





PROMISE, Bangladesh Extension Program activities in Jamalpur City

FINAL REPORT

Reporting Period: October, 2009 to September, 2010





Asian Disaster Preparedness Center

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1. Introduction

Bangladesh is one of the most disaster prone countries in the Asian Continent. The country has a land area of 147,570 sq km and a population of about 164.40 million. Due to its geographic location in one of the main trans-basin hydro- catchments of the world, the most devastating events in the country are of hydro- meteorological origin. Extensive floods cause great disruption and damage to infrastructure, crops and properties. Floods also cause loss of lives. Jamalpur is situated on the bank of Brahmmaputra River which is the main cause of effecting flood each year. Local government and institutions are the first responders to mitigate the hydro-meteorological hazards as the in country's local service provider agencies. Mitigation measures depend upon both the structural and non-structural intervention to minimize the potential threats from the hydro-meteorological hazards. City level action planning for risk reduction and implementation of the plan require demonstration and advocacy to build the capacity of the local government/institutions so that they can undertake disaster risk reduction interventions. Therefore, it is necessary to collaborate with urban local government institutions, especially Pouroshava, which is mostly an implementing body, not a planning body.

With the successful implementation of SHOUHARDO Component 4 (SO4), in Jamalpur Pouroshava under SHOUHARDO program, the Pouroshava Disaster Management Committee (PDMC) has been strengthened to take up the responsibility to respond and anticipate potential threats with hydro-meteorological hazards. This has led to develop the risk based scenario and contingency plan. In SHOUHARDO program, focus is on effective measures on emergency response and the program has provided the foundation for city level disaster risk reduction activities and emergency response which need to be carry forward for mitigation, preparedness and advocacy. But SHOUHARDO program was covered all wards of Jamalpur Municipality except ward no 1, 10, and 12. The three wards are situated on the bank of Brammaputtra and Jinai River and frequently affected by hydro metrological disaster. The United States Agency for International Development (USAID) funds both SHOUHARDO program and the Program on Hydro-meteorological Disaster Mitigation in Secondary Cities (PROMISE). This gives the legacy to the USAID mission project to continue the effort on reducing the disaster risks. The community participants have been suffering by the hydro metrological disaster especially by flood but they did not know how can cope the disaster situation. PROMISE program has taken different activities with the active participation of community dwellers and the municipality for building capacity, community based volunteers development, establishment of community based early warning system and implementation of disaster mitigation interventions that helped the community participants to cope up hydro metrological risk reduction.

02. Project Overview

The overall program goal of PROMISE program is to reduce vulnerability of urban communities through enhanced preparedness and mitigation of hydro-meteorological disasters in urban areas of Bangladesh.

Program Objectives

- Adoption of specific hydro-meteorological disaster preparedness and mitigation measures to manage hydro-meteorological disaster risk by stakeholders in targeted cities
- Increased stakeholder involvement and further enhancement of strategies, tools and methodologies related to community preparedness and hydro-meteorological disaster mitigation in urban communities
- Strengthen networks and links among relevant risk management institutions/organizations for improving the potential and the capacity of urban local authorities for application and dissemination of lessons learned

3. Short profile of Jamalpur and justification of selecting Jamalpur municipality for PROMISE Program

The Jamalpur city falls under the Tangail region of north central Bangladesh. This area has the Brahmmaputra River, the Padma River, the Meghna River, the old Brahmmaputra River and the Lakhya River as boundaries and abounds with topographic variations compared to other areas. The North central area industrialization and urbanization is the most developed in the whole country and further rapid urbanization is also expected in future. The city has its population of 132,700 and the area of 53.28 km². Jamalpur is semi-urban in nature where 58 per cent of the land is agriculture and the rest is non-agriculture. The city is prone to various hydro meteorological hazards such as floods, cyclone, soil and river erosion and water logging. In 1998 and 2007, the city was badly affected by floods. Other than this, soil erosion is very eminent. In the east, the city is surrounded by the Brahmmaputra river whereas Jamuna is located in the west.

Jamalpur is divided in to 12 administrative wards. Out of them, wards of **1**, **10**, **and 12** have higher vulnerabilities for disasters due to its highly dense population, location in a low lying area and the slums and low-income houses of the poorest of the poor and landless. There are four main slum areas where inhabitants are threatened from eviction by the

owner, Bangladesh railway. These four places are railway slums at munsipara, gatepar, malgudam road and char nao vangga.

Jamalpur Pourashava is an "A-2" class pourashava, established in 1869. The pourashava is bounded on the north and east by Sherpur District, on the south by Kendua and Sorifpur union of Jamalpur sadar thana and on the west by Melandaha thana of Jamalpur District. It is situated on the bank of Brahmmaputra River.

As recurring phenomena, Jamalpur pouroshava gets both natural floods and human induce floods. The Pouroshava has unique drainage system installed long time back and is in the condition of malfunctioning. The network covers 6 wards only out of 12, and excludes extremely essential flood prone areas. There is a dire need to rehabilitate the existing drainage system to cope up with the floods and extend the network to areas of badly in need.

| Demographic Details | |
|----------------------------|--|
| Total Population | 132,727 |
| Male | 67,664 |
| Female | 65,063 |
| Population Density | 2471 km ² |
| Geographic Details | |
| Total land area | 53.28 km ² (13,165.775 acre) |
| Total No. of wards | 12 |
| Total No. of slums | 30 |
| Number of Holdings | 18,778 |
| Government | 146 |
| Private | 18,632 |
| Land Occupancy (percentage | ge) % |
| Homestead | 56.37 |
| Agriculture | 27.36 |
| Others (water, industrial | 11.06 |
| area, open space, road | |
| etc) | |
| Commercial | 5.21 |

The road network though spread over almost all the part of the city, it is significant to note that, 21.34% is Kachha (gravel). It can be washed away by high flood waves which will

ultimately affects the mobility of the community and hampers accessibility to the urban centers such as market, schools, hospitals and working stations.

