

SAMADHAN

Keshabpur, Jessore

ERMF-LDRRAP PROJECT FIANL REPORT

Date: 15.11.2008

1. Introduction:

Samadhan is a Non-government, Non-political, Non-religious, Non-profitable multidimensional development service oriented local level voluntary organization. The organization is working in southwest areas of Bangladesh from October 14, 1987 for poverty alleviation and sustainable socio-economic development, makes people free from natural hazardous especially for poor & ultra poor inhabitants of the Kopotakkha, Betna, Sonai and Ichamoti River basin areas under Jessore and Satkhira District, out of those working areas of Samadhan is Kalaroa upazila, which is one of the most vulnerable upazila in Satkhira district. The said upazila is most poverty-stricken for different disaster as it is adjacent Bay of Bengal in south-west region of Bangladesh. The upazila is stand on the bank of Kopotakkha, Betna, Sonai and Ichamoti river and for which the people of the upazila's are highly vulnerable to Waterlogging, Flooding, Agricultural Droughts, Arsenic Contamination, River bed siltation, Hailstorm, Heavy rainfall, Tornado viral diseases for fish, the disaster are occurring here every year one after one and flood/waterlogging is the common hazards for the Kalaroa upazila.

The peoples were loosing field and homestead crops, other homestead belongings for inundation, selling cattle, goat, chicken, ducks and other family assets by token of price for survivability for poverty. The cultivable land were under water for 5 to 7 months of each year for siltation of river, which turned into permanent waterlogging, as a result the people were unable to cultivate to crops and they become unemployed. On the other hand in high areas the produced crops were lost and damaged for tornado and drought. The areas are severely arsenic contaminated and the people were desperately affected for arsenic-oasis disease. Moreover every year seriously disrupted the livelihood system of the people; especially the poor and ultra poor men, women, children and disable were the victim of disaster.

The Kalaroa Upazila has 12 Unions and 1 Pourasova with a total population of 224,834 (Female 109500 and Male 115334), consists of 119 villages and 37,467 households. The people of Kalaroa upazila are experienced in different type of natural hazards as well as a few man made hazards (which human trafficking is a major along with risks of HIV/AIDS in the area as it is boarder belt of India). There was no such assessment of risks associated with different hazards on the people, their livelihood and households, communities and nationals resource bases. The community people and DMCs played more reactive role after a hazard onset and tried to manage the disasters through relief and rehabilitation.



VIEW OF DISASTER OVER THE PROJECT AREA KALAROA UPAZILA

As a whole, a broad base unwillingness has been emerged among the Union Parishad representatives and tries to project the disaster condition to the relief authority, which made the whole of the disaster management culture more and more dependent to the relief. The nature of work found very limited practice to have a meeting of DMCs during normal time; they were conceptualized that disaster management committee will only work after a disaster situation. Most of the Union has a work plan prepared by Disaster Management Bureau, which were merely used by the committee for preparedness business. There were no action plan done followed a risk assessment, which have been done a case to prepare a local action plan with active participation of the vulnerable people. Furthermore, there was gross lack of linking the hazard and vulnerability issues into the sector plan of different development wings of government at the grass-root level. However, the main problem were in the following areas are-

- ✚ Union and Pourasova DMCs were not well functioned.
- ✚ These DMC members were not awareness about the importance of risk assessment.
- ✚ The DMC members and people were not having understanding about their roles and responsibilities in pre, during and after a hazard onset period.
- ✚ The Union Parishad has their annual development plan, but it was not prepared thoughtfully considering the risk factors associated with different natural and man made hazards of the particular locality.
- ✚ There were no any initiatives to involve the whole community in the process of planning and through that participatory process to identify their roles, which was created a culture of dependency.
- ✚ Moreover, the other departments were not responsive enough to the need of the people vulnerable to different hazards.

Samadhan applied earlier with one project proposal in the name of **Ensuring Risk Management Framework in Local Disaster Risks Reduction Action Plan (ERMF-LDRRAP)** against on the advertisement of the CDMP, was duly accepted and approved by the CDMP to implement the proposed activities in Kalaroa upazila with amounting **BDT. 3,713,584.00** for the period of April 24, 2006 April 24, 2007, Then again allotted **BDT. 4,346,559.00** and continued the project activities as of October 31, 2008, finally the total period of the project was **April 24, 2006 to October 31, 2008** and the total budgeted amount was **BDT. 8,060,143.00**

1.1. Project areas:

Keralkata, Joynagor, Diara, Langaljhara, Jalalabad, Jugikhali, Keragachi, Sonabaria, Kushodanga, Helatola, Koyla, Chanadanpur and Kalaroa Pourasova under Kalaroa upazila in Satkhira district.



VIEW OF DISASTER AFFECTED MARKET

1.2. The project goal:

To equip DMCs at Union Level to Develop, support, operationalize effective local disaster risk reduction action plans (LDRRAP) to significantly reduce the vulnerability of the community from the natural hazards.

1.3. Project objectives:

- ✚ To make the members of Union, Pourashava and Upazila DMCs knowledgeable on community risk assessment process.
- ✚ To aware DMC members and community people about their roles and responsibilities before, during and after disasters.
- ✚ To conduct community Risk Assessment involving DMCs
- ✚ To rank, prioritize and identify risk reduction measures of identified risks.
- ✚ To develop LDRRAP at Union, Pourashava and Upazila level.
- ✚ Following LDRRAP, community level stimulation on emergency situation established on regular basis.

2. Project Details:

2.1. Details of plans are as follows-

MAJOR ACTIVITIES	Year 1											
	1	2	3	4	5	6	7	8	9	10	11	12
Inception Phase												
1. Finalize work plan and submitted to CDMP	■											
2. Consultation start with DMCs	■											
Training for DMC Members on risk Assessment Process												
1. Training module develops, consult and field test.	■											
2. ToT for core trainers	■											
3. Training for union level DMC members		■	■	■	■	■	■					
4. Training for pourasova DMC members		■										
5. Training for upazila DMC members		■										
Awareness on Roles and Responsibilities of DMCs and Community People before during and after Disaster												
1. Awareness raising training for all DMC members			■	■	■	■	■	■	■	■	■	
2. Develop and display billboard			■	■	■							
3. Printing and dissemination of leaflets			■	■	■	■	■	■	■	■	■	
4. Develop, print and disseminate posters			■	■	■	■	■	■	■	■	■	
5. Develop and printing of flip chart	■	■										
Community Risk Assessment												
1. Collect and analyze of historical records from secondary information	■	■										
2. Collect GIS based hazards maps and climate change information	■											
3. Participatory tools using to collect hazards information and data.		■	■	■								
Prioritizing Ranking the Risk and Identification of Risk Reduction Options												
1. Sharing workshop with DMC members at union, pourashava and upazila level					■	■						
2. Validation workshop with govt. officials, private sectors, local govt. representative, and NGOs						■	■					
Develop LDRRAP												
1. Discussions on determine action plan for LDRRAP preparation at union level					■	■	■	■	■	■	■	
2. Discussion session at union level DMC to develop comprehensive LDRRAP								■	■	■	■	
3. Discussion meeting with pourasova level DMC to develop comprehensive LDRRAP									■	■	■	
4. Upazila level sharing meeting to finalize integrated LDRRAP											■	
5. Printing and dissemination of LDRRAP											■	■

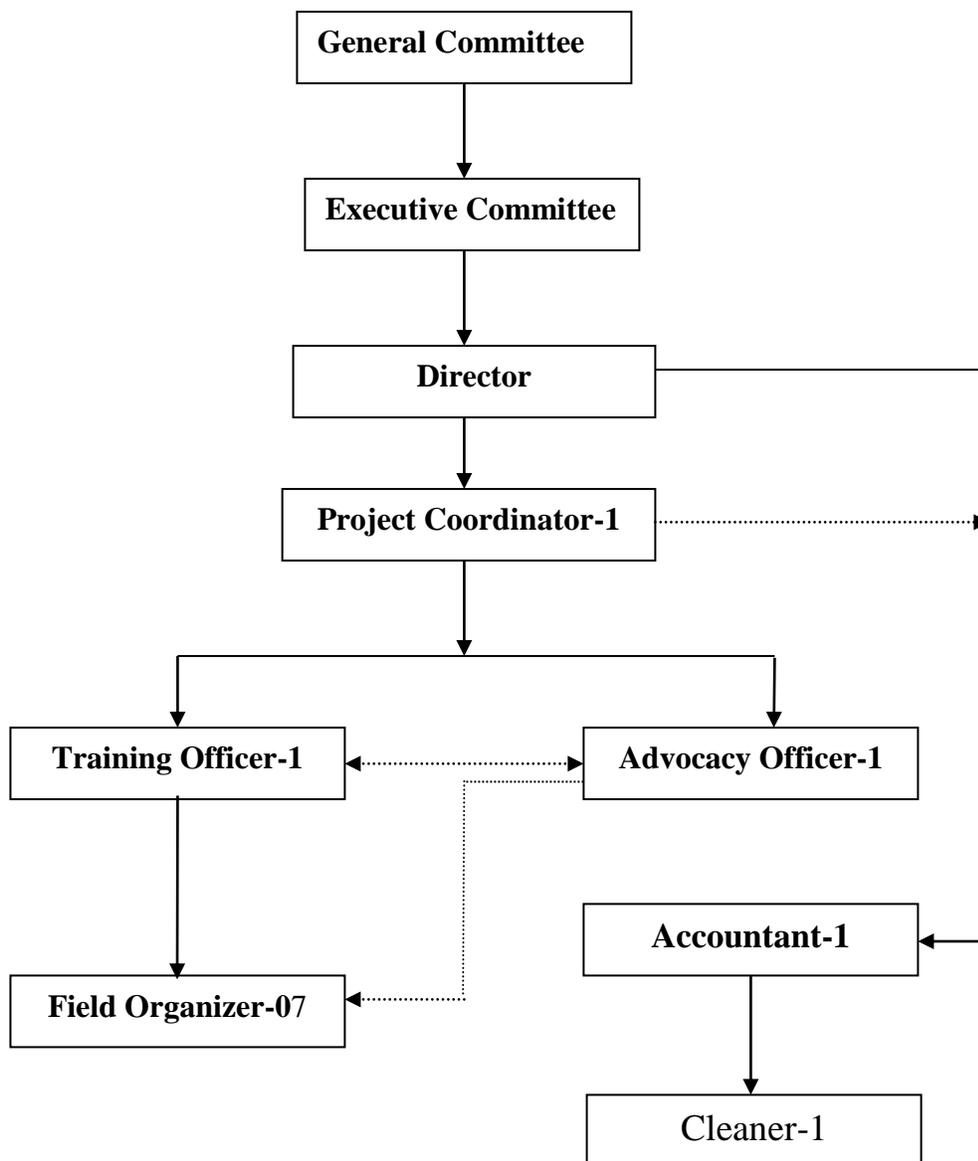
MAJOR ACTIVITIES	Year 1											
	1	2	3	4	5	6	7	8	9	10	11	12
Community level stimulation												
1. Identify themes of stimulation exercise												
2. Stimulation exercise to sensitize general public and DMCs on their roles												
Monitoring Evaluation and Reporting												
1. Baseline study												
2. Draft Monitoring and Evaluation Plan submitted to CDMP												
3. Monitoring and Evaluation Plan finalized												
4. Mid-term narrative and financial reports submitted to CDMP												
5. Final narrative and financial reports submitted to CDMP												

2.2. Expected output and outcome of the project:

SI.	Expected out put	Outcome
1	All members of 12 union levels DMC, 1 Pourasova DMC and 1 upazila DMC are become knowledgeable on community risk assessment process.	Role of DMCs with Community involvement is established and tested through identifying issues and options of operationalizing the risk management framework in local disaster risk reduction action plan (LDRRAP)
2	All DMC members and community people of 12 unions, 1 pourasova and 1 upazila are aware about their roles and responsibilities before, during and after hazards.	
3	Specific risks associated with different hazards of 12 unions, 1 Pourasova are identified with the active involvement of the community people and people at risk at the grass root level.	
4	Identified risks are ranked, prioritized and risk reduction options are developed through active community participation.	
5	LDRRAP of 12 unions, 1 Pourasova and Kalaroa upazila has developed and discussion initiated for mainstreaming LDRRAP into development program.	
6	Following LDRRAP, community level stimulation on emergency situation established on regular basis.	

3. The project implementation structure:

The project implementation structures of the ensuring risk management framework in local disaster risk reduction action plan in Kalaroa upazila under Satkhira district are as follows--



4. The implementation, Monitoring and reporting mechanism followed:

4.1. The Implementation mechanism:

To implement the project activities we have followed the following mechanism|

- i) Conducted Community Risk Assessment (CRA) by involving group of people of grassroots level farmers, landless, women and disable people from each of the greater wards of 12 unions and 1 pourasova. Then sited with DMCs in the name of plenary session for validation of collected information.
- ii) Finalized drafts Disaster Risk Reduction Plan (DRRAP) and again sited with DMCs and finalized the plan by ensuring validation signature of the respective Chairman of Union and Upazila DMC.
- iii) Then again sited with union DMC for prioritization of disaster risk reduction options following DRRAP. Through the meeting analyzed the prioritized options, finalized the activity considering feasibility, formation of the Project Implementation Committee (PIC) consist of 7 members.
- iv) Accordingly written separate proposal against each of the option mentioning justification, required budget, location, duration, community contribution and the name of 7 members of the PIC, collected no objection certificate from the Project Implementation Officer (PIO) of the Kalaroa upazila and in some cases from Bangladesh Water Development Board against each of the activity to avoid any overlapping and the proposal submitted to the CDMP for approval.
- v) After prior approval from CDMP, sited with DMC, discussed about the approved activity with budget and implementation procedures, make them oriented about how to implement the activity by developing implementation strategies and finally implemented the activity by forming monitoring committee consist of 3 members from DMC, where ensured community contribution.
- vi) After implementation of the activity again sited with DMC for assessment and handed over the activity to the DMC for further maintainance.

4.2. The Monitoring mechanism:

Samadhan has been tracked project progress through a series of regular monitoring activities including regular meetings with local DMCs, project team, field visit, monthly staff report, quarterly project report etc. In addition to that the technical specialists of CDMP have been frequently visited the project activities and given feedback. Actually these allows of Samadhan to assess the progress, taken immediate steps and addressed constraints and respond to new opportunities. At the beginning assessed the real scenario of hazards of Kalaroa upazila and peoples coping mechanism through a baseline study. The project team has been maintained liaison with upazila administration other key stakeholders for regularly monitoring of the project activities. Samadhan has been consulted with community people, beneficiaries and maintained a regular dialogue with local government agencies, local NGOs that have experience to work on disaster issues.

4.3 The Reporting mechanism:

Different category of report has been produced under the projects like monthly report prepared by the individual staff, compiling of which prepared quarterly program progress report, quarterly program tracking report. Every quarterly report presented and shared in district coordination meeting and copy of progress report submitted to the CDMP in every quarter. Other than that there are many of one short program accomplished, against of which prepared report like baseline survey report, different training report, meeting report, workshop report etc have been completed under the supervision of the Director and technical advice of the CDMP expert. The reporting system initiated in different frequencies, it was depended on nature of program interventions, but the quarterly report was mandatory for each of quarter and prepared accordingly as per instruction by following prescribed format provided by CDMP.

