir habib House at ward no. 7 The pond of Sukurranjon Thakur House at ward no. 7 The pond of Mannan House at ward no. 7	√	√	√	√

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		<p>The pond of Prof. Faruque House at ward no. 8 The pond of Rashid Kerani House at ward no. 8 The pond of Jalal Hawlader House at ward no. 8 The pond of Tuzamabur House at ward no. 8 The pond of Badhal Kulu House t ward no. 9a The pond of Nurul Haque Houseat ward no 9 The pond of Delewar Hussain House at ward no. 9 The pond of Abdus Sattar House .at ward no 9</p> <p>Khontakata Union Re-excavation of pond of Abdur Razzak Fakir House at ward no. 1 The pond of Motaleb's House at ward no. 1 The pond of Belayet House at ward no. 9 Excavation of 5 ponds at ward no. 2 The pond of Mostafa Munchi House at ward no. 3 The pond of Abdul haque House at ward no. 3 The pond of Ohab Boyati House 3 .at ward no The pond of Hazi Shekendar House at ward no. 4 The pond of abdul Rashid House at ward no. 4 The pond of Abdul Aziz master House at ward no. 5 The pond of Moslem Akone House at ward no. 5 The pond of Badsha Chaiman House at ward no. 5 The pond of Shahin Talukder House at ward no. 6 The pond of Latif Talukder House at ward no. 6 The pond of Rahim Hawlader House at ward no. 6 The pond of Mohsin Talukder House at ward no. 7 The pond of andul Auwal Akon House at ward no. 7 The pond of Freedom fighter Ayesha Begum House at ward no. 8 The pond of Altab Hawlader House at ward no. 8 The pond of Balam hawlader House at ward no. 9 The pond of Zamaddar House at ward no. 9 The pond of Habib House at ward no. 9</p> <p>Royenda Union Reexcavation of 5 ponds at ward no. 9 The pond of Imomi Khan House at ward no. 2 The pond of Baro Basor at ward no. 2 The pond of Farazi House at ward no. 2 3 ponds ward no. 3 5 ponds at ward no. 4 The pond of Agroduct Club at ward no. 5 The pond of Moslem doctor's house at ward no. 5 The pond of Toiyab Ali Talukdar House at ward no. 5</p>				

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		<p>The pond of Royenda Upazila Parishad at ward no. 5 Re-excavation 6 ponds at ward no. 5 The pond of Abdul Goni Akon house at Uttar Tafalbari, ward no. 7 The pond of Nozir Gabasir's House at ward no. 7 The pond of Kartik master House at ward no. 7 Re-excavation of 3ponds at ward no. 8 The pond of Jalil Zamaddar House at Rajeshor, ward no. 9 The pond of Abdul Latif Gazi house at ward no. 9 The pond of Motaleb Munshi's house at Jhilbuniya, ward no. 9</p> <p>Southkhali Union The pond in the Sonatali Village at ward no. 1 The pond of Sogir Mridha House at Uttar bakultala, ward no. 2 The pond of Hazi Abdul Mozid Hawlader House at ward no. 2 The pond of Abdul mannan Farazi House at ward no. 2 The pond adjacent to the Land office at Tafalbari, ward no. 4 The pond of Nurul Islam Khan House at ward no. 4 The pond of Shekedar Ali Hawlader House at ward no. 4 The pond adjacent to the Sharifa Zame Mosque at ward no. 5 The pond of Nurul Islam House at ward no. 5 The pond of Sultan Shikder House at ward no. 5 The pond of Anisur Rahman House at ward no. 5 The pond of Nurul Islam Khan House at ward no. 6 The pond of Sahajahan Hawlader House at ward no. 6 The pond of Abu hanif Fakir House at ward no. 6 The pond of Gayus Faruqi Panchayet House at ward no. 7 The pond of Anowar Kholifa House at ward no. 7 The pond of Hemayet Panchayet House at ward no. 7 The pond of Sheish Uddin House at ward no. 7 The pond of Shekh Obayadul House at Chaltabuniya village, ward no. 8 The pond of Nurul Haque Fakir House at ward no. 8 The pond of Zakir Hussain Panna House at ward no. 8</p>				

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		The pond of Mofazzel Hussain Panchobayet House at ward no. 8 The pond of Rabeya member house at ward no. 8. The pond of Abdur Rashid at Guriakhali village, ward no. 9 The pond of Kabaz Uddin house ward no. 9. The pond of Mujibar hawlder at ward no. 9. The pond of Shekendar Sawdagar at ward no. 9				
	Construct Culvert (Target- 69; Tentative Budget-BDT 3 lakh/culvert; Implementation month-April-Nov.)	Dhansagar Union On the canal beside the Rashid Talukder's house (ward no. 1)-1 On the canal beside the house of amin Sultan (ward no. 1)-1 On the canal beside the house of Rashid Sarder (ward no. 2)-1 On the canal beside the house of Rashid Fakir (ward no. 3)-1 On the canal beside the house of Hazi aslam Ali (ward no. 3)-1 On the canal beside the house of Mosaref Farazi (ward no. 4)-1 On the canal beside the house of Salam Hawlder (ward no. 4)-1 On the canal of Shingbari Noekura (ward no. 5)-1 On the canal beside the house of Jamal Hawlder at Amragaciya (ward no. 5)-1 On the canal beside the house of Beddhi (ward no. 6)-1 On the canal beside the Madrasha of Habib Hawlder (ward no. 6)-1 On the canal beside the Fish sell center at Rajapur bazaar (ward no. 7)-1 On the canal beside the house of Aziz Kari (ward no. 7)-1 On the canal beside the house of Kuddus Khan (ward no. 8)-1 On the canal adjacent to the Chutu kha's pond (ward no. 8)-1 On the canal beside the house of Hamid gong at Hogolpati (ward no. 9)-1 On the canal beside the house of Gagon Babu at Helabuniya (ward no. 9)-1	√	-	√	√

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		<p>Royenda Union</p> <p>On the canal beside the house of Aziz Tarafder 1-ward no. 1))</p> <p>On the canal beside the house of Halim Khan 1-ward no. 1))</p> <p>On the canal beside the house of Mohid Mistri 1-ward no. 2))</p> <p>On the canal beside the house of Hatim Farazi 1-ward no. 2))</p> <p>On the canal beside the house of Mukta member 1-ward no. 2))</p> <p>In front of the TNT office 1(ward no. 5)</p> <p>In front of the Uttar kadomtala cyclone center (ward no. 5)-1</p> <p>On the canal in front of the house of Nazrul Kha 1-ward no. 5))</p> <p>front of the house Khalil Mollah In 1-ward no. 7))</p> <p>In front of the house Hakim Palwan 1-ward no. 7))</p> <p>In front of the house Rashid Khan 1-ward no. 7))</p> <p>In front of the house Falul hawlader 1-ward no. 7))</p> <p>In front of the house of Jalil master at rajessor 1-ward no. 9))</p> <p>In front of the house of Ruhul Amin khan 1-ward no. 9))</p> <p>-ward no. 4))inIn front of the house of Kalu Jamadar 1</p> <p>In front of the house of Yunus hawlader (ward no. 1-(4</p> <p>In front of the house of Anser at Hatempur (ward 1-no. 4)</p> <p>nal in front of the house of Amir Hussain On the ca 1-ward no. 4))</p> <p>Khontakata Union</p> <p>On the canal beside the house of Mosaraf Akon 1-ward no. 9))</p> <p>On the Kadomtala canal beside the house of 1-Tujambor Akon at Zilbuniya (ward no. 9)</p> <p>or's house ward no. In front of the house of Abu Zaf 1-(9</p>				

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		-On the canal beside the house of Farazi (ward no. 9) 1 On the canal beside the house of Sarder (ward no. 1-9) On the canal beside the house of Mozaffor (ward no. 1-9) On the canal beside the Mukul secondary school 1-(ward no. 4) On the canal beside the house of Aiyub Ali (ward 1-no. 8) -On the drain of IPS club at Nalbuniya (ward no. 8) 1 On the road in front of the house of Abul Farazi 1-ward no. 8)) On the canal beside the house of Delowar at 1-Khontakata (ward no. 5) the canal beside the house of Hemayet Munshi On 1-ward no. 5)) On the canal beside the house of Ishak Farazi (ward 1-no. 5) On the canal of Pulin Bihar 1-ward no. 3)) 1-On the canal of Rokman Jamaddar (ward no. 3) In front of the Akondapara Madrasha (ward no. 6)-1 In front of the house of Mosaraf Boyati (ward no. 2)-1 In front of the Akondapara Madrasha (ward no. 6)-1 In front of the Matherpar Girls School (ward no. 6)-1 On the canal beside the house of Ali gazi (ward no. 6)-1 On the canal beside the house of Abdul Aziz mullah (ward no. 7)-1 On the canal beside the house of Isahak master (ward no. 1)-1 and On the canal of Baniyakhali (ward no. 1)-1 Southkhali In front of the house of Shamsul Haque Howlader (ward no. 2)-1 Over the Rekhi canal at Uttar Bakul tala (ward no. 2)- 1 In front of the house of Jalil Matubbar (ward no. 6)-1 In front of the house of Nazir Ahammed (ward no. 6)-1 In front of the house of Bahadur Khan (ward no. 6)-				

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
		1 In front of the house of Mannan (ward no. 1)-1 In front of the KALIBARI (ward no. 8)-1 In front of the house of Mannan Khalifa (ward no. 7)-1 In front of the house of Samser Gazi (ward no. 7)-1				
11	Elevating play ground by earth filling (Target- 17; Tentative Budget-BDT 3 lakh/ground; Implementation month-Dec.-April)	Dhansagar Union Nolbuniya Govt. play ground (ward -3) Amragaciya S. School play ground(ward -9) United Secondary school play ground (ward -2) and Rajapur Secondary school play fround(ward -7) Royenda Union Royenda Pilot scool play ground (ward -5) Janata secondary school play ground(ward -4) and Lakurtala School play ground(ward -8) Khontakata Union Baniyakhali secondary school play ground (ward -3) Sharankhola degree collage play ground(ward -7) Anawar Hussain secondary school play ground (ward -7) Southkhali Union Tafalbari collegiate school play ground (ward -4) Sundarban Govt. School play ground (ward -8) Sundarban Islamia Dakhil Madrasha play ground (ward -7) Bogi Govt. Primary School Field (ward -7) Sonatala Hafezia Madrasha field (ward -1) Khuriya khali Govt. Primary school play ground (ward -9) and Southkhali Girls School Play Ground(ward -3)	√	√	√	√
12	Tree Plantation (Target- 223km; Tentative Budget-BDT 50 000/km; Implementation month May-July)	Dhansagar Union Both sides of all roads in whole unon- 57 km (tentative) Royenda Union Both sides of all roads in whole unon- 55 km (tentative) Khontakata Union Both sides of all roads in whole unon- 61 km (tentative) Southkhali Both sides of all roads in whole unon- 60 km (tentative)	√	√	√	√

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
13	Construct hazard adaptive house (Target- 810km; Tentative Budget-BDT 1.5 lakh/each; Implementation month May-Nov.)	Dhansagar Union Total 180 HHs from 9 wards considering 20 families in each ward. Royenda Union Total 180 HHs from 9 wards considering 20 families in each ward. Khontakata Union Total 180 HHs from 9 wards considering 20 families in each ward. Southkhali Total 270 HHs from 9 wards considering 30 families in each ward.	√	√	-	√
14	Create alternative livelihood of vulnerable women (cow and goat rearing and handicraft.) (Target- 360; Tentative Budget-BDT 25 000/person;	Dhansagar Union > 90 women in whole union (equally ward wise) Royenda Union > 90 women in whole union (equally ward wise) Khontakata Union > 90 women in whole union (equally ward wise) Southkhali > 90 women in whole union (equally ward wise)	√	√	-	√
15	Demonstration on hazard adaptive agriculture (Target- 120; Tentative Budget-BDT 20 000/demo; Implementation –Rohi, Khari 1 &2)	Dhansagar Union > 30 demos of hazard adaptive agriculture plot in the whole union (ward -wise) Royenda Union > 30 demos of hazard adaptive agriculture plot in the whole union (ward -wise) Khontakata Union > 30 demos of hazard adaptive agriculture plot in the whole union (ward -wise) Southkhali > 30 demos of hazard adaptive agriculture plot in the whole union (ward -wise)	√	√	-	√
16	Disable Friendly disaster Adaptive house construction (Target- 144; Tentative Budget-BDT	Dhansagar Union > 36 from entire unions (ward -wise) Royenda Union > 36 from entire unions (ward -wise) Khontakata Union > 36 from entire unions (ward -wise) Southkhali > 36 from entire unions (ward -wise)	√	√	-	√

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
	2.5lakh/house					
17	Provide Aid to the poor and affected fisherman (Target- 297HH; Tentative Budget- BDT25000/HH)	Dhansagar Union Total 72 HHs from 9 ward no. s considering 8 families in each ward s. Royenda Union Total 90 HHs from 9 ward no. s considering 10 families in each ward s. Khontakata Union Total 45 HHs from 9 ward no. s considering 5 families in each ward s. Southkhali Total 90 HHs from 9 ward no. s considering 10 families in each ward s.	√	√	-	√
18	Awareness building about the shrimp virus and its management (Target- 900 person and Budget- BDT 4.5 lakh)	Selected fish farmers of each union of the Upazila	√	-	-	√
19	Increase awareness of disaster-tolerant agriculture (Target- 5000 person and Budget- BDT 25 lakh)	Each union of the Upazila	√	-	-	√
20	Increased awareness of health issues (Target- 1800 person and Budget- BDT 9 lakh)	Vulnerable villages of all unions	√	-	-	√

SL#	Activities	Implementation Side	Who & How much will do			
			Upazila Admin	Community	UP	NGO
21	Taking Advocacy (Target- 3 and Budget- BDT 1.5 lakh)	Local level Advocacy with local administration on (Agriculture, Fishery, and Land)	-	√	-	√
22	Training on disaster (Target- 360 volunteer and Budget- BDT 80000)	Training to the all volunteer s of the upazilla (disaster management and shelter management)	-	-	-	√
23	Arrange Mock drill (Target- 4 and Budget- BDT 2 lakh)	Arrange Mock drill of all vulnerable area of Sharankhala upazilla (Rescue, First Aid, and Rehabilitation)	-	-	-	√

Chapter Four: Emergency Response

4.1 Emergency Operation Center (EOC)

In Sharankhola upazila an emergency operation center is formed during a disaster. That center plays a vital role during disaster by immediate response and coordination. It should be mentioned that, this emergency operation center gives 24 hour service. During that time this center collects data, examines and analyses it, audits and manages properties. This emergency operation center is opened at upazila project implementation officer's office. In that center a telephone can be used which has the number as follows: 04679556108/01725- 889863. There are 1 operation center, 1 control room, and 1 communication cell in that center. In any disaster, emergency operation center coordinates very effectively and response immediately. The name, mobile phone number, and designation of the responsible persons are given below:

Number	Name	Designation	Mobile Number
1	Md.Kamal Uddin Akon	Upazila Chairman	01710-009991
2	K.M Mamun Uzzaman	Upazila Nirbahi Officer	01914- 883825 0465956004
3	Md. Nasir Uddin	Upazila Project Implimentation Officer	01725- 889863 04679556108
4	Somitro Sarker	Upazila Agriculture Officer	0465956019
5	Prodip Kumar Mitro	Upazila Engineer	01715- 398922
6	Md. Ferdous Ansary	Upazila Fisharies Officer	0465956047
7	Md. Delowar Hussain	Upazila Livestock Officer	01718606627
8	Alomgir Hossain	CPP Representatives	01728-837869

4.1.1 Emergency Control Room management

After disaster immediately emergency control rooms should be established at upazila level. The day and night presence of 3/4 volunteers and polices in succession should be assured. The responsible persons of the upazila should take the responsibility of the whole supervision of the control room. The volunteers, in groups with 3 members in each, will take the responsibility of the control room in succession for day and night. All time communication will be maintained with district/division and union level. There will be a control room register in the control room. Who will take responsibility and when, what news is got then, and to whom and where that news will be conveyed, all these will be written in that register.

