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কর্ম-সহায়ক
ফাউন্ডেশন
PKSF

Final Report

Interim Independent Evaluation of Extended Community Climate Change Project-Flood (ECCCP-Flood) of Palli Karma-Sahayak Foundation (PKSF)

April 2023

CEGIS
Center for Environmental and Geographic Information Services

Final Report

on

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Abbreviations and Acronyms

ANOVA	Analysis of Variance
ATE	Average Treatment Effect
ATET	Average Treatment Effect on the Treated
BDT	Bangladesh Taka
CCAG	Climate Change Adaptation Group
CEGIS	Center for Environmental and Geographic Information Services
DE	Design Effect
DiD	Difference in Difference
ECCCP	Extended Community Climate Change Project
ESDO	Eco-Social Development Organization
FGD	Focus Group Discussion
GBK	Gram Bikash Kendra
GCF	Green Climate Fund
GRM	Grievance Redress Mechanism
HH	Household
IE	Implementing Entity
KII	Key Informant Interview
MS	Microsoft
NAZIR	Natun Zibon Rochi
NDP	National Development Programme
NGO	Non-Government Organization
OECD	Organisation for Economic Co-operation and Development
PKSF	Palli Karma-Sahayak Foundation
PMU	Project Management Unit
PMUK	Padakkhep Manabik Unnayan Kendra
PO	Partner Organization
POPI	People's Oriented Program Implementation

PSM	Propensity Score Matching
SHARP	Self-Help and Rehabilitation Program
SQL	Structured Query Language
SSS	Society for Social Services
ToR	Terms of Reference
TV	Television
UNFCCC	United Nations Framework Convention on Climate Change
UP	Union Parishad

Executive Summary

The "Extended Community Climate Change Project-Flood (ECCCP-Flood)" project is initiated and implemented by Palli Karma-Sahayak Foundation (PKSF) in five flood-vulnerable districts of Bangladesh, namely Nilphamari, Lalmonirhat, Kurigram, Gaibandha, and Jamalpur. The project aims to support 90,000 (20,000 HHS) people at high risk of flood hazard, high poverty, water scarcity, and food insecurity. The ECCCP-Flood project was launched in April, 2020. In December 2022, CEGIS was been awarded the responsibility of conducting an interim evaluation of this project to assess its effectiveness from GCF guidelines based impact indicators.

The interim evaluation survey was conducted in one upazila from each of the 5 project districts. Both quantitative and qualitative surveys were carried out for this survey. For the quantitative survey, the study interviewed 660 beneficiaries household members (97.27% female and 2.73% male) and 330 control group household members (91.82% female and 8.18% male) with a pre-designed questionnaire relevant to the ToR.

Findings from Interim Evaluation of ECCCP-Flood Indicators

The interim evaluation assessed institutional capacity of Implementing Entities (IEs), which revealed improved indicators of high capacity. Analysis of question-wise achievements also revealed indictors pointing to 92% 'highly achieved', and 8% 'moderately achieved'. Factors such as the effective utilization of knowledge products, organization of dissemination workshops, and dedicated monitoring efforts by PKSF have played a pivotal role in bringing significant improvements to the capacity of these IEs.

The study has further revealed that 54.5% of the beneficiaries now have highly increased community awareness. In contrast, the remaining 41% and 4.5% show 'moderately' and 'slightly increased' capacity and awareness in terms of local institutions and communities, respectively.

Implementing climate-resilient farming practices has positive results, with 13,545 (90.3%) farmers actively utilizing this technique. Though, it is little lower than the target of interim survey (15,000), because in general, people are rarely welcomed any modification or upgradation in traditional farming practices without observing the feedback, however the number will be rapidly increased in end line survey if the feedback of this practice is properly exposed to the local farmers.

In terms of strengthened capacity for addressing climate change, all 9 IEs show high capacity for climate adaption, community resilience, and enhanced technical expertise.

Household capacity to apply climate change adaptation solutions has demonstrated notable improvement, with 27% of households showing slight improvement, 43% moderate, and the remaining 30% high. Beneficiaries are still not fully adopting climate-resilient crop farming, which has resulted in moderate achievement on the 'high' scale.

Upon assessing the utilization of knowledge products (*newsletter, guidelines, communication materials, etc.*), all 9 IEs are observed to have utilized the knowledge products. In elaborating, 2% of beneficiaries from the project area have 'slightly' used the knowledge products, while 51% have 'moderately' and 36% have 'highly' utilized them.

The project has significantly reduced economic loss in terms of rearing of animal husbandry, with a 5% loss recorded instead of the anticipated 50% loss. This achievement is highly commendable and demonstrates the effectiveness of the project's interventions.

It was also found that raising homestead plinths has resulted in a substantial increase in the income and nutrition uptake of the communities. According to the survey, the rise in income stands at 4,582 BDT., and the increased income involves a positive influence on nutrition intake by household members. Only 11% of beneficiaries reported flood-caused sickness in the interim phase, which shows that 36.91% of beneficiaries suffer less from illnesses compared to the baseline.

The project has made significant strides in improving women's security during floods, with 28% (12,600) feeling slightly secure, 45% (20,250) feeling moderately secure, and 27% (12,150) feeling fully secure. This presents a positive trend towards greater safety and protection of women in flood-prone areas.

Access to safe water has improved in the targeted areas as about 81% of the beneficiaries now have access to it, which is very close to the mid-term target of 85%. Furthermore, the population in the targeted areas with access to flood-resilient sanitation has increased 77.4%, which is significantly better than the mid-term target of 60%.

The monthly income of the households targeted by GCF-funded livelihood technologies has witnessed a remarkable increase of 214%, surpassing the interim situation by a significant margin. The growth is impressive, especially compared to the mid-term target of 30%.

Outputs related to Outcome 1

The mid-term evaluation has revealed that 1,000 Climate Change Adaptation Groups (CCAG) have been successfully formed and operationalized. Their impact on decision-making has been moderately effective and is consistent with the mid-term target. This indicates a strong commitment to building resilience in the face of climate change.

With the 1,000 CCAGs groups an equal number of vulnerability and adaptation plans were prepared. Notably, 53.69% of these plans were utilized by households or IEs for decision-making and planning. This highlights the practical application and effectiveness of these plans in adapting to the adverse impacts of climate change.

The interim evaluation found that 56.66% of the project beneficiaries received training on decision-making and household planning, surpassing the interim target of 40%.

Knowledge and related products were disseminated through various means during project implementation. Five quarterly newsletters were published, and 13 workshops were organized to share knowledge. Lessons learned will be published following the project's completion.

Outputs related to Outcome 2

The interim evaluation revealed that the project has successfully raised 7,128 homesteads above flood level, exceeding the initial target of 6,000. In addition, 6,500 climate-resilient houses have been constructed, higher than the initial target of 6,000.

Outputs related to Outcome 3

Installing 319 tube wells has ensured that 106% of tube wells in the targeted areas provide safe water. This has benefitted 16,004 people, including 8,084 males and 7,920 females. As a result, there has been a significant decrease in waterborne diseases at 61%, exceeding the mid-term target of 50%.

A total of 1,742 sanitary latrines have been also successfully constructed, surpassing the initial target of 1,600. These toilets benefit 9,502 female and 9,630 male beneficiaries, providing them with safe and hygienic sanitation facilities.

Outputs related to Outcome 4

The mid-term evaluation found that around 6,492 female beneficiaries have benefited from the project's slatted house initiative, which involves rearing goats/sheep. This number exceeded the initial target of 6,000 women, indicating a positive impact.

Crop production of different kinds has increased significantly at 71%. The actual target was 30% during the interim evaluation. Out of the target of 4,000 each, a total of 1,617 males and 2,103 females are now practicing flood-tolerant rice production. Similarly, 2,113 beneficiaries/farmers are cultivating short-duration and disease-protective wheat varieties, and a total of 1,220 farmers are producing vegetables in sand bars, both numbers surpassing the actual target of 1,500 beneficiaries/farmers.

Findings of GCF Indicators

Only 3 people died during the last flood, and the total loss of economic assets during that time was 34,003 BDT (US$404) per household, whereas the interim figure was 13,748 BDT (US$ 163). Considering the total number of beneficiaries under the project, the total loss of economic assets by the last flood was US$ 3.27 million, which was US$ 8.08 million in the baseline study. This means US$ 4.8 million of economic loss has been reduced.

The project has provided diversified, climate-resilient livelihood options to 30,476 males and 30,476 females, respectively, exceeding the target of 30 thousand each. It has also ensured food security for 13,545 households (112%), surpassing the target of 12000. Moreover, 7,920 females and 8,084 males have access to year-round reliable and safe water supply despite climate change shocks and stress.

D.3. Outcomes measured by GCF indicators

The project interventions offer a comparatively better living to its people than before. Five flood-tolerant rice varieties, Five short duration and disease-protective wheat varieties, Four sandbar vegetable cultivation varieties were introduced during the mid-term.

In terms of institutional and regulatory systems for climate resilience and implementation, 1000 CCAGs were formed and operationalized. As a result, 36% of beneficiaries now fall in the 'highly' effective category, and 44% in the 'moderately' aware category. The remaining 20% are 'slightly' effective in terms of the use of Tools, Instruments, Strategies, and Activities to Respond to Climate Change and Variability.

Project Evaluation

The project area-Charland-is recognized as a 'hotspot' in the recently prepared National Adaptation Plan (NAP). The NAP document also focuses on poor, marginalized, and climate-vulnerable communities and proposes adaptation programs for them.

The ECCCP-Flood project complies with the global development policy of "no one left behind." Thus, it meets the global priorities of climate adaptation focus, green climate financing, and sustainable development.

The overall achievement of the project objectives has been assessed. Thus, by analyzing findings, the study has found that all objectives were met for the target beneficiaries in the interim stage with achievements surpassing targets in the following indicators.

Indicator's name	Scale of Effectiveness
Strengthening the Capacity of Institutions and Communities	High
Protection of Homesteads from Flood Affectedness	High
Increase Access to Safe Water and Sanitation	High
Promote Climate Adaptive Livelihoods	High

Additionally, the study findings indicate a positive impact of the interventions as demonstrated by both the PSM (Propensity Score Matching) and DiD (Difference-in-Differences) estimations. Looking into the Table 3.2 and 3.7, it can be verified that a significant improvement has been realized in household income of the treatment group compared to the control one and the baseline condition as well. For instance, PSM estimation indicates the provision of flood-tolerant rice increased the monthly income by about 2859 BDT in the treatment area compared to the control area whereas the DiD estimator reports the increased amount is about 4379 BDT (see details at Table 3.2). In case of slatted house facility for goats, the monthly income of treatment households increased about 2,189 BDT (e.g., PSM estimation) compared to the control group where DiD estimator reports an increase of 2,770 BDT with respect to the control group and baseline condition. The impacts of all other interventions can be explained in the similar tone. The following table gives a snapshot of five major interventions and their concomitant impacts on the treatment group with comparison to the control group and baseline condition.

Comparison of PSM and DiD Estimators for Treatment Group with Reference to Control Group

Interventions	PSM (BDT in Monthly)	DiD (BDT in Monthly)
Flood Tolerant Rice	2,859	4,379
Slatted House	2,189	2,770
Plinth Raising	635	1,856
Sandbar Vegetables	2,310	1,945
Disease Resistant Wheat	2,524	2,694

Note: All the values quoted in the table have been compared with reference to the control group and baseline condition.

The ECCCP-Flood project was handled efficiently as evidenced by the effective results in most of the indicators. This project also fits the GCF project criterion in most of the indicators. The results of the DiD estimation show that the income effect has been improved considerably, which also fits the theory. In addition, the estimation process affirms that the income effect has been noticed mostly due to the provision of flood-resilient rice and livelihood intervention, where the plinth-raising impact was less. The PSM estimation provides a similar conclusion.

1. Introduction

1.1 Background

Bangladesh is one of the most vulnerable countries in the world to natural disasters due to its geography, population density, poverty, and inadequate infrastructure. In addition to floods, the country is also prone to cyclones, tidal surges, and earthquakes. The country's vulnerability is exacerbated by climate change, which is causing more frequent and severe natural disasters. The country experiences frequent floods, which occur mainly during the monsoon season. Floods are a major natural disaster in Bangladesh and can cause significant damage to property, infrastructure, crops, and livelihoods. Flooding leads to various vulnerabilities, tremendously impacting the life and livelihoods of the people in the floodplain. The char people, primarily farmers, and fishermen, are particularly vulnerable to the effects of flooding due to their location and lack of resources. Women and children are especially at-risk during floods and are more susceptible to water-borne diseases, malnutrition, and injuries. Floods can also have a significant impact on the economy of the char people. Crops and livestock may be devastated, fishing boats and equipment may be damaged, and transportation infrastructure may be disrupted, leading to loss of income and reduced access to essential goods and services.

Against this context, Bangladesh needs to have various adaptation interventions to protect vulnerable people and transformed them as climate resilient. Since the country has experienced financial barriers in implementing these needed interventions, it needs external supports from international agencies and private parties. Eventually, Palli Karma-Sahayak Foundation (PKSF) —an independent government organization— has initiated such an adaption project: "Extended Community Climate Change Project-Flood (ECCCP-Flood)" with the financial support by Green Climate Fund (GCF) for approximately 90,000 beneficiaries from 5 flood vulnerable districts (Nilphamari, Jamalpur, Gaibandha, Kurigram and Lalmonirhat). The project aimed at increasing resilience of the climate vulnerable communities.

PKSF intends to carry out an independent interim evaluation in the mid-way of the project implementation. This study report is an attempt to explore and evaluate the project's status, performance, and relevancy against the desired outcomes of the project. By analyzing the secondary and primary (collected from the field through survey) data systematically, the evaluation study reviewed each activity implemented in the project area, examined consequences/impacts on beneficiaries against their vulnerabilities, and documented in this report by indicators.

1.2 Project Objectives and Activities

The main objective of the project is to increase resilience of the climate vulnerable community in flood prone areas of Bangladesh. This objective is intended to achieve through four outcomes: (1) strengthening the capacity of institutions (Implementing Entities) and community groups in addressing climate change, (2) protecting homesteads from adverse effects of flood, (3) increasing access to safe water and sanitation and (4) facilitating access to flood resilient livelihoods.

Under outcome 1, the project intended to enhance capacity of 9 organizations (IEs) to implement climate change adaptation projects at community level (see the list of IEs in **Figure 1.1**). Additionally, the project intended to increase capacity of 90,000 beneficiaries on climate change vulnerabilities and impacts through class room training, meetings and group exercises.

Also, the project intended to generate knowledge and document lessons that can help in effective implementation of community-based adaptation projects.

Table 1.1: List of Project Implementing Entities (IEs)

Sl.	Name of IEs	Working Areas	
		District	Upazila
1	Eco-Social Development Organization (ESDO)	Gaibandha	Fulchari
		Jamalpur	Madarganj
		Jamalpur	Sarishabari
2	Society for Social Services (SSS)	Jamalpur	Islampur
		Jamalpur	Malenda
3	TMSS	Gaibandha	Saghata
4	Padakkhep Manabik Unnayan Kenda (PMUK)	Kurigram	Rowmari
5	National Development Programme (NDP)	Kurigram	Chilmari
		Kurigram	Char Rajibpur
6	Self-Help and Rehabilitation Program (SHARP)	Nilphamari	Dimla
7	Gram Bikash Kendra (GBK)	Nilphamari	Dimla
8	NAZIR (Natun Zibon Rochi)	Lalmonirhat	Lalmonirhat Sadar
9	People's Oriented Program Implementation (POPI)	Lalmonirhat	Lalmonirhat Sadar

Under outcome 2, the project targeted to raise plinth of 45,000 vulnerable people in cluster basis. The project also facilitated the plinth dwellers to cultivate vegetables and plant trees round the year on the raised plinth. Under outcome 3, the project targeted to install 500 flood resilient shallow tube wells for safe drinking water and 2810 sanitary latrines for hygiene. Necessary awareness sessions on health and hygiene were targeted to conduct in the monthly group meetings of CCAGs. Under outcome 4, the project intended to enhance resilience of livelihoods of 45,000 beneficiaries against flood. Interventions/activities are presented in **Figure 1.1**.

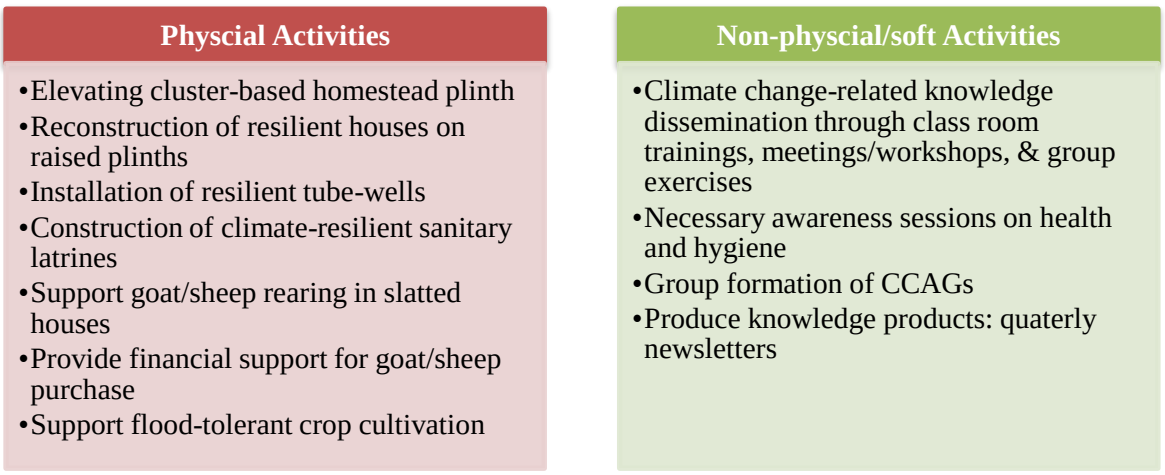


Figure 1.1: Physical and Non-Physical/Soft Activities of the Project

1.3 Objectives of Interim Evaluation Study

The overall objective of the interim evaluation was to measure the ECCCP-Flood project performance by identifying achievements against the intended outcomes and outputs of the project as set in the Result Framework. The specific objectives of the interim evaluation are given below:

- To measure the change and achievement of the project towards the goal through the specified outcome and output level indicators in terms of project and GCF logical framework and compare the findings with the value of the baseline survey;
- To assess the evaluation parameters such as relevance, efficiency, effectiveness, lessons learned, impact, and sustainability of the project interventions against project outcomes and outputs;
- To assess the performance of the project concerning GCF investment criteria such as paradigm shift potential, contribution to the creation of an enabling environment, potential for knowledge and learning, sustainable development potential, and meeting needs of the recipients and country ownership;
- To identify key achievements, best practices, replicability, scalability, challenges, as well as intended and unintended results (both negative and positive);
- To provide recommendations with clear and actionable ways forward for supporting sustainable benefits for the target communities (if any deviation is noticed comparing the project result framework)

The following presents the intended outputs and outcomes of the project.

Outputs of the project:

- Climate change adaptation groups (CCAG) formed and operationalized
- Preparation of vulnerability assessment and adaptation action plan
- Trainings and workshops on climate change conducted for beneficiaries and stakeholders
- Preparation and dissemination of knowledge products
- Raised homesteads above flood level
- Reconstruction of climate resilient houses
- Installation of resilient tube wells
- Construction of sanitary latrines
- Rearing of goat/sheep in slatted houses
- Cultivation of flood tolerant crops

Outcomes of the project

- Institutions (Implementing Entities) and community groups strengthened capacity on addressing climate change
- Protection of homestead from adverse effect of flood

- Increased access to safe water and sanitation
- Access to flood resilient livelihood

1.4 Scope of Work

The independent interim evaluation focused on adaptation to floods, including the changing condition of beneficiaries in terms of income, economic activities, livelihoods, food security, health and nutrition, water, sanitation and hygiene knowledge, women's security to climate change, and community participation. The evaluation also looked into improvements achieved in the issues of women's empowerment considering control over resources, community participation and decision-making ability in every sphere, including individual, family, and community levels. The specific scope of this study included the following:

- To assess the increased institutional capacity and awareness of local institutions and communities.
- To assess the coping capacity of the targeted households regarding knowledge management, utilization, practice, and dissemination against existing extreme climate change events like floods to apply climate change adaptation solutions.
- To measure the household's increased income, nutrition uptake, and food security of the targeted project participants through climate-resilient livelihoods;
- To identify the prevalence of health and hygiene practices at individual level, and access to safe drinking water at the household and community levels;
- Identify gaps in the baseline data, and develop methods to fill these gaps in consultation with project management and relevant national stakeholders.

1.5 Study Area

The project covers five (5) flood-vulnerable districts of Bangladesh with a high level of flood risks, high level of poverty, water scarcity, and food insecurity. The project area and locations are shown in **Table 1.2** and **Figure 1.2**.

Table 1.2: Locations of the Study Area

Sl. No.	Districts	Upazila	Unions	Number of Village
1	Nilphamari	Dimla	Tepakhoribari,	4
			Khogakhoribari	1
			PurboChatnai	1
			PoschimChatnai	1
2	Jamalpur	Shorishabari	Satpowa	9
			Pogoldigha	9
		Madarganj	Balujuri	8
			Charpakerdha	9
		Melandah	Nayanagar	6
			Ghosherpara	8
		Islampur	Golarchar	2

Sl. No.	Districts	Upazila	Unions	Number of Village
			Patharchi	6
			Belgacha	10
			Polabanda	2
			Kulkandi	2
3	Gaibandha	Fulchari	Erendabari	10
			Fazlupur	6
			Udakhali	1
		Shaghata	Shaghata	7
			Haldia	7
			Ghuri Dah	3
			Vator Khali	1
4	Kurigram	Chilmari	Chilmari	6
			Romna	7
			Noyerhat	9
			Austomir Char	11
		ChorRajibpur	Kodalkati	16
		Rowmari	Shoilmari	7
			Bondober	11
			Rowmari	6
			Char shoilmari	10
			Dantbhanga	7
5	Lalmonirhat	Lalmonirhat Sadar	Mogulhat	3
			Kulaghat	3
			Khuniagach	7
			Rajpur	16

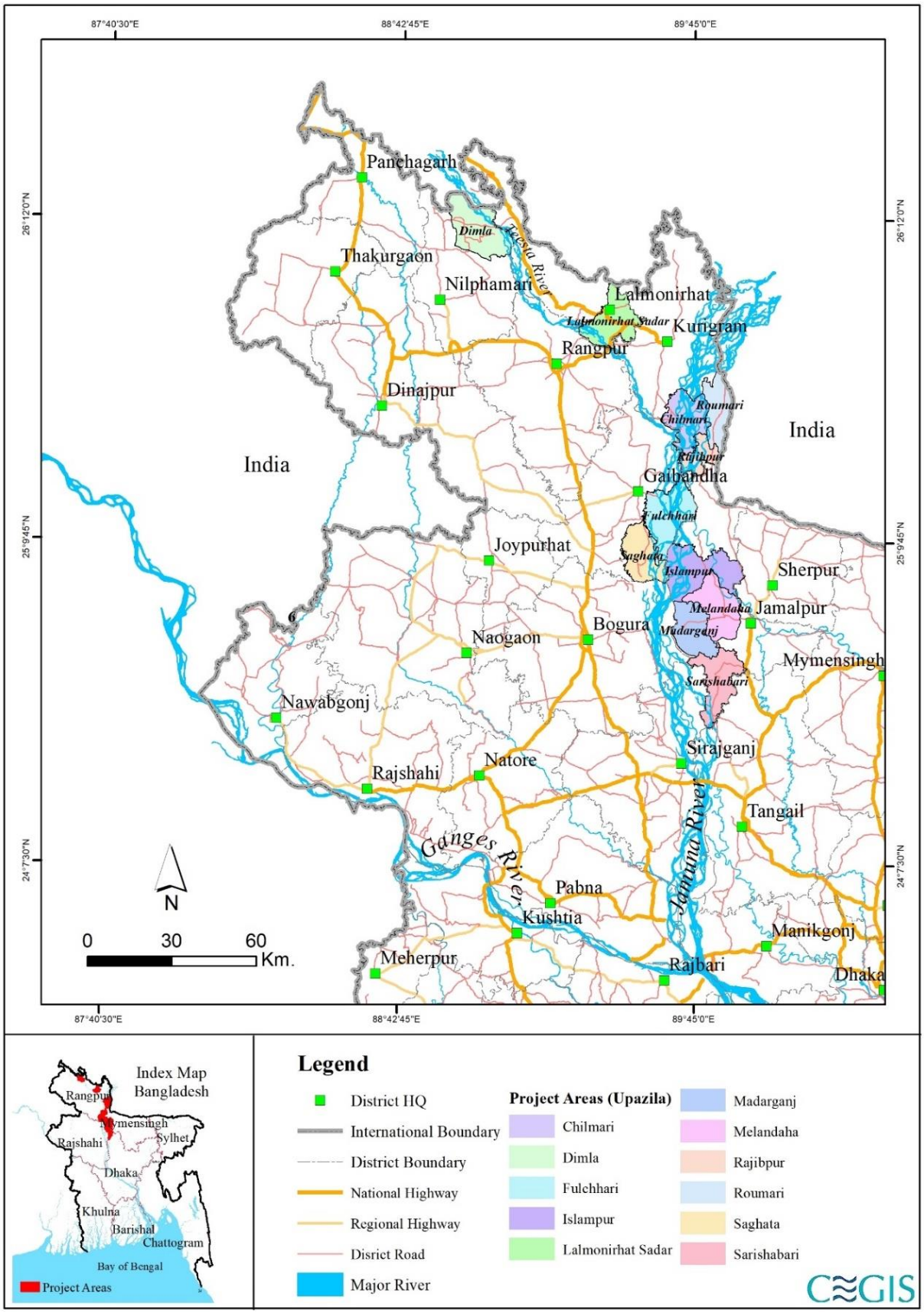


Figure 1.2: Locations of the Study Area

1.6 Justification and Rationale

The interim evaluation was proposed to evaluate the progress, achievement, and success of the project against the set target and baseline data provided in the log-frame. The results are expected to provide a sound understanding of the project's progress, achievements, and impacts by comparing the before-after scenario. It was also expected to provide the existing scenario of the project through content analysis that would assist the project's management in determining priorities for revising the operational plan as necessary. The study was intended to serve as a basis for the results-based monitoring and evaluation, and impact assessment of the project interventions focusing on relevance, efficiency, effectiveness, and sustainability. It is further expected that the findings will determine the outcome results and the gaps and challenges of the project to achieve the final target of climate change adaptation for the benefit of vulnerable poor people. Data gathered by the interim evaluation will be used to evaluate targeting accuracy according to the household proxy indicators by weighing them appropriately in consultation with PKSF.

1.7 Approach and Methodology

1.7.1 Approach

The Interim evaluation study examined households within the project and control areas following a "longitudinal approach" to detect changes that might have occurred over time. The evaluation targeted project objectives, outcomes, and outputs regarding GCF and Logframe indicators. An in-depth review of the Terms of Reference (ToR) facilitated the finalization of the evaluation indicators. A comparative analysis was done following the Difference in Difference (DiD) method between "*project beneficiary households*" and "*control group non-beneficiary households*." Those who received benefit-treatments were referred to as '*project beneficiary households'*. In contrast, '*control group non- beneficiary households*' referred to those who did not receive any project support. In addition, "*baseline*" time versus "*mid-term*" time difference maturity confirmed the comparison scene.

The evaluation parameter developed by the Organization for Economic Co-operation and Development (OECD) assessed the evaluation results (**Figure 1.3**).

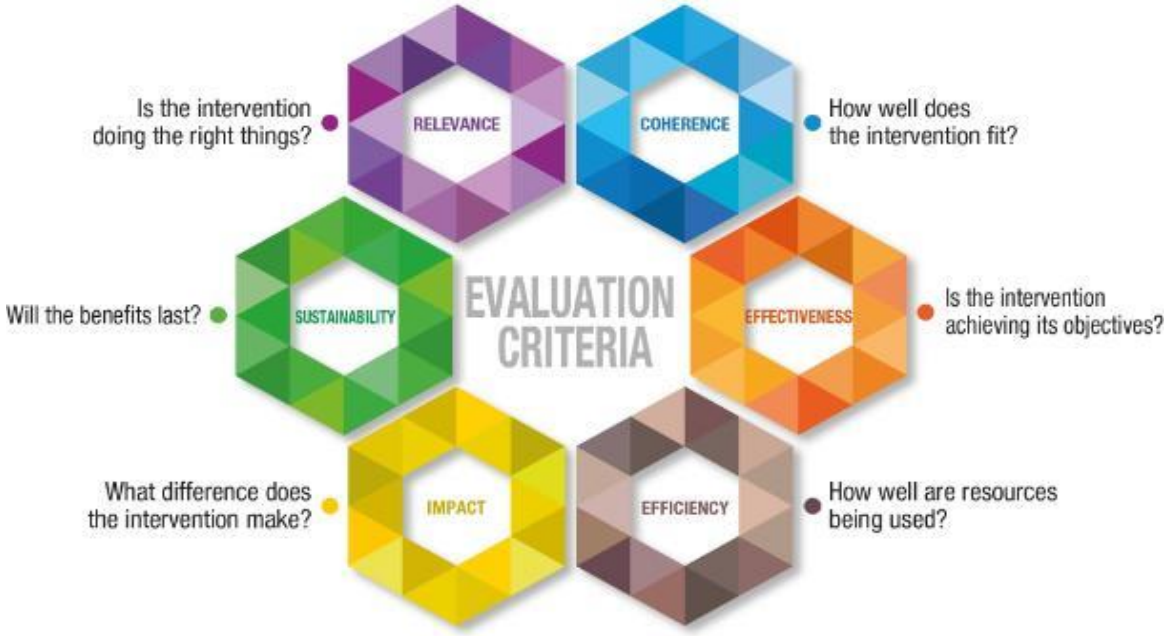


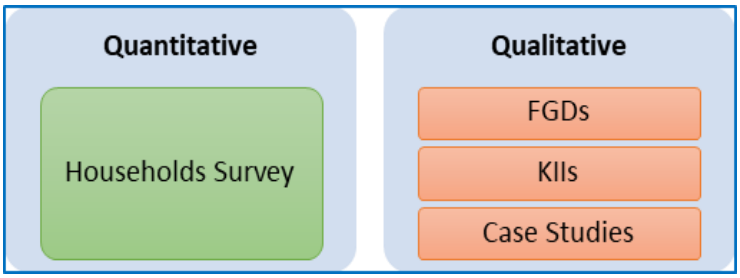
Figure 1.3: Framework for Evaluation

The evaluation assessed the project achievements with statistically analyzed data. In addition, the study defined the above-noted framework's elements (*relevance, effectiveness, efficiency, impacts, and sustainability*) and described guidance notes that helped the assessment.

Furthermore, the project's performance was evaluated concerning the GCF's investment criteria (GCF, 2019). The investment criteria included: (i) impact potential (impacts driven by project activities about expected changes), (ii) paradigm shift potential (project-led change to a new paradigm), (iii) sustainable development potential (co-benefits of the project), (iv) need of the recipients (of both institutional and community), and (v) country ownership (alignment with national targets and commitments).

Finally, the evaluation study identified gaps and drawbacks and prepared recommendations for promoting sustainable benefits for the targeted communities.

1.7.2 Methodology



The Interim evaluation study followed a mixed-method approach, which combined quantitative and qualitative methods to assess the achievement and performance of indicators. The main evaluation point was the project's logical framework, including its outcomes, outputs, objectives, and impact-related indicators. Households were the primary unit of analysis for the assessment.

Thus, the quantitative method included household surveys, and the qualitative methods included Focus Group Discussions (FGDs), Key Informant Interviews (KIIs), and Case studies. A description of both methods is given below.

The household surveys involved a structured questionnaire to collect data on the project's indicators. A representative sample of project beneficiary households and control group households was selected for the survey. The data collected were analyzed using statistical software to assess the project's performance.

FGDs were conducted with project beneficiaries, community leaders, and other stakeholders to obtain in-depth information on the project's relevance, effectiveness, and sustainability. KIIs were conducted with project staff, government officials, and other experts to get insights into the project's design, implementation, and impact. Case studies provided detailed information on the project's success stories, challenges, and lessons learned.

Both quantitative and qualitative methods triangulate the data and provide a comprehensive assessment of the project's achievement and performance.

Quantitative Method: Household Survey

In the same way as the baseline survey, households for the interim evaluation were selected to assess the impact of the intervention at household level. The household survey addressed the following major issues:

Assessment of household resilience toward climatic factors;

Details of the impact of interventions on the socio-economy of households;

Determining the satisfaction level of households toward interventions; and

Identifying any drawbacks and suggestions for the interventions.

The following steps were taken to select the surveyed villages for this evaluation study. Firstly, purposive sampling selected one upazila with project interventions from each of the five project districts. In the second stage, two unions with project interventions were selected from each of the five selected upazilas by a simple random sampling technique. In the third stage, two villages with project interventions were selected from each of the 10 sample unions by simple random sampling technique. Finally, the sample beneficiary households were selected from a list of vulnerable households in the selected villages applying a systematic random sampling technique from the village-wise list of project beneficiaries.

$$\mathbf{n} = \frac{\boldsymbol{NPQZ^2}}{\boldsymbol{(N-1)e^2+PQZ^2}} \times \mathbf{DE}$$

n= sample size (for finite population)

P= assumed that the sample proportion of a particular category was 50% in project area, i.e., p=0.50

Q= 1-p=1-0.50=0.50

Z= is the normal variate which is 1.96 at 5% level of significance with 95% confidence interval

N= Population size of the total direct beneficiaries = 20,000

e= is the precision level which is considered 5% for this study (if the margin of error is 5%, the e=0.05)

DE= Design Effect= 1.5

$$n = \frac{20{,}000 \times 0.50 \times 0.50 \times 1.96^2}{(20{,}000-1) \times 0.05^2 + 1.96^2 \times 0.50 \times 0.50}$$

$$n = \frac{19208}{50.9579}$$

n= 376.9376 ~ 384.6

The above formula results in 376.93 ~ 400. After adjusting with the design effect 1.5 and considering 10% attrition rate, the adjusted sample size becomes 660 beneficiaries for the treatment area.

The selected households from the beneficiary and control groups are shown in **Tables 1.3** and 1.4, respectively, based on the client's requirement. For this evaluation study, A total of 180 households in the project area were covered by the study for each category of intervention, except for water and sanitation, for which 60 households were surveyed.

In total, 600 beneficiary households benefiting from four (4) interventions were surveyed in the project area. An additional 10% (60) of households were surveyed under the attrition criteria, bringing the total number of households surveyed in 20 sampled villages in the project area to 660.

In the control villages, 330 households (50% of the beneficiary households) in each intervention were surveyed in 20 sample villages.

