REQUESTFORPROJECT/PROGRAMMEFUNDING FROM THE ADAPTATION FUND

Theannexedformshouldbecompletedandtransmittedtothe AdaptationFundBoard Secretariat by email or fax.

Pleasetypeintheresponsesusingthetemplateprovided.Theinstructionsattachedtothe form provide guidance to filling out the template.

Please note that a project/programme must be fully prepared (i.e., fully appraised for feasibility)whentherequestissubmitted.Thefinalproject/programmedocumentresulting from the appraisal process should be attached to this request for funding.

Completedocumentationshouldbesenttotheemail:submissions@adaptation-fund.org

ADAPTATION FUND

LOCALLY-LED ADAPTATION PROJECT/PROGRAMMEPROPOSAL FOR SINGLE COUNTRY

PARTI:PROJECT/PROGRAMMEINFORMATION

TitleofProject/Programme:Strengthening Climate Resilience through Locally-Led Housing Solutions in the Haor (Flash flood prone) Region of Bangladesh

Country: Bangladesh

ThematicFocalArea: Climate resilient housing

TypeofImplementingEntity: National Implementing Entity Chooseanitem.

Implementing Entity: Palli Karma-Sahayak Foundation (PKSF)

ExecutingEntities:Partner Organizations of PKSF (NGOs)

AmountofFinancingRequested: 5000000 (inU.SDollarsEquivalent)

LetterofEndorsement(LOE)signed: Yes ■ No ☐

NOTE:TheLOEshouldbesignedbytheDesignatedAuthority(DA).ThesignatoryDAmustbeonfilewith theAdaptationFund.TofindtheDAcurrentlyonfilecheckthispage: https://www.adaptation-fund.org/apply-funding/designated-authorities

StageofSubmission:

☐ Thisproposalhasbeensubmittedbeforeincludingatadifferentstage(pre-concept, concept,fully-developed proposal)

■ **Thisisthefirstsubmissioneveroftheproposalatanystage**

Incaseofaresubmission,pleaseindicatethelastsubmissiondate:First time submission

Pleasenotethatfully-developedproposaldocumentsshouldnotexceed100pages for the main document, and 100 pages for the annexes.

Project/ProgrammeBackgroundandContext:

Providebriefinformationontheproblemtheproposedproject/programmeisaimingtosolve.Outline the economic social, development and environmental context in which the project would operate.

The haor region of Bangladesh is a vast, low-lying basin home to 20 million people, and a critical zone for national food security (1. Haor master plan). However, this area faces an extremely fragile agroecological system and is increasingly vulnerable to climate-induced flash floods, which differ from perennial floods due to their sudden onset and devastating impact. Occurring annually from May to June, these floods often destroy the single annual boro rice crop. The vulnerability is further exacerbated by the fact that over 70 percent of households live under direct flood exposure, yet lack the means to invest in resilient housing.

The primary cause of these floods is increasing rainfall in the upstream catchment areas, particularly during the pre-monsoon season (March-May). The monsoon season (June-October) delivers the bulk of the annual rainfall, turning the haor basin into a vast "sea." During these events, powerful, wind-driven erosive waves locally known as "*afal*" can reach heights of 2-3 meters, threatening homes and settlements(2. IUCN 2015). This threat has been exacerbated by large-scale deforestation over the past 30-40 years, which has removed natural barriers that historically mitigated wave damage (3. Jakariya, M., & Islam, M. N)

Climate change has altered the timing, duration, and intensity of rainfall, increasing the frequency and severity of flash floods and the associated "*afal*." Data from 1991 to 2017 shows that annual rainfall in key haor areas has increased by 2.3 percent to 4.1 percent per decade. Furthermore, pre-monsoon rainfall has increased by 25-27 percent since 1991, contributing to more intense and unpredictable flood events. The devastating July 2022 flood, for instance, was triggered by a record ~2500 mm rainfall over three days in the upstream catchment areas of Meghalaya, India. This event killed 92 people, displaced over 3 million, and caused over USD 120 million in financial losses, with many communities facing food insecurity, debt, and forced migration (4. Dey, N.C., Parvez, M. and Islam, M.R., 2021).

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The majority of the 20 million inhabitants of the haor region are poor, with a significant percentage categorized as extreme poor. Poverty rates in many upazilas (sub-districts) are nearly triple the national average, such as the 61.2 percent poverty head count rate in *Mithamain Upazila* (sub-district). This poverty disproportionately affects women and girls, who experience lower literacy rates, limited access to education and credit, and higher unemployment. The region also lags in key social indicators, including health outcomes and nutrition, with a high incidence of water-related diseases.