There will be a map of the district/upazila hanging from/on the wall mentioning the location of the unions, roads, canals, embankments of various villages. After disaster most damaging areas should be marked. To make it easy to take the responsibility of the control room radio, charger light, 5 large torches, gumboot, life jacket, battery, rain coat etc. must be kept stored and ready in the control room. Immediately after the disaster above mentioned steps are taken in the control room of upazila office. But as there is no risk map here, the general map cannot show the most affected areas just after the disaster. It must be mentioned that there is very few things to perform the responsibility of the control room. For example, 5 large torches, gumboot, life jacket, battery and raincoat are not available.

4.2 Emergency planning:

SL	Work	Unit	Target	When	Who	Who will help	How	Communication
1	Prepare volunteers	Person	300 in four unions	February-march	UP chairman	UzDM C ,NGO and population	Giving training, providing elements, arranging rehearsal, personal communication	Appointed representative of DMC at union and upazila level
2	Anouncing the signals	Population	100% in 4 unions	Just after getting the signal	Appointed volunteer	Village police	Blowing siren, microphone, megaphone and drum	Appointed representative of UDM C
3	Ensuring transports like van/boat/car	Number	40 in 4 unions	Before disaster, in february/march	Appointed representative of union parishad	UP member	Keeping the phone numbers of the drivers, vanpullers,and boatmen by mutual discussion	Same
4	Rescue management	Population	180	Same	Same	NGO and community people	Selecting and giving orientation to some volunteers who can resque, providing engene boats	Communicating with appointed representative of UzDM C and UDM C
5	First aid	Number	4 in 4 unions	Same	Same	Same	Keeping the coomunication number of nearby health complex	Communicating with appointed officer of upazilla health complex and appointed representative of UzDMC and UDM C
6	Funeral	Number	400 persons	Same	Same	Community people	At grave of Union	Communicating with appointed representative of UzDMC and UDMC
7	Collecting and preparing dry food,	Dry food	12 tons	Before disaster	UDM C in charge	NGO, community people and local	Collecting phone numbers and discussing with those	Communicating with appointed representative
		rice/pulse	4 tons					

	rice/pulse, building particles and life saving medicines.	Medicine	200 persons			bussines holders	organizations who can provide life saving articles	of UzDMC and UDM C
8	Vccination/treatment of domestic animals	Medicine (number)	600	Before and after disaster	Appointed representative of union parishad	Community people	By discussion with the appointed worker of the union	Communicating with upazila UDMC and livestock officer
9	Reparing and management of the shelters	Number	76	Before disaster, in february/march	Same	GO, NGO and community people	Resolving the problems of the shelters by auditing it and discussing about it with related officer	Communicating with appointed representative of UzDMC and UDMC
10	Co-ordinating relief distribution	Group	12	Same	Same	Same	Communicating with those persons and organizations who will give relief	Communicating with appointed representative of UZDMC and UDMC
11	Arrangig rehearsal (signaling, , first aiding)	Number	32	Same	Same	Same	Arranging rehearsal over rescue in those areas which are more vulnarable	Communicating with appointed representative of UZDMC and UDMC
12	Operating emmergency control room	Room	3	Before disaster	Upazila and union	Member of UzDMC and UDMC	Preserving all the informations of the controle room	Communicating with district disaster management commitee

Directives for Implementing emergency action plan

4.2.1 Keeping the Volunteers ready

- Making groups in word levels under the leadership of UP chairman.
- Propagating signals and information in every village by the volunteers.
- Arranging rehearsals for the volunteers regarding various responsibilities like signaling, informing, rescuing, removing, cyclone shelter management and risk lessening.

4.2.2 Announcing signal

- Every UP member will ensure the announcement of the signal in their respective words by their own accord.
- When signal number 5 will be shown it must be announced through mike at least once in an hour. But when Signal of greatest danger will be telecasted through television or radio that must be announced immediately. The bells of the schools or madrasas should be rung continuously as a signal.

4.2.3 The arrangements to evacuate people

- The UP members will start evacuating people of respective areas immediately after the announcement in radio or television of evacuating people to safe places from risky areas.
- Immediately after the announcement of the signal of great danger number 8 people of risky areas must take shelter in cyclone shelters and it will be announced through the mike. The volunteers will convince people individually by contracting personally to take shelter in the cyclone shelters.

4.2.4 Rescue and first aid

- Many risky areas should be handled under the care of the members of the related district/upzila disaster management committee
- A permanent fund must be raised under the care of district/upazila disaster management committee to manage the rescue.
- Temporary health camps will be established.
- If there is any ill person, old person, child, or expecting mother they must be sent to the hospital immediately.
- UP members accompanied by the volunteers will bury the deads: both human and animal.

4.2.5 Shelter Mangement

- Keeping the shelters ready by necessary repairing before the disaster prone seasons.
- Determining who will take shelter where in emergency.
- All types of protection must be assured for women, children, and disabled during disaster.
- Assuring supply of pure drinking water and other services.
- Helping the mass to shift necessary assets (domestic animal, poultry, emergency food, etc)

4.2.6 Keeping the boats ready

- Determining the number of engine boats in a district/upazila. Determining their use during emergency
- The owners of the boats will help them in this project.
- The account of the owners of the boat and the boatmen must be kept in the emergency control room

4.2.7 Damage and Loss assesment, need determining, and reporting;

- The SOS form should be sent to the UP chairman within 24 hours after the disaster and the D form will be sent within maximum 7days.
- UP chairman will collect the report from every union by his secretary and will send it to the upazila chairman within next 12 hours.

4.2.8 Co-ordinating relief distribution

- UP chairman will co-ordinate the reliefs of various relief and rehabilitation groups.
- If any group comes from outside to distribute reliefs it must be recorded in the register that how much relief and rehabilitation elements they have brought.
- Union disaster management committee will determine word based allowance of relief depending on the loss and the amount of this allowance will be declared among the people of the word.

4.2.9 Keeping dry food and life saving medicine ready

- Dry food like fried rice, flattened rice will be purchased from the market to distribute immediately.
- Rice, pulse, flour, oil, and the elements needed to build a house such as iron sheet, nilon rope etc should be collected from the local market.
- The list of necessary medicines will be made and the medicines will be collected from the local market with the help of a union parishad assistant and family welfare assistant.
- The responsibility to co-ordinate rickshaw, babytaxi, and other transport for the relief and relief distributors will be bestowed upon the UP chairman.

4.2.10 Vaccination/treatment of domestic animal

- Necessary medicines should be collected from upazila livestock hospital and it should be preserved in union parishad or health complex.
- Proper training on animal treatment should be arranged for the members of Union Disaster Management Committee.
- If necessary experienced animal doctors should be consulted.

4.2.10 Arranging rehearsal

- Arranging rehearsal for announcing signals, removal, rescue and primary relief distribution.
- Arranging continuous rehearsal in cyclone and flood prone areas.
- Examining preparation through rehearsal in the month of September and April.

- Rehearsing the transportation of children, women, and disables to safe shelter is most important.
- In risky areas people must rehearse how to go to cyclone shelters. and this must be rehearsed in risky villages instead of union parishad.

4.2.11 Emergency control room management

- Control room must be established in the district/upazila/union level just after the disaster.
- Union parishad chairman and other responsible persons will be responsible for the management of the control room. 3 groups of volunteers containing 3 in each group in turns will manage the control room day and night.

4.2.12 Cyclone shelters and safe places

- Far from river erosion and will not be flooded during flood, such place will be used as cyclone shelter.
- Definite cyclone shelter, local school, college, government and non government institutions, high roads, embankments can be used as shelters.

4.3 List of safe places of district/upazila

Shelter	Name	Union's Name	Capacity	Comment
Earthen Killa	Rajapur Earthen Killa	Dhansagar Union ward # no.-6	4000	There are no water and light system almost all Cyclone shelter. Some cyclone shelter should be needed to repair
Cyclone Shelter	Char Mehar Ali shelter	Sundarban Range	550	
	Alorkol shelter	Sundarban Range	550	
	Sundarban Office Killa	Sundarban Range	650	
	Majher Kella	Sundarban Range	550	
	Shawler Char shelter	Sundarban Range	500	
	Jhalar Ghat shelter	Southkhali/1	550	
	Sharankhola shelter	Southkhali/9	550	
	Rasulpur Cyclone shelter	Royanda/2	550	
	North Tafalbari Shelter	Royanda/7	500	
	Chal Royanda shelter	Royanda/8	550	
School cum shelter	Tafalbari Govt. P. S	Southkhali/4	450	
	Southkhali Govt. P. S	Southkhali/6	350	
	Bogi Govt. P. S	Southkhali/7	300	
	Bokultala Govt. P. S	Southkhali/2	250	
	S B Tafalbari Govt. P. S	Southkhali/3	350	
	Shonatala Govt. P. S	Southkhali/1	350	
	Chaltabunia Govt. P. S	Southkhali/8	350	
	South Khuriakhali Govt. P. S	Southkhali/9	450	
	Southkhali Govt. P. S. attaching Cyclone shelter	Southkhali/5	450	
	CSB Govt. P. S	Southkhali/6	350	
	Chal Rooyanda Govt. P. S	Royanda/8	350	
	West Rajapur Govt. P. S	Royanda/1	350	
	South Rajapur Govt. P. S	Royanda/2	350	

Shelter	Name	Union's Name	Capacity	Comment
	Dibir Par Govt. P. S	Royanda/3	250	
	East Khada Govt. P. S	Royanda/4	350	
	Royanda Govt. P. S	Royanda/5	250	
	North Kodomtala Govt. P. S	Royanda/6	350	
	Janata Govt. P. S	Royanda/4	450	
	Rajassor Govt. P. S	Royanda/9	350	
	Kadomtala Govt. P. S	Royanda/6	350	
	Lakurtala Kadomtala Govt. P. S attaching Cyclone shelter	Royanda/8	450	
	Attach Lakurtala Kadomtala Govt. P. S	Royanda/6	450	
	4 no. Amragacia Govt. P. S	Dhansagar/5	450	
	9no.South Nalbunia Govt. P.S	Dhansagar/3	450	
	Govt. P. S	Khontakata /6	350	
	11 no. Bijanar Par Govt. P. S	Khontakata /2	450	
	12 Dhansagar G:P:S	Khontakata /1	350	
	13 Khontakata Govt. P. S	Khontakata /5	350	
	14 Mother Par Govt. P. S	Khontakata /6	450	
	15 Rajoir Govt. P. S	Khontakata /7	350	
	16 Golbunia Govt. P. S	Khontakata /8	450	
	31 TandT G:P:S	Khontakata /8	450	
	33 Baniakhali Govt. P. S	Khontakata /3	350	
	Khontakata United Govt. P. S	Khontakata /4	450	
	65 South Khontakata Govt. P. S	Khontakata /5	450	
	1 Khajurbaria Govt. P. S	Dhansagar/1	450	
	Dhansagar United Govt. P. S	Dhansagar/2	450	
	RajapurBazar Govt. P. S	Dhansagar/7	450	
	Yasin Memorial Govt. P. S	Dhansagar/3	450	
	4 East Amragacia Govt. P. S	Dhansagar/5	450	
	6 West Nalbunia Govt. P. S	Dhansagar/3	350	
Government/Private Organization	Southkhali Union Porishod Complex Cyclone shelter	Southkhali/4	250	At the time of hazard it just used in demand.
	Ashar Alo Mosque Complex Cyclone Shelter	Southkhali/6	450	
	Chaltabunia Sundorban High. S. Cyclone shelter	Southkhali/8	450	
	Sundorban Dokkhin Madrasa cyclone shelter	Southkhali/7	350	
	Royanda Bazar Islamia D:M cyclone shelter	Royanda/5	250	
	Khada Gagon Memorial Madrasa Attach Cyclone shelter	Royanda/4	250	
	Ashar Alo Mosque cum cyclone shelter	Royanda/3	350	

Shelter	Name	Union's Name	Capacity	Comment
	Chal Royanda Darul Hidayat Madrasa	Royanda/3	350	
	Khontakata UP complex cum Cyclone shelter	Khontakata /8	450	
	Radha lokkhi G:S shelter	Dhansagar/2	350	
	Matrivasa College shelter-1	Dhansagar/2	350	
	Matrivasa College shelter-2	Dhansagar/2	200	
	Rajapur Bazar Salahi Madrasa Shelter	Dhansagar/8	450	
Union Porishod Bhabon	UP office Dhansagar	Dhansagar/9	450	
	Khontakata UP office	Khontakata	400	
	SouthkhaliUP Bhabon	Southkhali	500	
	Royanda UP Bhabon	Royanda	100	

These cyclone shelters are supervised by union parishad and the school come shelters are supervised by the school managing committee. There is no instrument for the volunteers in these shelters. These shelters need repairing to be usable. The communication road between most shelters and habitations are unusable so they need repairing. Moreover, there is no supply for light and drinking water in most of the shelters.

4.4 Shelter Management committee formation

Shelter management is a very important part of disaster management. Because of the lack of right and appropriate supervision many shelters become unuseable. So shelter supervision is included in disaster management.

Shelter management center:

- Saving life and asset during disaster.
- Saving livestock during disaster.
- Making sure that shelters are used and looked after.

Shelter management committee:

- There will be 7-9 members in the shelter management committee.
- This committee will be comprised of chairmen/members, respected persons, teachers, NGO staffs, land givers, volunteers, etc.
- With the consent of the local people, this committee may work as management committee.
- At least half of the members of this committee should be female.
- The committee should be well aware of their responsibility.
- The committee will manage the shelter with the help of the local people.
- The committee will meet after certain intervals, and the decisions taken at this meeting will be written.
- To materialize these decisions responsibilities will be distributed and a time limit will be fixed.
- The list of the shelter management committee will be shown as annexure to the disaster management plan.

Which places will be used as shelters:

- Ascertained shelters.
- Local school, college.
- Government and non government institutions.
- High ways.

Which must be ensured in shelter:

- Tent/polybag/ORS/TDN/emergency medicines (paracetamol, flazil)/water purification tablet/bleaching powder must be provided.
- The opportunity for boiling water must be arranged.
- Drainage system (separate for male and female).
- Separate bathing system for male and female and the shelters must be sanitary.
- Cleaning dirt.
- Security and Light.
- The sheltered must be registered; stored materials should be listed returned properly after a disaster.
- Certain volunteers and staff must take the responsibility of the shelter management.
- Managing food and medicine for the sheltered.
- Special care should be provided for pregnant women, children, old, and disable people.

Usage of shelter:

- Shelter is mainly used as safe place for people during disaster.
- It may be used for social development works except for the time of disaster.
- It may be used as first aid center.
- It may also be used as adult education center and school.
- It may also be warless station.

Shelter Management:

- Each shelter must be supervised properly. Spatially it must be clean.
- Local enterprise should be taken to preserve the doors and windows of the shelter.
- Afforestation should be done on the land of the shelter.
- It must be locked except for the time of use.
- Shelter supervision committee must be comprised following proper guideline.
- The list of shelter supervision committee will be shown as an annexure to the disaster management plan.