Torrential rains accompany flash floods and regularly submerge low-lying areas. The situation is aggravated by the inadequate surface water drainage system and obstructions to natural free flow due to unplanned and unauthorized human settlements. The total lengths road network in the city stands at around 53.28 km² and the total drainage network is only 41.7 Km, which indicates the bear minimum provision of the drains.

| Surface Drainage | |
|-----------------------|----------|
| Total Length | 41.70 km |
| RCC Drains | 29.67% |
| Kutcha (earth) Drains | 8.63% |
| Brick & RCC Drains | 1.567% |
| CC Drains | 0.62% |

04. Implementing area selection procedure and used methodology:

Kick of meeting was held in Jamalpur municipality at the beginning of PROMISE program. Municipality's elected bodies, Water Development Board (WDB), District civil surgeon and different stake holders were participated at the meeting .The main objective of the inception meeting was to brief all possible activities of PROMISE program and sharing of working strategy. PROMISE program's working wards no 1, 10 and 12 were selected during this SHOUHARDO meeting considering program's covering wards.CARE-Bangladesh's SHOUHARDO program's component was "targeted community and institutions were bitterly able to prepare, response and mitigation of natural disaster". Under this component SHOUHARDO program has been implemented disaster risk reduction interventions in all wards of Jamalpur municipality except ward no 1, 10, and 12. After inception meeting on November, 2009, ADPC team were visited Jamalpur municipality and met with the municipality's elected representative, visited wards no 1,10 and 12 first and conducted LGDs (Large Group Dissemination), FGDs (Focus Groups Discussion) and taken KII (Key Informants Interview) for selecting most vulnerable cluster for PROMISE program's implementation. Ward level social maps were prepared at first by the community participants and based on that ward level maps community participants identified most vulnerable clusters of 3 wards. After that ADPC team visited the identified vulnerable communities and conducted community consultation and collected information on Program for Hydro-Meteorological Risk Mitigation in Secondary Cities in Asia (PROMISE) - Jamalpur, Bangladesh 6

vulnerability related to hydro metrological disaster. Risk and Resources Map (R&RM) for each ward focusing identified most vulnerable clusters was developed by the community through using PRA method. PROMISE program has implemented different interventions related to hydro metrological disaster risk reduction under ward no 1,10 and 12. Apart from this, ADPC conducted ward level workshop to identify specific hazard related to hydro metrological disaster .Identified hazards from ward level workshop to be included to city level action plan.

Process followed for selecting working cluster and implementation of mitigation interventions:



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Implementation Disaster mitigation intervention based on ward level action plan

05. Detailed activities, achievement and narratives:

Component 1 - **Development of Hydro-Meteorological Hazard based Maps and Action Plan for the Pouroshava_:** There was four components under the PROMISE program. The first component of the PROMISE program was development of hydrometrological hazard based maps and action plan for the Pourashava. A kick off or inception meeting was held at November, 2009 with the stakeholders. A Technical Working Group (TWG) formed consisting member from municipality, WDB, LGED, and Civil Surgeon (CS) for providing time to time advice on implementing interventions. ADPC conducted ward level workshop in 12 wards dividing in 3 groups to identify hydro metrological hazards.

Ward levels identified hazards are given bellow:

Hazard/problems identified in PROMISE programs wards # 01, 10 & 12

| Ide | ntified issues and problem | | | | |
|-----|---|-------|--------|-------|----------------|
| | | Ward | Ward | Ward | Measures |
| | | No. 1 | NO. 10 | No.12 | required on |
| Α. | Disaster related Problems | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | No relief fund for facing emergency situation | Х | Х | Х | Preparedness |
| 2 | Water Logging | Х | | Х | Mitigation |
| 3 | Lack of Flood Protection Dam | Х | | Х | Mitigation |
| 4 | River Erosion | Х | Х | Х | Mitigation |
| 5 | lack of proper training on emergency Response | | | Х | Preparedness |
| 6 | No post flood rehabilitation mechanism in place | х | Х | Х | Recovery & |
| | | | | | Rehabilitation |
| 7 | Lack of proper Local communication | х | х | , X | Preparedness |
| 8 | Lack of road infrastructure and maintenance | Х | х | Х | Preparedness |
| 9 | Lack of sufficient sewerage and drainage | х | Х | Х | Mitigation |
| | system | | | | |
| 10 | Lack of Safe drinking water | х | х | Х | Mitigation |
| 11 | No sufficient Primary health care facilities | Х | х | Х | Mitigation |
| 12 | Lack of awareness on disaster preparedness | | | Х | Mitigation |
| | and mitigation | | | | |
| 13 | Unsecured livestock's | Х | х | Х | Preparedness |
| 14 | Lack of Relief and safe shelters | х | Х | | Preparedness |
| В. | Social problems | | | | |
| 1 | Lack of primary education | х | | Х | Not directly |
| 2 | No sufficient electricity | Х | | | related with |

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| 3 | No available graveyard | | | Х | disaster |
|---|--|---|---|---|----------|
| 4 | No play Ground | Х | | Х | |
| 5 | Lack of agricultural land of marginal farmer | | | | |
| 6 | Un employment | х | Х | | |
| 7 | Lack of dustbin | | | Х | |
| | | | | | |