Table 1.3: Distribution of Sample Size of Beneficiary HHs by Different Interventions and Treatment Areas

Districts / **Interventions**	**Kurigram**	**Lalmonirhat**	**Gaibandha**	**Nilphamari**	**Jamalpur**	**Total**
Plinth raising	50	20	30	20	60	180
Water and sanitation	20	5	5	10	20	60
Livelihood operations	50	20	30	20	60	180
Agricultural operations	20	30	50	30	50	180
Total	**140**	**75**	**115**	**80**	**190**	**600**
Attrition (10%)	14	7	12	8	19	60
Total Treatment Group	**154**	**82**	**127**	**88**	**209**	**660**

Table 1.4: Distribution of Sample Size of HHs by Different Interventions and Control Areas

Districts / Interventions	Kurigram	Lalmonirhat	Gaibandah	Nilphamari	Jamalpur	Total
Plinth raising	25	10	15	10	30	90
Water and sanitation	10	3	2	5	10	30
Livelihood operations	25	10	15	10	30	90
Agricultural operations	10	15	25	15	25	90
Total	**70**	**38**	**57**	**40**	**95**	**300**
Attrition (10%)	7	4	5	4	10	30
Total Control Group	**77**	**42**	**62**	**44**	**105**	**330**

The sample size is also distributed among the sample villages per the administrative units and interventions in the project and control areas in the following **Table 1.5** and **Table 1.6**.

Table 1.5: Sample Beneficiaries as per Administrative Units and Interventions in the Project Area

District	Upazila	Unions	Village	Plinth Raising	Livelihood Intervention	Agricultural Option	Water and Sanitation	Total
Nilphamari	Dimla	Tepa Kharibari	Dighirpar-6	4	3	3	2	12
			Tatipara	3	3	3	2	11
		Paschim Chhatnai	Kaligonj	16	10	7	5	38
			Doholpara	6	10	9	2	27
Sub-Total	**1**	**2**	**4**	**29**	**26**	**22**	**11**	**88**
Jamalpur	Islampur	Belgachha	Sindurtali	18	18	0	4	40
			Anandapur	26	0	25	6	57
		Kulkandi	Jigatola Bangla Bazar	27	6	22	7	62
			JigatolaModopara	22	13	9	6	50
Sub-Total	**1**	**2**	**4**	**93**	**37**	**56**	**23**	**209**
Gaibandha	Fulchhari	Erendabari	Char ChaumohanModdho para	6	4	5	3	18
			Paschim Jigabari	8	5	4	2	19
		Fazlupur	Madhya Khatiamani	18	16	17	7	58
			Paschim Khatiamani	11	7	10	4	32
Sub-Total	**1**	**2**	**4**	**43**	**32**	**36**	**16**	**127**
Kurigram	Raumari	Bandaber	Char Khanjanmara	24	11	8	4	47
			Faluar Char	39	21	18	9	87
		Saulmari	Sabuj Para	3	4	3	0	10
			Taluar Char	3	3	2	2	10
Sub-Total	**1**	**2**	**4**	**69**	**39**	**31**	**15**	**154**
Lalmonirhat	LalmonirhatSadar	Khuniagachh	Talpotti	4	5	5	1	15
			Kuthipara	8	6	11	4	29
		Rajpur	Thikanar Bazar	3	3	7	0	13
			Chinatuly Govt. Primary School	5	6	12	2	25
Sub-Total	**1**	**2**	**4**	20	20	35	7	82
Grand-Total	**5**	**10**	**20**	**254**	**154**	**180**	**72**	**660**

Table 1.6: Sample Non-beneficiaries as per Administrative units and Interventions in the Control Area

District	Upazila	Union	Village	Plinth Raising	Livelihood Intervention	Agricultural Option	Water and Sanitation	Total
Nilphamari	Dimla	DimlaSadar	Monospara	2	2	2	1	7
		Tepa Kharibari	DokkhinKharibari	2	2	2	1	7
		Balapara Union-2	Thakurganj	6	2	2	1	11
		1 no. Paschim Chhatnai	PurbaSadnai	3	5	5	1	14
		KhogaKharibari	Pagolpara	3	3	2	2	10
Sub-Total	**1**	**2**	**4**	**15**	**14**	**13**	**6**	**48**
Jamalpur	Islampur	Chinadulli	Nondona para	9	9	0	2	20
			taluwarcor	13	0	12	3	28
			Ulliapara	13	3	9	4	29
		Belgachha	Projapoti	11	7	5	3	26
		7 vori	Kasharitoba	?	?	?	?	?
Sub-Total	**1**	**2**	**4**	**46**	**19**	**26**	**12**	**103**
Gaibandha	Fulchhari	Kanchi Para Union-5	Rosulpur	3	2	3	2	10
			Fulchari	4	2	2	1	9
		Gazaria Union-6	BaushiGojaria	8	7	8	3	26
			Village-12	6	4	5	2	17
Sub-Total	**1**	**2**	**4**	**21**	**15**	**18**	**8**	**62**
Kurigram	Raumari	Dantbhanga Union-7	PuranTapurChor	12	6	3	2	23
		Bandaber Union-8	Borodhontola	19	9	8	5	41
		Jadur Char	Jadurcor	2	2	2	0	6
		Saulmari	kirtimani	2	2	1	1	6
				35	**19**	**14**	**8**	**76**

District	Upazila	Union	Village	Plinth Raising	Livelihood Intervention	Agricultural Option	Water and Sanitation	Total
Lalmonirhat	LalmonirhatSadar	Barabari Union-9	Atbildorponskor	2	2	3	1	8
		Harati	Hiramanik	4	3	5	2	14
		Gokunda Union-10	Puratontista	2	2	3	0	7
		1 no. Rangavali	Rangavali	2	3	6	1	12
Sub-Total	**1**	**2**	**4**	**10**	**10**	**17**	**3**	**41**
Grand-Total	**5**	**10**	**20**	**127**	**77**	**88**	**37**	**330**

Scoring Method

The scoring method for assessing the capacity of a household in any awareness and community mobilization program for resilient climate activities during floods is a method that uses a set of questions to evaluate the level of knowledge or capacity that the household possesses in a specific area of interest. This method involves assigning a numerical value to each possible response to the questions and then scoring the responses by adding the numerical values for each answer. This score reflects the household's capacity level in the specific area of interest. It can categorize the capacity level as *low*, *moderate*, or *high*.

Binary scoring method

The binary scoring method assigns a score of 1 or 0 to each response. This score reflects the household's capacity level in the specific area of interest. It can categorize the capacity level as either *low/slight, moderate,* or *high*. If the response is correct or meets the expected level of knowledge or capacity, a score of 1 is assigned. If the response is incorrect or does not meet the expected knowledge or capacity level, a score of 0 is assigned. This method is easy to use and score, but it does not consider the difficulty level of the questions or tasks.

The binary scoring method (yes/no) for multiple questions calculates the overall score by adding up the scores for each response across all questions.

If the value is estimated in percentage, the percentage of the maximum possible score for each respondent is calculated. For example, if the maximum possible score is 5 and a respondent scored 3, their percentage would be 60% (3/5 x 100).

In particular, a threshold or cut-off point for each category is defined to assess the capacity level as slight, moderate, or high with the binary scoring method. For example, the following cut-off points are defined as:

Not at all=0%

Slight/low: 1-33%

Moderate: 34-66%

High: 67-100%

Since the respondent scored in the 34-66% range, their capacity level is categorized as "moderate."

Likert scale

The study used a Likert scale to measure the household's level of knowledge or capacity. This method is widely used in evaluations of programs or interventions designed to improve knowledge or capacity in specific areas, and can be applied to a variety of contexts and objectives. In contrast, a predetermined range of mark-based scoring categorizes the capacity/knowledge level. This score reflects the level of capacity or knowledge level of the household in the specific area of interest and can organize the level of capacity as:

- Not at all= 0

Slight increase in capacity= 1

A moderate rise in capacity= 2

High growth in capacity=3

Or

No/never=0,

Sometimes/little (slight)=1,

Frequently/significantly (moderate)=2,

Always/ regularly/sustained=3

Alternatively, the percentage of respondents falling within each category can be calculated based on the overall scores. For example, the level of capacity can be categorized as follows:

Slight increase in capacity: 0-30%

A moderate increase in capacity: 31-60%

High growth in capacity: 61-100%

Using the Likert scale and a predetermined range of scores, the level of knowledge or capacity can be measured accurately and identified areas needing improvement.

Qualitative Methods

Focus Group Discussion (FGD)

Triangulation of the dataset was referred to the use of multiple methods or data sources to gather information about a phenomenon to increase the findings' validity and reliability. In this case, there were 13 Focus Group Discussions (FGDs) in the project area, of which 11 FGDs were with local communities in different sample upazilas and 2 remaining FGDs with female and female vulnerable groups explicitly focusing on the interventions of Plinth Raising and Livelihood.

Key Informant Interviews (KIIs)

A total of 36 Key Informant Interviews (KIIs), comprising 9 KIIs with Implementing Entities (IEs) of PKSF, collected feedback and identified difficulties they encountered in managing the project interventions at the local level. Additionally, the evaluation study arranged 27 community-level KIIs with various community-influencing people (UP Chairman/members, Imam/Purohit, local leaders) and Health Workers and Teachers from schools and colleges. These KIIs were utilized to gather recommendations for enhancing the implementation of the interventions (**Figure 1.4**).

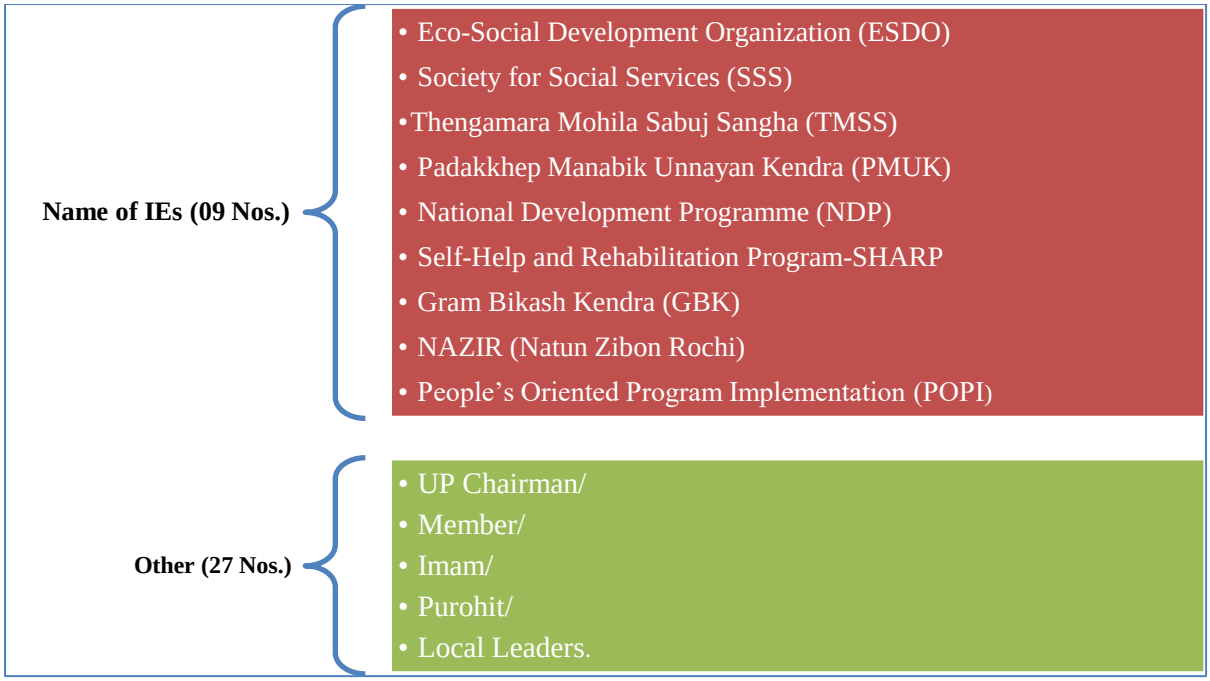


Figure 1.4: Stakeholders for Conducting KII

Case Study

Thirteen (13) case studies were conducted with project beneficiaries based on five (5) key scopes of work for evaluation. These case studies aimed to assess the project's success in enhancing the beneficiaries' lives. Each scope of work included two case studies, focusing on male and female beneficiaries and considering vulnerable populations and their experiences with the Plinth Raising and Livelihood interventions. Ultimately, these case studies yielded essential insights into the project's impact and contributed to determining its overall success in meeting its objectives.

Evaluation Planning Matrix

A Key Evaluation Questions matrix based on the objectives, key questions, and data collection and analysis methods was inserted in the inception report. The matrix detailed each of the focusing areas with selected methods for investigation. The report discussed the appropriateness of the analysis (quantitative/qualitative) to the evaluation questions. A sample of the Evaluation Matrix is shown in the following **Table 1.7**.

Table 1.7: Evaluation Planning Matrix

Evaluation criteria	Key evaluation questions	Indicators	Sub-indicators	Variables	Source of information
Assess the increased awareness of the community groups	How effective were the CCAG sessions in building awareness and knowledge on climate change adaptation among beneficiaries and stakeholders? To what extent did CCAGs contribute to building local capacity for climate change adaptation and resilience?	Climate change adaptation groups (CCAG) formed and operationalized	Several climate change adaptation groups developed and operationalized	Climate change adaptation groups	PMU
			Improved capacity of climate change adaption groups related to knowledge management and information dissemination	Level of the capacity of climate change adaption groups related to knowledge management and information dissemination	FGD, Survey questionnaire
			Impact of the meetings on the decision-making process	Women take decisions	Survey questionnaire, FGD
				Women's participation in social activities	
				Women involved in employment and IGAs	
				Actively engaged in project activities	
	How comprehensive and appropriately did the project conduct the vulnerability assessment?	Preparation of vulnerability assessment and adaptation action plan	Number of vulnerability assessment and adaptation plans	Several vulnerability assessments are prepared	PMU
				Several adaptation plans are prepared.	
	How well were the adaptation action plans implemented, and what were the resulting outcomes regarding increased resilience to climate change impacts?		Percentage of vulnerability assessment and adaptation plans used in decision-making and planning by households or IEs	The number of beneficiaries utilized the outcome of vulnerability assessment and adaptation plans at the HH level.	Survey questionnaire
	How effective were the training and workshop sessions in building awareness and	Training and workshops on Climate Change conducted for	Use of the information from the training and workshops in	The number of beneficiaries received livelihood and leadership training and	Survey questionnaire

Evaluation criteria	Key evaluation questions	Indicators	Sub-indicators	Variables	Source of information
	knowledge on climate change adaptation among beneficiaries and stakeholders?	beneficiaries and stakeholders	decision-making and planning at the household or policy level	several beneficiaries utilized the knowledge of training and workshops	
	How effectively was knowledge from the knowledge products utilized?	Preparation and dissemination of knowledge products	Quarterly newsletter published	Newsletter	PMU
			Number of workshops organized	Workshops and seminars	PMU
			Lessons learned published	Lessons learned documents	field data
Assess the straitening of the capacity of local institute	How effective were the institutional and regulatory systems in improving incentives for climate resilience? To what extent were the institutional and regulatory systems effective in implementing measures that improve climate resilience? What were the outcomes of the transferred or licensed technologies and innovative solutions in promoting climate resilience? How sustainable are the transferred or licensed technologies and innovative solutions beyond the project period?	Strengthened institutional and regulatory systems for climate-responsive planning and development	Institutional and regulatory systems that improve incentives for climate resilience and their effective implementation	Implement the adaptation plans to address climate change (e.g., established focal persons and recruit specialized staff on climate change)	Project document, field data
			Number of technologies and innovative solutions transferred or licensed to promote climate resilience as a result of Fund support	Flood-tolerant rice varieties	Survey questionnaire, KII, PMU
				Short duration and disease-protective wheat variety	
				Sand bar vegetable cultivation	
				Slatted house for goat/sheep rearing	
				Tube-wells	
				Sanitary latrine	
Assess the increased	How effective were the project interventions in protecting		Raised the homesteads above flood level	Re-construction of climate-resilient houses	Survey questionnaire

Evaluation criteria	Key evaluation questions	Indicators	Sub-indicators	Variables	Source of information
resilience of infrastructure	homesteads from the adverse effects of floods? To what extent were the homesteads protected from flooding, and what were the key factors that contributed to their protection? How sustainable are the measures to protect homesteads from flooding beyond the project period? What were the outcomes of protecting homesteads from flooding in terms of reducing damage to property and improving the safety of vulnerable people?	Protection of homestead from the adverse effect of flood		Number and value of the raised homestead	
				Year-round vegetables and fruits cultivation on the raised plinth	
			Installation of resilient tube wells	The number and value of tube-wells made more resilient to climate vulnerability and change, considering human benefits.	Survey questionnaire
				Number of males and females with year-round access to reliable and safe water supply despite climate shocks and stresses	
			Construction of sanitary latrines	The number and value of sanitary latrines made more resilient to climate vulnerability and change, considering human benefits.	Survey questionnaire
			Change in expected losses of lives and economic assets (US$) due to the impact of extreme climate-related disasters	Loss of lives	Survey questionnaire
				Loss of economic assets	
			Reduced economic losses in animal husbandry	Economic losses in animal husbandry	Survey questionnaire
		Increased women's security during flood	Several Sexual harassments happened during the flood	Number and level of women security (slightly, moderately, highly)	Survey questionnaire

Evaluation criteria	Key evaluation questions	Indicators	Sub-indicators	Variables	Source of information
Assess the increased resilience of livelihood	To what extent has the project increased resilience and enhanced the livelihoods of the most vulnerable people in its targeted area?	Number of food-secure households (in areas/periods at risk of climate change impacts)	Practiced climate-resilient farming	Climate resilient farming (agriculture, livestock)	Survey questionnaire
			Rearing of goats/sheep in slatted houses	Number of beneficiaries reared goats/sheep in slatted houses	Survey questionnaire
				Received training on goat rearing	
			Cultivation of flood-tolerant crops	Number of farmers cultivating flood-tolerant rice crops	PMU
				Number of farmers cultivating short-duration and disease-protective wheat varieties	PMU
				Number of farmers cultivating vegetables in the sand bars	PMU
				Received training on flood-tolerant crops	PMU
			Increase in crop production.	Crop (rice, wheat, sandbar vegetables) production	Survey questionnaire
			The number of males and females benefiting from adopting diversified, climate-resilient livelihood options (including fisheries, agriculture, tourism, etc.)	Adopting diversified, climate-resilient livelihood options (agriculture, livestock, etc.)	Survey questionnaire
				Increase monthly Income	Income	

Evaluation criteria	Key evaluation questions	Indicators	Sub-indicators	Variables	Source of information
		Increased income and nutrition uptake of the communities due to raising homestead plinths	Reduction of nutrition sickness due to flood	Nutrition: reduced sickness	Survey questionnaire
Assess the access to water and sanitation facilities	To what extent has the project increased resilience of health, well-being, and water security?	Increased access to safe water and sanitation	Percentage of the population in the targeted areas with access to safe water	Number of tube-well installed	Project document, field data
				Percentage of tube-wells providing water by ensuring national standards	Survey questionnaire
				Number of beneficiaries using safe water (gender disaggregated)	PMU, Survey questionnaire
				Decrease in water-borne diseases.	Survey questionnaire
		Percentage of the population in the targeted areas with access to flood-resilient sanitation	Construction of sanitary latrines	Number of sanitary latrines constructed	PMU
				Number of beneficiaries using sanitary latrines (gender disaggregated)	

Data Analysis and Report Preparation

The data analysis for the interim evaluation focused on identifying the gaps between the baseline and interim conditions and between the conditions of the project and control group households. To achieve this, the study employed several techniques, including *Difference in Difference* (DiD), Propensity Score Matching (PSM), and Average Treatment Effect (ATE). These methods were used to measure the project's impact on various outcome indicators.

It is essential to identify the key objective variables that both PSM and DiD methods examined to ensure the analysis's accuracy. These variables were categorized into three types, outcome variables, treatment variables, and independent variables. However, the use of these techniques depended on the availability of relevant data and the specific needs of the assessment.

During the assessment, a scale of "slightly increased," "moderately increased," and "highly increased" was used to evaluate the results. However, one of the major challenges in any program evaluation is isolating the spillover effects in treatment and control areas. The DiD method avoids these spillover effects by assuming that unobserved heterogeneity is time-invariant and uncorrelated with program participation. A detailed discussion of these techniques can be found in Appendix 2 and a table outlining their specific characteristics.

One of the key concerns in the impact evaluation is the issue of reducing contamination or selection bias. The extent of offsetting these problems depended on the method utilized in the study. In this connection, randomization appeared to be the most sophisticated method. However, the application of randomization stays difficult due to the limitation of a certain project and its objectives involved. In such cases, analysts often exploit two popular methods, namely the propensity score method (PSM) and difference in difference (DiD) method. This study attempted to utilize both of them for cross-examining the robustness of the results particularly about the challenge of contamination. Though it seems implausible to claim a complete immunity from the contamination bias, it can be fairly presumed that the spillover effects to the control group remained at the minimum level due at least three factors which has been unearthed by this study. There exist good balancing property of the covariates among both treatment and control groups (Figure 3.3), a large common support between the groups (**Table 3.6**) and improved results through both estimation methods (see details for further clarification at **Table 3.7**).

In addition to the techniques mentioned above, some statistical tests such as mean difference tests (t-test, z-test) to test the hypothesis, ANOVA, and association tests were applied as per the requirements. Furthermore, regression models were also considered to determine the factors that influence contributions to the outcomes. Overall, this approach to data analysis was designed to provide a comprehensive evaluation of the project's impact and help identify areas of improvement.

Data Management and Analysis

The data was analyzed using the SQL database technique, and the outputs were produced in MS Excel. Earlier, experts had provided dummy tables following their module requirements, on which a query was designed, and outputs were produced (Figure 1.5).

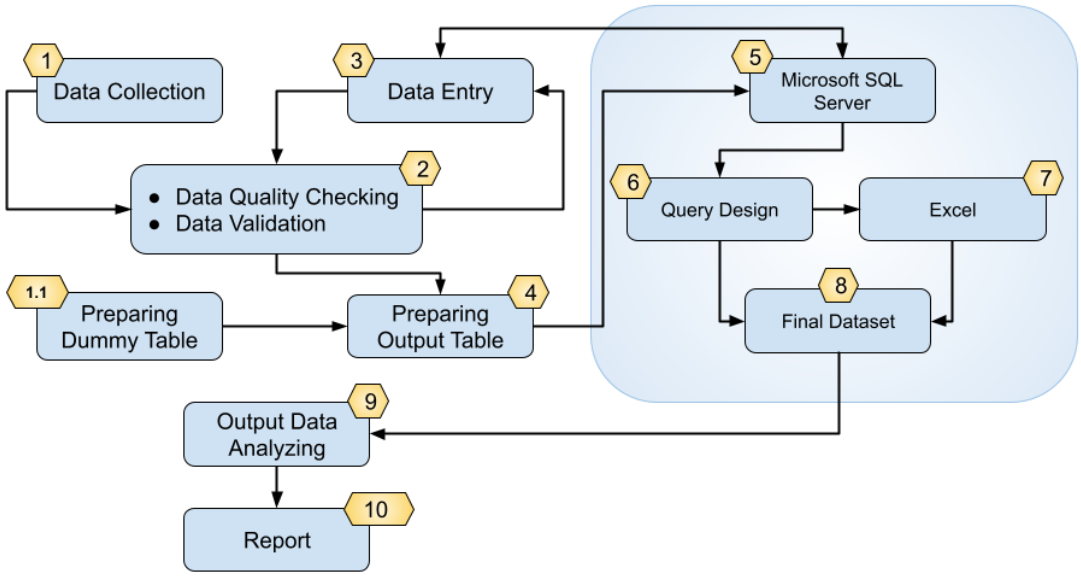


Figure 1.5: Flow Chart of Data Entry, Management, and Analysis

Data Quality Control

In order to ensure the appropriate data quality, accuracy, consistency, and relevance were checked at five stages during the evaluation process. These stages were:

Data Collection Stage

Before the data collection began, a comprehensive questionnaire was prepared, which was tested in the field and finalized through a series of iterations with relevant experts from CEGIS and PKSF. Each survey team comprised four members who worked under an experienced supervisor dedicated to the field. The supervisor's core responsibility was to check the collected data, clarify the questions to enumerators, guide them, clean the collected data, and link it to the report.

Post-Collection Stage

After data collection, the survey team visited the CEGIS head office and sat with relevant experts. The expert on each module reviewed the filled-up questionnaire rigorously, fine-tuned it, and carried out another round of cleaning of the collected data.

Data Entry Stage

Data entry operators entered the collected data, and the enumerators and supervisors checked the entered data in the MIS. In case of discrepancies, the data was edited and finalized.

Post-Data Entry Stage

Initially, outputs were drawn from the database and distributed to the experts concerned for checking the output tables. The experts did various tests to check the data validity. At this stage, minor discrepancies were resolved.

Data Analysis Stage

The assigned programmer also checked the output data and linked it with the sample size and other cross-referencing issues. Thus, a cleaned and robust dataset and reports were prepared.

Any abnormalities found in the dataset during reporting on the processed dataset were sent back to the checking process in subsequent stages of data checking. A potential and competent programmer dealt with the dataset in association with strong, supporting professional hands.

Training of Field Staff and Field Mobilization

Regarding the field plan and duration of the assignment, ten (10) field officers (enumerators) from CEGIS, having adequate experience in household surveys and knowledge of quantitative and qualitative data collection, were nominated for data collection. Two supervisors from CEGIS were also assigned to oversee the work of the field officers. The field officers and supervisors were split into two teams, each consisting of five field officers and a supervisor. The supervisors supervised the entire survey work and conducted FGDs, KIIs, and case studies with the necessary support from CEGIS senior officers. Each field officer collected data from six households daily, and thus data was collected in total from 60 households daily. It was anticipated that the questionnaire survey would be completed within 17 days.

Furthermore, a Manager from CEGIS staff was responsible for managing all field activities and logistics support. The field officers and supervisors underwent a 5-day training in CEGIS to get familiar with the project, data collection methods, and instruments such as questionnaires and checklists. They were instructed on managing and retaining the data quality regarding data consistency, accuracy, correctness, completeness, and relevance during data collection. Trainee feedback was also encouraged during the training as they could easily solve the problems faced in the field during data collection.

After completing the training, a pre-testing was held based on the prepared questionnaire and checklist to check the questionnaires' relevancy and correctness. This pre-testing was conducted on a pilot basis, and the questionnaire was improved according to the gaps identified.

Visiting Project/Control Area

Before conducting the survey, an advanced senior team from CEGIS visited the selected project and control areas to assess if any new beneficiaries needed to be added or removed from the beneficiary list. The team then shared their findings with PKSF and only proceeded with the survey after receiving confirmation from PKSF.

Field Preparation and Data Collection

A logistics support team at CEGIS arranged the field preparation and supported the study team.

2. Findings of the Interim Evaluation

2.1 Introduction

This chapter presents the evaluation results of project impact according to sub-indicators. In assessing the indicator-based results, the baseline and interim period were compared to understand how the changes occurred in each project sub-indicators according to the target (till interim) following the GCF and Log frame sub-indicators.

2.2 Assessment in the Light of the Theory of Change (ToC)

The overall project achievements show that the project is on the right track of the Theory of Change (see the ToC in Appendix-10). All the planned activities were implemented accordingly and outputs were found visible during the interim evaluation stage.

The outcomes reveal that the project intends to strengthen the institutional capacity of the Implementing Entities (IE), which was identified as one of the important barriers in the context of project implementation. Thus, PKSF conducted an assessment of certain implementing entities (IEs) to determine their expertise in climate adaptation. The baseline study revealed that these IEs possessed some experience engaging with communities that are vulnerable to climate change impacts. However, their proficiency in scientific knowledge and organized project implementation on climate change initiatives were inadequate. Their focus revolved mainly around local knowledge. Additionally, the capabilities of these IEs varied in the relevant field, such as remote char dwellers and flood-prone areas. Consequently, PKSF opted to enhance their capacity by imparting recent scientific knowledge and drawing lessons from PKSF's own experiences. The IEs' ability was initially regarded as 0 (zero) at the baseline level due to their lack of experience working on adaptation initiatives in such remote locations and their degree of scientific knowledge about climate change. On top of this, the PSKF also implemented a couple of other projects by these IEs, and thus, have developed a very good understanding and partnership with them. The interim findings show that all nine IEs overcame their barriers and developed ‘high’ capacity, which is higher than the target.

Alongside institutional capacity, the project identified a ‘lack of community awareness’ on climate adaptation and resilience which is another important barrier to implementing the project. Therefore, the project aims to enhance community awareness. The achievements show that more than fifty percent of the beneficiary people have become highly aware and self-driven on climate adaptation and resiliency. Over time, beneficiary households have become motivated to be involved in project-assisted climate-resilient farming.

The project location is a low-lying riverine and flood prone char area, located in the most braided river called Jamuna-Brahmaputra. The project targeted the poor and vulnerable people in this area who are under the constant threat of erosion and flooding. Project implemented activities —such as: i) raising homesteads above flood level, ii) reconstruction of climate resilient houses, iii) installation of tube wells, iv) construction of climate resilient sanitary latrines— increased resiliency of households and its members in the context of health and well-being. Other activities —such as: v) rearing of goat/sheep in slatted houses and vi) cultivation

of flood tolerant crops— directly benefited livelihoods of beneficiary households and increased resiliency in adapting/combating future climate change.

Women are highly affected due to the consequences of climate change, and they are also structurally more vulnerable than men in the country. This is also true for the char areas (project area). The project's target to include more women is justified in the context of eliminating gender inequality.

Thus, the interim evaluation assessed that the project has already met its objectives and show overachievement in some cases. The effective project management and monitoring by PKSF has led to this overachievement. Based on the assessment result, it can be anticipated that the remaining activities will be accomplished within the targeted time-frame. However, some modifications (as presented in 'Chapter-4: Recommendations') would further enhance the benefits of the project.

2.3 Key Findings of Indicators

The following pages present the key findings of outputs, outcome indicators, and GCF's measurement indicators.