List of Union wise cyclone shelter name:

Shelter	Names's of Shelter	Responsible person	Mobile Number	Comments
Earthen Kila	Rajapur Earthen killa Dhansagar Union ward # no-6	Md.Sajahan Dulal Md.Siddikur Rahman	01715-167027	
Cyclone shelter	Jalar Ghat Shelter	Md Korim Hossain	01774017001	
	Sharomkhola shelter			

Shelter	Names's of Shelter	Responsible person	Mobile Number	Comments
	Rasulpur Cyclone shelter	Abdul Malak	01197249330	
	North Tafalbari Cyclone shelter	Md.Anwar Hossain	01721835516	
	Chal Rayande shelter	Md.Rofik	01770200210	
	Char Mahar Ali Shelter	Sundorban Range	-	
	Alor Kol Shelter	Sundorban Range	-	
	Sundarban Office Killa	Sundorban Range	-	
	Majher Killa	Sundorban Range	-	
	Shawlarchar	Sundorban Range	-	
School cum shelter	Tafalbari G.P.S	Monotos Chandra Rua	01724395022	
	Southkhali G.P.S	Gouranga Lal Mistry	01717249071	
	Boghi G.P.S	Motalab Hossain	01714482134	
	Bokultala G.P.S	Md.Shah Alom	01710475026	
	SB Tafalbari G.P.S	Belayat Hossain	01715448443	
	Shonatala G.P.S	Md.Rustum Ali	01716502458	
	Chaltabunia G.P.S	Tahmina Akhter	01777155898	
	South Khuriakhali G.P.S	bdul Mojid	01721116690	
	Southkhali G.P.S attach Cyclone shelter	Md.Rohim Halder	01771684901	
	C S B G.P.S	Bilkis Jahan	01735686881	
	Chal Rayande G.P.S	Abdul Aziz Hawlader	01735686920	
	West Rajapur G.P.S	Raton Halder	01721395463	
	South Rajapur G.P.S	Md.Nazmul Haque	01716449009	
	Dibir Par G.P.S	Md.Lutfur Rahman	01716604127	
	East Khada G.P.S	Md.Alamgir	01714662805	
	Rayande G.P.S	Md.Cauadul Haque	01914775746	
	North Kadomtala G.P.S	A:Khalaque Talukder	01912302164	
	Janata G.P.S	Abdur Rob Hawlader	01770017001	
	Rajassor G.P.S	Sunil Kumar Mollick	01745398565	
	Kadomtala G.P.S	Abdul Auwal	01731503274	
	Lakurtala Kadamtala G.P.S attach Cyclone shelter	Md.Saidur	01949851718	
	Lakurtala Kadamtala G.P.S attach	Rashma Akhter	01719899642	
	Amragacia G.P.S	Md.Cauwadur Rahman	01719838071	
	South Nalbunia G.P.S	Bipu Bihari Roy	01711190136	
	Mothar Par G.P.S	Md.A: Auwal	01731357902	
	Bojanar Par G.P.S	Md.Srwar Alam	01716725111	
	BiDhansagar G.P.S	Orbindo Mazumder	01719690871	
	Khontakata G.P.S	Haru-ur-Rashid	01729549047	
	Mothar Par G.G.S	Kamrun Nahar	01749721853	
	Rajoirsors G.P.S	Jakia Khanom	01736000011	
	Golbunia G.P.S	Md.Johirul Haque Gazi	01914617348	

Shelter	Names's of Shelter	Responsible person	Mobile Number	Comments
	TT and CD G.P.S	Salima Akhter	01718774507	
	Baniakhali G.P.S	Md.A:Latif Khan	01712550096	
	Khontakata United G.P.S	Md.Harun-ur-Rashid	01729549047	
	South Khontakata G.P.S	Md.Rofikul Islam	01982122606	
	Khajurbari G.P.S	Tarun Kanti Halder	01715435667	
	Dhansagar United G.P.S	Rani Halder	01731078664	
	Rajapur Bazar G.P.S	Md.Saror Hossain	01722192259	
	Iasin Memorial G.P.S	Kashob Chandro Roy	01713922433	
	East Amragacia G.P.S	Khushi Rani Shutar	01710777682	
	West Nalbunia G.P.S	Harun Halder	01780303810	
Government/ -Non Government Organization	Southkhali UP cum shelter	Arif Hossain	01912211701	
	Ashar Alo Mosque Complax Cyclone shelter	Md.Kader Halder	01825177012	
	Sundorban Dakhil Madrassa shelter	Mrs.Rahala Begum	01920770010	
	Khontakata UP Complex cum Cyclone shelter	Md Belal Hossain	01920017001	
	Radha Lokhin G.G.S shelter	Mrs. Khushi Begum	01711000192	
	Matrivasa College shelter-1	-	-	
	Matrivasa College shelter-2	-	-	
	Rajapur Bazar Salahia Madrassa shelter	-	-	
UP Office	Dhansagar UP Office	Md. Shahajahan Dulal	01715167027	
	Khontakata UP office	Md. Motiyar Rahman	01716952303	
	Royeda UP office	Md. Asaduzzaman	01716321780	
	Southkhali Up Office	Md. Mozammel Hussain	01718060780	

4.5 List of the asset of the Upazila (which may be used during a disaster)

Infrastructure/asset	Number	Appointed persons	Short description
Shelter	76	Project Implementation Officer , union Chairman, Headmaster	The shelters are unuseable and unsupervised. Tubewells and latrines need repare.
Large megaphone	8	Union Chairman	
Small megaphone	20	Member	
Life jacket	500	-	Almost everything including gumboot, life jacket,rain coat and raio of most of the unions is unuseable.
Gumboot	10	-	
Siren	1	-	
Helmet	20	-	
Torch light	10	-	
Flag strand (with	4	-	

flag)			As no dangerous disaster is occurring for long time some things are taken by unit team leaders and members and the others are remaining in the union CPP office.
Engene boat	N/A	-	
Stretcher	5	-	
Radio	5	-	
First aid box	20	-	
Table	2	-	
Chair	10	-	
Closet	2	-	

4.6: Financing

The income of union parishad comes from local tax, hat/bazaar, lease, leasing canals etc. But nowadays large hat/bazaar, leasing is out of the hand of the union parishad. As a result, its main income source has been reduced. Nowadays, the government give 1% of land registration to the union parishad. Beforehand, they used to get full but now a days, the salary of village police and secretaries are paid from it, and the left over, if there is any, is given to the union parishad. Recently the government has managed to give directly TK 4/5 lakhs yearly to the union parishad.

a) Own Sources (Union Income Tax and Fees)

Source/type	Annual Income				
	Southkhali	Royenda	Khontakata	Dhansagar	Total
Annual house tax	350000	61255	69405	79040	
Permit and license fees for licenses issued by the Council	30000	57300	5700	5550	
Lease revenue (hats, markets, ghats, ponds, khoyara lease, etc.)	360000	152094	167409	272273	
Income from property	-	-	10000	68400	
Union Parishad General Funds	270000	-	1251	11472	
Other / (child birth)	5000	-	-	11350	

a) Government sources grants

Development sector:

Type of sector	Annual grants				
	Southkhali	Royenda	Khontakata	Dhansagar	Total
Agriculture, Health and Family planning, road construction and	-	-	-	-	
House Construction and Repair, Development Assistance Fund	-	-	-	-	
honorarium and allowances of the Chairman and members	-	-	-	-	
Development Assistance Fund (L.G.S.P)	1510000	1470173	1446507	1076304	
Secretary and other staff salaries allowances	604100	261000	165214	52770	
Land transfer tax 1%	30000	486764	559864	419669	

Establishment:

Union Parishad

Honorarium and allowances of the Chairman and members :

Chairman (4) :Government: 1475 Taka and Porishod: 1525 Taka

MUP (48): Government: 900 Taka and Porishod: 1200 Taka

Secretary (Scall) 4: Every Peron 48042 Taka

Dafader (4 Union): Every Peron 2100 Taka

Village Police (4 Union): Every Peron 1900 Taka

c) Local Government:

Local Government	Annual Payment (BDT)				
	Southkhali	Royenda	Khontakata	Dhansagar	Total
Upazila Parishad	2000000		15000		
Zilla Parishad					-

d) Non-government Development Organization

Nmae's of -Non Government Development Organization	Annual Payment (BDT)				
	Southkhali	Royenda	Khontakata	Dhansagar	Total
CDMP	-				
ADP	-		1000000	2300000	

Various charitable organizations, nongovernment development organizations are directly financing union parishad in order to strengthen local government. Getting more help/ charity depends upon the honesty, ability and above all upon good administration. Union parishad will finance to overcome the most dangerous hindrances by considering its most frequent and harmful disasters. With every development project disaster risk lessening will be considered and that project must be incremented and financed. (Source: union parishad)

4.7 Examining and making the plan up to date:

1. Plan follow up committee
2. Plan supervision and implementation committee.

Plan follow up committee: Plan writing and presenting committee of 5 members (chairman, secretary, NGO representative, 2 members from general committee).

Serial	Name	Position	Mobile
1.	Md.Kamal Uddin Akon	Upazila Chairman	01710-009991
2.	Md.Nasir Uddin	Upazila Project Implimentation Officer	01725- 889863
3.	Somitro Sarker	Upazila Agriculture Officer	0465956019
4.	Md. Ferdous Ansary	Upazila Fisharies Officer	0465956047
5	Abdul Khalek	NGO Representatives (Asray Foundation)	01712995359

Role of the plan follow up committee

- Draft plan analysing and final plan implementation.
- Taking help from the sub assistant agriculture officer for a subject wise plan such as: agriculture, cattle rearing, fish cultivation etc.
- The disaster plan must be pragmatic and definite and financing must be given importance.

Plan implementation and supervision committee:

Plan implementation committee of 7 members(chairman, woman member, secretary, government representative, NGO representative, 2 members from the general committee)

Number	Name	Position	Mobile
1.	KM. Manuzzaman	Upazila Nirbahi Officer	0465956004
2.	Md. Nasir Uddin	Project Implementation Officer	01725- 889863
3.	Mrs.Hasi Begum	Woman Vice-Chairman	01724-536316
4.	Prodip Kumar Mitro	Upazila Engineer	01715- 398922
5.	Md. Manjurul Hasan	Upazila Social Welfare Officer	01718-265545
6.	Alomgir Hossain	Upazila Team Leder CPP	01728- 837869
7.	Abdul Khale	NGO Representatives (Asray Foundation)	01712995359

The role of the plan supervision and implementation committee

1. The plan must be up-to-date by necessary refinement and addition and new plan must be implemented after thorough examination in every April/May. The secretary member of the committee will take a decision regarding this matter.
2. Immediately after the direct disaster management faults must be analysed and necessary plan must be taken.
3. In April/May and national disaster day of every year at least one rehearsal must be arranged upon disaster management according to the guideline of the disaster management bureau.
4. The disaster plan must be approved by District disaster Management Committee.
5. Plan implementation must be supervised.
6. Communication must be maintained with related institutions.

Chapter Five: Rescue and rehabilitation planning

5.1 Loss and damage Assessment

The main hazards of this Upazila are tidal surge, cyclone, salinity, flood which are affecting the life and livelihood of the inhabitants of this Upazila. On the other hand there are sustaining social elements like crops, fishes, livestock, trees, assets, roads, houses, bridges, culverts, educational institutions, health, water and drainage in this area. Hazard wise damage and loss assessment is given through table below:

Sectors	Description
Agriculture	<ul style="list-style-type: none"> • If cyclone like SIDR of 2007 hits crops (Aman paddy, vegetables, Rabi crop, guava etc) of 6965 hectare of 9951 hectare land may be damaged in Sharankhola Upazila. • If flood like 1998 hits crops of 9951 hectare of 3482 hectare land may be damaged in Sharankhola Upazila.
Fish	<ul style="list-style-type: none"> • Because of salinity cultivation of fishes, shrimps and crab of 1512 hectare land of 1250 ghers out of 9951hectare lands will be hampered. More over natural fishes of the local area may be destroyed in Sharankhola upazila. • Because of Cyclone cultivation of fishes, shrimps and crab of 1512 hectare land of 1250 ghers out of 9951hectare lands will be hampered. • Because of tidal surge cultivation of fishes, shrimps and crab of 1512 hectare land of 1250 ghers out of 9951hectare lands will be hampered. • Because of shrimp virus cultivation of fishes, shrimps and crab of 1512 hectare land of 1250 ghers out of 9951hectare lands will be hampered.
Livestock	<ul style="list-style-type: none"> • Because of salinity 4000 cows, 5400 goats, 800 sheep, 600 buffalos, 400 pigs may suffer from scarcity of food in Sharankhola upazila. As a result, cattle rearing may be hampered and many families will be incurring loss. • If cyclone like SIDR of 2007 hits 8000 cows, 10800 goats, 1600 sheep, 1200 buffalos, 800 pigs, 4500 ducks, 4000 hens, 500 wild livestock, may be washed away or dead in Sharankhola upazila. As a result, many families will be incurring loss and natural beauty may be hampered. • Because of Tidal surge like SIDR in 2007 6000 cows, 9000 goats, 1000 sheep, 400 buffalos, 800 pigs, 5800 ducks, 6000 hens and 500 wild animal may suffer from scarcity of food in Sharankhola upazila. As a result, cattle rearing may be hampered and many families will be incurring loss. • Because of Flood like SIDR in 2007 3100 cows, 2200 goats, 1100 sheep, 40 buffalos, 200 pigs 3500 ducks, 5000 hens and 500 wild animals may suffer from scarcity of food in Sharankhola upazila. As a result, cattle rearing may be hampered and many families will be incurring loss.

Sectors	Description
Health	<ul style="list-style-type: none"> • 8% of 119084 people of Sharankhola Upazila may be suffer from diarrhea, 10% from dysentery, 2% from Jaundice, 4% from typhoid, 6% from viral diseases, and 6% from skin diseases or may die premature death if salinity like SIDR hits in 2007. • 3% of 119084 people of Sharankhola Upazila may be suffer from diarrhea, 2% from dysentery, 2% from Jaundice, 8% from viral diseases, and 8% from skin diseases or may die premature death if cyclone like SIDR hits in 2007. • 3% of 140712 people of Sharankhola Upazila may be suffer from diarrhea, 2% from dysentery, 7% from Jaundice, 6% from viral diseases, and 8% from skin diseases or may die premature death if tidal surge like SIDR hits in 2007
Livelihood	<p>There are people of four occupations in Sharankhola upazila. Among this 22664 are fish farmers and 6000 are fisherman, 55249 are agriculturists farmers, 10025 are job holder, 10618 are small business holders, 8807 are job less young community.</p> <ul style="list-style-type: none"> • Cyclone: Because of cyclone 25000 peasants out of 55249, 5000 small business holders out of 10618, 10000 fish farmer out of 22664 and 1000 fishermen out of 6000 will be incurring loss directly or indirectly. • Salinity: Because of acute salinity of Chaitra and Baishakh (Bangle months) salinity 11398 peasants out of 55249, 5396 fish farmers out of 22664 will be incurring loss directly or indirectly. • Tidal surge: Because of tidal surge 12322 fish farmers out of 22664, 15243 peasants out of 55249 and 1050 small businessman will be incurring loss directly or indirectly. • Water logging: Because of water logging 3264 fish farmers, 14261 peasants will be incurring loss directly or indirectly. • River erosion: Because of river erosion in the Sharankhola Upazila 5% of 55249 peasant's agriculture land will go to river. In that circumstances 1155 peasants will be incurring loss directly or indirectly. • Flood: Because of flood in Sharankhola Upazila 10058 fish farmers out of 22664, 10933 peasants out of 55249 and 1457 small businessman of 10618 will be incurring loss directly or indirectly. • Shrimp virus: Because of flood in Sharankhola Upazila 10058 fish farmers out of 22664 will be incurring loss directly or indirectly.
Vegetation	<ul style="list-style-type: none"> • In Sharankhola Upazila 26900 fruit trees, 30000 forest trees, 12000 medicinal trees, 2500 nursery trees may be affected due to salinity. • In Sharankhola Upazila 200000 fruit trees, 250000 forest trees, 26000 medicinal trees, 6000 nursery trees may be affected if cyclone like SIDR of 2007. • In Sharankhola Upazila 55000 fruit trees, 20000 forest trees, 2000 medicinal trees, 1000 nursery trees may be affected by tidal surge. • In Sharankhola Upazila 6000 fruit trees, 3000 forest trees, 1800 medicinal trees, 1000 nursery trees may be affected by flood.

Sectors	Description
Infrastructure	<ul style="list-style-type: none"> • If cyclones like SIDR of 2007 hit Sharankhola upazila 12050 kacca, 100 pucca, 750 semi pucca houses may be destroyed totally or partly. • If tidal surge like SIDR of 2007 hit Sharankhola upazila 10225 kacca, 105 metalled, 814 semi metalled houses may be destroyed totally or partly. • If river erosion hit of the Sharankhola upazila 1500 kacca, 25 pucca, 50 semi pucca houses may be destroyed totally or partly. • If flood hit like 1988 in the Sharankhola upazila 5000 kacca, 40 pucca, 200 semi pucca houses may be destroyed totally or partly.
Sanitation	<ul style="list-style-type: none"> • If cyclones like SIDR of 2007 hit Sharankhola upazila 12050 kacca, 120 semi pucca latrines and reserved water of 25 ponds may be affected totally or partly • If tidal surge like SIDR of 2007 hit Sharankhola upazila 9850 kacca, and reserved water of 81 ponds may be affected totally or partly. • If flood hit Sharankhola upazila 5000 kacca latrines and reserved water of 30 ponds and 50 Rain Water Plants and 10 PSFs may be affected totally or partly.