Hazards/Problems identified in SHOUHARO program's ward # 2, 3, 4, 5, 6, 7, 8, 9, 11

| | Identified_hazards/ issues / Problems related to DRR | | | | War | d Nu | ımbe | r | | | Measures required on |
|-----|---|----------------------|-------------|-----------------------|---------|-------|----------|----------|------------|----|--------------------------------|
| | | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 11 | |
| | A Disaster related Problems | | | | | | | | | | |
| 1 | River Erosion | Х | | | | | | | х | | Mitigation |
| 3 | Inundation of HHs ,roads (not developed roads) | Х | Х | X | x | x | x | | X | X | Mitigation |
| 4 | Lack of proper communication problem during flood | Х | | Х | x | | | | | | Preparednes s |
| 5 | Lack of safe drinking water and poor sanitation system | Х | Х | Х | х | x | x | x | x | x | Preparednes s |
| 6 | Increasing water borne diseases | Х | | | x | | x | | x | x | Preparednes s |
| 7 | Problem of rearing livestock during flood | Х | | | | х | | | | | Preparednes s |
| 8 | Food Unavailability/ Food insecurity of poor HHs during flood | X | | | x | | | | x | x | Preparednes s |
| 9 | No Early Warning System for flood | | Х | | | | | | | | Preparednes s |
| 10 | Lack of first aid support during flood | | Х | | | | | | | | Emergency Response |
| 11 | Post flood rehabilitation problem | | Х | | | | | | | | Relief & Rehabilitatio n |
| 12 | Community based disaster volunteers are not active and having no rescue tools | x | Х | X | x | x | x | x | x | x | Preparednes s |
| 13 | Water Logging | | | Х | | х | х | | х | | Mitigation |
| 14 | Insufficient of Drainage , sewerage ,cannel dragging system | | | | | x | x | x | x | | Mitigation |
| 15 | Refilling of land ,cannel to establish industrial area | | | | | | х | | | | Mitigation |
| B | Social problems | | | | | | | | | | |
| 1 | Lack of electricity. Gas line | <u> </u> | | | | X | x | | . X | | Not |
| — Р | rogram for Hydro Meteorological Risk Mitigation in Seco | nh dary C | Hitics in A | A lsia (PF | (OMISE) |) Jar | nalpur,E | langlade | sh | | 9 |

| 2 | Unemployment | | | Х | | | Х | directly |
|---|----------------------------------|--|--|---|---|---|---|----------|
| 3 | Illiteracy | | | х | | | | related |
| 4 | Lack of dustbin | | | х | | | | with |
| 5 | No Switch gate | | | | х | | | disaster |
| 6 | No Community based health care | | | | | Х | | |
| 0 | center | | | | | | | |
| 7 | Lack of proper service of LSPs (| | | | | | х | |
| | Local service Providers) | | | | | | | |

Based on identified hazards ward level following action plan matrix has been prepared

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Flood Mitigation Plan for all Wards DRR Flood Mitigation Plan Matrix for all Wards: PROMISE-Jamalpur

| No. | Short/ Medium/ Long term | Measure | Activity | Ward / Location | Responsibilt y | Approx. Budget | Time frame | Action taken | Remarks |
|-----|-----------------------------------|---|--|-----------------------------|--------------------|--|-----------------------|--|---|
| 1 | Short | Preparedness | Flood Gauges Installation | 01, 02, 06, 08, 09,10,12 | Pourashava/ WDB | 58,590.00 | May – Aug 2010 | completed by PROMISE | 19 gauges in 7 wards |
| 2 | Short | Preparedness | Construction of access road (1) from Rashidpur main road to Maddarasha , length(160 miter) | 10 | Pourashava | 99,581.00 | May – Aug 2010 | complete by PROMISE | Gravel rd need strengtheni ng on slopes |
| 3 | Short | Preparedness | Construction of access road (2) from Rashid pur to Tanggor para, length(130 miter) | 10 | Pourashava | | May – Aug 2010 | completed by PROMISE | |
| 3 | Short | Preparedness | Installation of 5 nos. Tube wells | 01,12 | Pourashava | 102,747.00 | May – Aug 2010 | completed by PROMISE | |
| 4 | Short | Preparedness | Total 4 nos platform of tube well raised | 01,10,12 | Pourashava | 52,479.00 | May – Aug 2010 | completed by PROMISE | |
| 5 | Short | Preparedness | Supply of tools and materials for EOC Establishment | 1,2,6,7,8,9,1 0,12 | Pourashava | 60,030.00 | May – Aug 2010 | completed by PROMISE | |
| 6 | Short | Preparedness ,Mitigation and response | Identifying roles and responsibilities | EOC team | Pourashava | NA | May – Sept,2010 | Municipality to be initiated | |
| 7 | Long | Mitigation | Mitigate river Erosion/ construct flood protection dam | 1 ,2,9,10 | Pourashava | Municipality can allocate from Annual Development Budget | Sept-10 to June,11 | Poura Parishad/Munic ipality's elected body | |

| No. | Short/ Medium/ Long term | Measure | Activity | Ward / Location | Responsibilit y | Approx. Budget | Time frame | Action taken | Remarks |
|-----|-----------------------------------|------------------------------|---|--------------------|--------------------------|---|-----------------------|---|---------|
| 8 | Long | Mitigation | Improve surface drainage system to prevent water logging | 4,6,7,9 | Pourashava, WDB, LGED | Municipality can make collaboration with respective agencies | Sept,10 to June,11 | Establish collaboration among LSPs (Local Service Providers) | |
| 9 | Long | Mitigation | Improve road net work | All wards | Pourashava,L GED | Municipality can make collaboration with respective agencies & can allocate priority based budget in ADP | Sept,10 to June,11 | Establish collaboration among LSPs (Local Service Providers) Allocate need based budget in ADPC | |
| 10 | Long | Mitigation | Local communication problem due to lack of improved/constructed road | 2,4,5 | Pourashava,L GED | Do | Sept,10 to June,11 | Internal resources Mobilization of Municipality | |
| 11 | Short | Preparedness & Mitigation | Provide safe drinking water to all wards to reduce water borne diseases | All Wards | Pourashava,D PHE | Do | Sept- Decm,10 | Establish collaboration among LSPs (Local Service Providers) | |
| 12 | Long | Mitigation & Response | Establish post flood rehabilitation mechanism | 1,2,3,10,9,1 2 | Pourashava,D DMC | Do | Spet,10 to June,11 | • To establish collaboration among LSPs Using internal available resources | |