5. The achievement:

5. A.1) CRA process followed:

To conduct effective and qualitative CRA activity first conducted pre-CRA containing social maps, union maps, hazards maps, Venn diagrams, different seasonal calendars, transact and also 3 to 5 key informants interview against each of 12 unions, 01 Poursava and upazila level community people and DMCs member by using GIS based hazards maps following CDMP provided CRA guidelines. Compiling all those information developed digital social maps, union maps, hazards maps and vulnerability maps of each union and pourasova; those were used in CRA to get good out put.

CRA conducted by following CRA guideline provided by the CDMP i.e. in each of greater ward in every Union and Poursava of the Kalaroa upazila by ensuring active participation of the community people in separate 04 groups of farmers, women, disable and landless people from the grassroots level. The grassroots level participants were selected from different para/mohalla by the respective UDMC. The 8 to 10 nos. grassroots people in each groups have been seated in a same place separately for daylong and find out possible hazards, vulnerable sector, vulnerable areas, vulnerable elements, different risks by sectors by hazards, then assessed, analyzed the risks, ranked, prioritized considering consequences and likelihood of hazards. Then compiled the output of the primary data, which presented it in the first plenary meeting organized by UDMCs, where the representative from primary groups was invited and present by the DMCs. Through the plenary meeting the DMCs comes in a common consensus.



VIEW OF CRA SESSION WITH COMMUNITY PEOPLE

Again collected further information from field compiled and developed draft report. The draft report again presented in final plenary meeting in presence of the first meeting participants, whose were invited by the DMCs, after consensus of the participants primarily finalized the CRA report as draft. The semi finalized report composed and shared in details in discussion meeting in UDMC and finalized LDRRAP against 12 unions, 01 Poursava. Organized and conducted one upazila compilation meeting with upazila DMC by active participation of 32 members, where 13 CRA findings presented, discussed/shared, build conscious, ranked, prioritized and finalized the



VIEW OF VALIDATION MEETING OF UDMC

upazila LDRRAP. It is mentionable that in every stages of the CRA, the DMCs were active, as they feel ownership of the LDRRAP and also this was likeminded system to them.

Different stages and process of CRA:

- ✚ Trained 10 Staff (Male-6 and female-4) on CRA process.
- ✚ Trained 26 Core Trainers (Male-13 & female-13) on CRA process.
- ✚ Trained 12 nos. UDMCs consist of 36 members on CRA process
- ✚ Trained 1 pourasova DMC consist of 36 members.
- ✚ Trained 1 upazila DMC consist of 36 members.
- ✚ Selected primary stakeholder for 4 separate groups from grassroots level beneficiaries.
- ✚ The groups are farmer; landless, women and disable consist of 7 to 10 members.
- ✚ Seated all 4 groups in a same place separately.
- ✚ Identified hazards.
- ✚ Identified vulnerable sectors, Elements and Areas.
- ✚ Identified risks by sector by hazards.
- ✚ Risks assessment considering consequences and likelihood.
- ✚ Risk prioritization through voting of the participants.
- ✚ Risks analysis (Causes of risks and its possible reduction options).
- ✚ Prioritized manageable risks through voting.
- ✚ Conducted validation meeting by the DMCs and representatives from community groups.
- ✚ Analyzed possible social effects of risks reduction options.
- ✚ Finalized strategic directions against each of reduction options through final plenary session.
- ✚ Organized and conducted compilation meeting with upazila DMC
- ✚ Developed and finalized 14 nos. LDRRAP.



VIEW OF LDRRAP HANDED OVER TO UNO KALAROA

5. A.2) CRA conducted by DMCs:

Conducted total of 13 CRA over 12 unions and 01 Pourasova in Kalaroa upazila under Satkhira district have been conducted, details information of which are given below-

SL no	Name of union	Period/date of CRA conduction	No of CRA participants	
			Primary participants	Secondary participants
1	Diara	02.11.2006 to 11.11.2006	90	32
2	Joynagor	12.11.2006 to 21.11.2006	89	26
3	Jalalabad	22.11.2006 to 01.12.2006	91	24
4	Keralkata	02.12.2006 to 09.12.2006	96	27
5	Langaljhara	10.12.2006 to 22.12.2006	96	28
6	Jugikhali	10.01.2007 to 20.01.2007	82	21
7	Keragachi	23.01.2007 to 01.02.2007	91	23
8	Sonabaria	04.02.2007 to 13.02.2007	93	23
9	Kushodanga	14.02.2007 to 25.02.2007	90	29
10	Helatola	26.02.2007 to 07.03.2007	80	30
11	Koyla	08.03.2007 to 18.03.2007	86	24
12	Chandanpur	19.03.2007 to 29.03.2007	87	28
13	Pourasova	19.03.2007 to 29.03.2007	83	22
Total			1154	337

5. A.3) Types of people consulted by union:

The grassroots level primary stakeholders like farmers, women, disable and landless people in the process of collection of primary information in relation to hazards, risks, vulnerable sectors, vulnerable elements, likelihood and consequences of hazards and other relevant information etc. In validation process there were actively consulted by the existing chairperson and other members of the DMCs i.e. the representatives from local government, health & family planning department, Agriculture department, public engineering department, teachers from local educational institutions, representatives of business men, community Women, Religious leader etc. Other than that other community level representatives like former Chairman, Members, Land surveyor, Village doctor, Local aged and people were involved in each of the union.

5. A.4) Number of report produced:

Total of 14 nos. reports in the name of Local Disaster Risk Reduction Action Plan (LDRRAP) have been produced over 12 unions, 01 Pourasova and 01 Upazila.

5. A.5) Identified risks by sector and vulnerable elements:

Union-wise type of risks identified by sectors and by vulnerable elements:

Common Hazards	Name of Sector	Identified risks	Vulnerable elements
Diara union			
Flood, Waterlogging, Drought, Heavy rainfall, Hailstorm, Arsenic, Riverbed siltation, Fish virus & Tornado	Agriculture	Field crops may damage	Men and livestock
		Crops cultivation may hamper	
	Health	People may attack by water born disease	Men (Women, children, disable, elderly people etc)
		Child & elderly people may attack by ARI (Pneumonia)	
		Child may attack for scarcity of safe drinking water	
	Education	Education may hamper	Students
		Education institution may be inundated	
	Fish	Fish from pond/gher may washout	Men
		Fish can die for drying of water	
		Fish can die for attacking of viral diseases	
	Structure	Roads may damage	Men & service (Treatment, Electricity, Fuel, communication)
		Weak houses can damage	
		Houses of low laying areas can damage	
		Communication system may disrupted	
Livestock	Mud made week houses can damage	Men and livestock	
	Fodder crisis may happen		
		Cow rearing area may inundated	
Joynagor union			
Flood, Waterlogging, Arsenic, Hailstorm, Drought, Tornado, Riverbed siltation Heavy rainfall	Agriculture	Field crops may damage	Men and livestock
		Crops cultivation may hamper	
		Crops production reduce	
		Seasonal fruits may damage	
		Crops inundated and damage	
	Fish	Fish from pond/gher may washout	Men
		Fish cultivation may hamper	
	Livestock	Fodder crisis may happen	Men and livestock
		Shortage of fodder	
	Health	Water born disease may attack	Men (Women, children, disable, elderly people etc)
		Health service may hamper by inundating hospital	
		People may attack by different disease	
	Education	Education may disrupted	Students
		Education institutions may close	
Structure	Roads can washout for inundation	Men & service (Treatment, Electricity, Fuel, communication)	
	Mud made houses may damage		
	Low laying roads may damage		
Jugikhali union			
Waterlogging, Flood, Arsenic, Drought, Hailstorm, Tornado,	Agriculture	Crops cultivation may hamper	Men & livestock
		Field crops may damage	
		Crops production may reduce	
		Ripening crops may damage	
	Livestock	Fodder crisis may happen	Men & livestock
Health	Water born disease may attack	Men (Women, children,	

Common Hazards	Name of Sector	Identified risks	Vulnerable elements
		People may attack by Arsenic-oasis disease	disable, elderly people etc)
		People may attack by ARI (Acute Respiratory track Infection))	
	Education	School house inundated	Students
		School may close	
		School roof may fly away	
	Structure	Roads can washout for inundation	Men & service (Treatment, Electricity, Fuel, communication)
		Mud made houses may damage	
		Low laying roads may damage	
		Communication may disrupted	
	Fish	Pond/gher may flooded	Men
Fish can die for drying of water			
Jalalabad union			
Flood, Waterlogging, Drought, Arsenic, Hailstorm, Heavy rainfall Tornado	Agriculture	Crops may damage	Men and livestock
		Crops cultivation may disrupted	
		Crops production reduce	
		Produced crops may damage	
	Fish	Fish from pond/gher may washout	Men
		Fish can die for drying of water	
	Health	People may attack by water born disease	Men (Women, children, disable, elderly people etc)
		Child & elderly people may attack by ARI (pneumonia)	
		People may attack by scabies	
		Crisis for safe dinking water may happen	
	Education	School may inundated	Students
		Education may disrupted	
		School roof may fly away	
	Livestock	Fodder crisis may happen	Men & Livestock
Structure	Houses can damage	Men & service (Treatment, Electricity, Fuel, communication)	
	Roads of low laying area may damage		
	Mud made houses can damage		
	Weak houses can damage		
Kushodanga union			
Waterlogging, Flood, Drought, Arsenic, Tornado, Hailstorm, Heavy rainfall, un-planned embankment	Agriculture	Crops production may be closed	Men and livestock
		Produced crops may damage	
		Planted trees may die	
		Crops production may reduce	
	Fish	Fish from pond/gher may wash out	Men
		Embankment of Pond/gher may damage	
		Fish can die for drying of water	
	Livestock	Cattle rearing filed may reduce	Men & Livestock
		Fodder crisis may happen	
	Health	People may attack by skin disease	Men (Women, children, disable, elderly people etc)
		People may attack by water born disease	
		People may attack by arsenic-oasis disease	
	Structure	Mud made kacha houses can damage	Men (Women, disable, children, elderly people)
		Communication can disrupted by inundating roads	
Houses roof can damage			

Common Hazards	Name of Sector	Identified risks	Vulnerable elements
Keragachi union			
Waterlogging, Drought, Arsenic, Hailstorm, Heavy rainfall, Tornado	Agriculture	Crops cultivation may hamper	Men and livestock
		Production may reduce for heavy sunlight	
		Ripening rice & vegetables can damage	
		Produced crops may damage	
	Fish	Fish from pond/gher can washout	Men
		Fish can die for drying of water	
	Health	People may attack by water born disease	Men (Women, children, disable, elderly people etc)
		People may attack by diarrhea	
		People may attack by arsenic-oasis disease	
		Child can affected by ARI (pneumonia)	
	Education	School houses can inundated	Students
	Livestock	Fodder crisis may happen	Men
May affected by different diseases			
Structure	Mud made kancha houses can damage	Men & service	
	Mudy roads can damage for inundation		
Sonabaria union			
Waterlogging, Drought, Tornado, Hailstorm, Arsenic, Flood, Heavy rainfall	Agriculture	Crops can damage by inundation	Men and livestock
		Crops production can reduce	
		Produced crops may damage	
		Trees can damage and die	
	Fish	Fish from pond/gher may washout	Men
		Fish cultivation may hamper for drying water	
	Livestock	Cattle rearing field may reduce	Men
		Fodder crisis may happen	
		Fodder may damage	
	Health	People may attack by diarrhea, dysentery	Men (Women, children, disable, elderly people etc)
		Child & elderly people can sufferer for ARI	
		People can attack by arsenic oasis disease	
	Education	School class may suspended for inundation	Students
		School roof can fly away	
	Structure	Communication may disrupted by inundating roads	Men & service (Treatment, Electricity, Fuel, communication)
		Mud made kancha houses may damage	
Weak houses can damage			
Roads and washout and damage			
Koyla union			
Waterlogging, Arsenic, Hailstorm, Drought, Tornado, Heavy rainfall	Agriculture	Crops production may hamper	Men and livestock
		Produced crops may damage	
		Trees can damage and die	
		Vegetables can damage	
	Health	People may attack by skin disease	Men (Women, children, disable, elderly people etc)
		People may attack by scabies	
		Child may attack by ARI (Pneumonia)	
	Livestock	Fodder crisis may happen	Men
		Cattle rearing may hamper for damaging of fodder	
	Structure	Mud made kancha houses may damage	Men & service (Treatment, Electricity, Fuel, communication)
		Low laying roads can inundated and damaged	
		Kancha and weak houses can damage	

Common Hazards	Name of Sector	Identified risks	Vulnerable elements
Helatola union			
Flood, Waterlogging, Drought, Arsenic, Tornado, Hailstorm, Heavy rainfall	Agriculture	Crops may damage	Men and livestock
		Cultivation may hamper	
		Crops production may hamper	
		Trees can damage	
		Seasonal fruits can damage	
	Fish	Fish from pond/gher can washout	Men
		Fish can die by attacking viral diseases	
		Fish can die for drying of water	
	Health	People may attack by water born disease	Men (Women, children, disable, elderly people etc)
		Skin disease may attack	
		Crisis may happen for safe drinking water	
		People may attack by arsenic oasis	
	Education	Class can suspended	Students
		School roof can fly away	
Livestock	Fodder crisis may happen	Men	
Structure	Mud made kancha roads can inundate	Men & service (Treatment, Electricity, Fuel, communication)	
	Houses can inundated		
	Kancha roads and houses can damage		
Chandanpur union			
Waterlogging, Drought, Arsenic, Hailstorm, Tornado, Flood,	Agriculture	Crops can damage by inundating	Men and livestock
		Crops production may reduce	
		Growing crops may disrupted	
		Crops may damage	
	Fish	Fish can die for water contamination & pollution	Men
		Fish can die for attacking by viral disease	
		Fish can washout from pond/gher	
	Health	People may attack by water born diseases	Men (Women, children, disable, elderly people etc)
		People may attack by chickenpox	
		People attack by arsenic oasis disease	
	Livestock	Cattle rearing field may reduce	Men
		Fodder crisis may happen	
	Structure	Kancha and weakest houses can damage	Men & service (Treatment, Electricity, Fuel, communication)
		Roads can damage by inundating	
Roof of Kancha and weakest houses can fly away			
Communication may hamper for inundating roads			
Langaljhara union			
Waterlogging, Drought, Arsenic, Hailstorm, Tornado, Heavy rainfall	Agriculture	Crops cultivation may hamper	Men and Livestock
		Rice production may reduce	
		Produced crops may damage	
		Crops of low laying areas can inundated	
	Health	People may attack by different water born disease	Men (Women, children, disable, elderly people etc)
		People may attack by different diseases for excess hit	
		Safe drinking water crisis may happen for arsenic	
	Education	School may inundated and close the classes	Students
	Livestock	Fodder crisis may happen for livestock	Men
	Structure	Kancha houses can damage	Men & service (Treatment, Electricity,
Low laying kancha roads can inundate			

Common Hazards	Name of Sector	Identified risks	Vulnerable elements
		Kancha and weakest houses can damage for tornado	Fuel, communication)
Keralakata union			
Waterlogging, Drought, Flood, Heavy rainfall, Hailstorm, Arsenic, Tornado	Agriculture	Crops cultivation may disrupted	Men and livestock
		Cultivable land may reduce	
		Crops production may reduce	
		Produced crops may damage	
		Seasonal fruits can damage	
	Trees can damage		
	Health	People may attack by different water born	Men (Women, children, disable, elderly people etc)
		Child and elderly people may by ARI (pneumonia)	
		Child may attack for influenza fever	
		People may attack arsenic oasis disease	
	Structure	Communication may disrupted for inundating roads	Men & service (Treatment, Electricity, Fuel, communication)
		Kancha and weakest houses may damage	
		Roof of weakest house may damage	
		Kancha roads can inundated and washout	
	Livestock	Cattle rearing field may reduce	Men
Fodder crisis may happen			
Education	Education may hamper by inundating school	Students	
	Roof of school houses can fly away and damage		
Fish	Fish from pond/gher washout	Men	
Kalaroa pourasova			
Waterlogging, Arsenic, Drought, Tornado Flood,	Agriculture	Cultivation may hamper	Men and livestock
		Crops produce may reduce	
		Ripen paddy may damage	
		Crops may damage	
	Fish	Fish from pond and gher can washout	Men
		Fish can attack by different disease	
		Fish can die by drying water	
	Livestock	Fodder can damage	Men
		Fodder crisis may observe	
	Structure	Communication may disrupted by damaging roads	Men & service (Treatment, Electricity, Fuel, communication)
		Houses may damage	
		Weak houses can damage	
		Roads can disrupted by inundated	
	Health	People can attack by arsenic oasis	Men (Women, children, disable, elderly people etc)
		People can attack by diarrhea and dysentery	
Education	Educational activities may disrupted	Students	

5. A.6) Key output of the reports:

- ✚ All basic information of the individual unions accumulated in the reports.
- ✚ Increased commitment, awareness and knowledge of the DMCs members through CRA and report preparation, compilation.
- ✚ Ownership of the reports built by the UDMCs.
- ✚ All risks and risk associated hazards accumulated in the LDRRAP.
- ✚ Having all recommendation of grassroots level community peoples in the reports.
- ✚ Different long term risks reduction options are available in the reports.