2.3.1 Findings of Project Indicators

	Description	Indicators	Baseline	Targets (Interim)	Interim Evaluation Results (2023)	Data Source	Remarks
Objective related to GCF RMF Impact Areas	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	Institutions: 2 slightly increased capacity, 5 moderately increased capacity, and 3 highly increased capacity	9 IEs high capacity, 0 IEs moderate capacity, and 0 IEs slight capacity	KII	Positive Impact
			0	Beneficiaries: 10% slightly increased resilience, 60% moderately increased resilience, and 15% highly increased resilience	Beneficiaries: 54.5% highly increased, 41% moderately increased, and 4.5% slightly increased	Interim survey	Positive Impact
		Practiced climate-resilient farming	0	15,000 farmers	13,545 farmers	Interim survey and PMU	90.3% farmers practicing climate resilient farming
Outcomes	Outcome 1: Institutions (IEs) and community groups strengthened their capacity to address climate change	Increased capacity of NGOs to support households in flood protection and dissemination of adaptation solutions	0	2 slightly increased capacity, 5 moderately increased capacity, and 3 highly increased capacity	9 IEs high capacity, 0 IEs moderate capacity, and 0 IEs slight capacity	KII	Achievement is more than the interim target
		Increased capacity of households to apply climate change adaptation solutions	0	10% slightly increased capacity, 60% moderately increased capacity, and 15% highly increased capacity	27% slightly increased capacity, 43% moderately increased capacity, and 30% highly increased capacity	Interim survey	Positive Impact

	Description	Indicators	Baseline	Targets (Interim)	Interim Evaluation Results (2023)	Data Source	Remarks
		Utilization of the knowledge from the knowledge products	0	Institutions: 3 slightly, 6 moderately, and 1 highly utilize knowledge from the knowledge products	Institutions: all 9 IEs highly utilized knowledge from the knowledge products	KII	100% achievement
			0	Beneficiaries: 20% slightly use, 40% moderately use, and 5% highly use knowledge from knowledge products	Beneficiaries: 100% use knowledge from knowledge products (in which 2% slightly use, 62% moderately use and 36% highly use)	Interim survey	CCAG training manuals, newsletter, guideline, communication materials etc.
	Outcome 2: Protection of homestead from adverse effects of flood	Reduced economic losses in animal husbandry	1.26 million USD (annual average in Rangpur division, BBS, 2015)	Reduction of loss by 50% on targeted beneficiaries	95% of beneficiaries did not face economic losses in animal husbandry	Interim survey	Out of 660 surveyed households only 5% of households reported losses in animal husbandry.
		Increased income and nutrition uptake of the communities due to raising homestead plinths	Income: Monthly BDT. 3,573 (42.54 US$) (CCCP baseline)	Increased Income: 20%	Monthly BDT. 4582, income increased (28%)	Interim survey	8% higher than the targeted income
			Nutrition: 47.91% sickness due to flood	Nutrition: reduced sickness by 5%	36.91% reduced sickness due to support from the project	Interim survey	11% of the beneficiaries feel unwell due to lack of nutritious food
		Increased women's security during flood	0	10,000 slightly secured, 20,000 moderately secured, and 15,000 fully secured from sexual	12,600 felt slightly secure, 20,250 felt moderately secure, and 12,150 felt fully secure from sexual	Interim survey	Overall satisfactory achievement. Thus, compared to the interim target 26% more achievement in slightly

	Description	Indicators	Baseline	Targets (Interim)	Interim Evaluation Results (2023)	Data Source	Remarks
				harassment during flood.	harassment during flood.		secured category, 1.2% more achievement in moderately secured category, but 19% less achievement in highly secured category
	Outcome 3: Increased access to safe water and sanitation	Percentage of the population in the targeted areas with access to safe water	72.6% (CCCP baseline)	85% of the targeted beneficiaries	81% beneficiaries	Interim survey	8.4% more increase than baseline, but close to the target
		Percentage of the population in the targeted areas with access to flood-resilient sanitation	9.1% (CCCP baseline)	60% of the targeted beneficiaries	77.40% of the targeted beneficiary	Interim survey	17.4% more increase than the target
	Outcome 4: Access to flood-resilient livelihood	Increase in household income in targeted households by practicing GCF-funded livelihood technologies	Monthly BDT. 3573 (42.54 US$) (CCCP baseline)	30% (increased income)	Monthly BDT. 7656, income increased (114%)	Interim survey	Previously the targeted beneficiaries could not cultivate rice on the flood affected lands but after getting the flood tolerant varieties they cultivated the same land and received increased yield. Moreover, loss of and damage to crops and livestock has also decreased due to the project intervention. This has impacted their income highly.
Output	**Outputs related to Outcome 1**						

	Description	Indicators	Baseline	Targets (Interim)	Interim Evaluation Results (2023)	Data Source	Remarks
	Output 1.1 Climate change adaptation groups (CCAG) formed and operationalized	Number of climate change adaptation groups formed and operationalized	0	1,000	1000	PMU	100% achievement
		Improved capacity of climate change adaption groups related to knowledge management and information dissemination	Low	Moderate	High	The interim survey, KIIs, FGDs, and case studies	Positive impact
		Impact of the meetings on the decision-making process	Low effective	Moderately effective	Moderately effective	Interim survey, KIIs, FGDs, and case studies	Positive impact
	Output 1.2 Preparation of vulnerability assessment and adaptation action plan	Number of vulnerability assessment and adaptation plans	0	1,000	1000	PMU, FGDs & KIIs	Positive impact
		Percentage of vulnerability assessment and adaptation plans used in decision-making and planning by households or IEs	0	40%	53.69%	Interim survey, KIIs and FGDs	13.69% higher use of plans in decision making and planning
	Output 1.3 Trainings and workshops on Climate Change conducted for beneficiaries and stakeholders	Use of the information from the training and workshops in decision-making and planning at the household or policy level	0	40% of the targeted beneficiaries use the information from the training and workshops	56.66 % of the targeted beneficiaries use the information from the training and workshops	The interim survey, FGD	16.66% more beneficiaries use the information from training and workshop
	Output 1.4 Preparation and	Quarterly newsletter published	0	7	5	PMU	71% achievement

	Description	Indicators	Baseline	Targets (Interim)	Interim Evaluation Results (2023)	Data Source	Remarks
	dissemination of knowledge products	Number of workshops organized	0	10	13	KII, PMU	11 workshops has organized by IEs and remaining two organized by PKSF
		Lessons learned published	0	0	0	KII, PMU	
	Outputs related to Outcome 2						
	Output 2.1 Raised the homesteads above flood level	Number of homesteads constructed	0	6,000	7,128	The interim survey, PMU	118% more achievement than the target
	Output 2.2 Re-construction of climate-resilient houses	Number of resilient houses constructed	0	6,000	6,500	The interim survey , PMU	108% more achievement than the target
	Outputs related to Outcome 3						
	Output 3.1 Installation of resilient tube wells	Number of the tube-wells installed	0	300	319	PMU	106% more achievement than the target
		Percentage of tube-wells providing water by ensuring national standards	0	60%	95%	Interim Survey	95%-installed tube wells meeting all safe water criteria, the remaining 5% tube wells show the presence of iron. However, the achievement is 35% against the interim target
		Number of beneficiaries using safe water (gender disaggregated)	Male 0	Male 3,000	Male 8,084	PMU	269% higher achievement than the target
			Female 0	Female 3000	Female 7,920	PMU	264% higher achievement than the target

	Description	Indicators	Baseline	Targets (Interim)	Interim Evaluation Results (2023)	Data Source	Remarks
		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 by BBS, 2015)	50% of the targeted beneficiaries	61% of the targeted beneficiaries	Interim Survey	Water-borne diseases decreased among 11% more beneficiaries than the interim target
	Output 3.2 Construction of sanitary latrines	Number of sanitary latrines constructed	0	1,600	1,742	PMU	108% higher achievement than the target
		Number of beneficiaries using sanitary latrines (gender disaggregated)	0	3,600 female	9,630 Female	PMU	267% higher achievement than the target
			0	3,600 male	9,502 Male	PMU	263% higher achievement than the target
	Outputs related to Outcome 4						
	Output 4.1 Rearing of goats/sheep in slatted houses	Number of beneficiaries reared goats/sheep in slatted houses	0	6,000 women beneficiaries	6,492 women beneficiaries	PMU	108% higher achievement than the target
	Output 4.2 Cultivation of flood-tolerant crops	Increase in crop production	0	30%	71%	Interim survey	41% higher achievement than the target.
		Number of farmers cultivating flood-tolerant rice crops	0	Female 2,000	Female 2,103	PMU	105% higher achievement than the target
			0	Male 2,000	Male 1,617	PMU	20% less achievement than the target
		Number of farmers cultivating short-duration and disease-protective wheat varieties	0	1,500 beneficiaries	2,113 beneficiaries (HHs)	PMU	140% higher achievement than the target

	Description	Indicators	Baseline	Targets (Interim)	Interim Evaluation Results (2023)	Data Source	Remarks
		Number of farmers cultivating vegetables in the sand bars	0	1,500 women beneficiaries	1,220 beneficiaries (HHs)	PMU	19% less achievement than the target

2.3.2 Findings of GCF Indicators

Expected Result	Indicator	Unit of Measurements	Baseline	Interim Target	Interim Evaluation Results (2023)	Data Source	Remarks
A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions	A1.1 Change in expected losses of lives and economic assets (US$) due to the impact of extreme climate-related disasters	%	Average 120 losses of lives	Reduced losses of lives by 20%	Only 03 people died in the whole study area during last year's flood	Interim survey	230% reduced loss of lives
		US$	Loss of economic assets: US$13million (as per BBS, 2015 for the targeted 5 districts	Reduction of loss of economic assets for the targeted population by US$ 1 million	US$ 3.27 million of economic asset loss incurred in the study area	Interim survey	US$ 9.73 million of economic asset loss has been reduced in reference to the baseline condition
A2.0 Increased resilience of health and well-being, and food and water security	A 2.1 Number of males and females benefiting from adopting diversified, climate-resilient livelihood options (including fisheries, agriculture, tourism, etc.)		Female: 0	Female: 30,000	30,476	PMU	101% higher achievement against the target
			Male: 0	Male: 30,000	30,476	PMU	(112%)
	A2.2 Number of food-secure households (in areas/periods at risk of climate change impacts)		0	12,000 HHs	13,545 HHs	PMU	112% higher achievement against the target

Expected Result	Indicator	Unit of Measurements	Baseline	Interim Target	Interim Evaluation Results (2023)	Data Source	Remarks
	A2.3 Number of males and females with year-round access to reliable and safe water supply despite climate shocks and stresses		Female: 0	Female: 15,000	7,920 (53%)	PMU	47.2% less achievement than the target
			Male: 0	Male: 15,000	8,084 (54%)	PMU	46.10% less achievement than the target
A3.0 Increased resilience of infrastructure and the built environment to climate change	A.3.1 Number and value of physical assets made more resilient to climate vulnerability and change, considering human benefits		Homestead and household assets: 0 Latrine: 0 Tube-well: 0	Homestead and household asset: # 6,000 Value: US$ 1.55 million Latrine: # 1,500 Value: US$ 0.56 million Tube-well: # 300 Value: US$ 0.18 million	Homestead and household asset: # 7128 Value: US$ 2.45 million Latrine: # 319 Value: US$ 0.19 million Tube-well: # 1742 Value: US$ 0.64 million	Interim survey	Positive Impact
D.3. Outcomes measured by GCF indicators							
A5.0 Strengthened institutional and regulatory systems for climate-responsive planning and development	Number of technologies and innovative solutions transferred or licensed to promote climate resilience as a result of Fund support		0 flood-tolerant rice varieties	3 flood-tolerant rice varieties	5 flood tolerant rice varieties	KII	Name of varieties: BRRI 51, 52, & 79; BINA11& 12,
			0 short duration and disease-protective wheat variety	1 short-duration and disease-protective wheat variety	5 short duration and disease-protective wheat varieties	KII	Name of varieties: BARI 30, 31 & 33, WMRI, & Kanchan
			0 sand bar vegetable cultivation	1 sand bar vegetable cultivation	4 sand bar vegetable cultivation	KII	Name of varieties: BARI Pumpkin 6, & Baromashi
			0 Slatted housing for goat/sheep rearing	1 Slatted housing for goat/sheep rearing	1 Slatted housing for goat/sheep rearing	KII	100% achievement
			0 flood-resilient tube wells	1 flood-resilient tube wells	1 flood-resilient tube wells	KII	100% achievement
			0 Flood-resilient sanitary latrine	1 Flood-resilient sanitary latrine	1 Flood-resilient sanitary latrine	KII	100% achievement

Expected Result	Indicator	Unit of Measurements	Baseline	Interim Target	Interim Evaluation Results (2023)	Data Source	Remarks
	A5.1 Institutional and regulatory systems that improve incentives for climate resilience and their effective implementation		0 institutional systems' plans	selected Institutions implemented 2 plans to address climate change (established focal persons and recruited specialized staff on climate change)	All the 9 institutions implemented 2 plans to address climate change	KII	100% achievement
			0 CCAG	1,000 CCAGs	1,000 CCAGs	PMU	100% achievement
A7.0 Strengthened adaptive capacity and reduced exposure to climate risks	A7.1 Use by vulnerable households, communities, businesses, and public-sector services of Fund-supported tools, instruments, strategies, and activities to respond to climate change and variability		0% of the selected households and communities use fund supports tools and strategies	10% of the selected households and communities use slightly effective, 60% use moderately effective and 10% use highly effective fund-supported tools, instruments, strategies, and activities increase to respond to climate change and variability	About 20% of the beneficiaries showed slight effectiveness, 44% showed moderate effectiveness, and the remaining 36% fell into the highly effective category concerning their use of tools, instruments, strategies, and activities to respond to climate change and variability.	Interim survey	Overall, higher achievement against the target
A8.0 Strengthened awareness of climate threats and risk-reduction processes	A8.1 Number of males and females made aware of climate threats and related appropriate responses		Female: 0 Male: 0	9,000 people have low awareness of climate change, 54,000 are moderately aware and 27,000 highly aware Female: 10,000 have low awareness, 20,000 are moderately aware, and 15,000 are highly aware Male: 20,000 have low awareness, 20,000 are	Out of a total of 90,000 beneficiaries, 73,705 individuals (37,654 males and 36,051 females) have been informed about the threats of climate change and appropriate response measures.	PMU	81% of achievement

Expected Result	Indicator	Unit of Measurements	Baseline	Interim Target	Interim Evaluation Results (2023)	Data Source	Remarks
				moderately aware, and 5,000 are highly aware			

2.4 Description of Indicators

2.4.1 Objective-related Indicators

Institutional Capacity

The project intends to increase the capacity of Implementing Entities (IEs). The IEs comprise 9 implementing NGOs. The institutional capacity has been assessed based on the following issues/indicators:

Institutional networking

Technical capacity of an institution (staff knowledge of climate change and unit of staff)

Received training and attended workshop and seminar related to climate change

Experience in dealing with climate change-related projects

Having own resources (financial capacity, climate expert)

Prepared climate-related knowledge products (newsletter, CCAG training manual, guidelines, communication materials, etc.)

Having institutional systems plans

Knowledge about climate change funds or access to climate change funds, etc.

A total of 12 questions were prepared based on these issues/indicators, and the responses were "Yes" and "No". Thus, the answer 'Yes' gets the score '1', and the 'No' answer gets '0'. The institutional capacity was assessed based on the accumulated number of answer score 1 and its ranking scale. The ranking scales are slight capacity, moderate capacity, and high capacity. The ranking scale and scoring range with the accumulated number of answer score 1 are presented in the following table (**Table 2.1**).

Table 2.1: Ranking Scale and Scoring for Institutional Capacity Assessment of IEs

Ranking Scale	Scoring Range (1-12)
Slight capacity	1-4
Moderate capacity	5-8
High capacity	9-12

All IEs were engaged in the project with no relevant capacity during baseline (Thus, PKSF conducted an assessment of certain implementing entities (IEs) to determine their expertise in climate adaptation. The baseline study revealed that these IEs possessed some experience engaging with communities that are vulnerable to climate change impacts. However, their proficiency in scientific knowledge and organized project implementation on climate change initiatives were inadequate. Their focus revolved mainly around local knowledge. Additionally, the capabilities of these IEs varied in the relevant field, such as remote char dwellers and flood-prone areas. Consequently, PKSF opted to enhance their capacity by imparting recent scientific knowledge and drawing lessons from PKSF's own experiences. The IEs' ability was initially regarded as 0 (zero) at the baseline level due to their lack of experience working on adaptation initiatives in such remote locations and their degree of scientific knowledge about climate change). In contrast, the evaluation assessment result shows that all IEs improved their capacity to 'high.' The assessment result is presented below in **Table 2.2**.

Table 2.2: Institutional Capacity Score and Scale in Baseline and Mid-term Year

Sl.	Name of IEs	Baseline	Evaluation Results in 2023	
			Score (1-12)	Scale
1	Eco-Social Development Organization (ESDO)	0	11	High
2	Society for Social Service (SSS)	0	9	High
3	Thengamara Mohila Sabuj Sangha (TMSS)	0	12	High
4	Padakkhep Manabik Unnayan Kendra (PMUK)	0	11	High
5	National Development Organization (NDP)	0	11	High
6	Self-Help and Rehabilitation Programme (SHARP)	0	12	High
7	Gram Bikash Kendra (GBK)	0	12	High
8	NAZIR (Natun Zibon Rochi)	0	11	High
9	People's Oriented Program Implementation (POPI)	0	12	High

Source: Interim Evaluation Survey, 2023

By analyzing the question-wise achievement, it is found that eleven questions/issues (92%) are 'highly achieved', and only one question/issue (8%) is 'moderately achieved'. In contrast, no questions/issues are achieved in the category low. The following **Table 2.3 & 2.4** show the results:

Table 2.3: Detailed Results of IEs Capacity Investigation

Sl.	Capacity Assessment Activity	Implementing Entities (IEs)									Total Number of IEs by Activity (n=9)
		ESDO	SSS	TMSS	PMUK	NDP	SHARP	GBK	NAZIR	POPI	
1.	Complete CC-related project	1	0	1	0	0	1	1	0	1	5
2.	Develop networking	1	1	1	1	1	1	1	1	1	9
3.	Familiarity & access to CC fund	1	1	1	1	1	1	1	1	1	9
4.	Adaptation program	1	1	1	1	1	1	1	1	1	9
5.	Attend CC training	1	1	1	1	1	1	1	1	1	9
6.	Organize workshop/seminar	1	0	1	1	1	1	1	1	1	8
7.	Prepare knowledge products on CC	0	0	1	1	1	1	1	1	1	7
8.	Staff expert on CC	1	1	1	1	1	1	1	1	1	9
9.	CC-related adaptive technology	1	1	1	1	1	1	1	1	1	9
10.	Contingency plan for CC	1	1	1	1	1	1	1	1	1	9
11.	Minimum 5 employees for CC	1	1	1	1	1	1	1	1	1	9
12.	System plan for flood	1	1	1	1	1	1	1	1	1	9

Source: Interim Evaluation Survey, 2023

As a result of rigorous PMU monitoring, practical training for IE employees, helpful exchange visits, and effective engagement of IE officials with climate-vulnerable populations, Institutions (IEs) have improved their capacity to address climate change more than the mid-term target.factors such as the effective utilization of knowledge products, organization of dissemination workshops by PKSF have played a pivotal role in deriving a significant improvement in the capacity of these IEs.

Table 2.4: Range of Overall Achievement

Scoring Range	Definition	Overall Achievement (in %)
1-3	Low achievement	0
4-6	Moderate Achievement	8
7-9	High Achievement	92

Source: Interim Evaluation Survey, 2023

Community Awareness

Community awareness refers to knowledge and information about climate change-related issues and their adaptation/adjustment practices, if any. The project also intends to bring community awareness alongside providing various physical interventions. Community awareness issues were assessed based on 22 questions/indicators (Appendix 8). The assessment followed the same methods (for institutional capacity). Thus, the answer 'Yes' received the score '1', and the 'No' answer received '0'. However, unlike the baseline report, the scale was categorized based on the number of beneficiary households that responded for score 1. The scoring and assessment scale is presented in the following table (**Table 2.5**):

Table 2.5: Scoring Method for Community Awareness

Awareness Scoring Range	Awareness Scale
1-7	Slightly aware
8-14	Moderately aware
15-22	Highly aware

Source: Interim Evaluation Survey, 2023

According to the evaluation findings below, about 4.5% of beneficiary households were slightly aware, 41% were moderately aware, and 54.5% were highly aware (**Table 2.6**). Increased resilience of health and well-being, food and water security, dissemination of knowledge products and project related interventions mainly contributed to building community awareness in this regard.

Table 2.6: Score and Interpretation of Community Awareness

Scoring Range	Scale	Baseline	Evaluation Results (2023)		
			No. of HHs Responded (n=660)	No. of Issues Aware of	% of HHs Gained Awareness
1-7	Slight	0	30	1	4.5
8-14	Moderate	0	270	9	41.0
15-22	High	0	360	12	54.5

Source: Interim Evaluation Survey, 2023

2.4.2 Outcome-related Indicators

i. 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

The Capacity of NGOs was assessed based on a set 11 questions. The assessment followed the same methods as given above. Thus, the answer 'Yes' received the score '1', and the answer 'No' the '0' score. The scale was categorized based on the number of questions complied. According to the interim assessment, all 9 IEs achieved high capacity in flood protection and dissemination of adaptation solutions. The scoring and assessment criteria is presented in the following table (**Table 2.7**).

Table 2.7: Score and Interpretation of the Capacity of NGOs

Sl.	Name of IEs	Baseline	Evaluation Results in Year 2023	
			Score (1-11)	Scale
1	Eco-Social Development Organization (ESDO)	0	11	High
2	Society for Social Service (SSS)	0	11	High
3	TMSS	0	11	High
4	Padakkhep Manabik Unnayan Kendra (PMUK)	0	11	High
5	National Development Organization (NDP)	0	11	High
6	Self-Help and Rehabilitation Programme (SHARP)	0	11	High
7	Gram Bikash Kendra (GBK)	0	11	High
8	NAZIR (Natun Zibon Rochi)	0	11	High
9	People's Oriented Program Implementation (POPI)	0	11	High

Source: Interim Evaluation Survey, 2023

Increased Capacity of Households to apply Climate Change Adaptation Solutions

The project-provided adaptation solutions by beneficiary households were considered for assessing household capacity. According to the interim findings, the capacity of 27% of households improved slightly, 43% moderately, and the remaining 30% highly. Beneficiaries are still not fully adopting climate-resilient crop farming, which causes a lower achievement on the 'high' scale. Thus, nine questions related to plinth raising, climate-resilient crop cultivation, the use of slatted houses for goat/sheep rearing, access to climate-resilient tube wells, and sanitation were assessed (**Table 2.8**).

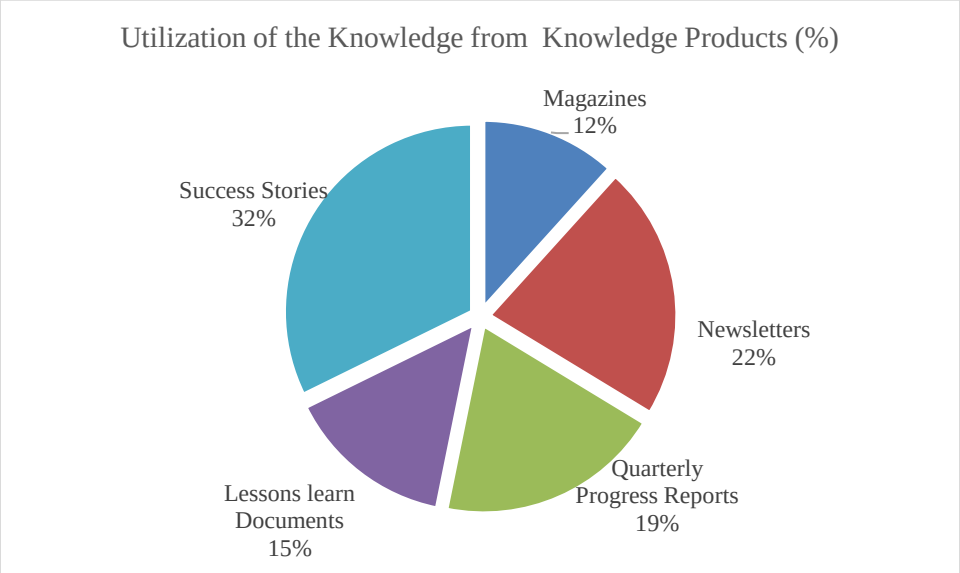
Table 2.8: Interpretation of the Capacity of HHs to Apply CC Adaptation Solutions

Scoring Range	Scale	Baseline score	Evaluation Results (2023)	
			No. of HHs Responded (n=660)	% of HHs Gained Awareness
<=220	Slight	0	180	27
221-440	Moderate	0	285	43
>440	High	0.	195	30

Source: Interim Evaluation Survey, 2023

Utilization of the Knowledge from the Knowledge Products

All 9 IEs were found to utilize knowledge to a great extent from knowledge products, which exceeded the interim target. Since IEs need to implement the project and motivate beneficiaries, they have been equipped with related knowledge products and have become self-motivated for utilization. **Figure 2.1** reveals that knowledge products take on different forms, with success stories comprising the largest proportion at 32%, followed by newsletters at 22%. Quarterly progress reports account for 19%, while lesson-learned documents and magazines make up 15% and 12%, respectively.



Source: Interim Evaluation Survey, 2023

Figure 2.1: Usage of Knowledge Products

On the other hand, 36% of beneficiary households were found to highly utilize knowledge from the above-mentioned knowledge products (**Table 2.9**), whereas 62% of households utilized moderately, and only 2% of households utilized slightly.

Table 2.9: Score and Interpretation of the Utilization of Knowledge by Households

Scoring Range	Scale	Baseline	Evaluating Results (2023)	
			No. of Households Utilized (n=660)	% of Households Utilized
1-3	Slightly utilize	0	13	2
4-6	Moderately utilize	0	409	62
7-9	Highly utilize	0	238	36

Source: Interim Evaluation Survey, 2023

ii. Outcome 2: Protection of Homesteads from Adverse Effect of Flood

Reduced Economic Loss in Animal Husbandry

Every year, floods cause a lot of damage to flood-affected areas, especially houses, livestock, and fisheries. The mid-term evaluation assessment found that 95% of the sample beneficiaries did not face economic losses, while only 5% of households reported losses in animal husbandry. However, this reduction was not caused by the project solely, although people reported positive impacts in animal husbandry due to plinth raising and slatted houses. In principle, the loss of animals occurred in extreme weather events. The surveyed households had not experienced such extreme flooding since the project initiation. The reported 5% loss is therefore largely due to diseases and other factors. However, the raised plinths have provided a place free from tidal inundation, which reduces animal diseases and has eventually reduced economic loss in animal husbandry.

Increased Income and Nutrition Uptake of the Communities due to Raising Homestead Plinths

Raising homestead plinths has increased community revenue and nutrient intake. A raised plinth area has provided flood protected space for plantation and homestead gardening. Communities are engaged in producing vegetables and rearing goats and poultry on raised platforms during and after the flood. Reduce damages to household assets. And also reduced economic losses in animal husbandry. So, homestead plinth rising has contributed to the increase of household income and ensured security. Also, plinth raising has protected homesteads from recurrent expenses due to flooding. Furthermore, people reported less disease prevalence (which used to occur due to flooding and inundation), and consequently, that also reduced the cost of treatment. These combined effects of plinth-raising have contributed to household income. Although the assessment shows an increase of 8% household income compared to the interim target, other factors —such as: the adoption of more secondary occupations, involvement in livelihood activities by other household members, etc.— have also contributed to this income increase (**Table 2.10)**. A related case study is shown in **Appendix 7**.

Table 2.10: Household Income (BDT) Increased due to Homestead Plinth Raising

Indicator	Income during Baseline (BDT)	Target	Income during Interim Evaluation (BDT)	Income Increased from Baseline	Remarks
Income (BDT) increased due to the homestead plinth rising	3,573	20% increase in income	4,582	28% increase from the baseline	8% higher than the target

Source: Interim Evaluation Survey, 2023

The increased income involves a positive influence on nutrition intake by household members. Thus, only 11% of beneficiaries reported flood-caused sickness in the interim phase, which shows that illness of 36.91% of beneficiaries has been reduced compared to the starting of the project. This reduction rate is much higher than the interim target (**Table 2.11**).

However, the study revealed that women in the char area are suffering severley for antenatal and postnatal care due to the absence of health service providers nearby them. Locational remoteness, troublesome and time consuming transportation and communication problemitise the health care services futher. On top of that, this problem becomes intensified during the flooding time. In this context, estabilishing community clinics in the char area could eliminate the problem.

Table 2.11: Analysis of Flood-Caused Sickness

Response on Suffering from Sickness	Interim findings	
	Beneficiary [n=660]	
	No.	%
Yes	75	11
No	585	89
Total	660	100

Source: Interim Evaluation Survey, 2023

Increased Women's Security During Flood

Flood events in the project area cause insecurity for women in terms of outside mobility and night time mobility for using latrines. Due to the raised plinth, communities' people are not moving to flood shelters, embankments, or such higher places. They stayed on their own homestead and that increased women's security during floods.The interim assessment shows that 28% of women now felt slightly secure, 45% moderately secure, and 27% highly secure during flood events after project implementation. Overall, this outcome slightly better than the interim target. The activity of plinth raising has helped to build latrines next to their homes. Furthermore, the improved toilets have also ensured privacy for them. Over the course of time, the security of women has increased (**Table 2.12**).

Table 2.12: Reported Security Status of Women During Flood Events

Scale of Security	Baseline	Interim Target	Evaluation Results (2023)		
			n=660	%	Proportionate Distribution (n=45000)
Slightly secure	0	10,000	185	28	12,600

Scale of Security	Baseline	Interim Target	Evaluation Results (2023)		
			n=660	%	Proportionate Distribution (n=45000)
Moderately secure	0	20,000	297	45	20,250
Highly secure	0	15,000	178	27	12,150

Source: Interim Evaluation Survey, 2023

iii. Outcome 3: Increased Access to Safe Water and Sanitation

Population with Access to Safe Water

Households having flood-resilient tube wells with potable water were assessed as having access to safe water. In the baseline, 72.6% population in the project area had access to tube wells. The project intended to install flood-resilient tube wells to ensure access for 85% of the population in the interim phase. According to the interim findings, 81% of beneficiaries responded that their tube-wells are resilient now (free from inundation). Thus, the evaluation assessment shows that 8.4% of the population now have access to safe and flood-resilient water compared to the baseline, although it is still 4% below the interim target (**Table 2.13**).

Table 2.13: Responses of Access to Safe Water

Beneficiary Responses	Interim Findings (n=660)		Interim Target
	No.	%	
Yes	532	81	85%
No	118	19	-

Source: Interim Evaluation Survey, 2023

Considering gender segregated beneficiaries, 8084 females and 7920 males were benefited from installed tube wells. This achievement is higher than that of interim targets. The installed tube wells were used not only for collecting drinking water but also for bathing, washing cloths and utensils. Both male and female use the same tube wells at the same time, which often causes privacy problems. Therefore, beneficiaries stated to have separate section in the same tube wells or a spate tube wells for female only.

Percentage of Population with Access to Flood Resilient Sanitation

Households having sanitary latrines above the flood level were assessed as having access to flood-resilient sanitation. The project intends to install flood-resilient sanitary latrines that ensure access for 60% of the population in the interim phase. According to the interim findings, 77.4% of beneficiaries responded that their toilets are resilient now (free from inundation). Thus, the evaluation assessment shows that 68.3% of the population now have access to flood-resilient sanitation facility compared to the baseline, which is more than 17.4% of the interim target (**Table 2.14**).

Table 2.14: Responses from Beneficiaries on Access to Flood Resilient Sanitation

Beneficiary Responses	Interim Findings (n=660)		Interim Target
	No.	%	
Yes	511	77.4	60%
No	149	22.6	-

Source: Interim Evaluation Survey, 2023

About 9630 females and 6502 males were benefited from sanitary latrines, which is higher than the baseline target. However, the use of same latrine by both male and female often caused privacy problems. Therefore, beneficiaries expected to have gender-segregated separate latrines.

iv. Outcome 4: Access to Flood Resilient Livelihood

Increase Household Income by Practicing Livelihood Technologies

Under the Flood-resilient livelihood technologies, the project provides livestock support (goat rearing in slatted house) and agricultural practices (rice, wheat, sandbar vegetables). According to the baseline situation, the average monthly income of the beneficiaries was BDT 3,573/-, which has risen to 7,656/- in the above-mentioned sectors due to the project intervention. The interim evaluation shows that the average income from these sectors has increased about 214%, which is 184% higher than the target. The reason for the high rate of income rise is that previously, the targeted beneficiaries could not cultivate rice in flood-affected fields, but after receiving flood-tolerant rice varieties, they cultivated the same land, and yield increased. Furthermore, wheat production has also increased due to the project's short duration and disease-resistant wheat varieties. The project intervention, on the other hand, has reduced crop and livestock loss and damage. This has had a significant impact on income (**Table 2.15**). A related case study is shown in **Appendix 7.**

Table 2.15: Household Income by Practicing GCF-Funded Livelihood Technologies

Indicator	Income during Baseline (BDT)	Target	Income during Interim Evaluation (BDT)	Income Increased from Baseline	Remarks
Income (BDT) by Practicing GCF-Funded Livelihood Technologies	3,573	30% increase in income	7,656	214%	184% higher than the target

Source: Interim Evaluation Survey, 2023

During our field visits, the local people highlighted the potential of sandbar cultivation as another popular means for livelihoods. Many people contended with small land plots and the challenge of transporting water for their plants. They also feel that they could generate higher income from alternative crops like melons or groundnuts/mung beans instead of sandbar cultivation, particularly sweet pumpkins. This underscores the necessity for increased motivation and support to encourage sandbar cultivation.

Given the limited livelihood options due to their reliance on water and land in the char area, it is needed to introduce additional income-generating activities. As part of the project, training programs for Alternative Income Generating Activities (AIGA) could be initiated. The AIGA options might include ‘training of women on tailoring’ and technical training (such as driving, repairing, and welding) for the youth. Such diversification of livelihood strategies could significantly enhance the overall economic prospects of the community.

2.4.3 Output-related Indicators

i. Output 1.1 Climate Change Adaptation Groups (CCAG) Formed and Operationalized

Number of Climate Change Adaptation Groups Formed and Operationalized

During baseline, no CCAGs had been formed and operationalized, which prompted the need to establish groups to better adapt to climate change. During the interim period, KIIs revealed that the goal of creating and operationalizing a total of 1000 CCAGs had been achieved (**Table 2.16**). The overall distribution of these groups is shown below:

Table 2.16: Number of CCAGs Formed and Operationalized in the Study Districts

Sl.	Districts	Name of IEs	Number
1	Lalmonirhat	National Development Programme (NDP)	170
2		Peoples Oriented Program Implementation (POPI)	50
3		NAZIR (Natun Zibon Rochi)	50
4	Jamalpur	Eco social Development Organization (ESDO)	265
5	Kurigram	Society for Social Service (SSS)	165
6		Padakhep Manabik Unnayan Kendra (PMUK)	100
7	Gaibandha	TMSS	100
8	Nilphamari	Self-Help and Rehabilitation Program (SHARP)	50
9		Gram Bikash Kendra (GBK)	50
Total			**1000**

Source: Interim Evaluation Survey, 2023

Improved Capacity of Climate Change Adaption Groups related to Knowledge Management and Information Dissemination

Knowledge Management of CCAGs refers to the knowledge and information about climate change-related issues and their adaptation/adjustment practices, if any. The project also intends to bring improved capacity alongside providing various physical interventions. These capacity issues were assessed based on 05 questions/indicators (**Appendix 08**). The assessment followed the same methods: the answer 'Yes' receiving the score '1' and the answer 'No' receiving '0'. However, unlike the baseline report, the scale was categorized based on how many beneficiary households had actually responded. The scoring and assessment criteria are presented in the following table (**Table 2.17**):

Table 2.17: Scoring Method for Knowledge Management of CCAGs

Scale	Scoring Range/HH responded (n=660)
Low	<=220
Moderate	221-440
High	>440

Source: Interim Evaluation Survey, 2023

According to the evaluation findings given below, it was found that all of the households did not know the risk of climate change and its mitigation. However, the capacity of climate change

adaption groups in terms of knowledge management and information dissemination was found to have highly increased (**Table 2.18**).

Table 2.18: Score and Interpretation of Knowledge Management of CCAGs

Scoring Range (HHs)	Scale	Baseline score (2020)	Evaluation Results (2023)	
			The average No. of HHs Responded	% of HHs
<=220	Slight	0	0	0
221-440	Moderate	0	0	0
>440	High	0	660	100

Source: Interim Evaluation Survey, 2023

Impact of Meetings on Decision-Making

The impact of decision-making is that the beneficiaries can adapt and put into practice the lessons learned from the CCAGs about climate resilience. As no CCAG had been formed before baseline period, no beneficiaries had participated in any climate change adaptation training. Therefore, decision-making capacity was low during the baseline period of the study.

Decision-making capacity was assessed based on 09 questions/indicators **(Appendix 08**). Here too the assessment used the scoring system where the 'Yes' response was assigned a score of '1' and a 'No' response a score of '0' in multiple-choice questions. This explains why responses may not align perfectly with a 100% match. However, unlike the baseline report, the scale was categorized based on how many beneficiary households had responded. The scoring and assessment criteria are presented in the following table (**Table 2.19**).

Table 2.19: Scoring Method for Impact of Meetings on Decision-Making

Scale	Scoring Range/HH responded (n=660)
Low	<=220
Moderate	221-440
High	>440

Source: Interim Evaluation Survey, 2023

According to the evaluation findings, about 86.36% of beneficiary households were moderately effective, 9.29% slightly effective, and 4.35% belonged to the highly effective category (**Table 2.20**).

Table 2.20: Score and Interpretation of Impact of Meetings on Decision-Making

Scoring Range (HHs)	Scale	Baseline score (2020)	Evaluation Results (2023)	
			The average No. of HHs Responded	% of HHs
<=220	Low effective	0	61	9.29
221-440	Moderately effective	0	570	86.36
>440	Highly effective	0	29	4.35

Source: Interim Evaluation Survey, 2023.

ii. Output 1.2 Preparation of Vulnerability Assessment and Adaptation Action Plan

Number of Vulnerability Assessment and Adaptation Plans

Vulnerability assessments refer to ascertaining the susceptibility of a natural or human system to sustaining damage from climate change. During the baseline period, there was no plan found in this respect.

According to interim findings, 1000 vulnerability assessment and adaptation plans were prepared with the active support of implementing agencies. The community member participates in the consultation meeting or large group discussion to discuss and identify the vulnerability, and prepare a community adaptation action plan (**Table 2.21**).

Table 2.21: Number of Vulnerability Assessment and Adaptation Action Plans

Sl.	Districts	Name of IEs	Number
1	Lalmonirhat	National Development Programme (NDP)	170
2		People Oriented Program Implementation (POPI)	50
3		NAZIR (Natun Zibon Rochi)	50
4	Jamalpur	Eco Social Development Organization (ESDO)	265
5	Kurigram	Society for Social Service (SSS)	165
6		Padakhep Manabik Unnayan Kendra (PMUK)	100
7	Gaibandha	TMSS	100
8	Nilphamari	Self-Help and Rehabilitation Program (SHARP)	50
9		Gram Bikash Kendra (GBK)	50
Total			**1000**

Source: ECCCP-Flood Interim Evaluation Survey, 2023

Community members are encouraged to actively participate in consultation meetings or large group discussions to discuss, identify vulnerabilities, and collaborate in the preparation of a community adaptation action plan.

