SAP008 "Extended Community Climate Change Project-Flood (ECCCP-Flood)"

Annual Progress Report

Jan 2022-Dec 2022

BASIC INFORMATION OF THE PROJECT

Project ID/Output ID	**SAP 008**		
Full Title:	**Extended Community Climate Change Project-Flood (ECCCP-Food)**		
Start Date	27 April 2020	**Completion date:**	26 April 2024
Total Project Fund:	**USD 13.33 Million**	Total amount of GCF Proceeds Approved	**Grant: USD 9,681,340**
GCF (Grant):	USD 9.68 Million		
PKSF (Co-financing):	USD 3.65 Million	Total disbursement by GCF	**USD 7,703,814**
National Designated Authority:	Economic Relations Division (ERD), Ministry of Finance, Govt. of the People's Republic of Bangladesh.		
Accredited Entity:	**Palli Karma-Sahayak Foundation (PKSF)**		
Country:	Bangladesh		

Acronyms

GCF	Green Climate Fund
ECCCP	Extended Community Climate Change Project
IE	Implementing Entity
CCAG	Climate Change Adaptation Group
HHs	Households
PMU	Project Management Unit
POs	Partner Organizations
PVA	Preparation of Vulnerability Assessment
FGD	Focus Group Discussion
GRM	Grievance Redress Mechanism
PRA	Participatory Rural Appraisal
BADC	Bangladesh Agricultural Development Corporation
BRRI	Bangladesh Rice Research Institute

Executive Summary

The project has made substantial progress during 2022, despite the challenging project area (char land) and country lockdown due to the pandemic situation at the beginning of the project. The ECCCP-Flood project revised the target according to its budget at the PMU level. Despite the revision project's achievement is still on track to achieving its target. The project has made significant progress across all four outcomes, in particular strengthening community capacity, plinth raising, improving access to safe water and sanitation, and supporting flood-resilient livelihoods. The comprehensive action plan in place has helped the project to remain on track toward its objectives. Continuous on-site and off-site monitoring is undergoing to bring out the intended result by ensuring quality implementation. Overall, the project is doing well despite the target changes.

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A. Introduction

Climate change is one of the most significant global challenges of the 21st century, with far-reaching implications for the environment, economy, and society. Bangladesh, a low-lying deltaic country, is one of the most vulnerable countries to the impacts of climate change, particularly in the face of flooding. Floods have always been a part of Bangladesh's natural landscape, but climate change is exacerbating the problem, increasing the frequency and severity of floods, and leaving millions of people vulnerable to its effects.

The Intergovernmental Panel on Climate Change (IPCC) has warned that global warming caused by human activities has led to an increase in the frequency and intensity of extreme weather events, including floods. In Bangladesh, floods have become a recurrent phenomenon, with devastating effects on the economy, agriculture, infrastructure, and people's livelihoods (IPCC, 2018)[1]. The country's geography, with over 90% of its land area being a deltaic plain, means that floods have a severe impact, with most of the country's population living in flood-prone areas (Ahmed et al., 2019)[2]. The impact of climate change on flooding in Bangladesh has far-reaching consequences, particularly for the country's most vulnerable communities. Poor infrastructure and limited access to resources make it difficult for these communities to cope with and recover from floods. As a result, there is a pressing need for action to mitigate and adapt to the effects of climate change in Bangladesh (Islam et al., 2020).[3]

Considering the climatic emergency, Palli Karma-Sahayak Foundation (PKSF) has extended its support by designing a project titled “Extended Community Climate Change Project-Flood (ECCCP-Flood)” to increase the resilience of the flood-vulnerable populations to climate change and its impacts. A Grant Agreement was signed between PKSF and GCF on 27 April 2020 for the implementation of ECCCP–Flood. With financial support from Green Climate Fund (GCF), PKSF has been implementing the project in Nilphamari, Lalmonirhat, Kurigram, Gaibandha, and Jamalpur districts through its partner organization which is addressed as Implementing Entity (IE) for this project. Under the supervision of the project management unit (PMU), nine (9) Implementing Entities (IEs) have been carrying out the implementation of project activities in the above-mentioned districts according to the goal and objectives of the project. The goal of the project is ‘to increase the resilience of the poor, marginalized and climate-vulnerable communities to the adverse effects of climate change in the flood-prone areas of Bangladesh’. The ECCCP-Flood project focuses on long-term improvements and thus supports the adaptation of people's lives and livelihoods against flood. Including others, the main activities of these 4 (four) year-long projects are to raise homestead plinths, install tube wells to create access to safe drinking water, construct flood-resilient latrines, support to construct of slatted houses for rearing goat/sheep, cultivate high value flood tolerant crops, enhance knowledge and skill of the

[1] IPCC. (2018). Global warming of 1.5°C. Summary for policymakers. Geneva, Switzerland: IPCC.

[2] Ahmed, M., Rahman, M. M., & Rahman, M. Z. (2019). Flood risk and management strategies for Bangladesh. Climate, 7(1), 7

[3] Islam, M. A., Alam, M. M., & Islam, M. N. (2020). Impacts of Climate Change on Floods in Bangladesh: A Review. International Journal of Environment, Agriculture and Biotechnology, 5(6), 1456-1462.

project participants and implementing entities (IEs) through meetings, trainings, workshops and seminars.

This Annual Progress Report (APR) presents the achievement carried out by the PMU with the support of IEs from January to December 2022. Therefore, the purpose of this report is to document and share the project progress, lesson learned, adoption of best practices, and challenges during the quarter and draw some recommendations to overcome the risks and challenges for the best outcomes of the project.

B. Project Brief

Goal: The goal of the project is to increase the resilience of the poor, marginalized and climate-vulnerable communities towards the adverse effects of climate change in flood-prone areas of Bangladesh.

The Project Participants

The project has targeted 20,000 flood-vulnerable households that will cover approximately 90,000 people. The project has developed selection criteria for the project participants during the design phase. These are:

i. Those who are living in riverine char and low-lying flood vulnerable areas;
ii. Priority on women-headed households and other disadvantaged groups;
iii. Poor and Ultra-poor Households;
iv. Daily income is less than USD 1.75;
v. Those who are not receiving any support from other projects or organization;

Project area

The project is being implemented in the 5 flood-vulnerable districts namely Nilphamari, Lalmonirhat, Kurigram, Gaibandha, and Jamalpur. The districts were selected based on two criteria i.e., intensity and frequency of flood and density of poverty.

Expected outcomes of the project

The project has identified four outcomes that will contribute to achieving the selected impact areas of GCF through the achievement of the project goal.

1. Institutions and community groups strengthened capacity on addressing climate change
2. Protection of homestead from the adverse effect of flood
3. Increased access to safe water and sanitation
4. Access to flood-resilient livelihood.

C. Overall progress

PMU (Project Management Unit) of the ECCCP-Flood project took a proactive approach and developed a well-structured plan to ensure that all the project activities were carried out smoothly. Consequently, the project covered the delayed activity that was rolled over from the previous year's target and put the flow of the progress on track. Additionally, a consulting firm has been brought on board to conduct a mid-term review, which is assessing the impact of the project and provides valuable insights into its overall success.