- ✚ The reports are available in union to district level all DMCs, CDMP and Ministry of Food and Disaster Management, who can use it for the disaster risks reduction activities.
- ✚ The report built linkage/relation with upazila and District level DMCs.
- ✚ The report might be inspired to mainstreaming the risk reduction activities into development.

5. A.7) Key benefits produced:

- ✚ 14 nos. LDRRAP against 12 unions, 1 pourasova and 1 upazila have been produced containing different risk associated hazards and risks reduction options, which are available at all level of stakeholder grassroots level to National level.
- ✚ Different risks reduction options both structural and non-structural have been accomplished by following the reports.
- ✚ Any agency, department and DMCs can use the report for any purposes as all the information accumulated in the report by union, pourasova and upazila.

5. A.8) Use of CRA:

- ✚ Very effectively use of CRA was ensured to develop LDRRAP.
- ✚ In the process of CRA all level of representation were ensured.
- ✚ The system of CRA is very systematic, easiest to understand and presentable to the community.
- ✚ Having scope to give individual comments to build report.
- ✚ The community people spontaneously participated in CRA as it is self explanatory and interesting.

5. A.9) Lessons learned:

- ✚ Conduct CRA in rainy season, when the community people spare sufficient time for group work as it is very long process.
- ✚ Involvement of Union Disaster Management Committee in the process of CRA activities is very risky and makes them aware and responsible to take lead role in the implementation of community need based activities.
- ✚ Learn to DMC's members of union and pourasova that the task is for them.
- ✚ Not to be depended to the DMCs for selection of group participants.
- ✚ Assistance from GoB Officials is most essential to get the adequate support from them to accomplish the targeted activities accordingly. So we are involving them in the process of implementation at every level of project activity, especially the involvement of upazila Project Implementation Officer make more easier and build ownership.
- ✚ Build ownership of the UDMC and community to properly accomplish the task as it is very tough.
- ✚ Teamwork is far better and sustainable initiatives than individual initiates.
- ✚ Build enough confidence of the community people and DMC's towards implementing agencies if there is a provision to accomplish hardware activity besides software program activity.

5. A.10) Recommendation for improvement:

- ✚ Disable can't participate as per desire of the system of CRA as they can't say something, share their views, and so exclude their representation from the process of CRA.
- ✚ Create opportunities to incorporate children in the CRA process.
- ✚ CRA process is too long, so it can be reduced to complete short time.
- ✚ Community level gathering may organize to make people aware about LDRRAP, especially by wards, by union inviting all levels of participation.

5.B) Identified risks reduction options by DMCs and by risk/hazard types:

The risks have been identified by hazards, ranked and prioritized by voting of the participants, those are as follows-

DIARA UNION		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Flood	Crops may damage.	Kopotakkha river bed dressing
		cultivate rice in high land
		Homestead vegetables cultivation
		Goat and duck rearing
	Roads can inundate and damage.	Re-construct & raise the roads up to 4 feet high than previous flood levels.
		Roads site plantation
Arsenic	The people may attack by drinking of arsenic contaminated water.	Install arsenic free deep tube-well
		Construction of water plants for rain water harvesting.
		Make aware on arsenic & its demerits
Flood	Fish from pond/gher may washout.	Digging pond/gher by planning
Waterlogging	Crops cultivation may hamper & cultivated crops may damage	Cultivate crops, which may grow in water stagnant land.
		Cultivate hydroponics (Floating garden)
Drought	Crops production may hamper	Arrange irrigation by digging of ditches
		Cultivate the drought resist variety of crops
River bed sealtration	Rainwater can overflow, inundate & may damage crops.	Construct embankment on the bank of river
		Develop, finalize & follow river dressing and embankment construction policy.
Waterlogging	Educational institutions can inundate	School ground raising
Flood	Muddy kacha houses may damage	Raise homestead ground up to 3 feet high than previous flood levels.
	People may attack by water born disease	Construct sluice gate to control the flood water
Waterlogging	Fodder crisis may happen	Cultivation grass in high land
Heavy rainfall	Crops production may disrupted	Cultivate the early variety of rice
	Communication may hamper by damaging muddy roads.	Construct culvert for drain out the surplus water
River bed sealtration	Fish from pond/gher may washout.	Supervise the river management system
Fish virus	Fish can die by attacking viral disease	Provide training on handicrafts
Tornado	Produced crops may damage before harvest	Early and late variety of crops cultivation
	Thatched made house may damage	Construct shelter

JOYNAGOR UNION		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Flood	Field crops may damage	Kopotakkha river dressing
		Connecting canal with river will be re-excavated
		Homestead cultivation
		Cattle, goat, milky cow and duck rearing fattening
	Establish tree nursery & handicrafts by trining	
Flood	Fish from pond/gher may washout	Raise the dike of pond/gher at least 4 feet high than flood level
		Digging of pond/gher by planning
Waterlogging	Cultivation may suspended	Early or late variety of crops cultivation
Flood	Communication system may disrupted	Roads side plantation
		Roads carpeting for sustainability
	Muddy houses may damage	Homestead ground rising at least 4 feet high than flood level.
		Construct houses on RCC pillar

Arsenic	May crisis of safe drinking water & people may attack by different disease	Arsenic free deep tube-well may install
		Construct rain water harvester
		Make people aware by training on affect of arsenic
Flood	Fodder crisis may happen	Construct culvert on the roads
	Education system may disrupted	Pacca school house may construct
	Treatment system may hamper by inundating hospital	Develop strong management committee for river & canal management.
Drought	Crops yield may reduce	Drought resist variety of crops may cultivate
Waterlogging	Roads in low area may inundating	Raise roads at least 3 feet high than flood level
	Educational institutions may close	Education institutional ground raise at least 4 feet high than flood level
Waterlogging	People may attack by water born diseases	Hospital and family welfare center may rise at least 4 feet high than flood level.
Riverbed sealtration	Education institutions may inundate	Raise plinth of education institutions considering flood level

JUGIKHALI UNION		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Flood	Crops may damage	Kopotakkha river dressing
		Digging river connected all canals
		Homestead cultivation
		Provide training on handicrafts
		Cattle, goat, milky cow and duck rearing/fattening
	Roads can inundate & wash out	Raise & construct roads at least 4 feet high than flood level and roads site plantation
Arsenic	People may attack by arsenic-oasis disease	Sluice gate construction
		Install arsenic free deep tube-well
		Make people aware on arsenic
Flood	House can damage	Construct rain water harvester
		Raise houses at least 4 feet high than flood level
Waterlogging	Roads can inundate	Raise school ground at least 4 feet high than flood level
	Cultivation may hamper	Raise & carpeting the roads & construct culvert
Flood	Fish from pond/gher can washout	Cultivation of waterlogging resist variety of crops
Drought	Crops yield may reduce	Raise the dike of pond/gher
		Provide irrigation by installing deep tube-well
Waterlogging	Muddy houses can damage	Cultivate drought resist variety of crops
Flood	Fodder crisis may happen	Houses construction on RCC pillar
Waterlogging	School hose may inundate	Grow grass at high area
	Fodder crisis may happen	Raise schools ground at least 4 feet high than flood level.
Tornado	Produced crops may damage	Grow grass at high area
Hailstorm	Produced crops may damage	Early or late variety of crops cultivation

JALALABAD UNION		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Waterlogging	Cultivation may hamper	Kopotakkha river dressing
		Internal canal digging & sluice gate construction
Arsenic	May crisis of safe drinking water	Install arsenic deep tube-well
		Install pond sands filter
		Construct rainwater harvester
		Make people aware through training
Waterlogging	Roads can damage	Raise roads at least 4 feet high than flood level
		Construct need based culvert
		Roads carpeting for its survivability
Flood	Crops can damage	Waterlogging resist variety of crops cultivation
	Houses can damage	Raise houses at least 4 feet high than flood level Construct shelter
	Low laying roads can inundate	Raise low laying roads by earth filling at least 4 feet high than flood level
	Fish from pond/gher can washout	Raise the dike of pond/gher at least 4 feet than flood level
	Schools can inundate	Rise school ground at least 4 feet than flood level and raise the pacca plinth.
Waterlogging	Muddy houses can damage	Rise houses at least 4 feet than flood level
Flood	Fodder crisis may happen	Grow fodder at high land
Tornado	School house can fly away	Construct RCC made school houses
	Crops damage	Provide support to establish small trades for disable
	Muddy & weak houses can damage	Construct houses on RCC pillar
Hailstorm	Produced crops may damage	Cultivate early variety of crops
Heavy rainfall	Crops damage	Duck rearing, cattle/goat/milky cow fattening
		Homestead cultivation
		Provide training on handicrafts
Drought	Crops production yield may reduce	Drought resist variety of crops cultivation

KUSHODANGA UNION		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Waterlogging	Cultivation may hamper	Kopotakkha river dressing
		Internal canal digging & sluice gate construction
		To execute river/canal dressing policy develop strong management committee
Arsenic	May crisis of safe drinking water	Install arsenic deep tube-well
		Install pond sands filter
		Construct rainwater harvester
		Make people aware through training
Waterlogging	Roads can damage	Raise roads at least 4 feet high than flood level
		Construct need based culvert
		Roads carpeting for its survivability

Flood	Crops can damage	Waterlogging resist variety of crops cultivation
	Houses can damage	Raise houses at least 4 feet high than flood level Construct shelter
	Low laying roads can inundate	Raise roads at least 4 feet high than flood level
	Fish from pond/gher can washout	Rise the dike of pond/gher at least 4 feet than flood level & plantation
	Schools can inundate	Rise school ground at least 4 feet than flood level and raise the pacca plinth & planattion.
Waterlogging	Muddy houses can damage	Rise houses at least 4 feet than flood level
Flood	Fodder crisis may happen	Grow fodder at high land
Tornado	School house can fly away	Construct RCC made school houses
	Crops damage	Provide support to establish small trades for disable
	Muddy & weak houses can damage	Construct houses on RCC pillar
Hailstorm	Produced crops may damage	Cultivate early variety of crops
Heavy rainfall	Crops may damage	Duck rearing, cattle/goat/milky cow fattening
		Homestead cultivation
		Provide training on handicrafts
Drought	Crops production yield may reduce	Drought resist variety of crops cultivation

KOYLA UNION		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Waterlogging	Cultivation may disrupted	Digging Betraboti river
		Increase fish cultivation
		Deep water rice cultivation
		Increase horticulture
		Duck rearing, cattle, goat and milky cow fattening
		Training on handicrafts & small trades for disable
	Low laying and muddy made roads can inundated	Re-excavation of canals Proper use of river/canal re-excavation policy
Roads can waterlogging	Raise roads at least 4 feet high than waterlogging level.	
Kacha houses can damage	Fodder crisis may happen	Raise houses and construct on the RCC pillar
		Cultivate fodder at high land
Fish from pond/gher may washout		Raise dike at least 4 feet high than waterlogging level.
		Construct pond/gher by following govt. policy
Arsenic	People may attack by arsenic-oasis diseases.	Digging well or indara
		Install pond sands filter
		Construct rainwater harvester
		Make aware about demerits of arsenic through training
Drought	Crops production may reduce	Install deep tube-well for irrigation
		Drought resist variety of crops cultivation
	Fish of pond/gher may die for drying of water	Fish cultivation by irrigation through installation of deep-well at pond/gher.
		Digging pond deeply Quick & early growing variety of fish cultivation
Heavy rainfall	Fish from/gher can washout	Raise dike considering level.
	Produced crop may damage	Cultivate waterlogging resist crops like arum
Tornado	Kacha and weak houses can damage	Construct houses on RCC pillar

KERALKATA UNION		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Waterlogging	Cultivation may disrupted	Betraboti river dressing
		Fish cultivation
		Water stagnant resist variety of crops cultivation
		Construct embankment on the bank of Betraboti river
		Duck rearing, goat rearing
Drought	Low laying roads can inundate	Raise roads at least 4 feet high than water level
	Crops production may reduce	Develop irrigation facilities from river and canal
	Fish cultivation may disrupted	Install tube-well for irrigation in pond
Arsenic	May crisis of safe drinking water	Install arsenic free deep tube-well
		Construction of rainwater harvester
		Install pond sands filter
		Training on arsenic to make people aware
Heavy rainfall	Produced crops may damage	Homestead vegetables cultivation
		Provide training on handicrafts
Hailstorm	Produced crops may damage	Cultivate hailstorm resist crops
Flood	Crops may damage	Monoshadaha and Noukhal canal re-excavation
	Fish from pond/gher may washout	Establish good governance
		Remove un-lawful gher and Bari
		Raise dike of pond/gher at least 3 feet high than flood level
	Muddy roads can damage for inundation	Raise roads at least 4 feet high than flood
		Construct culvert & sluice gate
		Tree plantation

HELATOLA UNION		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Waterlogging	Cultivation may disrupted	Digging of Betraboti river
		Water resist variety of crops cultivation
		Ducks rearing, Cattle, milky cow and goat fattening
		Provide assistive device to disable
	Muddy roads may damage	River & canal excavation policy follow strongly
		Raise roads considering water level
		Roads carpeting for its sustainability
	Muddy houses can damage	Connecting canals with river re-excavation
House raising considering water level		
Fodder crisis may happen	Cultivation of grass at high land	
Arsenic	People may attack by arsenic-oasis	Install arsenic free deep tube-well as per need
		Install pond sands filter at the pond embankment
		Construct rainwater harvester
		Provide training to the community people on arsenic
Flood	Crops may damage	Construct culvert on the roads for passing of water
		Roads site plantation
		Provide training on handicrafts
Hailstorm	Produced Crops may damage	Early or late variety of crops cultivation
		Vegetables cultivation in homestead areas
Drought	crops production may hamper	Cultivate crops by modern technologies
Tornado	Produced crops may damage	Early or late variety of crops cultivation
	Muddy week houses may damage	Construct houses on RCC pillar