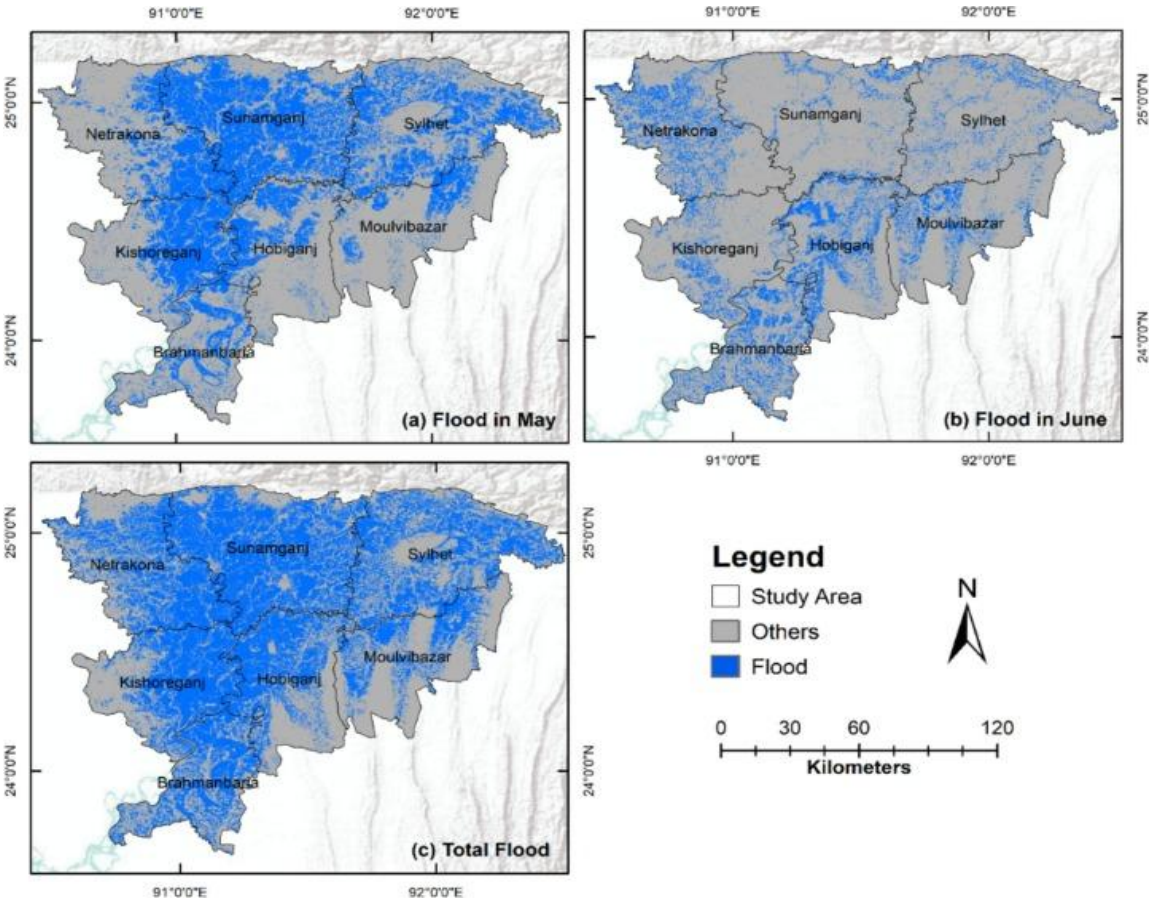


Figure-1:. Flood inundation maps: (a) Flood in May, (b) Flood in June, and (c) Total flood from May to June. (7. Flood mapping damage assessment)

The unique nature of haor flash floods has a devastating impact on housing. The sudden surges of water and powerful "*afal*" erode foundations, collapse walls, and submerge homes built from vulnerable materials like mud, bamboo, and straw. This not only causes immense property loss and a humanitarian crisis but also contaminates water sources and destroys sanitation facilities, leading to disease. The constant erosion of homesteads ("*kandas*") reduces livable land, forcing families into a perpetual cycle of rebuilding or migrating, which perpetuates poverty and instability.

A study on selected areas of the haor region predicted changes in annual rainfall patterns for different future carbon emission trajectories RCP4.5 and RCP8.5. This modelling suggests that total annual rainfall over selected areas of the haor region would increase up to 11 percent - 12 percent by the 2080s. The study also predicted an increase in pre-monsoon rainfall by 5 percent - 6 percent in the haor region compared to the base period considering RCP2.6, RCP 4.5 and RCP8.5. (9. Climate Anomalies of Bangladesh).

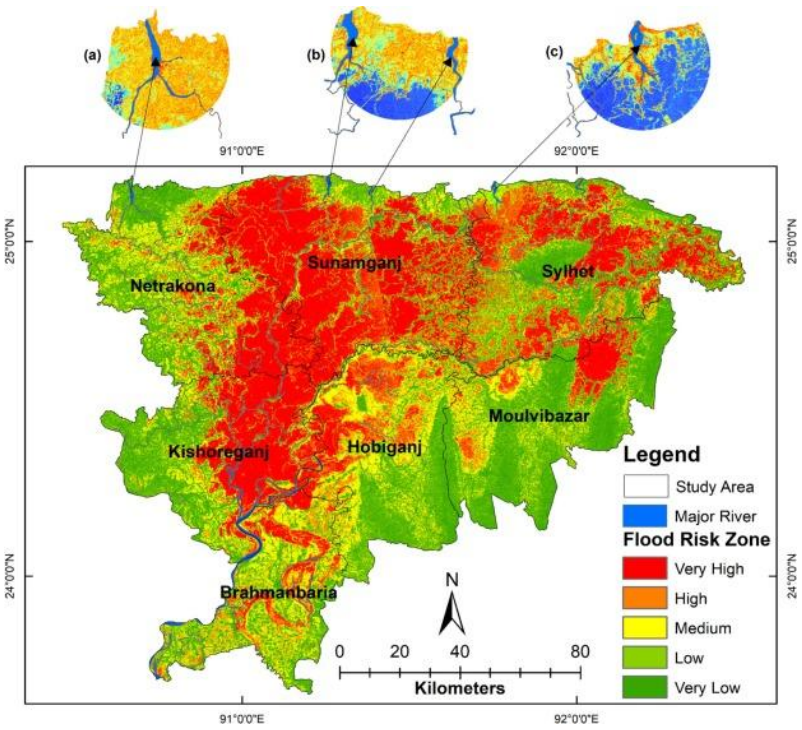


Figure-2: Flood Risk Zones in the Haor Region of Northeastern Bangladesh

Climate-resilient housing is therefore a foundational strategy to break this cycle. Resilient, elevated, and durable structures provide physical protection against climate shocks, reduce displacement, safeguard assets, and ensure the continuity of livelihoods. They can also serve as community hubs during disasters, reducing mortality and morbidity risks. Investing in these solutions shifts the focus from short-term relief to long-term self-reliance

This project aims to address the critical gap in resilient housing by piloting and scaling up affordable and locally appropriate solutions. The approach is multifaceted and rooted in community empowerment. Key components include:

- Designing and piloting housing models with features like raised plinths and stilts.
- Strengthening local capacity by training masons and community members in climate-resilient construction methods.
- Promoting an inclusive, locally led adaptation by actively engaging women and marginalized groups in decision-making and implementation.

