2016

# Building Resilience to Climate Change

## *Adapting to Flood*

An experience of

**Eco-Social Development Organization (ESDO)**




**Community Climate Change Project, PKSF**

# Building Resilience to Climate Change 2016

Sub-project

**Enhancing Resilience and Livelihood Protection Extreme Marginalized Community from Flood Hazards Through Integrated Community Based Approach**

Working Area :

**Kishoreganj, Nilphamari**

Sub-project Implemented by

**Eco-Social Development Organization (ESDO)**

Under the management of

**Community Climate Change Project (CCCP)**

**Palli Karma-Sahayak Foundation (PKSF)**

***Advisory Board***

Md Fazlul Kader, Deputy Managing Director (Operations), PKSF
Dr Fazle Rabbi Sadeque Ahmed, Project Coordinator, CCCP, PKSF
Zahir Uddin Ahmed, Deputy Project Coordinator, CCCP, PKSF

***Editorial Adviser***

Dr. Md. Shahid Uz Zaman, Executive Director, ESDO

***Contributors***

KM Marufuzzaman, Programme Officer (Flood), CCCP, PKSF
Mr. Swapon Kumar Saha, Focal, ESDO-CCCP Sub Project
Md. Rezwanur Rahman, Project Manager, ESDO-CCCP Sub Project

***Cover Design***

Tasin Ashraf

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# Abbreviation

| | |
|---|---|
| BARI | Bangladesh Agricultural Research Institute |
| BBS | Bangladesh Bureau of Statistics |
| BCCRF | Bangladesh Climate Change Resilience Fund |
| BCCSAP | Bangladesh Climate Change Strategy and Action Plan |
| BINA | Bangladesh Institute of Nuclear Agriculture |
| BRRI | Bangladesh Rice Research Institute |
| CBA | Community Based Approach |
| CBO | Community Based Organization |
| CCAG | Climate Change Adaptation Group |
| CCDB | Christian Commission for Development in Bangladesh |
| CCCP | Community Climate Change Project |
| CHM | Complaint Handling Mechanism |
| CLP | Chars Livelihood Program |
| CMDRR | Comprehensive Management of Disaster Risk Reduction |
| DAE | Department of Agriculture Extension |
| DPHE | Department of Public Health Engineering |
| DRR | Disaster Risk Reduction |
| EAR | Environmental Assessment Report |
| EMF | Environmental Management Framework |
| EMP | Environmental Management Plan |
| EPF | Emergency Program Flood |
| ESDO | Eco Social Development Organization |
| FCDRR | Family & Community level Disaster Risk Reduction |
| FDMC | Federation Disaster Management Committee |
| FF | Field Facilitator |
| FFWC | Flood Forecasting and Warning Centre |
| FSHG | From School to Homestead Gardening |
| GoB | Government of Bangladesh |
| GRM | Grievance Redress Mechanism |
| HH | Household |
| HIES | Household Integrated Economic Survey |
| IAPP | Integrated Agricultural Productivity Project |
| ICS | Improved Cooking Stove |
| IDE | International Development Enterprise |

# Abbreviation

| | |
|---|---|
| LEB | Local Elected Body |
| LED | Light-Emitting Diode |
| LGED | Local Govt. Engineering Department |
| LGSP | Local Govt. Sustainable Project |
| MDG | Millennium Development Goals |
| MOEF | Ministry of Environment and Forest |
| MoU | Memorandum of Understanding |
| NGO | Non Govt. Organization |
| Nos | Numbers |
| ODA | Overseas Development Assistance |
| OECD | Organization for Economic Co-operation and Development |
| OM | Operational Manual |
| PAD | Project Appraisal Document |
| PIO | Project Implementation Officer |
| PIP | Project Implementing Partner |
| PKSF | Palli Karma-Sahayak Foundation |
| PMU | Project Management Unit |
| PPA | Public Procurement Act |
| PPR | Public Procurement Rules |
| PRA | Participatory Rural Appraisal |
| RMP | Rural Maintenance Program |
| SGP | Sub Grant Proposal |
| SHARP | Shelf Help and Rehabilitation Center |
| SMF | Social Management Framework |
| TER | Test and Emergency Relief |
| UP | Union Parishad |
| USWD | Upazila Social Welfare Department |
| UWAO | Upazila Women Affairs Office |
| UzP | UpazilaParishad |
| VGD | Vulnerable Group Development |
| WB | World Bank |
| WDB | Water Development Board |

# Contents

# Chapter 1: Introduction

## 1.1 Brief Overview of Climate Change in Bangladesh

Bangladesh is widely recognized as one of the most vulnerable countries to climate change in the world. Geographically, the country is characterized by low-laying delta formed by the three major rivers i.e. the Brahmaputra, Ganges and Meghna. More than 90% of the land is low-lying flood plain. In addition, the country lies between the Bay of Bengal in the south and an active Himalayan tectonic belt in the north. Thus the country is inherently at high degree of risk to a range of natural disaster. The whole central part of the country is highly prone to flood and erosion, the southern part is prone to salinity intrusion and cyclone, the north western part is prone to drought and north-eastern part is prone to flash flood. In addition, the whole country has been experiencing some emerging hazards for last few decades which include densely fog, heat wave, cold wave, seasonal variation of temperature, precipitation and so on. The major elements of climate change including temperature and precipitation have been gradually changing over the period. Observed data indicates that the temperature is generally increasing in the monsoon season (June, July and August). Average maximum and minimum temperatures in monsoon period show an increasing trend annually at the rate of 0.05OC and 0.03OC respectively (MOEF, 2005). On the other hand, average maximum temperature in winter season (December, January and February) shows an increasing trend annually at the rate of 0.041°C while minimum temperature shows an increasing trend annually at the rate of 0.026°C, which reflects winter is also becoming warmer (Atiq et al., 2007). Various models also show an increasing trend of temperature and the seasonal variation. There is also significant variation in temporal distribution of rainfall. Observed data shows that both number of days without rainfall and annual total rainfall is increasing, which means more rain is occurring in short duration. It also reflects erratic behavior of rainfall.

The overall impacts of climate change on Bangladesh would be significant. It is estimated that climate change could affect more that 70 million people of Bangladesh due to its geographic location, low elevation, high population density, poor infrastructure, high levels of poverty and high dependency on natural resources[1]. It was found that the population living in the coastal area is more vulnerable than the population in other areas (Alam and Laurel, 2005). Coastal resources upon which the most people depend are likely to be affected severally due to climate variability and change[2].

[1] *UN Human Development Report 2007/'08*
[2] *OECD, 2003*

It is predicted that for 45 cm rise of sea level may inundate 10-15% of the land by the year 2050 resulting over 35 million climate refuges from the coastal districts[3]. Ultimately adverse impacts have the potential to undermine poverty reduction efforts and could compromise to achieve the national target on development. The OECD and World Bank also estimated that 40% of the Overseas Development Assistance (ODA) to Bangladesh may be climate sensitive or at risk.

## 1.2 Overview of Community Climate Change Project (CCCP)

With an understanding of the nature and magnitude of the adverse impacts of climate change and the efforts required to enhance resilience, the Government of Bangladesh (GoB) adopted Bangladesh Climate Change Strategy and Action Plan (BCCSAP) in 2009. A multi-donor trust fund, known as "Bangladesh Climate Change Resilience Fund (BCCRF)", was established to implement the strategy and action plan. As of today, BCCRF has attracted around US$190 million (initially it was US$125 million) from the bilateral development partners (United Kingdom, European Union, Sweden, USA, Australia, Switzerland and Denmark). Ninety percent of the available fund has been allocated to public sector projects, while 10 percent is channeled through NGOs for community level climate actions through a different project titled 'Community Climate Change Project (CCCP). The Governing Council of BCCRF entrusted Palli Karma-Sahayak Foundation (PKSF) to implement the community-level climate change adaptation activities through CCCP. On behalf of the contributing Development Partners and in consultation with the Government of Bangladesh (GoB), the World Bank (WB) ensures the fiduciary management of the project. CCCP has its own Operational Manual (OM), Environmental Management Framework (EMF), Social Management Framework (SMF), Procurement Guideline, Grievance Redress Mechanism, Complaint Handling Mechanism and Monitoring and Evaluation Manual. Throughout the project, every NGO has to work as per the guidelines of these manuals. PKSF established a Project Management Unit (PMU) in its own premises to manage the activities of CCCP and the project implementation supervision in PIP level.

## 1.3 Brief on the Sub-project

As a part of the CCCP, ESDO is working for the flood vulnerable people of Nitaiand Bahagili unions of Kishoreganj Upazila under Nilphamari district. The total population of the two unions is approximately 54,442. The main climate change challenge in the project area is flooding which is disproportionally affecting Nitai and Bahagili unions. Livelihood and income of a large population depend on the natural resource base and most of the poor people often live in areas prone to natural disasters. In the working areas, livelihood sectors are tremendously affected by climate change effects (temperature rise in summer, cold wave in winter, and flood in monsoon), which consequently affects livelihoods of the poor and ultra poor. The working area is situated by the side of the river BuriTeesta and Jamuneshwari (Charal Kata). In these circumstances, ESDO is working for the improvement of livelihoods of vulnerable people of Kishoreganj Upazila. As a result people whose livelihood depends on small land and selling labour or on wages, have to suffer from food insecurity. Although the Department of Livestock is working to improve livestock management but targeted people are not well aware of climate-resilient technologies. To this purpose,rearing livestock i.e. goat/sheep/duck/poultry will be the means of alternative livelihoods during flood. So ensuring better management and treatments of livestock will increase resilience of the vulnerable people. Thus, the project addresses flood impacts on the livelihoods of the poor and ultra-poor people. In addition to this, water and sanitation systems of the targeted area are highly affected by flood particularly during the monsoon. Hence the proposed project attempts to develop climate-resilient water and sanitation systems to increase resilience of the affected community.

[3] *Climate Change Cell, DoE, Bangladesh*

### 1.3.1 Goal and Objectives

**Goal:**

To improve access to services and adaptation capacity on flood related shocks for disadvantage and marginalized group and enhance support system in the Upazila of Kishoreganj of Nilphamari District.

**Objective:**

Strengthening adaptive capacity of highly flood insecure communities to respond the impact of climate change, including variability in the targeted households of two unions in Kishoreganj of Nilphamari district and in the basin of the rivers-- Teesta, Buriteesta, Dhum, Jamunasherwai and Noutara.