LANGALJHARA UNION		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Waterlogging	Cultivation may disrupted	Dressing of Betraboti river
		Water resist variety of crops cultivation
		Canal re-excavation
		Increase fish cultivation
	Low laying roads may damage	Raise the roads at least 3 feet high that flood level
		Roads site plantation
	Muddy houses may damage	Renovate sluice gate of the canals
Homestead ground raise		
Fodder crisis may happen	Cultivate grass at high lands	
People may attack by water born disease	Construct culvert at the starting point of canal	
	Make people aware on disease by training	
Arsenic	May crisis of safe drinking water	Construct rainwater harvester
		Install arsenic free deep tube-well
		Make people aware through training
Heavy rainfall	Low laying crops may inundate	Cattle, goat milky cow fattening & duck rearing
	Low laying roads may inundate	Raise the roads at least 3 feet high that flood level
	Fish from pond/gher may washout	Construct pond/gher by planning
Drought	Produced crops yield may reduce	Arrange irrigation from deep tube-well
	Fish may die for drying of water	Provide training to owner of the pond/gher
Tornado	Muddy/weak houses can damage	Construct houses on the RCC pillar
	Produced crops may damage	Training on handicrafts
Hailstorm	Produced crops may damage	Mudi business for disable

KERAGACHI UNION		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Waterlogging	Crops may disrupted	Dressing of Sonai river
		Cattle, goat & milky cow fattening, duck rearing.
		Water resist variety of crops production
	Muddy roads may inundate	Raise & tree plantation
	Fodder crisis may happen	Construct new sluice gate in the canals
		Cultivate latest variety of grasses
Muddy hoses may damage	House raising at least 3 feet than water level	
	Sealtrated canal re-excavation	
	Construct houses on RCC pillar	
Arsenic	People may attack by arsenic-oasis	Install arsenic free deep tube-well
		Install rainwater harvester
		Make people aware on arsenic-oasis
Heavy rainfall	Fish from pond/gher may washout	Net use to save the fish
		Follow the govt. rules at the time of pond/gher construction.
	Crops may damage	Cultivation of of homestead gardening
		Provide training on handicrafts
Drought	Muddy roads may inundate	Carpeting of roads and construction of culvert
		Crops production may hamper

CHANDANPUR UNION		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Waterlogging	Crops may inundate and damage	Dressing of Ichamoti & Sonai river
		Construct embankment on the bank of Ichamoti
		Fish cultivation as alternatively
		Cultivate water resist variety of rice
		Re-excavation of canal connected with river
		Duck rearing and cages fish cultivation
Flood	Roads can inundate and damage	Raise roads at least 4 feet high than water level Bamboo/wooden bridge construction
	May reduce cattle rearing field	Develop high place as cattle field
	Muddy and weak house may damage	Raise houses at least 4 feet high than water level
	Fodder crisis may happen	Cultivate grasses at high areas
	Produce crops may damage	Cattle, goat, milky cow fattening & homestead gardening. Provide training on handicrafts
Flood	Houses may damage	Raise houses at least 4 feet than water level.
	Fish from pond/Gher may washout	Raise dike at least 4 feet than water level
		Cultivate of short duration of fish
		Construct pond/gher as per planning
	Roads can inundate & disrupted communication	Raise roads at least 4 feet than water level. Provide support for disable on trolley business
School may inundate & suspend education	Raise school ground at least 4 feet than water level.	
Arsenic	People may attack by arsenic-oasis	Arsenic free deep tube-well installation
		Construct rainwater harvester
		Install pond sands filter
		Make people aware on arsenic-oasis by training
Drought	Crops production may hamper	Drought resist variety of crops cultivation
		Cool and mango cultivation increase
	Fish can die by viral disease	Install shallow tube-well for irrigation in pond/gher
Tornado	Crops may damage	Early variety of crops cultivation
	Muddy and weak houses can damage	Construct houses on RCC pillar
	School houses can fly away	Tree plantation

SONABARIA UNION		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Waterlogging	Crops may inundate and damage	Dressing of Sonai river following govt. policy
		Construct embankment on the bank of the Sonai river
		Dressing of canals connected with rivers following govt. policy
		Construct sluice gate in the face of canal
		Cultivate water resist variety of crops
	Muddy houses can damage	Raise houses considering water levels
Roads can inundate and damage	Raise and carpeting the roads	
Cattle rearing field may reduce	Raise the cattle rearing field	

Arsenic	People may attack by arsenic-oasis	Construction of rainwater harvester
		Install arsenic free deep tube-well
		Pond sands filter installation at pond embankment
		Provide training on arsenic-oasis for the people
Flood	Roads can inundate and disrupt communication	Raise roads at least 3 feet high than water level Construct culvert for passing of surplus water
	Fish from pond/gher may washout	Raise pond/gher at least 3 feet high than water level
	Crops can go under water & damage	Early variety of crops cultivation Duck rearing and cattle fattening
	Muddy houses can inundate & damage	Raise houses considering water levels
Drought	May reduce crops yield	Drought resist crops cultivation
	Fish can die by drying water	Construct pond/gher by following plan.
	People may attack by diseases	Make people aware through training
Heavy rainfall	Roads can washout	Carpeting the roads
	Fish from pond/gher may washout	Raise pond/gher at least 3 feet high than water level
	Crops may damage	Cultivate horticulture garden
	Fodder crisis may happen	Cultivate grasses at high land
Tornado	Produced crops may damage	Introduce early variety of crops
Hailstorm	Produced crops may damage	Introduce early variety of crops

KALAROA POURASOVA		
Name of hazard	Prioritized risks by voting of the participants	Risk reduction options
Arsenic	People may attack by arsenic-oasis	Construct rainwater harvester
		Install arsenic deep tube-well
		Make people aware about arsenic through training
Waterlogging	Cultivation may hamper	Water resist variety of crops cultivation
		Training on handicraft
		Small business for the disables
	Communication can disrupted by damaging roads	Dressing of Betrabeti river
		Raise roads at least 3 feet high than water level
		Re-excavation of canals
Fish can attack by alterative disease	Cattle, goat and milky cow fattening & duck rearing	
Fodder can damage	Cultivate grasses at high land	
Houses can damage	Raise houses at least 3 feet high than water level	
Flood	Crops can go under water & damage	Construct embankment at the bank of Betrabeti river
	Communication can disrupted by damaging roads	Construct culvert
		Carpeting the roads and roads site plantation
Fish from pond/gher can washout	Construct pond/gher by planning	
Drought	Yield may reduce of crops	Install deep tube-well for irrigation
	Fish can die by drying water	Install shallow machine at the embankment of pond/gher
Tornado	Weak houses can damage	Construct houses on RCC pillar
	Ripped rice can damage	Homestead vegetables cultivation

5. C) Details of the risk reduction options implemented with impacts:

The following interventions implemented following LDRRAP

5. C .i) Embankment re-construction:

a) Name of Intervention:

Establish Linkage between Growth center (Market) and Community for evacuation of vulnerable people by repairing Road from Diara Kashiadanga Bazar to Diara Malek Sardar house for Local Disaster Risk Reduction in Diara union.

a.a) Project location: Village- Kashiadanga, Union- Diara, Upazila-Kalaroa, District- Satkhira

a-b) Justification of the project:

Diara is one of the unions in Kalaroa upazila, which is highly vulnerable for Waterlogging and also more vulnerable to climate change impacts. Actually the flood and waterlogging started from 1995 and finally from 2000 it's become as continuous and permanent hazards. In the union there is a road connected from local market to community and district road. Out of the total road only 01 KM was washed out and damaged by the flood 2000, but after that the road was not repaired. Every year the floodwater was coming in the community through the damaged part of the road and inundating the community house including plinth, damaging crops, vegetables, pond, gher and other assets including livestock, increasing suffering of women, children, elderly people, disable and sick people. Actually the road is very important and having relation with the livelihood system of the community people as because the damaged part of road inundated during flood every year and stop the communication of the community people and created another problems to evacuate the vulnerable people from affected villages. Even though stop the education for huge number of children stop the income of van/rickshaw driver and they were becoming unemployed. Ultimately the poor people were becoming more vulnerable situation. It was threatening for life risk for school attending children, besides that the students were losing quality of education for suspended of their classes. Actually repairing of the proposed road was very essential to reduce the risk of the vulnerable community people. We found in the CRA process that the condition of the road was more harmful. Community people find out the embankment and include in the developed RRAP for re-construction



a.c) Implementation period: April 25 to May 25, 2007

a.d) Involvement of DMC:

Following LDRRAP the project has been prioritized, selected, designed, agreement with land owner, agreement with labor, labor management, supervision and progress monitoring etc everything have been done by the Union Disaster Management Committee and other community people by forming Project Implementation Committee consists of 07 member, which also formed by the DMC in their meeting.

The member of the Project Implementation Committee is as follows-

1.	Md.Anwarul Islam	Project Chairman	Present UP Chairman
2.	Md. Rafiqul Islam	Member secretary	F O, Samadhan
3.	Md. Motiar Rahman	Member	UDMC member & UP Member
4.	Md.Mizanur Rahman	-Do-	UDMC member & UP Member
5.	Mrs. Aleya Begom	- Do-	DMC Member
6.	Mrs. Shamettovan	-Do -	Beneficiaries
7.	Md. Motiar Rahman	- Do-	Beneficiaries

a.e) Role of Samadhan:

Samadhan has been played role of facilitator to make UDMC proactive, writing project proposal for the activity, collected clearance certificate from Upazila Project Implementation Officer to avoid overlapping, taken approval from CDMP. Provided financial and technical support to the UDMC during implementation, measurement, payment and ensure the quality of the project, necessary documentation and reporting.

a.f) Total cost of the Intervention: BDT. 300,333.00, in addition to that tk. 36,500.00 have been spent by the community people, which calculated as their physical labor.

a.g) Impact of the activity:

Re-construction of one Embankment for evacuation in Diara union by which 2000 vulnerable people have been evacuated during flood period, 100 acres of crop land, 1 mandrasha, 1 primary school & 8 fish Gheer have been saved from over flow water of river **Kopotakkha** in rainy season.

a.h) Benefit to the poor and disadvantaged:

- ✚ Reduced livelihood risks from hazards as their cultivable lands are now free from flood/Waterlogging.
- ✚ Growing crops are saved and total lands are under cultivation.
- ✚ Children from poor and disadvantaged family will get education opportunities as their families getting employment opportunities.
- ✚ The community people got secured shelter for flood and Waterlogging.
- ✚ Producing different variety of crops on the secured and risk free crops land

b) Name of Intervention:

Establish shelter/Linkage between Growth centers for evacuation of vulnerable people by re-constructing Embankment from Sharoshkathi Khetrapara molla parar mor to khordabatra Kinu pramanic house mor in Joynagor union.

b.a) Project location: Village- Sharoshkathi, Union- Joynagor, Upazila- Kalaroa, District- Satkhira.

b.b) Justification of the project:

Sharoshkathi was most vulnerable village in Joynagor union under Kalaroa upazila in Satkhira district. In the village there was an embankment at the bank of Koptakkha River. Total of 4000 feet of that embankment was washed out for flood-2000 and more or less 4700 peoples were affecting for flooding and waterlogging every year and increasing their sufferings gradually. The people were losing their different family belongings, damaging field and homestead crops and disrupting communication with growth center, even though during flood/waterlogging they can't take shelter when their houses were in inundation condition. As a result the people were becoming more vulnerable situation and their livelihood systems was in threatening for continuous flooding/waterlogging as the areas are stand on the bank of the Kopotakkah River. Actually re-construction of proposed Embankment was very essential and highly justified as it was creating disaster every year and after re-construction the disaster risks have been reduced, as well as enhanced opportunities to production of crops in both field & homestead areas, marketing and shelter facilities for the vulnerable people. Community people find out the embankment and include in the developed RRAP for re-construction.



b.c) Implementation period: May 20 to June 30, 2008

b.d) Involvement of DMC:

Following LDRRAP the project has been prioritized, selected, designed, labor management, supervision everything have been done by the Union Disaster Management Committee and other community people by forming Project Implementation Committee consists of 07 member, which also formed by the DMC in their meeting.

The member of the Project Implementation Committee is as follows-

1.	Md. Bazlur Rahman	Project Chairman	UDMC member & UP Member
2.	Md. Shamimur Rahaman	Member secretary	FS, Samadhan
3.	Ms. Tanzila Khatun	Member	UDMC member & UP Member
4.	Md. Abul Kashem	-Do-	Local elite
5.	Md. Haider Ali	- Do-	UDMC member and teacher representative
6.	Mr. Kartick Chandra	-Do -	Disable Beneficiary
7.	Md. Jharna Khatun	- Do-	Beneficiaries representative

b.e) Role of Samadhan:

Samadhan has been played role of facilitator to make UDMC proactive, writing project proposal for the activity, collected clearance certificate from Upazila Project Implementation Officer to avoid overlapping, taken approval from CDMP. Provided financial and technical support to the UDMC during implementation, measurement, payment and ensure the quality of the project, necessary documentation and reporting.

b.f) Total cost of the Intervention: BDT. 229,969.00, in addition to that taka 10,500.00 have been spend by the community people, which calculated as their physical labor.

b.g) Impact of the activity:

4000 feet old Embankment re-constructed in Joynagor union by earth filling, through which 500 acres of crop land, 1000 people, 5 Gher, 25 Pond, 150 household with commodities 3 Mosque have been saved from water logging.

b.h) Benefit to the poor and disadvantaged:

- ✚ Reduced livelihood risks from hazards as their cultivable lands are now free from flood/Waterlogging.
- ✚ Growing crops are saved and total lands are under cultivation.
- ✚ Children from poor and disadvantaged family will get education opportunities as their families getting employment opportunities.
- ✚ The community people got secured shelter for flood and Waterlogging.
- ✚ Producing different variety of crops on the secured and risk free crops land

c) Name of Intervention:

Establish shelter/Linkage between Growth centers for evacuation of vulnerable people by repairing of Embankment from east side of Sharoshkathi high school to Golaghatarhat mor in Joynagor union.

c.a) Project location: Sharoshkathi-Khetrapara, Union-Joynagor, Upazila-Kalaroa, District-Satkhira.

c-b) Justification of the project:

Sharoshkathi is most vulnerable village in Joynagor union under Kalaroa upazila in Satkhira district. In the village there is an embankment at the west bank of Koptakkha River. Total of 2.5 km of that embankment was washed out for flood-2000, licked, rat cutting and for which more or less 3500 peoples were affecting for flooding and waterlogging every year; increasing sufferings gradually. The people are losing their family belongings, damaging field and homestead crops and disrupting communication with growth center, even though during flood/waterlogging they can't take shelter when their houses will be in inundation condition. As a result the people becoming more vulnerable situation and their livelihood systems were in threatening for continuous flooding/waterlogging as the areas are stand on the bank of the Koptakkha River.

Actually repairing of proposed Embankment is very essential and highly justified as it was some where washed out, some where licked and rate cutting, which creating disaster every year, even though without repairing the total embankment was in threatening for damage and questioned for huge money to reconstruct again. After repairing damaging risk of the embankment have been reduced and disaster risks also reduced, as well as enhanced opportunities for production of crops in field & homestead areas, marketing and shelter facilities for the vulnerable people now ensured. Community people find out the embankment and include in the developed RRAP for re-construction.

c.c) Implementation period: May 30 to July 30, 2008

c.d) Involvement of DMC:

Following LDRRAP the project has been prioritized, selected, designed, labor management, supervision everything have been done by the Union Disaster Management Committee and other community people by forming Project Implementation Committee consists of 07 member, which also formed by the DMC in their meeting.