By linking resilient housing with safe water, sanitation, and clean energy facilities, the project will holistically improve the health, hygiene, and overall climate adaptation capacity of targeted families. This approach

will not only foster social cohesion but also create a scalable model for national replication, aligning with international best practices for flood-prone regions.

As mentioned, the haor region of Bangladesh faces unique climate vulnerabilities, making locally led adaptation (LLA) a crucial approach. This approach centers on empowering local institutions and communities, shifting decision-making authority and resources to those directly affected by climate change. This project will provide direct access to funding and the autonomy for local institutions and communities to design, prioritize, and implement their own adaptation strategies. This approach recognizes that local people possess invaluable traditional knowledge, particularly concerning resilient housing designs and materials best suited for their specific environment. Furthermore, the project will ensure the inclusive participation of women, youth, and other marginalized groups, who are often disproportionately impacted by climate disasters. Their active involvement will be integral to both the decision-making processes and the equitable distribution of project benefits.

To make the housing more resilient against the impacts of flash floods in haor areas, a twofold nature-based approach is highly effective. The first strategy focuses on creating a natural defense system. Historically, haor areas were protected by extensive freshwater swamp forests. Re-establishing these forests with native, flood-tolerant trees like *Hijal (Barringtonia acutangula) and Koroch (Pongamia pinnata)* offers a strong solution. A dense belt of these trees planted around village mounds, known as *hatis*, acts as a natural breakwater. Their strong root systems hold the soil in place, preventing erosion of the earthen mounds, while their trunks and branches absorb and dissipate the destructive energy of flood-driven waves.

The second strategy involves fortifying the settlements themselves. The traditional practice of building homes on raised platforms or mounds should be reinforced. This involves elevating the ground level of homesteads using natural materials like compacted earth and clay to a height above the typical flood level. This elevation ensures that houses and livestock remain above the floodwaters, providing a direct and immediate layer of protection for the physical structures. By combining these natural defenses and structural enhancements, communities can create a more resilient and sustainable living environment in the face of flash floods.

To enhance climate resilience, the project plans to integrate traditional building techniques, such as raising homesteads on earthen plinths or utilizing floating platforms with modern engineering. This hybrid approach will create more robust and effective adaptation solutions. A community-based monitoring system will also be established to ensure accountability and build long-term trust by allowing residents to track progress and resource utilization.

Project/ProgrammeObjectives:
Listthemainobjectivesoftheproject/programme.

1. To design, pilot, and scale up climate-resilient housing for flood-prone and vulnerable Haor communities.
2. To build community knowledge and capacity in climate-resilient construction, water and sanitation integration, and disaster preparedness.
3. To promote inclusive, locally led adaptation by engaging community members in decision-making and implementation.

A. Project/Programme Components and Financing:

Fillinthetablepresentingtherelationshipsamongprojectcomponents,activities,expectedconcrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.For the case of a programme, individual components are likely to refer to specific sub- sets of stakeholders,regionsand/orsectorsthat canbeaddressedthroughasetofwell-definedinterventions/ projects.

The project aims to enhance resilience and reduce vulnerability in the flood-prone Haor region by introducing climate-resilient housing solutions tailored to local needs. The project seeks to design, pilot, and scale up innovative housing models that can withstand recurrent flooding, elevated water levels, and climate shocks. These houses will be adapted with features such as raised plinths, stilts, and integrated flood-resilient designs, ensuring safe shelter for vulnerable households in the most exposed communities.

At the same time, the project emphasizes building community knowledge and technical capacity, ensuring that local masons, engineers, and households acquire skills in climate-resilient construction methods, as well as the integration of water, sanitation, and renewable energy solutions. By linking resilient housing with safe water, sanitation, and clean energy facilities, the project will improve overall health, hygiene, and disaster preparedness of the target population.

Furthermore, the project is anchored in inclusive and locally led adaptation. Community members, particularly women and marginalized groups, will be actively engaged in decision-making, risk mapping, and project implementation. This participatory approach not only strengthens social cohesion and ownership but also ensures that housing models and services are context-specific, culturally appropriate, and sustainable in the long term.

Table-1: Porject components, expected output and outcomes and Budget

Components	Expected Outcomes	Expected Outputs	Countries	Amount (US$)
Community Engagement, Vulnerability Assessment, and Climate-Resilient Housing Design & Construction	Enhanced flood resilience of vulnerable households through safe and durable housing	Construct climate resilient houses with elevated plinths and stilts for identified vulnerable houses identified vulnerable households.	Bangladesh	3,687,040
Integration of Water, Sanitation, and Renewable Energy	Improved health, hygiene, and sustainable energy access in flood-prone areas	Output 2.1: Solar lightening system installed Output 2.2: Rainwater harvesting system installed Output 2.3: Eco-toilets installed Output 2.4: Tree planted in the household area	Bangladesh	754,000
3. Capacity Building and Local Skills Development	Strengthened local capacity and ownership of climate-resilient housing solutions	Output 3.1: Groups are formed. 3.2: Training materials developed. 3.3: Training for beneficiaries conducted	Bangladesh	124538
4. Project/Programme Execution Cost				49000
5. Total Project/Programme Cost				4614578
6. Project/Programme Cycle Management Fee charged by the Implementing Entity			Bangladesh	385422

Theory of Change:

Narrative of the Theory of Change

The Theory of Change (ToC) for the Climate-Resilient Housing Project in the haor region illustrates how locally led actions, community empowerment, and climate-resilient infrastructure collectively lead to sustainable, long-term adaptation and resilience. The ToC is grounded in Locally Led Adaptation (LLA) principles subsidiarity, inclusiveness, accountability, and community ownership ensuring that decision-making authority and resources shift meaningfully to those most affected by climate change.