Outcome 1 (Institutions and community groups strengthened capacity on addressing climate change)-The project selected 20,000 HHs that represent 73,705 direct beneficiaries. CCAG meetings are proceeding as planned after its formation. Five project guidelines have been prepared and shared with the IEs for the seamless functioning of the field-level activities, and more are yet to be published. 65% of beneficiaries out of the project target have brought under the project pre-planned training support. In addition, 13 workshops and seminars have been organized to engage different levels of stakeholders. Organizing four exchange visits added a new dimension with an opportunity to learn and adapt to new knowledge. The project has already shared five newsletters with the stakeholder as a knowledge product. Refresher training for the staff of nine Implementing Entities (IEs) on the project implementation and skill development training is being provided on the field level to ensure quality service at the community level.

Outcome 2 related to the plinth raise in clusters, is growing fast; it has achieved 71% (7,128 homestead plnths were raised out of 10000) of its overall target to date. The plinth dwellers kept running the cultivation of vegetables and fruit around the year on the raised plinth.

Outcome 3 (Increased access to safe water and sanitation): To date, the project has made progress in installing 63% (319 out of 500) of the tube-wells and constructing 62% (1742 out of 2850) of climate-resilient sanitary latrines. Awareness sessions on health and hygiene are yielding fruitful results.

Outcome 4 (Access to flood-resilient livelihoods): A noteworthy progress has been made in providing agriculture and livestock support to the selected beneficiaries, who are highly vulnerable to climate change-induced floods. 70% (7,053 out of 10,000) of the household received a flood-resilient crop varieties, and 64% (6,492 out of 10,000)of women beneficiaries received slatted houses for goat rearing. They additionally received loans if they needed to buy goats. The project continually provided technical support to increase livelihood skills as well as income.

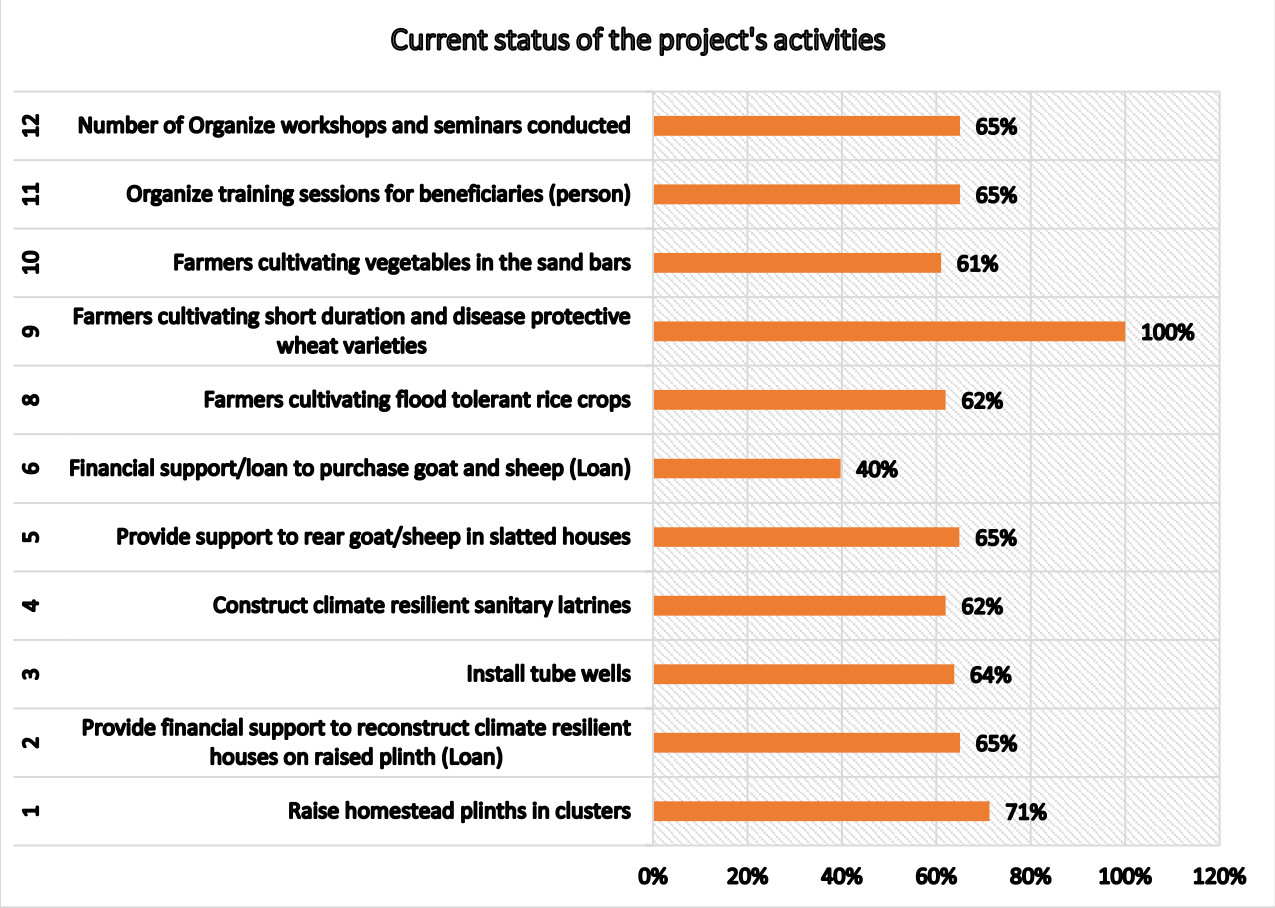

Figure 1 A glimse of current status of project activities

1.0 Institutions (Implementing Entities) and community groups strengthened capacity on addressing climate change

1.1 Arrange monthly group meetings on climate change issues of CCAGs

As 1000 CCAGs had already been created to meet the project target immediately after beneficiary selection. The CCAG member conducted 25,350 meetings the over the course of the project period, including 18,523 were in 2022. The majority of attendees at CCAG meetings are female (94%). The groups have taken necessary decisions in addressing climate change impacts by the project interventions.