| No. | Short/ Medium/ Long term | Measure | Activity | Ward / Location | Responsibilit y | Approx. Budget | Time frame | Action taken | Remarks |
|-----|-----------------------------------|------------------------------|---|-----------------------|--|--|--|---|---------|
| 13 | Long | Mitigation | Improve sewerage and drainage system | 6,7,8,9 | Pourashava, WDB, PDB,LGED | DO | Sept,10 to June,11 | Establish collaboration among LSPs | |
| 14 | Long | Preparedness | Food Unavailability/ Food insecurity of poor HHs during flood | 2,5,9,11 | Pourashava,D istrict Agriculture Extension (DAE) | Municipality can make collaboration with respective agencies | Oct,10 to June,11 | Establish collaboration among LSPs (Local Service Providers) | |
| 15 | Long | Preparedness & Mitigation | No Early Warning System for flood | 1,2,6,7,8,9,1 0,12 | Pourashava, WDB | Municipality can make collaboration with respective agencies | April- Oct/each year | Establish collaboration among LSPs (Local Service Providers) Using Internal available resources | |
| 16 | Long | Preparedness | Lack of first aid support during flood | 1,2,6,7,8,9,1 0,12 | Pourashava,E OC, Civil Surgeon | Emergency fund to be raised by Municipality | April- Oct/each year | Collaboration among Municipality, Social Elites, Service agencies | |
| 17 | Long | Response | Post flood rehabilitation problem | 1,2,6,7,8,9,1 0,12 | Pourashava | Municipality can allocate from Annual Development Budget | Nov to March/ yearly- Need base | Internal resources Mobilization of Municipality Activating | |

| | | | | | | | | PDMC and making god collaboration | |
|-----|-----------------------------------|---|---|-----------------------|------------------------------------|---|----------------------------|---|---------|
| No. | Short/ Medium/ Long term | Measure | Activity | Ward / Location | Responsibilt y | Approx. Budget | Time frame | with DDMC Action taken | Remarks |
| 18 | Long | Preparedness ,response & mitigation | Training/Refresher trg to volunteers on search and rescue | 1,2,6,7,8,9,1 0,12 | Pourashava,D DMC,PDMC | NA | Nov to March/ Yearly | PDMC,DDMC & Community Based volunteers | |
| 19 | Long | Mitigation | Cleaning of canals | 1,2,6,9,10, 12 | Pourashava,B IWTC | Municipality can search option | January to June,11 | Pourashava, BIWTC (Bangl adesh Internal Water Transportation Corporation) jointly can do | |
| 20 | Long | Preparedness ,Response & Mitigation | To establish systems for Relief and safe shelter | 1,2,6,7,8,9,1 0,12 | Pourashava,L GED, DDMC | Municipality can search option Budget | January to June,11 | collaboration among LSPs (Local Service Providers) & Municipality | |
| 21 | Long | Preparedness, Mitigation and Response | To establish relief funds for facing emergency situation | 1,2,6,7,8,9,1 0,12 | Pourashava, DDMC, WDB , LEBs | Municipality can search option | January to June,11 | Establish collaboration among LSPs Using Local Available resources Fund raised from ADP of Municipality | |
| 22 | Long | Mitigation | Restrict reclaiming lands for to | Ward # 7 | Pourashava,L | Municipality | January to | Joint | |

| | | | establish industrial area | | ocal Land | can make | June,11 | collaboration | |
|----|------|------------|---|-----------------------|---------------------------------------|---|-----------------------|--|--|
| | | | | | office, Urban | collaboration | | with respective | |
| | | | | | Planning | with respective | | service agency | |
| | | | | | commission | agency | | | |
| 23 | Long | Mitigation | Establish sufficient Primary health care facilities | 1,2,6,7,8,9,1 0,12 | Pourashava,D PHE, Civil Surgeon | Municipality can search option from service providers agencies | January to June,11 | Join collaboration among respective service providers agencies | |

During ward level workshops disaster mitigation interventions have been identified and prioritized by the community in ward no 1,10 and 12. For smooth implementation of mitigation interventions a MOU concluded between ADPC and Jamalpur Municipality. ADPC team conducted consultation among the municipal authority, local elected bodies, communities and taken interview from mixed groups and facilitated to the community participants to develop risk and resources maps for selecting vulnerable cluster in selected wards.

Component 2: The second component of PROMISE program was **Mitigation and Preparedness**. For establishing a community based early warning system (CBEWS) municipality selected 19 no flood gauges locations based on previous experience of raising water level and considering water flow points from Brahmmaputra and Jenai river. Total 19 flood gauges were installed within the municipality areas with the assistance of Water Development Board (WDB).Total estimated_amount was **BDT.58,590.00**

| F.G SI | Ward # | Location of Flood Gauges | | |
|--------|--------|--|--|--|
| # | | | | |
| 01 | 01 | Ending Point of pathalia WDB's dam (North Side of Electric pool) | | |
| 02 | 02 | In front of Naw Vangga Bridge | | |
| 03 | 02 | Compo pur Moddho Para (In front of Mosque's piller) | | |
| 04 | 02 | Compo pur goah baria (in front of Eid gah math) | | |
| 05 | 02 | North side of Jamalpur Municipality (with Ghat) | | |
| 06 | 02 | In front of District Police Super Residence (Jaam tree of North side | | |
| | | of the road) | | |
| 07 | 06 | Daak para-Near of Mojid's mill (North side of Bridge-with wing wall) | | |
| 08 | 06 | Behind of Bania Bazar School | | |
| 09 | 07 | Zahurul Fisheries, Rail crossing –Goba Khal | | |
| 10 | 08 | Tengor Para polisha-Behind of Rashid's house (3 raastar matha-with | | |
| | | electric pool) | | |
| 11 | 09 | Machim Pur-Hori pur nodir par | | |
| 12 | 09 | Near of Sheer pur Bridge-Near of WDB's existing flood gauges | | |
| 13 | 10 | Chandra aam tola Nodir Par(Near of Gaamar tree, North side of | | |
| | | Masud's house | | |
| 14 | 10 | Rashidpur Nodir Paar (Near of Koroiee tree) | | |
| 15 | 10 | Rashid pur bridge-Near of PROMISE approach road | | |
| 16 | 12 | Ram Nagar-Poncho god-North side of grave yard (25 gauge West | | |
| | | side of 3 raastar mode) | | |
| 17 | 12 | Tetulia Motaleb's house (Near of Electric pool) | | |
| 18 | 12 | Ram Nagar Mondol Bari-In front of Rafiq's house | | |
| 19 | 12 | Tetulia- near of X councilor Mr.Barek house | | |