### 1.3.2 Working Area

The sub-project is being implemented at Kishoreganj Upazila of Nilphamari district. The district is situated on the bank of Teestariver. The area was selected on the basis of vulnerability and poverty concentration. Thus, 02 unions of Kishoreganj upazila have been selected for adaptation interventions. These unions have been selected in consultation with the local government and community representatives.

The names of working areas are presented in the table below:

| District | Upazila | Union |
|---|---|---|
| Nilphamari | Kishoreganj | 1. Bahagili<br>2. Nitai |

**Table 01: Project Working Area**

### 1.3.3 Target Beneficiaries

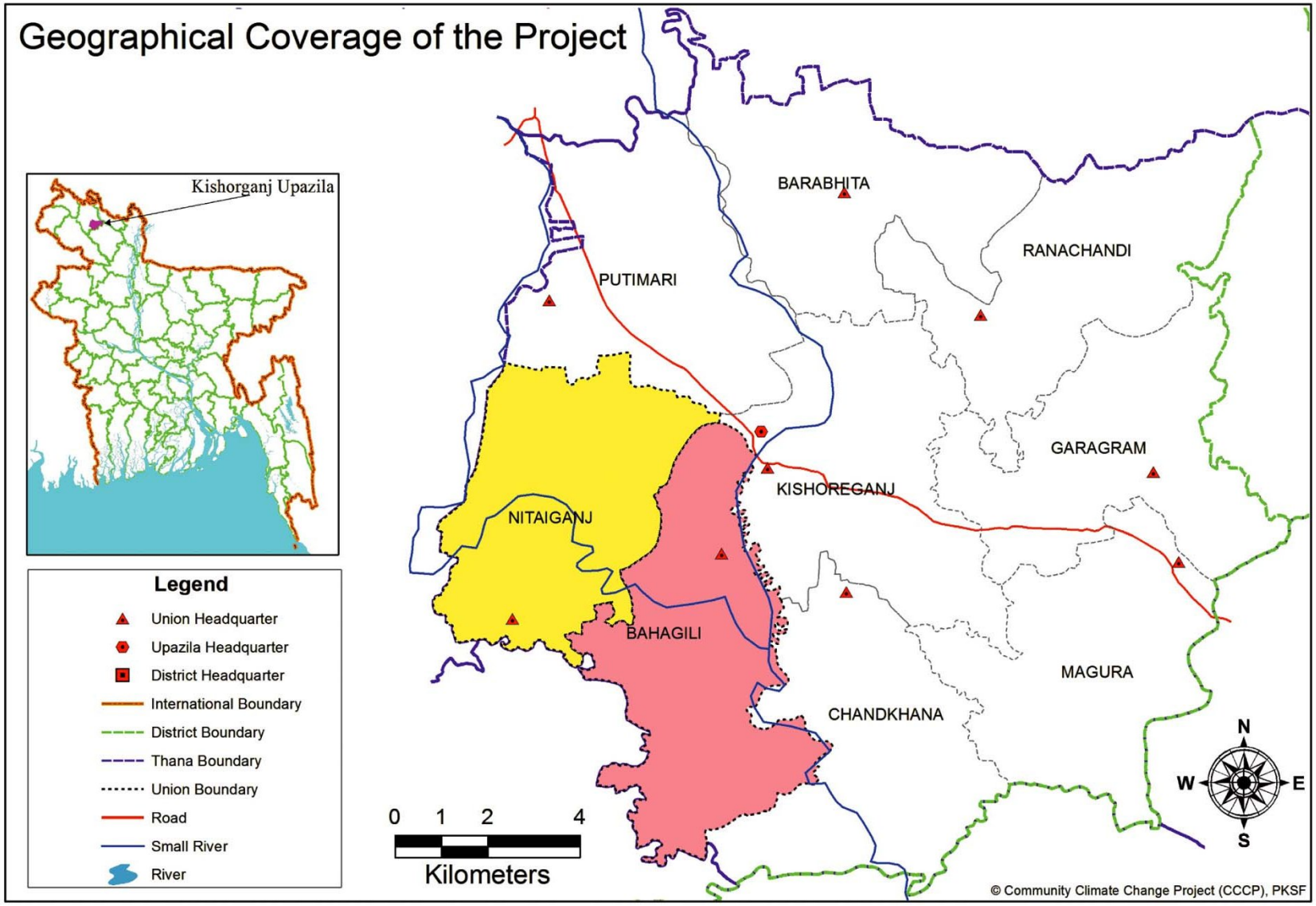
The project has been being implemented in two unions of Kishoreganj Upazilla from February 2014. The unions are Nitaiand Bahagili under the district of Nilphamari. There are 62 villages that consist of 54,442 people and 11,744 households. The selection of direct beneficiaries of the project is very much justified as the vulnerability of these people is very high and most of the people in this area are victim of adverse effects of climate change accompanied with natural disasters like flood, tornadoes and river erosion etc. A large number of people are in risk of climate change and they have not sufficient access to safe water, hygiene and sanitation facilities. The sub-project under Community Climate Change Project is undertaken to serve the poor and ultra-poor vulnerable people of the project area for ensuring food security and improving health condition through the adaptation to climate change. ESDO is now working with its full strength to make people aware about climate change and adaptation to climate change with full cooperation from the CCCP PMU of PKSF.

### 1.3.4 Budget

The total budget of the sub-project is BDT 2,33,25,850/- (Two crore thirty three lac twenty five thousand eight hundred fifty only) where the beneficiaries/community contribution is BDT 24,21,600/- and the CCCP contribution is BDT 2,02,00000/- (Two crore two lac only) and the ESDO's contribution is BDT 7,04,250/-. The beneficiary contribution in the project activities has become a very effective way to develop ownership.

### 1.3.5 Major Activities

The activities of the sub-project were selected in consultation with community people and local government representatives. A series of consultation meetings were held during the proposal development phase. The major activities include slatted housing system for goat/sheep with technical support, installation of sanitary latrines, installation of tube-well with platform for safe drinking water, and installation of improved cooking stoves etc. The sub-project also provides necessary training to build capacity of the community on climate change and its relation with their livelihoods. The community prepares adaptation action plan for their locality to address the adverse impacts of climate change in the long run.


Geographical Coverage of the Project
Kishorganj Upazila
Legend
Union Headquarter
Upazila Headquarter
District Headquarter
International Boundary
District Boundary
Thana Boundary
Union Boundary
Road
Small River
River
BARABHITA
RANACHANDI
PUTIMARI
GARAGRAM
KISHOREGANJ
NITAIGANJ
BAHAGILI
MAGURA
CHANDKHANA
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© Community Climate Change Project (CCCP), PKSF

# Chapter 2 : Vulnerability of the Sub-project Area

## 2.1 Context of Climate Change

### 2.1.1 Temperature

The northwest region is characterized by high temperature and low rainfall compared to the average condition of Bangladesh. Nilphamari district has warm temperatures throughout the year, with relatively little variation from the month to month status. January tends to be the coldest month and late-April the hottest. Annual temperature in Nilphamari is: maximum 32.3°C, minimum 11.2°C. The average temperature ranges from 25°C to 35°C in the hottest season and 9°C to 15°C in the coldest season. However, the region including Nilphamari sometimes experiences extremes – in summer, some of the hottest days experience a temperature of about 45°C or even more and in winter the temperature falls to about 5°C in some places with cold waves.

In 2012, the temperature of Nilphamari district fell down to 2.8° C and in 2014, it rose to 43.5° C.The average January temperature is about 8-10°C and May temperature is about 36°-41°C.

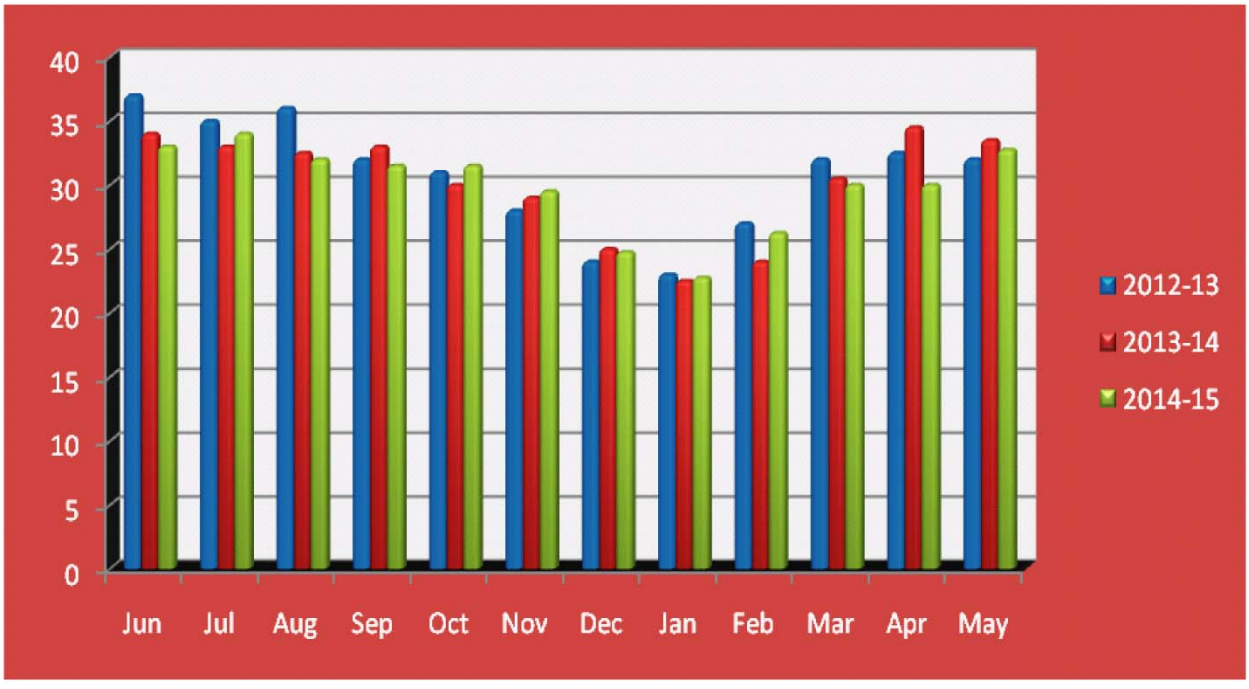



**Figure 1 : Monthly variation of maximum temperature (in $0^0$ C) in 2012-2015**

### 2.1.2 Precipitation

Observed data shows that both number of days without rainfall and annual total rainfall in Nilphamari experienced changes in rainfall patterns. The most important changes noted by the people living in the northwest of Bangladesh are excessive rains, both in terms of the absolute amount throughout the monsoon season and the single very intensive high-rainfall events. Also, there has been an increase in the variability of rainfall, in terms of "too much" and "too little" rain and its timing, as rain is either absent or comes at unexpected times. Overall, however, the total monsoon rainfall seems to be declining at a rate of about 0.39mm per year (Metrological department, Rangpur), as shown in figure, on the basis of the daily rainfall time series for Nilphamari station during 2012 to 2015. While the total amount of monsoon rainfall in Nilphamari – and thus the change in the absolute amount of rainfall – is negligibly declining or even increasing, the figure shows that the variability of rainfall is increasing.