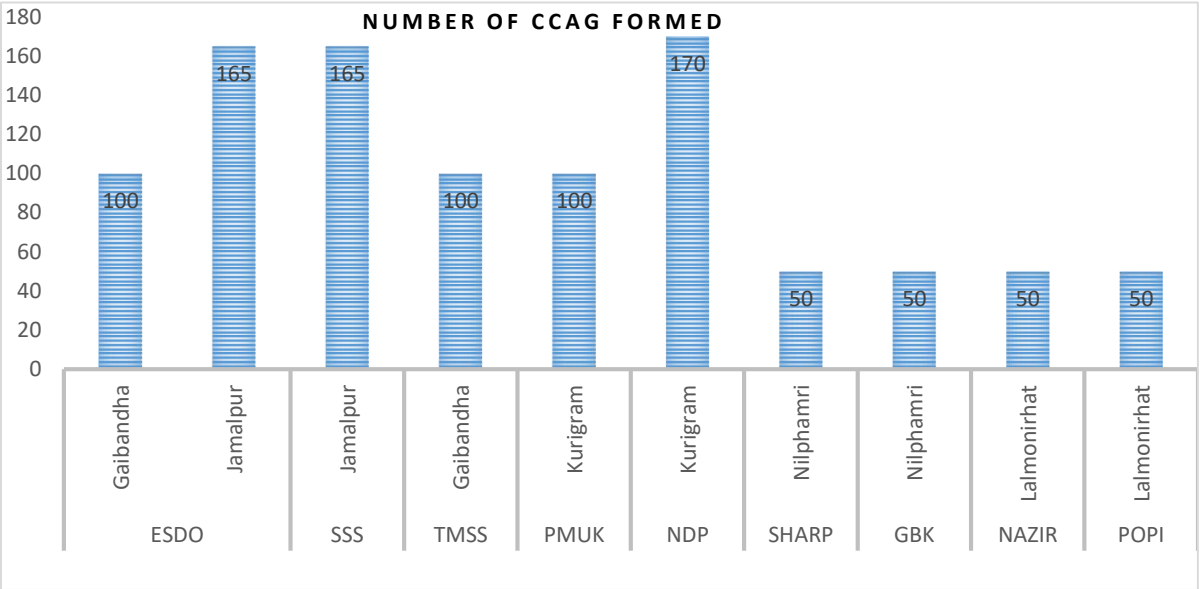

Figure 2 Number of CCAG formed (District and IE wise)

The project participants have demonstrated their commitment to adapting to climate change by attending monthly meetings on time. The beneficiaries have gained knowledge about safe water management, hygiene practices, farming techniques, and disaster preparedness etc. which they also share with their families and communities. The CCAG meeting helped the community identify their vulnerability and choose appropriate adaptive measures. As a result of the meeting, everyone has a clear understanding of the project objectives, and they can express their views and learning. Through the PMU's participatory monitoring process, it's clear that the

beneficiaries are aware of climate change and how to adapt to it. Overall, the community is more aware of climate change and can take their own decisions to adapt.

1.2 Preparation of vulnerability assessment and adaptation action plan

The project is actively supporting beneficiaries in managing future risks by preparing and implementing 1000 local-level adaptation action plans. This is being done in close collaboration with vulnerable community members across 5 districts, 11 upazilas (sub-districts), 37 unions and 262 villages. The implementation of these action plans has helped to boost the confidence of the community and increase their resilience in the face of climate change.

Furthermore, the knowledge gained through the implementation of these action plans is being disseminated to the wider community. This ensures that the learning and benefits from the project are being shared as widely as possible, helping to increase overall resilience and preparedness for future climate risks. The project's focus on collaboration and community involvement is key to its success, as it ensures that those most affected by climate change are at the forefront of efforts to adapt and respond.

1.3 Organized exchange visits for CCAG members and IE staff

The project is committed to adopt best practices through its implementing intervention, notably through the exchange visit. As part of this initiative, the ECCCP-Flood project arranged four intercommunity exchange visits within two organizations with the spontaneous participation of project participants within the current reporting period. The purpose of the exchange visit is to learn from each other and encourage them to embrace climate-resilient technologies and practices. In exchange visits, one implementing entity (IE) along with project participants and its staff visited another project area of another implementing entity to observe the quality of activities, best practices, identify the comparative difference, and find gaps.

A total of 140 participants from CCAGs, along with 52 project staff participated in those exchange visits with a view to observed the agriculture-based technologies, plinth raising status, goat rearing and slatted house management, homestead gardening, vegetables cultivation at raised plinth and sweet gourd cultivation in sand bar etc. Participants shared their knowledge and experiences with one another, and learned about new practices and techniques that they could adopt in their own areas.

As a result of the exchange visits, participants gained valuable insights and learned about new practices, such as sweet gourd cultivation in sandbars using improved practices, turfing in sloping areas, and homestead space planning for vegetable cultivation. These initiatives are aimed at promoting climate-resilient technologies and practices and will help to improve the livelihoods of project participants in the long run.

Table 1- Participants of the Exchange visit

SL#	IE name	Invited IE	Visited area		Total Participants	
			District	Upazila	Project Participants	Project staff
1	ESDO	SSS	Jamalpur	Madargonj	40	7
2	TMSS	ESDO	Gaibandha	Saghata	40	13
3	PMUK	i. POPI	Kurigram	Rowmari	45	26
		ii. NAZIR			15	6
Total					**140**	**52**

1.4 Organize Training on Climate Change conducted for Project Participants and Stakeholders

1.4.1. Preparing training manuals and guidelines on climate change issues and project management

The project developed training manuals on climate change for providing training among the CCAG members. During the current reporting period (2022), two new manuals namely CCAG Training Manual and the Environment and Social Management guideline were prepared and published: the. With these two additions, in total five training manuals were published by the project. Those are:

i. Activity implementation guideline
ii. F&A Management guideline
iii. Procurement guideline
iv. CCAG Training Manual
v. Environment and Social Management guideline

The project is currently in the process of preparing five additional manuals, as part of the plan to reach the total of ten manuals.

1.4.2 Organizing workshops and seminars

The project organized seven workshops this year and a total of thirteen workshops have been completed with the active participation of local stakeholders like the local elite person, local government representatives (Chairmen, members), journalists, representatives of local NGOs, etc. This effort has received a positive response from the local stakeholder which has been helping the project to overcome local challenges like political instability and conflict among the community.

1.4.3 Organized Training on Climate Change conducted for Project Participants

The project has been promoting improved and flood-resilient crop cultivation, as well as goat and sheep rearing through training and creating mass awareness at the community level. Along with that, leadership skill training is also offered to Group leaders, Secretory and Cashiers of CCAG as if they could carry out the CCAG meeting even after the end of the project.

In total, the project has delivered 712 batches of training with the presence of 14,950 participants, with a substantial presence of women (78%). Out of the total participants, 6,796 received training on the extension of high-value crops through conducting 382 batches of training, 7,029 received training on goat rearing through 250 batches of training, and 1,125 participants received leadership skill training through 80 batches of training.

Table 2- Training Summary

SL no	Training title	No. of Batch	No. of Participants (till dec 2022)		
			Total	Male	Female
1	Goat rearing and management	250	7029	0	7029
2	Training on Flood tolerant Rice cultivation	177	4198	1665	2533
3	Training on BARI-30 Wheat cultivation	169	2113	1479	634
4	Training on Thai Golden 8 Guava cultivation	2	28	15	13
5	Training on Sweet gourd cultivation	34	457	153	304
6	Leadership Skill	80	1125	19	1106
	Total	**712**	**14950**	**3331**	**11619**

The training on improved and flood-resilient crop cultivation has likely led to an increase in crop yields and income for the farmers who have adopted these practices. The training on goat and sheep rearing has likely improved the knowledge and skills of the participants, leading to better animal health and productivity. In addition, the leadership skill training has contributed to the sustainability of the project outcomes beyond the project period. The trained leaders can continue to organize and conduct CCAG meetings, disseminate information, and promote good agricultural practices in their communities.