Through participatory vulnerability assessments, co-designed resilient housing models, community-led planning, and the establishment of Community Housing and Adaptation groups, the project creates an enabling environment for local actors to lead adaptation. These activities generate tangible outputs such as resilient homes, improved WASH and energy services, trained local masons and engineers, strengthened community governance structures, and knowledge systems rooted in both scientific evidence and indigenous practices.

These outputs contribute to critical outcomes, including reduced flood losses, improved health and safety, enhanced local technical capacity, inclusive community governance, reduced displacement, and stronger adaptive capacity at the household and institutional levels. Over time, these outcomes lead to the broader impact of establishing climate-resilient, locally governed, and self-sustaining haor settlements capable of anticipating, absorbing, and adapting to increasing climate-induced flash floods and wave surges.

Underlying this causal chain are key assumptions: communities remain engaged and empowered throughout the project; climate hazards remain within the design parameters; local governance structures function inclusively; trained masons remain accessible; and essential materials remain available. External risks include extreme or unpredicted climatic shocks, inflationary pressures on construction materials, political shifts affecting local institutional engagement, pandemics, and prolonged monsoon disruptions. The project mitigates these risks through adaptive management, diversified procurement strategies, robust community governance mechanisms, and safeguards ensuring equity and accountability.

By embedding LLA principles across all components decision-making, financing, knowledge generation, capacity building, and community oversight the project ensures that adaptation actions are not externally driven but are instead owned, governed, and sustained by the communities themselves. The ToC thus provides a coherent, integrated pathway from activities to long-term climate resilience, demonstrating how locally rooted systems can drive enduring change in one of Bangladesh's most climate-vulnerable regions.

Table-2: Theory of Change

INPUTS / ACTIVITIES	OUTPUTS	OUTCOMES	IMPACT
i. Participatory vulnerability and risk assessments. ii. Formation and strengthening of groups. iii. Co-design of resilient housing typologies integrating indigenous knowledge and engineering standards. iv. Training of local masons, women, youth, and engineers. v. Construction of 700 climate-resilient houses with WASH & renewable energy systems. vi. Tree plantation and nature-based buffering. vii. Community monitoring, scorecards, learning systems & GRM.	i. 700 climate-resilient housing units constructed. ii. Solar lighting, RWH, and eco-toilet systems installed. iii. Strengthened local construction capacity and trained workforce. iv. Functional and inclusive CHACs practicing participatory governance. v. Knowledge products, manuals, community awareness materials. vi. Local financial-management and decision-making systems operational.	i. Reduced flood exposure and annual household losses. ii. Improved health, water security and sanitation during inundation. iii. Increased local employment and stability through resilient construction. iv. Stronger community institutions capable of leading adaptation planning. v. Enhanced adaptive capacity and reduced displacement. vi. More equitable and inclusive decision-making for women and marginalized groups.	i. Climate-resilient haor settlements with durable, adaptive housing. ii. Communities able to independently plan, finance and implement adaptation. iii. Reduced vulnerability to flash floods and wave surges. iv. Sustained resilience and improved wellbeing for ultra-poor households. v. Scalable community-driven adaptation model for national replication.