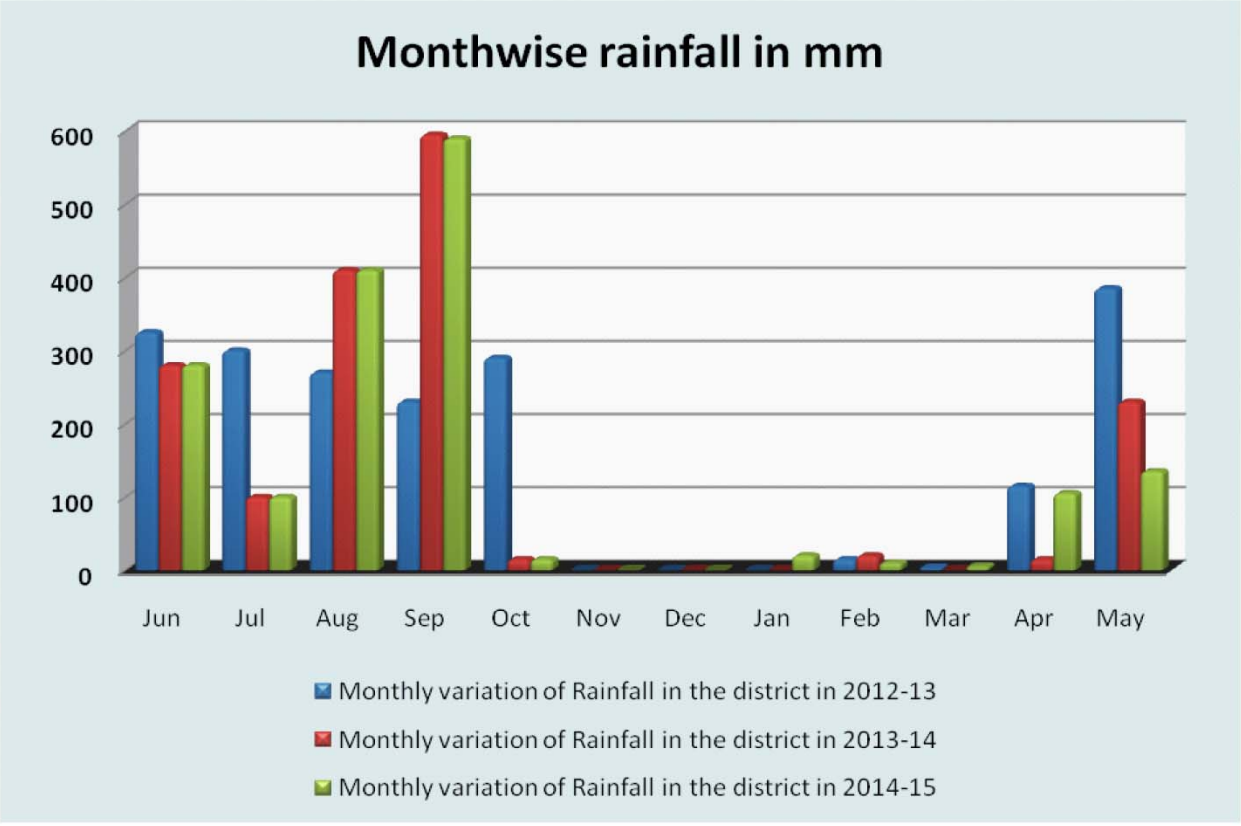



**Figure 2 : Monthly variation in rainfall in the Nilphamari district from 2012 to 2015 (BRRI, 2015)**

In heavy rainfall in 2005, for instance, throughout the whole rainy season, the absolute amount of rainfall was more than 378mm above the average monsoons between 2005 and 2014. More recently, excessive rains – also with impressive peaks in terms of singleheavy rainfall events – are recorded for the monsoon in 2005 and 2008. In contrast, 2006 and 2013 were particularly dry years.

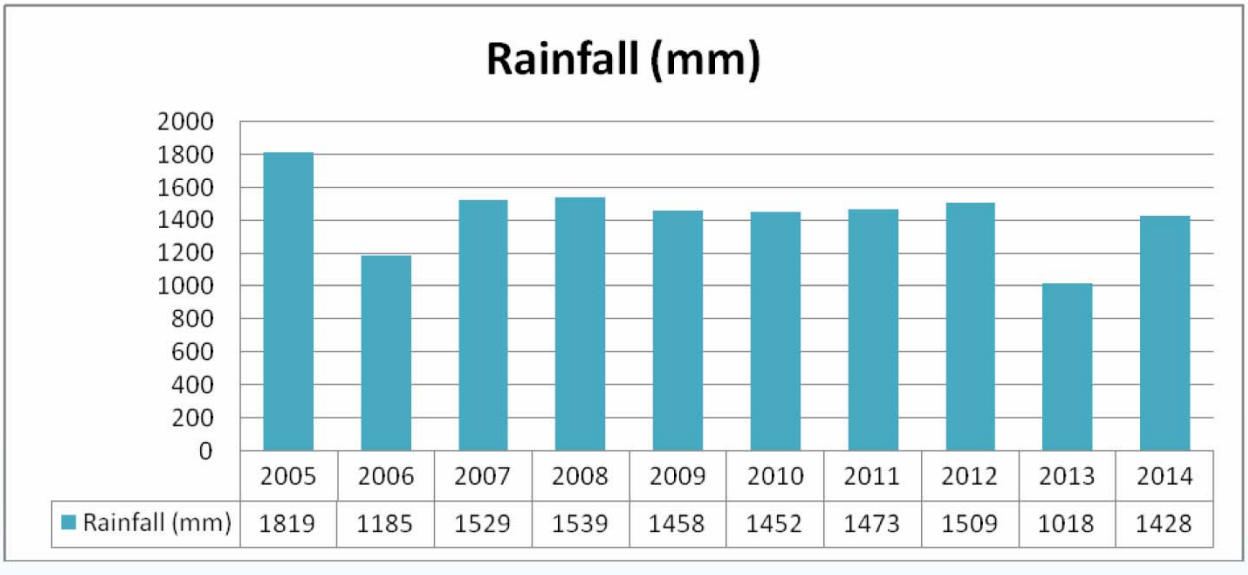



**Figure 3 : Total monsoon rainfall in Nilphamari district between 2005 and 2014.**

*Source: Bangladesh Metrological Department (BMD).*

### 2.1.3 Climate Change Induced Hazards

People have noted visible anomalies or changes in the seasonal pattern. Three seasons – namely, summer, monsoon and winter have become dominant. Other three seasons namely autumn, late autumn and spring seem to merge with them due to climate change. Summer has become prolonged and very hot. Rain starts very late; and the season manifests in few bouts excessively heavy rains and dry spells in-between. Winter has become delayed, short and severe. It also includes several spells of coldwave. These variability and seasonality of climate elements have significant impacts on climate change-induced hazards. Frequency, timing and nature of the hazards have also changed. Earlier, in 1980's and 1990's, floods were usually a single incidence of deep inundation in a year but, nowadays, flood has become recurring events with low inundation in a given year. In the past, riverbank erosions were in specific areas and always associated with accretions at some distance. Riverbank erosions currently occur in several locations simultaneously and accretions rarely create new areas; instead, it raises the riverbed.

**Flood:** The 2007 flood came in two waves. The first wave commenced around the 24th July 2007 and initially affected Nilphamari, Lalmonirhat and Kurigram, Sherpur, Jamalpur, Sylhet, Sunamganj districts. In the following days, Rangpur, Gaibandha, Bogra and Sirajganj were flooded, and subsequently the other districts were inundated up until about the 6th August. The second wave commenced on the 5th September and continued up until the 15th September 2007 when some new districts were flooded. A total of 46 districts were affected to varying degrees during the two flood waves. The flood inundated about 32,000 Sq Km including 6000 sq km of the char areas affecting almost 16 million people of around 3 million households. Thousands of people also suffered from the flood-related health hazards. Eighty five thousand (85,000) houses were completely damaged, while almost one million suffered partial damages. About 649 persons were reported to have perished either as a direct impact of the flood or through flood-related causes including bridge collapse or boat capsize. A number of children drowned in flood water. In addition to this, many-perished as a result of diseases caused by contaminated water and poor sanitation (Consolidated loss and damage assessment in 2007 GoB).

**Cold Wave:** Bangladesh as a tropical country that enjoys a moderate winter. However in recent years, the country has experienced numerous cold waves during the winter. These natural events are termed as disasters when these adversely affect the whole environment, including human beings, their shelters, or the resources essential for their livelihoods. The northern region is the most vulnerable to cold wave. Nilphamari district is one of those districts. Cold wave seriously affects Nilphamari due to its location, lying on the Himalayan basin. Generally, from December 15 to February 15 feelscold and the temperature of this area falls to 6°C. In 2012, the temperature of Nilphamari district fell down to 2.8°C, lowest in 45 years in Nilphamari's history. Human body fails to conserve optimum temperature and lives with minimum temperature when people get idle. This situation holds out for between 1-3 days and 3-5 days. The poorest children, old people and day laborers are mainly affected by the cold waves. From December to the mid-February is the crucial period for cold wave. On an Average, all areas of Nilphamari are affected by cold waves. For the last few years, the country experienced some severe cold waves that caused serious damage, distress and disruption in mobility and regular activities of the people. In January 2010, northern parts of the country as well as Nilphamari experienced a rapid fall in temperature with cold winds and dense fog, resulting significant rise in respiratory illnesses and, in some cases, deaths, while in January 2011, the Meteorological Department recorded the temperature as 2-5 degree Celsius lower than the normal average temperature (about 10°C) during that time of the year.