1.5 Organized training for IE staff

With an addition of three batch of training during this reporting year, a total ten batches of training including recurrent refresher training were organized for the IE staff. Their proficiency has already been demonstrated in different areas of project implementation, such as the selecting appropriate project areas, selecting targeted beneficiaries, facilitating vulnerability assessments and preparing local-level adaptation plans, conducting and facilitating regular CCAG meetings, organizing exchange visits, providing leadership training, collecting necessary data and documents from the field.

2.0 Protection of homesteads from adverse effects of flood

2.1 Raised homesteads above flood level

2.1.1 Raised homestead plinths in clusters

Plinth raising is an effective adaptation practice for low-lying areas that are prone to frequent flooding, as it helps prevent infrastructure damage and minimizes problems for residents, especially women and adolescent girls. However, through the ECCCP-Flood project, a ray of hope has emerged, with over 7,128 homesteads raised using soil from nearby sources in compliance with activity implementation guideline. Out of these, 5,921plinths were raised during the reporting period (2022).

The result of this activity is immediate and tangible. During the 2022 floods, not a single raised

Chili Cultivation on Raised Plinth

Project area: Dimla, Nilphamari
IE name: Gram Bikash Kendra (GBK)
Member's Name: Mosha Fahia Begum
Land Area: 2.5 decimal
Expense Amount: BDT 1,650/-
Income: BDT 8,200/- (Till dec, 2022)
Expected Income: BDT 21,000/- (during total crop calender)

homestead was inundated. Clean water and sanitary latrines are available to participants, ensuring that their basic needs will be met even in the face of disaster.

But the project benefits didn't stop there. In an effort to prevent soil erosion, the soil was compacted and grasses were planted on the slopes to hold the soil together. Deep-rooted trees were also planted, providing an additional layer of protection against erosion. Participants were encouraged to start vegetable gardens on their raised homesteads and to grow fruit trees on the slopes. These measures allowed the people to become financially self-sufficient by selling their surplus production in the market. Beneficiaries are now cultivating Gourd, Pumpkin, Snake gourd, Ladies' finger, Papaya, Red spinach, Spinach, Cauliflower, Spices etc. on their raised homestead.

2.2 Reconstruction of climate-resilient houses

2.2.1 providing financial support to reconstruct climate-resilient houses on raised plinths

After raising the plinth, it was required to reconstruct the homestead. The poor vulnerable people have lack of financial capital to reconstruct their homestead. As per project plan, the ECCCP-Flood project has been continuing the support to provide loan. As of the reporting date, a total of 6,500 beneficiaries have received loans, with an amount totalling approximately BDT 9,75,00,000. This assistance has been enabling participants to rebuild their homes and enhance their resilience to future disasters.

3.0 Increased access to safe water and sanitation

3.1 Installation of flood-resilient tube wells

3.1.1 Installation of tube wells

Prior to the project intervention, tube wells in the project area were also prone to flooding, exacerbating the situation by contaminating the water source with floodwater. This led to an increase in waterborne diseases immediately after the gradual receding of flood waters. Additionally, health facilities, which had been disrupted by floodwaters, were struggling to provide services and prevent the outbreak of serious diseases.

To address this issue, the ECCCP-flood project installed 319 tube wells on the raised plinth as if contaminated water due to flood couldn't intrude into it during total project duration and 299 tube wells were installed during this reporting year (2022). These have provided access to safe water sources for 16004 (Female- 7920, and Male- 8084) people including project beneficiaries and the community people to the tube well for drinking and household chores. They don't have to drink contaminated water anymore. The installation of these tube wells was carried out in consultation with experts from the Department of Public Health Engineering (DPHE).

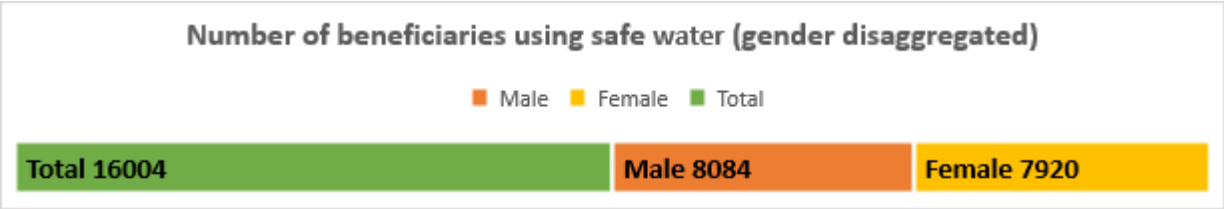

Figure 3 Number of beneficiaries using safe water (gender desaggregated)

The project also designed soak-wells attached to the tube well to function as water filters, enabling community members to reuse stored water for homestead gardening and irrigation while the remaining water flows downstream, contributing to an increase in groundwater levels.

At the field level, the ECCCP-flood project is currently in the process of forming tube well committees. These committees will receive an orientation on tube well repairing and management to empower them to repair the tube wells independently. Additionally, the project is encouraging committee members to deposit a small amount periodically to cover the costs of tube well maintenance. Overall, this approach supports sustainable water management practices and helps promote self-sufficiency among community members.

3.2 Construction of sanitary latrines

3.2.1 Construct climate-resilient sanitary latrines

With a focus on promoting hygiene and reducing the risk of water-borne diseases, the project has installed 1,713 sanitary latrines during in 2022, each latrine was equipped with a water reservoir and a wood handle to make it accessible for children, pregnant women, elderly and those with physical challenges. Overall, 1,742 latrines were constructed to date and benefiting a total of 19,132 people (9,502 males and 9,630 females) in the community.

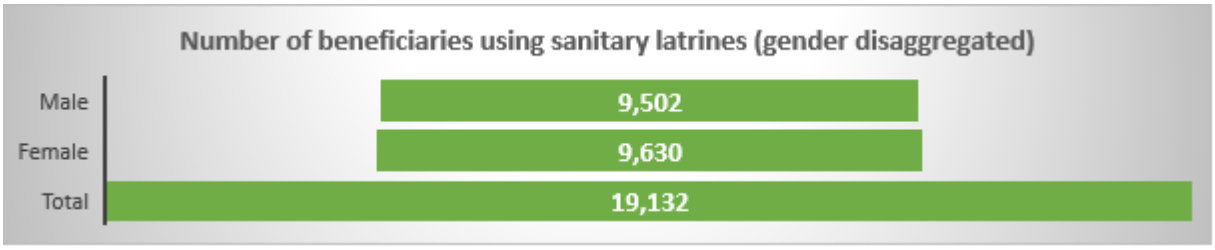

Figure 4 Number of beneficiaries using Sanitary larine (gender desaggregated)

Moreover, the raised plinth design of the latrines ensures structural stability. As a result of their involvement in the CCAG, community members have adopted positive hygiene practices, including hand-washing with soap, using sanitary latrines, wearing sandals, and safely collecting, storing, and using water.