5.2 Fast/Early Recovery

5.2.1 Administrative Rapprochement

Serial	Name	Position	Mobile
1	Md.Kamal Uddin Akon	Upazila Chairman	01710-009991
2	K.M Mamun Uzzaman	Upazila Nirbahi Officer	01914- 883825
3	Md.Nasir Uddin	Upazila Project Implimentation Officer	01725- 889863
4	Md. Azizul Haque	Office-in-Charge (Police)	01713374128
5	Md Shajahan Dulal	Chairman- 1 no. Dhansagar	01715- 167027
6	Md.Motiar Rahman Khan	Chairman- 2 no. Khontakanta	01716- 952303
7	Md.Asaduzzaman (Milon)	Chairman-3 no. Royanda	01716- 321780
8	Md. Mojammal Hossain	Chairman- 4 no. Southkhali	01718060780

5.2.2 Cleaning Debris

Serial	Name	Position	Mobile
1	K.M Mamun Uzzaman	Upazila Nirbahi Officer	01914- 883825
2	Md. Nasir Uddin	Upazila Project Implimentation Officer	01725- 889863
3	Prodip Kumar Mitro	Upazila Engineer	01715- 398922
4	Md, Shajahan Dulal	Chairman- 1 no. Dhansagar	01715- 167027
5	Md.Motiar Rahman Khan	Chairman- 2 no. Khontakanta	01716- 952303
6	Md.Asaduzzaman (Milon)	Chairman-3 no. Royanda	01716- 321780
7	Md.Mojammal Hossain	Chairman- 4 no. Southkhali	01718060780

5.2.3 Public Service Restart

Serial	Name	Position	Mobile
1	Md. Kamal Uddin Akon	Upazila Chairman	01710-009991
2	K.M Mamun Uzzaman	Upazila Nirbahi Officer	01914- 883825
3	Md. Nasir Uddin	Project Implimentation Officer	01725- 889863
4	Manjurul Hassan	Upazila Social Welfare Officer	01718- 896977
5	Prodip Kumar Mitro	Upazila Engineer	01715- 398922
6	Md Shajahan Dulal	Chairman- 1 no. Dhansagar	01715- 167027
7	Md.Motiar Rahman Khan	Chairman- 2 no. Khontakanta	01716- 952303
8	Md.Asaduzzaman (Milon)	Chairman-3 no. Royanda	01716- 321780
9	Md.Mojammal Hossain	Chairman- 4 no. Southkhali	01718060780

5.2.4 Emergency Livelihood Assistance

Serial	Name	Position	Mobile
1	Md. Kamal Uddin Akon	Upazila Chairman	01710-009991
2	K.M Mamun Uzzaman	Upazila Nirbahi Officer	01914- 883825
3	Md.Nasir Uddin	Project Implimentation Officer	01725- 889863
4	Afroza Akter	Upazila Anser VDP Officer	01734230919
5	Md. Ferdous Ansary	Upazila Fisharies Officer	01712- 149010
6	Md. Delowar Hussain	Upozila Livestock Officer	01711- 193500
7	Somitro Sarker	Upazila Agriculture Officer	0465956019
8	Md Shajahan Dulal	Chairman- 1 no. Dhansagar	01715- 167027
9	Md.Motiar Rahman Khan	Chairman- 2 no. Khontakanta	01716- 952303
10	Md.Asaduzzaman (Milon)	Chairman-3 no. Royanda	01716- 321780
11	Md.Mojammal Hossain	Chairman- 4 no. Southkhali	01718060780

Annexure 1

Cheque list of plan implementation during hazard

Immediately after the announcement of the signal through radio/television the steps which are mentioned below through table must be taken.

Serial no	Subject	Yes/No
1.	It is told to the selected volunteers for announcing signal to announce the upcoming danger.	Yes
2.	Responsible person or group are appointed to rescue people from risky areas.	Yes
3.	It is announced that people must preserve dry foods under ground after wrapping it properly with packet.	Yes
4.	The volunteers are provided with life jacket for safety.	Yes
5.	Necessary manpower is ready to manage the union control room all the time.	Yes
6.	Union food storehouse/ relief storehouse is secured.	No
7.	Other	

Check list

The following table, after being filled, must be sent to Upazila Nirbahee Officer and Deputy Commissioner within April/May of each year, after being discussed in the meeting of union disaster management committee.

Serial no	Subject	Tick
1	Enough food is stored in the storehouses of each union	No
2	The children of the risky areas are vaccinated	Yes
3	The mothers of ১- ৬ years old children are fed vitamin capsules.	Yes
4	Volunteers are provided with yearly training	Yes
5	The volunteers are made aware of appointed responsibility	Yes
6	Necessary medicines and oral salines are stored in UP clinic hospital	Yes
7	First aid tools and medicines are there for the shelters	No
8	Selected doctor for every shelter is present	No
9	There is useable tubewell in each shelter	No
10	There is necessary and useable latrine in each shelter	Yes
11	The doors and windows of each shelter are useable	No
12	There is separate and secured management for women in each shelter	No
13	The alternative caretaker, who is selected, is present	No
14	Selected nurses are there in each shelter to look after expecting mothers	No
15	High place or killa is prepared to keep poultry and domestic animals	No
16	Necessary microphones to telecast the weather report and signal are useable	Yes
17	People are inspired and beware to save dry foods at least for 2/3 days	Yes
18	other	

Annexure-2: Upazila Disaster Management Committee

Sl.No	Name	Designation	Member	Mobile
1	Md.Kamal Uddin Akon	Upazila Chirman	President	01710009991
2	K M Mamunuzzaman	Upazila Nirbahi Officer	Vice-President	01914-883825 0465956004
3	Md. Nasir Uddin	Upazila Project Implementation Officer	Member Secretary	01725-889863 04679556108
4	Mr. Parves Hossain	Upazila Vice-Chairmen	Member	01713-865805
5	Md. Hasi Begum	Woman Vice-Chairmen	Member	01724-536316
6	Md. Shahajahan Dulal	Chairman -1 no. Dhansagar	Member	01715- 167027
7	Md. Motiar Rahman Khan	Chairman- 2no. Khontakata	Member	01716- 952303
8	Md. Asaduzzaman Milon	Chairman-3 no. Royenda	Member	01716- 321780
9	Md. Mozzamal Hossain	Chairman-4 no. Southkhali	Member	01718-060780
10	Somitro Sarker	Upazila Agriculture Officer	Member	0465956019
11	Dr. Subrato kumar shaha	Upazila Health and Family Planning Officer.	Member	01736666897
12		Assistant Commissioner (Land).	Member	-
13	Md. Ferdous Ansary	Upazila Fisheries Officer.	Member	0465956047
14	Md. Aktaruzzaman Milon	Upazila Education Officer	Member	01923189621
15	Prodip Kumar Mitra	Upazila Engineer	Member	01715-398922
16	Md.Manjurul Hasan	Upazila Social Welfare officer,	Member	01718-265545
17	Rebeka Sultana	Upazila Family Planning Officer	Member	01711- 781678
18	Md. Mosaraf Hussain Hawlader	Upazila Food Controller	Member	01774973371
19	Md. Delowar Hussain	Upazila Livestock Officer.	Member	01718606627
20	Md.Azizul Haque	Officer-in-Charge (Police)	Member	01713-374128
21	Md. Mizanur Rahman	Sub-Assistant Engineer (DPHE)	Member	01711-479319
22	Siddikur Rahman	Upazila Youth Development Officer	Member	01712-220329
23	Md.Tohidul Islam	Upazila Cooperative Officer.	Member	01717-886116
24	Modhu Subarno Shaha	Upazila Primary Education Officer	Member	01712-829482
25	MD.Abdul Wahab	Upazila Women Affairs Officer.	Member	01819-047409
26	Afroza Akter	Upazila Ansar-VDP Officer	Member	01734-230919
27	Md. Hazar Ali	Representative Upazila FA.SA.O.CD,	Member	01719-151580
28	Rahala Begum	UP Member Southkhali	Member	01715-743778
29	Aklima Begum	UP Member Royenda	Member	01918-767739

Sl.No	Name	Designation	Member	Mobile
30	Momotaz Begum	UP Member Khontakata	Member	01939-411936
31	A. Salam Akon	President BRDB	Member	01747878594
32	Alomgir Hossain	Assistant Director CPP	Member	01728-837869
33	Afroza Begum	Representative of Bangladesh Red Crescent Society.	Member	01932-262944
34	Md. Ayub Ali	Executive Diretor (Agradut Foundation)	Member	01711-481809
35	Shahinur Rahman	Asroy Foundation	Member	01712-562499
36	Alomgir Hossain (Miru)	Nominated	Member	01716-277044
37	Bisatos Halder	Same	Member	01739-321539
38	Professor Malek Reza	Same	Member	01724-175858
39	Abdul Khalaque Khan	Upazila Commander of Freedom Fighter Command Council.	Member	01718-048587

Ammexure-3: Table of Union Volunteers

Volunteer's list of Dhansagar Union

Sl. No.	Name	Father/Husbend	ward # No.	Mobile
01	Md.Nasir Halder	Md.Moslim Ali Haw:	1	01718656920
02	Masum beelah	Md.Malak Haw:	1	01739009743
03	Monowara Begum	Motalab Haw:	1	01913725613
04	Md.Abul Kalam Khan	Md.Mokbul Ali Khan	2	01710886272
05	Manik Halder	Ashutos Hawlader	2	01718976275
06	Shahajahan	Rahman	2	01914728695
07	Md.Nasir Uddin Talukder	Md.Samad	3	01960056095
08	Mis.Hasi Begum	Late. Altaf Hossain	3	01937162096
09	Shapon Hawlader	Khalaque Jamadder	3	01921808578
10	Md.Rajaul Karim	-	4	01712879035
11	Md.Dalowar Farazi	Joinal Forazi	4	-
12	Mrs.Sumi Akhter	Md.Joinal	4	01934507172
13	Md.Shamim Munshi	Md.Saidur Rahman	5	01713927786
14	Biswajit Halder	Bishashor Hawlader	5	01719093083
15	Arup Kumar	Abony Hawlader	5	01949232090
16	Md.Siddikur Rahman	Mobarok Ali Bapari	6	01729487058
17	Md.Yadul Akon	Nurul Islam	6	01741046040
18	Md.Mahadi Hasan	Habibur Rahman	6	01757285689
19	Md.Aminul Hossain	Abdul Latif Hawlader	7	01717313992
20	Gopal Karmokar	Sunil Kormokar	7	01753510250
21	Arif Shipai	Md.Salam Shipai	7	01757048896
22	Md.Nanna Mia Akon	Late. Chan Mia Akon	8	01732778108
23	Md.Jafor Ikbai	Md. Jalal Hossain	8	01720013262
24	Md.Jakir Munshi	Late.Salam Munshi	8	01924416458
25	Md.Ali Ahmad Hawlader	Abdul Hakim Hawlader	9	01720574211
26	Nupur Rani	Ajit Hawlader	9	01757164399
27	Md.Balal Hossain	Md.Sultan Ahmed	9	01925365443

Volunteer's list of Royenda Union

Sl. No.	Name	Father/Husbend Name	ward # No.	Mobile
01	Md.Kuddus Sarder	Abdul Jabbar Sarder	1	01753510507
02	Md.Altaf Hossain	Md.Shohorab Hossain	1	01942490221
03	Mrs.Piara Begum	Hus:Tafazzal Hossain	1	01718207882
04	Md.Ruhul Amin	A: Haque	2	01713962559
05	Md. Harun Hang	Md.Nazma Dafader	2	-
06	Mrs.Laizu Akhter	Md.Latif Khan	2	01720572649
07	Amtadul Haque Babul	Fulmia Akon	3	01923326684
08	Rokeya Begum	Alhaz Ibrahim	3	01913603208
09	A: Jalil Khan	A: Jabbar Khan	3	01924027610
10	Md.Babul Akon	Md.Sultan Akon	4	01731325378
11	Shupti Rani	Debasis Mistry	4	01724218505

Sl. No.	Name	Father/Husbend Name	ward # No.	Mobile
12	Md.Nizam Kahan	Nur Mohammad	4	01922541766
13	Md.Dadu Akon	A: Aziz Akon	5	01717411885
14	Razia Sultana	Babul Jamadder	5	01725023827
15	Narayon Chandra	Late. Harandro nath Bala	5	01726572733
16	Md.Shaiful Mollah	Motiar Rahman	6	01740967285
17	Mrs.Hafiza Akhter	Rubel Shikhder	6	01923254839
18	Md.Kuddus Mollah	Late.Hafizur Rahman	6	01916706826
19	Md.Jhangir Fokir	Md.Mokbul Fakir	7	01938672616
20	Popy Begum	Harunur Rashid	7	01751683800
21	Masud Reza	Md.Asaduzzaman	7	01947284589
22	Shahajahan Badal	Dalowar Hossain Jamadder	8	01718321315
23	Shima Rany	Ranjon Shadhok	8	01748274409
24	Md.Imdadul Hang	A: Mannan Hang	8	
25	Md.Kawser Akon	Moslam Ali Akon	9	01717961532
26	Shusma Rani	Shomiranjjon Kulu	9	01732778106
27	Md.Jamal Khan	Golup Khan	9	01719838095

Volunteer's list of Khontakata Union

Sl. No.	Name	Father/Husbend Name	ward # No.	Mobile
1	Md.Mohiuddin Khan	Mohammad Khan	1	01736- 330350
2	Nasima Akhter	MD.Dalowar Hossain	1	01731- 45516
3	Md.Afzal Khandokar	Abdul Kader Khondokar	1	01720- 360817
4	Md.Motiur Rahman	Md.Mbarak Hawlader	2	01731- 527645
5	Arifa Akhter	Razib Hossain	2	01931- 184734
6	Md.Abdur Rahim	Md.Chan Mia	2	01745- 107082
7	Md.Shogir Hossain Pahloan	Nurul Haque Palowan	3	01919- 466673
8	Mrs.Taslima Begum	Abdul Malak Chokider	3	01740- 368280
9	Md.Dlowar Munshi	Alkaj Munshi	3	01733- 473295
10	Md.Jakir Hossain Gazi	Abdur Rob Hossain Gazi	4	01930- 624146
11	Mrs.Parul Begum	Md.Nuruzzaman Gazi	4	01737- 190246
12	Shaidur Rahman Talukder	Hatam Talukder	4	01936- 249593
13	Abdul Haque Akon	Mojjamal Haque	5	01937- 859246
14	Tuli Akhter	Md.Mizanur Rahman	5	01717- 197788
15	Mawlana Anisur Rahman	Md.Motiur Rahman	5	01937- 875923
16	Md.Shohid Islam Akon	Chan Mia Akon	6	01724- 788569
17	Munni Akhter	Abdul Mannan Halder	6	01736- 491114
18	Mawlana Siddikur Rahman	Abdul Latif Shah	6	01749- 805141
19	MD.Mojibur Rahman Talukder	Md.Fazlul Haque	7	01716- 211241
20	Mrs.Hasina Mamotaj	Md.Jhangir Alom	7	01745- 705251

Sl. No.	Name	Father/Husbend Name	ward # No.	Mobile
21	Kari Abdul Hamid	Abdul Aziz	7	01816- 604605
22	Md.Nasimul Ahsan Talukder	Abdul Awal Talukder	8	01911- 188814
23	Mrs.Salina Begum	Abdul Halim	8	01915- 806699
24	Mawlana Ilias	Md.Motiur Rahman	8	01927- 487661
25	Md.Panna Talukder	Abdul Jabbar Talukder	9	01719- 750253
26	Md.Shohidur Ali Hawlader	Md.Iasin Ali Hawlader	9	01719- 838071
27	Mawlana Nurul Islam	Late.Abdul Aziz	9	01728- 619823