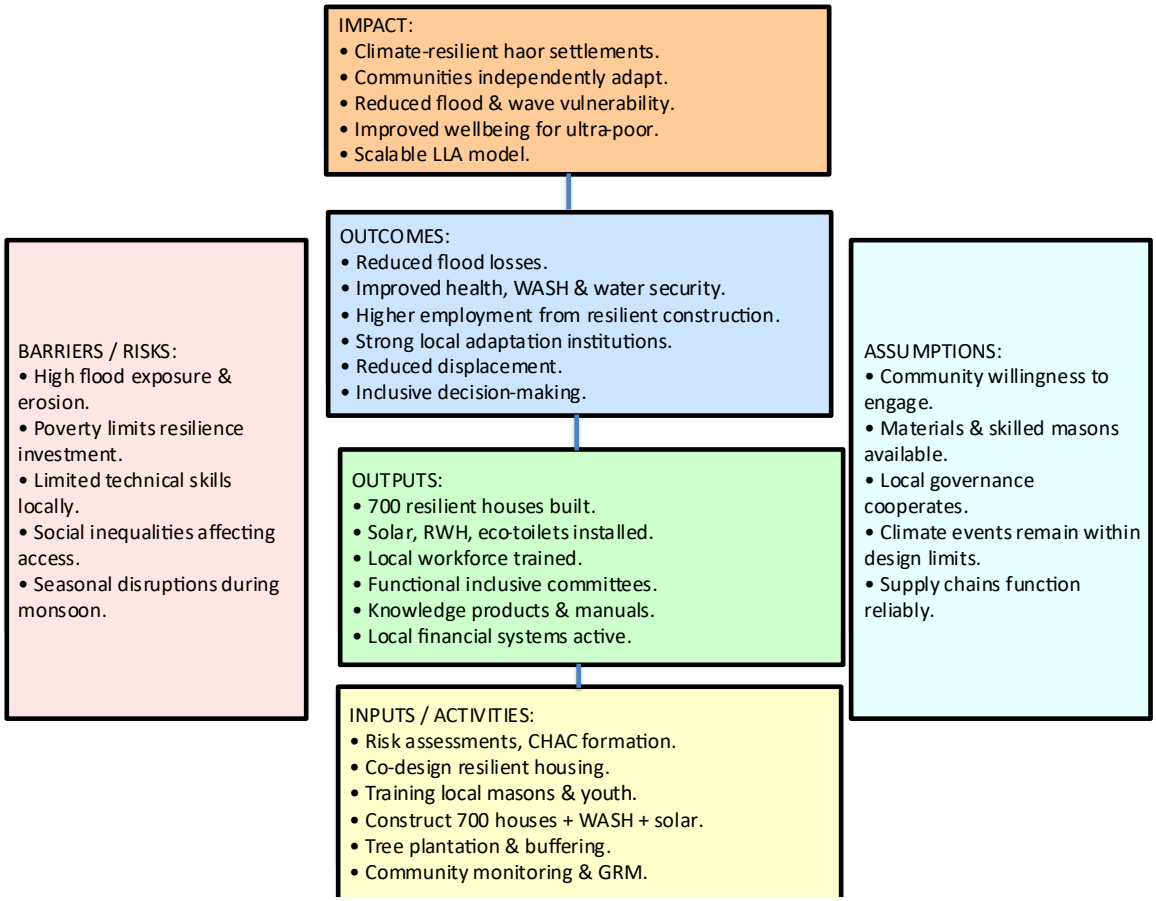


Figure:3 Theory of Change

ProjectedCalendar:

Indicatethedatesofthefollowingmilestonesfortheproposedproject/programme

Table-4: Milestones with dates

Milestones	ExpectedDates
StartofProject/ProgrammeImplementation	July 2026
Mid-termReview(ifplanned)	December 2028
Project/ProgrammeClosing	July 2030
TerminalEvaluation	December 2030

B. Amount of Financing Requested: USD 5,000,000

C. Project Duration: 4 years (48 months)

PARTII:PROJECT/PROGRAMMEJUSTIFICATION

A. Describe the project / programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme,showhowthecombinationofindividualprojects willcontributetotheoverallincreasein resilience. Specify how the project/programme enables devolving decision making to the lowest appropriate level and gives local institutions and communities more direct access to finance and decision-makingpoweroverhowadaptationactionsaredefined,prioritized,designed,implemented; how progress is monitored and how success is evaluated.

Flash floods in the haor wetlands of Bangladesh are distinct from the perennial floods in other parts of the country due to their sudden onset, intensity, and devastating impacts. Occurring annually between May and June, these floods severely affect more than 20 million people living in a fragile agroecological system where *boro* rice, the single annual crop, is frequently destroyed. Over 70 percent of households live under direct flood exposure yet lack the means to invest in resilient housing. Rainfall in the upstream catchment area is the critical driver of flash floods, with the pre-monsoon season now characterized by increasingly erratic and intense rainfall. During the monsoon, the haor turns into a vast inland sea, with destructive wind-driven waves locally known as *afal* reaching up to three metres and eroding homesteads. Deforestation over recent decades has worsened exposure by stripping away natural barriers, while climate data show steady increases in rainfall and pre-monsoon precipitation, trends that are projected to intensify under all climate scenarios. The devastating flash floods of July 2022, which displaced over three million people and caused damages exceeding USD 120 million, demonstrate the urgent need for climate-

resilient solutions.

In response to this challenge, the proposed project aims to pilot and scale up affordable, flood-resilient housing solutions tailored to the unique conditions of the haor region. The project will focus on designing and constructing durable housing models incorporating raised plinths, stilt foundations, and reinforced flood-resilient structures to withstand flash floods and *afal*-induced erosion. These models will be developed using locally available materials and adapted engineering solutions that are both affordable and replicable. To ensure sustainability, the project will also strengthen the skills of local masons, carpenters, and community members in resilient construction techniques so that knowledge and expertise remain within the community.

A central focus of the initiative is on inclusiveness and community ownership. Women, ultra-poor households, and other marginalized groups will be actively engaged in decision-making, planning, and implementation to ensure that solutions are culturally appropriate and equitable. By linking resilient housing with safe water, sanitation, and clean energy, the project takes a holistic approach that not only provides physical protection but also improves health, hygiene, and adaptive capacity. Resilient houses will double as safe community hubs during disasters, reducing displacement and mortality while protecting livelihoods and essential assets.

The project strongly emphasizes devolving decision-making to the lowest appropriate level. Community-based housing committees will be established to select beneficiaries, oversee construction, and manage resources. These committees will be supported by participatory monitoring and evaluation processes, including community scorecards and feedback mechanisms, which allow local people to define priorities, measure progress, and evaluate success. Local governments and institutions will also be engaged to strengthen governance and ensure that adaptation resources are directed effectively to those most at risk.

Through these measures, the project will directly enhance resilience by reducing losses from flash floods, breaking the cycle of disaster and recovery that traps households in poverty, and protecting health through improved housing and services. By building local skills, empowering women, and fostering community-led governance, the project will ensure that adaptation actions are not externally imposed but locally owned and sustained. In this way, the initiative shifts haor households from a recurring cycle of vulnerability to a pathway of stability and long-term climate resilience, while creating a scalable model for replication across other flood-prone regions of Bangladesh.