Location of installed Flood Gauges:

For installation of flood gauges a bilateral MOU concluded between ADPC and Jamalpur Municipality on July, 10. ADPC facilitated to installed flood gauges in line with WDB's standard.19 no community based volunteers were selected by the local elected body to monitor and collect flood related data. Main objective of selecting community volunteers to disseminate flood related information from community to municipality's EOC. Main activities of the EOC were collecting flood related information from all flood gauges through volunteers, to coordinate among WDB, PDMC, and Municipality councils DDMC (District Disaster Management Committee & disseminating flood related information. An EOC (Emergency Operating Center) is established by ADPC within the premises of Jamalpur municipality and different EOC materials (like life jackets, Helmet, rechargeable torch lights, ropes, first aid boxes and wooden rack) were provided by ADPC to Jamalpur municipality for EOC. PROMISE program developed six EOC volunteers from each ward of 1, 10 and 12 and nominated EOC focal person on behalf of municipality. Roles and responsibilities of EOC volunteers were to disseminate flood related early warning to the community, searching and rescuing flood victims through using search and rescues equipments, providing first aid support to flood victims, maintaining liaison and networking among, EOC ,Pourashava Disaster Management Committee (PDMC), Water Development Board, Civil Surgeon , Local elected Bodies and other stakeholders & sharing community level flood situation time to time. Sharing

ADPC provided CBDRR, CBERC training and flood gauges monitoring & record keeping orientation to the volunteers and EOC focal person. On the other hand, based on the prioritized hydro metrological disaster mitigation interventions in ward no 1,10 and12 another bi lateral MOU concluded between ADPC and Jamalpur municipality. Under this MOU following interventions were implemented during May to Sept, 2010-

| SI # | Name of intervention | No. of Scheme | No. of Total Schem e | Total Budget |
|------|---|------------------|-------------------------------|--------------|
| 01 | Development of Approach road-Rashid pur & Tango Para | Scheme-01 | 2 | 99581.00 |
| 02 | Construction of Flood protected tube well platform | Scheme-02 | 4 | 52479.00 |
| 03 | Supplying and Installation of tube well with flood protected platform | Scheme-03 | 5 | 102747.00 |
| | Total | | | 254,807.00 |

A joint team consisting Engineering staff of Municipality, Local elected councilors, town planner, community leaders and ADPC representative intensively consulted with the community, visiting site to identify suitable place to install above mentioned mitigation options, community selected site and proposed to the municipality. Engineering team of Jamalpur Municipality estimated cost and submitted to ADPC HQ through ADPC Bangladesh office. Municipality implemented proposed interventions based on final approval of ADPC HQ. Community participants contributed places to establish those interventions, some cases they provided free labor especially for approach road works.

Component 3: The third component of PROMISE program was **Training and Public Awareness**. Under this program a 3 days long training course entitled "Community Based Emergency Response Course (CBERC)"- was conducted by ADPC. Objectives of the training conducted to build capacity and raising awareness of community volunteers and municipality.

The training contents were-course Introduction, common hazards and the community response group, securing family and preparing for response, cardiopulmonary resuscitation and basic life support, practical skills station: CPR & BLS, mass casualty management & triage, practical skills station: triage, fire and water safety, light search & rescue, practical skills station: vehicle extrication. Training duration was 11th to 13th May, 2010 at Jamalpur municipality's hall room. An International expertise team of ADPC HQ and Bangladesh office , subject mater specialist from Bangladesh Red Crescent Society (BDRCS) and World Vision conducted the training .Total 28 participants (9 community volunteers from PROMISE's working wards no 1,10 & 12 and 18 community volunteers from 9 working wards of SHOUHARDO Program and town planner of Jamalpur Municipality) participated to the training program. This was actually more practical and hands on training where in different search and rescue equipments have been demonstrated and used. During closing session of training participants shared their learning that "now we are able to operate search and rescue equipment easily and we can help any victims after completion of this training."

Component 4: The 4th component of the program was **Advocacy for mainstreaming Risk Management**. Under this component ward level action plans were compiled for developing city level action plan and developed action planning matrix. The matrix were Program for Hydro-Meteorological Risk Mitigation in Secondary Cities in Asia (PROMISE) – Jamalpur, Bangladesh 19 presented and shared with the TWG members and municipality's elected bodies and community participants.

06. Opportunities, Strengths, Obstacles and Constraints

Jamalpur municipality provided extended support for smoothly implementation of PROMISE interventions within the municipality areas. Especially mayor of Jamalpur Municipality was very much positive to ADPC and PROMISE works. Due to dynamic leadership of mayor of Jamalpur Municipality all councilors were very much supportive to us. As a result community participants were easily accepted promise interventions and ADPC staffs within the short time. It was very appreciable that Jamalpur municipality allocated a room for EOC and nominated EOC focal person on behalf of Municipality. Municipality has taken active role to implement all selected disaster mitigation interventions under ward 01,10 and 12.

Very good acceptance of mayor to the city dwellers was the big strength for us during program implementation period. Selection of working procedure through using bottom up approach and participatory method were vital strength also. As a result community participants / beneficiaries accepted well of PROMISE interventions.