Percentage of Vulnerability Assessment and Adaptation Plans Used by Households or IEs

Preparing vulnerability assessment and adaptation action plans means strengthening and accelerating local-level climate change adaptation plans through community-based risk. Since this indicator was assessed after the preparation of plans, the baseline percentage was zero (0), indicating no such effort had been made to determine vulnerability for supporting household decision-making and planning.

According to interim findings, the vulnerability assessment and adaptation plans were assessed based on 04 questions/indicators (Appendix 08). Here too the assessment followed the same methods: the answer 'Yes' receiving the score '1', and 'No' receiving '0'. It was found that about 53.69% of the beneficiary households had used vulnerability assessment and adaptation plans in the decision-making and planning process (**Table 2.22**).

Table 2.22: Scoring Results of Vulnerability Assessment and Adaptation Plans

Scale	% HH responded (n=660)
Yes	53.69
No	46.31

Source: Interim Evaluation Survey, 2023

iii. Output 1.3 Trainings and workshops on Climate Change Conducted for Beneficiaries and Stakeholders

Use of the Information in Decision-Making and Planning

Use of information from the training and workshops in decision-making and planning at the household or policy level refers to the percentage of beneficiaries who used information received from training and workshops on decision-making and planning at the household or policy level.

According to interim findings, about 56.67% of family members received training on different options through this project. It was intended that about 40% of the targeted beneficiaries would use the information from the training and workshops (**Table 2.23**).

Table 2.23: Scoring Results of Training and Workshops on Climate Change

Scale	% HH responded (n=660)	Interim Target
Yes	56.67	40%
No	43.33	

Source: Interim Evaluation Survey, 2023

iv. Output 1.4 Preparation and Dissemination of Knowledge Products

Quarterly Newsletter Published

Under the project, there was a target to publish seven (7) newsletters by mid project period, but interim findings show that PMU had published 5 newsletters.

Number of Workshops Organized

The interim evaluation revealed that 13 workshops were organized by different IEs and PKSF, as evidenced by **Table 2.24**. Nevertheless, the project's interim target of 14 workshops could not be met.

Table 2.24: Number of Workshops Conducted by Implementing Entities (IEs) & PKSF

Name of the implementing entities	Number of workshops
NAZIR (Natun Zibon Rochi), Lalmonirhat	1
People's Oriented Program Implementation (POPI), Lalmonirhat	1
National Development Programme (NDP), Kurigram	1
Padakhep Manabik Unnayan Kendra, Roumari, Kurigram	1
Eco Social Development Organization (ESDO), Jamalpur	2
Society For Social Services (SSS), Jamalpur	2
TMSS, Gaibandha	1
Self -Help and Rehabilitation Program (SHARP), Nilphamari	1
GBK (Gram Bikash Kendra), Nilphamari	1
Workshops Organised by PKSF	2
Total Workshops	**13**

Source: ECCCP-Flood Interim Evaluation Survey, 2023

Lessons Learnt Published

Lesson learned refers to the collected result of learning of success, challenges in implementation, etc., by the project's end. The mid-term evaluation has revealed that the lessons learned will be published after the completion of the project.

v. Output 2.1 Homesteads Raised above Flood Level

Construction of Raised Homesteads

Plinth raising is an essential climate-resilient feature to combat flooding, mainly in river basin areas. According to the household survey, out of 660 beneficiaries in the beneficiary village, 58% of household plinths have been raised through the ECCCP-Flood project. Data received from PMU confirms that about 7,128 homesteads have been re-constructed till now, which shows a 118% higher achievement than the mid-term target of 6,000 homesteads.

Hovever, the flooding also induate Common Property Resources (CPR) such as mosques, temples, graveyards, educational institutions, playgrounds, and cultural centers etc. nearby the settlements. The study reveals that "plinth raising of CPR" in conjunction with homesteads could support in smooth accessing to CPRs.

vi. Output 2.2 Re-construction of Climate Resilient Houses

Reconstruction of Resilient Houses

The ECCCP-Flood project has provided financial support to reconstruct homesteads on the raised plinth. It is found that 65% of households are now re-constructed climate-resilient houses with financial support of PKSF. Data received from PMU confirms that about 6,500 houses have been re-constructed till now, which shows a 108% achievement which is higher than the mid-term target of 6,000 homesteads.

vii. Output 3.1 Installation of Resilient Tube Wells

The interim evaluation revealed that against the interim target of 300, the ECCCP-Flood project has installed 319 tube wells for the targeted beneficiaries (6.3% more than the target). Regarding water quality, 95% of the installed tube wells met all safe water criteria. The remaining 5% tube wells show the presence of iron.

Regarding gender-segregated beneficiary coverage, 8,084 male and 7,920 female beneficiaries have access to safe water, which is more than the interim target (3,000 males and 3,000 females). Water-borne diseases (e.g., Cholera, Diarrhea, Dysentery) have been reduced among the beneficiary households due to use of potable water from safe sources. Thus, these diseases have decreased by 11% among beneficiaries which is more than the interim target (**Table 2.25**).

Table 2.25: Number of Installations of Climate Resilient Tubewells

Indicators	Interim Target	Interim Findings	Achievement (in %)
Number of installations of resilient tube wells	300 (in nos)	319 (in nos)	106
Number of beneficiaries using resilient tube wells (gender disaggregated)	3,000 female	7,920 female	264
	3,000 male	8,084 male	269

Source: Interim Evaluation Survey, 2023

viii. Output 3.2 Construction of Sanitary Latrines

At the interim level, the ECCCP-Flood project intended to install 1,600 climate resilient sanitary latrines, while 1,742 sanitary latrines have already been established under this project (**Table 2.26**). 9,502 male and 9,630 female beneficiaries have benefited against the interim target of 3,600 males and 3,600 females.

Table 2.26: Number of Sanitary Latrines Constructed

Indicators	Interim Target	Interim Findings	Achievement (in %)
Number of sanitary latrines constructed	1,600 (in nos)	1,742 (in nos)	109
Number of beneficiaries using sanitary latrines (gender disaggregated)	3,600 female	9,630 female	268
	3,600 male	9,502 male	264

Source: Interim Evaluation Survey, 2023.

Based on the demand from the community, an extended number of toilets and tube wells need to be installed. It needs to be implemented to reduce dissatisfaction among the beneficiaries. Therefore, increased access to safe water and sanitation is overachieved.

ix. Output 4.1 Rearing of Goats/Sheep in Slatted Houses

Beneficiaries Rearing Goat/Sheep in Slatted Houses

During the interim evaluation survey, it was found that 6,492 female beneficiaries are rearing goats or sheep in slatted houses, as opposed to none of the beneficiaries doing so in baseline situation. The following table reveals that the project's achievement is 108% which is more than the target (**Table 2.27**). As slatted house has high demand in the field so, more slatted house was provided than the target to reduce community dissatisfaction

Table 2.27: Number of Beneficiaries Rearing Goat/Sheep in Slatted Houses

Group	Baseline (no.)	Target (no.)	Interim (no.)	Achievement against target (%)
Beneficiary	0	6,000	6,492	108

Source: Interim Evaluation Survey, 2023

x. Output 4.2 Cultivation of Flood-Tolerant Crops

Increase in Crop Production

To measure this indicator, the yield of crop production has been assessed. It is observed that during baseline, none of the beneficiaries had any idea about flood-tolerant rice variety, short duration, and diseases protective wheat and sand bar vegetable cultivation. As a result, none of these crops, except wheat, were being produced. But after the project intervention, it appears that overall crop production has increased due to the provision of climate-resilient rice varieties like BRRI Dhan 51, BRRI Dhan 52, BINA 14, etc., and wheat varieties like BARI Ghom-33, BARI Ghom-30 etc. and vegetables (grown in char areas) like pumpkins. **Table 2.28** demonstrates that the average crop production has witnessed a remarkable increase, with a 71% overall growth.

Table 2.28: Comparative Matrix of Crop Production

Crops	Baseline (ton/ha)	Target	Interim (ton/ha)	Increase against Baseline (%)	The average increase in Production
Aman (flood-tolerant variety)	0	30%	4.66	100	71% increase in overall production
Wheat	3.30 (national standard)		3.45	15	
Sand Bar Vegetables (Sweet Pumpkin)	0		11.84	100	

Source: Interim Evaluation Survey, 2023

Farmers Cultivating Flood-Tolerant Rice

In the baseline, the beneficiaries had no idea that technology for cultivating flood-tolerant rice variety existed. But the situation changed due to the project input among the beneficiaries. During the interim evaluation, it was found that 2,103 female and 1,617 male beneficiaries were cultivating flood-tolerant rice. The following table shows that the project has achieved the interim target only for female beneficiaries as most of the beneficiaries are female (**Table 2.29**).

Table 2.29: Number of Farmers Cultivating Flood-Tolerant Rice

Beneficiary	Baseline	Target	Interim	Achievement against target
Female	0	2000	2103	105.15
Male	0	2000	1617	80.85

Source: Interim Evaluation Survey, 2023

Farmers Cultivating Short Duration and Disease-Protective Wheat Varieties

At baseline, the beneficiaries had no idea about disease-resistant wheat variety cultivation technology. However, the scenario changed after the project implementation and it was observed during the interim evaluation survey that 2,113 beneficiaries were cultivating short-duration and disease-protective wheat varieties. The following table (**Table 2.30**) shows that the project has achieved more than the target set for the interim.

Table 2.30: Status of Cultivating Short Duration and Disease-Protective Wheat Varieties

Group	Baseline	Target	Interim	Achievement against target (%)
Beneficiary	0	1,500	2,113	141

Source: Interim Evaluation Survey, 2023

Due to the community's positive perception of the GCF-funded livelihood technologies for better adaptation, an increase in household income in the targeted families exceeded targets, proving that, this type of activity in high demand.

Farmers Cultivating Vegetables in Sand Bars

Table 2.31 shows that during the baseline, no one from the beneficiaries cultivated vegetables on sandbars. But after the project intervention, 1,220 beneficiaries, all of whom are female, produce sandbar vegetables. Although the data shows that the situation has changed from the baseline condition, the project is still slightly behind the set target. On the other hand, it is also observed that about 44.4% of the beneficiaries are aware of sand bar vegetable cultivation, but the rate of practicing is comparatively lower than the awareness. Therefore, the project may initiate more motivational activities among farmers for cultivating sand bar vegetables.

Table 2.31: Status of Cultivating Vegetables on Sand Bars

Group	Baseline	Target	Interim	Achievement against target (%)
Beneficiary	0	1,500	1,220	81

2.4.4 Source: Interim Evaluation Survey, 2023GCF's Indicators for Impact Assessment

i. A1.0 Increased Resilience and Enhanced Livelihoods of the Most Vulnerable People, Communities, and Regions

Change in Loss of Lives and Economic Assets

Vulnerable households in the project area fall victim to floods and other climatic shocks, which cause them to lose tangible and intangible assets that are their economic valuables. Three people died in the study area during the last flood and 120 people died in the baseline period. In this particular indicator, loss of economic assets was assessed in terms of individuals losing money due to climatic adverse events. In this study, the economic loss was referred to as financial loss of tangible assets due to flood and climatic effects.

In order to measure this indicator, the total value of economic loss, including physical structure, agriculture, and other resources, was considered. The baseline finding reports that the total loss of economic assets by the last flood was 34,003 BDT (US$404) per household, whereas the interim figure equals to 13,748 BDT (US$ 163). Considering the total number of beneficiaries under the project, the total loss of economic assets by the last flood was US$ 13 million in the baseline condition, where the corresponding loss accounts for US$ 3.27 million in the interim study. Even the project interventions were able to surpass the midterm target, that is US$ 1 million, by more US$ 8.73 million (**Table 2.32**).

Table 2.32: Distribution of Loss of Lives and Assets

Loss type	Baseline	Target	Interim	Achievement(difference)
Lives	120	Reduced by 20%	03	230% reduced
Gross economic loss	US$13 million	Reduced by US$ 1 million	US$3.27 million	Reduced by US$ 9.73 million against the baseline

Source: Interim Evaluation Survey, 2023

ii. A2.0 Increased Resilience of Health and Well-Being and Food and Water Security

People Benefiting from Diversified, Climate-Resilient Livelihood Options

This indicator is measured by the number of beneficiaries who adopted livestock (goat rearing), and agricultural practices (rice, wheat, sandbar vegetables) that the ECCCP-Flood project

provides. According to the baseline findings, none of the farmers cultivated flood-tolerant rice, short-duration, and disease-resistant wheat varieties or practiced slatted houses for goat/sheep rearing. In the interim evaluation, it was found that on average, just 13 545 beneficiary HHs received the interventions provided by the project. However, in evaluating the project progress, the beneficiary HHs were multiplied by the HH size (4.5) and then equally divided among males and females following the set target. As a result, it was found that the project has benefited 30, 476 males and 30, 476 females, respectively, which is 101% higher than the interim target (**Table 2.33**).

Table 2.33: Number of Males and Females Benefiting from Livelihood Options

Beneficiary	Baseline	Target	Interim	Achievement Against Target (%)
Male	0	30,000	30,476	101
Female	0	30,000	30,476	101

Source: Interim Evaluation Survey, 2023

Food Secure Households (in Areas/Periods at Risk of Climate Change Impacts)

In this study, a typical household has access to safe water for drinking and household chores when it uses arsenic and odor-free tubewells. Besides, it was examined whether the household's water sources became flood-resilient after the provision of respective interventions (**Table 2.34**). The following question was taken into consideration while assessing the indicator:

The number of households having tube wells suitable for drinking and use of household chores.

Table 2.34: Year-Round Access to Safe Water Supply

Indicator		Baseline	Interim	Achievement(difference)
Suitable for Drinking		72.6%	95%	12%

Source: Interim Evaluation Survey, 2023

The interim study reveals that 95% of beneficiaries have arsenic-free tubewells, whereas the figure was 72.6% in the baseline study. It means a considerable difference has been realized. In addition, 16,004 of the beneficiaries (51% male and 49% female) reported that they had access to year-round drinking water sources. The following table presents the gender-segregated scenario for baseline and interim progress trajectory (**Table 2.35**).

Table 2.35: Gender-Segregated Scenario for Year-Round Access to Safe Water

Gender	Baseline	Interim	% of Beneficiary
Male	0	8,084	51
Female	0	7,920	49

Source: Interim Evaluation Survey, 2023.

iii. A3.0 Increased Resilience of Infrastructure and the Built Environment to Climate Change

Physical Assets for Better Climate Resilience

One of the major objectives of the ECCCP-Flood is to make the physical assets of households more resilient and secure from climate shocks. Three types of impactful support were extended to meet this goal. The study considered climate-resilient homesteads (due to plinth raising),

resilient tube wells, and sanitary latrines in this connection (**Table 2.36**). The expected current market value was considered to calculate the assets. In the baseline, the physical assets were vulnerable to climatic shocks, whereas after the intervention, the assets are expected to be safe, and the monetary benefits accrue to USD 3.28 Million. In this regard, 7128 homesteads have become climate resilient. The following table and the baseline scenario illustrate the monetary value of other interventions (e.g., tube wells and latrines).

Table 2.36: Physical Asset Values of Resilient Households

Resilience item	Baseline		Interim	
	No. of HHs	Market Value in USD	No. of HHs & Quantity	Market Value in USD
Resilient Homestead	0	0	7128	2.45 Million
Resilient Tube wells	0	0	319 (No)	0.19 Million
Resilient Latrines	0	0	1,742 (No)	0.64 Million

Source: Interim Evaluation Survey, 2023.

2.4.5 GCF's Indicator for Outcome Assessment

iv. A5.0 Strengthened Institutional and Regulatory Systems for Climate-Responsive Planning and Development

Transfer of Licensed Promoted Climate Resilience Technologies and Innovative Solutions

Living against the climate is always challenging, especially for those continually facing the phenomenon. The livelihoods patterns of the respondents of the project areas (Gaibandha, Lalmonirhat, Nilphamari, Kurigram, Jamalpur) are now comparatively better than before with the help of project interventions. At baseline, the number of flood-tolerant rice varieties, short-duration wheat varieties, and varieties of sand bar vegetables cultivated, were all zero. However by mid-term, the project achieved five types of flood-tolerant rice varieties against the target of three, five different categories of wheat varieties against the target of one, and four varieties of sand bar vegetables cultivated against the target of one. At the same time, the project also managed to fulfil the mid-term targets related to the number of technologies and innovative solutions concerning slatted housing for goat/sheep rearing, flood-resilient tube walls, and flood-resilient sanitary latrines. At baseline, these too were non-existent in the project areas (**Table 2.37**).

Table 2.37: Project Outcome (Mid-Term Analysis) against Baseline

Indicators	Baseline (2020)	Mid-term target	Interim Achievement (2023)
Number of technologies and innovative solutions transferred or licensed to promote climate resilience as a result of fund support	0 flood-tolerant rice varieties	3 flood-tolerant rice varieties	5 flood-tolerant rice varieties
	0 short duration and disease-protective wheat variety	1 short-duration and disease-protective wheat variety	5 short duration and disease-protective wheat varieties
	0 sand bar vegetable cultivation	1 sand bar vegetable cultivation	4 sand bar vegetable variety cultivation
	0 Slatted housing for goat/sheep rearing	1 Slatted housing for goat/sheep rearing	1 Slatted housing for goat/sheep rearing

	0 flood-resilient tube wells	1 flood-resilient tube wells	1 flood-resilient tube wells
	0 Flood-resilient sanitary latrine	1 Flood-resilient sanitary latrine	1 Flood resilient sanitary latrine

Source: Interim Evaluation Survey, 2023.

Institutional and Regulatory Systems for Climate Resilience and Implementation

In order to implement any project successfully, there should be a regulatory system between all stakeholders. In the ECCCP-Flood project, 9 implementing entities work collaboratively with other stakeholders to reach the same targets. Moreover, in the sector of institutional plans regarding floods, the mid-term targets were to implement two plans to address climate change, considering the establishment of focal persons and recruiting specialized staff on climate change. However, the project has gained more as nine IEs have developed institutional capacity regarding floods whereas at baseline period, none of them had such capacity. In the same manner, while there were no CCAGs at baseline, but by mid-term the target of forming 1000 was successfully achieved (**Table 2.38**).

Table 2.38: Project Outcome (mid-term analysis) against Baseline

Indicator	Baseline	Mid-term Target	Achieved in Mid -Term
A5.1 Institutional and regulatory systems that improve incentives for climate resilience and their effective implementation	0 institutional systems' plans	selected Institutions implemented 2 plans to address climate change (established focal persons and recruited specialized staff on climate change).	9 IEs implemented 2 plans to address climate change
	0 CCAG	1,000 CCAGs	1000

Source: Interim Evaluation Survey, 2023

v. A7.0 Strengthened Adaptive Capacity and Reduced Exposure to Climate Risks

Use by Vulnerable Households, Communities, Businesses, and Public-Sector Services of Fund-Supported Tools, Instruments, Strategies, and Activities to Respond to Climate Change and Variability

This indicator was about awareness among beneficiary households regarding the importance of raising plinth above flood level, year-round vegetables and fruits cultivation on the raised plinth and climate resilient crop cultivation to strengthen adaptive capacity and reduced exposure to climate change. It was measured by the number of vulnerable households, communities, businesses, and public-sector services of fund-supported tools, instruments, strategies, and activities. The response scale was: High awareness, Moderate awareness, and low awareness. The project supported strengthening adaptive capacity and reduced exposure to climate risks.

Following the survey, only 'yes' answers were taken into consideration for assessment, while multiple answers were also taken and categorized according to the following table (**Table 2.39**).

Table 2.39: Computation Score for Community Responses

Scoring Range (HHs)	Scale	Baseline score (2020)	Evaluating Findings (2023)	
		% of People	In sample 660, HH	
			No. of people	% of People
1-3 (<=220)	Slightly effective	0	132	20
4-6 (221-440)	Moderately effective	0	290	44
7-9 (>440)	Highly effective	0	238	36

Source: Interim Evaluation Survey, 2023

Thus, approximately 20% of the beneficiaries showed slight effectiveness, 44% showed moderate effectiveness, and the remaining 36% fell into the highly effective category concerning use of tools, instruments, strategies, and activities to respond to climate change and variability.

vi. A8.0 Strengthened Awareness of Climate Threats and Risk-Reduction Processes

Number of People Aware of Climate Threats and Related Appropriate Responses

Based on data from the PMU, out of a total of 90,000 beneficiaries, 73,705 individuals (37,654 males and 36,051 females) have been informed about the threats of climate change and appropriate response measures.

3. Evaluation of Project Interventions & Performances

3.1 Overview

The overall achievement of the project in the interim stage shows a very good progress of project activities and intended impacts. In some cases, the progress shows overachievement against targets. Thus, capacity development of IEs and awareness of community shows a significant achievement. Since IEs already have climate change and adaptation related knowledge, the implementation of this project provided an opportunity to translate this knowledge into action. The plinth raising activity and the development of associated facilities have become very popular among char-dwellers who hope for similar projects in future.

The raised plinth also provided a place for plantation and vegetable gardening. Thus, it contributed to the household income and environment. Beneficiaries also warmly accepted the cultivation of flood tolerant crops. The installation of tube wells and construction of sanitary latrines also benefited people at large. On top of that, the continuous monitoring of PKSF and the role of IEs contributed to the success and overachievement of the project.

3.2 Evaluation in OECD Framework

3.2.1 Relevance

Beneficiary Needs

There are two types of beneficiaries: implementing entities (IEs) and vulnerable char-living communities. The IEs working for these communities' well-being still lack climate adaptation and sustainable development. The objective is to increase their capacity as partners to implement the ECCCP-flood project and develop them as competent communities able to deal with future climate change.

On the other hand, the ECCCP-Flood project was implemented in the low-lying char land areas, where people are highly exposed to climatic vulnerability because of geophysical settings and their lack of capacity for adaptation. The objective was to increase their capacity for helping them to identify and deal with climatic changes. Since the area is low-lying and easily exposed to flooding, a plinth-raising activity is highly needed for the communities. Similarly, their sanitation condition is deplorable because of flooding and a lack of safe drinking water. The communities have very limited livelihood options and the existing livelihoods are heavily affected by disasters and climate change.

Country Requirement

The project area -charland- is recognized as a ‘hotspot’ in the recently prepared National Adaptation Plan (NAP). The NAP document also focuses on poor, marginalized, and climate-vulnerable communities and proposes adaptation programs for them.

Global Priorities

The ECCCP-Flood project complies with the global development policy of “leaving no one behind.” Thus, it meets the global priorities of climate adaptation focus, green climate financing, and sustainable development.

Dissemination and Knowledge Management

Preliminary results and findings were shared with the Implementing Entities (IEs) in a validation workshop as part of knowledge dissemination to validate the findings and improve or address the gaps. Furthermore, the PMU will be in charge of disseminating the evaluation's findings, conclusions, and recommendations. Implementing Entities (IE), other national and international NGOs, government agencies, etc. are the intended knowledge users. The knowledge will be disseminated via newsletters and booklets, both of which will be published on the PKSF website. The Program Officer (Capacity Building and Knowledge Management) of PMU will serve as the dissemination focal point for this assignment.

The lesson will aid PKSF in modifying or adapting its program in accordance with the recommendations. This dissemination will assist IE in adjusting their implementation strategy to address PKSF's concerns. In addition, other NGOs and government agencies will be able to learn from the successes and failures and locally-suited implementation strategies in preparing future climate adaptation plans or programs.

3.2.2 Efficiency

The overall achievement of the project objectives was assessed and found higher than the target (**Table 3.1**). Thus, by analyzing findings, the study found that all objectives have been met in the interim stage and that the achievements had exceeded the targets.

Table 3.1: Overall Effectiveness of Project Objectives

Objectives	Scale of Effectiveness
Strengthening the Capacity of Institutions and Communities	High
Protection of Homesteads from Flood Affectedness	High
Increasing Access to Safe Water and Sanitation	High
Promoting Climate Adaptive Livelihoods	High

Source: Interim Evaluation Survey, 2023

Specific objective-wise achievements are presented below:

Strengthening the Capacity of Institutions and Communities

The study found that all nine implementing entities (IEs) have developed high capacity (which was zero in the baseline condition) as a result of the project through training and other guidance from PKSF.

About 54.5% of the beneficiaries have highly developed their capacity and awareness of climate change, which was very limited in the baseline condition. Thus, the project has turned ‘slight awareness’ into ‘high awareness’ of most beneficiaries.

Protection of Homesteads from Flood Affectedness

The project intends to protect homesteads from flood-affectedness by two means: raising homestead plinths in clusters, and providing financial support to reconstruct climate-resilient houses on raised plinths. The first show about 118% achievement against the interim target, and the other shows about 95% achievement close to the target. Overall, the target was found to be achieved in the interim stage.

Increasing Access to Safe Water and Sanitation

The project intends to increase gender-segregated access to safe water and sanitary latrines. Under the project, 319 tube wells were installed (in December 2022) to provide access to 8084 male and 7920 female members. Both male and female beneficiaries exceeded the target of 3000 by a significant margin, achieving a rate of 264% and 269% male and female, respectively.

Under the project, 1,742 climate-resilient sanitary latrines (in December 2022) were installed to provide access to 9502 male and 9630 female beneficiaries. Compared to the target of 3600 beneficiaries for both males and females, the achievement nearly doubled for each gender, with male beneficiaries reaching a rate of 263% and female beneficiaries getting a rate of 267%.

Promoting Climate Adaptive Livelihoods

The project promoted flood-tolerant crop cultivation and constructed slatted houses for goat/sheep rearing. These interventions improved the livelihoods of beneficiaries, introduced new adaptive technologies, and eventually supported securing household income. Out of the targeted (interim) 15,000 beneficiaries, 13,545 farmers were found involved in GCF-funded climate resilient farming, which shows the achievement of 90.3%.

Household income through the project intervention increased to 114% among beneficiaries compared to the baseline findings. Promoting climate-adaptive livelihoods can also be explained through PSM and DiD. While interpreting the results of PSM estimators, it is to be noted that all the estimators were assessed against the control area. For instance, the provision of flood-tolerant rice increased the monthly income by about 2859 BDT in the treatment area compared to the control area. The estimated values for other interventions were also explained similarly.

Precaution was taken while explaining the DiD estimators. It seems that the DiD method as a Panel model compares its results concerning the baseline monthly income (**Table 3.2**). For example, the provision of flood-tolerant rice contributed to the monthly income of about 4379 BDT in the treatment area compared to the baseline condition.

Table 3.2: Comparison of PSM and DiD Estimators

ATT of Interventions	PSM (BDT in Monthly)	DiD (BDT in Monthly)
Flood Tolerant Rice	2,859	4,379
Slatted House	2,189	2,770
Plinth Raising	635	1,856
Sandbar Vegetables	2,310	1,945
Disease Resistant Wheat	2,524	2,694

Source: Interim Evaluation Survey, 2023

3.2.3 Effectiveness

The ECCCP-Flood project was handled efficiently as reflected in the effectiveness results. The following table **(Table 3.3)** demonstrates the achievement of the project in terms of efficiency:

Table 3.3: Interim Achievement in Relation to Efficiency

Expected Result	Indicators	Unit of Measurements	Interventions	Baseline	Interim target	Evaluation Results (December 2022)	
						Interim achievement (nos.)	Interim Achievement (%)
Strengthened institutional and regulatory systems for climate-responsive planning and development	Number of technologies and innovative solutions transferred or licensed to promote climate resilience as a result of Fund support	Number	flood-tolerant rice varieties	0	3	5	167
		,,	short duration and disease-protective wheat variety	0	1	5	500
		,,	sand bar vegetable cultivation	0	1	4	400
		,,	Slatted housing for goat/sheep rearing	0	1	1	100
		,,	flood resilient tube wells	0	1	1	100
		,,	Flood-resilient sanitary latrine	0	1	1	100
	Institutional and regulatory systems that improve incentives for climate resilience and their effective implementation	,,	institutional systems' plans	0	2	2	100
		,,	CCAG	0	1000	1000	100

Source: Interim Evaluation Survey, 2023

3.3 Evaluating in GCF's Investment Criteria

An analysis of GCF's investment criteria is presented in **Table 3.4**.:

Table 3.4: Analysis of GCF Investment Criteria

Investment criteria	Indicators	Achievement
Impact potential	Reduced loss of lives	As shown in the baseline condition, there is a significant reduction in death (97.5%) due to flooding (extreme events). Increasing people's awareness of flood events and raising plinths helped to achieve this.
	Value of physical assets protected	The charland area is usually prone to flooding because of its lower elevation, which causes damage to physical assets. The plinth raising have helped protect household assets. Thus, the interim findings show that about 96.1% value of physical assets was protected compared to the pre-project situation.
	Livelihoods improved	The income of households has improved significantly. Eventually, about 28% of household income was increased compared to the baseline condition. Thus, plinth raising

Investment criteria	Indicators	Achievement
		have led beneficiaries to grow vegetables, plant trees, and other domestic birds (like chickens, ducks, etc.). In the interim stage, 13,545 farmers adopted climate resilient farming, who did not have this opportunity before the project. The project has provided different varieties of flood-tolerant varieties and financial assistance. Over time, it has supported households to increase their income to 114% compared to the baseline condition. Furthermore, plinth raising and the construction of slatted houses have reduced economic loss in animal husbandry and led to livelihood improvement.
	Other direct & indirect benefits	The project has brought other direct benefits such as nutrition intake, health benefits, and other associated benefits. About 81% of beneficiaries who used to drink river water are now collecting water from safe tube wells. Furthermore, 77.4% of beneficiaries with traditional or no sanitary latrines are now using improved sanitation facilities through the project. This has gradually made the people aware of health and hygiene and reduced their cost of health services.
Paradigm shift potential	Impact beyond on-off investment	The project has generated a wider sectoral transformation rather than just serving as an isolated investment. Thus, it has prepared the institutions (all 9 IEs) and community (54.5%) to deal with climate change, which will benefit them in the post-project condition. The increased capacity is like an investment for adaptation against future unseen but anticipated catastrophes. The project has also provided a platform for community building through CCAG, which will help people actively participate as leaders.
	Long-term change, according to the theory of change	The project targets the poor and marginalized section of society; thus, these groups, with their adaptive capacity and achieved benefits, can reduce their future vulnerability
	Scaling up and replication	This intervention model is most effective in the char land area and can be replicated in a similar landscape.
Sustainable development goal	Economic Co-benefits	Following the project objectives, the poor and marginalized section of society, including women, was included. The project supported alternative income generation and, eventually, poverty alleviation. This project has engaged the CCAG members in financial services institutions (grant and loan). This will ensure the sustainability of the CCAGs in the upcoming days. The safe water and sanitation intervention will reduce treatment costs for beneficiaries. Under the project, beneficiaries started cultivating flood-tolerant crops like Aman, Wheat, Sand Bar Vegetables

Investment criteria	Indicators	Achievement
		(Sweet Pumpkin), which increased their overall production to 71.66%.
	Social Co-benefits	The project's intervention facilitates have improved sanitation facilities and safe drinking water. Thus, it supports community health and hygiene, and community well-being. The cluster-raised plinths have aided in developing a strong community and restoring social cohesion. The formation of CCAG has developed leadership skills and social capital that will encourage each other to help, especially in crisis events.
	Environmental Co-benefits	Generally, the project was 'green' that produced no emissions. Furthermore, people were motivated to plant environment-friendly species on the raised plinths. Project beneficiaries are now more aware of environmental contamination in this regard. Thus, the project supports biodiversity conservation and ecosystem services. In addition to grass, deep-rooted trees were encouraged to be planted on the slope in order to stop erosion. Besides, the project has motivated them to prepare a compost system using cow and goat dung. Also, the project has enforced a minimum distance (30 feet) between tube wells and sanitary latrines to avoid contamination.
	Gender Empowerment co-benefits: how to reduce gender inequalities	Women beneficiaries were the project's main target, which supported women empowerment. Furthermore, about 27% of women were found highly secure, and 45% were moderately secure in the flooding events.
	Link with SDGs	The project connects with the core policy of "leaving no one behind." Specifically, it connects with goals: 1, 5, 6, 10, and 13.
Needs of the recipients	Needs for financing	The country has prepared a NAP with the need for private sector engagement in adaptation planning. Thus, the recipient needs funding in this regard.
Country ownership	Alignment with NAP & NDCs	NDCs and NAP identifies charlands (the project area) as one of the climate hotspots. As such, both documents emphasize on inclusion of poor and marginalized groups.

Source: Interim Evaluation Survey, 2023

3.4 Propensity Score Matching (PSM) Analysis

As a causal and quasi-experimental method, Propensity Score Matching (henceforth, PSM) was designed to isolate the biases stemming from confounding factors. As the usual comparison of the outcome means of both groups (e.g., treatment and control) suffers from such external biases (primarily due to selection bias), PSM seeks to demean these by producing similar scores (thereby matching treatment units to control ones) based on observed characteristics. Such similarity allows the PSM model to imitate the scope of randomization by measuring the treatment effect keeping aside the selection bias. In a four-step process, the

results of the major program interventions have been analyzed using the following PSM framework.

3.4.1 PSM Framework

For a comprehensive analysis, this study primarily followed a four-step PSM framework that included:

1. Variables Inclusion in the PSM model;
2. Screening the common support;
3. Examining the Balancing Property of the Covariates After Matching;
4. Estimating the Treatment Effects of Different Interventions.

Variables Inclusion in the PSM Model

It is decisive for any impact analysis to select the variables with utmost caution. Aligning with the objectives of the study area and considering the nature of the PSM method, four socio-demographic and two flood-related variables were incorporated into the model, where these served as explanatory predictors. In this regard, PSM showed more consistent results when observed characteristics appeared to be similar among the treatment and control groups. Based on the previous studies, the following variables are of interest:

Age of the respondents

Gender orientation

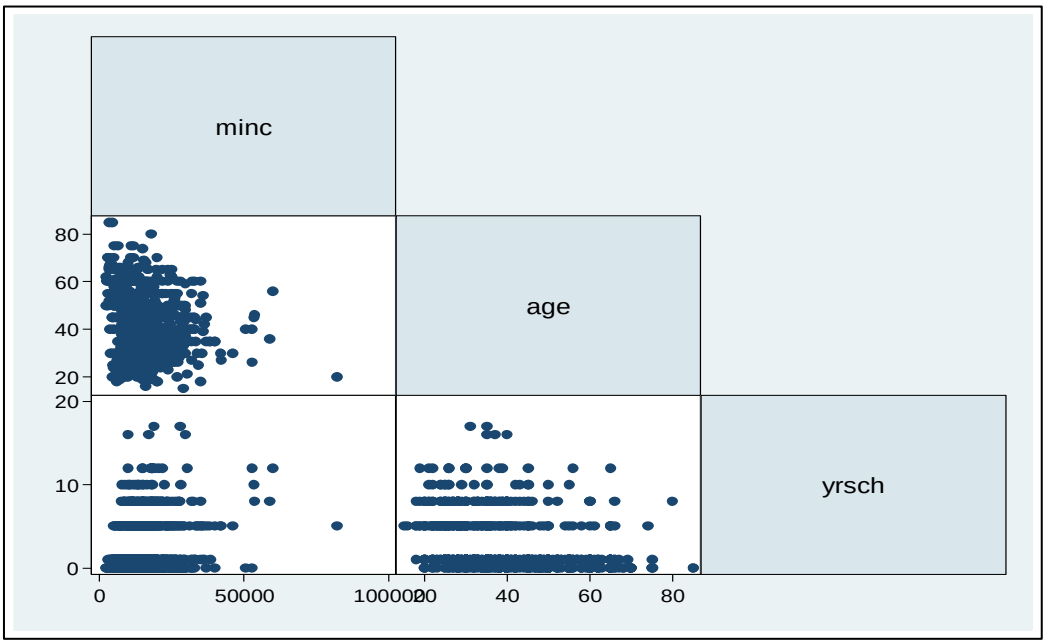
Years of schooling as the educational qualification

Occupation of the household head

Whether the household got flooded in the last year

Frequency of flood the household encountered in the last year

The model also considered the monthly income as the outcome variable. Accordingly, the treatment effect was measured on it. Concerning the treatment variable, the model assumed that all households in the treatment area received any of the interventions. The following visual illustration has been placed below to give a sense of the rationale of linkage between the outcome variable and leading demographic variables.