Volunteer's list of Southkhali Union

Sl. No.	Name of the Volunteer	Father/Husband Name	ward # No.	.Mobile No
1	Md.Shofikul Islam	Md.Unus Ali Halder	1	01740- 650662
2	Md.Isarul Kazi	Moksalam Gazi	1	01775- 546255
3	Murshida Akhter	A:Malak Hawlader	1	01751- 550652
4	Md.Dalowar Hossain Mir	A:Ali Mir	2	01736- 491133
5	Md.Shahajahan Hawlader	Late.Mominuddin Hawlader	2	01783- 480787
6	Md.Monir Shakh	Usuf Saikh	2	01732- 619515
7	M.Fazlul Haque Halder	Anisur Rahman	3	01712- 972313
8	Mawlana Jahidur Rahman	Late.Momin Uddin	3	01747- 400530
9	Md.Tajammul Saikh	Unus Ali Khan	3	01850- 334970
10	Md.Gias Uddin Hawlader	Ansar Ali Hawlader	4	01722- 105655
11	Md.Malak Islam	Late.Azhar Hawlader	4	01725- 417387
12	Md.Mizanur Rahman	Jaman Uddin Hawlader	4	01735- 300375
13	Md.Harunur Rashid	A: Aziz Hawlader	5	01713927759
14	A: Khalaque Fakir	Late.Arshad	5	01731961993
15	A:Khalaque Shaikh	Late Akkal Saikh	5	01724536323
16	Md.Jakir Hossain Hang	Mokbul Hossain Hawlader	6	01729475932
17	Shuli Begum	Md.Alaluddin	6	01779662665
18	Md.Karim Halder	Late.Abdul Kader Hawlader	6	01961611237
19	Md.Abadul Haque	Mokbul Hossain	7	01718746878
20	A:razzak H:	Md.Said H:	7	01719556595
21	Dr:Barak	Md.Sakander	7	01745307542
22	Md.Altaf Hossain	Asal Uddin Munshi	8	01720995080
23	Md.Usuf Hang	Late.Akub ALi	8	01725350236
24	Dr:Niwas Mahmood	Md.Nasar Uddin	8	01912968671
25	Md.Saiful Islam	Md.Lal Mia	9	01718776224
26	Md.Usuf Ali Khan	Md.Sultan Khan	9	01715866844
27	Dr.Fulmia Akon	LAt.e.Fazlul Akon	9	01753478456

Annexure-4: Table of Cyclone shelter Management Committe

Earthen Killa

Shelter	Responsible Person	.Mobile No	Comment
Rajapur Earthen Kalla	Md.Shajahan Dulal and Md.Siddikur Rahman	01715- 167027 01719- 487058	

Cyclone shelter

Cyclone shelter Name	Responsible person	.Mobile No	Comment
Jalar Ghat Cyclone Shelter	Md.Korim Hossain	01774017001	
Rasulpur Tarnado Cyclone Shelter	Abdul Malak	01197249330	
North Tafalbari Cyclone Shelter	Md.Anwar Hossain	01721835516	
Cyclone Shelter Royenda Chal	Md.Rofik	01770200210	
Char Mahar Ali Cyclone Shelter	Sundorban Range	-	
Alor Kol Cyclone Shelter	Sundorban Range	-	
Sundorban Office Kalla	Sundorban Range	-	
Majher Kalla	Sundorban Range	-	
Shawla River bed	Sundorban Range	-	

School Cum Cyclone Shelter

Cyclone shelter	Responsible person	.Mobile No	Comments
Tafalbari GOVT. P. S	Manotos chandra Tarua	01724395022	
Southkhali GOVT. P. S	Gouraga Lal Mistry	01717249071	
Bogi GOVT. P. S	Motalab Hossain	01714482134	
Bokultala GOVT. P. S	Md.Shah Alom	01710475026	
SB Tafalbari Govt. P. S	Balayat Hossain	01715448443	
Sonatala GOVT. P. S	Md.Rustum Ali	01716502458	
Chaltabunia GOVT. P. S	Tahmina Akhter	01777155898	
South Kuriakhali GOVT. P. S	Abdul Mojid	01721116690	
Southkhali Govt. P. S attaching shelter	Md.Rohim Halder	01771684901	
CSB GOVT. P. S	Bilkis Jahan	01735686881	
Chal Royenda GOVT. P. S	A: Aziz Halder	01735686920	
West Rajapur GOVT. P. S	Roton Halder	01721395463	
South Rajapur GOVT. P. S	Md.Nazmul Haque	01716449009	
Dibir Par GOVT. P. S	Md.Lutfur Rahman	01716604127	
East Khada GOVT. P. S	Md.Alomgir	01714662805	
Royenda GOVT. P. S	Md.Cauadul Haque	01914775746	
North Kadomtala GOVT. P. S	A:Khalaque Hawlader	01912302164	
Janata Govt. P. S	Abdur Rab Hawlader	01770017001	
Rajasar Govt. P. S	Sunil Kumar Mollick	01745398565	
Kadomtala Govt. P. S	Abdul Awal	01731503274	
Lakurtala Kadomtala Govt. P. S attached cyclone shelter	Md.Saidur	019498517018	
Lakurtala Kadomtala Govt. P. S attaching shelter	Resma Akhter	01719899642	

Cyclone shelter	Responsible person	.Mobile No	Comments
Amragacia GOVT. P. S	Md.Saiadur Rahman	01719838071	
South Nalbunia GOVT. P. S	Bipul Bihari Roy	01711190136	
Mother Par GOVT. P. S	Md.A: Awal	01731357902	
Bijaner Par GOVT. P. S	Md.Srowar Alom	01716725111	
BiDhansagar GOVT. P. S	Arbindo Majumder	01719690871	
Khontakata GOVT. P. S	Harun-ur-Rashid	01729549047	
Mothar Par G:G:S	Kamrunnahar	01749721853	
Rajoir G::S	Jakia Khanim	01736000011	
Golbunia GOVT. P. S	Md.Jahirul Haque Gazi	01914617348	
TT andCD GOVT. P. S	Salima Akhter	01718774507	
Baniakhali GOVT. P. S	Md.A:Latif Khan	01712550096	
Khontakata Govt. P. S	Md.Harun-ur-Rashid	01729549047	
South Khontakata GOVT. P. S	Md.Rofikul Islam	01982122606	
Khajurbaria GP:S	Tarun Kanti Halder	01715435667	
Dhansagar Govt. P. S	Rani Halder	01731078664	
Rajapur Bazar Govt. P. S	Md.Sarowar Hossain	01722192259	
Iasin Memorial Govt. P. S	Kashob Chandra Roy	01713922433	
East Amragacia Govt. P. S	Khushi Rani Suta	01710777682	
West Nalbunia GOVT. P. S	Harun Halder	01780303810	

Government/Private Institution

Cyclone shelter Name	Responsible person	Mobile	Comment
Southkhali Union Porishad Complex cum Cyclone shelter	Arif Hossain	01912211701	
Ashar Alo Mosque cum Cyclone shelter	Md.Kader Halder	01825177012	
Khontakata Union Porishod Complex cum Cyclone shelter	Md.Balal Hossain	01920017001	
Radha Lokhin G:S Cyclone shelter	Md.Khushi Begum	01711000192	
Matrivasa College Cyclone shelter-1	-	-	
Matrivasa College Cyclone shelter-2	-	-	
Rajapur Bazar Slahia Madrasa Cyclone shelter	Mrs.Rahala Begum	01920770010	
Dhansagar Union Porishod Bhabon.	Md.Shahajahan Dulal	01715- 167027	

High Road/Polder

Cyclone shalter Name	Responsible person	Mobile	Comment
N/A	-		

Health Management Committee

Name of Center	Responsible Person	Designation	Mobile	Comment
Upazila Health Center	Md kamal uddin Akon	Upazila Chairman	01710-009991	
	K.M Mamunuzzaman	Upazila Nirbahi Officer	01914- 883825	
	Dr. Subrato kumar shaha	Upazila Health and Family Planning Officer	01736666897	
	Rabaka Begum	Upazila Family Planning Officer	01711- 781678	
	Md.Nasir Uddin	Project Implementation Officer	01725889863	

Fire safety Committee

Name's of Fire Station	person Responsible	Designation	Mobile
Upazila Fire Station	Md.Kamal Uddin Akon	Upazila Chairman	009991-01710
	Md.Kamrul Islam	Upazila Nirbahi Officer	01914- 883825
	Md.Hazar Ali	Station Officer, Fire Service and Civil Defense Station	01719151580
	Md.Nasir Uddin	Upazila Project Implementation Officer	01725889863
	Prodip Kumar Mitra	Upazila Engineer	01715398922

Engine powered boats

Union/ward #	Responsible person	Mobile	Comment
Southkhali/8	Monir Khan	01783900241	
Royenda/9	Babul	01936280747	
Royenda/9	Jamal	01964586929	
Royenda/8	Rahim	01733040259	
Royenda/4	Halal	01961127020	
Royenda/8	Masud	01828535756	
Royenda/8	Bachu	01780033557	
Royenda/5	Firoz	01730197055	
Royenda/5	Sultan	01973962559	
Royenda/5	Shipon	01924425223	

Local Businessmen

Union/ward # Name's	Name's of Local Businessman	Mobile	Comment
Royenda Union	Md. Shimul Gazi	01713926822	Farmacy
Royenda Union	Md. Wahid	01915563530	Farmacy
Royenda Union	Md. Jalal Uddin	01744396961	General store Businessman
Southkhali Union ward # no.-4	Milon Hossain .Md	01922360950	General store Businessman
Royenda Union ward # no.-9	Md. Hasam	01736829158	Cloth Store

Union/ward # Name's	Name's of Local Businessman	Mobile	Comment
Royenda Union ward # no.-9	Md. Nasir	01914832737	General store Businessman
Royenda Union ward # no.-9	Joynal	01765594215	General store Businessman
Royenda Union ward # no.-5	Shohidul	01722564045	General store Businessman
Southkhali Union ward # no.-	Babul	01751139638	General store Businessman
Southkhali Union ward # no.-	Borkot	01719506999	General store Businessman

Annexure-5: At a Glance of Upazila

Area	756.0sq. km	Cement Factory	N/A
Upazila Porishad	1	Church	0
Union Porishod	4	Eidgah	67
Pourosava Office	N/A	Land Office	4
Mouza	12	Bank (Agriculture, Sonali, Janata (Bank	3
Village	50	Office Post	13
Family	28581	Club	8
Total Population	119084	Bazar-Hat	19
Male	62400	L P Gas Factory	-
Female	56484	Fire Service Center	2
Government Primary School	112	Weather Office	-
Primaru School	17	BGB Force	-
College	5	Cost Guard	1
(Dakhil, Fazil, Abtadia) Madrasa	5	Graveyard	1
Cultivate Land	9951 Hectares	Shoshan Ghat	1
		Poultry farm	-
BRAC School and NGO School	-	Navy Caamp	
Kinder Garden School	-	Mobile Tower	47
Percentage of Literacy	58.9	Deep Tubewall	7
Community Clinic	16	Shallow Tubewall	3250
Polder	km 43	Hand enforce Tubewall	0
sluice Gate	22	River	5
Bridge	92	Canal	31
Cultvert	90	(Sundorban area (km	594.58
Mosque	317	Pond	2063
Temple	46	Road kacha	268 Km
Orphanage	-	Pucca Road	84 Km
International NGO	6	Semi pucca road	55 Km
National Private Development Organization	33	Play Ground	17
Government Hospital	1	Fish Gher	1250
Government Health Center	4	Sea Port	-
		Ice Factory	-
		Food Godown	-
Buddist orphanage		Godown Power enforce of	-
Police Station	1	Auto Rice Mill	-
BRDB Office	-	Flour Mill	1
		Dak Banglo	1

Annexure 6: List some of the important events broadcasting from Bangladesh Radio

Radio center	Name of the programmes	Time	Day
Dhaka	Krishi samachar	Morning 6.55-7.00 am	Everyday
	Sukher Thikana	Morning 7.25-7.30 am	Everyday
	Shastoy sukher mul	Morning 11.30-12.00 pm	All days except Friday
	Sonali Fasol	Evening 6.05-6.35 pm	Everyday
	News of weather	Evening 06.50-7.00 pm	Everyday
Chittagong	Krishi khota	Morning 06.55-7.00 am	Everyday
	Krishi Khamar	Evening 06.10-06.50 pm	All days Except Monday
	Sukhi Sanssar	Night 08.10-08.30 pm	All days except friday
Rajshahi	Khet Khamer samacher	Morning 06.55-7.00 am	Everyday
	Sobuz bangla	Evening 06.05-06.50 pm	Everyday
Khulna	Shasto Thoutho	Morning 06.55-7.00 am	Everyday
	Krishi samacher	Evening 04.20-04.30 pm	Everyday
	Chashabad	Evening 06.10-06.50	Everyday
Rangpur	Sukher thekana	Morning 07.25-07.30	Everyday
	Khet Khamar	Evening 06.05-06.35 pm	Everyday
Shylhet	Azker chashabad	Morning 06.55-07.00 am	Everyday
	Sukher thekana	Morning 07.25-07.30	Everyday
	Shamol Sylhet	Evening 06.05-06.50 pm	All days except friday
Thaurgone	Kishan Matir desh	Afternoon 06.05-06.25 pm	Saturday, monday and wednesday
Coxsazar	Azker krishi	Afternoon 03.07-03.10 pm	Everyday
	Sonali Prantor	Afternoon 03.40-03.45 pm	Tuesday and thursday
Barishal	Krishi kotha	Afternoon 03.15-03.30 pm	All days except saturday and wednesday
	Soto Poribar	Evening 03.35-03.50	All days except monday, wednesday and friday
Rangamati	Jiboner jonno	Afternoon 1.50-1.55 pm	Everyday
	Khamar bari	Evening 03.05-03.15 pm	Everyday

* Weather news broadcasting from all stations at 6.50 pm

List of some important event broadcasting from community Radio

Wireless Center	Event Name	Time	Days

Annexure-7: Union wise mouza's Name

Union's Name	Moja's Number	Union wise Muja's Name
Dhansagar	3	Dhansagar, Rajapur, Nalbunia
Khontakata	3	Amragacia, Baniakhali, MorelBad
Southkhali	3	Shonatala, North Southkhali, Sharankhola
Royenda	3	Rajapur, Khada, Royenda
Total	12	

Annexure-8: Union wise different Stage Population

Union's Name	Population							
	Male	Female	Child (o-15)	Old (60+)	Desable	Total Population	Family	Voters
Southkhali	13304	12085	6900	1200	113	25390	6300	16271
Royenda	17766	16139	9214	1602	172	33906	9500	20853
Khontakata	18804	17082	9752	1696	110	35886	8300	20364
Dhansagar	12526	11378	6496	1130	101	23902	5630	13758
Total	62400	56684	32362	5628	496	119084	29730	71246

Annexure-9: Union wise statistics of polder

Union's Name	Polder Number	Polder's Name	Lenth (km)	Location (Ward ##)	Location	Width (ft.)	Height (ft.)
Southkhali	1	WAPDA Polder	20	1, 4, 5, 6, 7, 8, 9	From Daser Varani to Talfalbari Canal	8	10
Royenda	3	WAPDA Polder	1	8, 5	From mouth of Boleshor River to mouth of Talfalbari Canal	15	7
		Border Support Polder	0.5	7, 8	From Boleshor River to North Talfalbari	15	7
		Talfalbari Canal Polder	0.5	5, 2	From Bhola River to Bharani Canal	15	7
Khontakata	1	WAPDA Polder	5.5	4,5,7	From Majair Markus Mosque to Kumarkhali	15	5
Dhansagar	1	WAPDA Polder	15	1, 2, 6	From Rajpur to Pollimongol	10	6
Total	6	0	43	-	-	-	-