But there were few challenges have been faced in the last reporting period those were overcome also. Like-

- There are total 12 wards in Jamalpur Municipality but disaster mitigation interventions were implemented in only three wards (no.1, 10 and 12) out of 12 wards under the PROMISE program. Rest of ward councilors were argued to do work in there wards and it was very difficult to realize them that it was not possible due to programs limitations. Finally, community participants were accepted our works cordially based on the participatory works of the PROMISE program and active support of Mayor.
- Community Based Early Warning System (CB-EWS) is a new idea for the community. Flood gauges installation and information dissemination is a complex process from them. Based on the community concern ADPC has done an extensive community consultation and consulted with WDB, different councilors, mayors, natural leaders of the community. Information dissemination tools were also developed and provided orientation to the volunteers and municipality's focal person on record keeping and monitoring of flood level. Usually WDB has collected information on highest water level from their installed flood gauges for sending data to national level's Flood Forecasting and Warning Center (FFWC), Dhaka. This was the first time community

based flood gauges were installed under the PROMISE program. This system would be helpful for the community to forecast and warn to the community about flood.

- There are total 19 flood gauges identified and 19 no community volunteers were selected as the information dissemination process of CB-EWS. But selection of community volunteers was very difficult due to find out of suitable, literate and committed person. Finally the difficulties were overcome successfully with the active cooperation of mayor and respective ward councilors and they selected 19 no volunteers for flood gauges data recording and monitoring and 1 person nominated from municipality for EOC operation.
- The initial idea of PROMISE program was to provide livelihood strengthening support to beneficiaries of selected ward. The livelihood options would be helpful for Income Generating Activities (IGA) that could be utilized as the Alternative Income Generating Activities (AIGA) during disaster period. After intensive consultation with communities and considering practical situation the strategy was changed and finally it's turned to disaster risk mitigation intervention. Turning from livelihood interventions to disaster risk mitigation intervention was big challenge for this program. Finally it was implemented through extensive community consultation

07. Lessons learned

- The city recognised the formation of community level clusters with city officials to conduct community based risk assessment as a productive initiative. It produced ward level land use maps integrated with Community Risk Assessment(CRA) and the city will look for annual development plan to be based on it with further developing using GIS tools
- Jamalpur people are mainly fall into categories of middle and low-income families and majority are poor, living in under served settlements. When developing the action plans and risk maps at ward level, education background, literacy, gender or the social environment of the family were never found to be obstacles.
- Disaster risk reduction actions or any development activity will be sustainable when the political commitment is in place. In an atmosphere of the changing leadership, sustainability mainly relies on the hands of the leader who is dedicated for work and capable of maintaining the support of others. Such proven political leadership was in

- Nothing can be predicted for so called "happy ending or zero defects" unless it is rehearsed for real time situation. A flood drill based on a simple scenario was planned during early September to assess the readiness of community, WDB, EOC, and Council, understanding their roles, effectiveness of coordination, measuring the response time for different alert levels of flood situation, participation of all stakeholders, recording and reporting system and application of community level response, first aid, and relief. Pre rehearsal meeting was attended over 60 people but for unknown reasons, hidden by the people, the turn out on the day of rehearsal was ten.
- The city wishes to engage more effectively with the local community with disaster risk reduction activities and link with their concern on Govt. priorities. One of the options is through the Water Development Board for major work on flood protection and other area can be on safe housing
- Since the Central Govt. do the DRR activities on a mass scale in terms of spreading on geographical areas, monitory means and duration, cities have to institutionalise DRR in their routine operational services mandated in the fields of land use planning, development control, and provision of basic services. So the city extends its aspiration to strengthen their own institutional capacities and implement practical DRR actions by themselves

8. Exit Strategy and Sustainability of the project

Community based volunteers are trained. EOC focal person was trained also for handling EOC materials to the municipality. CBEWS was established, flood gauges were installed in the municipality's identified locations. Municipality was committed to carry forward CBEWS and maintenance of disaster mitigation interventions. Municipality has developed ownership of this program's interventions. So logically we can expect that the municipality will continue the project activities with the active participation of community participants even in the absence of the PROMESE program in Jamalpur. More over TWG members have suggested follows to sustain the PROMISE in Jamalpur through taking lead role of municipality, volunteers and community participants -

- Providing more training to the volunteers
- Developing an strong volunteers groups those are capable to work in any disaster situation

- Providing honourium to the volunteers for working during disaster period
- Providing necessary equipments, like mobile phone etc. to the volunteers
- Proper instruction and guidance needed for volunteers from municipality
- Strong collaboration and regular communication among EOC, volunteers and local elected bodies, service providing agencies, GOs, NGOs during disaster
- Establish strong monitoring mechanism of volunteers works from the Municipality
- Assigning capable persons on behalf of municipality to follow up of regular activities during disaster.
- Properly maintenance of EOC & CBEWS materials
- Matching the information of EWS of EOC & WDB
- Building awareness of local community participants, students, adolescents, social elites, Influential leaders etc.
- Quick response mechanism development for evacuation during disaster
- Using local available resources (local mosq's mike, local media etc) for announcing CB-EWS
- Raising fund by the municipality to overcome any disaster situation

9. Financial Report

Annexes

i. Updated PMP

ii. HV Assessment report. (Attached in bellow)

- iii. Training reports (on training and capacity building activities
- iv. Public Awareness materials
- v. Case studies

vi. Accomplished activities (Attached in bellow)

vii. Other publications (if any)

Annex-ii: Hazards & Vulnerability Assessment report

Hazards in Jamalpur Municipality

Flood, cyclone, tidal surge, earthquake, salinity, tsunami, river erosion are common hazards in Bangladesh. But following major hazards has been identified for Jamalpur city area through community consultation -