Source: ECCCP-Flood Interim Evaluation Survey, 2023

Figure 3.1: Scatterplot Matrix of Monthly Income, Age, and Years of Schooling

Inspecting the scatterplot, it is evident that monthly income is high among the people whose age ranges from 20 to 60 whereas their years of schooling stand around 10 years or above. This plotting matrix affirms the determining role of the leading socio-economic variables on the monthly income. Hence, their inclusion in the model is justified.

Screening the Common Support

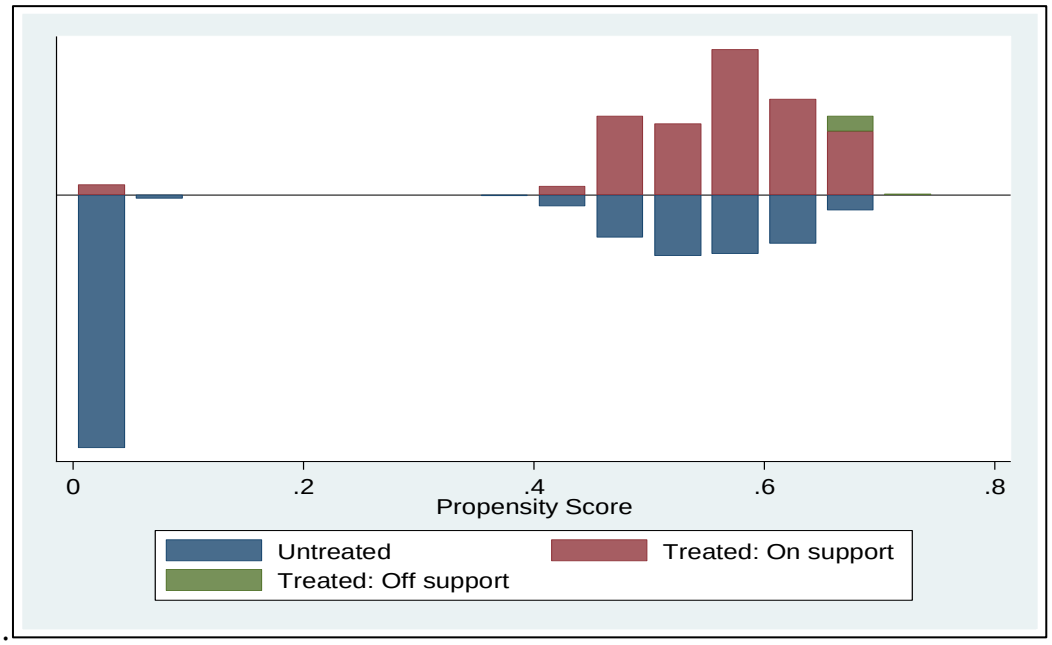
Unlike conditional independence, common support is a more flexible condition that a typical PSM model should meet considerably. The following table and the figure depict the specific scenario of common support for plinth raising. It also shows how the samples from treatment and control groups overlap based on the observed characteristics. Both figure and the table illustrate considerable common support and overlap regarding the intervention of plinth raising. Only one of the treatment units seems to remain off support (**Table 3.5**).

Table 3.5: Common Support for Plinth Raising

Treatment Assignment	Treated	Untreated	Total
On Support	384	605	989
Off Support	1	0	1
Total	385	605	990

Source: Interim Evaluation Survey, 2023

The following graph shows little support from 0.2 to 0.4. In addition, most support was between 0.4 and 0.7.



Source: Interim Evaluation Survey, 2023

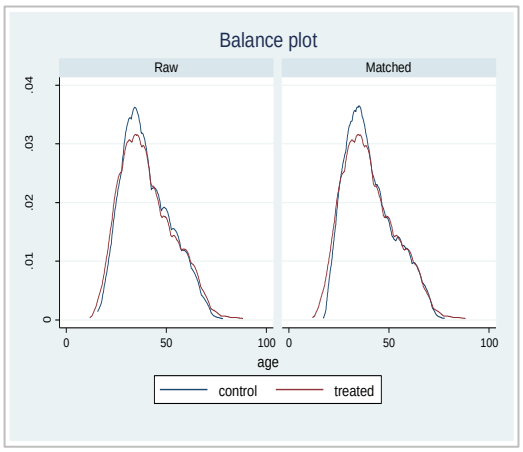
Figure 3.2: Common Support for Plinth Raising among the Treatment and Control Groups

Examining the Balancing Property of the Covariates after Matching

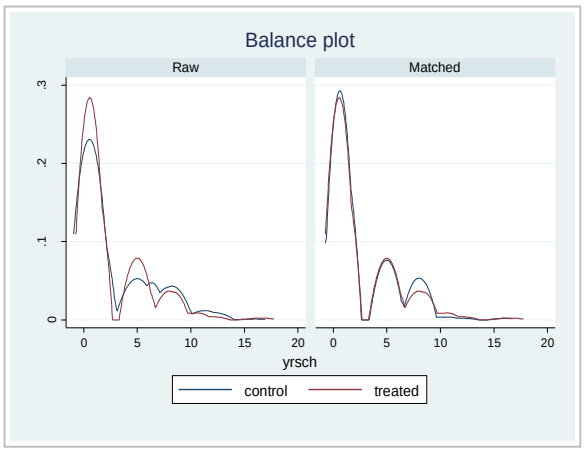
Balancing the covariates (observed characteristics) stands crucial for PSM estimation. It is because the more balanced covariates get after matching, the more consistent PSM estimators become. Balancing plots of four variables have been presented below for ease of understanding.

Inspecting the age plot (panel a), the age composition among the control and treated groups appear identical even before the matching. In the case of years of schooling (coded as yrsch), it is apparent that there was a tiny gap between the control and treatment before the matching. Still, after the matching, both groups' curves overlapped significantly (panel b).

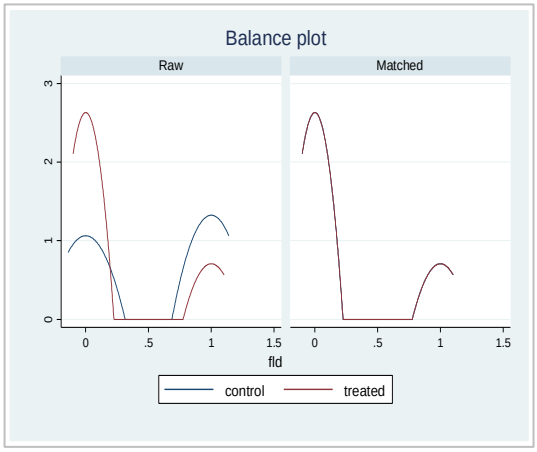
Comparing panels c and d reveals a significant difference before the matching, but both flood and frequency of flood became smooth after balancing. However, the overall balancing property affirms that the PSM model is ready to estimate the treatment effects.



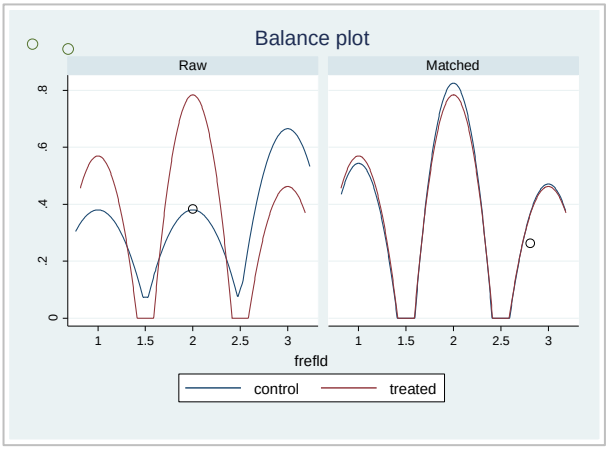
Age after Matching (Panel a)



Years of Schooling after Matching (Panel b)



Flood after Matching (Panel c)



Frequency of Flood after Matching (Panel d)

Source: Interim Evaluation Survey, 2023

Figure 3.3: Balancing Property of Covariates after Matching

Estimating the Treatment Effects of Different Interventions

As noticed earlier, as there is a significant level of common support between the treated and untreated units, the PSM model is ready to proceed for estimation. The model estimates the treatment effects of three major interventions, namely flood-tolerant rice, plinth raising, and slatted house, on the outcome variable, that is, the monthly income of the household.

In this study, the PSM model estimated the treatment effects by following the Probit regression and Nearest Neighborhood matching method, although the Logit model is also customary to use. In addition, the model only reported the average treatment effect on the treated (often dubbed as ATT or ATET), as it was essential for our study.

The following **Table 3.6** illustrates that the monthly incomes of the household in the treatment area increased significantly for matched and unmatched units. For instance, plinth rise increased by 635 BDT, and the provision of flood-tolerant rice contributed to 2,859 BDT per month. In contrast, livelihood intervention (e.g., slatted houses for goats/sheep) also increased monthly income by 2,189 BDT for matched data.

The income effect was mainly realized due to flood-tolerant rice and livelihood support, although income was not negligible for plinth raising. However, for unmatched units, monthly incomes report a higher value for each intervention. But these values were not of our study interest. Nonetheless, the overall PSM estimates affirm the substantial impact in the treatment area.

Table 3.6: Increase in Monthly Income due to Respective Interventions

ATT/ATET of Interventions	Unmatched	Matched	Units on Common Support out of 990
Flood Tolerant Rice	3738	2859	989
Slatted House	2807	2189	988
Plinth Raising	1518	635	989

Source: Interim Evaluation Survey, 2023

3.5 Difference in Difference (DiD) Analysis

The Difference in Difference (DiD) as an evaluation approach stands superior to the PSM since it considered the panel data of the study area. In contrast, PSM only took account of the single cross-sectional data. Hence, the program effect was calculated using the data on treatment and control areas and comparing the pre- and post-interventions.

From a theoretical perspective, DiD successfully captures unobserved factors, thereby insulating the biases arising from outside the model. Due to this particular feature, DiD estimators endeavour to improve the average treatment effect compared to the PSM estimation.

In this DiD estimation, monthly income was considered as the outcome variable. For ease of comparison between the PSM and DiD estimators, treatment and explanatory variables were kept the same except for the occupation variable, which appears only in the PSM model.

3.5.1 Comparison between DiD and PSM Estimators

The results of the DiD estimation show that the income effect has improved considerably, which also fits the theory. In addition, the estimation process affirms that the income effect has been mainly noticed due to the provision of flood-resilient rice and livelihood intervention. In contrast, less impact is realized in the plinth raising. PSM estimation observed a similar conclusion. Comparative results of the estimation are presented in the table (**Table 3.7**) below.

Table 3.7: Comparison of PSM and DiD Estimators

ATET of Interventions	PSM (BDT in Monthly)	DiD (BDT in Monthly)
Flood Tolerant Rice	2859	4379
Slatted House	2189	2770
Plinth Raising	635	1856
Sandbar Vegetables	2310	1945
Disease Resistant Wheat	2524	2694

Source: ECCCP-Flood Interim Evaluation Survey, 2023

4. Conclusion

The overall achievement of the project objectives was met for the target beneficiaries in the interim stage, with achievements surpassing targets in the following indicators: The "Extended Community Climate Change Project-Flood (ECCCP-Flood)" has made a substantial contribution to nurturing community resilience, reducing vulnerability, and promoting sustainable livelihoods in the flood-prone districts. Thus, the project transformed lives and serves as a model for comprehensive climate-focused initiatives thanks to its strategic approach that integrates climate adaptation, capacity development, and innovative interventions.

Through the project, one thousand functional Climate Change Adaptation Groups (CCAGs) were formed, and climate-resilient farming techniques were promoted. Access to hygienic sanitation and safe drinking water was also ensured. Eventually, as the capacity of Implementing Entities (IE) and the community increased to understand the issues of climate change and implement the project to combat the negative consequences of climate change, flood-related economic losses were reduced. The project's success thus demonstrates its relevance and replicability in the country's similar landscape.

However, there are some deficiencies that require attention. The shared use of latrines and tube wells by households compromises the privacy of women. In addition, the eligibility requirements for sandbar cultivation (e.g., requiring a minimum quantity of land) sometimes discourage the participation of smallholders. As people are also experiencing flooding of their common property resources (mosques, temples, cemeteries, etc.), they have urged for the incorporation of CPR alongside homesteads in the plinth-raising activity. These deficiencies might be remediable by modifying the remaining project activity. In addition, it would be ideal to include training for alternative income-generating activities and a health care facility for women in the future planning of the project, as char dwellers have very few options for diversifying their livelihood and women lack access to prenatal and postnatal care due to the remote location.

The ECCCP-Flood project was handled efficiently, as evidenced by the effective results in most of the indicators. This project also fits the GCF project criteria in most of the indicators.

5. Recommendations

Based on the findings of the interim evaluation, the study proposes the following recommendations. As both beneficiaries and non-beneficiaries anticipate an extension of the current project or implementation of a similar project, this study recommends further activities that could be included and/or will bring more benefits for the target people.

Recommendation-1: Constructing Separate Latrines on Raised Plinths

Under the intervention "construction of sanitary latrines", a latrine is constructed on a raised plinth for three or more households. It is noted that both male and female members of neighboring households share the same latrine. This common use of latrine hampers the privacy of both male and female members of the households. Particularly women are embarrassed to use these shared latrines.

Implementation Modification*:* Two separate latrines, instead of one, can be constructed for more than three households: one for the male and another for the female.

Beneficiaries: Privacy of both male and female will be protected. Particularly women will be benefited largely.

Responsible Parties: PSKF & IEs

***Timeline*:** This recommendation can be implemented for the remaining latrine construction activity.

***Linkage with ToC*:** This recommendation will contribute to the sanitation of women, who are the most affected among the vulnerable section of the society.

Recommendation-2: Construction of Gender-Segregated Section in Tube Wells

Under the intervention "installation of resilient tube wells", a tube well is installed for a number of households on the raised plinth. Although the purpose is to collect drinking water, people use it for washing of utensils and bathing. This use is justifiable for old char areas that are located far from the river. Since both male and female beneficiaries use the same tube well, it causes privacy problem, especially when taking a bath. In this context, a gender-segregated boundary could be constructed with a fence around the tube well or an extension tube well from the original could also be installed.

Implementation Modification*:* The area of tube well should not be an open space, but rather gender segregated by a fence. An extension tube well could also be installed from the main tube well.

***Beneficiaries*:** Privacy of both male and female will be protected. Women in particular will be benefited largely.

Responsible Parties: PSKF & IEs

***Timeline*:** This recommendation can be implemented for the remaining construction activity.

***Linkage with ToC*:** This recommendation will ensure access to safe water and enable multiple use of tube wells.

Recommendation-3: More Encouragement for Sandbar Cultivation

Although beneficiaries have adopted sandbar cultivation, they are few in number. According to field findings, the beneficiaries are required to have a minimum of 33 decimal of lands to become eligible for sandbar cultivation. Many of them do not have so much land, and besides, farmers face difficulty in carrying water for watering plants and they also anticipate more financial gain from other types of cultivation (such as melon, ground nuts/mung bean) instead of sandbar cultivation (sweet pumpkin). These combined factors have often discouraged beneficiaries from adopting sandbar cultivation.

Implementation Modification*:* It is necessary to reassess the criteria of required land area (33 decimals) for sandbar cultivation. Furthermore, motivations (through training or otherwise) to farmers for sandbar cultivation is needed.

Beneficiaries: Farmers/households.

Responsible Parties: PSKF, IEs, and farmers

***Timeline*:** This recommendation can be implemented for the remaining activity.

Linkage with ToC: This recommendation intends to inspire more famers to adopt sandbar cultivation and hence to improve their livelihoods.

Recommendation-4: Raising Plinth of CPR

At present, the project only focuses on raising homestead plinth. However, there are also Common Property Resources (CPR) such as mosques, temples, graveyards, educational institutions, etc.— that become inundated due to flooding. This creates obstacles to accessing prayer locations and also burial grounds. Furthermore, academic activity is also hampered, especially during the monsoon season. The project can include the element of "plinth raising of CPR" in addition to homestead plinth raising.

Implementation Modification*:* If fund is available, this activity of raising CPR plinth can be included in the list.

Beneficiaries: Community and students.

Responsible Parties: PSKF, IEs and community people

Timeline: This recommendation can be added in the activity of homestead plinth raising, if there is fund in the current allocation. Otherwise, this activity can be included in the next, if there is an extension of the project.

***Linkage with ToC*:** This recommendation will increase the capacity of the community.

Recommendation-5: Training for AIGA

The char area has very limited livelihood options besides dependency on land and water. Under the project, trainings for Alternative Income Generating Activities (IGA), such as

tailoring for women, and technical training (driving, repairing, welding) for youth can be initiated.

Implementation Modification*:* If fund is available, this activity of training for AIGA can be included in the list.

Beneficiaries: Youths (household members).

Responsible Parties: PSKF, IEs and youth (male and female)

Timeline: This recommendation can be added to the list, if there is any scope. Otherwise, it can be included in the next phase, if there is an extension of the project.

Linkage with ToC: This recommendation will enhance livelihoods and increase the capacity of the community.

Recommendation-6: Health Facility for Women in Char Area

Women in the char area experience difficulty in receiving health services, particularly related to anti-natal and post-natal care. The remote location (from remote char to upazila health complex), difficult transportation, and limited communication often worsen the situation in many cases. Against this context, an activity of 'establish community clinics' can be included.

Implementation Modification: As the project has already implemented significantly, the addition of this activity may not be possible as this stage. Rather, this activity can be included in the future project design.

Beneficiaries: Women.

Responsible Parties: PSKF, IEs

Timeline: This activity can be included in the next phase, if there is an extension of the project.

Linkage with ToC: This recommendation will enhance capacity of the community/women.

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Appendices

Appendix 1: Questionnaire for Household Survey

Questionnaire for Household Respondents (English Version)

Interim Evaluation

on

Extended Community Climate Change Project-Flood (ECCCP-Flood)
Palli Karma-Sahayak Foundation (PKSF)

Consent:

I am from PKSF appointed consultancy firm named Center for Environmental and Geographic Information Services (CEGIS), A public Trust under the Ministry of Water Resources (MoWR) Dhaka. The purpose is to collect data for the Interim Evaluation of a project titled "Extended Community Climate Change Project-Flood (ECCCP-Flood)" being implemented by PKSF's subsidiary/partner organization in your area. The project is being implemented by Palli Karma-Sahayak Foundation (PKSF) with financial support from Green Climate Fund (GCF). We need to collect information from you as a respondent for this survey work. All information obtained during the discussion will be used for survey purposes only and your identity will not be disclosed in any way during or after the survey is completed. If you are interested in participating in our survey and giving permission to complete our discussion, please sign the participation form.

a.	GPS coordinate:	Latitude:	Longitude:
b.	Household type:	i) Beneficiary (treatment)	ii) Control

c.	Name of respondent:		
d.	Sex of Respondent:	i) Male	ii) Female
e.	Mobile number		
f.	District		
g.	Upazilla		
h.	Union		
i.	Ward		
j.	Village		
k.	Landmark		

☐	Name of interviewer:	
☐	Supervisor's Name:	
	Signature:	

Do you agree to participate in the Survey?

1. Yes
2. No

Section A: Profile of Household (HH) Members

Sl. No.	Household members' Name	Relation with HH Head	Age	Sex	Marital Status	Level of Education	Disability	Religion	Occupation	
									Primary	Secondary
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

**Income refers to monthly basis*

Code					
Relation to Household Head 1 - Head, 2 - Husband/ wife, 3 - Son/Daughter, 4 - Spouse of Son/Daughter, 5 - Grandchild, 6 - Father/Mother, 7 - Brother/Sister 8 - Niece/Nephew 9 - Father/Mother-in- law, 10 - Brother/Sister-in-law, 11 - Other relative, specify, 12 - Servant, 13 - Employee, 14 - Other, specify	**Sex** 1 – Male 2- Female **Disability** 1-Yes 2- No	**Marital status** 1 - Married 2 - Unmarried 3 - Widowed 4 - Divorced 5 - Separated	**Occupation** 1 - Cultivation 2 - Agricultural labor 3 - Fishing 4 - Forest related work 5 - Trader or vendor 6 - Salaried employment 7 - Cash for work 8 -Handicrafts like cotton garments, pottery, etc. 9 - Work in canoes, boats and barges 10 - Household help and other manual services 11 - Other, specify	**Religion** 1-Islam 2-Hindu 3-Buddhist 4-Cristian 5-Other…(please specify)	**Education** 1-Illiterate 2- Signature knowledge 3- Primary school 4- High school 5- Secondary School Certificate (SSC) 6- Higher Secondary Certificate (HSC) 7- Graduate 8- Post-graduate and above 9. Others…(please specify)

B) Household Income-Expenditure

1.	**Income and Sources**	**BDT/Month (total HH)**
	Income from Agriculture (Rice, wheat, sandbar vegetables etc.)	
1.1	Income from Homestead gardening (vegetables,) and crop cultivation	
1.2	Income from Livestock	
	Income from Non-Agriculture	
1.3	Income from business	
1.4	Income from wages	
1.5	Remittances	
1.6	Gov. Allowances	
1.7	Financial Support from others	
1.8	If other, please specify……	
	Total	
2.	**Expenditure and Sector**	
2.1	Food Expenses	
2.2	Purchase of Clothing	
2.3	House Rent	
2.4	Treatment Cost	
2.5	Cost of Education	
2.6	Cost of Transportation	
2.7	Cost of Business	
2.8	Cost of Cultivation	
2.9	If other, please specify……	
	Total	

C) Housing Status

3.	What is the ownership status of your house?	1= Private house, 2= Rented house, 3= House built on others' lands, 4= House owned by relative, 5= Other (specify) …….	
4.	What is the roofing material of your house?	1= Plastic, 2= Bamboo/Cash/Straw Roofing, 3= Earthen Roofing, 4= Tanning Roofing, 5= Brick Roofing, 6= Others (Specify)…..	
5.	What is the condition of the walls in your house?	1=Plastic, 2=Bamboo, 3=Tin, 4=Concrete 5= Other (specify) …….	
6.	Does your house get flooded?	1=Yes	2=No
7.	Is there any need to raise your dwelling to protect against flooding?	1=Yes	2=No

D) Household Assets

8. Which of the Following Assets does Your Household Have?

Items	**Number**	**Current Price in BDT (Depreciated)**	**Items**	**Number**	**Current Price in BDT (Depreciated)**
Cot/chowki			Plow		
Table			Boat		
Chair			Motorcycle		
Cupboard/Box/Trunk			Nirani / Kaste		
Dressing table			Cow/buffalo		
Showcase			Goat/sheep		
Radio/cassette player			Poultry		

Items	Number	Current Price in BDT (Depreciated)	Items	Number	Current Price in BDT (Depreciated)
Television			Pigeon		
Mobile phone			Fishing nets		
Refrigerator			Rickshaw		
Electric fan			Auto- Rickshaw		
By cycle			Vans		
Tube Well			Bullock cart		
Latrine			Irrigation Tools		
Living Rooms			Other……..		

E) Health and Medical Services

9.	Are there any medical centers near your home?	1=Yes	2=No
10.	If the answer is 'yes', what type of medical facilities exist?	1=Community clinic, 2=Charity clinic, 3=NGO run clinic, 4=Private clinic, 5=Gov.Hospital, 6=Other…….	
11.	How far is the existing medical center from your home?	……..Km	

F) Food Safety and Hygiene

12.	How often do your family members wash their hands before preparing or handling food?	1=never, 2=rarely, 3=sometimes, 4=most of the time, 5=always		
13.	Do you or your family members eat stale food that is not properly stored?	1=Never, 2=Sometimes, 3=Always		
14.	Do you or your family members cover food to prevent flies?	1=Yes,	2=No,	3=Don't Know

G) Climate Change and Flood Damage (last year)

15.	Which natural disasters/hazards did you encounter? *(Multiple responses are acceptable)*	1=Flood, 2=Storm, 3=River break, 4=Drought, 5=Lightning, 6=Other (specify)……
16.	How many times have you been affected by floods in the last year?	1= Once, 2= Twice, 3= Several times
17.	How long did the flood water last in your area?	…….Day
18.	How high was the flood water in your house?	1=knee level, 2=waist level, 3=chest level, 4=water more than head height, 5=water not rising in yard
19.	How high (feet) was the flood water in your house?	……feet
20.	What property of your family was damaged in the said flood? *[Multiple answers are acceptable]*	1=Habitat/homestead 2=Field crops, 3=Livestock damaged, 4= cropland, 5=Fish Pond/enclosure, 6=Family member lost, 7=Others ---------- (if any), 8=No loss at all

21.	What was the estimated value of the damaged properties (if damaged)?	……..BDT	
22.	Did any member from your family die in the last flood?	1=Yes	2=No
23.	Did your family have to relocate to another area due to floods/river bank erosion in the last year?	1=Yes	2=No
24.	Did the flood damage any kind of assets and structures in your area?	1=Yes	2=No
25.	If the answer is 'Yes', what kind of assets and facilities were damaged? [Multiple answers are acceptable]	1=roads, 2=fences, 3=river bank erosion after flood, 4= Crops 5=Fishponds/enclosures, 6=Schools/shelters/markets/other structures, 7=Bridges/culverts/Sluice gates, 8=Livestock, 9=Other……	
26.	How many times did your family take meals during the flood?	1= Starved, 2= Once, 3= Twice, 4= Thrice, 5=More than Thrice	
27.	Do you have an alternative source of drinking water during floods?	1=Yes	2=No
28.	Where do members of your community defecate during floods? (More than one answer is acceptable)	1=Temporary Latrine, 2=Open Space, 3=Directly into the flood water, 4=Other…….	
29.	Do members of your family suffer from dehydration during floods?	1=Yes	2=No
30.	If yes, how was the severity of the illness?	1=very much, 2=moderate, 3=slight	
31.	Where do you take shelter during floods?	1=Rooftop of the own house, 2=High road/dam pad, 3=Relative's house, 4=Other's house, 5=Shelter Center, 6=Other ……..	
32.	Are there any flood shelters in the village?	1=Yes	2=No
33.	Does the area have early warning systems for floods or other hazards?	1=Yes	2=No
34.	Has any member of your family received any type of training/awareness on flood damage prevention and mitigation?	1=Yes	2=No
35.	If 'yes', from which organization have you/they received the training? [Multiple answers are acceptable]	1=Local Government Organization, 2=NGO, 3=Any other organization ……...	
36.	During the floods do women/children/disabled/elderly people suffer from any type of insecurity?	1=Yes	2=No
37.	What problems do the environment face during floods? (Multiple answers are acceptable)	1=Water scarcity causes disease outbreaks, 2=Overcrowding in shelters creates unhealthy environment, 3=Pools the environment by accumulation of garbage, and 4=Pollutes the environment by accumulation of plastic materials causing waterlogging., 5=large yards or roads become congested, 6=others (specify)	

H) Elevation of Settlements

38.	What is the plinth height of your homestead?	……Feet	
39.	Did flooding inundate your residential courtyards (last year)?	1=Yes	2=No
40.	If the answer is ``yes'', what is the level of inundation (in feet)	……Feet	
41.	Was the plinth of your homestead raised (under the ECCCP-Flood project)?	1=Yes	2=No
42.	If yes, the height of the plinth raised?	……Feet	
43.	Did your homestead experience flooding after the plinth was raised?	1=Yes	2=No
44.	If no, what was the water level below the raised plinth?	……Feet	
45.	Did you receive financial assistance (direct cash support) from the project for raising the plinth level?	1=Yes	2=No
46.	If the answer is yes, how effective is the financial assistance?	1=very useful, 2=moderately useful, 3=slightly useful, 4=not at all	
47.	Did you receive loans from the project for raising the plinth level?	1=Yes	2=No
48.	If the answer is yes, how effective was the loans?	1=very useful, 2=moderately useful, 3=slightly useful, 4=not at all	
49.	Was your house reconstructed as climate resilient by the project loan ?	1=Yes	2=No

I) Water and Sanitation

50.	Does your house have a tube well?	1=Yes	2=No
51.	Did water sources (tube-well) inundate due to flooding (last year)?	1= Yes	2=No
52.	If the answer is 'yes', how did you use water for drinking?	1=water purchase 2=boiled flood water, 3=use disinfectant tablets in flood water, 4=Drink flood water directly, 5=Others--------	
53.	Does your tube-well need to raise for safe water supply during floods?	1=Yes	2=No
54.	Do you know about the climate resilient tube-well?	1=Yes	2=No
55.	If you are a project beneficiary, have you received financial assistance from the project for setting up flood-resilient tube wells?	1=Yes	2=No
56.	If the answer is yes, is your tube well suitable for drinking and usage of household chores?	1=Yes	2=No
57.	Did anyone from your family suffer from the following water-borne disease in the last two years? (1. Typhoid Fever 2. Cholera 3. Hepatitis A 4. Dysentery 5. Others…..)	1=Yes	2=No
58.	Do you have a toilet in your house?	1=Yes	2=No
59.	If yes, what is the structure of your toilet?	1=Sanitary Latrine, 2=Pit, 3=Water Sink	
60.	If 'no', what is the destination of excretion?	1= Open space next to house, 2 = Public Road, 3 = Canal/river bank, 4=Other…..	
61.	Did the sanitary latrine get inundated during the last flood?	1=Yes	2=No
62.	If yes, do you need to raise your latrines to make it free from flooding?	1=Yes	2=No
63.	If you are a beneficiary of the project, have you constructed the flood-resilient latrines under ECCCP-Flood project?	1=Yes	2=No
64.	If yes, are you or your family members using it?	1=Yes	2=No

65.	Did you receive any training/awareness for CCAG on hygienic toilet use?	1=Yes	2=No
66.	Is there a hand-washing facility (water reservoir, soap case, soap etc.)? next to your latrine?	1=Yes	2=No
67.	Do your family members wash their hands thoroughly with soap/detergent before meals and after defecation?	1=Yes	2=No

J) Crop Cultivation and Livestock Husbandry

68.	What crops does your family grow (last year)? *(More than one answer is acceptable)*	1=rice, 2=wheat, 3=maize, 4=vegetables, 5=ground seeds, 6=pulses, 7=fruit crops, 8=Sweet pumpkin, 9=others……..., 10 = not cultivating any crops	
69.	State the yield per bigha (33 decimals of one bigha) of the crops you cultivated? (during this estimation, calculate both traditional and project supported climate resilient crops varies)	Aus:…….Mon/Bigha	
		Aman:……	
		Boro:……..	
		Wheat:…….	
		Sweet Pumpkin**:……..**	
		.. ……..	
		……	
		……	
		……	
		……	
70.	Do you know about climate resilient cultivation?	1=Yes	2=No
71.	Did you receive any training on resilient farming?	1=Yes	2=No
72.	Do you cultivate any flood tolerant variety of paddy (last year)?	1=Yes	2=No
73.	If the answer is yes, which varieties did you cultivate in flood tolerant paddy? (Multiple answers are acceptable)	1=BRRI rice-51, 2=BRRI rice -52, 3=BINA Dhan-11, 4=Other ……	
74.	Do you have any ideas about short-term and disease resistant wheat varieties?	1=Yes	2=No
75.	If the answer is 'Yes', did you cultivate early (short-duration and disease-resistant wheat varieties?	1=Yes	2=No
76.	If the answer is 'Yes', name the variety: (Multiple answers are acceptable)	1=BARI Gham-26, 2=BARI Gham-21, 3=BARI Gham-23 4=BARI Gham-30 5=BARI Gham-33 6=Other……	
77.	Do you know about vegetable cultivation technology in sand pasture?	1=Yes	2=No
78.	If yes, did you grow vegetables in the sand bars?	1=Yes	2=No
79.	If yes, which vegetables are you cultivating? (Multiple answers are acceptable)	1=Corn, 2=Potato, 3=Chili, 4=Onion, 5=Garlic, 6=Pumpkin, 7=Other ……	
80.	Did any damage occur to your cultivated field crops due to floods in the last year?	1=Yes	2=No
81.	If 'yes', what is the estimated value of the crops damaged by the flood?	……. BDT	

	such as Rice, wheat, maize, Vegetables (e.g. tomatoes, cucumbers, chilies), Oil Seeds etc.		
82.	Do you grow vegetables and fruits in your backyard/homestead?	1=Yes	2=No
83.	If yes, which vegetables and fruits do you grow?	1. ……... 2…… 3…….4…… 5……..6……	
84.	Does growing vegetables and fruits in backyards provide additional income to you?	1=Yes	2=No
85.	If yes, how much (approximate) is the income or market value of those vegetables?	…….BDT/yearly	
86.	If you are a beneficiary, have you received seed, training and technical assistance from the scheme for cultivation of flood resistant paddy/wheat varieties or vegetables in sand pasture?	1=Yes	2=No
87.	What livestock did your family usually raise? (More than one answer is acceptable)	1=Cow, 2=Goat, 3=Poultry, 4=Duck, 5=Chicken, 6=Pigeon, 7=Other……, 8=No Livestock	
88.	Did any livestock/fish farming in your household get damaged in the last flood?	1=Yes	2=No
89.	If the answer is 'yes', what is the approximate value of the livestock/ fish farming damaged in the flood?	…….BDT	
90.	Are you rearing goats/sheep in slatted house?	1=Yes	2= No
91.	If you have been a beneficiary of the scheme, have you received any financial assistance for goats/sheep rearing under loft system from the scheme?	1=Yes	2=No