The member of the Project Implementation Committee is as follows-

1.	Md. Bazlur Rahman	Project Chairman	UDMC member & UP Member
2.	Md. Shamimur Rahaman	Member secretary	FS, Samadhan
3.	Ms. Tanzila Khatun	Member	UDMC member & UP Member
4.	Md. Abul Kashem	-Do-	Local elite
5.	Md. Haider Ali	- Do-	UDMC member and teacher representative
6.	Mr. Kartick Chandra	-Do -	Disable Beneficiary
7.	Md. Jharna Khatun	- Do-	Beneficiaries representative

c.e) Role of Samadhan:

Samadhan has been played role of facilitator to make UDMC proactive, writing project proposal for the activity, collected clearance certificate from Upazila Project Implementation Officer to avoid overlapping, taken approval from CDMP. Provided financial and technical support to the UDMC during implementation, measurement, payment and ensure the quality of the project, necessary documentation and reporting.

c.f) Total cost of the Intervention: BDT. 69,914.00, in addition to that taka 15,500.00 have been spend by the community people, which calculated as their physical labor.

c.g) Impact of the activity:

2.5 km Embankment repaired by earth filling, through which 200 acres of crop land, 500 people, 10 Gheer, 30 household with commodities have been saved from water logging.

c.h) Benefit to the poor and disadvantaged:

- ✚ Reduced livelihood risks from hazards as their cultivable lands are now free from flood/Waterlogging.
- ✚ Producing different variety of crops on the secured and risk free crops land
- ✚ The community people got secured shelter and communication opportunities round the year.
- ✚ Producing different variety of crops on the secured and risk free crops land.
- ✚ Houses of the community people especially poor and disadvantaged have been safely saved.

5. C.ii) Homestead ground rising:

a) Name of Intervention:

Make community houses flood free by raising homestead ground to reduce Local Disaster Risk Reduction in Jugikhali and Jalalabad union.

a.a) Project location:

18 houses in Mathpara under Ufapur, 14 houses in Gajipara, 7 houses in Purbopara Gochmari, 12 houses in Bororajnagor, 5 houses in Paschim Khanpara, 16 houses in Dakhinpara upafapur, 18 houses in Maniknagor villages, total of 80 nos. houses in Jugikhali union & 25 houses in Boddopur, 19 houses in Shangkarpur, 31 houses in Narayanpur, 49 houses in Ahsannagor, 45 houses in Shinghalal villages, total of 169 nos. houses in Jalalabad union. As a whole total of 259 houses in Kalaroa upazila under Satkhira district.

a-b) Justification of the project:

The proposed areas were highly vulnerable for continuing Water logging and Flood since 2000. The proposed areas were inundated every year by floodwater. As a result the women, children, disable and elderly people school students were becoming in a vulnerable situation. Every year the homestead production and other assets are loosing including houses hold belongings assets also. The peoples were taking shelter on roads, schools and other places with other member of the family and family belongings. The people becoming sick, especially women (Pregnant & lactating mother) and children of the affected areas. Increasing their sufferings for different moveable water born diseases.

Other than that all the off and on farming IGA related activities were hampering and for why the affected people were becoming unemployed, selling their family assets by token of prices to mitigate their immediate needs and sufferings. The situation were beyond control of the affected people every year and hampering/disrupting their livelihood pattern. Most of the houses of the affected areas are inundating every year. The latrine, tube-well, kitchen, firewood's and other essential items and commodities were also going under water and damaging.



The respective UDMC members of Jugikhali and Jalalabad are most sincere in relation to risk reduction program. They are trained and become aware by different initiatives of Samadhan to reduce risk by implementing different options of CRA. UDMC has been requested to implement the proposed activities and them also taken different initiatives to accomplished intervention accordingly and ensured their involvement for the better implement. Actually homesteads ground rising made people risk free and quality of their livelihood system enhanced. Community people find out the homesteads especially in the low laying and include in the developed RRAP for rising.

a.c) Implementation period:

32 houses in April 01 to 30, 2007 and 227 houses in March 29 to May 30, 2008.

a.d) Involvement of DMC:

Following LDRRAP the project have been prioritized, selected, designed, MoU with labors, labor management, supervision everything have been done by the Union Disaster Management Committee and other community people by forming Project Implementation Committee consists of 07 members each, which were also formed by the DMC in their meeting.

The list of 3 PICs are as follows-

PIC for raise 32 houses in Jugikhali union in 2007:

1.	Md. Ismail Hossain	Project Chairman	UDMC member & UP Member
2.	Md. Ropfiqul Islam	Member secretary	F O, Samadhan
3.	Ms. Shahida Khatun	Member	UDMC member & UP Member
4.	Md. Fazlur Rahman Molla	-Do-	Local elite
5.	Md. Samsur Rahman	-Do-	UDMC member & Teacher
6.	Ms. Rehana Khatun	-Do-	Disable Beneficiaries
7.	Md. Abdus Satter	-Do-	Beneficiaries

PIC for raise 58 houses in Jugikhali union in 2008:

1.	Md. Mifijul Islam	Project Chairman	UDMC member & UP Member
2.	Md. Rofiqul Islam	Member secretary	F O, Samadhan
3.	Ms. Nargis Begum	Member	UDMC member & UP Member
4.	Md. Atiar rahman	-Do-	Local elite
5.	Md. Asharaf Hossain	- Do-	UDMC member and teacher representative
6.	Md. Mostak Ali Gaji	-Do -	Disable Beneficiary
7.	Md. Shiddique Mali	- Do-	Beneficiaries representative

PIC for raise 169 houses in Jalalabad union in 2008:

1.	Md. Asgor Ali	Project Chairman	UDMC member & UP Member
2.	Md. Shamimur Rahman	Member secretary	F O, Samadhan
3.	Ms. Begum samsun nhara	Member	UDMC member & UP Member
4.	Md. Moylana Abdul Monaem	-Do-	Local elite
5.	Mrs. Najmun Nahar	- Do-	UDMC member and teacher representative
6.	Ms. Khadiza begum	-Do -	Disable Beneficiary
7.	Ms. Jharna Begum	- Do-	Beneficiaries representative

a.e) Role of Samadhan:

Samadhan has been played role of facilitator to make UDMC proactive and linkage with UDMCs, writing project proposal for the activity, collected clearance certificate from Upazila Project Implementation Officer to avoid overlapping, taken approval from CDMP. Provided financial and technical support to the UDMC during implementation, measurement, payment and ensure the quality of the project, necessary documentation and reporting.

a.f) Total cost of the Intervention: BDT. 1,399,601.00, in addition to that taka 240,821.00 have been spend by the beneficiaries, which calculated as their physical labor.

a.g) Impact of the activity:

Total of 259 homestead ground have been raised in Jugikhali and Jalalabad union under Kalaroa upazila in Satkhira district under the supervision of UDMC. 1366 vulnerable people have been directly benefited by the activities, 259-nos. flood affected vulnerable family become flood free with secured shelter, The community people are producing year round vegetables and livestock in the homestead area, The women, children of the community becoming well nourishing,

a.h) Benefit to the poor and disadvantaged:

- ✚ Family belongings have been safely saved from flood/waterlogging.
- ✚ The disable, sick and elderly people become free from flood/waterlogging.
- ✚ Homestead productions have been saved from flood/waterlogging & increased, which supplemented to their family income.
- ✚ The poor people got employment opportunities as their houses including homestead areas are saved from flood/waterlogging.

5. C.iii) Institutional ground rising:**a) Name of Intervention:**

Make flood shelter for vulnerable people by raising School ground through earthwork for Local Disaster Risk Reduction in Joynagor union.

a.a) Project location:

Village-Sharoskathi, Union- Joynagor, Upazila- Kalaroa, District- Satkhira

a-b) Justification of the project:

Sharoskathi bazar, Sharoskathi School, khetra para, Ufapur and Gazna are the neighbored villages and stand on the bank of Kopotakkha River. The said areas are one of the permanent water logging area in Joynagor union which is highly vulnerable for continuing Water logging and Flood since 2000. The total area goes under water at least 04 to 05 feet's of flood water and or waterlogging for 6 to 7 month in every. As a result the women, children, disable and elderly people become in a vulnerable situation for un-availability of shelter in the locality. The peoples were taking shelter in roads, schools and other places with family member and family belonging in very far area from their village. Besides that the students of Sharoskathi united secondary school were the victim in the area. The said institution was affecting every year for flood and waterlogging. Finally 3 to 6 feet's of floodwater are standing in the school ground at least for 4 to 6 months, even though the plinth of the school house was also inundating for every year. So the schools class was suspended for a long time. Ultimately 400 to 500 students were losing quality education for the flood and waterlogging. So there no alternative except raise of school ground to reduce the vulnerability of the affected people and students of Joynagor union. Community people find out the education institution as shelter and include in the developed RRAP for rising.



a.c) Implementation period: May 1 to June 30, 2008

a.d) Involvement of DMC:

Following LDRRAP the project have been prioritized, selected, designed, MoU with labors, labor management, supervision everything have been done by the Union Disaster Management Committee and other community people by forming Project Implementation Committee consists of 07 members each, which were also formed by the DMC in their meeting.

The member of the Project Implementation Committee is as follows-

1.	Md.Afil Uddin	Project Chairman	UDMC member & UP Member
2.	Md. Achia khatun	Member secretary	F O, Samadhan
3.	Ms. Tanzila Khatun	Member	UDMC member & UP Member
4.	Md.Ebadur Haque	-Do-	UDMC member and Head teacher of the school
5.	Mrs. Salina Khatun	- Do-	Beneficiaries
6.	Md. Shahidul Islam	-Do -	Disable Beneficiatties
7.	Md. Abdur Rahman	- Do-	Local elite

a.e) Role of Samadhan:

Samadhan has been played role of facilitator to make UDMC proactive and linkage with UDMCs, writing project proposal for the activity, collected clearance certificate from Upazila Project Implementation Officer to avoid overlapping, taken approval from CDMP. Provided financial and technical support to the UDMC during implementation, measurement, payment and ensure the quality of the project, necessary documentation and reporting.

a.f) Total cost of the Intervention: BDT. 227,158.00, in addition to that taka 59324.00 have been spend by the community people, which calculated as their physical labor.

a.g) Impact of the activity:

More or less 500 students' getting opportunities to attend school regularly as the school is now free from flood/waterlogging by raising the ground. The communities people may take shelter during flood/waterlogging with their livestock assets and other family belongings.

a.h) Benefit to the poor and disadvantaged:

- ✚ Poor and disadvantaged people may take shelter during disaster including family belongings during flood/waterlogging.
- ✚ The disable, sick and elderly people also can take shelter during flood/waterlogging.
- ✚ Education facilities established as the school is now free from flood/waterlogging.

b) Name of the intervention:

Make flood shelter for vulnerable people by raising institutional ground through earthwork at Bamonali registered primary school in Jugikhali union in Kalaroa upazila.

b.a) Project location: Bamonali registered primary school in Jugikhali union in Kalaroa upazila in Satkhira district

b.b) Justification of the project:

Jugikhali union is highly vulnerable for continuing Water logging and Flood since 2000. The total area goes under water at least 04 to 05 feet's of flood water and or waterlogging for 6 to 7 month in every year. As a result the women, children, disable and elderly people become in a vulnerable situation for un-availability of shelter in the locality. The peoples were taking shelter in roads, schools and other places with family member and family belonging in very far area from their village. The people were becoming sick especially women (Pregnant & lactating mother) and children in the affected area and were increasing their sufferings for different moveable water born diseases. The situation was beyond control of the affected people every year and hampering/disrupting their livelihood pattern. Most of the houses of the affected areas were inundating every year. The latrine, tube-well, kitchen, firewood and other essential items and commodities were going under water and damaging.

Besides that the students of Bamonali registered primary school are another victim in the area. The said institution was inundating every year for flood and water logging. Finally 2 to 3 feet's of floodwater were standing in the school ground at least for 4 to 6 months, even though the plinth of the school houses were also inundating for every year. So the schools classes were suspending for a long time. Ultimately 200 to 250 nos. students were losing from quality education. There was no alternative except raise of school ground to reduce the vulnerability. Actually the proposed institutional ground was most important place to make it secured flood shelter to accommodate the affected people including livestock during disaster. Even though enhance the quality of education for a huge number of students round the year. Community people find out the institute and include in the developed RRAP for rising.



b.c) Implementation period: March 1 - 31, 2008

b.d) Involvement of DMC:

Following LDRRAP the project has been prioritized, selected, designed, labor management, supervision everything have been done by the Union Disaster Management Committee and other community people by forming Project Implementation Committee consists of 07 member, which also formed by the DMC in their meeting.

The member of the Project Implementation Committee is as follows-

1.	Md. Mizanur Rahman	Project Chairman	UDMC member & UP Member
2.	Md. Rofiqul Islam	Member secretary	F O, Samadhan
3.	Ms. Shahida begum	Member	UDMC member & UP Member
4.	Md. Mizanur Rahman	-Do-	Local elite
5.	Md. Samsur rahman	- Do-	UDMC member and teacher representative
6.	Ms. Jamela Khatun	-Do -	Disable Beneficiary
7.	Md. Sardi Mallik	- Do-	Beneficiaries representative

b.e) Role of Samadhan:

Samadhan has been played role of facilitator to make UDMC proactive, writing project proposal for the activity, collected clearance certificate from Upazila Project Implementation Officer to avoid overlapping, taken approval from CDMP. Provided financial and technical support to the UDMC during implementation, measurement, payment and ensure the quality of the project, necessary documentation and reporting.

b.f) Total cost of the Intervention: BDT. 168,104.00, in addition to that taka 7,000.00 have been spend by the community people, which calculated as their physical labor.

a.g) Impact of the activity:

- ✚ School is now flood/waterlogging free.
- ✚ The school class may not be suspended, earlier which was suspended for 3 to moths.
- ✚ The education will not be disrupted i.e. the quality of education will be enhanced for 185 student.
- ✚ The flood affected people may take shelter with house assets i.e the community people got flood free shelter.

b.h) Benefit to the poor and disadvantaged:

- ✚ Poor and disadvantaged people may take shelter during disaster including family belongings during flood/waterlogging.
- ✚ The disable, sick and elderly people also can take shelter during flood/waterlogging.
- ✚ Education facilities established as the school is now free from flood/waterlogging.

c) Name of Intervention;

Ensure Emergency treatment facilities for vulnerable people by raising institutional ground through earthwork at **Shorashkati Satellite Clinic** in **Joynagor** union.

c.a) Project location: Shorashkati Satellite clinics ground rising in **Joynagor** union in Kalaroa upazila under Satkhira district.

c.b) Justification of the project:

Joynagor union is highly vulnerable for continuing Waterlogging and Flood since 2000. The total area goes under water at least 03 to 05 feet's of flood water and or waterlogging for 3 to 5 months in every year. As a result the women, children, disable and elderly people were becoming in a vulnerable situation for unavailability of shelter in the locality. The peoples were taking shelter in roads, schools and other places with family member and family belonging from far area from their village in the unhygienic context. The people were becoming sick especially women (Pregnant & lactating mother) and children in the affected areas and increasing their sufferings for different moveable water born diseases. The situation was becoming beyond control of the affected people every year and hampering



their Health condition. Besides that Shorashkati Satellite Clinic was inundating every year by 3 to 5 feet of water and the affected people were depriving from emergency treatment. As a result the sufferings of the affected people were increasing very severely and rapidly, through the raising of Shorashkati Satellite Clinic, emergency treatment of the community people is now ensured and their sufferings have been reduced. Community people find out the health clinic and include in the developed RRAP for rising.

c.c) Implementation period: March 20 – April 20, 2008

c.d) Involvement of DMC:

Following LDRRAP the project has been prioritized, selected, designed, agreement with local authority, agreement with labor, labor management, supervision and progress monitoring etc everything have been done by the Union Disaster Management Committee and other community people by forming Project Implementation Committee consists of 07 member, which also formed by the DMC in their meeting.