- Flood •
- Water Logging •
- River erosion

| | Hazard/problem identified | Ward | Ward | Ward |
|----|---|------|---------|--------|
| Α. | Disaster related Problems | | 110. 10 | 110.12 |
| 1 | 2 | 3 | 4 | 5 |
| 1 | No relief fund for facing emergency situation | X | Х | X |
| 2 | Water Logging | x | | х |
| 3 | Lack of Flood Protection Dam | X | | х |
| 4 | River Erosion | X | Х | х |
| 5 | lack of proper training on emergency Response | | | х |
| 6 | No post flood rehabilitation mechanism in place | x | Х | х |
| 7 | Lack of proper Local communication | x | Х | , x |
| 8 | Lack of road infrastructure and maintainance | x | Х | х |
| 9 | Lack of sufficient sewerage and drainage system | x | Х | х |
| 10 | Lack of Safe drinking water | x | Х | х |
| 11 | No sufficient Primary health care facilities | x | Х | х |
| 12 | Lack of awareness on disaster preparedness and | | | х |
| | mitigation | | | |
| 13 | Unsecured livestock's | Х | Х | x |
| 14 | Lack of Relief and safe shelters | x | Х | |
| В. | Social problems | | | |
| 1 | Lack of primary education | X | | х |
| 2 | No sufficient electricity | X | | |
| 3 | No available graveyard | | | х |
| 4 | No play Ground | x | | х |
| 5 | Lack of agricultural land of marginal farmer | | | |
| 6 | Un employment | Х | Х | |
| 7 | Lack of dustbin | | | x |
| | | | | |
| | | | | |

Hazards/Problems identified in SHOUHARO program's ward # 2, 3, 4, 5, 6, 7, 8, 9, 11

| Identified hazards/issues/ | Ward Number |
|--|---|
| Program for Hydro-Weleorological Kisk Willigation in Secon | idary Gites in Asia (PROMISE) – Jamaipur, Bangiadesh 24 |

| | Problem related to DRR | | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 11 |
|----|-----------------------------------|----------|---|---|---|---|---|----------|----------|----|
| | A Disaster related Problems | | | | | | | | | |
| | <u>.</u> | | | | | | | | | |
| 1 | River Erosion | Х | | | | | | | х | |
| | Inundation of HHs ,roads (not | Х | Х | Х | х | х | х | | х | х |
| 3 | developed roads) | | | | | | | | | |
| | | | | | | | | | | |
| 4 | Lack of proper communication | Х | | Х | х | | | | | |
| | problem during flood | | | | | | | | | |
| 5 | Lack of safe drinking water and | Х | Х | Х | х | х | х | х | х | х |
| | poor sanitation system | | | | | | | | | |
| 6 | Increasing water borne diseases | X | | | X | | Х | | Х | Х |
| 7 | Problem of rearing livestock | X | | | | х | | | | |
| | during flood | | | | | | | | | |
| 0 | Food Unavailability/ Food | X | | | X | | | | X | X |
| 0 | flood | | | | | | | | | |
| | No Farly Warning System for | | Y | | | | | | | |
| 9 | flood | | ^ | | | | | | | |
| | Lack of first aid support during | | X | | | | | | | |
| 10 | flood | | ~ | | | | | | | |
| 11 | Post flood rehabilitation problem | | Х | | | • | | | | |
| | Community based disaster | х | X | Х | х | x | x | х | х | х |
| 12 | volunteers are not active and | | | | | | | | | |
| | having no rescue tools | | | | | | | | | |
| 13 | Water Logging | | | Х | | х | х | | х | |
| | Insufficient of Drainage, | | | | | х | х | х | х | |
| 14 | sewerage, cannel dragging | | | | | | | | | |
| | system | | | | | | | | | |
| 15 | Refilling of land ,cannel to | | | | | | х | | | |
| | establish industrial area | | | | | | | | | |
| В | Social problems | | | | | | | | | |
| • | | | | | | | | | | |
| 1 | Lack of electricity. Case line | | | | | V | V | | X | |
| 2 | Lack of electricity, Gass line | | | | | X | X | | X | v |
| 2 | Illiteracy | | | | | × | | | | ^ |
| 4 | Lack of dustbin | | | | | x | | | | |
| 5 | No Switch gate | | | | | | x | | | |
| | No Community based health care | <u> </u> | | | | | ^ | x | | |
| 6 | center | | | | | | | | | |
| | Lack of proper service of LSPs (| · | | | | | | <u> </u> | <u> </u> | x |
| / | Local service Providers) | | | | | | | | | |

Vulnerability Assessment:

PROMISE program assessed vulnerability in ward no 1,10 and 12 as it's working area. An interactive discussion was held with elected bodies of Jamalpur Municipality as the fist initiative to gather primary knowledge on vulnerable areas under Jamalpur Municipality. Different stakeholders, elected bodies of municipality were participated at this interactive discussion. Ward level visitation and community consultation in respective ward no 1, 10 and 12 were conducted and community were developed ward level vulnerability maps. Based on the developed vulnerability maps PROMISE program selected most vulnerable clusters under ward no 1, 10 and 12.