The impact of cold waves is as notorious as other regular natural calamities in Bangladesh as far as the damage, distress, disruption and death toll is concerned. The cold wave of January 2011 claimed 12 lives with most victims being children and the elderly people. Hospitals in the affected districts reported higher numbers of admissions with cold weather-related illnesses. The weather has also caused loss of crops and other natural resources that had long-term negative impacts on rural economy.

In 2013, cold wave crippled the country during the first week of January, affecting more than 20 districts including Nilphamari, more than 50% of population living in those districts was affected and 80 people died, many of them children. During the cold wave of 2013, the temperature of Syedpur dropped down to 3 degree Celsius, the lowest in Bangladesh since 1968.

## 2.2 Physical Context

Total land area of Nilphamari district is 1821 Sq Km. Nilphamari extends from 25°44'N to 26°19'N latitude and from 88°46'E to 89°12'E longitude, and contains low-lying plain land. It is surrounded by Lalmonirhat in the east, West Bengal (Jalpaiguri and Cooch Behar) state of India in the north, the lofty Himalayas lying farther to the north. To its south, situated Rangpur and Dinajpur districts, and to the west Panchagarh and Dinajpur districts. This district is situated on the Teesta meander floodplain under the AEZ -3.

Nilphamari district lies on the foot of the Himalayan. The land formation is fully characterized by one of the major rivers of the country -- the Teesta and its tributaries. The other rivers that shape the land form of the sub-project areas are the Buri-Teesta and the Arial Khan. All the three rivers are very active in fluvial process, causing severe erosion and flooding. All the selected unions are remote char areas which are subject to annual flooding and erosion. There is no reserve or natural forest in the catchment area. Temperature variation due to climate change affects the timing and rate of snow melting in the upper Himalayan reaches. The current trends of glacial melts suggest that the Ganges, Brahmaputra and other rivers that criss-cross the northern plain land could likely become seasonal rivers in the near future as a consequence of climate change. Teesta, BuriTeesta etc. riversystems would begin to swell early, which would increase precipitation in monsoon, would generate additional volumes of run-off.

## 2.3 Socio-economic Context

Nilphamari is one of the poorest districts in the country. A poverty map of Bangladesh shows that almost the highest numbers of poor people live in Nilphamari district while the rate is lowest in Kushtia district (HIES 2010, Population Census 2011, BBS and World Bank). According to the Poverty Map, 30.7 percent people are poor in the country. Nilphamari is top in the district-level poverty rate with 36-47 percent people being poor while the poverty rate in Kushtia district is only 3.6 percent. Coupled with the high level of widespread poverty and increasing population density, limited adaptive capacity and poorly funded, ineffective local governance has made the region one of the most adversely affected in this area. The total population of Nilphamari district is 19,07,497 (population survey 2011) and almost 62% of the population live under poverty line (Purchasing Power Parity of $1.25 per person a day). There are many occupations in Nilphamari district like agriculture, agricultural laborer, wage laborer, fishing service, transport job, commerce etc. But agriculture is the main occupation in this area. Major occupation is subsistence agriculture which is highly sensitive to flood and river erosion. Main sources of income are agriculture 73.09%, non-agricultural laborers 3.42%, commerce 08.65%, service 06.07%, others 08.77%. Climate change has affected livelihoods, agriculture, health and other resources. It also affects employment of rural people particularly those of daily wage labor (HIES 2010 and Population Census 2011).

Hence these people do not have the ability to respond to a natural disaster and it is difficult for the GoB to help them as per the need. Almost every year due to natural disasters and climatic hazards, Nilphamari is subjected to substantial loss of life and damage of property. All the national planning efforts for development are disrupted by these calamities that leave behind damaged infrastructure facilities, physical assets and land. The human suffering goes beyond description.

# Chapter 3: Existing Practices of Adaptation and Risk Reduction

## 3.1 Government Initiatives

As Nilphamari is one of the most vulnerable districts of Bangladesh, there are a lot of government interventions in the project area such as: Integrated Agricultural Productivity Project (IAPP), Ektee Bari EkteeKhamar, Kabikha, Test and Emergency Relief (TER), Local Govt. Sustainable Project (LGSP), Ultra poor program, Food for Work, LGD Program, and Rural Maintenance Program (RMP).

Kishoreganj Upazila of Nilphamari district is one of the most vulnerable upazila of Bangladesh in terms of climate change variability and extreme events including flood, river erosion, drought and cold wave. The following project has been initiates by the government.

**Table 02: Government Initiatives**

| Sl | Project title | Goal and objectives | Major Activities | Duration | Total budget (in BDT) | Implemented by | Funded by |
|---|---|---|---|---|---|---|---|
| 1. | Ektee Bari Ektee Khamar | Poverty alleviation and sustainable development through fund mobilization & farming | a. Formation of 4860 cooperatives involving all the small & marginal farm families by 2016<br>b. Ensure optimum use of local human and natural resources sustainably by 2018<br>c. Provide possible assistance to all smallholders in fund mobilization by 2017<br>d. Provide assistance to all small farmers in investment in family farming by 2018<br>e. Skill development and Empowermentof the poor farmers in particular the women by 2016<br>f. All activities through e-financial management and cooperatives by 2016<br>g. Develop marketing centers at Sub-district & union level ensuring online or Remarketingfacilities for the farmers by 2018.<br>h. Develop food processing and cold storage facilities at sub-district level. | January 2010 - June 2016 | 7,11,79,356/- BDT | Bangladesh Rural Development Board (BRDB) | GoB |
| 2. | Integrated Agricultural Productivity Project (IAPP) | To generate and release to farmers new varieties that give a higher yield and/or provide technological solutions to production problems under specific agro-ecological conditions.<br>To improve productivity through production and supply of quality seed and breeding materials<br>To increase the availability of surface water for crop and livestock production, reduction in conveyance and distribution loses, and energy saving from more efficient irrigation systems. | • Technology generation.<br>• Technology adoption;<br>• Water management and<br>• Technical Assistance and Capacity Building. | July 2011- June 2016 | 99,37,895/- BDT | Department of Agriculture Extension (DAE) | GoB |

| Sl | Project title | Goal and objectives | Major Activities | Duration | Total budget (in BDT) | Implemented by | Funded by |
|---|---|---|---|---|---|---|---|
| 3. | Kabikha | a. Food for work<br>b. Available food | Earth works, Solar, Road Repairing | June 2016 | 204.81 ton rice | Project Implementation Office (PIO) | GoB |
| 4. | Test and Emergency Relief | a. Available food<br>b. Reduce Monga | Earth works, Solar, Road Repairing | June 2016 | 119.90 ton rice | Project Implementation Office (PIO) | GoB |
| 5. | School Feeding Programme (SFP) | • Developed quality of primary education.<br>• Increase the admission rate of school going children.<br>• Decrease the drop out of the admitted students.<br>• Increase the regular attandance rate of the admitted students.<br>• Enhance learning capacity through fill-upped the nutrition of the students.<br>• Increase the rate of primary completion cycle. | • Biscuit transport<br>• Biscuit distribution and management.<br>• Monitoring of istribution<br>• Warehouse anagement<br>• Orientation of biscuit distribution committees<br>• Community awareness on nutrition and health | July 2010 to June 2017 | 16,49,574/- BDT | RDRS Bangladesh | GoB & WFP |

## 3.2 Active NGOs and CBOs in the Project area:

A number of NGOs are working in Kishoreganj Upazila of Nilphamari district. NGOs and CBOs like RDRS Bangladesh, BRAC, ASA, Shelf Help and Rehabilitation Programme (SHARP), Christian Commission for Development in Bangladesh (CCDB), World Vision Bangladesh, Debi Chowdhurani Palli Unnayan Kendra (DCPUK), LAMB, Luthern Aid Mission of Bangladesh (TLMIB), TMSS, Podokkhep Manobik Unnayan Kendro (PMUK), Social Development Foundation (SDF), TLM, Gana Unnayan Kendra (GUK), Desh Seba, SUPOTH, Village Development Organization (VDO) and GSUS are working in different development sectors in the Upazila.

### 3.2.1 Completed Projects:

Recently some projects of different NGOs have been completed in the project area. The completed projects are Activating Village Courts in Bangladesh (AVCB) by ESDO, Rural Wash Project by RDRS Bangladesh, Education project by World Vision Bangladesh, Child Center for Community Development (CCCD) by SUPOTH.

**Table 03: List of completed project implemented by the NGOs**

| Sl | Project title | Goal and objectives | Major Activities | Duration | Total budget (in BDT) | Implemented by | Funded by |
|---|---|---|---|---|---|---|---|
| 1. | Activating Village Courts in Bangladesh (AVCB) | **Project Goal :** The project aims at strengthening local justice system in 500 union parishad through village courts intends to improve access to justice for disadvantaged and marginalized groups and enhance human rights systems and process in Bangladesh<br>**Specific objectives:**<br>* to empower women, the poor and disadvantaged groups to seek remedies for injustices and to enable justice institutions to be responsive to claims<br>* to improve and protect human rights security through a human right based approach to development and delivery<br>* to empower citizens to resolve their disputes at the local level in an expeditious, transparent and affordable manner<br>* to strengthen local government institutions to be responsive to local need and offer appropriate legal service through well functioning village courts. | ❒ Conduct Courtyard meeting<br>❒ CBO members meeting<br>❒ Complete training to the UP elected reps & CBO members of each UP<br>❒ Complete refresher training to the UP elected reps & CBO members of each UP<br>❒ Issue based skill development (gender, human rights, legal aid and property rights) for women and disadvantage section.<br>❒ Upazlia level Capacity Building for Imam on local justice and VCs<br>❒ Capacity building of Village Police<br>❒ Annual Upazila level sensitization workshop<br>❒ Half annual Upazila level sensitization workshop<br>❒ Half Annual youth workshop at UP level<br>❒ Conduct Community workshop at Upazila level<br>❒ Conduct Community workshop at UP level<br>❒ Workshop on mediation techniques for CBO's<br>❒ Conduct Rallies, campaigns, street drama and folksongs<br>❒ Organize experience Sharing meeting with UP<br>❒ Project Planning workshop<br>❒ Day Observance | August 2010-November 2015 | 10588235/- BDT | Eco-Social Development Organization (ESDO) | EU and UNDP |
| 2. | Integrated Agri. Support Programme (IASP) | **Goal :**<br>To income increase through sustainable Agriculture of small and marginal farmer.<br>**Objective :**<br>* To established model hub for local farmers and ensue well communication with different market through the Hub.<br>* Market linkage through farmers hub.<br>* To develop contact growers. | ❒ To deliver technology services through farmer hub<br>❒ To encourage high value vegetable production and marketing<br>❒ Value chain focused product/sub sector development<br>❒ To established market linkage through farmers hub<br>❒ Training on high value vegetables<br>❒ Established Soil less vegetable nursery. | July,2011-December, 2015 | 2,62,00000/- BDT | Shelf Help and Rehabilitation Programme (SHARP) | Syngenta Foundation Bangladesh |