The project is structured around three core components:

1. Community Engagement, Vulnerability Assessment, and Climate-Resilient Housing Design & Construction
2. Integration of Water, Sanitation, and Renewable Energyand tree plantation
3. Capacity Building and Local Skills Development

Component 1: Community Engagement, Vulnerability Assessment, and Climate-Resilient Housing Design & Construction

Outcome 1:

Enhanced flood resilience of vulnerable households through safe and durable housing.
This outcome aims to reduce the vulnerability of flood-affected communities by providing secure and

sustainable housing solutions. Through the construction of climate-resilient houses, the project will enhance the adaptive capacity of poor households, ensuring that they can better withstand and recover from recurring floods and associated climate shocks.

Output 1.1:

Climate-resilient houses constructed with elevated plinths and stilts for identified vulnerable households.

Under this output, flood-resilient housing units will be designed and built for households most at risk from inundation and waterlogging. These structures will feature elevated plinths and/or stilt-based foundations, incorporating locally appropriate and cost-effective materials. The design will also emphasize safety, durability, and inclusiveness, particularly for women-headed and low-income families.

Activities:

- **Construction of climate-resilient houses**: PKSF, in collaboration with Partner Organizations (POs), will oversee the construction of 700 flood-resilient houses for the selected vulnerable households. Construction will adhere to the approved resilient housing standards, ensuring safety & durability from the perspective of highest wind speed and specified magnitude of earthquake of the hoar region, the houses will be constructed with specific measures incorporated to enhance thermal tolerance also, and adaptability to local environmental conditions. Special priority will be given to women-headed households and marginalized families.
- **Engage professional services (firms/individual experts)** for design development, supervision, and quality assurance to maintain construction standards and ensure climate compatibility.
- **Facilitate local EE staff travel** for site supervision, beneficiary consultation, and monitoring of construction progress.
- **Provide essential logistics and equipment** (laptops, printers, photocopiers) to strengthen the operational capacity of the Executing Entity (EE) in implementing, documenting, and reporting project activities efficiently.

Component 2: Integration of Water, Sanitation, and Renewable Energy

Expected Outcome 2: Improved health, hygiene, and sustainable energy access in flood-prone areas.

Expected Outputs:

- **Output 2.1:** Solar lighting systems installed in 700 households.
- **Output 2.2:** Rainwater harvesting systems in 700 households
- **Output 2.3:** eco-toilets provided to 700 households.
- **Output 2.**4: 15400 tree plantation in the working area

Activities:

1. **Installation of solar lighting systems**: Solar home systems and solar lanterns will be distributed and installed in 700 households to ensure reliable and clean lighting during power outages and floods, reducing dependency on kerosene (fuel).
2. **Rainwater harvesting system setup**: Roof-based rainwater harvesting systems will be constructed in700 flood-prone households, providing safe drinking water during inundation when tube-wells become contaminated.
3. **Provision of climate-resilient eco-toilets**: Raised, flood-proof eco-toilets will be provided to 700households to prevent waterborne diseases during flooding, improving sanitation and hygiene.
4. **Tree plantation**: A total of 15,400 climate-resilient and locally appropriate trees will be planted across the project area to restore degraded land, reduce soil erosion, and act as natural barriers against flood and wind damage. Community members, particularly women and youth, will be mobilized to participate in plantation and care-taking, ensuring long-term survival of the trees and strengthening ecosystem-based resilience.

Component 3: Capacity Building and Local Skills Development

Outcome 3: Capacity enhancement and local skill development.

This outcome focuses on strengthening the capacity of vulnerable households, local institutions, and project staff to promote climate-resilient housing and adaptive livelihood practices. By enhancing local skills and knowledge, the project ensures sustainability and ownership of interventions beyond the project period.

Output 3.1: Groups are formed.

Beneficiaries will be identified and organized into community-based groups to foster participatory decision-making and collective action in implementing project activities.

Activities:

Activity 3.1.1: Select beneficiaries based on vulnerability criteria and form groups to ensure effective coordination and participation in project interventions.

Output 3.2: Training materials developed.

Comprehensive training materials will be prepared to strengthen awareness and technical understanding of climate-resilient housing, adaptation techniques, and maintenance practices.

Activities:

- Activity 3.2.1: Provide office supplies and logistical support to the Executing Entity (EE) to facilitate preparation and delivery of training programs.
- Activity 3.2.2: Develop and prepare training modules, manuals, and visual materials focusing on climate-resilient housing and related adaptation measures.

Output 3.3: Training for beneficiaries conducted.

Training sessions will be organized for beneficiaries, local masons, and community leaders to build their capacity in constructing, maintaining, and promoting climate-resilient housing.

Activities:

Activity 3.3.1: Organize and conduct training sessions for beneficiaries and relevant stakeholders at the community level.

This activity will involve planning and delivering capacity-building workshops for selected beneficiaries, local builders, community leaders, and other relevant stakeholders. The training will focus on enhancing participants' understanding of climate-resilient housing concepts, safe construction practices, maintenance techniques, and disaster preparedness. Interactive sessions, practical demonstrations, and local language materials will be used to ensure inclusiveness and effective knowledge transfer.

Activity 3.3.2: Conduct post-training evaluations to assess knowledge improvement, skill application, and feedback for continuous improvement.

After each training session, structured evaluations will be carried out to measure participants' learning outcomes, assess their ability to apply new skills in real-life situations, and collect feedback for refining future training programs. These evaluations will also help track behavioral change and improvements in community-level practices.

Activity 3.3.3: Provide office supplies to support training implementation.

Essential office and logistical supplies (e.g., stationery, printing materials, folders, and other consumables) will be procured for the Executing Entity (EE) to support the smooth organization and documentation of training activities, communication, and reporting.

Activity 3.3.4: Conduct periodic evaluations to assess the effectiveness and sustainability of capacity-building interventions.