Main objectives of assessing vulnerability were to identify vulnerable communities/clusters, building capacity of community participants, implementation of DRR interventions within identified vulnerable areas.

| Ward No | Name of identified vulnerable clusters |
|---------|---|
| 01 | Char Nao Vangga |
| 10 | Rashid Pur (West) |
| 10 | Char Palisha |
| 12 | Tetulia |
| 12 | Ramnagra |
| 12 | Deur Par Chandra |

Finally following vulnerable clusters were identified by the community participants-

North, west, east part of Char Nao Vangga cluster are highly vulnerable and a portion of south east part of Char Nao Vangga is medium vulnerable under ward no 01. Rest of areas named Pathalia and Pahtalia Bazar are lowest vulnerable. The vulnerability identified as the frequency of inundation of areas by flood's water. Highest vulnerability is considered as inundation of the area by flood's water within 12 hours. For medium it is considered 24 hours and for lowest vulnerability the time is 36 hour. Char Nao Vangga area is situated on the bank of Brammaputra River and that is the main cause of high vulnerability of the area. **(Vulnerability map attached: Ward # 01)**

For ward no 10, Rashid Pur (west) and Charpalish are highly vulnerable areas in terms of inundation of the area by flood's water within 12 hours. Chandra, mid Rashidpur and east part of Modhdher char are medium vulnerable. The lowest vulnerable areas are east part of Rashidpur and west part of Modhdher char according to the inundation frequency of the area by flood's water. **(Vulnerability map attached: Ward # 10). And**

For ward no 12, Ramnagra ,Tetulia and Deur Par Chandra are highly vulnerable due to Ramnagar Khal / cannel is situated in these areas. Middle part of ward no 12 is medium vulnerable and Baman Par / east part of ward no 12 is lowest vulnerable according to the frequency of inundation of the area by flood water. (Vulnerability map attached: Ward

12)

Capacity Assessment:

There were following stakeholders of PROMISE program

- 01. Jamalpur Municipality
- 02. Bangladesh Water Development Board (BWDB)
- 03. Civil Surgeon
- 04. LGED
- 05. GTZ

There was no capacity assessment conducted of stakeholders under the PROMISE program, Jamalpur.

Accomplished activities during the program period (October -2009 to September-2010)

| SI # | Description | Targeted date of completion | Target | Achieve ment | |
|----------|--|-------------------------------------|--|----------------------|--|
| 1 | Development of Hydro-Meteorological Hazard based Maps and Action Plan for the Pouroshava | | | | |
| 1.1 | Kick off meeting with PDMC, Water Development Board, DDMC, DRRO and other Pouroshava Officials | Nov,09 | 01 | 01 | |
| 1.2 | Formation of Technical Working Group (TWG) | Nov,09 | 01 | 01 | |
| 1.3 | Conducting preliminary meetings with ward commissioners, members, and community in ward No. 1, 10 and 12. | Decm,09 | 01 | 01 | |
| 1.4 | Conducting preliminary meetings with ward commissioners, members, community in SHOUHARDO implemented wards of 2,3,4,5,6,7 and 8 | Decm,09 | 02 | 02 | |
| 1.5 | MOU between Pouroshava and ADPC | June,10 | 02 | 02 | |
| 1.6 | Conducting detailed vulnerability analysis with community, volunteers, WDB and city officials for selected wards: | Feb,10 | 03 | 03 | |
| 1.7 | Preparation of detailed community based risk maps and action plans for selected wards of 1,10,12 | April,10 | 03 | 03 | |
| 1.8 | Pouroshava action plan workshop to present and validate prepared ward level detailed risk maps and action plans for selected wards | August,10 | 01 | 01 | |
| 1.9 | Submission of Pouroshava Hydro-Meteorological action plans of selected wards to TWG in local language | | | | |
| 1.1 1 | Replication workshop for other remaining wards and prepare respective ward level risk maps | August,10 | 01 | 01 | |
| 2 | Mitigation and Preparedness | | | | |
| 2.1 | Identifying strategy for contributions (labor/funds) from each | Decm,09 | Communi contribute | ty ed labor | |
| 2.2 | Establishing community based EWS system | July,10 19 nos & EO gauges insta | | EOC flood stalled | |
| а | Identify ward level strategy for EWS dissemination mechanism, priorities and needs etc. through TWG meetings | Decm,09 | EWS dissemination tools developed & oriented to the community volunteers & EOC operator | | |
| b | Identify locations for flood gauges with assistance from WDB | June,10 | 18 | 19 | |
| С | Supply and install flood gauges at identified locations in ward numbers 1 to 8, 10, 12 | July,10 | 18 | 19 | |
| d | Establishing a EOC at Pouroshava | Feb,10 | 01 | 01 | |
| e | Provision of data monitoring and recording system | August,10 | Data monitoring tools developed & oriented to the community | | |

| | | | volunteers & EOC | | |
|-----|---|----------------|------------------|--------------|--|
| | | | operator | | |
| f | Provision of minor tools and equipment | June,10 | Tools & e | quipments | |
| | | | provided | • | |
| g | Training selected community members on monitoring | August,10 | 37 | 37 | |
| | flood gauges etc. | | | | |
| 2.3 | Implementation of 1 -2 mitigation activities identified at | June-July,10 | 11 | 11 | |
| | action planning | | intervent | intervent | |
| | | - | ions | ions | |
| а | Prioritize the activities identified at the action planning | June-July,10 | | 11 | |
| | workshop | | | intervent | |
| | | | | | |
| | | | | prioritize | |
| h | Earmation of implementing team (Ward member, Tech | lupo_luly 10 | 11 | u 11 | |
| U | officer community etc.) | Julie-July, 10 | 11 member | 11 member | |
| | officer, community etc.) | | c | c | |
| C | Estimation for activities by Municipality including in-kind | lune-luly 10 | 5 | 5 | |
| C | contribution | Julie July,10 | | | |
| d | Implementation of the activity | June-July,10 | 11 | 11 | |
| | | | intervent | intervent | |
| | | | ions | ions | |
| 3 | Training and Public Awareness | | | | |
| 3.1 | Conduct CBERC training for selected community groups | May,10 | 37 | 37 | |
| | Conducted CBDRR training for community volunteers | February,10 | 20 | 20 | |
| 4 | Advocacy for mainstreaming Risk Management | | | | |
| 4.1 | Compiling all ward level action plans and finalize the | Compiled | | | |
| | Pouroshava level flood mitigation action plan with | | | | |
| | PDMC and TWG | | | | |
| 4.2 | Validation workshop for the item 4.1 | | | | |
| 4.3 | Making recommendations to integrate DRR inline with | August,10 | | | |
| | development Plan of Pouroshava | | | | |