Annexure-10: Union wise Location Statistics of Sluice Gate

Union's Name	Sluice Gate's Number	Location /ward #	Attachment of River and Canal	Active or inactive work	Types
Southkhali	9	9	Mouth of Bhola River	Active	Concrete
		4	Mouth of Tafalbari Canal	Active	Concrete
		7	Mouth of Sharankhola Bogi River	Active	Concrete
		6	Mouth of Bolessor River at South Southkhali	Active	Concrete
		8	Mouth of Bolessor River	Active	Concrete
		8	Middle of Varani and Bogi at Sharankhola	Active	Concrete
		7	Mouth of Varani Balasor River at Sharonkhol	Active	Concrete
		4	Mouth of Bolessor River at Royenda village	Active	Concrete
		1	Instant Bhola River	Active	Concrete
Royenda	7	1 and 2	Mouth of Bhola River	Slight work	Concrete
		8	Mouth of Bolasor River	Partially active	Concrete
		9	Mouth of Bolasor River	Active	Concrete
		5	Mouth of Royenda Canal	Active	Concrete
Khontakata	3	8	Mouth of Royenda Canal	Active	Concrete
		5	South Khontakata attach Canal	Active	Concrete
		4	Mouth of Kumar Canal	Active	Concrete
Dhansagar	3	6	Bhola river at Rajapur	Active	Concrete
		2	Mouth of Dhansagar Ghopar Cannal	Active	Concrete
		2	Mouth of Dhansagar Canal	Active	Concrete
Total	22				

Annexure-11: Union wise Statistics of Bridge

Union's Name	Number of Bridge	Attachment of River and Canal	Bridge/ Ward #	Active or inactive work	Types
Southkhali	2	CandB Bridge on the Baoari Bari Canal	2, 4	Active	Concrete
		CandB Bridge On Varani Canal		Active	Concrete
Royenda	46	On the Khader Canal	4	Active	Concrete
		On the Doctor Canal	3	Active	Concrete
		On the Kazir Canal	4	Active	Concrete
		On the Polar Hat Canal	7	Active	Concrete
		On the Bangla Bazar Canal	4	Active	Concrete
		On the Mondol Bari Canal	3	Active	Concrete
		Khada Char ghata	4	Active	Iron
		On the Khada Jamaddar Bari Canal	4	Active	Iron
		On the canal of Banglabazar	4	Active	Iron
		On the Jilbunia Rajessor Canal	9	Active	Wood
		On the Lakurtala Bazar Canal	8	Active	Wood
		On the North TafalBari Canal	7	Active	Wood
		On the South Kadomtala Canal	6	Active	Wood
		On the khada Canal	8	Active	Wood
		On the Middle Rajapur canal	3	Active	Wood
		On the South Rajapur Canal	2	Active	Wood
		On the North Rajapur Canal	1	Active	Wood
Khontakata	17	On the Nalbunia Canal	2, 6	Active	Concrete
		On the Royenda Canal	7	Active	Concrete
		On the Royenda Boatstand	7	Active	Concrete
		On the Khontakata Canal	5	Active	Concrete
		On the Amtoli Canal	4	Active	Concrete
		On the Bania Canal	3	Active	Metal
		On the Rajoir Canal		Active	Slub
		On the Mothar Par Canal		Active	Slub
		On the Khontakata Canal	5	Active	Slub
		On the JanarPar Canal		Active	Slub
		On the BiDhansagar Canal		Active	Slub
		On the Nalbunia Canal	2	Active	Slub
		On the Golbunia Canal		Active	Wood
		On the Amragacia Canal		Active	Wood
		On the Janar Par Canal		Active	Wood
		On the Khontakata Canal	5	Active	Wood
		On the Bidhan sagor Canal		Active	Wood
Dhansagar	27	On the Jomaddar House Canal	3, 5	Active	Wood
		On the Rajpur Bazar Canal	7	Active	Concrete
		On the Aiesh House Canal	3	Active	Concrete
		On the Nalbunia Canal	3	Active	Concrete
		On the Amragacia Canal	5	Active	Concrete
		On the ShingBari Canal	5	Active	Concrete
		On the Kali Bari Canal	9	Active	Concrete
		On the Nalbunia Gazi Canal	3	Active	Concrete

Union's Name	Number of Bridge	Attachment of River and Canal	Bridge/ Ward #	Active or inactive work	Types
		On the Bari Canal	3	Active	Concrete
		On the Jaliar Chuta Canal	2	Active	Concrete
		On the Cholbunia Canal-2	9	Active	Concrete
		On the Bandha Ghata Canal	2	Active	Concrete
		On the South Badal Canal-2	5	Active	Concrete
		On the South Badal Canal	4	Active	Concrete
		On the Cutu Kha Bazar Canal	3	Active	Concrete
		On the Shing Bari Tafsil Office	5	Active	Concrete
		On the Sultan Chaprasa Bari Canal	3	Active	Concrete
	92				

Annexure-12: Union wise Statistics of Cultvert

Union's Name	Number of Cultvert	Cultvert/ Ward #	Attachment of River/Canal	Active or Inactive work	Types
Southkhali	16	7	On the Bogi Road – 2 in numbers	Active	Concrete
		8	On the Chaltabunia Road- 7 in numbers	Active	Concrete
		8	From Tafal Bari Bazar Road to River bank – 3 in numbers	Active	Concrete
		4	Middle of Royenda village Road	Active	Concrete
		5	In front of road of Nur Islam Mollah House at N. Southkhali- 1 in number	Active	Concrete
		5	In front of road of Safayat Jommader House at North Southkhali- 1 in number	Active	Concrete
		5	In front of road of Sihrub Fokir House at North Southkhali- 1 in number	Active	Concrete
Royenda	41	1	On the North Rajapur Road-3 in number	Active	Concrete
		2	On the South Rajapur Road-6 in numbers	Active	Concrete
		3	On the Middle Rajapur Road- 2 in numbers	Active	Concrete
		4	On the Khada Rajapur Road- 10 in numbers	Active	Concrete
		5	On the North Kodomtala Rayanda Bazar Road-5 in numbers	Active	Concrete
		6	On the South Kodomtala Rayanda Bazar Road-4 in numbers	Active	Concrete
		7	On the North Tafalbari Rayanda Bazar Road-6 in numbers	Active	Concrete
		9	On the Jilbunia Rajessor Road- 5	Active	Concrete
Khontakata	10	7	On Rajoir Road	Active	Concrete
		6	On Mothar Para Road	Active	Concrete
		2	On Nalbunia Road	Active	Concrete
		6	On Varanir Par Road	Active	Concrete
		3	On Chaumohini Road	Active	Concrete

Union's Name	Number of Cultvert	Cultvert/ Ward #	Attachment of River/Canal	Active or Inactive work	Types
		5	On Khontakata Road	Active	Concrete
		2	On Janar Par Road	Active	Concrete
		3	On Baniakhali Road	Active	Concrete
		1	On Janar Par Road	Active	Concrete
		9	On North Parmagacia Road	Active	Concrete
Dhansagar	23	2	Instant Chairman House Road	Active	Concrete
		2	Dhansagar Road	Active	Concrete
		3	On Kollan Hoyse Road	Active	Concrete
		3	Attach Cotukha Bazar	Active	Concrete
		4	North Badal Road	Active	Concrete
		4	Malsha Road	Active	Concrete
		5	Shingbari Road	Active	Concrete
		7	Attach Rajapur Bazar Road	Active	Concrete
		7	Beside Rajapur Bazar Road	Active	Concrete
		8	Shavar Road	Active	Concrete
		9	Shohilabunia Road	Active	Concrete
		9	Amragacia Road	Active	Concrete
			Kalibari Road-2	Active	Concrete
			Hazi Bridge Road	Active	Concrete
			Aish House Road	Active	Concrete
			Attach Molsha Shikder House	Active	Concrete
			North Badal Road	Active	Concrete
			Instant Union Porishod Road	Active	Concrete
			WAPDA Road	Active	Concrete
			East Rjapur Road	Active	Concrete
Total	90				

Annexure-13: Union wise Statistics of Roads

Union's Name	Number of Pucca Roads	Length Pucca Road (KM)	Location of Pucca Road	Number of HBB road	Length HBB Road (K.M.)	Location of HBB Road	Number of Kacha Road	Length Kacha Road (KM)	Location of Kacha Road
Southkhali	2	14	1. From UP to Bapari House Bridge 2. From Kholil Mridha House to bank of the River	3	20	1) From CandB Road to Forazi House connecting to Jalar Ghat Vaia Boyati House- 4 KM 2) From mouth of Camp Road to Haraz Munshi House - 5 KM, 3) From Alom Shikder House to Shohrab Fokir House -5 KM	23	45.5	1. From Hemayat khan house near cyclone shelter to Frazi house -1.5 km, 2. Khalifa house at Boghi to bank of the river -1 km, 3. Sundarban Dhakil madrasa to bank of the river -1 km. 4, From C & B road to Farazi house via zoler ghat then Boyati house -4 km, 5. From the head of camp road to Horej munshi's house- 5 km, 6. From Alam sikder house to Shohorab fakir house- 5 km. 7, From Alam howlader house at Sonatala to Board school- 5 km, 8. From Harez munshi's house to Panna doctor's house- 5km, 9. From Mofazzel member house to Terabeka-1.5 km, 10. From Mofazzel member house to Khuriya khali school-2 km, 11. From Khuriya khali school to Yunus doctor house- 2.5 km, 12. From Fazlu member house to Sham howlader house via infront of Boyati house then Motaleb house-3km, 13. From kalam member house to Hatim mistry house- 3 km, 14. From Rob

Union's Name	Number of Pucca Roads	Length Pucca Road (KM)	Location of Pucca Road	Number of HBB road	Length HBB Road (K.M.)	Location of HBB Road	Number of Kacha Road	Length Kacha Road (KM)	Location of Kacha Road
									chabrashi house to infront of Kobiraz house 3 km, 15. From Kalam house to Monnaf Chowkider via Shamsu howlader house-2.5 km, 16. From Fazlu member house to in front of Obaidul house then chand mia house-1 km, 17. From Nibvan house to west side of Boroitola via Mridha house-3 km, 18. From Ismail Kha house to Rashid kha house then Boraitola-2 km, 19. From Mollah house to bridge of Bapari house-1 km, 20. From camp to Munsshi house-1.5 km, 21.From South Tafalbari tample to Moti panna house then Ismail guard house-1.5 km, 22. From Uttar Tafalbari tample to open Shadhu via Swdhansu house-1.5 km, and 23. From roads at Bhola to Tuku member house 2.5 km.
Rayande	10	4	1) North Rajapur Road 1 no ward # - 4 KM 2) South Rajapur Road 2 no ward # -2 KM,	16	32	1) North Rajapur Road 1 no. ward # -4 KM 2) South Rajapur Road 2 no. ward #- 2KM, 3)	14	113	1. From the shelter of Tafalbari Mira house to tultul-4 km, 2. From Hatimpur village to Ruhul's gher- 2 km, 3 From Mele shelter to Jogodish member house-3 km, 4. From Gavi harez house to Kuddus member bridge-4 km, 5. From the pond of Jomadder house to Khadar

Union's Name	Number of Pucca Roads	Length Pucca Road (KM)	Location of Pucca Road	Number of HBB road	Length HBB Road (K.M.)	Location of HBB Road	Number of Kacha Road	Length Kacha Road (KM)	Location of Kacha Road
			3) Middle Rajapur 3 no. ward # -2KM 4) Khada Road 4 no. ward # -5km) Rayande Bazar to Rasulpur-7KM; 6) Pach Road to North Tafalbari Bazar- 6 KM; 7) From Khada Tri mohoni to Char Road-2 KM; 8)From Bangla Bazar Trimukh to Polar Hat- 2 K:M;; 9) From Tin Road to Bara House- 2 K:M: 10)From Varanir Mukh to Rasulpur Bazar-1K:M:			Middle Rajapur 3 no. ward # -2 KM; 4) Khada Road 4 no. ward # no-5KM; 5) Rayande Bazar to Rasulpur-7K:M: 6) Pach Road to North Tafalbari Bazar- 6 K:M: 7) From Khada Tri mohoni to Char Road-2 K:M: 8)From Bangla Bazar Trimukh to Polar Hat- 2 K:M;; 9) From Tin Road to Bara House- 2 K:M: 10)From Varanir Mukh to Rasulpur Bazar-1K:M:			vote centre-2 km, 6. From Char rasta to pholer hat then Dewer house-4 km, 7. From Uttar Razapur to Mele cyclone shelter -6 km, 8. From Kuddus member house to Uttar Razapur cyclone shelter-5 km, 9. From Rasulpur bazar to Charer cyclone shelter-4 km, 9. From maddho Kadamtala to Ula cyclone shelter-6 km, 10. From Goni master house cyclone shelter to Gazi house-5 km, 11. From Jibonto house to cyclone shelter of Mofez mollah's house - 4km, 12. From Sadder chairman house to Rashid Talukder house-2 km, 13. From kamal Talukder house to Mowrashi bazar-5 km, 14. From Soto tafalbari to Mira house-3 km, 15. From Kaosar member house to Laqurtala bazar- 5 km, and 16. From bas stand to Razessor kallanbari -3 km.

Union's Name	Number of Pucca Roads	Length Pucca Road (KM)	Location of Pucca Road	Number of HBB road	Length HBB Road (K.M.)	Location of HBB Road	Number of Kacha Road	Length Kacha Road (KM)	Location of Kacha Road
Khontakata	3	2	From Amtala to Rayande Bazar-1 KM; From Bandha Ghat to Taltoli Bazar and From Bus stand to Nalbunia Bazar-2 KM.	13	14	From Rajoir Main Road to Baniakhali Bazar- 6 KM; West Khontakata to Nalbunia to 2 and 3 no.ward # to 1 no.ward # last side-19 KM.	25	42	From Jobber hat to east Khontakata shelter house ward # 4, From Rajjer primary school to bas stand ward # 7, From Yaqub kha house at Zanerper to Chand mia sarker house ward # 2, 8. From Bepari house to South khontakata govt. primary school ward # 5, From Chowmahani to Ashraful kalam madrasa then chairman bari ward # 3, Amragasia Talukder house to Dipchar ward # 9, Golbuniya taltoli road ward # 4 From Nalbuniya Hatem talukder house to Yasin howlader house ward # 2, From Zanerper govt. primary school to Moharaz howlader house ward # 2, From moti dilar house to Bandaghata ward # 7, From west Khontakata Isharath kha house to Chowmohani ward # 3, From west Razzer to Aziz boyati house ward # 7, and From Chowmohani to Khontakata bazer then Khontakasta rasta to Gazi house then WAPDA.
Dhansagar	9	2	From Amragacia to Rajapur-2KM,	17	18	From Dhansagar Union parishad	2	67	Khazurbariya road ward # 1 total - 2 km,Dhansagar road ward # 2 - total 3 km, Nalbuniya road ward #

Union's Name	Number of Pucca Roads	Length Pucca Road (KM)	Location of Pucca Road	Number of HBB road	Length HBB Road (K.M.)	Location of HBB Road	Number of Kacha Road	Length Kacha Road (KM)	Location of Kacha Road
			From Rajapur to Pollan House-1 KM, From Pollan House to Dhansagar 2.5 KM, From Cotku Bazar to Khajur House-2 KM, From Dhansagar to Bandhaghat Bazar-2 KM, From Amragacia to Shing House-1 KM; From Pollan House to South Badal-2KM; from Pollan House to Nalbunia-1KM; From CandB to Khontakata Union-2KM			to Upazilla parishad -2KM.			3 -total 4 km, South Badhal road ward # 4-total 3 km, North Badhal road ward # 4-total 4 km, South. Badhal road ward # 5- total 4 km, Shingbari road ward # 5- total 6 km, Amragasia road ward # 5-total 3 km, Sailabuniya road ward # 9-total 4 km, Hogolpati road ward # 9 -total 3 km, Rotiya-Razpur road ward # 7 -total 4 km, Saverper road ward # 8 -total 4 km. Volar zapur's road ward # -7 total 4 km. West Razapur middle road ward # 6- total 6 km, West Razapur Hindupara road ward # 6 -total 6 km, West Razapur bank of Vhola river road ward # 6 -total 9 km, and West Razapur infront of Saver madrasa road ward # 6 -total 7 km.