### 3.2.2 Existing Projects:

The CCCP sub-project is being implemented at Kishoreganj Upazila of Nilphamari district. A number of projects are being implemented by different GO/NGOs in the project area. The existing projects including GO/NGO names are: Ektee Bari Ektee Khamar by Bangladesh Government, Integrated Agricultural Productivity Project (IAPP) by Department of Agriculture Extension (DAE), Kabikha and Test and Emergency Relief by Bangladesh Government, Enhancing resilience and livelihood protection extreme marginalized community from flood hazards through integrated community based approach (CCCP) by Eco-Social Development Organization (ESDO), South Asia WASH Result Programmeby Eco-Social Development Organization (ESDO), Strengthening Community based Organization for Pro-poor Democratic Governance Project (SCOPE), READ (Reading Enhancement for Advancing Development) and School Feeding Programme (SFP) by RDRS Bangladesh, Unique Intervention for Quality Primary Education (UNIQUE-II) by Christian Commission for Development in Bangladesh (CCDB).

**Table 04: Existing Project in Working Area**

| Sl | Project title | Goal and objectives | Major Activities | Duration | Total budget (in BDT) | Implemented by | Funded by |
|---|---|---|---|---|---|---|---|
| 1. | Ektee Bari Ektee Khamar | Poverty alleviation and sustainable development through fund mobilization & farming | a. Formation of 4860 cooperatives involving all the small & marginal farm families by 2016<br>b. Ensure optimum use of local human and natural resources sustainably by 2018<br>c. Provide possible assistance to all smallholders in fund mobilization by 2017<br>d. Provide assistance to all small farmers in investment in family farming by 2018<br>e. Skill development and Empowermentof the poor farmers in particular the women by 2016<br>f. All activities through e-financial management and cooperatives by 2016<br>g. Develop marketing centers at Sub-district & union level ensuring online or Remarketingfacilities for the farmers by 2018.<br>h. Develop food processing and cold storage facilities at sub-district level. | January 2010 - June 2016 | 7,11,79,356/- BDT | Bangladesh Rural Development Board (BRDB) | GoB |
| 2. | Integrated Agricultural Productivity Project (IAPP) | To generate and release to farmers new varieties that give a higher yield and/or provide technological solutions to production problems under specific agro-ecological conditions.<br>To improve productivity through production and supply of quality seed and breeding materials<br>To increase the availability of surface water for crop and livestock production, reduction in conveyance and distribution loses, and energy saving from more efficient irrigation systems. | • Technology generation.<br>• Technology adoption;<br>• Water management and<br>• Technical Assistance and Capacity Building. | July 2011- June 2016 | 99,37,895/- BDT | Department of Agriculture Extension (DAE) | GoB |

| Sl | Project title | Goal and objectives | Major Activities | Duration | Total budget (in BDT) | Implemented by | Funded by |
|---|---|---|---|---|---|---|---|
| 3. | Kabikha | a. Food for work<br>b. Available food | Earth works, Solar, Road Repairing | June 2016 | 204.81 ton rice | Project Implementation Office (PIO) | GoB |
| 4. | Test and Emergency Relief | a. Available food<br>b. Reduce Monga | Earth works, Solar, Road Repairing | June 2016 | 119.90 ton rice | Project Implementation Office (PIO) | GoB |
| 5. | Enhancing resilience and livelihood protection extreme marginalized community from flood hazards through integrated community based approach. | **Goal:** To improve access to services and adaptation capacity on flood related shocks for disadvantage and marginalized group and enhance support system in the Upazila of Kishoreganj of Nilphamari District.<br>**Objective:** Strengthen adaptive capacity of highly flood insecure communities to response the impact of climate change, including variability in the targeted households of two unions in the Kishoreganj of Nilphamari District and in the basin of the river Tista, BuriTista, Dhum, Jamunasherwai and Noutara. | • Slatted housing for goat/sheep with technical support.<br>• Installation of sanitary latrine.<br>• Installation of Improved Cooking Stove.<br>• Installation of Tube-well with platform for safe drinking water. | February, 2014 to December 2016 | 2,33,25,850/- BDT | Eco-Social Development Organization (ESDO) | Bangladesh Climate Change Resilience Fund (BCCRF) |
| 6. | South Asia WASH Result Programme | The objective of the programme is to promote School WASH facilities, hygiene awareness and practices of 41,64,342 children in the 16,000 primary schools under 33 Districts of Bangladesh and enable to sustained use of hygienic; and implement an intensive hand washing campaign in primary schools of low-income areas in Bangladesh. | • Global hand washing dayobservation (District, Upazila& School level)<br>• Sub district coordination Meeting with head Teacher.<br>• SMC Orientation & refreshers meeting.<br>• Little doctor orientation & refreshers meeting.<br>• Initiation of low cost device.<br>• Mother Group meeting.<br>• Soap campaign.<br>• Introducing Tippy tape. | Jan'2015 to Dec'2017 | 6,95,771/- BDT | Eco-Social Development Organization (ESDO) | UK Aid |

| Sl | Project title | Goal and objectives | Major Activities | Duration | Total budget (in BDT) | Implemented by | Funded by |
|---|---|---|---|---|---|---|---|
| 7. | Strengthening Community based Organization for Pro-poor Democratic Governance Project (SCOPE) | **Overall objectives:** To promote inclusive and empowered federation/CBOs to strengthen out-of-reach communities participation in poverty reduction and sustainable development. **Specific objectives:** Established and build the capacity of federation/CBOs and their networks for participation in local Governance for attainment of poor people's rights and services. Inform and empower poor men and women to collectively address causes of their economic, social and political exclusion. | • Buildup Governance of Union parishod<br>• Meeting with UP standing committee.<br>• Open day observation.<br>• Social audit.<br>• Ward meeting.<br>• Selection federation.<br>• PRA.<br>• Disaster management training.<br>• Youth forum meeting.<br>• Women forum meeting.<br>• Issue-wise meeting. | Jan'2013 to Dec'2016 | 6,28,358 BDT (Kishoreganj Upazila) | RDRS Bangladesh | European Union, DanChurch Aid, Church of Sweden |
| 8. | READ (Reading Enhancement for Advancing Development) | All primary school children in Bangladesh attain expected learning outcomes and competencies. January 2014-January 2016 (2years) will field-test READ approaches in Government Primary Schools where the PROTEEVA project is already active in 1,260 school, located in 21 districts across 6 divisions. These school will receive: Teacher training on instructional strategies and diagnostic tools, Training for head teachers and Assistant Upazila Education Officers, Continuous Professional Development for teachers, project-sourced reading materials, SMC training on reading and reading awareness workshops for parents. | • Website development and digital sharing (e-library, resource site)<br>• Gathering and leveling early grade reading material<br>• Regular monitoring and evaluation activities<br>• Annual base/end line of reading assessment<br>• Data system development; GIS; data quality<br>• Formation of mechanism to solicit feedback from teachers, school and students<br>• Quarterly Program Review and Learning Workshops | Jan'2013 to Dec'2017 | 1,02,00,000 BDT | RDRS Bangladesh | USAID |

| Sl | Project title | Goal and objectives | Major Activities | Duration | Total budget (in BDT) | Implemented by | Funded by |
|---|---|---|---|---|---|---|---|
| 9. | School Feeding Programme (SFP) | • Developed quality of primary education.<br>• Increase the admission rate of school going children.<br>• Decrease the drop out of the admitted students.<br>• Increase the regular attandance rate of the admitted students.<br>• Enhance learning capacity through fill-upped the nutrition of the students.<br>• Increase the rate of primary completion cycle. | • Biscuit transport<br>• Biscuit distribution and management.<br>• Monitoring of istribution<br>• Warehouse anagement<br>• Orientation of biscuit distribution committees<br>• Community awareness on nutrition and health | July 2010 to June 2017 | 16,49,574/- BDT | RDRS Bangladesh | GoB & WFP |
| 10. | Unique Intervention for Quality Primary Education (UNIQUE-II) | To provide primary and pre-primary education to 297,467 disadvantaged children from the targeted geographically susceptible upazilas<br>2. To develop institutional collaboration and horizontal learning mechanism between formal and non-formal primary education providers<br>3. To document and disseminate effective practices and lessons<br>4. Key Expected Results<br>5. Effectiveness of non-formal primary education programmes increased in 26 targeted districts through reaching the out-of-school children and catering for their learning needs<br>6. Children's performance improved in formal schools of targeted 84 upazilas<br>7. Child-centred learning community and supportive environment developed in the targeted 454 unions of the project | • The UNIQUE-II project is being implemented through a decentralised management system to afford substantial autonomy at all levels of operation.<br>• All Children Learning Centres (CLC) are managed by the community through CLC Management Committees (CMC).<br>• CLCs are usually multipurpose centres for the local community as a whole.<br>• A Learning Resource Centre (LRC) is operated and managed by the community people in each of the unions of the project area.<br>• LRCs offer a wide range of community managed programmes and services | 01 December 2011 - 30 November 2017 | Need based | Christian Commission for Development in Bangladesh (CCDB) | European Union |

# Chapter 4: Outcome of the Sub-project Activities

## Activity 1: Slatted housing for goat/sheep with technical support

Slatted housing for goat rearing is a new technology for the selected areas. This would enhance resilience of the livestock (goat/sheep) to climate change. Goat rearing is an important livelihood option for the people of rural poor community in this area. Goat is very sensitive to cold and water. The major problem of traditional process of goat rearing is that people keep goats on soil at night. It allows goats to inhale methane from their urine, which causes bronchitis, cold and other respiratory diseases. The traditional system could not protect the livestock from these shocks. Slatted housing for goat increases productivity and decreases disease and death. From group discussion, we know that now goat rearing in slatted houses protects them from cold and other diseases and increases productivity. Raw materials for the slatted housing system are available in the project area. Although goat rearing is a very profitable IGA, all efforts may go in vain if the beneficiaries do not have the proper knowledge on goat rearing. For this reason, we conducted two days' training program for 1000 beneficiaries in 40 batches on goat