4.0 Access to flood-resilient livelihood

4.1 Rear of goats/sheep in slatted houses

4.1.1 Provide support to rearing goats/sheep in slatted houses

The GCF fund has invested to build the slatted house which has proved as a financially feasible alternative to traditional farming methods. The women of vulnerable communities of project areas already have a conventional practice of goat rearing. However, the comprehensive engagement of traditional rearing approaches has limited the possible extensive economic benefits. The project adopted goat rearing in the slatted house as a financially feasible alternative to traditional farming. Goat rearing is a convenient way to earn additional income for vulnerable families, particularly for women. The project fund is used to build the slatted house as a new adaptation technique and provide training on goat rearing, management, vaccination, etc. The constructed 6,492 slatted house over the project period is expected to ensure better livelihoods and food security for the women participants.

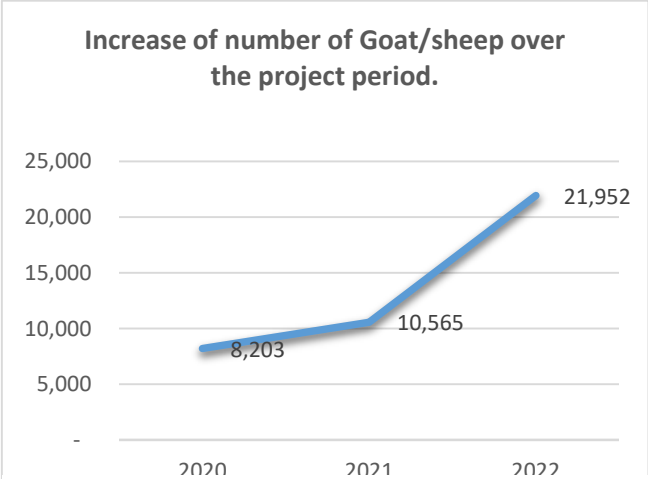

Figure 5 Increase of number of Goat/sheep over the project period.

The project is expected to reduce gender inequality by generating employment among women participants through the implantation of this intervention at the community level. The floor of this house is kept above the ground (2-2.5 feet) as if manure, and urine could fall down on the ground from the floor of the slatted house. So that, the released gas from goat manure couldn't affect the goat or sheep. The project additionally motivated the participants to prepare organic fertilizer from manure.

The project participants already started a fruitful result by using of slatted house instead of rearing goats in traditional method. In 2020, the supported project participants had 8,203 goats/sheep, and this number increased to 10,565 in 2021 and dramatically rose to 21,952 in 2022. The project beneficiary also could sell the goat whenever they need. The demand of goat in the local market is significant in the project area. The rise in the number of the goats/sheep resulted to increase the rise of the number of the goats/sheep sold as well as net income. As a result, the number of the goats/sheep sold also increased from 956 in 2020 to 1,501 in 2021 and significantly surged to 5,356 in 2022. In addition, the net income from selling goats/sheep was BDT 4,451,100 in 2020, which increased to 9,305,001 in 2021 and showed a remarkable increase in 2022, generating a net income of BDT 27,021,178.

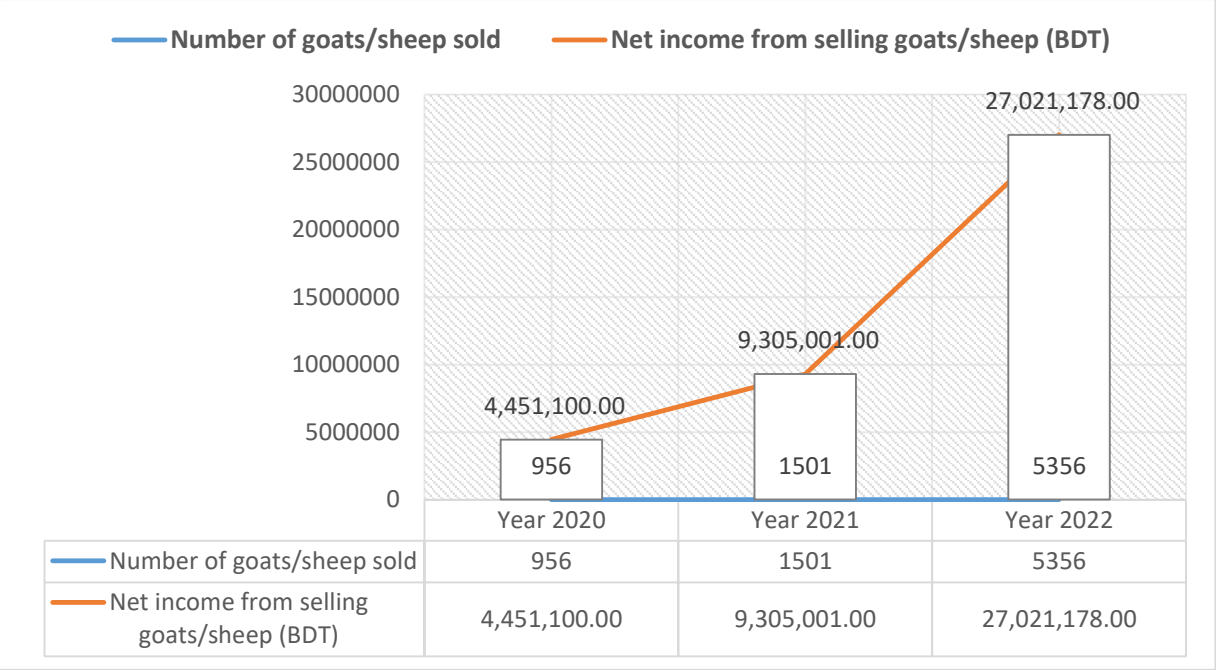

Figure 6 Income of goat selling and net income

4.2 Financial support/loan to purchase goat and sheep

This loan is already accelerating household income considering the importance of the growing markets. Meanwhile, as of the reporting date, 3,971 participants received about BDT 7,04,65,170 amounts of loans.

From Vulnerability to Resilience: The Inspiring Story of Shilpi Akter - A Woman Farmer's Journey to Success

Shilpi Akter, a resident of Malipara village under Pogoldigha Union of Sarishabari Upazila of Jamalpur district, has been living alone with her children since her husband moved to another district for work. She belongs to a class of extreme poverty, and her family income has always been a struggle for her. As a resident of the flood-prone region, Shilpi faced the brunt of climate change impacts. Every year, from April to October, her home and surrounding areas would be submerged in water due to massive flash floods. She recalled, "*Every year, during the monsoon, my home, and the surrounding area goes into the water and remains submerged for more than one week. I cannot live in water with my kids and need to find some temporary place to pass these days.*"

But things changed for Shilpi when she became part of a member of ECCCP-Flood Project in 2020, which aimed to increase resilience of the vulnerable communities in the face of climate change predominatly flood. Through this project, she received support to raise the plinth of her homestead, making it resilient to floods. She also received training on goat and sheep rearing management.