This activity will involve conducting periodic reviews and assessments to evaluate how well the training has translated into practice over time. The evaluations will identify strengths, challenges, and areas for improvement, ensuring that knowledge and skills gained by beneficiaries are effectively institutionalized and contribute to long-term community resilience.

Component 4: Project Execution Arrangement

PKSF will not directly implement the project but will facilitate its execution through its extensive network of partner organizations. To ensure effective oversight, PKSF will establish a dedicated Project Management Unit (PMU) through recruitment or deploying the existing eligible staffs. responsible for supervising and monitoring all project activities as the Executing Entity (EE).

Executing Entities (EEs) will be selected from PKSF's pool of 171 active partner organizations which are NGOs (civil society organization). The selection will be based on criteria including their operational presence in the project locations, proven credibility in managing funds, a strong track record of successful project implementation, transparency, accountability, and relevant technical expertise. Furthermore, these organizations must be registered with the Microcredit Regulatory Authority (MRA) and maintain established relationships with local communities and government bodies.

While PKSF will not be involved in direct implementation, its PMU will ensure the project's smooth progress through rigorous monitoring and supervision. This approach leverages the combined strengths of PKSF and its partner organizations to deliver the project objectives effectively and efficiently.

Criteria for Selecting Executing Entities:

- EEs must have a presence of at least 02 years in the proposed project areas to ensure effective implementation at the grassroots level.
- EEs should demonstrate a track record of transparent and accountable fund management to ensure the proper utilization of project resources.
- EEs should have experience in successfully implementing development projects, particularly in the areas of water management and climate change adaptation.
- EEs must possess the technical expertise necessary for implementing the various components of the project, including RO plant management, community mobilization, and capacity building.

Selection Process:

- PKSF will seek EOI from the Pos and then, conduct an initial screening of its existing pool of interested partner NGOs based on the specified criteria by a high-level selection-committee formed by the PKSF's management.
- Eligible NGOs will be invited to submit applications detailing their experience, capacity, and proposed approach to project implementation.
- A high level selection committee of PKSF will evaluate the applications against the selection criteria and shortlist the most suitable EEs for the project.
- Shortlisted EEs will undergo a due diligence process to verify their credentials, including financial stability, organizational capacity, and past performance.
- Based on the results of the due diligence process, the final selection of EEs will be made,

ensuring a diverse representation of organizations with complementary strengths.
- The entire selection process might take approximately 3 months.

An agreement will be signed between the EE and PKSF. This agreement will clearly outline the roles and responsibilities. In addition, a detailed procurement guideline will be provided to the EEs, explaining the procurement methods.

For any procurement exceeding USD 5000, prior approval from PKSF will be required. The roles and responsibilities will be distinctly defined. PKSF will be responsible for selecting EEs through a competitive and a fair process, building the capacity of the selected EE
s, approving the annual procurement plans of the EEs, conducting prior and post reviews of procurement documents, and comprehensively monitoring the field-level activities of the EEs. On the other hand, the EEs will be responsible for preparing procurement plans following the provided procurement guideline, get approval of the procurement plan, calling for quotations, conducting comparative analyses (both financial and technical), declaring awards, entering into contracts with vendors, engaging labor, and conducting quality testing of water. This structured approach will ensure clarity and accountability in the entire process. The procurement process and selection results of the selected entities will be reported in the project performance reports (PPRs). The executing entities which will be our executing entity subsequently will be responsible for field level implementation of the project activities. PKSF expects multiple executing entities to be involved in the project activities.

Competent staff both at the PMU and EE levels will be a critical input for the success of the project. The staff will be recruited competitively through an open advertisement. PKSF may deploy competent personnel to execute the project. Training will be provided to all recruited staff, both at the PMU and EE levels. A group of competent trainers will be invited to train the staff following standard training modules. Field visits will be included in each training batch. Industry experts will be invited to share their experiences, particularly the best practices and challenges. Details budget can be seen in Annex-2.

PKSF will also involve the local council members, who are the elected members of the union parishad (the lowest administrative unit of the government). They have their own development mandates established by the local government act. These members are also members of the union disaster management committee and the union WASH committee.

Project Cycle Management Fee: PKSF, as a NIE of the Adaptation Fund, will monitor the activities of the proposed project. A number of high-level field visits will be organized for high-level officials and policymakers. To recruit efficient staff for implementing the project, the appropriate Terms of Reference (ToR) for each staff member will be developed, focusing on the experience and knowledge related to climate resilient housing issues of the incumbent by NIE. Besides, PKSF will review the quarterly and annual reports prepared by PMU staff.

Adaptation Rationale for major Components

Climate change is fundamentally reshaping the hydrology, flood regime, and living conditions of the haor basin. Increases in pre-monsoon flash floods, prolonged waterlogging, stronger wave action, erratic

rainfall, disease outbreaks, and climate-related energy disruptions have exceeded the coping capacity of poor households. Without targeted adaptation measures, conventional development activities such as ordinary housing, standard toilets, or tube wells fail repeatedly under intensifying climate hazards. The proposed components therefore represent climate-specific adaptation interventions, not general infrastructure or social investments.

Component 1: *Community Engagement, Vulnerability Assessment, and Climate-Resilient Housing Design & Construction*

Adaptation rationale

The haor region now experiences earlier and more intense pre-monsoon flash floods due to accelerated snowmelt in upstream basins and increased extreme rainfall events linked to climate change. Flood levels are rising beyond the height of traditional homesteads, while wave action ("*afal*") during prolonged inundation erodes foundations and collapses earthen plinths. Traditional houses built with bamboo, mud, and low-lying platforms are no longer viable.

The elevated plinths and stilt-based engineered housing proposed here are directly derived from climate models and hydrological projections, which estimate future maximum flood heights, wind loads, and wave energy. These designs exceed normal building standards and are not applied in standard rural housing programs.