K) Adaptation Against Climate Change

92.	Do you know about the weather?	1=Yes	2=No
93.	Do you know about the climate?	1=Yes	2=No
94.	Did you notice any change in the occurrence of flood after 2020?	1=Yes	2=No
95.	Did you participate in preparing vulnerability assessment and local level adaptation plan facilitated by CCAG?	1=Yes	2=No
96.	Did you use the learning from vulnerability assessment and adaptation plans used in decision making and planning in HH or community level?	1=Yes	2=No
97.	Do you have any knowledge about the impact of flood?	1=Yes	2=No
98.	Do you have any knowledge on disaster preparedness?	1=Yes	2=No
99.	Do you have any knowledge on adaptation strategies?	1=Yes	2=No
100.	Do you or any of your family member know about CCAG (Climate change adaptation group)?	1=Yes	2=No
101.	If yes, does any of your family member have any membership in this group (CCAG)?	1=Yes	2=No
102.	If yes, do you or your family members attend the meeting of CCAG regularly?	1=Yes	2=No
103.	If yes, do you share the learning outcome from CCAG/ any other group with family members?	1=Yes	2=No
104.	Does any member of climate group discuss the learning outcome with you?	1=Yes	2=No
105.	Did you or any of your family members receive any training on the following options through this project? 1=goat/sheep rearing using slatted house system, 2=flood resistant rice/wheat cultivation, 3=nutrition/health awareness, 4= cultivation in sandbar	1=Yes	2=No

106.	If yes, how satisfied are you with the training received?	1=Very Satisfied, 2=Fairly Satisfied, 3=Slightly Satisfied, 4=Not Satisfied at all	
107.	Are the trainings (livelihood, leadership) effective?	1. Extremely Effective 2. Very Effective 3. Moderately Effective 4. Slightly Effective 5. Not Effective	
108.	Do you disseminate the knowledge among the communities?	1=Yes	2=No
109.	Do you participate in courtyard meeting?	1=Yes	2=No
110.	Did you move to nearby disaster center during the flood?	1=Yes	2=No
111.	Did you build any climate resilient infrastructures after 2020?	1=Yes	2=No
112.	Did you practice climate resilient farming after 2020?	1=Yes	2=No
113.	Do you maintain regular communication with local administrations, NGOs or Union Disaster Management Unit?	1=Yes	2=No
114.	Which type of knowledge product generally did you utilize? [Multiple responses are acceptable]	1=Articles (newspaper/magazine); 2=Blog posts; 3=Newsletters; 4=Press releases; 5=TV; 6=Social Media; 7=Bill Board 8=CCAG training manual 9=Training materials (banner, poster etc.) 10. others…..	
115.	To what extent did you utilize your knowledge acquired from knowledge products?	0= Never use 1= Sometimes/rarely (slight) use 2= Frequently/significantly (moderate) use 3= Always/fully (high) use	

L) Food Safety and Nutrition

116.	How many times did your family eat yesterday?		1=once, 2=twice, 3=thrice, 4=four times, 5=five times
117.	How many days in the last two weeks have you taken three meals a day?		……. Days
	Food Items	In the last 7 days, what food are you taking on the left side? (1 = yes, 2 = no)	In the last 7 days, how many days have you been consuming food on the left side?
a	White rice/ bread /khicuṛi		……...Days
b	Potato		
c	Fish		
d	Meat (chicken/beef/mutton/rice)		
e	Pea		
f	Egg		
g	Vegetables		
h	Fruits		
i	Milk/yogurt		
j	Mustard		
k	Chips / Biscuit / Chanachur		
i	Others		

118.	Has any member of your family had to sleep without food in the last fifteen days?	1=Yes	2=No
119.	If the answer is 'Yes', how many days in the last fifteen days did you sleep without food/hungry?	……Days	
120.	Did you store the grain you produced last year?	1=Yes	2=No
121.	If yes, how long did you keep it last year?	……...Days	
122.	How often does your family eat meat/fish?	1=at least twice a week, 2=once a week, 3=once a month, 4=rarely	
123.	Are you or any of your family members suffering from malnutrition?	1=Yes	2=No
124.	If yes, which nutritional diseases are you suffering from? (More than one answer is acceptable)	1=anemia (anemia), 2=Beriberi (legs paralyzed, loss of ability to move), 3=scurvy (dental swelling, bleeding and loose teeth, arm pain, etc.), 4= night blindness (inability to see in low light at night), 5=Goitre (swelling of the throat due to iodine deficiency),	
125.	Did any of your family feel sick due to lack of nutritional food during flood?	1=Yes	2=No
126.	Have you or any member of your family participated in any training/activities/awareness related to nutrition and food safety?	1=Yes	2=No

N) Women Empowerment (Decision Making, Increased Security, and Capacity) [Note: Only female family members will answer]

127.	Can you make decisions about the education of children in your family?	Never=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high) =3		
128.	Can you make decisions about the purchase/sale of assets and property?	Never=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high) =3		
129.	Can you decide solely how to spend your earnings?	Never=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high) =3		
130.	Are you a member of any NGO or any community-based organization or group other than CCAG?	1=Yes	2=No	
131.	Are you a member of a Climate Change Adaptation Group?	1=Yes	2=No	
132.	Do you face any social/disadvantages/barriers after going out for work as a job/daily wage earner?	1=Yes		3=N/A
133.	In terms of employment/daily wages, are you getting the same pay/wage as your male colleague for the same job?	1=Yes		3=N/A
134.	If employed, can you avail maternity leave?	1=Yes		3=N/A
135.	Have you participated in any yard meeting on women empowerment organized by CCAG or any other organization under this project?	1=Yes	2=No	
136.	Are you able to play a role in family decision-making by using the knowledge gained through the meeting?	Never=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high) =3		
137.	Have you participated in any yard meeting on sanitation organized by CCAG or any other organization under this project?	1=Yes	2=No	
138.	Can you use the knowledge gained through the meeting to increase health awareness in your family?	1=Yes	2=No	

139.	Do you have any idea about climate adaptation?	1=Yes	2=No
140.	Did anyone of your family attend any climate related groups after 2020?	1=Yes	2=No
141.	Did you hear about flood preparedness?	1=Yes	2=No
142.	Do you know about modern livelihood technologies like slatted house?	1=Yes	2=No
143.	Do you have any access to local agriculture or livestock related organization?	1=Yes	2=No
144.	Did you or any member of your family practice IGA like homestead gardening?	1=Yes	2=No
145.	Did you get any financial assistance for setting up climate resilient tube-well after 2020?	1=Yes	2=No
146.	Did you have an access to the safe water source round the year after 2020?	1=Yes	2=No
147.	Did you know about the benefit of using climate resilient sanitary latrine after 2020?	1=Yes	2=No
148.	Do your family members use the resilient toilets after 2020?	1=Yes	2=No
149.	Did you disseminate the climate change adaptation related knowledge to the community?	1=Yes	2=No
150.	Was the plinth height of your household higher than the average flood level in your area?	1=Yes	2=No
151.	Do you know about climate resilient crop cultivation after 2020?	1=Yes	2=No
152.	Did you receive any training on resilient farming after 2020?	1=Yes	2=No
153.	Did you cultivate any short duration and disease resistant wheat varieties after 2020?	1=Yes	2=No
154.	Do you cultivate vegetables in sand bar after 2020?	1=Yes	2=No
155.	Did you have slatted house for goat/sheep rearing after 2020?	1=Yes	2=No
156.	Do you have an access to use climate resilient tube-well after 2020?	1=Yes	2=No
157.	Do you have any access to use climate resilient sanitary latrine after 2020?	1=Yes	2=No
158.	Do you participate with the community people in taking any decision?	Never=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high) =3	
159.	Did you participate in taking decisions regarding preparing an adaptation action plan?	Never=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high) =3	
160.	Did you take the decision to practice adaptive livelihood after participating in any community group?	Never=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high) =3	
161.	Did you take the decision to practice IGA (e.g., homestead gardening) or adopt an alternative livelihood after participating in any community group?	Never=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high) =3	
162.	Did you (female)/any female member of your HH face any restrictions to earn money?	Never=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high)	
163.	Can you (female)/any female member of your HH participate to make decision about the marriage of daughter/son? If no children, please insert (N/A)	Never=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high) =3 N/A=4	
164.	Did you feel insecure at home during the flood?	No=0, Sometimes/little (slight)=1,	

		Frequently/significantly (moderate)=2, Always/regularly/ sustained (high)1=Yes
165.	Have you taken shelter during the last flood in shelter center/roadside/embankment?	No=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high)
166.	Did you feel insecure/sexually harassed while taking shelter or when going to the toilet during the flood?	No=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high)
167.	Have you been afraid of and felt insecure about the unexpected accidents during the last flood?	No=0, Sometimes (slight)=1, Frequently (moderate)=2, Always(high)
168.	Did you feel safe while going outside during that period?	No=0, Sometimes/little (slight)=1, Frequently/significantly (moderate)=2, Always/regularly/sustained (high)
169.	Did you feel safe while going to the toilet at night during that period?	No=0, Sometimes/little (slight)=1, Frequently/significantly (moderate)=2, Always/regularly/sustained (high)

Appendix 2: Data Analysis Techniques

A) Average Treatment Effect (ATE)

The ATE measures the mean (average) of the differences of the outcomes between units assigned to the treatment and units assigned to the control. The average difference in the pair of potential outcomes averaged over the entire population of interest (at a particular moment in time). In an experimental study, the average treatment effect can be estimated from a sample using a comparison in mean outcomes for treated and untreated units.

In order to define the average treatment effect, we define two potential outcomes: $\boldsymbol{Y_0(i)}$is the value of the outcome variable for individual $\boldsymbol{i}$if they are not treated, $\boldsymbol{Y_1(i)}$is the value of the outcome variable for individual $\boldsymbol{i}$ if they are treated. If we could observe, for each individual, $\boldsymbol{Y_1(i)}$and $\boldsymbol{Y_0(i)}$ among a large representative sample of the population, we could estimate the ATE simply by taking the average value of $\boldsymbol{Y_1(i)}$— $\boldsymbol{Y_0(i)}$ across the sample. However, we cannot observe both $\boldsymbol{Y_1(i)}$ and $\boldsymbol{Y_0(i)}$ for each individual since an individual cannot be both treated and not treated. Generally, there is no reason to expect this effect to be constant across individuals. The average treatment effect is given by

$$\text{ATE} = \frac{1}{N}\sum_i (Y_1(i) — Y_0(i))$$

Where the summation occurs over all $\boldsymbol{N}$ individuals in the population.

B) Propensity Score Matching (PSM)

Propensity score matching is a quantitative process that produces a statistical comparison group which is based on a setup of the potential participation in the treatment utilizing the observed characteristics. Considering these observed characteristics, participants are matched to non-participants. Besides, PSM as an impact evaluation method works properly when the pre-program data (e.g. baseline) is rich and consistent.

In general, the matching method tries to create a counterfactual group which is identical to the treatment group based on the observed properties. Then the average treatment effect (or TOT) of the program is measured as the mean difference in outcomes between these two groups. If the assumptions of conditional independence and common support are maintained, a typical PSM estimator involves the following functional form:

$$\text{TOTPSM} = E_{P(X) \mid T=1}\{E[YT \mid T=1, P(X)] - E[YC \mid T=0, P(X)]\} \quad (1)$$

With the cross-sectional scenario, the aforementioned treatment effect can also be reformulated in the following setup:

$$\text{TOTPSM} = 1/NT\,[\sum YiT - \sum \omega(i,j)\ YjC\ ] \quad (2)$$

Where NT is the number of participants i and ω(i,j) is the weight incorporated to capture the aggregate outcomes for the matched nonparticipants j.

C) Difference in Difference (DiD)

Difference in Difference (DiD) as an evaluation approach stands superior to the PSM since it considers the panel data of the study area where PSM only takes accounts of the single cross-sectional data. Hence, using the data on treatment and control areas and comparing the pre and post-interventions, the program effect will be calculated.

In a usual formation, DiD compares project and control area observations in terms of outcome changes over time in relation to the outcomes observed for the baseline data. Considering a two-period timeframe, where t=o denotes the pre-intervention and t=1 denotes the post-intervention, YtT and YtC are the representative outcomes for the beneficiaries and non-beneficiaries over time t. A typical DD estimator appears as the following formulation:

$$DiD = E(Y1T - Y0T \mid T1=1) - E(Y1C - Y0C \mid T1=0) \quad (3)$$

In the aforementioned equation, T1 =1 denotes the treatment effect in time t whereas T1=0 denotes the control areas at time t. Nature of the variables has been detailed out below in the table for easy understanding.

Table A1: Applicable Method by Variables

Type of the Variable	Variables	Nature of the Variables in the Model		Applicable Method
Outcome	Monthly Income	Continuous	Monthly Income of the Household	DiD& PSM
Outcome	Agricultural Production	Continuous	Annual Agricultural Production	PSM
Outcome	Food Consumption	Dummy	1 if the HH takes daily meals thrice otherwise 0	DiD
Treatment	Plinth Raised	Dummy	1 if the HH raised the plinth under the programe otherwise 0	DiD
Treatment	Flood Tolerant Varieties (Paddy/Wheat)	Dummy	1 if the HH received the paddy/wheat varieties under the programe otherwise 0	PSM
Independent	Age	Continuous	Actual age of the respondent	DiD& PSM
Independent	Sex	Dummy	1 if the respondent male, otherwise 0 for female	DiD& PSM
Independent	Marital Status	Dummy	1 if the respondent is married, otherwise 0	DiD& PSM
Independent	Education	Continuous	Maximum Grade Earned	DiD& PSM
Independent	Household Size	Continuous	Number of the family members	DiD& PSM
Independent	Flood	Dummy	1 if the respondent's HH faced flood in the last year, otherwise 0	DiD& PSM

Appendix 3: FGD Checklist

Checklist for Focus Group Discussion (FGD)

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

Palli Karma-Sahayak Foundation (PKSF)

Venue of FGD: ……. Village: ……,		
Union: ……, Upazila:……, District: …….		
GPS coordinate:	Latitude:	Longitude:

Increase resilience of health and well-being, food and water security

1. How people are being benefitted by the project initiatives?
2. Can you mention the height of the last flood water?
3. How people survive during flood or any (number) loss of lives?
4. How people are facing challenges to grow diversified crops due to flood?
5. How people grow flood tolerant varieties/climate reslilient crops? Do people grow any varieties of flood-tolerant and disease-resistant wheat in your area to protect themselves from early flood damage? Which varieties effectively grow tackling the challenges of flood?
6. Do people get proper sanitation facilities during flood? Do the plinth heights properly address the water level during the flooding?
7. Do people get proper facilities for drinking of safe water during flooding and post flooding condition? What kind of risks or difficulties do women, children, elderly and disabled members face during floods? What is the way to eliminate these risks or difficulties? What type of water-borne diseases did you affect?
8. How people get shelter during flood with also their assets. e livestock and necessary things?
9. What types of health risks do residents typically face after a flood? What are the ways to deal with these risks?
10. What are the suggestions for future improvements?

Preparation and dissemination of knowledge

1. How people receive training under the project?
2. How people become aware of getting knowledge from the project or project activities?
3. How people receive training on technologies and innovative solutions transferred or licensed to promote climate resilience as a result of financial support
4. How do males and females become aware of climate threats and related appropriate responses?
5. How do you use the knowledge of Vulnerability and adaptation plan in decision making and planning taken by households?
6. What types of decision or plan they have taken?
7. How effective the CCAG meeting in decision making?
8. What do you learn from livelihood and leadership training, exchange visit? How did you utilize it?

Social and Women Empowerment

1. In addition to the male members of your family, are the female members also involved in any work? If so, what kind of activities are they involved in?
2. What is the role of women in vegetable and/or livestock farming in your backyard? What kind of advantages or disadvantages do they have?
3. Does wage rate vary between male and female?
4. Do the women members make decisions on various HH matters along with men in the HH? (decision related to family and community level)
5. Role of women decision making by attending CCAG and preparing vulnerability and adaptation action plan
6. Do the people of that area raise livestock (cows-goats-sheep etc.) in their homes? How people are effectively eliminating difficulties to raise goats and sheep?
7. Do women collect clean drinking water during floods? If there is no provision of clean drinking water, what measures are taken regarding drinking water?
8. Do women face problem to go to toilet during flood? Do women face any sexual harassment or feel safe to move during flood?
9. Any alternative employment option for women? Do women receive training and motivation (CCAG) for IGA (goat rearing/homestead gardening)? How do you benefit from this support?
10. Are women satisfied with project initiatives? What are the challenges? What are the suggestions to ensure social and women empowerment by the project initiatives?

FGD Participations List

Sl No.	Name of the participations	Occupation	Mobile no.	Signature
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Name of FGD Facilitator: ----------

Signature---------- **Date: ----------**

Appendix 4: KII Checklist

General Information

Name of respondent: _____ Designation: _____
Institution/organization: _____ Mobile No.:_____, Upazila: _____, District: _____
Name of Implementing Entities (IE) of PKSF: _____
Name of IE's Branch officer: ---------- GPS coordinate: Latitude: Longitude:

Topics/issues of interview

1. What kind of damages the beneficiary households face in the area during flood, such as:
   (a) homestead conditions
   (b) safe water sources
   (c) Sanitation facilities
   (d) homestead gardening
   (e) goat/sheep rearing
   (f) rice and wheat cultivation and harvesting
   (g) Sandbar vegetables
2. From your point of view, what is the current status of climate change and flood impacts in the project area, and how are they affecting the livelihoods of the beneficiary households?

3. Plinth raising and household conditions

a. Can you tell us about the benefits of plinth raising for household conditions?
b. How has plinth raising affected the living conditions of people in flood-prone areas?
c. Have you noticed any differences in health and hygiene since plinth raising was introduced?

d. Homestead gardening

e. Can you tell us about the benefits of homestead gardening for households? Could you sell the surplus?
f. How has homestead gardening contributed to food security in the community?
g. Have you noticed any changes in dietary patterns since homestead gardening was introduced?

4. Sanitation and safe water sources

a. How has access to pure drinking water improved in recent years?
b. What measures have been taken to ensure the quality and availability of drinking water?
c. How has access to sanitation and latrine facilities improved in recent years?
d. What measures have been taken to improve access to these facilities?
e. Have you noticed any changes in hygiene and health since these facilities were introduced?

5. Goat/sheep rearing in slatted house

a. How has goat/sheep rearing in slatted house contributed to household income?

b. What challenges have been faced in goat/sheep rearing in slatted house?

c. Have you noticed any changes in the availability of meat and dairy products since this practice was introduced?

6. Flood tolerant rice and wheat cultivation

a. Can you tell us about the benefits of flood tolerant rice and wheat cultivation?

b. How has this practice contributed to food security in the community?

c. Have you noticed any changes in agricultural productivity since this practice was introduced?

d. Vegetable cultivation on sandbar

e. How has vegetable cultivation on sandbar contributed to household income?

f. What challenges have been faced in vegetable cultivation on sandbar?

g. Have you noticed any changes in dietary patterns since this practice was introduced?

7. Number of technologies and innovative solutions transferred or licensed to promote climate resilience as a result of Fund support.

Sl	Type	Name/Varieties	Number of technologies and innovative solutions
1.	Flood tolerant rice varieties	*Ex-BRRI-51, 52….*	
2.	Short duration and disease protective wheat variety	*Ex- BARI-30….*	
3.	Sand bar vegetable cultivation	*Ex Pumpkin….*	
4.	Modern housing for goat/sheep rearing	*Slatted house*	
5.	Tube-wells	*flood resilient tube-wells*	

8. Did you receive or produce any knowledge products (number of magazines, newsletters, number of quarterly progress reports, success stories, and lesson learn documents etc.)?

9. To what extend did you use the knowledge products?

Never use

Slightly (sometimes/rare) use

Moderately (frequently/significantly) use

highly (already/regularly) use

10. Can you share your perspective on how relevant the project activities are in addressing climate change and fulfilling the project objectives in the project area?

11. In your opinion, do you believe that this intervention is effective for this particular area? If not, why? Can you suggest any other interventions that you think might be more effective in addressing the issues in this area?

12. What are the challenges did you face during implementation? How did you recover? What were the key lessons you learned from project intervention? If you have chance to do the project again, what changes would you make?

13. How many Climate Change Adaptation Groups are formed and what are their main functionalities and future plan?

14. How many workshops have you organized?

15. How many vulnerability assessment and adaptation plans have you prepared?

16. Increased capacity of local institutions

i. Did your organization complete any climate-related project after 2020? [Code: 1=Yes, 0=No]

ii. Did you have networking with any organization who has expertise or fund in climate change after 2020? [Code: 1=Yes, 0=No]

iii. Did your organization are familiar with climate change fund or have access to an international climate change fund? [Code: 1=Yes, 0=No]

iv. Did your organization have any program or project related to the dissemination of adaptation solutions to support household-level beneficiaries in adopting climate-resilient issues after 2020? [Code: 1=Yes, 0=No]

v. Did you or any member of your organization participate in any climate resilient training or capacity-building program after2020? [Code: 1=Yes, 0=No]

vi. Did your organization arrange any workshop/seminar/round table meeting on climate resilient subjects after2020? [Code: 1=Yes, 0=No]

vii. Did your organization (partnership) prepare climate-related knowledge products (book, guideline, manual, communication materials) after2020? [Code: 1=Yes, 0=No]

viii. Did your organization have focal person or recruit specialized staff climate expert on climate change after2020? [Code: 1=Yes, 0=No]

ix. Did you know about climate change adaptive technologies or innovative solutions (rice varieties, wheat varieties, sand bar vegetables, goat rearing in slatted houses, climate-resilient tube-well, sanitary latrine) to promote climate resilience? [Code: 1=Yes, 0=No]

x. Did your organization have any contingency plan in case of any climatic emergency? [Code: 1=Yes, 0=No]

xi. Were there at least 5 employees of your organization involved in the implementation of climate-resilient-related project activities after 2020? [Code: 1=Yes, 0=No]

xii. Did your organization have any institutional system plan related to flood? [Code: 1=Yes, 0=No]

xiii. Did your organization complete any climate-related project after 2020? [Code: 1=Yes, 0=No]

xiv. Did you have networking with any organization who has expertise or fund in climate change after2020? [Code: 1=Yes, 0=No]

xv. Did your organization are familiar with climate change fund or have access to an international climate change fund? [Code: 1=Yes, 0=No]

17. Increased capacity of NGOs to support households in flood protection and dissemination of adaptation solutions

i. Did your organization have any program related to the dissemination of adaptation solutions to support household-level beneficiaries in adopting climate-resilient issues after 2020? [Code: 1=Yes, 0=No]

ii. Were there at least 5 employees of your organization involved in the dissemination of adaptation solutions to support household-level beneficiaries in adopting climate-resilient issues after 2020? [Code: 1=Yes, 0=No]

iii. Did you have any knowledge about adaptation strategies or solutions or action plan after 2020? [Code: 1=Yes, 0=No]

iv. Did you know about climate adaptive livelihood options after 2020? [Code: 1=Yes, 0=No]

v. Did you know about flood resilient corps after2020? [Code: 1=Yes, 0=No]

vi. Did your organization arrange any workshop/seminar/round table meeting on climate resilient subject after2020? [Code: 1=Yes, 0=No]

vii. Did you receive skill development training relevant to climate change after 2020? [Code: 1=Yes, 0=No]

viii. Did your organization (partnership) or working project prepare climate-related knowledge products (book, guideline, manual, communication materials) after 2020? [Code: 1=Yes, 0=No]

ix. Did your organization have focal person or recruit specialized staff climate expert on climate change after 2020? [Code: 1=Yes, 0=No]

x. Did you know about climate change adaptive technologies or innovative solutions (rice varieties, wheat varieties, sand bar vegetables, goat rearing in slatted houses, climate-resilient tube-well, sanitary latrine) to promote climate resilience after 2020? [Code: 1=Yes, 0=No]

xi. Did you facilitate any training program under climate change project focusing adaptation to flood after2020? [Code: 1=Yes, 0=No]

18. Recommendations for better implementation of the project activities.

Thanks for cooperation

1. Name of interviewer ----------	
2. Signature of interviewer ----------	
3. Mobile number of interviewer ----------	
1. Name of related Supervisor ----------	
2. Signature of Supervisor ----------	
3. Mobile number of Supervisor ----------	
Date: ----------	Date: ----------

Appendix 5: Details of FGDs

FGD No.	Group Type	Venue	Village	Union	Upazila	District	Date	Time	No. of Participants
FGD-1	Female	Dighir Par	Dighir Par	Tepakhoribari	Dimla	Nilphamari	26.03.2023	12.30 P.M.	15
FGD-2	Combined (male + female	Shildoho Uttar Para	Shildoho Uttar Para	Belgaccha	Islampur	Jamalpur	25.03.2023	12:00 pm	12
FGD-3	Combined (male + female	Shildoho	Shildoho	,,	,,	,,	25.03.2023	10:30 pm	12
FGD-4	Female	Beside Nurnobi's house	Chinatuly	Rajpur	Lalmonirhat Sadar	Lalmonirhat	18.03.20.23	11.27 A.M.	12
FGD-5	Female	In front of Arjina Begum stationary shop	Kuthipara	Khuniagach	,,	,,	18.03.2023	1.51 P.M.	14
FGD-6	Combined (male +female)	In Dulalmia house	Talpotti	,,	,,	,,	18.03.20.23	3.56 P.M.	12
FGD-7	Combined (male + female)	In Rahima Begum's house	Thikanar Bazar	Rajpur	,,	,,	18/03/2023	12:01 P.M	12
FGD-8	Female	Kha Para	Foluwar Char	Bandober	Rowmari	Kurigram	23.03.2023	4.00 P.M	12
FGD-9	Female	Char Khonjanmara	Khonjanmara	,,	,,	,,	19.03.2023	4.00 PM	13
FGD-10	Female	In front of Monjuara Begum House	Modahokhatiya	Fazlupur	Fulchhari	Gaibandha	14.03.2023	12.30 P.M.	12
FGD-11	Combined (male + female)	Laboni's House	Kaligonj	Pashchim Chhatnai	Dimla	Nilphamari	31.03.23	12.30 P.M.	12
FGD-12	Female	Khodeja Begum's House	Poschim Jigabari	Erendabari	Fulchhari	Gaibandha	21.03.23	11.30 A.M	12
FGD-13	Combined (male + female	Jigatola Bangla Bazar Govt. Primary School	Jigatola Bangla Bazar	Kulkandi	Islampur	Jamalpur	25.03.2023	10:30 pm	12

FGD 1

SL.	Name	Age	Mobile No	Address
01	Mrs. Achiya Begum	36	01927114574	Village: Dighir Par, Union: Tepakhoribari, Upazila: Dimla, District: Nilphamari
02	Mrs Rojina Khatun	38	01780798295	
03	Mrs Jarina Begum	58	01774580023	
04	Mrs Arjina Begum	25	01740418921	
05	Mrs Najma	27	01976643004	
06	Mrs Jannati	24	01727596077	
07	Mrs Achimon Begum	50	01994160662	
08	Mrs Chayna	35	01944747333	
09	Mrs Sabiron Begum	48	-	
10	Mrs Belchaya Begum	60	-	
11	Mrs Rashida Begum	27	01930289553	
12	Mrs Pinjira	57	-	
13	Mrs Sabina Khatun	32	01724771471	
14	Mrs Asma Begum	30	01716218632	
15	Mrs Jamiran Begum	35	01783094403	

FGD 2

SL.	Name	Age	Mobile No	Address
01	Mrs Rinara Begum	30	01724265869	Village: Shildoho Uttar Para, Union: Belgaccha, Upazila: Islampur, District: Jamalpur
02	Mrs Sonali Rani	28	01724328327	
03	Mrs Puja Rani	29	01736278851	
04	Mrs Gita Rani	32	01744679370	
05	Mrs Kajoli Rani	25	01704841281	
06	Mrs Sita Rani	26	01723979757	
07	Mrs Gita Rani	29	01742626879	
08	Mrs Menoti Rani	32	01797986798	
09	Mrs Tithi Rani	26	01796783155	
10	Mrs Alomoti	32	01773466225	
11	Mrs Ferija Begum	26	01759590471	
12	Mrs Golapi Rani	29	01740009687	

FGD 3

SL.	Name	Age	Mobile No	Address
01	Mrs Sabina Begum	40	-	Village: Shildoho, Union: Belgaccha, Upazila: Islampur, District: Jamalpur
02	Mrs Rubi	25	-	
03	Mrs Marjina Begum	40	-	
04	Mrs Sabina	30	-	

SL.	Name	Age	Mobile No	Address
05	Mrs Sahida Begum	42	-	
06	Mrs Hasnara	28	-	
07	Mrs Azima	45	-	
08	Mrs Manjuara	35	-	
09	Mrs Rehena Begum	30	-	
10	Mrs Ambia	25	-	
11	Mrs Marjina Begum	30	-	
12	Mrs Rebeka	30	-	

FGD 4

SL.	Name	Age	Mobile No	Address
01	Mrs Nureja Begum	36	01915961763	Village: Chinatuly, Union: Rajpur, Upazila: Lalmonirhat Sadar, District: Lalmonirhat
02	Mrs Akhiron	37	01916124334	
03	Mrs Sukhjan	21	01953357347	
04	Mrs Julekha	22	01957843430	
05	Mrs Jahanara	35	01960395081	
06	Mrs Anjana	25	01981705751	
07	Mrs Khadija Begum	27	01971819082	
08	Mrs Salma	26	01921640957	
09	Mrs Shamiran	38	01953427665	
10	Mrs Banesa Begum	33	01997542298	
11	Mrs Marjina Begum	32	01983971172	
12	Mrs Sakhina Begum	51	01921238106	

FGD 5

SL.	Name	Age	Mobile No	Address
01	Mrs Rupali	28	01962763206	Village: Kuthipara, Union: Khuniagach, Upazila: Lalmonirhat Sadar, District: Lalmonirhat
02	Mrs Shilpi Begum	22	01622360508	
03	Mrs Bilkis Begum	29	01887703722	
04	Mrs Akhi	22	01864060176	
05	Mrs Asma	48	01840376975	
06	Mrs Rina	28	01884662443	
07	Mrs Fatema	30	01930775600	
08	Mrs Mamataj Begum	25	01860806892	
09	Mrs Bilkis	30	01840376975	
10	Mrs Najma	30	01890564943	
11	Mrs Nurjahan Begum	40	01956296947	
12	Mrs Ajeda	26	01829371077	

SL.	Name	Age	Mobile No	Address
13	Mrs Rabeya	40	01797893092	
14	Mrs Mayna	30	01840376975	

FGD 6

SL.	Name	Age	Mobile No	Address
01	Mrs. Jaheda	45	-	Village: Talpotti, Union: Khuniagach, Upazila: Lalmonirhat Sadar, District: Lalmonirhat
02	Mrs. Mojida	42	-	
03	Mrs. Fatema	40	-	
04	Mrs. Rupali	35	-	
05	Mrs. Farzan	36	-	
06	Mrs. Supia	38	-	
07	Mrs. Hamida	34	-	
08	Mrs. Nazma	27	-	
09	Mrs. Arzina	25	-	
10	Mrs. Anjuara	27	-	
11	Mrs. Jelly Begum	25	-	
12	Mrs. Rashida	29	-	

FGD 7

SL.	Name	Age	Mobile No	Address
01	Mrs Sriti	25	01321054616	Village: Thikanar Bazar, Union: Rajpur, Upazila: Lalmonirhat Sadar, District: Lalmonirhat
02	Mrs Sefali Begum	26	01753818186	
03	Mrs Lovely	38	01745698187	
04	Mrs Rashida	38	01301122168	
05	Mrs Sefali	27	01738588165	
06	Mrs Marufa Begum	30	01738586741	
07	Mrs Golapi	21	01742453799	
08	Mrs Chaina Begum	30	01316557408	
09	Mrs Rumana	20	01796011605	
10	Mrs Shahera Begum	30	01740077992	
11	Mrs Yesmin	27	01302133063	
12	Mrs Aleya Begum	35	01762935132	

FGD 8

SL.	Name	Age	Mobile No	Address
01	Mrs Fatema Begum	25	01707085493	Village: Foluwar Char, Union: Bandobe, Upazila: Rowmari, District: Kurigram
02	Mrs Anowara Begum	38	01788012106	
03	Mrs Shahinur Begum	40	01763209163	

SL.	Name	Age	Mobile No	Address
04	Mrs Shamoly Begum	26	01939084670	
05	Mrs Sabina Begum	25	01313284837	
06	Mrs Fatema Begum	26	01784552015	
07	Mrs Khushida Begum	28	01794638171	
08	Mrs Rabeya Begum	27	01705858937	
09	Mrs Fulmati Begum	33	-	
10	Mrs Sabina	37	01907819018	
11	Mrs Monowara Begum	38	01759667060	
12	Mrs Shonakhatun	40	-	

FGD 09

SL.	Name	Age	Mobile No	Address
01	Mrs Mazeda Begum	36	-	
02	Mrs Hira	28	-	
03	Mrs Esha Banu	29	-	
04	Mrs Rikta	27	01755318715	
05	Mrs Sona Khatun	34	-	
06	Mrs Abeda	30	01763141438	Village: Khonjanmara, Union: Bandober, Upazila: Rowmari, District: Kurigram
07	Mrs Nur Nahar	40	-	
08	Mrs Rowshan Ara	42	-	
09	Mrs Mahmuda	43	-	
10	Mrs Nasima	32	-	
11	Mrs Mina	30	01716786817	
12	Mrs Ojufa	39	-	
13	Mrs Falema	26	01775608557	

FGD 10

SL.	Name	Age	Mobile No	Address
01	Mrs Happy	30	01991727222	
02	Mrs Salma Akhter	28	01953700486	
03	Mrs Happy	29	01989893907	
04	Mrs Raseda Begum	32	01947290210	
05	Mrs Rotna	25	01960055458	Village: Modahokhatiya, Union: Fazlupur, Upazila: Fulchhari, District: Gaibandha
06	Mrs Najma Begum	26	01946896288	
07	Mrs Kolpona	29	01908901475	
08	Mrs Fatema	32	01308615242	
09	Mrs Akhi	26	01720073882	
10	Mrs Lipi Begum	32	01954611474	

SL.	Name	Age	Mobile No	Address
11	Mrs Jomila	26	01949700927	
12	Mrs Sabina	29	01763221227	

FGD 11

SL.	Name	Age	Mobile No	Address
01	Mrs. Rikta Khanam	24	01907553316	Village: Kaligonj, Union: Pashchim Chhatnai, Upazila: Dimla, District: Nilphamari
02	Mrs. Rima Akhter	25	01961354449	
03	Mrs. Farida Begum	47	01981545373	
04	Mrs. Munni Begum	50	01926222090	
05	Mrs. Dilera Begum	55	01952940243	
06	Mrs. Shurjo Khatun	30	01923969552	
07	Mrs. Ayesha Begum	29	01926183459	
08	Mrs. Momena Begum	42	01961963699	
09	Mrs. Julekha Begum	30	01984144292	
10	Mrs. Mina Begum	35	01983578910	
11	Mrs. Shabana Begum	40	01950087146	
12	Mrs. Smrity	33	01929326743	

FGD 12

SL.	Name	Age	Mobile No	Address
01	Mrs Johura	45	01788758876	Village: Poschim Jigabari, Union: Erendabari, Upazila: Fulchhari, District: Gaibandha
02	Mrs Khorsheda	25	01737627217	
03	Mrs Srimotirunia	55	-	
04	Mrs Monoara	54	-	
05	Mrs Ruma	35	01788914691	
06	Mrs Hajera Begum	44	01878170069	
07	Mrs Shahida	43	-	
08	Mrs Zahima	25	01737906522	
09	Mrs Rohima	35	-	
10	Mrs Sukhjan Begum	32	-	
11	Mrs Shahara	22	01947599500	
12	Mrs Anowara	52	01986365427	