With the support of the ECCCP-Flood Project, Shilpi was able to overcome the challenges posed by climate-induced floods and build a more resilient and sustainable livelihood for herself and her family. She started homestead vegetable gardening and goat rearing, and she even initiated cow rearing. She has been growing red amaranth, onion, garlic, chili, bitter gourd, and spinach for the last two years, and during the last winter season, she sold winter vegetables for BDT 6,300, with the total vegetable selling cost for these two years being BDT 15,000. She has also sold two goats for BDT 18,600, earning a total of BDT 33,600 within two years, which averages to BDT 2,800 per month after fulfilling nutrition and minerals demand for her family of three. Reflecting on her experience, Shilpi says, *"Now we can live in our home all the year-round because of the raised plinth. It has saved us from submerging durng flood. I am working and earning all through the year, and my family does not have to buy meat, vegetables, and eggs from the market anymore."*

The support Shilpi received has given her financial security, and she is now able to take care of her family's responsibilities. She says, "*It gives me satisfaction that I can provide a happy and healthy life to my children.*" Shilpi is a self-sufficient and has become one of the most successful women farmers in her village. Shilpi's success shows how initiatives that gained knowledge and skills on climate change adaptation and homestead gardening can help vulnerable people become self-sufficient and resilient, even in the face of climate-induced disasters. She became a beacon of hope and inspiration to her community.

4.3 Cultivation of flood-tolerant crops

Flood affected cultivation has a direct effect on crop production in several ways. The traditional crop and crop cultivation practice in the project area is observed to have a low ability to cope with climatic shocks especially flood in the project area. As a result, crop production became damaged significantly, resulting in low yield. This affect further impacts in markets, food prices, and the supply chain in the local community. This situation would force them to deal with food crises as well as nutrition for the people of the project area who already live under the poverty level. To help this vulnerable community beyond the present subsistence agricultural system, the ECCCP-Flood project adopted flood resilient crops which are able to grow even if being flooded for two weeks or more. The project provided direct support to a total of 26,307 beneficiaries, with 7,053 project participants and their family members being included in this number, as each participant represented a household.

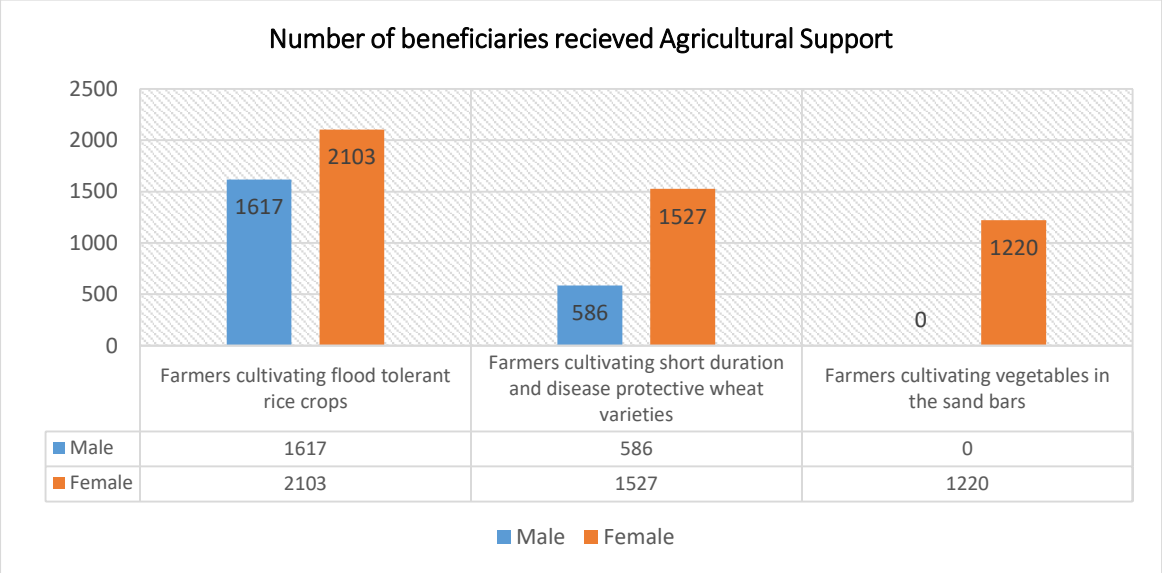

Figure 7 Number of beneficiaries recieved Agricultural Support

4.3.1 Cultivation of flood-resilient rice varieties

The project promoted rice crops has the ability to tolerate prolonged flooding. 3,720 project participants are cultivating flood-resilient rice crops by the project support. The supports include receiving seeds, being trained, getting technical assistance, etc. The training covered the topics such as management of this variety, seeds, fertilizer, and so forth.

The rice crops produced fantastic output last year, which made the farmers happy. It is expected that this practice would eventually contribute to the food security of the flood-affected people in the project area.

Table-3 Rice production and and Income Generated for the Years 2020-2022

Year 2020			Year 2021			Year 2022		
Total land cultivated (decimal)	Total yield produced (ton)	Total income generated (BDT)	Total land cultivated (decimal)	Total yield produced (ton)	Total income generated (BDT)	Total land cultivated (decimal)	Total yield produced (ton)	Total income generated (BDT)
496.17	1,435.59	14,392,809	571.70	3,115.40	38,645,144	1,045.41	4,857.79	87,081,075

In 2020, a total of 1,22,607 decimal land was cultivated, which yielded 1,43.56 Metric ton of rice, generating a profit of BDT 1,43,92,809. After the project intervention, there was an increase in both the cultivated land and the yield in 2021, with a total of 141,271 decimal land yielding 311.54 Metric ton of rice and generating a profit of BDT 38,645,144. The year 2022 marked further progress as a total of 258,325 decimal land was cultivated, which resulted in a production of 485.78 Metric ton of rice, and generating a income of BDT 8,70,81,075.

The average household production increased from 2.89 ton/hec to 4.65 ton/hec in 2022 due to the project intervention, resulting in a 1.75 ton increase per hectare compared to the pre-intervention period. This indicates that the project intervention has been successful in increasing the cultivation of flood-tolerant crops and improving the yield, leading to a substantial increase in profits.

4.3.2 Cultivation of early and disease-protective wheat variety

This project supported BARI Gom-30 wheat variety that can be harvested within 100 days of sowing and costs less to cultivate. The wheat plant can withstand storms and rains on its own due to its short height. The first and second demonstration of wheat cultivation in the field was successfully accomplished with the support of IE. 2,113 participants received seed and training on this wheat variety last year.

Table-4 Wheat production and and Income Generated for the Years 2020-2022

Year	Total land cultivated (decimal)	Total yield produced (ton)	Total income generated (BDT)
2020	588.94	272.90	4,832,866.00
2021	936.33	713.94	13,051,246.00
2022	1,237.56	995.18	19,248,228.00

The successful implementation of the first and second demonstrations of wheat cultivation in the field led to an increase in wheat production by 0.34 ton per hectare compared to the baseline

situation (2020), representing a substantial improvement in production and providing farmers with more wheat to sell in the market.