Annexure-14: Union wise Statistics of Irrigation system

Union's Name	Number of Tube-wells	Number of Shallow machines
Royenda	150	70
Khontakata	200	40
Dhansagar	1000	70
Southkhali	1200	50
	2550	230

Annexure-15: Union wise Statistics of Hat-Bazar

Union's Name	Number of Hats	Name of Hat-Bazar	Location / Ward # No.	Day of Hats	Number of shop	Number of Association
Southkhali	7	Royenda Bazar	3	Wednes day, Sun day	50	N/A
		Amragacia Bazar	4	Thursday, Monday	40	N/A
		Rajapur Bazar	4	Sunday, Wednesday	35	N/A
		Tafalbari Bazar	4	Thursday, Monday	40	N/A
		Chaltabunia Bazar	6	Saturday, Wednesday	25	N/A
		Gabtala Bazar	6	Sturday	15	N/A
		Sharankhola Bazar	7	Thursday, Monday	30	N/A
Royenda	5	Royenda Bazar	5	Sunday, Wednesday	1200	3
		Lakurtala Bazar	8	Saturday	25	N/A
		Mourasi Bazar	7	Saturday, Tuesday	50	N/A
		Bangla Bazar	4	Saturday, Thursday, Monday,	40	N/A
		Rasulpur Bazar	2	Friday, Tuesday	50	N/A
Khontakata	3	Khontakata Bazar	5	Monday, Friday	50	N/A
		Nalbunia Hat	2	Saturday, Tuesday	20	N/A
		Taltoli Hat	8	Thursday	10	N/A
Dhansagar	4	Amragacia Hat	5	Thursday, Monday	35	N/A
		Rajapur Hat	7	Friday, Tuesday	30	N/A
		Cutu Kha Bazar Hat	3	Wednesday, Monday	25	N/A
		Bandha Hat	1	Monday, Saturday	35	N/A
Total	19				1805	

Annexure-16: Union wise Statistics of House

Union's Name	Total House	Kacha	Semi-pucca	Pucca	Flooded houses	Landless family's House
Southkhali	5700	5530	110	60	10	10
Royenda	9650	9280	250	120	5	5
Khontakata	7757	7557	150	50	5	5
Dhansagar	5350	5095	185	70	8	8
Total	28457	27462	695	300	28	28

Annaxure-17: Union wise Statistics of drinking water sources

Water Ways													
Union's Name	Number of Tube-wells	Number of Ponds	Number of RWHs	Dram Water (Number)	Number of Active Tube wells	Number of Active ponds	Number of Active RWHs	Number of Waste Tube wells	Number of waste Ponds	Number of waste RWHs	Tubewell in Flood Level Number	Pond in Flood Level Number	% of depend person
Southkhali	1200	18	22	1100	988	12	8	212	6	14	220	8	100%
Royenda	150	29	50	1400	120	25	25	30	4	25	40	10	100%
Khontakata	200	75	18	1000	140	60	5	60	15	13	100	35	100%
Dhansagar	800	22	37	1000	600	12	15	200	10	22	50	10	100%
Total	2350	144	127	4500	1848	109	53	502	35	74	410	63	

Annaxure-18 : Union wise Statistics of latrine

Sanitary						
Union's Name	Unhygienic Toilet (Open)	Hygienic Toilet (Semi Pucca)	Healthy Toilet (Pucca)	Out Flooded Number	Usable during flood	% of inhabitants to use in healthy Toilet
Southkhali	15	5640	60	20%	1128	70%
Royenda	10	8850	250	20%	1820	85%
Khontakata	10	8050	250	30%	2400	80%
Dhansagar	10	5220	80	10%	2000	75%
Total	45	27760	640		7348	

Annexure-19: Union wise statistics of the Educational Institution

Union name	School/ College /Madrasa	Institution's Name	Student's number	Teacher's number	Location/ ward #	Active during Cyclone and Flood
Southkhali	Government	24 no. Tafal Bari GOVT. P. S	140	5	4	Useable
		25 no. SB Tafal Bari GOVT. P. S	160	4	3	Useable
		26 no. Sonatala GOVT. P. S	150	5	1	Useable
		27 no. KuriaKhali GOVT. P. S	120	4	9	Useable
		28 no. Chaltabunia GOVT. P. S	130	5	8	N/A
		29 no. Southkhali GOVT. P. S	170	4	6	Use
		30 no. Bogi GOVT. P. S	140	5	7	Use
		47 no. Sharankhola GOVT. P. S	160	4	-	Use
		48 no. Middle Chandkhali GOVT. P. S	150	4	-	N/A
		49 no. North Sonatala GOVT. P. S	120	5	-	Use
		50 no. South Tafalbari GOVT. P. S	130	4	-	Use
		51 no. South Tafal Bari Adorsha:S	170	4	-	Use
		52 no. Bokultala GOVT. P. S	140	4	-	Use
		67 no. Mourasi Adarsha GOVT. P. S	160	4	-	N/A
		79no. Southkhali Bablatala GOVT. P. S	150	4	-	Use
		80 no. Sonatala Ahmadia GOVT. P. S	120	4	-	Use
		92 no. South Tafal Bari Bidyapathi GOVT. P. S	130	4	-	Use
		100 no. South Kuriakhali GOVT. P. S	170	5	-	N/A
		102 no. East Sonatala GOVT. P. S	180	4	-	Use
		106 no. CSB GOVT. P. S	200	8	6	Use
Royenda	Government	23 no. Chal Royenda GOVT. P. S	180	4	4	Use
		17 no. West Rajapur GOVT. P. S	200	4	2	Use
		18no. South Rajapur GOVT. P. S	190	4	2	Use
		19 no. Dibir Par GOVT. P. S	200	4	3	Use
		20no. East Khada GOVT. P. S	170	4	4	Use
		21 no. Royenda GOVT. P. S	180	5	5	Use
		22 no. Lakurtala GOVT. P. S	200	5	8	Use
		41 no. North Kadomtala GOVT. P. S	190	5	6	N/A
		42 no. Janata GOVT. P. S	160	4	4	Use
		43 no. MaliaRajapur GOVT. P. S	170	4	3	Use
		44 no.North Rajapur GOVT. P. S	180	4	3	
		45 no. Cota Rajapur GOVT. P. S	200	5	1	Use
		46 no.North Rajapur GOVT. P. S	170	4	1	Use
		53 no.Kodamtali GOVT. P. S	200	5	6	Use
		56no.Rajapur Sonatala GOVT. P. S	180	4	2	N/A
		58 no.NorthTafalbari GOVT. P. S	200	4	7	Use
		63 no.West Tafalbari GOVT. P. S	180	5		Use
		66 no.Adorsho Shishu GOVT. P. S	190	5		N/A
		68 no.Malia Rajapur GOVT. P. S	170	5	3	Use

Union name	School/ College /Madrasa	Institution's Name	Student's number	Teacher's number	Location/ ward #	Active during Cyclone and Flood
		71no.North Rajapur G.P	200	5	2	Use
		74 no.Rajapur Polli G:P	190	4	2	Use
		77 no.Rajassor GOVT. P. S	200	4	9	Use
		81 no.West Kodomtala K M GOVT. P. S	150	5	6	Use
		85 no.Shar-E-Bangla GOVT. P. S	150	4		Use
		89 no.Gazi Para GOVT. P. S	150	4		Use
		93no.North Rajapur GOVT. P. S	160	4		Use
		96 no.North Rajapur Cultvert GOVT. P. S	130	4	-	Use
		103no.North Rajapur GOVT. P. S	150	5	-	Use
		99 no.Kadomtala A GOVT. P. S	150	4	6	Use
		107no.North Talfalbari East Para G:P	160	4	7	Use
Khontakata	Government	10no.Mothar Para GOVT. P. S	150	4	6	Use
		11no.Bijoner Para GOVT. P. S	170	4	2	Use
		12no.Bidhan Sagor GOVT. P. S	140	3	1	Use
		13no.Khontakata GOVT. P. S	160	3	5	Use
		14no.Mothar Para G:G:S	150	5	6	Use
		15no.Rajoir GOVT. P. S	150	4	7	Use
		16no.Golbunia GOVT. P. S	150	3	8	Use
		31no.TT and CD GOVT. P. S	140	3	8	Use
		32no.Badal Salaha Memorial GOVT. P. S	160	5	-	Use
		33no.Baniakhali GOVT. P. S	160	4	-	Use
		37no.West Baniakhali GOVT. P. S	150	4	-	Use
		38no.Taltoli GOVT. P. S	150	4	-	Use
		39no.Miiddle Baniakhali GOVT. P. S	170	4	-	Use
		40no.West Khontakata GOVT. P. S	140	5	-	Use
		54no.East Khontakata GOVT. P. S	160	4	-	Use
		55no.East Khontakata GOVT. P. S	160	4	-	Use
		57no.Amra Gacia GOVT. P. S	150	3	-	Use
		59no.Taltoli Ullasi GOVT. P. S	150	4	4	Use
		60no.Jibnu Bari GOVT. P. S	170	4		Use
		65no.South Khontakata GOVT. P. S	140	4	5	Use
		69no.Amragacia Guccogram GOVT. P. S	160	4	-	Use
		70no.Middle Nalbunia GOVT. P. S	160	3	-	Use
		72no.Sundorban GOVT. P. S	150	4	-	Use
		75no.North Khontakata Mukul GOVT. P. S	150	3	-	Use
		79no.West Khontakata Varanir Para GOVT. P. S	170	4	-	Use
		83no.North Khontakata GOVT. P. S	140	3	-	Use
		84no.North Khontakata GOVT. P. S	160	3	-	Use
		86no.B.K Junir Primary G:G:S	160	4	-	Use
		90no.North Khontakata GOVT. P. S	150	4		Use
		91no.East Nalbunia GOVT. P. S	150	4	-	Use
		97no.Koiar Par GOVT. P. S	170	4	-	Use

Union name	School/ College /Madrasa	Institution's Name	Student's number	Teacher's number	Location/ ward #	Active during Cyclone and Flood
		98no.East Dhansagar GOVT. P. S	140	4	-	Use
		101no.J B K GOVT. P. S	160	4	-	Use
		105no.Khontakata United GOVT. P. S	180	3	-	Use
		108no.B.K GOVT. P. S	140	4	-	Use
		109no.East Baniakhali GOVT. P. S	120	5	-	Use
Dhansagar	Government	8no.Amragacia GOVT. P. S	160	4	5	Use
		9no.South Nalbunia GOVT. P. S	150	4	3	Use
		1no.Khajur Baria GOVT. P. S	120	4	1	Use
		2no.Dhansagar Nalbunia GOVT. P. S	150	4	2	Use
		3no.Badal GOVT. P. S	100	5	4	Use
		4no. East Amragacia GOVT. P. S	120	4	5	Use
		5no.Amragacia GOVT. P. S	150	4	5	Use
		6no.West Nalbunia GOVT. P. S	120	4	3	Use
		7no.Rajapur GOVT. P. S	120	4	7	Use
		34no.Dhansagar GOVT. P. S	150	5	2	Use
		35no.Rajapur Iasin Memorial GOVT. P. S	125	5	6	Use
		36no. West Dhansagar GOVT. P. S	120	4	2	Use
		61no.Rajapur Necaria GOVT. P. S	135	4	6	Not use
		62no.South Dhansagar GOVT. P. S	145	4	2	Use
		63no.North Rajapur GOVT. P. S	110	5	6	Not use
		73no.Adorsho Bidyapathi GOVT. P. S	150	4		Not use
		76no.South-West Badal GOVT. P. S	100	4	4	Use
		82no.Rajapur-Sundorban GOVT. P. S	120	4	7	Not use
		87no.Bora Rajapur Adorsha GOVT. P. S	135	4	8	Use
		88no.Middle Khajur Baria GOVT. P. S	140	4	1	Use
		94no.Middle Dhansagar GOVT. P. S	125	4	2	Use
		95no.Ratia Rajapur GOVT. P. S	140	5	7	Use
		104no.Dhansagar Tagrabari GOVT. P. S	135	4	2	Not use
		110no.Nalbunia GOVT. P. S	125	4	2	Not use
		111no.Hoglapatia GOVT. P. S	100	5		Not use
		112no.Rajapur Baor GOVT. P. S	110	4	7	Not use
Southkhali	Private P S	Sundorban P:S:	650	16	-	Use
		Tafalbari P:G:S:	380	15	-	Use
Royenda	Private P S	Royenda Pilot P.S	650	12	5	Use
		R K D S Girls:S	450	11	5	Use
		Janata P:S	390	11	3	Use
		Rasulpur J:P:S	280	9	2	Use
Khontakata	Private P S	Anwar Hossain P:S	390	15		Use
		Khontakata P:S	360	17		Use
		Baniakhali P:S	350	14		Use
		B K J:P:G:S	410	12	-	Use
		Amana Memorial J:P:S	280	11	-	Use
	Private	Amragacia P:S	300	11	-	Use

Union name	School/ College /Madrasa	Institution's Name	Student's number	Teacher's number	Location/ ward #	Active during Cyclone and Flood
Dhansagar	P:S	Rajapur P:S	275	12	-	Use
		Badal P:S	235	10	-	Use
		Radha Lokhin J:P:S	165	9	-	Use
		Dhansagar J:P:S	180	9	-	Use
		Rajapur J:P:G:S	185	9	-	Use
Royenda	Private Madrasa	Khada AGM Dakhil Madrasa	270	10	4	Use
		Royenda Bazar Islamia Dakhil Madrasa	250	12	5	Use
		Kadomtala Mohsania CSK Dakhil Madrasa	350	8	6	Use
		Sharankhola G:Dakhil:M	150	9	5	Use
		South Rajapur Dakhil:M	220	10	2	Use
Southkhali	Private College	Tafalbari Collegiate:S	420	19	-	Use
Khomtakata	Private College	Sharankhola Degree Collega	600	20	-	Use
		Taltoli Mofizul Haque Agriculture College	450	20	-	Use
Dhansagar	Private College	Matrivasa College	400	14	-	Use
		Din Polytechnical College	335	12	-	Use

Anexure-2o: Union wise statistics of the Religious Institution

Union's Name	Number of Mosque's	Number of Temple's	Number of Church	Location of Mosque	Location of Temple/ Ward #	Location of Church
Southkhali	54	6	N/A	1 no. ward #- 7, 2 no. ward #-5; 3 no. ward #-6; 4 no. ward #- 8; 5 no. ward #- 7; 6 no. ward #7;7 no. ward #- 5; 8 no. ward #-4, 9 no. ward #- 5	1no. ward #-2	N/A
Royenda	101	14	N/A	1 no. ward #-12, 2no. ward #- 10 3no. ward #- 9,4no. ward # 11; 5no. ward # 16, 6no. ward # 7; 7no. ward # 14 8no. ward # 8 9no. ward # 12	1no. ward # 2,2no. ward # 1; 3no. ward # 1; 4no. ward # 2; 5no. ward # 2; 6no. ward # 2; 7no. ward # 2; 8no. ward # 1; 9no. ward # 1	N/A
Khontakata	102	6	N/A	1 no. ward # 10,	1, 2, 3, 8	N/A

Union's Name	Number of Mosque's	Number of Temple's	Number of Church	Location of Mosque	Location of Temple/ Ward #	Location of Church
				2 no. ward # - 12; 3 no. ward # - 8, 4 no. ward # - 9; 5 no. ward # - 14; 6 no. ward # - 16; 7 no. ward # - 12; 8 no. ward # - 10; 9 no. ward # - 11		
Dhansagar	60	20	N/A	1 no. ward # 9; 2 no. ward # 6; 3 no. ward # 8; 4no. ward # 7; 5no. ward # 6; 6no. ward # 6; no. ward # 7; 8no. ward # 7; 9no. ward # 6	2 no. ward # 7; 4 no. ward # 1; 5no. ward # 5; 7 no. ward # 2; 9 no. ward # 5	N/A
Total	317	46				

Annexure-21: Union wise statistics of Eidgah

Eidgah				
Union's Name	Number of Eid Gha's	Name of Eidgahs	Location/Ward #	Use in shelter during flood
Southkhali	13		1no. ward #-1, 2 no. ward #-2, 3no. ward #-1, 4no. ward #-2, 5no. ward #-1, 6no. ward #-2, 7no. ward #-1, 8no. ward #-1, 9no. ward #-2	N/A
Royenda	20		1no. ward #-3, 2 no. ward #-2, 3no. ward #-1, 4no. ward #-3, 5no. ward #-1, 6no. ward #-2, 7no. ward #-2, 8no. ward #-1, 9no. ward #-2	N/A
Khontakata	25		In Mosque- 1no. ward #-3, 2 no. ward #-3, 3no. ward #-3, 4no. ward #-1, 5no. ward #-3, 6no. ward #-3, 7no. ward #-3, 8no. ward #-3, 9no. ward #-3	N/A
Dhansagar	9		Every ward #-1	N/A
Total	67			