FGD 13

SL.	Name	Age	Mobile No	Address
01	Mrs Rabeya	27	01789437000	Village: Jigatola Bangla Bazar, Union: Kulkandi,
02	Mrs Yasmin	26	01735526375	
03	Mr Milon	24	01729477318	

SL.	Name	Age	Mobile No	Address
04	Mrs Kajuli	23	01765069834	Upazila: Islampur, District: Jamalpur
05	Mrs Selina	30	01743830388	
06	Mrs Dilroba Begum	23	01745300512	
07	Mrs Amena Begum	27	01747560026	
08	Mrs Masuda Begum	33	01751842651	
09	Mrs Morshed	24	01798295654	
10	Mrs Mira Begum	23	01710656588	
11	Mrs Laki	30	01627414422	
12	Mrs Kajuli	25	01731612469	

Appendix 6: Detail of KIIs

Sl. No	Stakeholder Name	Designation	Upazil	District	Date
1.	Md. Habibur Rashid	Project Coordinator (NDP)	Chilmari	Kurigram	24.03.2023
2.	Md. Harun AR Rashid	Project Coordinator (Padakkhep)	Chilmari	Kurigram	29-03-2023
3.	Md. Aslam Uddin	Project Coordinator (POPI)	Lalmonirhat Sadar	Lalmonirhat	23.03.2023
4.	Ashish Kumar Mojumdar	Project Coordinator (NAZIR)	Lalmonirhat Sadar	Lalmonirhat	22.03.2023
5.	MR. Pogidur Rahman	Project Coordinator (ESDO)	Islampur	Jamalpur	27.03.2023
6.	Md. Nurul Haque	Project Coordinator (SSS)	Jamalpur Sadar	Jamalpur	25.03.2023
7.	MD. Shafiul Alam Mondal	Project Coordinator (TMSS)	Shaghata	Gaibandha	21.03.2023
8.	Md. Mamunur Rashid	Project Coordinator (SHARP)	Dimla	Niphamari	30.03.2023
9.	Dr_Sumsur Rahman	Project Coordinator (GBK)	Dimla	Niphamari	29.03.2023
10.	Ismail Shikder	UP Member	Melandah	Jamalpur	27.03.2023
11.	Md. Biplob Hosen	GRM member	Rowmari	Kurigram	27.03.2023
12.	Abdul Qader	GRM member	Rowmari	Kurigram	19.03.22023
13.	Md. Nazrul Islam	GRM member	Rowmari	Kurigram	26.03.2023
14.	Mst. Salema Begum	GRM member	Rowmari	Kurigram	03-23-2023
15.	Arefa Khatun	GRM member	Lalmonirhat Sadar	Lalmonirhat	24.03.2023
16.	Kamrun Nahar	GRM member	Lalmonirhat Sadar	Lalmonirhat	23.03.2023
17.	Abdul Malek Sarkar	UP Chairman	Lalmonirhat Sadar	Lalmonirhat	22.03.2023
18.	Amina Begum	GRM member	Lalmonirhat Sadar	Lalmonirhat	25.03.2023
19.	Md. Golam Shaheed	GRM member	Rowmari	Kurigram	27.03.2023
20.	Md. Mohidul Islam	UP Member	Lalmonirhat Sadar	Lalmonirhat	18.03.2023
21.	Minu begum	GRM member	Lalmonirhat Sadar	Lalmonirhat	25.03.2023
22.	Ashraful Islam	UP Member	Lalmonirhat Sadar	Lalmonirhat	18.03.2023
23.	Md. Abu Bokkor Mondol	UP Member	Islampur	Jamalpur	25.03.2023
24.	Md. Abdul Malek	UP Chairman	Islampur	Jamalpur	26.03.2023

Sl. No	Stakeholder Name	Designation	Upazil	District	Date
25.	Md. Shofiqul Islam Belal	GRM member	Islampur	Jamalpur	26.03.2023
26.	Md. Banij Bepary	GRM member	Islampur	Jamalpur	25.03.2023
27.	MD. Nazrul Islam	Member of GRM	Dimla	Niphamari	01.04.2023
28.	Md. Alamgir Hossain	UP Member	Phulchari	Gaibandha	17.03.2023
29.	Abdul Manan Akundo	UP Member	Erandabari	Gaibandha	26.03.2023
30.	MD Nurul Islam	U P Member	Phulchari	Gaibandha	26.03.2023
31.	Md Saiful Islam	School Teacher	Phulchari	Gaibandha	24.03.2023
32.	Md. Abul Kalam Azad	UP Member	Dimla	Niphamari	30.03.2023
33.	Moynul Haque	UP Chairman	Dimla	Niphamari	27.03.2023
34.	Nur Mohammad Mintu	GRM Member	Dimla	Niphamari	31.03.2023
35.	Robiul Islam Liton	UP Chairman	Dimla	Niphamari	30.03.2023
36.	Shafiyar Rahman	UP Member	Dimla	Niphamari	26.03.2023

Appendix 7: Case Studies

Case Study: 01

"Empowering Climate Resilience: Aneza Begum's Journey towards Sustainable Livelihoods"

Aneza Begum, 51-year-old woman, currently resides in Chinatuly village in Rajpur Union, Lalmonirhat Sadar Upazila, Lalmonirhat District. She got married to Seyad Ali at the age of 15, and they have two children, making it a family of four individuals. Aneza's husband works primarily as an agricultural laborer, cultivating their own family land as well as mortgaged land. He serves as the sole breadwinner for the family. In 2019 and 2020, Aneza faced financial difficulties due to her husband's illness. To overcome these challenges, she sought employment as a laborer in various agricultural fields and took on any available work.

One fine afternoon, Aneza learned about the ECCCP-Flood initiative, which aimed to engage women in flood-prone regions in income-generating activities in response to the increasing impact of climate change. Aneza was enthusiastic about the project and stated, "The project has given me the opportunity to actively participate in income-generating activities, while also addressing the challenges brought by climate change, and has empowered me to enhance my quality of life." She received training on goat and sheep rearing in slatted houses and learned about its benefits in building climate resilience. With her newfound knowledge and a total of 14 goats and 2 sheep, she embarked on her journey to become a successful entrepreneur, adapting to the changing climate conditions.

The intervention of the ECCCP-Flood project, with its focus on climate resilience, played a pivotal role in Aneza's achievements. This year, she sold 14 goats and utilized the earnings to construct a concrete plinth beneath her home, ensuring increased resilience against water damage during floods that have become more frequent due to climate change. She is grateful for the support provided by the project, which has not only improved her livelihood but also helped her adapt to the changing climate realities.

The training emphasized the importance of proper immunization practices and maintaining a clean and well-organized slatted house, which are crucial aspects of climate-resilient farming. Previously, Aneza owned only 12 goats, but since the construction of the slatted house in her backyard, she has been able to expand her livestock and adapt to the changing climate conditions. Unfortunately, Aneza faced a setback when five of her goats died due to the harsh weather conditions exacerbated by climate change last year, highlighting the challenges that farmers like her face in the face of a changing climate.

Nevertheless, the ECCCP-Flood project has not only empowered Aneza economically but also instilled in her the confidence to assume a leadership role within her group and community to address the impacts of climate change. Aneza emphasizes, "Life has taught me that to achieve sustainable livelihoods, I must raise my voice and remain vigilant about climate variations." In response to the damaging effects of climate change, she has decided to serve as a volunteer mentor to her fellow team members, motivating them to increase their participation in home-based income-generating activities, particularly goat rearing, while also creating awareness about climate change adaptation strategies. Aneza's journey exemplifies the transformative power of climate resilience initiatives, enabling individuals to thrive economically, adapt to climate change, and assume leadership roles within their communities to build a more sustainable and climate-resilient future.

Case study: 02

"Transforming Livelihoods: Innovative Wheat Cultivation Techniques"

Mr. Saiful, a 40-year-old, resident of Shildoho village in Belgaccha Union, located in the Islampur upazila of Jamalpur district, leads a family of four, including his wife and two children. His primary occupation revolves around agriculture and daily labor, where he is the sole breadwinner. He sustains his family by selling these agricultural products by engaging in crop cultivation, such as rice, jute, and potatoes. Until recently, he had limited knowledge about innovative agricultural practices, particularly wheat cultivation. It was through the implementation of the ""Extended Community Climate Change Project-Flood (ECCCP-Flood)" project by the "Society for Social Service" that he first became acquainted with the concept of short-duration and disease-resistant wheat varieties. As part of the project, Saiful was introduced to plinth-raising techniques and provided with a high-yielding, disease-resistant wheat variety. Before this intervention, he encountered significant challenges in his wheat cultivation efforts. His yields were meager, with most crops succumbing to diseases and pests. On average, he yielded only 280 to 320 kilograms per 40 decimals (approximately 0.4) when cultivating traditional wheat varieties. However, after learning about the new wheat variety, specifically the BARI Ghom-30, through training, his approach to wheat cultivation underwent a remarkable transformation. Taking heed of the training instructions on seed sowing, pesticide usage, and fertilizer application, he cultivated wheat on 36 decimals of his land. This year, he achieved a yield of 560 kilograms, doubling his previous output.

The newfound knowledge and skills from the training enabled him to collect and preserve wheat seeds for future cultivation. With the market price of wheat ranging from Tk. 42 to Tk. 50 per kilogram, the cultivation expenses on his 36 decimals of land amounted to Tk. 8,000 to Tk. 10,000. Witnessing this unprecedented level of wheat production, Saiful experienced a significant boost in his income and overall livelihood status, highlighting the positive impact of climate change adaptation and adopting climate-resilient crop cultivation practices. Motivated by his success, Saiful has continued cultivating this high-yielding wheat variety. By doing so, he actively embraces climate change adaptation strategies while promoting growing crops resilient to climatic challenges.

Case study: 03

"Fulti Begum's Journey to Empowerment and Climate Advocacy"

Living in difficult-changing climate challenges; for individuals like Fulti Begum, a 31-year-old resident of Chinatuly village in Rajpur Union, Lalmonirhat Sadar Upazila, Lalmonirhat District, it is a battle worth fighting. Married to Md. Mijanur Rahman, for 16 years, they share a happy household with three children, comprising five members. With her husband working as an agricultural laborer in other employing districts throughout the year, Fulti takes charge of all agricultural activities in his absence. Fulti Begum embodies the transformative power of climate change initiatives as she seizes the opportunity to uplift her livelihood and advocate against the impacts of a changing climate. Through her participation in the "Extended Community Climate Change Project-Flood (ECCCP-Flood)," supported by the Palli Karma-Sahayak Foundation (PKSF) and implemented by NAZIR (Notun Jibon Rochi), Fulti has harnessed her skills and knowledge to create a more resilient and prosperous future. Actively engaging in income-generating activities, Fulti has mastered the art of goat and sheep rearing, guided by the project's comprehensive training on efficient management practices. Installing a slatted house has further enhanced her livestock activities, significantly increasing her herd size. With 15 goats and 3 sheep thriving on her premises, Fulti is on her way to becoming a successful entrepreneur.

The sale of goats has not only generated income but has also enabled Fulti to improve her household. With the proceeds, she has elevated the plinth of her house, fortifying it against floodwaters and securing her family's safety. Fulti's entrepreneurial endeavors have allowed her to expand her assets, including purchasing a cow. The cow provides a daily source of milk for her family and offers additional income through milk sales. Fulti Begum's journey goes beyond personal resilience. She has emerged as a leader within her community, motivated to create awareness and take action against climate change. As a team mentor, she inspires her peers to embrace income-generating activities and encourages them to voice their concerns and ideas. Fulti Begum's inspiring story demonstrates the immense potential for individuals to thrive amidst climate challenges. Her resilience, resourcefulness, and dedication to a sustainable future inspire others to join the fight against climate change, paving the way for a more resilient and empowered community.

Case study: 04

"Thriving Harvest: Md. Sobahan's Journey to Prosperity with Climate-Resilient Wheat"

Md. Sobahan, a 27-year-old resident of Shildoho village in Belagaccha union, Islampur upazila, Jamalpur District, is facing the challenges of sustaining his livelihood through agriculture. He is the sole earner of his four members of the family. While his wife primarily takes care of household duties, she also assists him as an agricultural laborer. He cultivated various crops this year, including maize, chili, onion, and wheat. However, before receiving training on climate-resilient farming practices and plinth raising, he was unaware of the "ECCCP Flood Project" being implemented by the Society for Social Service (SSS) in their village. This project introduced Sobahan to a short-duration, disease-resistant high yielding wheat variety called BARI Ghom-31. Intrigued by its potential, he decided to cultivate this wheat variety for the first time, shifting away from the traditional variety that suffered from low productivity and susceptibility to diseases and pests. He shared that the new wheat variety had a shorter cultivation period, requiring only 90 days to harvest. This year, he cultivated wheat on 40 decimals of land and achieved a yield of 600 kg, a significant improvement compared to the 280-320 kg yield per 40 decimals from the traditional variety. Furthermore, he highlighted the financial benefits of cultivating climate-resilient wheat. With cultivation expenses amounting to Tk. 6000 for the 40 decimals of land, he was able to sell his harvested crops for Tk. 21,500. The lower cultivation costs and higher productivity of the new wheat variety have contributed to increased earnings for Sobahan. This success has improved Sobahan's income and instilled confidence in him as a farmer. He recognizes the importance of adapting to climate change and using resilient crop varieties to enhance his livelihood. He is grateful to the ECCCP Flood Project and the Society for Social Service for introducing him to the climate-resilient wheat variety, transforming his farming practices and increasing his earnings.

Case Study: 05

"Transforming Lives: Abdullah Mamun's Sweet Pumpkin Success"

Md. Abdullah Mamun, a 29-year-old resident of Shildoho village in Belgacha Union, Islampur Upazila, Jamalpur district. He has lived in this village and is happily married to Kulsum Begum, a 22-year-old resident of the same community. They have two children: Ridita, a 5-year-old daughter, and Siyam, a 2-year-old son. Over the years, Abdullah has witnessed numerous natural disasters. In the devastating floods of 2018, he lost 1.65 acres of his cultivated land, destroying his rice, wheat, corn, and peppers.

In 2020, the GCF-supported PKSF initiated the "Extended Community Climate Change Project-Flood (ECCCP-Flood)" through the local NGO Society for Social Service (SSS). The project aimed to enhance the standard of life in flood-prone areas through various measures. This includes plinth raises of houses, constructing slatted house for goat/sheep rearing, installing climate resilient tube wells for safe water, promoting sanitation practices, establishing vegetable gardens, distributing flood-tolerant seeds for rice, wheat, and sweet pumpkins, and providing training sessions. Abdullah Mamun was fortunate to be

one of the beneficiaries of this project. He raised his house and started growing vegetables in his backyard. Observing his efforts, the SSS team encouraged him to cultivate sweet pumpkins on the unused land. Abdullah procured the necessary seeds with their guidance and began cultivating sweet pumpkins. Initially, he had doubts and concerns about the success of this venture. However, after planting around 200 saplings of the Asha Cincinta variety, he was delighted to see the fruits appearing within 55 days. The sweet pumpkins he cultivated weighed between 2 to 4 kilograms, and he earned approximately 6,000–7,000 TK from the first harvest. With more fruits growing on his land, Abdullah expects to earn additional income for his family. Today, Abdullah Mamun stands as a successful sweet pumpkin producer in Shildoho Village, serving as an inspiration to fellow farmers. He generously shares his knowledge and experiences gained from the training sessions conducted by SSS, guiding other farmers interested in cultivating sweet pumpkins on unused land. His dedication and success in growing sweet pumpkins have provided him with extra income and instilled hope and optimism in the hearts of many.

Case Study: 06

"Overcoming Water Challenges: Bobita Akter's Path to Resilience"

In the picturesque village of Baishpara, nestled within the Char Khunjormara Union of Rowmari Upazila, Kurigram district, Mst Bobita Akter and her family once grappled with the daunting challenges of accessing clean water. Prior to their involvement in the ECCCP-Flood project, their daily existence was marred by the arduous task of collecting water from neighbors, a struggle that intensified during the unforgiving floods that plagued their region. Desperate times called for desperate measures, as they resorted to cutting banana rafts or even swimming in search of alternative water sources. Compounding their predicament, the lack of cooking stoves during these trying times made boiling floodwater for safety an impossible luxury.

However, the tides of fate would soon turn for Bobita Akter and her family, as they found solace and support through the benevolent intervention of a local non-governmental organization (NGO). It was through the invaluable gift of climate-resilient tube wells. The installation of this tube well in a profound transformation, ensuring a continuous supply of clean water for Bobita Akter and her loved ones. Remarkably, even during the most challenging flood events, this resilient tube well steadfastly withstood the deluge, steadfastly providing them with a lifeline of safe drinking water. This newfound abundance of clean water not only emancipated them from the constant fear of water scarcity but also safeguarded them from the perils of waterborne diseases.

Today, Bobita Akter's countenance radiates with unbridled joy as she revels in the resounding change that has swept through her life. No longer burdened by the specter of water scarcity or compromised hygiene, she finds herself at the forefront of a personal odyssey that embodies resilience and hope. Her transformative journey stands as an inspiring testament to the remarkable impact that climate change interventions can yield in uplifting the lives of vulnerable communities. Through the tireless efforts of initiatives like the ECCCP-Flood project, the intricate threads of Bobita Akter's existence have been rewoven, creating a tapestry of empowerment, security, and improved well-being. Thus, the story reverberates as a powerful reminder of the potential for change and the triumph of human spirit in the face of adversity. It serves as an enduring symbol of the positive influence that climate change interventions can have on the lives of individuals and communities, fostering resilience and creating pathways towards a brighter and more sustainable future.

Case Study:07

"Julekha Begum's Triumph Over Climate Challenges"

Julekha Begum, a determined 33-year-old woman, resides in Thikanar Bazar, Rajpur Union of Lalmonirhat Sadar Upazila, Lalmonirhat district. Her husband, Md. Rezaul Karim, primarily engages in cultivation but occasionally works as an agricultural laborer to meet their family's needs. With five members in their household, including their three children, Julekha's life has been filled with hardships, particularly due to frequent flooding in their area.

One day, Julekha learned about the transformative activities of the "Extended Community Climate Change Project" from Bablu, a dedicated worker of the local NGO NAZIR (Natun Zibon Rochi). This project, supported by the Palli Karma-Sahayak Foundation (PKSF) and implemented by NAZIR, aimed to address climate change impacts and empower women in flood-prone areas.

Julekha's house had been vulnerable to flooding, causing significant challenges regarding access to clean drinking water and proper sanitation facilities. Collecting water from neighbors' homes with elevated plinths and relying on shared toilets had been a source of discomfort for Julekha and her children.

However, the implementation of the Extended Community Climate Change Project gradually brought positive changes to Julekha's life. Several interventions were introduced to tackle the challenges she faced. Firstly, her house was equipped with a raised plinth, providing enhanced resilience during flood events and offering greater protection to her family.

Moreover, the project addressed the issue of clean drinking water by implementing interventions to improve access to it during floods. This meant that Julekha and her family no longer had to rely on collecting water from neighbors' homes. They now had a reliable and safe water source, reducing the risk of waterborne diseases and improving their overall health. Additionally, the project focused on improving sanitation facilities in flood-prone areas. Julekha and her family gained access to better sanitation facilities, ensuring improved hygiene, privacy, and dignity.

Furthermore, the Extended Community Climate Change Project introduced income-generating activities and livestock rearing. Julekha was able to engage in activities such as raising goats, sheep, ducks, and chickens, as well as homestead gardening. These interventions not only increased her household income but also provided a more sustainable livelihood. Julekha's family benefited from a diverse and nutritious food supply, contributing to their economic well-being and overall quality of life. Julekha's journey exemplifies the strength and resilience gained through climate change initiatives. By implementing adaptive measures and interventions, she overcame climate challenges, improved her living conditions, and paved the way for a brighter and more prosperous future for herself and her family.

Case Study: 08

"Empowering Change: Hamela Begum's Plinth Raising and Sanitation Journey"

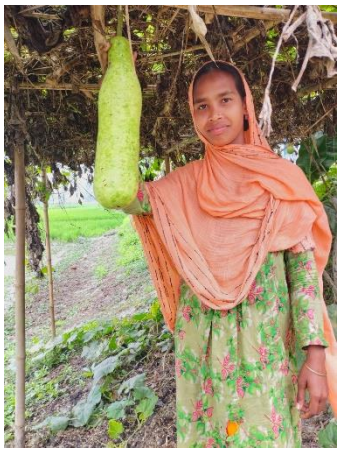
Life in flood-prone areas is far from easy, and Hamela Begum's story exemplifies the challenges those living in such regions face. Hailing from the village of Foluwarchor in Bandaber Union, Rowmari Upazilla, Kurigram district, Hamela Begum has personally experienced the hardships of flooding. With her husband, child, and in-laws, she endured difficult times during floods, compounded by the fact that her husband worked as a daily laborer and struggled to earn income. Their home was frequently inundated, forcing them to seek shelter elsewhere, sometimes with relatives or in overcrowded shelter houses. The conditions in these shelters were unsanitary, and Hamela's young daughter even faced sexual harassment. Access to proper sanitation facilities during floods was a major concern for her family, leading them to use polythene bags and banana leaves for waste disposal, ultimately ending up in the water. However, in 2020, a turning point came into Hamela's life when she received the ECCCP-Flood project's plinth-raising and sanitation interventions. These interventions brought about a dramatic transformation in her life. With the raised plinth, she can cultivate vegetables in her homestead, significantly improving her household income.

The climate-resilient sanitation measures have played a crucial role in empowering Hamela and improving her standard of life. Additionally, the provision of improved sanitation facilities has alleviated the struggles she faced previously. Hamela and her family no longer need to seek shelter elsewhere, as they can now live comfortably in their own home and engage in homestead cultivation.

Case study: 09

"Transforming Lives: Parveen Begum's Resilience Against Flooding"

Parveen Begum, 29-year-old woman, residing in the town of Thikana Bazar in Rajpur Union, Lalmonirhat Sadar Upazila of Lalmonirhat District. Married at 17 to Asaduzzaman, she is a mother of two children, making four members in their household. Her husband's main occupation is agriculture, tending to their farmland, and engaging in land sales. As the sole breadwinner, their livelihood depended solely on his income. However, their lives were harshly impacted by the low-lying nature of their land. Even a slight rainfall would accumulate water in their yard, causing numerous difficulties. During flooding, they were forced to evacuate their home, placing their essential belongings on the bed and seeking refuge with relatives. Parveen Begum recalls, "The implementation of this project, led by the PKSF-affiliated organization Nazir (Notun Jibon Rochi), has been a transformative impact for many individuals in this distressed area." Nazir enlisted Parveen's assistance in raising the plinth of her house, and her active involvement made a significant difference. Today, her home remains resilient against floods, eliminating the need to abandon their residence during such calamities. The project's impact extends beyond flood resilience.



Parveen Begum's determination and collaboration with Nazir have transformed her life and inspired others in the community to embrace resilience against flooding. Parveen now cultivates various vegetables

in her home garden, including gourds, beans, and sweet pumpkins. Regularly attending Nazir's programs, she actively encourages others to join, enabling them to benefit from such initiatives and improve their quality of life during floods. Her journey exemplifies how individuals can thrive amidst environmental challenges, turning adversity into an opportunity for a brighter future.

Case Study: 10

"Harvesting Success: Manjuara Begum's Journey to Resilience"

Manjuara Begum, a resident of Moddhya Khatiyamari village in the Fazlupur union of Phulchhari upazila, Gaibandha district, has emerged as a symbol of resilience and success. With five members in the family, their lives were heavily impacted by the flood. The destruction of their crops led to financial strain, forcing them to purchase rice throughout the year. The situation worsened as their children suffered from malnutrition, and providing three meals a day became a challenge. In the face of this crisis, Manjuara received a lifeline through the ECCCP-Flood project. She was provided with climate-resilient rice seeds, specifically 5 kg of BRRI Dhan 52, along with 90 kg of fertilizer (Urea, TSP, MoP, Gypsum, Borax, etc.) for cultivation on their 1 bigha (33 decimal) of land. Through active participation in monthly meetings conducted by the CCAG group and guidance from the field facilitator of Eco-Social Development Organization (ESDO) NGO, she learned effective practices for cultivating climate-resilient rice. Utilizing the knowledge gained from the training, Manjuara achieved a remarkable feat in the Aman season. She harvested 1000 kgs of paddy on her 1 bigha of land, setting a record in Fazlupur Union.

She accomplished with a cultivation cost of only 2000 taka, support by the ECCCP-Flood project in providing fertilizer and rice seeds. The abundant rice obtained now fulfills her family's food requirements for the entire year. Encouraged by this success, Manjuara made plans to save money. She established a small dairy farm with her savings, gradually expanding her economic opportunities by purchasing additional cropland. Her inspiring journey has garnered attention from the local community, with many seeking her advice on achieving a bumper crop of paddy. Manjuara gladly shares her knowledge and experiences, assisting others in their agricultural endeavors. Manjuara Begum takes pride in her remarkable achievements as a woman who overcame adversity, transforming her family's fortunes through climate-resilient agriculture.

Case Study: 11

"From Struggle to Success: Khodeja Begum's Empowering Journey"

Khodeja Begum resides in the village of West Jigabari, located in the Erendabari union of the Gaibandha district. Her family faced numerous challenges, including her husband's illness, that required significant medical expenses. The recurring floods and river erosion further worsened their situation, resulting in the loss of cultivated crops and farmland. Struggling with economic instability, Khodeja endured malnutrition and the loss of their poultry due to the floods. However, a ray of hope appeared in Khodeja's life through the ECCCP-Flood Project.

As a member of the CCAG group, she received valuable support, including plinth raising for her homestead, a slatted house for goat rearing, and climate-resilient rice and wheat seeds. These interventions played an important role in restoring financial stability. The slatted house for goat rearing proved to be the most beneficial intervention. Before having the slatted house, Khodeja had only 8 goats. However, after its construction, the number of goats increased to 22. Over the past two years, she sold goats and earned Tk. 35,000. She, currently, owns 13 goats and utilized the funds from their sale to purchase a cow with a market value of around Tk. 1 lakh.

Additionally, Khodeja utilized the proceeds to purchase one bigha (0.33 decimals) of farmland, where she successfully cultivated maize. This year, her cropland yielded approximately 1600 kgs of maize. Through the ECCCP-Flood Project, Khodeja Begum, as a woman, she has brought back become a beacon of hope for her family. She adopted sustainable farming practices by using goat dung as fertilizer, allowing her to grow vegetables in her courtyard. The abundant vegetable yield not only fulfills her nutritional needs but also generates extra income through sales in the market. Khodeja's success in overcoming adversity and transforming her family's financial situation has inspired her neighbors. They seek her advice on goat rearing, and she willingly shares the knowledge gained from the CCAG group, motivating others to pursue similar opportunities.

Case Study: 12

"Aleya's Path to Use of Improved Sanitation and Good Health"

The ECCCP-Flood project has provided support for plinth raising and the construction of sanitary latrines to improve sanitation conditions. Aleya, a resident of the Dighirpar area in the Dimla Upazilla of Nilphamari district, is among the beneficiaries in the Dighirpar village. Through the CCAG training and meetings, Aleya has acquired valuable knowledge. She now understands how to use and maintain flood-resilient latrines. As a result, her sanitary latrine remains unaffected during inundation and remains resilient to floods. Due to this resilience, Aleya's family can use the latrine easily, even during flooding.

Furthermore, Aleya has gained knowledge from the CCAG regarding the importance of hygienic toilet practices. The toilets include nearby handwashing facilities, soap, a water container, and a soap case. All members of Aleya's family consistently wash their hands after using the toilet. Moreover, Aleya takes the initiative to educate her neighbors on the proper maintenance and use of the latrine. As a result of these

improvements, Aleya and her family no longer practice open defecation or use floodwater for sanitation purposes. By adopting hygienic toilet practices, Aleya and her family have significantly reduced their vulnerability to waterborne diseases. Recognizing the connection between good health and overall well-being, Aleya has realized the positive impact this has on her family's income and overall happiness.

Case Study: 13

"Empowering Resilience: Ashia Begum's Journey to Self-Sufficiency"

Ashia Begum resides in the village of Kaliganj, under the Dimla Upazilla in the Nilphamari district. She is an independent individual who financially supports her family alongside her spouse. Ashia describes her journey towards progress and becoming a self-sufficient woman. Initially, her family faced unfavorable circumstances. Her husband works as a farmer, but they have limited arable land for cultivation, merely possessing 33 decimal lands on which they grow various crops. However, their crops would get destroyed by floods every year. At that time, their financial situation was not prosperous, leading to great suffering. Ashia's spouse, in particular, suffered from various waterborne diseases, resulting in significant medical expenses—however, a sudden turn of events brought hope into their lives. Ashia was chosen as a beneficiary for the ECCCP-Flood project. She received a raised house and became a member of a flood-resilient tube well. The flood-resilient tubewell was a life-altering asset for Ashia and her family's financial situation. This tube well provides clean drinking water, free from iron and arsenic contamination. As a result, her family is now protected from several waterborne illnesses, making healthcare more affordable than before. Her husband's health has improved, allowing him to work diligently in the fields.

Ashia actively engages in homestead gardening, which helps fulfill their nutritional needs. Additionally, Ashia has increased her income gradually by raising goats in the raised house and selling them. This year, they also mortgaged 3 bighas of land. Ashia highly appreciates the CCAG meetings and training, recognizing their significant contribution to her current situation. She is grateful to the project for its transformative impact on her life and her family's well-being.

Appendix 8: Questions for the Description of Indicators

Indicator name: Improved capacity of CCAGs related to knowledge management and information dissemination

Sl. No.	Questions
01	Are you a member of any community-based climate change adaptation group or any group that discuss about climate change, adaptation, etc.? (after 2020)
02	If yes, do you regularly attend the meeting/courtyard meeting in a community-based climate change related group (after 2020)?
03	If yes, do you share the learning outcome what you learned from the climate change group, with the children and other family members?
04	If yes, do you disseminate the learning outcomes to the community people or relatives? (after 2020)?
05	Does any member of climate-related group discuss the learning with you (respondents)?

Indicator Name: Impact of the meetings on the decision-making process

Sl. No.	Questions
1.	If you engage in any community group, do you participate with the community people in taking any decision?
2.	If you engage in any community group, did you participate in taking decisions regarding preparing an adaptation action plan?
3.	Did you take the decision to practice adaptive livelihood after participating in any community group?
4.	Did you take the decision to practice IGA (e.g., homestead gardening) or adopt an alternative livelihood after participating in any community group?
5.	Could you (female)/your female member of your HH face any restrictions to earn money? [Code: 1=Yes, 0=No]
6.	Could you (female)/your female member of your HH take decision solely to spend money earned by herself? [Code: 1=Yes, 0=No]
7.	Could you (female)/your female member of your HH take decision for children's education? [Code: 1=Yes, 0=No]
8.	Could you (female)/your female member of your HH participate to make decision about the marriage of daughter/son? [Code: 1=Yes, 0=No]
9.	Could you (female)/your female member of your HH take decision for purchasing of assets and properties? [Code: 1=Yes, 0=No]

Indicator Name: Use of the information from the trainings and workshops in decision-making and planning at household or policy level

Sl. No.	Questions
01	Family members receive any training on the following options through this project

Indicator Name: Percentage of vulnerability assessment and adaptation plans used in decision making and planning by households or IEs

Sl. No.	Questions
01	vulnerability assessment and local level adaptation plan facilitated by CCAG
02.	Learning from vulnerability assessment and adaptation plans used in decision making and planning in HH or community level

Indicator Name: Community Awareness Questions

Sl. No.	Questions
1	Do you have heard about on weather? [Code: 1=Yes, 0=No]
2	Do you hear about climate? [Code: 1=Yes, 0=No]
3	Do you hear about adaptation? [Code: 1=Yes, 0=No]
4	Did you notice any change in the occurrence of flood? [Code: 1=Yes, 0=No]
5	Did you or any member of your HH become member of any group or committee? [Code: 1=Yes, 0=No]
6	Do you or your family members attend the meeting of CCAG regularly after 2020? [Code: 1=Yes, 0=No]
7	Did any member of your HH attend any climate related group after 2020? [Code: 1=Yes, 0=No]
9	Has he/she received any leadership training? [Code: 1=Yes, 0=No]
10	Do you hear about flood preparedness? [Code: 1=Yes, 0=No]
11	Did you know about climate resilient crop cultivation after 2020? [Code: 1=Yes, 0=No]
12	Did you know about modern livelihood technologies like slatted house after 2020? [Code: 1=Yes, 0=No]
13	Did you receive any training on resilient farming after 2020? [Code: 1=Yes, 0=No]
14	Do you have any access to local agriculture or livestock related organization? [Code: 1=Yes, 0=No]
15	Was your homestead raised above flood level which is not inundated during flood? [Code: 1=Yes, 0=No]
16	Did you or any member of your HH practice IGA like homestead gardening? [Code: 1=Yes, 0=No]
17	Did you know about climate resilient tube-well after 2020? [Code: 1=Yes, 0=No]
18	Did you have an access to the safe water source round the year after 2020? [Code: 1=Yes, 0=No]
19	Did you know about the benefit of using climate resilient sanitary latrine after 2020? [Code: 1=Yes, 0=No]
20	Did your family members use the resilient toilet after 2020? [Code: 1=Yes, 0=No]
21	Did you wash your hand before meal and after using toilet after 2020? [Code: 1=Yes, 0=No]
22	Did you disseminate the climate change adaptation related knowledge to the community? [Code: 1=Yes, 0=No]

Indicator name: Increased Capacity of Households to Apply Climate Change Adaptation Solutions

Sl. No.	Questions
01	Was the plinth height of your household higher than the average flood level in your area?
02.	Did you know about climate resilient crop cultivation after 2020?
03.	Did you receive any training on resilient farming after 2020?
04.	Did you cultivate any flood resilient rice varieties after 2020?
05.	Did you cultivate any short duration any disease resistant wheat varieties after 2020?
06.	Did you cultivate vegetables in sand bar after 2020?
07.	Did you have slatted house for goat/sheep rearing after 2020?
08.	Did you have an access to use climate resilient tube-well after 2020?
09.	Did you have an access to use climate resilient sanitary latrine after 2020?