4.3.3 Cultivation of vegetables on sand bars

Promoting sandbar cropping in the project area has transformed sandy lands, those are mostly barren, created by flooding, into arable farmland. This also could enable the char habitants to use as their resources at best to ensure the food security, nutrition security as well as improved livelihood. Already 1,220 participants received support to cultivate vegetable like pumpkin in the sandbar.

After the initiation of the project to date, the beneficiaries in the project areas have produced 18.11 Metric tons of sandbar vegetables. In 2022, they surpassed their 2020 production, yielding an additional 8.4 Metric tons of pumpkins. It is worth mentioning that, previously, cucumber was seen only as the “sand-bar vegetables” in the locality, but the project promoted pumpkin considering its nutritional and economic value.

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D. Gender perspective

Women are commonly exposed to increasing risks and burden higher risks and greater burdens from the impacts of climate change in our rural settings. Women's unequal participation in decision-making processes creates more vulnerability and prevents resilient building against climate change in the intervention area. Due to their lack of empowerment and resources, women and girls confront life-threatening risks. Gender inequality confines women and their families in cycles of poverty. Ensuring gender equality is a sustainable, highly effective way to reduce poverty.

A total of 4850 women beneficiaries received agricultural support and additional 6492 women beneficiaries received support for goat rearing. The employment opportunities are reducing gender disparity by generating employment among women participants in the project area. The project has prioritized in selection of women participants from the household while providing leadership, and agricultural training. In the long term, the raised homestead will directly benefit women by providing a greatly improved environment during floods, enabling them to carry out domestic activities, creating opportunities for year-round income, and enhancing nutrition from homestead gardening. The raised plinth already created a scope of-

- enabling environment for livestock rearing,
- increasing greater mobility during the flood season as the homestead area is more secure,
- giving birth to the child
- accessing to safe drinking water, sanitation during floods,
- improving family well-being and health,
- reducing the possibility to suffer from diarrhoea and skin disease etc.

Besides, having to stay on the raised plinth will reduce sexual harassment. Women won't feel the insecurity of unexpected events. They could go to the toilet at night without any fear during the flood. In addition, being engaged in project intervention, the women have gained access to credit and established institutional linkages with services, among other benefits. The project intervention will additionally increase their bargaining power, improve the access to markets, and enhance the scope for developing income-earning activities. Already leadership and learning skills of women have been increasing day by day through the participation of different training and workshops.

F. Challenges

- Some farmers showed their reluctancy to adopt new crop varieties and diversify their crops. Despite efforts to promote the benefits of new crop varieties that are more resilience to climate change and have higher yields, some farmers were resistant to change and preferred to stick to traditional crop varieties that they were more familiar with.
- In some cases, the beneficiaries did not leave enough space between their tube-well and latrine to maintain 30ft distance between those.
- During the rainy seasons, some people in the project areas have the tendency to find appropriate and sustainable solutions that address their needs and are resilient to the impacts of climate change.
- Less fellow land are found for earthwork.
- Maintaining the plinth slope is difficult due to the sandy soil
- Beneficiaries show less interest to receive a loan to reconstruct climate-resilient houses and goat/sheep purchases as they want it for free.
- The frequent heavy rainfall and frequent flood hamper activity implementation, particularly in agriculture.
- In some project areas, it is difficult to keep regular communication with the beneficiaries due to a lot of small river channels.

G. Learning

- The project provided demonstrations to highlight the benefits of climate resilient crops like BRRI dhan-51, 52 and BARI wheat-30, 33 crops and encourage adoption by other farmers. By introducing climate-resilient crops and providing demonstrations to highlight their benefits, the project was able to encourage farmers to adopt these practices. This demonstrates the importance of hands-on demonstrations and practical examples in promoting new agricultural practices.
- The project motivate & aware of beneficiaries to maintain a 30-ft distance between tube-well and latrine considering the hygiene and environmental issues. The project beneficiaries become aware and allow the IE to install tube well and construct sanitary latrines as per guideline.
- Community members who tend to migrate during the rainy season, the project has taken a proactive approach by avoiding deep char areas and carefully selecting beneficiaries who are committed to staying in the area and improving their adaptive capacity. The project team has collected land ownership documents to ensure that beneficiaries have a stake in their communities and are less likely to leave. By carefully selecting beneficiaries who are committed to improving their resilience, the project can ensure that its resources are being used effectively and that the beneficiaries are able to take full advantage of the support

provided. This approach also helps to ensure that the project's impact is sustainable in the long term.

- Take necessary steps to maintain plinth shape including soil compaction, maintaining slope ratio, and grass plantation. Inform the beneficiaries how to protect the slope even after the project. The slope stability has significantly improved as it has become stronger, and the rate of erosion has decreased.
- Field staff motivated the beneficiaries that they don’t have to go to anyone to repair a house or buy a goat in the future, rather, they could take a loan from the project. As a result, the number of the borrower is increasing.
- Those activities that are more vulnerable to being hampered by rainfall, such as certain types of agriculture, have been shifted to the dry season when the risk of heavy rainfall and flooding is lower. As a result, the project could continue the intervention as planned.
- Project staff are stationed in the char area to carry out their tasks timely and efficiently. The project's implementation is proceeding smoothly.

H. Way forward

Considering the field situation and yearly activity implementation action plan, the project developed an effective quarterly action plan for the next quarter (July-Sep, 2022) by integrating and active participation of all project personnel.

Table 5- Action plan for the next annual (Jan-Dec, 2023)

Activity	Total Target	Rest of target	Revised target				
			Q 1	Q 2	Q 3	Q 4	Total
Raise homestead plinths in clusters	10,000	2872	1,000	1,000	625	247	2872
Install tube wells	500	184	72	32	50	30	184
Construct climate resilient sanitary latrines	2,810	1,068	350	318	200	200	1068
Provide support to rear goat/sheep in slatted houses	10,000	3538	1,000	1,100	800	638	3538
Cultivate flood resilient rice variety BRRI dhan 51 & 52 and BINA dhan 11	6,000	2280	-	1,080	-	1200	2280
Cultivate early and disease protective wheat variety BARI wheat 26	2,000	-	-	-			0
Cultivate vegetables in sand bars	2,000	780	180	280	160	160	780