Annexure-22: Union wise statistics of Health Care and Hospital

Union's Name	Number of Health center	Name's of Govt. Health Center	Location/ward #	Name's of Private Health Center	Number of Doctor's	Number of Nurse's
Southkhali	8	Tafalbari Sub-Health Center	4	N/A	Doctor-1	1
		North Tafalbari C: Clinic	3	N/A	ParaMedical-1	1
		Gabtala S: Southkhali C: Clinic	6	N/A	ParaMedical-1	1
		Khuriakhali C: Clinic	9	N/A	ParaMedical-1	1
Royenda	6	Upazila Health Complex	5	N/A	Doctor-2	4
		North Rajapur Bot Tala Community Clinic	1	N/A	ParaMedical-1	1
		South Rajapur Community Clinic	2	N/A	ParaMedical-1	1
		Bangla Bazar Community Clinic	3	N/A	ParaMedical-1	1
		Lakurtala Community Clinic	8	N/A	ParaMedical-1	1
		North Tafalbari Community Clinic	7	N/A	ParaMedical-1	1
Khontakata	7	Choumohuni Bazar Community Clinic	5	N/A	ParaMedical-1	1
		East Khontakata Community Clinic	4	N/A	ParaMedical-1	1
		Khontakata Bazar Community Clinic	5	N/A	ParaMedical-1	1
		Bidhab Sagor Community Clinic	1	N/A	ParaMedical-1	1
		Surjar Hasi Community Clinic	5	N/A	ParaMedical-1	1
		Hatam Ali General Hospital	4	N/A	ParaMedical-1	1
		Khontakata Union Community Clinic	2	N/A	ParaMedical-1	1
Dhansagar	8	Upazila Health Center	3	N/A	Doctor-1	1
		Kalibari Community Clinic	9	N/A	ParaMedical-1	1
		Bandha Ghat Community Clinic	1	N/A	ParaMedical-1	1
		Rajapur Community Clinic	7	N/A	ParaMedical-1	1
Total	21					24

Annexure-23: Union wise statistics of the Bank

Union's Name	Number	Name	Location/Ward #	Types of service
Southkhali	N/A	N/A		Money exchange, Debt, Agriculture debt, Deposit schim
Royenda	3	Janata Bank		
		Sonali Bank		
		Agriculture Bank		
Khontakata	N/A	N/A		
Dhansagar	N/A	N/A		
Total	3			

Annexure-24: Union wise statistics of the Post Office

Union's Name	Number	Name of post office	Location/ Ward #	Types of Service
Southkhali	3	Tafalbari	8	Postal Cash Card Service, Mobile Money Order Service, GEP Service, Savings Bank
		Borgi Bondor	7	
		Sonatala	1	
Royenda	5	Upazila Post Office	5	
		Janata Bazar Post Office	4	
		North Rajapur Bazar Post Office	1	
		R SaronKhola Post Office	2	
		Lakurtala Bazar Post Office	8	
Khonakanta	2	Jala Para	1	
		Khontakata Post Office	5	
Dhansagar	3	Rajapur	7	
		Nolbunia	3	
		Amragacia	9	
Total	13			

Annexure-25: Union wise statistics of the Club and Cultural Center

Union's Name	Number	Name	Location /ward #	Type of services
Southkhali	N/A	N/A		Act as a volunteer During disaster and after disaster for rehabilitation activities
Royenda	1	Royenda Press Club	5	
Khontakata	3	Khontakata AI VDC	5	
		East Nalbunia Akota Youth Club	2	
		Taltoli Youth Club	8	
Dhansagar	4	Akota Youth Organization	2	
		Woman IPM Club	4	
		Amragacia IPM Club	9	
		South Badal IPM Club	5	
Total	8			

Annexure-26: Union wise statistics of the Play ground

Union's Name	Number	Name of the Play ground	Location /ward #	Using during Disaster
Southkhali	7	Tafalbari Collegiate School Ground	4	Use as relief distribution, mock drill and disaster training
		Sundorban Govt. School Ground	8	
		Sundorban Islamia Dakhil Madrasa Ground	7	
		Bogi Govt. Primary School	7	
		Sonatala Hafazia Madrasa	1	
		Khuriakhali Govt. Primary School	9	
		Southkhali Girls School	3	
Royenda	3	Royandra Pilot School	5	
		Janata Primary School Ground	4	
		Lakur Tala School Ground	8	
Khonakanta	3	Baniakhali Govt. Primary School Ground	3	
		Soronkhila Degree College Ground	7	
		Anwar Hossain Primary School	7	
Dhansagar	4	Nalbunia Govt. Primary School Ground	3	
		Amragacia Govt. Primary School Ground	9	
		United Primary School Ground	2	
		Rajapur Primary School Ground	7	
	17			

Annexure-27: Union wise statistics of the Communication and Vehicles

Union's Name	Number of Van's	Number of Motors	Other vehicles	Boat	Engine Boat
Southkhali	150	200	30	20	50
Royenda	120	250	40	20	5
Khontakata	100	300	30	50	60
Dhansagar	150	250	40	350	400
Total	520	1000	140	400	460

Annexure-28: Statistics of NGO's

Num ber	NGO's Name	Subject of work	Beneficiary Number	Project Number	Duration of Project
1	Rupantor	Disester Related Conciousness, Risk Riduction and Relief	1400- 1500	1	Runing
2	CODEC	Disester Related Conciousness, Risk Riduction and Relief.	1600- 1700	2	Runing
3	NABOLOK	Disester Related Conciousness.	2500- 2700	1	Runing
4	MUSLIM AID	Disester Related Conciousness, Risk Riduction and Relief.	1700- 1800	1	Runing
5	J J S	Disester Related Conciousness.	2500- 2200	1	Runing
6	ASSA	Disester Related Conciousness, Risk Riduction and Relief, Dept programme.	1500- 1700	1	Runing
7	BRAC	Disester Related Conciousness, Risk Riduction and Relief, Dept programme.	1600- 1700	1	Runing
8	PROTIVA	Disester Related Conciousness, Dept programme.	1000- 1500	1	Runing
9	GRMEEN BANK	Disester Related Conciousness, Dept programme.	2500- 3000	1	Runing
10	AGRODUT FOUNDATION	Disester Related Awarnes building	3000- 3200	1	Runing
11	UDOYON BANGLADES H	Disester Related Conciousness	5000- 5500	1	Runing
12	PRODIPON	Disester Related Conciousness	2500- 3000	1	Runing
13	RICK	Disester Related Conciousness, Risk Riduction and Relief.	1500- 2000	1	Runing
14	SODASH UNNOYON KENDRO	Disester Related Conciousness	2000- 2200	1	Runing
15	SUSILON	Disester Related Conciousness, Risk Riduction and Relief.	1400- 1500	1	Runing
16	SANTI UDDOG TRUST	Disester Related Conciousness	1600- 1700	1	Runing
17	DHAKA AHSANIA MISSION	Disester Related Conciousness, Risk Riduction and Relief.	2500- 2700	1	Runing
18	NIBADITA MOHILA KALYAN SOMITY	Disester Related Conciousness	1700- 1800	1	Runing

Num ber	NGO's Name	Subject of work	Beneficiary Number	Project Number	Duration of Project
19	ASROY FOUNDATION	Disaster Related Conciousness	2100- 2200	1	Runing
20	VOSD	Disaster Related Conciousness	1500- 1700	1	Runing
21	UPOKUL FOUNDATION	Disaster Related Conciousness	1600- 1700	1	Runing
22	GONO SASTO KANDRO	Disaster Related Conciousness	1000- 1500	1	Runing
23	C R C SARONKHOL A	Disaster Related Conciousness	2500- 3000	1	Runing
24	HELP	Disaster Related Conciousness	3000- 3200	1	Runing
25	DAK DIA JAI	Disaster Related Conciousness	5000- 5500	1	Runing
26	BETTER TOMORROW SOCIETY	Disaster Related Conciousness	2500- 3000	1	Runing
27	DKS	Disaster Related Conciousness	1500- 2000	1	Runing
28	VOCA	Disaster Related Conciousness	2000- 2200	1	Runing
29	IPAK	Disaster Related Conciousness	1400- 1500	1	Runing
30	SONALI UNNOYON FOUNDATION	Disaster Related Conciousness	1600- 1700	1	Runing
31	ISLAMIC BANK FOUNDATION	Disaster Related Conciousness	2500- 2700	1	Runing
32	DORIDRO BIMOCHON	Disaster Related Conciousness	1700- 1800	1	Runing
33	KARITAS	Disaster Related Conciousness	2100- 2200	1	Runing

Annexure-29: Union wise Statistics of the Forest and Afforestation

Union's Name	Name of the forest	Coverage area	Tree Types	Location / Ward #	Entrepreneur (Government, NGO, Personal)
Southkhali	Sundorban	Sundarban (mangrove forest) 594 Km.	Acacia, mehogony, Arjun, Cambal, Shishu,		Government
Royenda	N/A				
Khontakata		From Rajoir Markus Mosque to Kumir Canal- 5.5 Km.	Mehogony, Arjun, Cambal, Shishu,		Government
		From Royenda Bazar to Taltoli Bazar-8 Km.	Mehogony, Arjun, Cambal, Shishu,		Government
Dhansagar	N/A				
Total					

Annexure-30: Union wise Statistics of the Land and Land use

Land and Land Utilities							
Union's Name	Total Land in Hectares	Arable Land (Hectares)	Fallow Land Ha	Single Cropped Land Ha.	Double Cropped Land Ha.	Tripple Crop Land Ha.	Habitable Land Ha
Southkhali	2600	2450	150	1750	600	100	500
Royenda	2850	2600	250	1200	850	550	680
Khontakata	2696	2526	170	1250	1000	276	655
Dhansagar	2525	2375	150	1800	400	175	510
Total	10671	9951	720	6000	2850	1101	2345

Annexure-31: Union wise Statistics of the Agriculture and Food

Agriculture and Food				
Union's Name	Staple crop (Agriculture)	Statistics of Production (Agriculture) Mt.	Fish	Statistics of Production (Fish) Mt
Southkhali	Aman Rice	5400	Shrimp	39.6
	Aus Rice	260	Carp Fish	72.85
	Boro Rice	350		
Royenda	Aman Rice	5600	Shrimp	74.25
	Aus Rice	520	Carp Fish	111.6
	Boro Rice	45		
Khontakata	Aman Rice	5455	Shrimp	88
	Aus Rice	2600	Carp Fish	102
	Boro Rice	30		
Dhansagar	Aman Rice	5200	Shrimp	49.725
	Aus Rice	0	Carp Fish	124
	Boro Rice	20		
Total		25480		662

Annexure-32: Union wise Statistics of the River

Union's Name	Name of the river	Flowing direction	Merits	Demerits	Dependent Population
Southkhali	Bolashor	East	Communication of River, Catching Fish, Transportation of goods business, Irrigation, Bath	River break, Cyclone	80%
	Bhola	West			
	Sharankhola	South			
Royenda	Bolashor	East			
	Bhola Biskhali	South-West			
	Royenda River	North			
Khontakata	Bolashor	East side			
Dhansagar	Bhola River	West			
Total= 5					

Annexure-33: Union wise Statistics of the Canal

Union's Name	Number	Name of the canal	Location (Ward #)	Present situation
Southkhali	3	Tafalbari Canal	1-9 No.	Gradually drying out
		Chaltabunia Canal	1-9 No.	
		North Tafalbari Cannal	1-9 No.	
Royenda	10	Khader Canal	4	
		Doctor House Canal	6	
		Kazi Canal	4	
		Polar Hat Canal	7	

Union's Name	Number	Name of the canal	Location (Ward #)	Present situation
		Bangla Bazar Canal	4	
		Mondol House Canal	3	
		Khada Char Ghata Canal	4	
		Khada Jommader House Canal	4	
		Tafal House Canal	8	
		Varani Canal	2	
Khontakata	3	Kumarkhali	3,4,1	
		Nalbunia	2,8,1	
		Khontakata	5	
Dhansagar	15	Dhansagar Doctor Canal	2	
		Dhansagar Ghooper Canal	2	
		Malsar Canal	4	
		Dhansagar Varani Canal	2	
		Rajapur Bazar Canal	7	
		Nalbunia Canal	3	
		Shingbari Canal	5	
		Kalibari Canal	9	
		Amragacia Canal	5	
		Nalbunia Gazi Canal	3	
		Pollan's House	3	
		Jailer Chuta Canal	2	
		Coliabunia Canal	9	
		Bandhaghata Canal	2	
		South Badal Canal	4	
Total	31			

Annexure -34: Union wise statistics of the Lakes and Ponds

Union Name	Number of Lakes	Number of Ponds
Southkhali	150	373
Royenda	265	555
Khontakata	315	560
Dhansagar	520	575
Total	1250	2063

Annexure 35: Different activities for conducting disaster management Plan at Upazila level



Inception Workshop with UzDMC member



KII with member of UzDMC



KII with Upazila Project Implementation Officer



KII with Upazila Engineer



Group Discussion with UDMC members



Most Vulnerable Area Identification



FGD With different Women group



FGD With different Male group



Social Mapping with different Stakeholders



Livelihood calendar Illustration with different Stakeholders



Emergency Planning with the presence of UDMC



Final Validation Workshop with UzDMC





এরিয়া ডেভলপমেন্ট অর্গানাইজেশন (এ্যাডো)

এ্যাডো-সিডিএমপি পার্টনারশীপ প্রকল্প

দুর্যোগ ব্যবস্থাপনা কর্মপরিকল্পনা প্রণয়নের জন্য

উপজেলা পর্যায়ে চূড়ান্ত যাচাই বাছাই করণ সভার উপস্থিতি সীট

শরণখোলা উপজেলা, বাগেরহাট ॥ ২৮ মে, ২০১৪ ॥ বুধবার

ক্রমিক নং	নাম	পদবী	মোবাইল নং	স্বাক্ষর
	ডাঃ হুমায়ুন মোকতার	ডায়ালগিক্যাল ডিভিশন	০১৭২৬৪৭১৭১৩	ডাঃ হুমায়ুন
	ডাঃ মোঃ মোজাম্মেল	ডাঃ মোঃ মোজাম্মেল	০১৭১৪৭৬৭৪	ডাঃ মোজাম্মেল
	ডাঃ মোঃ মোজাম্মেল	ডাঃ মোঃ মোজাম্মেল	০১৭১১৪৮১৪৮	ডাঃ মোজাম্মেল
	ডাঃ মোঃ মোজাম্মেল	ডাঃ মোঃ মোজাম্মেল	০১৭২১৩৬২২৬৭	ডাঃ মোজাম্মেল
	ডাঃ মোঃ মোজাম্মেল	ডাঃ মোঃ মোজাম্মেল	০১৭৩৭২৩৪৭৭	ডাঃ মোজাম্মেল
	ডাঃ মোঃ মোজাম্মেল	ডাঃ মোঃ মোজাম্মেল	০১৭২০০১০১৬	ডাঃ মোজাম্মেল
	ডাঃ মোঃ মোজাম্মেল	ডাঃ মোঃ মোজাম্মেল	০১৭১৬৩৩০৬৪৭	ডাঃ মোজাম্মেল
	ডাঃ মোঃ মোজাম্মেল	ডাঃ মোঃ মোজাম্মেল	০১৭১৬২৪৪৬৭৭	ডাঃ মোজাম্মেল
	ডাঃ মোঃ মোজাম্মেল	ডাঃ মোঃ মোজাম্মেল	০১৭১৭৫২৭৫২	ডাঃ মোজাম্মেল
	ডাঃ মোঃ মোজাম্মেল	ডাঃ মোঃ মোজাম্মেল	০১৭১৭৭৭৭৭৭	ডাঃ মোজাম্মেল
	ডাঃ মোঃ মোজাম্মেল	ডাঃ মোঃ মোজাম্মেল	০১৭১৫২৬৭৫২	ডাঃ মোজাম্মেল