Appendix 9: Terms of Reference (ToR)

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Terms of References (ToR)

Interim Independent Evaluation of Extended Community Climate Change Project-Flood (ECCCP-Flood) of Palli Karma-Sahayak Foundation (PKSF)

Project Title	**Extended Community Climate Change Project-Flood (ECCCP-Flood)**
Project Duration	4 Years (April, 2020-March 2024)
Development Partner	Green Climate Fund (GCF)
Accredited Entity	Palli Karma-Sahayak Foundation (PKSF)

1.0 Introduction

The Palli Karma-Sahayak Foundation (PKSF) was established by the Government of Bangladesh in 1990 and registered under the Companies Act 1913/1994 as a 'not for profit' organization with the vision: *A Bangladesh where poverty has been eradicated; ruling development and governance paradigm is inclusive, people-centered, equitable and sustainable; and all citizens live a healthy, appropriately educated and empowered and humanly dignified life*. Since its inception, PKSF has been relentlessly working to create a favorable environment for poor people by focusing on a holistic development approach, including climate change adaptation and mitigation through efficient implementation of various programs and projects. The legal structure of PKSF allows flexibility and authority to undertake projects/programs in a dynamic environment, implementing them throughout the country and managing its affairs as an independent organization. It has been assisting the poor and ultra-poor people through different non-government organizations (NGOs) (known as Partner Organizations, POs) for the last 30 years. PKSF also works with semi-government and government organizations, voluntary agencies; local government institutions; groups, and individuals with different financial instruments such as grants, appropriate credit, savings, and insurance. In addition, PKSF assists its POs in their institutional development. As a result, many countries and organizations follow standards, guidelines, and modalities developed by PKSF. PKSF has diversified its focus on non-credit programs in the last few years, such as training, education, health, awareness building, nutrition, direct employment linkages, climate change, and environment, marketing, and value chain development. PKSF supports intending to provide all-inclusive services for the continuous betterment of the poor and ultra-poor.

The Green Climate Fund (GCF) was set up by the United Nations Framework Convention on Climate Change (UNFCCC) in 2010. The Fund aims to support a paradigm shift in the global response to climate change. It allocates its resources to low-emission and climate-resilient projects and programmes in developing countries. The Fund pays particular attention to the needs of societies that are highly vulnerable to the effects of climate change. PKSF was accredited to GCF in 2017 and since then working with GCF to get access to climate finance.

PKSF received a grant finance from the Green Climate Fund (GCF) and has been implementing the "Extended Community Climate Change Project- Flood (ECCCP-Flood)".

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2.0 Background of the Project:

Due to the geographical location of the country, Bangladesh faces water-induced disasters like floods every year. Consequently, the people living in low-lying areas have been suffering from these events over the years. Their homesteads suffer regular inundation during a normal flood. Their livelihoods depend on subsistence agriculture and agriculture wage labor which also are very sensitive to flooding. They lose their crops almost every alternative year. The women in the *char* areas are particularly vulnerable to floods because they have to look after children and old members of the households in addition to collecting drinking water, cooking food, looking after poultry and livestock, and other household activities. Adolescent girls and women are also vulnerable to sexual harassment during a flood because they have to stay on the embankments or flood shelters. These poor communities always struggle to meet their daily necessary commodities and have the least capacity to address additional threats.

The project aims 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 is being implemented in 5 flood vulnerable districts namely Nilphamari, Lalmonirhat, Kurigram, Gaibandha, and Jamalpur.

- The project will directly impact 90,000 (20,000 HHs) selected vulnerable project participants in the selected 5 districts with a high level of flood risks, high level of poverty, water scarcity, food insecurity, etc.
- The project will raise plinth of 45,000 vulnerable people (10,000 households) in a cluster basis with alluvial sand above flood level. The project will also facilitate the plinth dwellers to cultivate vegetables and plant trees around the year on the raised plinth.
- The project will install 500 flood resilient shallow tube wells for safe drinking water and 2810 sanitary latrines for hygiene. Necessary awareness sessions on health and hygiene will be conducted in the monthly group meetings of Climate Change Adaptation Groups (CCAGs).
- The project will also enhance the resilience of livelihoods of 90,000 (10000HHs) participants against flood.

3.0 Objective of the Project

Main objective: The objective 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.

3.1 Specific objectives:

1. To strengthen the capacity of institutions and community group on addressing climate change;
2. To protect homestead from adverse effect of flood;
3. To increase access to safe water and sanitation through installation of resilient utilities.
4. To promote climate adaptive livelihoods;

3.2 Outcomes of the Project:

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

3.3 Major Activities:

1. Raising homestead plinths in clusters
2. reconstruction of resilient houses on raised plinths
3. construction of climate-resilient sanitary latrines
4. installation of tube wells
5. Providing support to rearing goats/sheep in slatted houses
6. Cultivation of flood-tolerant crops

4.0 Objective of Interim Evaluation

The **overall objective** of the Interim evaluation is to measure the ECCCP-Flood project performance by identifying the achievements against the intended outcomes and outputs of the project as set in the Result Framework. The specific objectives of the Interim evaluation are given below:

1. To measure the change and achievement of the project towards the goal through the specified outcome and output level indicators in terms of project and GCF logical framework and compare the findings with the value of the baseline survey;
2. To assess the evaluation parameters such as relevance, efficiency, effectiveness, lessons learned, impact, and sustainability of the project interventions against project outcomes and outputs;
3. To assess the performance of the project in relation to GCF investment criteria such as paradigm shift potential, contribution to the creation of an enabling environment, potential for knowledge and learning, sustainable development potential and meeting needs of the recipients and country ownership;
4. To identify key achievements, best practices, replicability, scalability, challenges, , as well as intended and unintended results (both negative and positive);
5. To provide recommendations with clear and actionable ways forwards for support sustainable benefits for the target communities (if any deviation is noticed comparing the project result framework);

Note: The consultant/firm will strictly follow all the indicators mentioned in the logical framework (Annex-1).

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5.0 Scope and focus of the interim evaluation

The interim independent evaluation would focus on adaptation to floods including project participant's changing status in terms of income, economic activities, livelihoods, food security, health and nutrition, water, sanitation and hygiene knowledge, women security to climate change and community participation of the target project participants. Besides, the evaluation results will improve the issues of women empowerment considering the aspects of control over resources, community participants, and decision-making ability in every sphere including individual, family and community levels. The specific scopes of this study are listed below:

- To assess the increased institutional capacity and awareness of local institutions and communities.
- To assess the coping capacity of the targeted households in terms of knowledge management, utilization, practice and dissemination against existing extreme climate change events like flood to apply climate change adaptation solutions.
- To measure the household's increased income, nutrition uptake, food security of the targeted project participants through the climate resilient livelihood;
- To identify the prevalence of health and hygiene practices at individual, access to safe drinking water at the households and community level;
- Identify gaps in the baseline data, and develop methods to fill these gaps in consultation with project management and relevant national stakeholders;

6.0 Key Evaluation Questions

The key questions that need to be answered by this assignment include the following GCF Investment criteria.

Table 1 – Evaluation Questions

SL no.	Evaluation Criteria	Evaluation Questions	Indicators	Sources of Information
2	Increase the resilience of infrastructure	How effectively has the project increased the resilience of infrastructure and the built environment to climate change?	Raised Plinth	Project data
			Reconstruction of Homestead	Project data
			Reduced economic losses in animal husbandry	Survey Questionnaire
			Year-round vegetables and fruits cultivation on the raised plinth	Survey Questionnaire
			Income	Survey Questionnaire
			Nutrition uptake	Survey Questionnaire
			Reduction of nutrition sickness	Survey Questionnaire
			Women's security	Survey Questionnaire

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Sl. no.	Evaluation Criteria	Evaluation Questions	Indicators	Sources of Information
			Number and value of physical assets (Homestead, tube well, Sanitary latrine)	Project data
3	Increase resilience of livelihood	To what extent has the project increased resilience and enhanced the livelihoods of the most vulnerable people in its targeted area?	Loss of lives	Survey Questionnaire
			Loss of economic assets	Survey Questionnaire
			Household income	Survey Questionnaire
			Goat/sheep rearing in slatted houses	Survey Questionnaire
			Increase in crop production	Survey Questionnaire
			Cultivation of flood tolerant rice crops	Survey Questionnaire
			Cultivation of short duration and disease tollerant wheat varieties	Survey Questionnaire
			Cultivation of vegetables in the sand bars	Survey Questionnaire
4	Increase resilience of health and well-being, food and water security	To what extent has the project increased resilience of health and well-being, and food and water security?	Tube -well Installation	Project data
			Tube -well installation ensuring national standard	Survey Questionnaire
			Access to reliable and safe water supply despite climate shocks and stresses (gender disaggregated)	Survey Questionnaire
			Water-borne diseases	Survey Questionnaire
			Construction of Sanitary latrines	Project data
			Access to Sanitation (gender disaggregated)	Survey Questionnaire
			Health and Hygiene practices	Survey Questionnaire, FGD
			Adoption of diversified, climate resilient livelihood options (including agriculture, goat/sheep rearing, etc.)	Survey Questionnaire, project data
			Food secure households (in areas/periods at risk of climate change impacts)	Survey Questionnaire
5	Preparation and dissemination of knowledge	How effectively has the project strengthened awareness of climate threats and	Formation of Climate Change Adaptation Groups (CCAGs)	Project data
			Capacity of Climate Change Adaptation Groups (CCAGs)	Project data FGD, KII

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Sl. no.	Evaluation Criteria	Evalnation Questions	Indicators	Sources of Information
		risk-reduction processes?	knowledge management and information dissemination	FGD, KII
			Level of impact of the meetings on the decision-making process	FGD, KII
			Preparation of vulnerability assessment and adaptation plan	Survey Questionnaire, FGD
			Percentage of vulnerability assessment and adaptation plans used in decision making and planning by households or IEs	Survey Questionnaire
			Training and Seminar condeuted	Project data
			Use of the information from the trainings and workshops	Survey Questionnaire, KII, FGD
			Quarterly newsletter published	Project data
			Number of workshops organized	Project data
			Lessons learnt published	Project data
			Utilization of the knowledge from the knowledge products (IE and beneficiaries)	FGD, KII
			Capacity of NGOs	KII
			Capacity of household to apply climate change adaptation solutions	FGD
6	Institutional and regulatory systems for climate-responsive planning and development	To what extent has the project strengthened institutional and regulatory systems for climate-responsive planning and development?	Technologies and innovative solutions (Flood-tolerant rice varieties, Short duration and disease protective wheat variety, Sand bar vegetable cultivation, Slatted housing for goat/sheep rearing, Flood resilient tube wells, Flood resilient sanitary latrine)	Project data

SL no.	Evaluation Criteria	Evaluation Questions	Indicators	Sources of Information
			Institutional and regulatory systems (Implementation of 2 plans by selected Institutions to address climate change such as establishing focal persons and recruiting the specialized staff on climate change)	Project data
7	Social and Women Empowerment	To what extent are female beneficiaries satisfied with the project's gender equality results?	Decisions taken by women	FGD, Questionnaire
			Women's participation in social activities	FGD, Questionnaire
			Women involved in employment and IGAs	FGD, Questionnaire
			Actively engaged in project activities	FGD, Questionnaire
			Wage	FGD, Questionnaire

7.0 Methodology

The interim evaluation should adopt a mixed methods approach, integrating quantitative and qualitative methods to achieve the evaluation objectives. The consultant/consultancy firm will propose a detailed methodology that allows for multi-stakeholder involvement and meaningful participation of different stakeholders and communities. The proposed methods should allow for assessing the extent to which the project contributed to the changes observed. It is expected that the evaluation will be conducted by taking into consideration the climate vulnerability of the ultra-poor people regarding the gathering of data from project beneficiaries (treatment group), control group and other relevant stakeholders.

The Interim Independent evaluation team will review all relevant sources of information including documents prepared during the preparation phase of the project, the project document including Annual Performance Reports, Quarterly Progress Reports, PKSF Environmental & Social Framework, and any other materials that the team considers useful for this evidence-based review. The Interim Evaluation report should describe the full evaluation approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses of the methods and approach of the review. Limitations include, among others: language barriers, inaccessible project sites, issues with access to data or verification of data sources, issues with availability of interviewees, methodological limitations to collecting more extensive or more representative qualitative or quantitative evaluation data, deviations from planned data collection and analysis further identify the efforts made to mitigate the limitations. The consultant/firm can propose a better methodology than this ToR if they can justify appropriateness, e.g. suggesting a modified sample size, capturing intersectional vulnerable group, its strengths and limitation, etc.

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7.1 Geographic Location of the Assessment: The project is implemented in 5 flood-vulnerable districts namely Nilphamari, Lalmonirhat, Kurigram, Gaibandha, and Jamalpur. Expectedly, the evaluation of the project will be conducted in those districts. It is worth noting that, among the project areas, the consultant/consultancy firms will consider the survey area and sample size that was already determined in the baseline survey.

Table 2- Project Area

Sl. #	District	Upazila	Unions
1	Nilphamari	Dimla	Tepakhoribari
			Khogakhoribari
			Poschim Chatnai
2	Jamalpur	Shorishabari	Satpowa
			Pogoldigha
		Madarganj	Balijuri
			Charpakerdha
		Melandaha	Nayanagar
			Ghosherpara
		Islampur	Goalarchar
			Patharchi
			Belgacha
3	Gaibandha	Fulchari	Erendabari
			Fazlupur
			Udakhali
		Shaghata	Shaghata
			Vator Khali
4	Kurigram	Chilmari	Chilmari
			Romna
			Noyerhat
		Chor Rajibpur	Kodalkati
		Rowmari	02 no. Shoilmari
			03 no Bondober
			04 no. Rowmari
5	Lalmonirhat	Lalmonirhat Sadar	Mogholhat
			Kulaghat
			Khuniagach
			Rajpur

7.2 Development of an evaluation approach

7.2.1 Study Design

The consulting firm will have to follow the determined method as in the baseline survey in terms of qualitative and quantitative approaches. The implementation plan will include the

overall interim evaluation process, timeline with a detailed calendar of key activities and milestones, supervisor and enumerator training manual/guidance, sampling approach and methods, data collection tools, validation (data quality assurance) and data analysis plan showing how each question will be analyzed from the data collected. It is recommended that the overall methodology closely follow the baseline to enable comparisons, but should ensure that any limitations with the baseline methodology are addressed by providing a revised approach with a clear justification.

7.2.2 Sampling strategy:

Likewise baseline survey, the consultant will follow a multistage cluster sampling approach where households in the selected villages under the assigned project union will be the last stage. The study will cover both control (non-intervention) and treatment (intervention) groups. Control groups for the interim impacts will measure the project impact perfectly. The interim evaluation will be conducted on the determined sapmle size /respondents of the baseline survey for both treatment and control groups which included the distribution of the sample size according to the different intervention areas. Like baseline, a total of 10 unions of 05 sub-districts of 05 districts will be targeted for this interim evaluation. Overall, the interim evaluation will be conducted for 990 beneficiaries (660 beneficiaries for the treatment group and 330 beneficiaries for the control group) following the baseline selected sample size.

The details of the sample distribution according to ToR are presented in the following sections:

Table-3 Distribution of sample size according to different interventions in treatment area

Districts / Interventions	Kurigram	Lalmonirhat	Gaibandha	Nilphamari	Jamalpur	Total
Plinth raising	50	20	30	20	60	180
Water and Sanitation	20	5	5	10	20	60
Livelihood Operations	50	20	30	20	60	180
Agricultural Operations	20	30	50	30	50	180
Total:	140	75	115	80	190	600
Attrition (10%)	14	7	12	8	19	60
Total Treatment Group	154	82	127	88	209	660

Table 4- Distribution of sample size according to different interventions in control area

Districts / Interventions	Kurigram	Lalmonirhat	Gaibandah	Nilphamari	Jamalpur	Total
Plinth raising	25	10	15	10	30	90
Water and	10	3	2	5	10	30

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Sanitation						
Livelihood Operations	25	10	15	10	30	90
Agricultural Operations	10	15	25	15	25	90
Total:	**70**	**38**	**57**	**40**	**95**	**300**
Attrition (10%)	7	4	5	4	10	30
Total Control Group	**77**	**42**	**62**	**44**	**105**	**330**

Table 5- Distribution of sample beneficiaries by district, upazila, union, village and project interventions

District	Upazila	Unions	Village	Plinth Raising	Livelihood Intervention	Agricultural option	Water and Sanitation	Total
Nilphamari	Dimla	Tenakhoribari	Dighirpar-6	4	3	3	2	12
			Tatipara	3	3	3	2	11
		Poschim Chatnai	Kaligonj	16	10	7	5	38
			Doholpara	6	10	9	2	27
Sub-Total	**1**	**2**	**4**	**29**	**26**	**22**	**11**	**88**
Jamalpur	Ismalampur	Belgacha	Sindurtali	18	18	0	4	40
			Anandapur	26	0	25	6	57
		Kulkandi	Jigatola Bangla Bazar	27	6	22	7	62
			Jigatola Modopara	22	13	9	6	50
Sub-Total	**1**	**2**	**4**	**93**	**37**	**56**	**23**	**209**
Gaibandha	Fulchari	Erendabari	Char Chomohon Moddho para	6	4	5	3	18
			Poschim Jigabari	8	5	4	2	19
		Fazlupur	Moddho Khatiyamari	18	16	17	7	58
			Poschim Khatiyamari	11	7	10	4	32
Sub-Total	**1**	**2**	**4**	**43**	**32**	**36**	**16**	**127**
Kurigram	Roumari	Bondober	Char Khanjanmara	24	11	8	4	47
			Foluwar char	39	21	18	9	87
		Sholmari	Sabuj Para	3	4	3	0	10
			Taluwar Char	3	3	2	2	10
Sub-Total	**1**	**2**	**4**	**69**	**39**	**31**	**15**	**154**
Lalmonirhat	Lalmonirhat Sadar	Khuniyagach	Talpotti	4	5	5	1	15

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District	Upazila	Unions	Village	Plinth Raising	Livelihood Intervention	Agricultural option	Water and Sanitation	Total
			Kuthipara	8	6	11	4	29
		Rajpur	Thikanar Bazar	3	3	7	0	13
			Chinatuly Govt. Primary School	5	6	12	2	25
Sub-Total	1	2	4	20	20	35	7	82
Grand-Total	5	10	20	254	154	180	72	660

Table 6- Distribution of control respondents by district, upazila, union and villages

District	Upazila	Union	Village	Plinth Raising	Livelihood Intervention	Agricultural option	Water and Sanitation	Total
Nilphamari	Dimla	Dimla Sadar	Monospara	2	2	2	1	7
		Khoribari	Dokkhin khoribari	2	2	2	1	7
		Balapara Union-2	Thakurganj	8	5	4	3	20
		1 no. Pochin Sadnai	Purba Sadnai	3	5	5	1	14
		Khoka Khoribari	Pugolpara					
Sub-Total	1	2	4	15	14	13	6	48
Jamalpur	Islampur	Tilatuli	Nondona para	9	9	0	2	20
		Tilatuli	taluwarcor	13	0	12	3	28
		Tilatuli 4	Ulliapara	13	3	9	4	29
		Jelagacha	Projapoti	11	7	5	3	26
		7 veri	Kasharitoba					
Sub-Total	1	2	4	46	19	26	12	103
Gaibandha	Fulchari	Kunchipara Union-5	Rosulpur	3	2	3	2	10
		Kunchipara Union-5	Fulchari	4	2	2	1	9
		Gonjaria Union-6	Baushi Gojaria	8	7	8	3	26
		Gonjaria Union-6	Village-12	6	4	5	2	17
Sub-Total	1	2	4	21	15	18	8	62
Kurigram	Roumari	Datvanga Union-7	Puran Tapur Chor	12	6	3	2	23
		Bondho Bair Union-8	Borodhontola	19	9	8	5	41
		Jadurcor	Jadurcor	2	2	2	0	6

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District	Upazila	Union	Village	Plinth Raising	Livelihood Intervention	Agricultural option	Water and Sanitation	Total
		Sholemari	kirtimani	2	2	1	1	6
				35	**19**	**14**	**8**	**76**
Lalmonirhat	Lalmonirhat Sadar	Barabari Union-9	Atbil dorponskor	2	2	3	1	8
		Harti	Hiramanik	4	3	5	2	14
		Gokunda Union-10	Puraton tista	2	2	3	0	7
		1 no. Rangavali	Rangavali	2	3	6	1	12
Sub-Total	**1**	**2**	**4**	**10**	**10**	**17**	**3**	**41**
Grand-Total	**5**	**10**	**20**	**127**	**77**	**88**	**37**	**330**

7.2.3 Data collection, procedure and instruments

The consultant has to adopt appropriate data collection tools that should be done through face-to-face interviews using hard/soft copies of the questionnaire. Since the questionnaire will be relatively large to capture the wide range of indicators according to the project log-frame, therefore, an online-based platform is less preferred as the necessities of continuous back and forth as well as interview management during data collection is difficult in the online platform. The consultant will propose the quantitative and qualitative data collection methods. In addition, baseline data collection tools will be considered.

7.2.4 Data Quality Management

To ensure appropriate quality of collected data/information need to be maintained in the various steps of the study. The proposal will describe the proper quality control for collecting authentic data. Appropriate monitoring mechanisms also need to follow by the firm and that should be detailed in the proposal. In addition, PKSF will do field monitoring with their own resources and support from their POs/IEs.

7.2.5 Data Analysis:

The proposal should describe the procedures used to analyze the collected data to answer the evaluation questions. It should detail the various steps and stages of analysis that were carried out, including the steps to confirm the accuracy of data and the results.

The consulting firm is suggested to use well-accepted impact assessment techniques such as Difference in Difference (DiD), Propensity Score Matching (PSM), and Average Treatment Affect on the Treated (ATT) to measure the impact of the ECCCP-FLOOD project on different outcome indicators. Besides these impact assessment techniques, the consultant may use other qualitative tools (such as Quality Impact Assessment Project-QUIP) to understand the mechanism of impact. In addition, they will adopt statistical techniques like t-test and mean difference tests to test the hypothesis. The consulting firm also may use various regression model to determine factors contributing to the outcomes. Furthermore, potential weaknesses in the data analysis and gaps or limitations of the data should be discussed, including their possible influence on the way findings may be interpreted and conclusions are drawn.

8.0 Evaluation Planning Matrix

The consultant will prepare a Key Evaluation Questions matrix based on the objective, key questions and methods to consider study design. The Key Evaluation Questions matrix should identify more-detailed areas of focus for each question, aspects to consider within each focus area, and methods for investigation. The report also should discuss the appropriateness of the analysis to the evaluation questions. This Interim Evaluation Design Matrix must be fully completed/amended by the consultant and included in the evaluation inception report.

Table 7- Evaluation Planning Matrix

Specific Objectives	Evaluation questions	Indicators	Source of information	Method of Data Collection	Data Analysis Methods

9.0 Task/Activities

- Conduct an inception meeting for the assignment and prepare an inception report with detailed methodology (both quantitative and qualitative), evaluation matrix, timeline, team plan, and draft data collection tools (including consent and assent form), analysis plan, training plan for enumerators, sampling plan, budget plan and outline of the final report;
- Collect and review of existing project documents, such as result framework, baseline report, and other related documents from the project office as a part of the desk review process;
- Design the evaluation in consultation with PMU in the inception meeting;
- Based on the comments received by PMU on the inception report, revise the evaluation design, methods or tools accordingly.
- Define a detailed approach and methodology for gathering and analysing data:
    - Develop data collection tools, pre-test, and finalize in consultation with the ECCCP-Flood project personnel;
    - Prepare the survey manual, and fieldwork protocols according to agreed methodologies;
    - Conduct training of the data enumerators and supervisors;
    - Collect data including cleaning, validation, and entry;
    - Develop data analysis and management plan;
    - Data analysis.
- Prepare draft report and share with PMU for feedback;
- Incorporate the feedback received from the project personnel and project partners;
- Give a presentation to management on the final draft Report;
- Finalize and submit the project interim evaluation report and the collected raw data to PMU.

The following tasks for the consultant will need to focus on the above-mentioned aspects, however, are not limited to them. Other associated tasks and subtasks may and should be undertaken based on discussion and need.

10.0 Deliverables and Timing

Total duration of the contract will be 120 calender days.

10.1 Key Deliverables of the Evaluation

- An inception report with the detailed work plan and methodologies shall be submitted after the signature of the contract for review and approval by the PMU (both soft and hard copy);
- All the data collection tools/instruments developed for conducting the interviews/questionnaire/FGD or other as a process of the evaluation;
- Training report for the enumerator and supervisor
- Raw data with a cleaned dataset of quantitative survey either in Excel or SPSS format;
- Hard copy of filled-in questionnaire and checklists/guidelines;
- Analysis table for all the variables of the questionnaire and checklists/guidelines;
- Transcripts of qualitative data;
- Draft report for receiving feedback from project personnel;
- Final report of the evaluation. [Please follow the Reporting Outline at Section 11.0]

The consultant/firm is responsible for submitting the following deliverables to the ECCCP-Flood project of PKSF at the agreed work plan.

Table 8- Deliverables and Timing

Sl.	Activities	Deliverables of Activities	Nature of Deliverables	Time of submission
1.	Submit the Draft inception report, draft Questionnaire, interview checklist/guideline (IDI, KII, FGD), and the checklist of observational and case studies, and hold an Inception meeting at the ECCCP-Flood project of PKSF	The inception report should include literature review, detailed work plan, a description of the methodology with an appropriate sampling plan, a detailed questionnaire/guideline, and case study method.	Four hard copies and an electronic copy.	25 days after signing the contract
2.	Submit of Final inception report, Final Questionnaire, Questionnaire, interview	Final Inception Report, Final data collection checklists, Recruitment lists.	One hard copy and an electronic copy	50 days after signing the contract

Sl.	Activities	Deliverables of Activities	Nature of Deliverables	Time of submission
	checklist/guideline (IDI, KII, FGD), and the checklist of observational and case studies,			
3.	Draft Interim Evaluation Report, Dissemination seminar/presentation on the findings of the draft Interim Evaluation report	Detail draft report of the interim evaluation as per reporting outlines	Four hard copies and an electronic copy	85 days after contract signing
4.	Final Interim Evaluation Report	a) Final report of the interim evaluation b) Cleaned HH & community survey data c) Qualitative interview transcripts & checklist	Five hard copies and an electronic copy computerized dataset, transcripts (MS Word, Excel, SPSS, STATA) Electronic copy (Word, Excel, SPSS, STATA, etc.)	120 days after contract signing

11.0 Reporting Outline:

- Acknowledgement
- Table of contents
- Executive summary
- Introduction/Background
- Justification and rationale
- Objectives of the study
- Details of methodology
- Limitations
- Findings
- Discussion
- GCF Investment Criteria

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পল্লী কর্ম-সহায়ক ফাউন্ডেশন (পিকেএসএফ)

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- Lessons learned
- Conclusion and Recommendation
- Annexe

12.0 Language:

It is mentionable that the reports are to be written in English using MS word compatible software, font Times New Roman and size 12..

13.0 Qualification of the Firm/Institution and Team composition for the Study:

The interested firm/consultant must meet the following minimum criteria for shortlisting:

- Minimum 10 years' experience in performing survey/ assessment/ review/ evaluation and sound understanding of survey concepts, methodologies, and tools;
- The lead consultant and the relevant members of the team should have an excellent research background and have proven track record in conducting a similar type of assignment;
- Knowledge and experiences on climate change adaptation, livelihood development in vulnerable communities will be given preference;
- Ability to work collaboratively with multiple individuals, groups and team;
- Demonstrable expertise in both quantitative and qualitative data analysis;
- Excellent data interpretation and report writing skills with high quality English;
- Evidence of having undertaken similar assignments.

a) **Team leader:**

Qualification and experience:

- At least Masters' degree in Urban and Rural Planning/Economics/Finance/Development Economics/ Development Studies/Statistics/Agriculture/Climate Change and Disaster Management/ Geography/Environmental Science/Environmental Management/Sociolgy from a recognized national/foreign university. PhD degree will be an added advantage.
- At least 10 years of experience in pro-poor/development/climate change or relevant sector.
- Participated as a team leader in at least 2 similar evaluation/research/survey projects/programs.
- Demonstrated experience conducting baseline/midterm/final evaluation studies for donor-funded projects;
- Clear understanding of research methodologies and experience using a range of research tools and techniques with regard to climate change adaptation;
- Good communication and computer skills;

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b) Sociologist/Social Analyst/Social Scientist

- At least a Master's degree in Sociology/ Anthropology/ Development Studies/ Social Welfare from a recognized university.
- At least 8 years of experience in the area of socio-economic impact, food security, adaptation, capacity development, research/evaluation etc.

c) Statistician and data analyst

- At least a Master's degree in Statistics/Economics/ Anthropology from a recognized academic university. PhD degree will be an added advantage.
- At least 8 years of experience in data management, analysis and reporting for social surveys and impact evaluation.
- Experienced in common data software Excel, SPSS and STATA.
- At least one publication or two technical reports in the related sector or perform data analysis in 3 similar research/survey projects/programs.

14.0 Mode of Payment Method

The payment of the service will be paid as follows:

i) Thirty percent (30%) will be released after submission and acceptance of the inception report, which would include background, objectives, detail work plan, methodology including sampling design, questionnaire, and work plan with Gantt chat.

ii) Thirty percent (30%) will be released after submission and acceptance of the draft interim evaluation report.

iii) The final instalment for forty percent (40%) will be released after submission and acceptance of the final interim evaluation report by PKSF along with data (soft copy).

iv) Government Tax, VAT, etc. as applicable will be deducted at source by PKSF as per NBR (National Board of Revenue, Bangladesh) rules.

15.0 Rights of PKSF

(a) In case of consultant/firm fails to provide service or perform under the terms and conditions of the contract by the agreed delivery dates, PKSF may, after giving the consultant/firm reasonable notice to perform and without prejudice to any other rights or remedies, exercise one or more of the following rights.

- Obtain all or part of the service or output from other sources or consultant/firm, in which event PKSF may hold the consultant/firm responsible for any excess cost occasioned thereby.
- Refuse to accept all or part of the service or output.
- Terminate the contract.

(b) Contract any or all references supplied by the consultant/firm;

(c) The consultant/firm shall not assign this contract or sub-contract any portion of it without the PKSF's prior written consent;

(d) Request additional supporting or supplementary data (from the consultant/firm);
(e) Accept any proposals in whole or part;
(f) Negotiate with the most favorable consultant/firm (s);
(g) PKSF reserves the right to make revisions to this ToR;
(h) PKSF reserves to the right to all aspects of monitoring and supervision of the consultant/firm and other forms of support during the duration of the project;
(i) PKSF reserves the right to reject any or all proposals.

16.0 Ownership

PKSF will reserve the right of all the data and information generated for this study and this data/information must not be used for any other purpose without prior permission of PKSF. The consultant/firm has to handover the complete dataset to PKSF.

Appendix 10: Theory of Change (ToC)

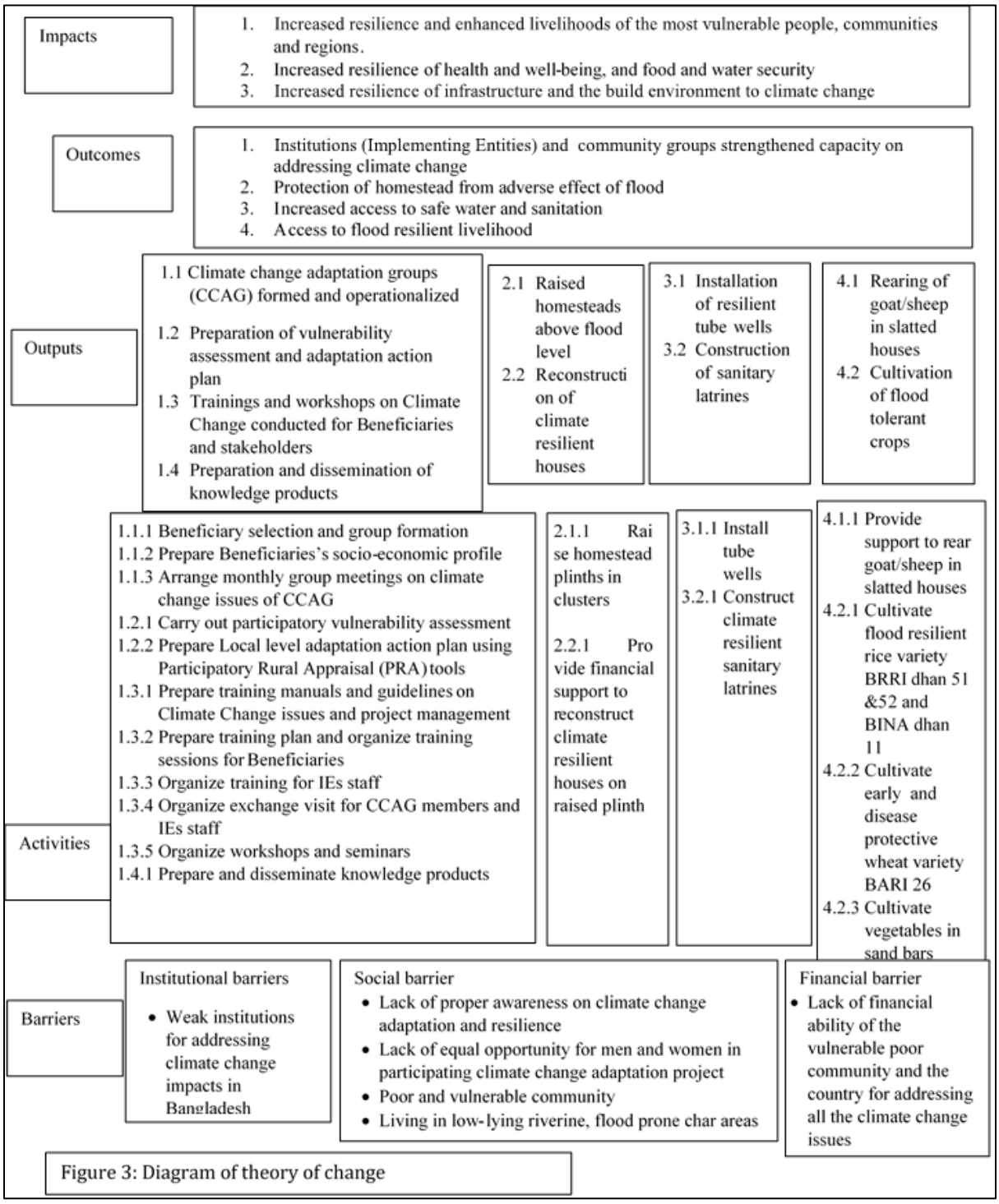

Figure 3: Diagram of theory of change

Appendix 11: Photo Album

Cluster-based Plinth Raising in Phulchari, Gaibandha

Resilient Tube-well in Lalmanirhat Sadar

Disease resistant Wheat cultivation in Malendaho, Jamalpur

Maize cultivation in Malendaho, Jamalpur

Goat rearing in slated house Jamalpur

Homestead gardening in Jamalpur

Goat slatted house in Kurigram

Pumpkin cultivation in Sandbar in Jamalpur

Sheep rearing in Kurigram

Wheat cultivation in Sandbar- Islampur, Jamalpur

Floods-resilient Rice cultivation in Islampur, Jamalpur

A household in a Control Village in Islampur, Jamalpur

Center for Environmental and Geographic Information Services
http://www.cegisbd.com