Annex 1- Indicator wise Achievement

	Description	Indicators	Baseline	Current value	Targets (mid-term)	Targets (final)
	Increased resilience of the poor, marginalized and climate vulnerable communities towards the adverse effects of climate change in flood prone areas of Bangladesh	Increased capacity and awareness of local institutions and communities	0	Data will be provided after Midterm and End line evaluation	Intuitions: 2 slightly increased capacity, 5 moderately increased capacity and 3 highly increased capacity	Beneficiaries: 5% slightly increased resilience, 50% moderately increased resilience and 30% highly increased resilience
			0	Data will be provided after Midterm and End line evaluation	Beneficiaries: 10% slightly increased resilience, 60% moderately increased resilience and 15% highly increased resilience	
		Practiced climate resilient farming	0	17,916 farmers	15,000 farmers	20,000 farmers
Outcomes	Outcome 1: Institutions (IEs) and community groups strengthened capacity on addressing climate change	Increased capacity of NGOs to support households in flood protection and dissemination of adaptation solutions	0	Data will be provided after Midterm and End line evaluation	2 slightly increased capacity, 5 moderately increased capacity and 3 highly increased capacity	1 slightly increased capacity, 5 moderately increased capacity and 4 highly increased capacity
		Increased capacity of households to apply climate change adaptation solutions	0	Data will be provided after Midterm and End line evaluation	10% slightly increased capacity, 60% moderately increased capacity and 15% highly increased capacity	5% slightly increased capacity, 50% moderately increased capacity and 30% highly increased capacity
		Utilization of the knowledge from the knowledge products	0	Data will be provided after Midterm and End line evaluation	Institutions: 3 slightly, 6 moderately and 1 highly utilize knowledge from the knowledge products	1 slightly, 5 moderately and 4 highly utilize knowledge from the knowledge product

	Description	Indicators	Baseline	Current value	Targets (mid-term)	Targets (final)
					Beneficiaries: 20% slightly use, 40% moderately use and 5% highly use knowledge from knowledge products	Beneficiaries: 30% slightly use, 30% moderately use and 10% highly use knowledge from knowledge products
	Outcome 2: Protection of homestead from adverse effect of flood	Reduced economic losses in animal husbandry	1.26 million USD (annual average in Rangpur division, BBS, 2015)	Data will be provided after Midterm and End line evaluation	Reduction of loss by 50% on targeted beneficiaries	Reduction of loss by 90% on targeted beneficiaries
		Increased income and nutrition uptake of the communities due to raising homestead plinths	Income: monthly BDT. 3,573 (42.54 US$) (CCCP baseline)	Data will be provided after Midterm and End line evaluation	Increased Income: 20%	Increased Income: 30%
			Nutrition: 47.91% sickness due to flood	Data will be provided after Midterm and End line evaluation	Nutrition: reduced sickness by 5%	Nutrition: reduced sickness by 10%
		Increased women's security during flood	0	Data will be provided after Midterm and End line evaluation	10,000 slightly secured, 20,000 moderately secured and 15,000 fully secured from sexual harassment during flood	5,000 slightly secured, 15,000 moderately secured and 25,000 fully secured from sexual harassment during flood
	Outcome 3: Increased access to safe water and sanitation	Percentage of population in the targeted areas with access to safe water	72.6% (CCCP baseline)	Data will be provided after Midterm and End line evaluation	85% of the targeted beneficiaries	90% of the targeted beneficiaries
		Percentage of population in the targeted areas with access to flood resilient sanitation	9.1% (CCCP baseline)	Data will be provided after Midterm and End line evaluation	60% of the targeted beneficiaries	80% of the targeted beneficiaries

	Description	Indicators	Baseline	Current value	Targets (mid-term)	Targets (final)
	Outcome 4: Access to flood resilient livelihood	Increase in household income in targeted households by practicing GCF funded livelihood technologies	Monthly BDT. 3,573 (42.54 US$) (CCCP baseline)	Data will be provided after Midterm and End line evaluation	30% (increased income)	40% (increased income)
Outputs	Outputs related to Outcome 1					
	Output 1.1 Climate change adaptation groups (CCAG) formed and operationalized	Number of climate change adaptation groups formed and operationalized	0	1,000	1,000	1,000
		Improved capacity of climate change adaption groups related to knowledge management and information dissemination	low	Data will be provided after Midterm and End line evaluation	moderate	high
		Impact of the meetings on the decision-making process	Low effective	Data will be provided after Midterm and End line evaluation	Moderately effective	Highly effective
	Output 1.2 Preparation of vulnerability assessment and adaptation action plan	Number of vulnerability assessment and adaptation plans	0	1,000	1,000	1,000
		Percentage of vulnerability assessment and adaptation plans used in decision making and planning by households or IEs	0	Data will be provided after Midterm and End line evaluation	40%	60%
	Output 1.3 Trainings and workshops on Climate Change conducted for beneficiaries and stakeholders	Use of the information from the trainings and workshops in decision-making and planning at household or policy level	0	Data will be provided after Midterm and End line evaluation	40% of the targeted beneficiaries use the information from the trainings and workshops	60% of the targeted beneficiaries use the information from the trainings and workshops
	Output 1.4 Preparation and dissemination of knowledge products	Quarterly newsletter published	0	5	7	14
		Number of workshops organized	0	13	10	20
		Lessons learnt published	0	0	0	1
	Outputs related to Outcome 2					

	Description	Indicators	Baseline	Current value	Targets (mid-term)	Targets (final)
	Output 2.1 Raised the homesteads above flood level	Number of homesteads constructed	0	7128	6,000	10,000
	Output 2.2 Re-construction of climate resilient houses	Number of resilient houses constructed	0	6500	6,000	10,000
	Outputs related to Outcome 3					
	Output 3.1 Installation of resilient tube wells	Number of tube- wells installed	0	319	300	500
		Percentage of tube-wells providing water by ensuring national standards	0	Data will be provided after Midterm and End line evaluation	60%	80%
		Number of beneficiaries using safe water (gender disaggregated)	Male 0	Male 8084	Male 3,000	Male 5625
			Female 0	Female 7920	Female 3000	Female 5625
		Decrease in water-borne diseases	Annual average 23,374 persons in selected 5 districts become sick due to lack of access to safe water (calculated from BBS, 2015)	Data will be provided after Midterm and End line evaluation	50% of the targeted beneficiaries	80% of the targeted beneficiaries
	Output 3.2 Construction of sanitary latrines	Number of sanitary latrines constructed	0	1742	1600	2,810
		Number of beneficiaries using sanitary latrines (gender disaggregated)	0 Male	9630 Male	3600 female	6,325 female
			0 Female	9502 Female	3600 male	6,320 male
	Outputs related to Outcome 4					
	Output 4.1 Rearing of goats/sheep in slatted houses	Number of beneficiaries reared goat/sheep in slatted houses	0	6492 women beneficiaries	6,000 women beneficiaries	10,000 women beneficiaries
	Output 4.2 Cultivation of	Increase in crop production	Baseline to be provided	Data will be provided after Midterm and	30% increase	40% increase

	Description	Indicators	Baseline	Current value	Targets (mid-term)	Targets (final)
	flood tolerant crops		in inception report	End line evaluation		
		Number of farmers cultivating flood tolerant rice crops	0	Female 2103	Female 2000	Female 3000
				Male 1617	Male 2000	Male 3,000
		Number of farmers cultivating short duration and disease protective wheat varieties	0	2113 beneficiaries	1,500 beneficiaries	2,000 beneficiaries
		Number of farmers cultivating vegetables in the sand bars	0	1220 women beneficiaries	1,500 women beneficiaries	2,000 women beneficiaries