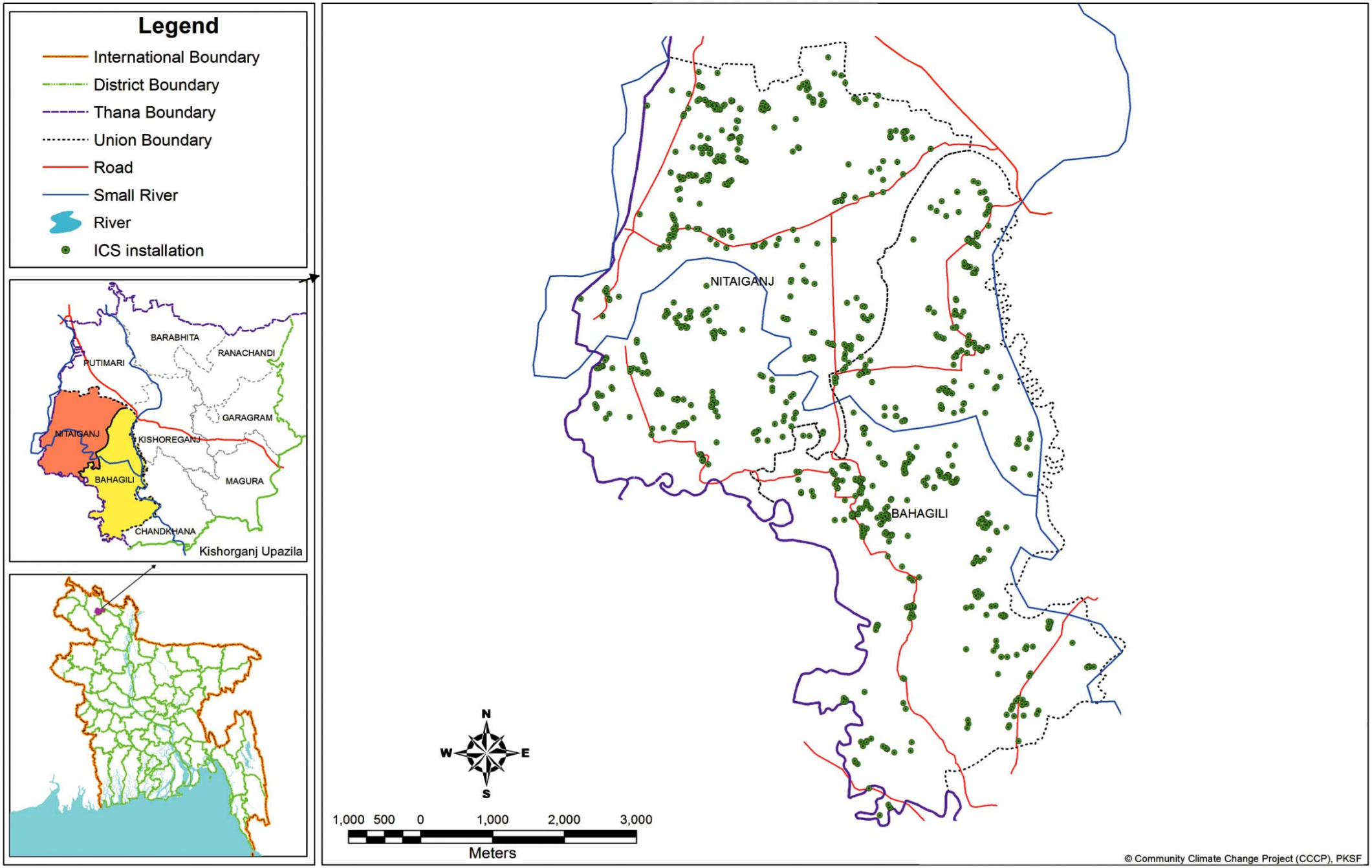
**Goat Rearing in Slatted Housing System**

rearing in slatted housing system in the project area. They received training and established 1000 slatted houses in Nitai and Bahagili unions for rearing goats. Beneficiaries are now able to select Black Bengal variety, and take careof feeds and diseases. Moreover, the project arranged 08 vaccination campaigns for goat and sheep in Nitai and Bahagili unions. We reached 1686 households approximately and completed vaccination for PPR disease for 3484 goats and 143 sheep. Upazila Live Stock Officer of Kishoreganjupazila gave us all technical support.

In the quarter of January - March 2016, the IGA record documents showed that 199 goats were sold by 127 beneficiaries for an amount of BDT 2,71,252 (Figure 4). In the quarter of July –September 2015, 245 beneficiaries sold 330 goats for an amount of BDT 4,13,760. The increment of goat continued in the next quarter from October – December 2015 and 352 goats were sold by 240 beneficiaries for an amount of BDT 3,67,100 BDT.

# Sub-project Activity Map

(Individual Level)

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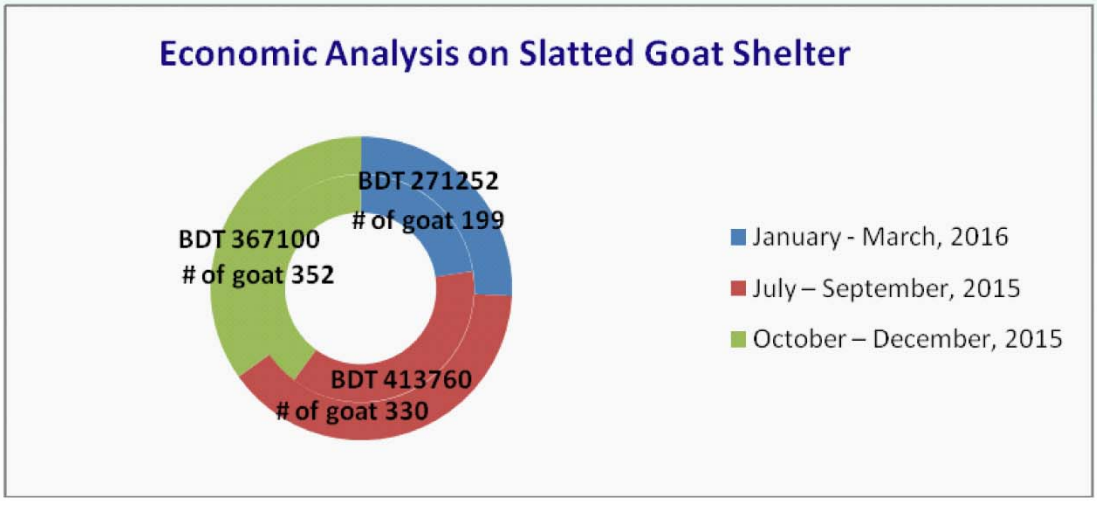



**Figure : Income from goat during October,15 to March,2016 from Slatted housing system of goat rearing under project**

## Activity 2 : Installation of sanitary latrines

In project working area, some people are habituated in open defecation that creates health hazards. By installation of sanitary latrine, total sanitation can be achieved by community mobilization and participation. Generally the poorer ones suffer from hygiene-related diseases. The CCCP designed a latrine to ensure hygiene. It is comparatively high in cost and is constructed on raised places. The CCCP terms the latrine as the "second generation latrine". The unique feature of the latrine is that it has water supply systems

**Sanitary latrine**

(a water reservoir is constructed attached with the structure connected with pipe and tap), handle inside the latrine for children, pregnant women, olds and physically challenged persons, ceramic pan, separate pit connected with PVC pipe, tin-roof with sufficient ventilation etc. This type of latrine is demonstrating for the first time. The field observation shows that those who have already received latrine are maintaining hygiene.

For ensuring healthiness of poor community and to reduce diseasesand improve their livelihood, establishing sustainable latrine is vital. We are following four criteria for resilient latrine -- 1. Proper cover is ensured 2. Mosquitoes and flies must not enter the latrine 3. Bad odour does not spread. 4. Environment is not polluted. These four criteria have been ensured and monitored. The users of the latrine know how it keep hygiene and healthy. The sub-project established 499 sanitary latrines in the project area.

## Activity 3: Promotion of environment-friendly cooking stove

Traditional cooking stoves are called "Killers in the kitchen". Women, who are mainly responsible to cook food for family, directly inhale carbon-dioxide with smoke when they cook. As a result, various respiratory diseases affect them.
Not only that, the baby with mother also inhales smoke and grows up with respiratory diseases. In addition, traditional stoves require more fuel and time, meaning higher carbon-dioxide emission in the atmosphere. 875 (Eight hundred seventy five) Improved Cooking Stoves (ICS) have been set up in the beneficiaries' houses at Nitai&Bahagili Unions. All the beneficiaries are using ICS for cooking. After installation of ICS,