The member of the Project Implementation Committee is as follows-

1.	Ms. Tanzila Begum	Project Chairman	UDMC member & UP Member
2.	Md. Yousuf Islam	Member secretary	F O, Samadhan
3.	Md. Afil Uddin	Member	UDMC member & UP Member
4.	Md. Bozlur Rahman	-Do-	Local elite
5.	Md. Ebadul Haque	- Do-	UDMC member and teacher representative
6.	Hazi Shahidul Islam	-Do -	Disable Beneficiary
7.	Ms. Kamrunnahar	- Do-	Beneficiaries representative

c.e) Role of Samadhan:

Samadhan has been played role of facilitator to make UDMC proactive, linkage with authority of clinics, writing project proposal for the activity, collected clearance certificate from Upazila Project Implementation Officer to avoid overlapping, taken approval from CDMP. Provided financial and technical support to the UDMC during implementation, measurement, payment and ensure the quality of the project, necessary documentation and reporting.

c.f) Total cost of the Intervention: BDT. 39,421.00, in additions to that taka 2,500.00 have been spend by the community people, which calculated as their physical labor.

c.g) Impact of the activity:

Raised Saroskati Satellite clinic, through which more or less 2000 people have come to receive clinical services per and the ground might be used as flood shelter during flood if occur.

c.h) Benefit to the poor and disadvantaged:

- ✚ The poor people get treatment facilities during flood/waterlogging as the clinic is now flood free.
- ✚ The people can take shelter during disaster including family belongings during flood/waterlogging.
- ✚ The disable, sick and elderly people also can take shelter during flood/waterlogging.
- ✚ Children from poor and disadvantaged family getting emergency treatment facilities.

d) Name of Intervention:

Make flood shelter for vulnerable people by rising institutional ground through earthwork of Narayanpur registered primary school for Local Disaster Risk Reduction in Jalalabad union.

d.a) Project location: Narayanpur registered Primary school, Narayanpur, Jalalabad union under Kalaroa under Satkhira district.

d.b) Justification of the project:

Narayanpur village in Jalalabad union was highly vulnerable for continuing Water logging and Flood. The total area goes under water at least 04 to 05 feet's of flood water and or waterlogging for 6 to 7 month in every

year. As a result the women, children, disable and elderly people become in a vulnerable situation for unavailability of shelter in the locality. The peoples were taking shelter in roads, schools and other places with family member and family belonging from far areas. Besides that the students of **Narayanpur registered primary school** were another victim in the area. The said institution was affecting every year for flood/waterlogging. Finally 2 to 3 feet's of floodwater are standing in the school ground at least for 4 to 6 months, even though the plinth/floor of the school house was also inundating every year. So the schools class were suspending for a long time. Ultimately 150 to 250 nos. students were depriving from quality education for the flood/waterlogging. Actually the proposed institutional ground was most important to make it secured as flood shelter to accommodate the affected people including livestock during disaster. Even though enhance the quality of education for a huge number of students round the year. Community people find out the institution and include in the developed RRAP for rising.



d.c) Implementation period: March 1 to 31, 2008

d.d) Involvement of DMC:

Following LDRRAP the project has been prioritized, selected, designed, agreement with local authority, agreement with labor, labor management, supervision and progress monitoring etc everything have been done by the Union Disaster Management Committee and other community people by forming Project Implementation Committee consists of 07 member, which also formed by the DMC in their meeting.

The member of the Project Implementation Committee is as follows-

1.	Md. Shofiquil Islam	Project Chairman	UDMC member & UP Member
2.	Md. Rofiquil Islam	Member secretary	F O, Samadhan
3.	Ms. Jaherun Nessa	Member	UDMC member & UP Member
4.	Md. Master Shahidul Islam	-Do-	Local elite
5.	Mrs. Najmun Nahar	- Do-	UDMC member & teacher representative
6.	Md. Fazlur Rahman	-Do -	Disable Beneficiaries
7.	Md. Shahidul Islam	- Do-	Beneficiaries representative

d.e) Role of Samadhan:

Samadhan has been played role of facilitator to make UDMC proactive, linkage with authority of clinics, writing project proposal for the activity, collected clearance certificate from Upazila Project Implementation Officer to avoid overlapping, taken approval from CDMP. Provided financial and technical support to the UDMC during implementation, measurement, payment and ensure the quality of the project, necessary documentation and reporting.

d.f) Total cost of the Intervention: BDT. 77,417.00, in additions to that taka 38,824.00 have been spend by the community people, which calculated as their physical labor.

d.g) Impact of the activity:

250 nos. students are enrolled in the school round the year in an un-disturbing situation by the hazards; the communities peoples taking shelter during disaster and other people of the areas are safely saved from major affects of flood/waterlogging.

d.h) Benefit to the poor and disadvantaged:

- ✚ Poor and disadvantaged people may take shelter during disaster including family belongings during flood/waterlogging.
- ✚ The disable, sick and elderly people also can take shelter during flood/waterlogging.
- ✚ Education facilities established as the school is now free from flood/waterlogging.
- ✚ Children from poor and disadvantaged family getting education opportunities round the year.

5. C.iv) Embankment construction:

a) Name of Intervention:

Establish shelter/Linkage between Growth center for evacuation/provide service to the vulnerable people by constructing Embankment from Fokirghat to Dofadar parar mor via Pajakholarghat in Diara union under ERMF-LDRRAP Project in Kalaroa upazila under Satkhira district.

a.a) Project location: Village- Diara, Union- Diara, Upazila- Kalaroa, District- Satkhira.

a.b) Justification of the project:

Diara village is one of the biggest villages in Diara union, which is most vulnerable. More or less 5000 peoples are living in this village and affecting for flooding and waterlogging every year since 2000, the people were losing their household belongings, damaging field and homestead crops and disrupting communication for growth center, even though during flood/waterlogging they can't take shelter, when their houses were in inundating condition i.e. there were no any high area, where they can take shelter. As a result the people were becoming more vulnerable situation, their livelihood systems was always in threatening for continuous flooding/waterlogging as the areas are stand on the bank of the Kopotakkah river. Finally the people of said village especially the school going children, van/rickshaw puller and common people were the real sufferers. Actually construction of proposed Embankment was very essential and highly justified as the Embankment reducing risks and as well as enhancing opportunities to crops production both field & homestead areas. Created opportunities for school going children, marketing facilities and shelter facilities for 5000 nos. vulnerable people Community people find out the embankment and include in the developed RRAP for construction.



a.c) Implementation period: May 12 to June 30, 2008

a.d) Involvement of DMC:

Following LDRRAP the project has been prioritized, selected, designed, agreement with land owner, agreement with labor, labor management, supervision and progress monitoring etc everything have been done by the Union Disaster Management Committee and other community people by forming Project Implementation Committee consists of 07 member, which also formed by the DMC in their meeting.

The member of the Project Implementation Committee is as follows-

1.	Md. Mizanur Rahman	Project Chairman	UDMC member & UP Member
2.	Md. Rofiqul Islam	Member secretary	F O, Samadhan
3.	Ms. Alam	Member	UDMC member & UP Member
4.	Alhaz Abdullah Khan	-Do-	Local elite
5.	Md. Mokshed Ali	- Do-	UDMC member and teacher representative
6.	Md. Lutfor Rahman	-Do -	Disable Beneficiary
7.	Md. Ibrahim Hossain	- Do-	Beneficiaries representative

a.e) Role of Samadhan:

Samadhan has been played role of facilitator to make UDMC proactive, writing project proposal for the activity, collected clearance certificate from Upazila Project Implementation Officer to avoid overlapping, taken approval from CDMP. Provided financial and technical support to the UDMC during implementation, measurement, payment and ensure the quality of the project, necessary documentation and reporting.

a.f) Total cost of the Intervention: BDT. 1,061,320.00, in additions to that taka 15,500.00 have been spend by the community people, which calculated as their physical labor.

a.g) Impact of the activity:

8750 feet new Embankment has been constructed by earth filling in Diara union, through which 1000 acres of crop land, 4000 living people, 20Gheer, 65 pond, 8 Km Connecting road, 550 household with commodities, 4 Mosque, 1 Hafizia mandrasha with 65 student, 1Dhakhil mandrasha with 85 student, 1Local Bazar, 1High School with 240 student, 1 Primary school with 160student, 1KG School with 50 student have been saved and benefited from water logging.

a.h) Benefit to the poor and disadvantaged:

- ✚ Reduced livelihood risks from hazards as their cultivable lands are now free from flood/Waterlogging.
- ✚ Growing crops are saved and total lands are under cultivation.
- ✚ Children from poor and disadvantaged family will get education opportunities as their families getting employment opportunities.
- ✚ The community people got secured shelter for flood and Waterlogging.
- ✚ Producing different variety of crops on the secured and risk free crops land under the embankment.

5. C.V) Canal re-excavation:

a) Name of the intervention:

Canal Re-excavation project from Narayanpur Abdul Gafur Fish Gher to Katra Bdridge via Jahajmari for Local Disaster Risk Reduction in Jalalabad union.

a.a) Project location: Narayanpur Abdul Gafur Fish Gher to Katra Bdridge via Jahajmari in Jalalabad union in Kaalroa upazila under Satkhira district

a-b) Justification of the project:

Jalalabad is one of the unions in Kalaroa upazila, which is highly vulnerable for Water logging, Floods, Agricultural Droughts and Arsenic Contamination and also vulnerable to climate change impacts. The union has total of 11 villages in 09 wards with a total population of 16760 (Male-8482, Female-8278). The people of Jalalabad union are experienced in different types of natural hazards like flood water logging, arsenic contamination in tube-well water etc. Though we found during CRA that there were many of risks associated hazards and causes of which their livelihood pattern were disrupting. Actually the flood and water logging started from 1995 and finally from 2000 it's become as continuous and permanent hazards.

In the union there was a canal connected with Kopotakkha River, which divided the union into two parts. The canal bed siltrated and made high, than beel and crops land area, causes of which rainwater can't drain out to the big river and finally created disaster and make people sufferers for food and shelter. The total area over flooded every year and damaging the field crops, homestead crops, livestock, pond, gher and other family assets every year. Finally the waterlogging was turning into a paramagnet disaster in the name of waterlogging. The people were becoming assets less, unemployed, facing famine situation and disrupting their



livelihood pattern. Increasing sufferings of women, children, elderly people, disable and sick people, especially the school-attending students of the areas. Even though stopping the education for huge number of children, stop the income of van/rickshaw driver and they were becoming unemployed. The price of daily commodities was raising high in the local markets. Ultimately the poor people become more vulnerable situation. It was really threatening and risk for survivability of the community people for future.

Actually re-excavation of the proposed was very essential to reduce the risk of the community people. We found in the CRA process that the present condition of the canal was very hurtful instead of helpful. So the primary group of CRA and union DMC both the forum requested to re-excavate it as priority basis. The UDMC organized and conducted one meeting and finalized the proposal through meeting minutes by forming Project Implementation Committee. Community people find out the canal and include in the developed RRAP for re-excavation.

a.c) Implementation period: April 15 to May 30, 2007

a.d) Involvement of DMC:

Following LDRRAP the project has been prioritized, selected, designed, labor management and supervision etc everything have been done by the Jalalabad Union Disaster Management Committee and other community people by forming Project Implementation Committee consists of 07 member, which also formed by the DMC in their meeting.

The member of the Project Implementation Committee is as follows-

1.	Md.Nurul Islam	Project Chairman	UDMC member & UP Member
2.	Md. Achia khatun	Member secretary	F O, Samadhan
3.	Ms. Zherul Nessa	Member	UDMC member & UP Member
4.	Md.Anis uddin maral	-Do-	Beneficiaries
5.	Mrs. Khodeza Khatun	- Do-	Disable Beneficiaries
6.	Ms. Nazunnahar	-Do -	UDMC member and Teacher
7.	Md. Ershad Hossain	- Do-	Local elite

a.e) Role of Samadhan:

Samadhan has been played role of facilitator to make UDMC proactive, writing project proposal for the activity, collected clearance certificate from Upazila Project Implementation Officer to avoid overlapping, taken approval from CDMP. Provided financial and technical support to the UDMC during implementation, measurement, payment and ensure the quality of the project, necessary documentation and reporting.

a.f) Total cost of the Intervention: BDT. 256,495.00, in additions to that taka 36,500.00 have been spend by the community people, which calculated as their physical labor.

a.g) Impact of the activity:

One canal re-excavated in Jalalabad union at Narayanpur Gofur's Gheer to Shingholal Bridge, through which 55 families with their household commodities, 200 acres of crop land, 1 Ebtadaee mandrasha with 40 students, 1 Reg. primary school with 120 students, 55 fish Gher save from water logging.

a.h) Benefit to the poor and disadvantaged:

- ✚ The poor people got earning sources by earth cutting for which the surplus water is passing out and cultivable lands becoming cultivation.
- ✚ Created scope for employment opportunities of the poor.
- ✚ The other disadvantaged people may fishing and selling the fish in the market.

5. C. VI) Connecting road:

a) Name of intervention:

Establish Linkage by constructing connecting Road from Bamonali sluice gate to Sattar Dofadar house in Jugikhali union.

a.a) Project location:

Village- Bamonali, union- Jugikhali, upazila- Kalaroa and district- Satkhira

a-b) Justification of the project:

Bamonali is another one most vulnerable village in Jugikhali union under Kalaroa upazila in Satkhira district. More or less 20 nos. household are living in this village and affecting for flooding and waterlogging every year since 2000. In the village Bamonali road was only the mode of communication for 20 families, but in the middle of that road under Bamonali village total of 360 feet road has been washed-out and inundating by 4 to 5 ft of water every year. So that is why the people of said village with school going children were sufferings across that particular place of washed out road and even though the life of school going children's were questioned in rainy season. The problem continuing 4 to 6 months in every year and the people becoming victim of waterlogging, actually construction of proposed road was very essential to reduce the risk of the vulnerable community people. Finally Community people find out the road and include in the developed RRAP for re-construction.



a.c) Implementation period: April 22 to May 22, 2008

a.d) Involvement of DMC:

Following LDRRAP the project has been prioritized, selected, designed, labor management and supervision etc everything have been done by the Jalalabad Union Disaster Management Committee and other community people by forming Project Implementation Committee consists of 07 member, which also formed by the DMC in their meeting.