**Improved Cooking Stove**

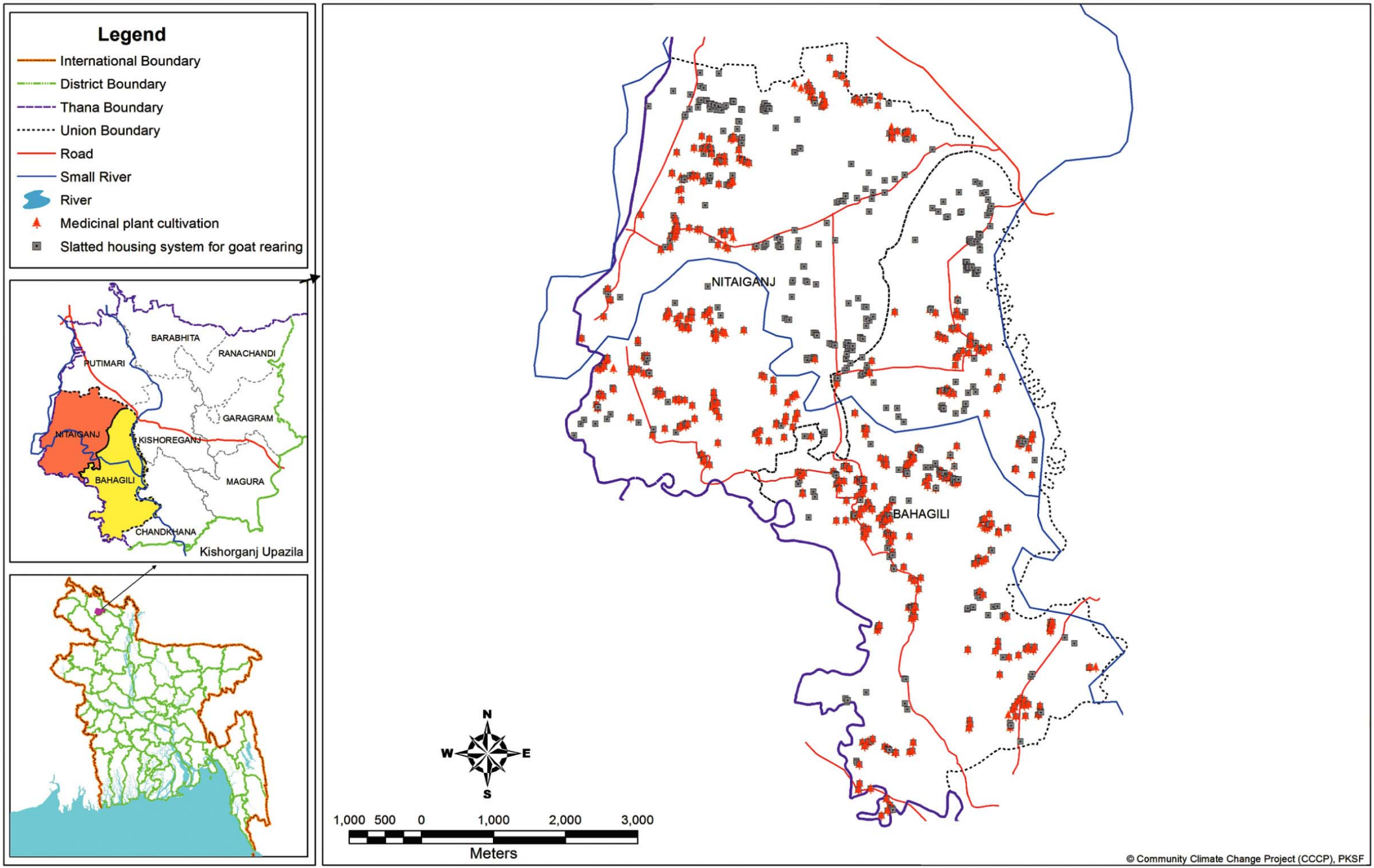
they become free from smoke hazards and diseases like bronchitis, respiratory problems. They mentioned that they need less time and less fuel wood to cook. Moreover, they can easily use all kind firewood like leaves, straw and other solid materials for cooking purpose.

## Activity 4: Installation of tube well with platform for safe drinking water

Drinking water scarcity is one of the major adverse impacts of climate change. Scarcity of water increases during flood in the flood prone area due to contamination of flood water. During flood, most of the tube wells get submerged, triggering an acute crisis of drinking water in the project area. It affects human health, particularly of children. Most of the peopleare by affected various waterborne diseases including diarrhea, dysentery etc. Though installation of tube well is a traditional solution of scarcity of safe drinking water but the process of intervention is innovative. The tube well has been installed above the flood level and maintain hygiene. Ensuring availability of safe drinking water for climate vulnerable poor people, ESDO is installing tube-well with platform at the community level.

# Sub-project Activity Map

(IGA-HH Level)

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A committee was formed for each tube well. The committee members were trained on maintenance and management of tube wells. This committee will look after the tube-well and maintenance accordingly in the long run. A tripartite MoU was signed among groups, tube-well owners and ESDO to make the intervention sustainable. It is interesting to note that beneficiaries have contributed 10% of total cost in cash. This cash contribution strengthens the ownership of tube wells. Installations of tube wells were done following DPHE rules and procedures. After the prior approval from the department of public health for design of tube well, we started the activities accordingly. Besides, we are taking advice from the Public health department of Kishoreganj Upazila. The tube-wells are constructed in densely populated area where more familiesare fetching the drinking water. We carry out arsenic and iron testing before installinga tube-well. The sub-project installed 143 tube-wells with platform in the working area.

**Tube well with platform**

## Activity 5: ToT for staff

For smooth operation of the programme, ESDO organized three-day long Training of Trainers (ToT) for all staff of the project at ESDO Training Center, Thakurgaon on 27 February 2014 to 01 March, 2014.

The objective of the ToT was to enhance (Technical & conceptual) knowledge & skills on the CCCP programme, increase the capacity about Climate Change Adaptation Techniques and increase the capacity for conducting and arranging social mapping, wealth mapping and Well being Analysis (WBA). Therefore, through Community Climate Change Project (CCCP), it can be possible to provide improved service and adaptation capacity on flood related shocks for the disadvantaged and marginalized groups and enhance support systems in the catchment area. Assistant Engineer (public health) and others relevant Upazila-level government officers also participated the training programme.

**ToT for staff**

## Activity 6 : Project Launching Workshop

A daylong project launching workshop was organized at the Upazilla Parishad Auditorium of Kishoreganj on 03 June 2014, where the Upazilla Parishad Chairman was the chief guest, Upazilla Nirbhai Officer (UNO) was the chair and the UpazillaParishadVice Chairman was present as the special guest. Two union parishad chairmen, Upazila agriculture officer, Upazila livestock officer, Upazila fisheries officer, Project Implementation Officers, Sub-assistant engineer (public health) and others Upazila-level officers, NGO personnel, and local elites participated in the events.

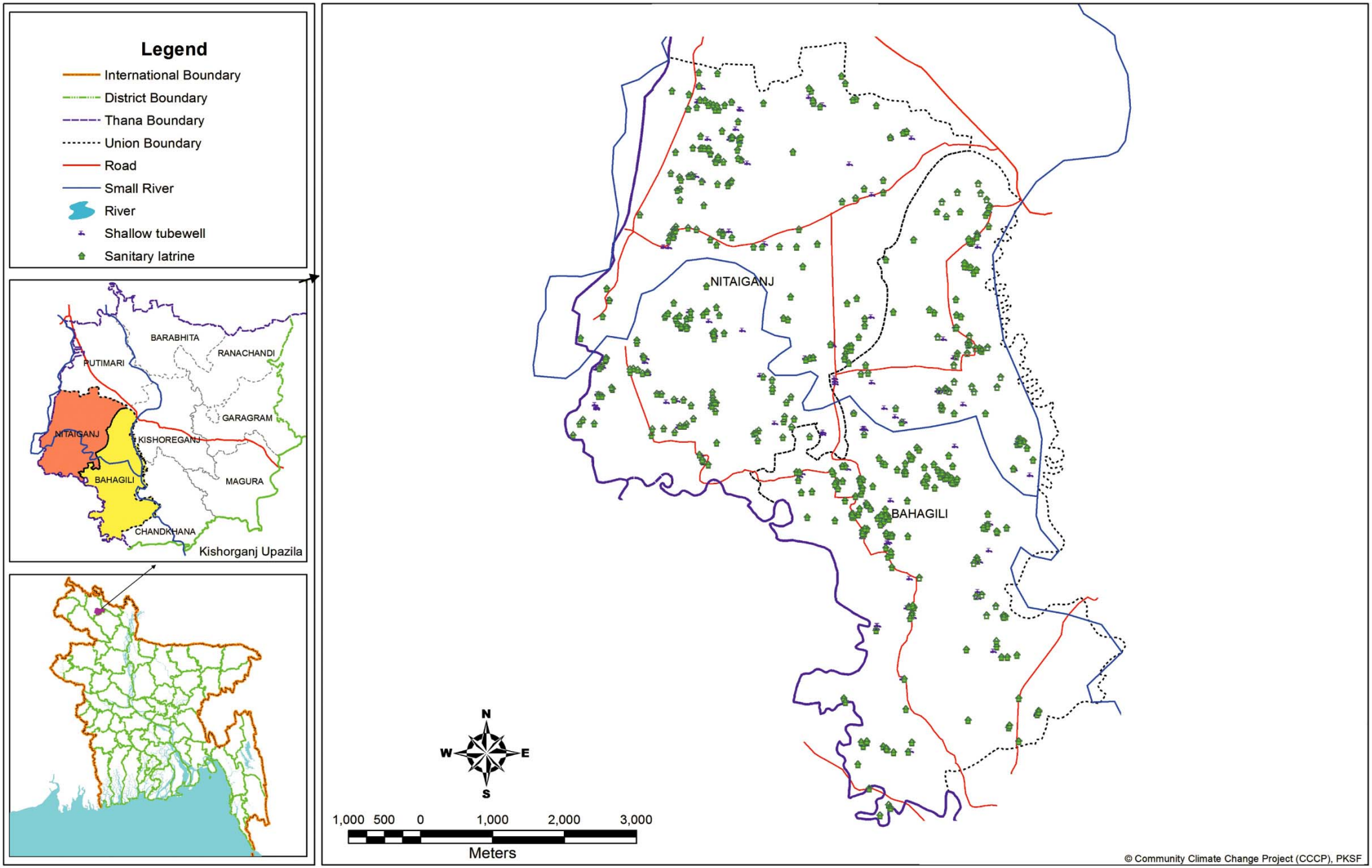

**Project Launching Workshop**

The objectives of the workshop were to --

* Introduce and share the goal and objectives of project as well as PKSF, CCCP and BCCRF with all the stakeholders of the Upazilla.
* Create scopesfor integrated work for community with the help of other stakeholders.
* Seek support for the community people from relevant stakeholders and the Government service providers.

All the participants discussed various issues and possible future adaptive opportunities, sustainability and project implementation support from their end.

# Sub-project Activity Map
(Community Level)

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# Chapter 5 : Need Assessment and future adaptation option

The project has one Project Manager, three Field Facilitation Officers (FFOs), one Technical Officer and one Finance Officer. From the beginning of the project arranged FGD with different stakeholders including local elite persons, Imams, local leaders and Union Parishad Upazila Parishad representatives. All of them take shape of community institution for all sorts of disaster management and reduce the effect of climate change.

For future action, community people developed an adaptation action plan.