The member of the Project Implementation Committee is as follows-

1.	Md. Mizanur Rahman	Project Chairman	UDMC member & UP Member
2.	Md. Rofiqul Islam	Member secretary	F O, Samadhan
3.	Ms. Shahida begum	Member	UDMC member & UP Member
4.	Md. Mizanur Rahman	-Do-	Local elite
5.	Md. Samsur rahman	- Do-	UDMC member and teacher representative
6.	Ms. Jamela Khatun	-Do -	Disable Beneficiary
7.	Md. Sardi Mallik	- Do-	Beneficiaries representative

a.e) Role of Samadhan:

Samadhan has been played role as facilitator to make UDMC proactive, writing project proposal for the activity, collected clearance certificate from Upazila Project Implementation Officer to avoid overlapping, taken approval from CDMP. Provided financial and technical support to the UDMC during implementation, measurement, payment and ensure the quality of the project, necessary documentation and reporting.

a.f) Total cost of the Intervention: BDT. 16,922.00, in additions to that taka 2,500.00 have been spend by the community people, which calculated as their physical labor.

a.g) Impact of the activity:

360 feet of connecting road constructed by earth filling, through which 25 family members of water logging affected areas have been used the road as their communication way. So they can move easily from house to another place round the year.

a.h) Benefit to the poor and disadvantaged:

- ✚ Establish communication scope over the year and reduced risks to hazards
- ✚ Created scope for easy communication, especially for school going children.
- ✚ The school students are now risk free and easily can go their school.
- ✚ The poor van puller can drive their van round the year as the road is now free from flood/waterlogging

5. C.VII) Others:

a) Name of Intervention:

“Assistive Device supports for the disable to reduce risk by enhance mobility for the disable of Diara, Joynagor, Jugikhali and Jalalabad union.

a.a) Project location: Disables of Diara, Joynagor, Jalalabad and Jugikhali union under Kalaroa upazila under Satkhira district.

a-b) Justification of the project:

Different village of Diara, Joynagor, Jugikhali and Jalalabad unions of Kalaroa upazila under Satkhira district are seriously affected for flood and permanent waterlogging as long term climate change impacts. Said areas are highly vulnerable for continuing Waterlogging and Flood. 3 to 5 months of the year the houses of the areas are in inundation condition. As a result women, children, disable and elderly people becoming in more vulnerable situation, especially

the disable are the highly victim and always they are in risk as they can't move lonely. When other people taking shelter on roads, schools and other places with family belongings at that time the disable person wait for other member's help, but they can't spare time during any emergency situation. On the other hand always the disable persons are depended to other even though for his or her personal need like toilet, bathroom etc. Ultimately they becoming as family liabilities.. Community people find out the intervention and include in the developed RRAP for support.



a.c) Implementation period: September 15 to October 30, 2008

a.d) Involvement of DMC:

The respective UDMCs were involved to select the target disable.

a.e) Role of Samadhan:

Samadhan has been played role as facilitator to make UDMC proactive to select the target disable beneficiaries, writing project proposal for the support, taken approval from CDMP.

Procure and supply the necessary device support to the selected beneficiaries in presence of the District Relief and Rehabilitation Office, Satkhira, the respective Chairman of the UDMC etc.

a.f) Total cost of the Intervention: BDT. 32,100.00

a.g) Impact of the activity:

The disable person are now moving lonely and reduced dependency to other members of the family and as well reduced the risk for hazards.

a.h) Benefit to the poor and disadvantaged:

- ✚ The more vulnerable people for their disability got the opportunities to move alone, other members of the poor and disadvantaged family getting time for their livelihood development.

b) Name of Intervention:

Installation of emergency Tube-well to ensure safe drinking water for flood victims of Diara union

b.a) Project location: Diara math para in Kalaroa upazila under Satkhira district.

b.b) Justification of the project:

Different village of Diara, union of Kalaroa upazila under Satkhira district was seriously affected for Flood 2008. The people of 5 villages were in serious crisis for drinking water; they were drinking open water and attacking by different water born disease as the areas were under water. The tube-wells were beyond use as it was also under water. More or less 6354 peoples were sufferings and day by the sufferings were increasing. There were no any agency taken such initiatives to provide or installation any tube-well to mitigate the drinking water crisis, so installation of tube-well was most essential and highly justified. Community people find out it and include in the developed RRAP for installation.



b.c) Implementation period: October 19 to 22, 2008

b.d) Involvement of DMC:

The respective UDMC assisted to select the places where the tube-well has been installed and they will take care for proper management by involving community people.

b.e) Role of Samadhan:

Samadhan has been played role as facilitator to make UDMC proactive to select the places and community houses, writing project proposal for the support, taken approval from CDMP. Procure and supply the necessary materials, selected sinker group and fianlly installed the tube-well and constructed platform to ensure safe water.

b.f) Total cost of the Intervention: BDT. 11,890.00

b.g) Impact of the activity:

The flood/waterlogging people getting fresh water, they are free from contaminated water and as well as their children. Women, disable and other family members are safely saved from different water born disease.

b.h) Benefit to the poor and disadvantaged:

- ✚ The more vulnerable people drinking fresh water, reduced risk for drinking water, especially whose have been taken shelter on the temporary shelter.

c) Name of Intervention:

“Establish Hydroponics demonstration (Floating Garden)” in Diara union

c.a) Project location: - Diara Mathpara, Union- Diara, Upazila- Kalaroa, District- Satkhira.

c.b) Justification of the project:

Climate change is one of the important issues and its causes behind the ecological imbalance, which bearing some changes like too hot, heavy rain fall, evolution of wild beast, changing the cropping pattern, over flood and waterlogging etc. As a result practically found that 6 month is drought and rest 6 six-month is rain. Ultimately the local people becoming the victims of climate change issues, losing livelihood options, creating

unemployment and poverty. Finally they are in the situation of livelihood risks and questioned for their survivability.

Different villages of Diara union of Kalaroa upazila under Satkhira district are seriously affected for permanent waterlogging as causes of climate change impacts. Some crops land of low lying areas are under water and no any crops are growing in low lying area based villages most of the time of the year. So the peoples of that particular areas especially the women, children, disable and elderly people becoming in more vulnerable situation, even though homestead production and other assets are losing including houses. The people's sufferings are increasing round the year, facing famine situation for poverty and depending on relief support. Ultimately their livelihood pattern is disrupting very rapidly & seriously and becoming poorest of the poor and as well as increasing national liabilities day by day.

Considering the aforesaid painful vulnerability of affected people for long term climate change affects the project aimed to establish total of 18 nos. demonstrations on hydroponics as alternative

livelihood options as pilot basis, 03 nos. boat supports have been provided for intercultural operation of floating beds and other materials support also to establish the garden. Now the activity has been supplemented to reduce their livelihood risk. Community people find out the option and include in the developed RRAP for technical and financial support.



c.c) Implementation period: July 10 to October 31, 2008

c.d) Involvement of DMC:

The respective UDMC assisted to select the places and beneficiaries where the floating garden established. Other than that the DMC ensured the security of produced crops from stealing.

c.e) Role of Samadhan:

Samadhan has been played role as facilitator to make UDMC proactive to select the places and community houses, writing project proposal for the support, taken approval from CDMP. Procure and supply the necessary materials, provided technical support, boat support for construction, intercultural operation and establish the hydroponics.

c.f) Total cost of the Intervention: BDT. 29,855.00, in additions to that taka 17,200 have been spend by the beneficiaries, which calculated as their physical labor.

c.g) Impact of the activity:

The flood/waterlogging people getting sufficient vegetables from the floating garden, which consuming instead of rice some time, selling the surplus, earning money, reducing mal nourish

c.h) Benefit to the poor and disadvantaged:

✚ The more vulnerable people got opportunities for work, use waterlogged land and water hyacinths, producing different variety of vegetables, which are supplemented to reduce their livelihood risk..

d) Name of Intervention:

“Establish Hydroponics (Floating Garden)” in Diara union by providing technical support as matching fund with “Hundred Days Employment Creation Project” of the government of peoples republic of Bangladesh.

d.a) Project location:

Village- Pakuria, Mathpara, Kashiadanga, Karigorpara, and Jankha, Union- Diara, Upazila- Kalaroa, District- Satkhira.

d.b) Justification of the project:

Different villages of Diara union of Kalaroa upazila under Satkhira district is seriously affected for permanent waterlogging as the causes of climate change impacts. Some crops land of low lying areas are under water and no any crops are growing in low lying area based villages most of the time of the year. So the peoples of that particular areas especially the women, children, disable and elderly people becoming in more vulnerable situation, even though homestead production and other assets are losing including houses and its other belongings. The people's sufferings are increasing for round the year, facing famine situation for poverty and depending on relief support. Ultimately their livelihood pattern is disrupting rapidly, seriously and becoming poorest of the poor, as well as increasing national liabilities day by day.

Considering the aforesaid painful vulnerability of affected people for long term climate change affects the project aimed to establish total of 150 beds of hydroponics as alternative livelihood options by the project support to reduce livelihood risk for 50 nos. vulnerable beneficiaries, 5 nos. boat support will be provided for intercultural operation of floating beds and other materials support will be provided to establish the garden. So, the activity might be supplemented to reduce livelihood risk of the vulnerable people of Kalaroa upazila. Community people find out the option and include in the developed RRAP for technical and financial support.



d.c) Implementation period: September 25 to October 25, 2008

d.d) Involvement of DMC:

The Chairman of the Diara UDMC has been provided labors to construct the beds of hydroponics, ensuring security from stealing etc.

d.e) Role of Samadhan:

Samadhan has been played role as facilitator to make UDMC proactive to select the places and community houses, writing project proposal for the support, taken approval from CDMP. Requested to the UNO and DC to divert fund to construct floating garden, Procure and supply the necessary materials, provided technical support, boat support for construction, intercultural operation and establish the hydroponics.

d.f) Total cost of the Intervention: BDT. 69,420.00

d.g) Impact of the activity:

The flood/waterlogging people getting sufficient vegetables from the floating garden, which consuming instead of rice some time, selling the surplus, earning money, reducing mal nourish

d.h) Benefit to the poor and disadvantaged:

- ✚ The more vulnerable people got opportunities for work, use waterlogged land and water hyacinths, producing different variety of vegetables, which are supplemented to reduce their livelihood risk.
- ✚ Reducing livelihood risks of the poor inhabitants of Kopotakkha river basin areas.

e) Name of Intervention:

Set Signboard for community awareness on disaster risk reduction in Diara, Joynagor, Jugikhali and Jalalabad Union under Kalaroa upazila

e.a) Project location:

Important & populous common places in Diara, Joynagor, Jalalabad and Jugikhali union under Kalaroa upazila

e.b) Justification of the project:

Different village of Diara, Joynagor, Jugikhali and Jalalabad unions of Kalaroa upazila under Satkhira district are seriously affected for local disaster. Said areas are highly vulnerable for continuing Waterlogging, Flooding and long term climate change impacts since 2000. Mostly 3 to 5 months of the year the houses and crops land are inundating by rain water. As a result women, children, disable and elderly peoples becoming in more vulnerable situation. The homestead production and other assets are losing including houses. The peoples are taking shelter in roads, schools and other places and facing famine situation for food/shelter, depending on relief support and ultimately their livelihood pattern is disrupting for damaging houses including plinth, homestead crops, field crops, livestock, increasing suffering for everybody of the family for disaster and as well as unaware people.

The local disaster is creating problems one after one, damaging & losing different assets every year for disaster and as well as lacking of knowledge i.e. major causes of the unawareness of the community people may make more vulnerable. The community peoples can easily reduce some risk through preparedness if they become aware about disaster risks. This projects aims to set some signboard with awareness messages in different important and common places with easy access of the maximum people. Community people find out the means for mass people awareness and include in the developed RRAP for necessary arrangement. Through which the mass people can get opportunities to learn about way of risk reduction. So, set of signboard is highly justified. By this time the draft awareness message is duly edited and finalized by the CDMP.



e.c) Implementation period: September 15 to October 15, 2008

e.d) Involvement of DMC:

The Diara UDMC has been selected the places, where the signboard have been installed and set, ensuring security of the message in the community level from stealing.

e.e) Role of Samadhan:

Samadhan has been played role as facilitator to make UDMC proactive to select the places, where the message board have been set, writing project proposal for the billboard, taken approval from CDMP, constructed bill boards, writing and setting the bill board.

e.f) Total cost of the Intervention: BDT. 31,987.00

e.g) Impact of the activity:

The flood/waterlogging people getting sufficient disaster risk reduction message from the board.

e.h) Benefit to the poor and disadvantaged:

- + The mass people becoming aware from the message.
- + People got different messages for alternative livelihood options.

f) Name of intervention:

Daylong orientation on climate change issues and its affectivity for Diara, Joynagor, Jugikhali and Jalalabad Union Disaster Management Committee of Kalaroa upazila.

f.a) Project location: Diara, Joynagor, Jalalabad and Joynagor union disaster management committee under Kalaroa upazila under Satkhira district.

f.b) Justification of the project:

Different village of Diara, Joynagor, Jugikhali and Jalalabad unions of Kalaroa upazila under Satkhira district are seriously affected for permanent water logging. Said areas are highly vulnerable for continuing Waterlogging and Flood since 2000. 3 to 5 months of the year the houses of the areas were inundating by 2.5 ft to 4.5 ft of water. As a result women, children, disable and elderly people were becoming in more vulnerable situation. The homestead production and other assets were losing including houses. The peoples were taking shelter in roads, schools and other places, they were facing famine situation for food/shelter and depending on relief support and ultimately their livelihood pattern was disrupting for damaging of house including plinth, homestead crops, vegetables, livestock, increasing suffering for everybody of the family.

Climate change is another one importance issues and its causes behind ecological imbalance, which bearing some changes like too hot, heavy rain fall, evolution of wild beast, changing the cropping pattern, over flood etc. As a result practically found that 6 month is drought and rest 6 six-month is rain. Ultimately the local people becoming the victims of climate change situation, losing livelihood options, creating unemployment and poverty. Finally they are in the situation of livelihood risks and questioned for survivability. So, that is why 01 daylong orientation for 04 nos. UDMCs consists of 36 member i.e. a total 144 nos. participants become aware and sensitized to reduce the affect of climate change, those whose might be encouraged to the community people to make them oriented on the issue. Community people find out the option and include in the developed RRAP for implementation.



f.c) Implementation period: January 14 to 17, 2008

f.d) Involvement of DMC:

Respective UDMC have been organized the training in a same venue, they have been received training from Samadhan and playing role in their own community, Union Parishad and other places, where they going and discussing climate change issues, its affectivity.

f.e) Role of Samadhan:

Developed training module, schedule, motivate the UDMCS to organize them and conducted training following module and schedule, then provided other technical support.

f.f) Total cost of the Intervention: BDT. 32,136.00

f.g) Impact of the activity:

The community people becoming aware and have been taken different initiatives to reduce climate change and implementing different alternative activity in relation of the same for save and protect from climate change impacts.

f.h) Benefit to the poor and disadvantaged:

- ✚ The people become aware and reducing risk for loses of their assets, taking initiatives for alternative livelihood options at their raised houses.
- ✚ Replicating the ideas in the community levels

g) Name of intervention:

Climate change issues and its affectivity and package of alternative livelihood options” are ongoing on in Diara, Joynagor, Jugikhali and Jalalabad Union.

g.a) Project location: Diara, Joynagor, Jalalabad and Joynagor union disaster management committee under Kalaroa upazila in Satkhira district.

g.b) Justification of the project:

Different village of Diara, Joynagor, Jugikhali and Jalalabad unions of Kalaroa upazila under Satkhira district are seriously affected for permanent waterlogging. Said areas are highly vulnerable for continuing Waterlogging and Flood since 2000. 3 to 5 months of the year the houses of the areas are inundating by 2.5 ft to 4.5 ft of water. As a result women, children, disable and elderly people were becoming in more vulnerable situation. The homestead production and other assets were losing including houses. The peoples were taking shelter in roads, schools and other places, they facing famine situation for food/shelter and depending on relief support and ultimately their livelihood pattern was disrupting for damaging of house including plinth, homestead crops, vegetables, livestock, increasing suffering for everybody of the family.