**Table 05: Matrix of an Adaptation Action Plan**

| Problem/Risk | Impacts | Existing Practice | Future Needs | Resource | Institution/ stakeholders | Time/ Duration |
|---|---|---|---|---|---|---|
| Flood | • Infrastructures (house, road and school college) submerged<br>• Loses and damages of agricultural crops<br>• Lose of agricultural land and cattle.<br>• During and after the flood different diseases vectors disseminate for human, livestock. and plant<br>• Increase water borne diseases.<br>• Social food security become at extreme risk.<br>• Communications systems, safe water and sanitation become obsolete.<br>• Damage agricultural field by soil sediment.<br>• Disrupt education activities and transport system.<br>• Decrease work opportunity and change occupation.<br>• Increase distress to old, disable and pregnant woman | • Take temporary shelter at house loft, house shed, others raised plinth and embankment.<br>• Sales their valuable assets and advance labor.<br>• Stay on boat or banana raft.<br>• Tree plantation around houses.<br>• Plinth raising<br>• Store dry food<br>• Prepare movable cooking stove<br>• Make new boat and repair old boat. | • Construction of the Infrastructures (Raise plinth and school ground, road and embank-ment, installation tube well and latrine) considering the highest flood level.<br>• Innovation the flood tolerant crop varieties and introduction the cultivation of floating vegetables.<br>• Savings for food security and stock dry food, cooking stove, emergency medicine and oral saline.<br>• Arrange vaccination programme for livestock after flood.<br>• Formation of Groups volunteers and security team for social security. | • Adequate earth and land<br>• Laborious/ hard worker<br>• Confident and brave<br>• Skill man power<br>• Boat or banana tree<br>• Volunteer group. | • CBOs<br>• UP<br>• NGOs<br>• Upazila administration and line agencies (DAE, Fisheries and Livestock department, LGED, DPHE, USWD, UWAO, PIO etc). | Short term |

| Problem/Risk | Impacts | Existing Practice | Future Needs | Resource | Institution/ stakeholders | Time/ Duration |
|---|---|---|---|---|---|---|
| Cold wave | •Reduce the crop production and growth<br>• Increase mortality rate of old people and child.<br>• Increase the incidence of diseases to human and livestock<br>• Decreases the workplace and employment.<br>• Communications systems are obstacles on the way to the river. | • Straw burning to be warm or protect cold.<br>• Spending the whole day idle inside the house.<br>• Uses warm cloth<br>• Putting gunny sheet on cattle to protect from cold. | • More Adequate worm cloth.<br>• Winter based crop cultivation.<br>• Training and cultivation on winter based homestead vegetable gardening to food security and nutrition.<br>• Forestation.<br>• Vaccination program.<br>• Technical training for IGA. | • Mental Stamina.<br>• Leaving house.<br>• Torn quilt, thin cloth.<br>• Straw | • CBO's<br>• UP<br>• NGOs<br>• Upazila administration and line agencies (DAE, Fisheries and Livestock department, LGED, DPHE, USWD, UWAO, PIO etc). | Short term |

## *Daughter's education ensured through goat rearing*

The Charalkata River is situated beside the Kishoreganj Upazila under Nilphamari. Bari-modhupur village is on the bank of this river under Nitai union. Rubi Aktar lives in this village. She is a day labour as a profession. She has a family of 5 members including two sons and one daughter. Most of the time, Rubi Aktar used to sell her labour for maintaining the family. They have only one room where all of the family members sleep together. Rubi kept the goats along with chicken and ducks beside her in the same room. As a result, her house was always wet and goats were contracting diseases especially in rainy and winter seasons. For getting the treatment, she had to spend more money, and goatswould die. Abject poverty would not let her send her children to school even.

She was then introduced to the ESDO-CCCP project. With the financial support of PKSF, ESDO is implementing Community Climate Change Project (CCCP). Rubi Aktar was selected as a member of a CCAG. She applied for a slatted house for goat rearing through the monthly group meeting of Bokul Eco Women group.

It was accepted.Rubi Aktar had two days' training on slatted housing system of goat rearing. Through the training she knew that goat likes dry and high place. If the goats are kept in dry places, they get less diseases. She also knew that regularly the goats should be given de-worming tablets and vaccination.

According to the training, she started rearing the goats. Now she keeps the goats in slatted houses, and de-worms and has them vaccinated regularly. Nine months after receiving the slatted house, 3 goats gave birth to six more.

Rubi Aktar suggested that at present, the total market price of her goats is about TK. 27,000/=. In addition she sold 1 goat for Tk3,250/= six months ago. With the money, Rubi Aktar is able to send her children to school regularly now. She paid her elder daughter's SSC exam fee with the money. The daughter got GPA 5.00 in the exam. Rubi is a proud mother and successful beneficiary of the project.

## Procurement methods

ESDO is implementing the sub project namely, "Enhancing resilience and livelihood protection extreme marginalized community from flood hazards through integrated community based approach" project' by following the procurement guideline which was developed by PKSF – CCCP. CCCP has to follow World Bank's Procurement Guidelines as well as Public Procurement Act, 2006 (PPA 2006) and Public Procurement Rules, 2008 (PPR 2008) in its procurement activities. But ESDO has the capability and experience to perform procurement under the PPA 2006/PPR 2008. This guideline has focused on the issue and formulates simplified procedures to carry out a standard procurement practice at root level by the ESDO as per PPA or/ and PPR. Effective and sound procurement process ensures value for money, economy, efficiency, equity, fairness, transparency, accountability and reliability as well. In public procurement it was legal obligation to meet the above mentioned criteria. Procurement is an indispensable part of the activities under the CCCP both at Project Management Unit (PMU) level and PIP (ESDO) level. Both the Project Appraisal Document (PAD) and the Operational Manual (OM) of the CCCP provide the overall procurement responsibilities on PMU of PKSF and ESDO. As per PAD and OM, Procurement for the CCCP would be carried out in accordance with the World Bank's "Guidelines: Procurement of Goods, Works and Non-Consulting Services through providing a suitable tools regarding selecting procurement methods will be applied to all procurement carried out under the sub-projects carried out by ESDO to ensure an efficient and consistent practice of the procurement processes. It also helped procuring entities and who were involved this to better and faster grasp procurement procedures in the day-to-day course of their activities.

## Monitoring and Evaluation Manual:

PKSF – CCCP has formulated a Monitoring and Evaluation Manual for assessing progress on planned activities and results and also it was a tool to monitor the implementation of CCCP in view of PKSF's emergence as financing entity in the climate change adaptation initiatives, it guides the project management to monitor the progress of implementation at ESDO implemented working areas and results at community level. The Manual served as the basis for ESDO implementing sub project monitoring practices in consistent with CCCP practices. It helped document information and knowledge in a way beneficial for knowledge management.

The purpose of the monitoring and Evaluation manual is to support implementation and management decisions of PKSF - PMU CCCP and ESDO provided useful and timely information to internal management at all levels, address the reporting requirements of PKSF - CCCP and provide for dissemination of useful information and learning to communities and other stakeholders. Appropriate information flow channels and procedures for synthesis and analysis, and quality control mechanisms have been established in order to effectively meet these information requirements. Information would be appropriately archived for future reference.

For successes and failure cases have been documented and would have to be reported accordingly. PKSF - CCCP and ESDO management provided guide and support to ensure the quality of works and generation of accurate data.

## Social Management Framework

The Social Management Framework (SMF) was intended to ensure that the selected NGOs prepare and implement the adaptation proposals taking into account the social safeguard requirements. SMF is further supposed to provide guidance about integrating social and gender dimensions of climate change vulnerability into project screening, preparation, and implementation processes. ESDO has identified adaptation activities according to the SMF (land use, negative social attributes, and integrated social issues). ESDO submitted necessary documents to CCCP-PMU before and after implementing of its activities as per CCCP provided Social Management Framework (SMF) guideline. Moreover, ESDO has ensured that the target communities, including women, children and aged people (depending on sub-project

locations), have been consulted about the sub-project as well as selection of the proposed climate change adaptation measures. SMF is monitored quarterly through social monitoring format which has already been developed by the PMU of CCCP.

## Environmental Safeguard and Management

In order to ensure environment sustainability, a set of principles is being followed since the beginning of the sub-project implementation process under CCCP. An Environment Management Framework (EMF) was developed in conformity with national environment policy and acts. The EMF includes Environmental Assessment Report (EAR), Environmental Management Plan (EMP), and Quarterly Environmental Monitoring Format to monitor and reporting environmental issues at field level. Environmental Assessment Report is being developed after any site selection to implement the activities. ESDO is sending quarterly EMF report with the inclusion of the physical, biological and socio-economic environment of the selected area to the PMU. ESDO implementing CCCP sub-project considering the environmental impacts and possible mitigation measures regarding physical interventions implemented.

## Grievance Redress Mechanism

Grievance Redress Mechanism (GRM) has been established at Central (PKSF) and sub project level to deal with any complaints/grievance about environmental and social issues. At the RDRS sub project level, the Union Parishad (UP) Chairman is the local Grievance Redress (GR) focal person for addressing the grievances. The concerned Upazilla Manager (UM) plays his role from the sub-project to have a proper solution for grievance redress as per CCCP-PKSF GRM guideline.

## Complaints Handling Mechanism

The Complaint Handling Mechanism (CHM) is intended for the CCCP-PKSF for handling complaints related to procurement under the sub-projects The key elements of the complaints handling procedure are prepared to ensure accountability and good governance. In order to comply with the national laws and regulations, CHM shall refer to Sections 29 & 30 of Public Procurement Act (PPA) 2006 and Rules 56, 57, 58, 59 and 60 of the Public Procurement Rules (PPR) 2008.

# Chapter 8: Lessons Learnt and Way Forward

## Lessons Learnt:

- Installation of sanitary latrine helps reduce prevalence of waterborne diseasesamong the poor community and increasestheir social status.
- Public procurement in NGO is a big achievement of the project.
- Functioning of community mechanism for each activity is encouraging and helpful to make the activities sustainable.
- The communities now can identify the problems and are able to plan for their future strategies in communication with service providers through the PRA tools.
- Use of the ICS helps reduce smoke-caused diseases like bronchitis, respiratory problems as well as reduce cooking time and consumption of fire wood. People can easily use all kinds of leaves, straw and other solid materials as fuel.
- Slatted housing system of goat rearing is a profitable IGA where goats become healthy and grow fast.
- Community contributions make the activities more sustainable.

## Way Forward:

- Capacity of CCCP beneficiaries to be further built to adapt to climate change.
- Develop specialized institutions at the grass roots level to address climate change.
- There is a still huge demand of sanitary latrine-sand slatted houses for goats in the rural areas of Kishoreganj.
- Disseminate technical knowledge of different earning sources to adapt to climate change.
- Promote use of RCC pillars for housing.

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