Climate change is another one importance issues and its causes behind ecological imbalance, which bearing some changes like too hot, heavy rain fall, evolution of wild beast, changing the cropping pattern, over flood etc. As a result practically found that 6 month is drought and rest 6 six-month is rain. Ultimately the local people becoming the victims of climate change situation, losing livelihood options, creating unemployment and poverty. Finally they were in the situation of livelihood risks and questioned for survivability. So that why community beneficiaries made aware and sensitized on climate change issues, its affects and alternative livelihood options package for their survivability by changing and adaptation of some new options i.e. growers' and environment friendly options is reducing their livelihood risks. Total of 324 nos. community people of the proposed unions have been trained. The three separate categories of beneficiaries were the participants as follows-

- (i) The male farmer
- (ii) The female landless people including women headed family and abundant women
- (iii) Disable/ both male and female from separate

family. Now the trained beneficiaries becoming aware sensitized and inspired to adaptation of alternative livelihood options like- Cattle fattening, Milky cow



fattening, Vegetables cultivation, Homestead gardening, Tree nursery, Poultry rearing, Deepwater rice cultivation, Use safe water, Primary health care, Seed preservation, Small business, Fish cultivation, handicraft & IPM. Community people find out the option and include in the developed RRAP for implementation.

g.c) Implementation period: February 9 to August 30, 2008

g.d) Involvement of DMC:

Selection of beneficiaries, follow up and support to beneficiaries to establish alternative livelihood options in community levels.

g.e) Role of Samadhan:

Selection of beneficiaries with the help of DMC members developed training module and schedule, hiring resources person, organized and conducted training, provided technical support to the beneficiaries at their house level to establish different livelihood options, linkage with different GoB/NGO officials for service providers at local level.



g.f) Total cost of the Intervention: BDT. 193, 541.00

g.g) Impact of the activity:

The people become aware about climate change, established different livelihood options like at community level Cattle fattening, Milky cow fattening, Vegetables cultivation, Homestead gardening, Tree nursery, Poultry rearing, Deepwater rice cultivation, Use safe water, Primary health care, Seed preservation, Small business, Fish cultivation, handicraft & IPM.

g.h) Benefit to the poor and disadvantaged:

The beneficiaries gained knowledge on climate change issues, its affects and package of alternative livelihood options, established some additional environment friendly earning sources.

5. d) Details on the capacity building initiatives:

SL	Name of Training/meeting/workshop	# of Training/meeting/workshop	Output
1	Project inception meeting with project team	1	10 staffs (Male-6, Female-4) become aware about the project goal, objective and interventions.
2	Staff training on project implementation strategies	1	10 staffs (Male-6, Female-4) have been aware about project goal, objectives, activities & implementation strategies
3	Staff training on organizational policy procedures	1	10 staffs (Male-6, Female-4) have been participated in orientation on organizational policy procedures and used the learning's to implement the project activities.
4	ToT for project staff on CRA	1	10 staffs (Male-6, Female-4) have been gained knowledge on CRA process and as accordingly conducted and completed the task to the point as per guideline.
5	Inception meeting	14	The DMCs members of 12 unions, 1 pourasova and 1 upazila

SL	Name of Training/meeting/workshop	# of Training/meeting/workshop	Output
	with union, pourasova & upazila DMCs		become aware about the project goal, objective and interventions.
6	ToT for 26 Core Trainer	1	26 Core trainers (Male-13, Female-13) have been gained knowledge on CRA process and as accordingly assisted to DMCs for conduction of CRA in field.
7	Training for union DMCs on CRA process	27	12 union DMC consist of 36 members have been gained knowledge on CRA process and as accordingly completed CRA, compiled wards information & developed union report in the name of LDRRAP.
8	Training for pourasova DMC	1	01 pourasova DMC consist of 36 members have been gained knowledge on CRA process and as accordingly completed CRA, compiled wards information & developed pourasova report in the name of LDRRAP.
9	Training for Upazila DMC	1	01 upazila DMC consist of 40 members have been gained knowledge on CRA process and as accordingly assisted to the other DMC members to complete CRA and compiled union reports & developed upazila compilation report in the name of LDRRAP.
10	Staff orientation on baseline survey process & questioners.	1	Total 10 staffs have been orientated on baseline survey process and questionnaire, then they have been conducted baseline accordingly with 100 individual household in each of 12 unions and 01 pourasova. Other than that conducted baseline survey for 12 union DMC's and 01 pourasova DMC also. Finally compiled and produced the survey report.
11	Conducted baseline survey with different category of people by FGD session	13	The participants become aware about different harmful hazards by season, its risk, seasonal livelihood options and its risks etc and role of DMCs before, during and after hazards. Finally one compilation report on baseline survey has been produced.
12	Conducted Pre-CRA	13	The participants become aware about different harmful hazards by season, its risk, seasonal livelihood options and its risks, developed hazards maps, social maps, vulnerability maps, Venn diagrams, seasonal livelihoods calendars by unions, which used in CRA process to develop final LDRRAP
13	Conducted CRA	314	The participants become aware about different harmful hazards by season, its risk, seasonal livelihood options and its risks etc, different risks reduction options, action plan and its different effects. Finally produced 14 nos. of LDRRAP.
14	UDMC orientation on climate change issues and its affectivity.	4	04 unions DMC consist of 36 members become aware on climate change issues and its affectivities.
15	Beneficiaries training on climate change issues, its affects and package of alternative livelihood options	12	313 nos. community beneficiaries both farmers, women and disable from Diara, Joynagor, Jugikhali and Jalalabad union become critically aware about climate change issues, its affects and package of alternative livelihood options. Beneficiaries become aware about climate change impact and how to cope with the situation & adapted with alternative livelihood option like as Cattle fattening, Milky cow fattening, Vegetables cultivation, Homestead gardening, Tree nursery,

SL	Name of Training/meeting/workshop	# of Training/meeting/workshop	Output
			Poultry rearing, Deepwater rice cultivation, Use safe water, Primary health care, Seed preservation, Small business, Fish cultivation, handicraft & IPM
16	Beneficiaries training on Hydroponics	1	18 vulnerable people (M-06, F-12) become aware on hydroponics cultivation, set demonstration of hydroponics by constructing 18 nos. bed of floating garden by water hyacinth as alternative livelihood option in waterlogging context, from where total of 18 nos. families will get livelihood support.
17	Lessons learn workshop	1	Different level of stakeholders from primary CRA groups, union, pourasova, upazila and district levels DMCs have been participated and sharing their experience in the workshop like-shortfall, learning for the betterment of the project for future, details report attached herewith.

5. e) Advocacy/awareness and networking:

The advocacy/awareness and networking related activities are as follows-

- e.a) Organized and conducted project inception meeting with 12 unions, 1 pourasova and 1 upazila DMC of Kalaroa upazila separately, where some other key stakeholder like journalist, GoB officials, NGO officials, teachers, religious leader etc. of the upazila were actively participated.
- e.b) 26 Core trainers (Male-13, Female-13) from 12 unions and 1 Pourasova have been selected jointly with the respective DMC's and made them trained on CRA process & conduction of CRA training for UDMC's.
- e.c) Organized and conducted 3 days training on Hazards & Risk Reduction issues for 420 members of 12 unions DMC's, 36 members of 1pourasova DMC & 36 members of upazila DMC's.
- e.d) Out of 4 UDMCs (Diara, Joynagor, Jugikhali and Jalalabad union total 128 members have been aware on climate change issues and its affectivity through training.
- e.e) 18 nos. male and female beneficiaries become aware through 5 days training on floating garden and established garden.
- e.f) 313 nos. beneficiaries both male, female and disable of Diara, Joynagor, Jugikhali and Jalalabad union become aware on climate change issues and its affectivity and package of alternative livelihood options and practicing its in their household level and establishing gradually to reduce livelihood risks.
- e.g) 10 nos. Billboard setting in different populous important palaces of Diara, Joynagor, Jugikhali and Jalalabad union for awareness of mass people of those union to reduce their risks.

6. Budget and delivery by major output/events:

SL	Name of events	Budget	Delivery
1	Project inception meeting with project team	0	1742
2	Staff training on project implementation strategies	0	1482
3	Staff training on organizational policy procedures	0	1352
4	ToT for project staff on CRA	0	30788
5	Inception meeting with union, pourasova & upazila DMCs	0	80593
6	ToT for 26 Core Trainer	105000	104949
7	Training for union DMCs on CRA process	240000	238838
8	Training for pourasova DMC	20000	19461

SL	Name of events	Budget	Delivery
9	Training for Upazila DMC	20000	19752
10	Group work with primary group of beneficiaries & plenary meeting with 12 unions & 1 pourasova DMCS for CRA.	260000	259858
11	Discussion meeting with union DMCs	48000	15917
12	Compilation meeting with Upazila DMC	5000	5215
13	UDMC orientation on climate change issues and its affectivity	32136	32136
14	Print LDRRAP	43000	43968
15	Beneficiaries training on climate change issues, its affects and package of alternative livelihood options	194000	193541
16	Beneficiaries training on Hydroponics	13500	13484
17	Collected GIS based Hazards Maps	5000	5789
18	Conduct baseline survey	20000	20000
19	Reconstruction of growth center in Diara union	300500	300333
20	32 Homestead ground raising Jugikhali union	285125	283115
21	1 Canal re-excavation in Jalalabad union	293500	256495
22	1 Institutional ground raising Sharashkati in Joynagor union	220444	227158
23	1 Institutional ground raising (Health center in Joynagor)	39577	39421
24	1 Institutional ground raising Bamonali in Jugikhali union	168750	168104
25	58 nos. Homestead ground raising	339283	343767
26	169 nos. Homestead ground raising	776872	772719
27	Visualized risk reduction interventions by setting 71 signboard at raised houses	17750	17750
28	1 Institutional ground raising Narayanpur in Jalalabad	77616	77417
29	Construction of 1 connecting road Jugikhali union	17000	16922
30	Construction of 1 Embankment in Diara union	1060000	1061320
31	Re-construction of 1 Embankment in Joynagor union	230000	229969
32	Repairing of 1 Embankment in Joynagor union	70000	69914
33	Setup demonstration on hydroponics by constructing 18 nos. bed of floating garden	30000	29855
34	Assistive device support	32100	32100
35	Billboard setting for community awareness	32000	31987
36	Installed tube-well	11900	11890
37	Lessons learning workshop	15000	15000
38	Construct new floating garden by UDMC	69425	69420

7. Key Challenges faced and action undertaken to overcome the challenges:

a) Key challenges faced:

- ✚ Re-organize of different levels DMCs with adequate number of members as per SoD.
- ✚ Tracking of information during baseline survey as because participants' information found inconsistency in the same union and ward.
- ✚ Conduction and Completion of baseline survey and CRA during rainy season, as because the some areas were affected for water logging and the people were suffering for food and shelter specially in Diara, Joynagor, Jugikhali, Jalalabad etc union. The affected people were searching relief support to reduce their immediate suffering.
- ✚ Ensure participation of the participants for daylong CRA session without compensation (Conveyance) as the task is for 05 days for some participants as they are poor & day labor, when there was some seasonal work scope to sale manual labor.
- ✚ During plenary session UP members were always try (burgeoning) to incorporate new plan for development work against their own areas in the LDRRAP, which created debate and un-wanted situation.
- ✚ Union DMC (Union Parishad) can't make confidence towards the planning made by them about its implementation in future.
- ✚ Area demarcation for other two partner NGO's, which were the causes of misunderstanding with other DMC members.
- ✚ Some union Parishad Bhaban was not appropriate place for group work.
- ✚ Initially found political unrest and then some UP representatives were taken shelter at out side of the union during CRA for strict law implementation by the caretaker government.
- ✚ Make women oriented with the CRA process to give their valuable comments and opinion especially in the first and final plenary, where other male leaders were present.
- ✚ Accomplish the earthwork related activity in rainy season.

b) Action undertaken to overcome the challenges:

- ✚ Requested to CDMP for issue an letter by the Secretary of Food and Disaster Management Bureau to DC and UNO to extend their cooperation, accordingly we received letter and handed over to the DC, Satkhira and UNO, Kalaroa.
- ✚ Shared with Upazila DMC Chairman, who authorized to alternative person from the respective UDMC.
- ✚ Build liaison, linkage, Co-ordination and communication with DMC's.
- ✚ The project team worked hard with tight schedule.
- ✚ Arranged the CRA group works in different school and open playground.
- ✚ Collected no objection certificate from Upazila Project Implementation Officer, in favor of proposed activity to avoid any overlapping.
- ✚ Follow up and Linkage with CDMP to get hurry approval the activities to start and finish immediately before rainy season.

8. Lessons learned:

- ✚ Build good relation with DMCs members and inspired them to feel ownership to the project.
- ✚ Ensure transparency in all aspect.
- ✚ Assistance from GoB Officials was most essential to get the support from them to accomplish the targeted activities accordingly. So we have involved the GoB officials in every process of the project activities.
- ✚ Learn to DMC's members of union and pourasova that development of LDRRAP for them. So that we have ensured active participation of the DMC member by individual conduct and motivation.
- ✚ Not to be depended to the DMCs for selection of CRA group participants. So the group participants were selected by the project staff with the help of DMC member and core trainer.
- ✚ Teamwork is far better and sustainable initiatives than individual initiates.

- ✚ Community people know better about risk associated hazards and its reduction options than outsider.
- ✚ Always careful about organizational transparency and handled UDMC member and community people very carefully.
- ✚ Covered more houses in cluster approach house rising by earth filling.

9. Limitations of the project:

- ✚ No coordination meeting provision was for idea sharing for each other at CDMP office.
- ✚ There was no any system to retention of competent staff for gap between 1st & 2nd phase of the project.
- ✚ There was no any scope for exposure visit or idea sharing for PNGOs.

10. Recommendation for sustainability:

- ✚ Minimizing the mentioned limitation may enhance the program quality and sustainability.
- ✚ Exposure visit for partner both external and internal.
- ✚ Develop national policy for disaster risk reduction.
- ✚ Integration among GoB/NGOs in national levels especially by agency head to make proactive the grassroots level staff to mainstreaming the risk reduction option following LDRRAP into development, which might be more effective and sustainable.

Conclusion:

Samadhan feel proud for its successfully implementation of the project interventions by involving different levels of stakeholders ensuring quality, quantity, time and cost, through which the name and fame of Samadhan, GoB, CDMP, UNDP, DFID and EC have been enhanced and increased acceptance to everybody in the project areas and beyond project areas. Samadhan's may have some limitation but there was no any shortage of commitment. Samadhan feel happy to got the opportunities to reduce the local disaster risks from the hazards prone community, so thanks and grateful to all of them, who extended whole hearted cooperation and to the management of GoB, UNDP, DFID, EC and UNOPS for their kind cooperation to Samadhan and as well as to disaster victims of Kalaroa upazila, under Satkhira district. Consideration of Samadhan to getting opportunities in 2nd phase will highly be appreciated.

Queries or suggestions if any on the report will highly be appreciated.

Thanks and regards

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