Additionally:

- Thermal stress in haor districts has risen significantly; improved ventilation and heat-resistant materials are essential for health and safety.
- Climate-linked wind speeds require stronger bracing, anchoring, and structural support.
- Women-headed and marginalized households lack resources to rebuild after-shocks; without adaptation housing, repeated loss and damage trap them in poverty.

Thus, this component is 100% adaptation-driven and responds directly to climate hazards that conventional development housing cannot address**.**

Component 2 :*Integration of Water, Sanitation, and Renewable Energy*

Adaptation rationale

Although these systems exist in general development contexts, their use in this project is driven entirely by climate change impacts**.**

Solar systems

Frequent climate-induced storms and prolonged floods increasingly disrupt grid electricity for days or even weeks at a time, leaving households especially women, children, and persons with disabilities without safe lighting during emergencies. While solar systems may operate at reduced capacity during periods of heavy rain or dense cloud cover, they still provide a more reliable and resilient source of lighting compared to the grid, which fully collapses during floods. Even under low-light conditions, solar backup ensures minimum lighting needed for safe mobility, caregiving, emergency preparedness, and communication. Beyond energy security, the use of solar lighting reduces dependence on kerosene and diesel-based alternatives, lowering household carbon emissions and contributing to environmentally sustainable adaptation. Thus, the intervention strengthens resilience to climate-induced power disruptions while promoting clean, climate-friendly energy access.

Rainwater harvesting systems

Floods now increasingly submerge tube wells for extended periods, contaminating groundwater with pathogens, iron, and surface pollutants. This problem has intensified as climate change alters rainfall patterns, increases runoff, and prolongs inundation in the *haor* basin. During severe floods, when tube wells become unusable or dangerous, rainwater harvesting (RWH) becomes the only reliable and safe source of drinking water. The intervention therefore does **not** replace a functioning baseline service it substitutes climate-contaminated wells with a climate-resilient water supply system. In the absence of climate change, households would continue depending on their existing tube wells; RWH becomes essential precisely because flooding depth, duration, and contamination risks have increased beyond historical norms.

Eco-toilets

Traditional pit latrines now collapse or overflow during weeks-long floods, causing disease outbreaks (cholera, diarrhea, skin infections) that spike immediately after climate-driven inundation events. Elevated eco-toilets are a climate-specific sanitation adaptation, ensuring dignity and preventing fecal contamination during flood submergence.

Tree plantation

Climate change has increased wave intensity, soil erosion, and wind speed during monsoon storms. Homestead trees act as nature-based buffers, reducing wave impact, stabilizing soil, and providing microclimatic cooling. This is not a general greening activity but a targeted ecosystem-based adaptation measure. Together, these WASH/energy/NbS elements protect households from climate-driven water contamination, energy failures, disease outbreaks, and environmental degradation.

Component 3: Capacity Building and Local Skills Development

Adaptation rationale

Climate-resilient structures and systems require *specialized adaptation skills* not previously needed in *haor* communities:

- Local masons do not traditionally build stilted structures or elevated plinths based on climate projections.
- Safe siting under future floodlines requires understanding of climate-informed mapping.
- Maintenance of eco-toilets and RWH systems requires new technical skills to ensure functionality during prolonged waterlogging.
- Changes in climate variability require new preparedness behaviors, early warning interpretation, and adaptive livelihood planning.

Capacity building is therefore essential to ensure that households and local institutions can maintain adaptation infrastructure beyond the project period, prevent maladaptation (e.g., unsafe modifications), and adopt behaviors aligned with future climate scenarios.

Moreover:

- Women, elderly persons, and persons with disabilities face specific risks during flooding; tailored training and group formation strengthen their adaptive capacity.
- Community committees (CHACs) are built to manage climate-specific decision-making, not generic development activities.

Thus, Component 3 ensures the *sustainability and long-term resilience* of the structural adaptation measures.

None of the components represent business-as-usual development. Each intervention housing, WASH, solar, tree plantation, and capacity building is designed in direct response to specificclimate hazards, derived from climate projections, and co-developed with communities experiencing intensifying climate impacts. The project therefore represents a coherent, climate-justified adaptation package, fully aligned with the Adaptation Fund's mandate.

B. Describe how the project / programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, includinggenderconsiderations.Describehowtheproject/programmewillavoidormitigatenegative impacts, incompliancewiththeEnvironmentalandSocialPolicy andGender Policy oftheAdaptation Fund. In particular, specify how the project/programme is addressing structural inequalities faced by women, youth, children, people with disabilities, people who are displaced, Indigenous Peoples and marginalized ethnic groups.

The project is designed to deliver tangible economic, social, and environmental co-benefits to some of Bangladesh's most climate-vulnerable populations, while adhering fully to the Adaptation Fund's Environmental and Social Policy and Gender Policy. By targeting ultra-poor households in the *haor* wetlands, the project ensures that adaptation investments reach those who suffer the most from recurrent climate shocks yet have the least resources to cope.

Economic benefits will be generated through the protection and stabilization of household assets, reducing repeated financial losses from flood damage. Secure housing and basic services lower the need for distress borrowing and migration, allowing households to invest in farming, fishing, and small businesses. Training local masons, youth, and women in resilient construction creates new employment pathways and enhances local markets for climate-smart technologies. These livelihood opportunities build adaptive capacity while keeping financial gains within the community.

Social benefits stem from improved safety, dignity, and inclusion for marginalized groups, particularly women, children, the elderly, and people with disabilities. Elevated, flood-resilient homes reduce displacement risks, ensuring continuity of education and care during floods. Integrating safe water and sanitation enhances public health, reducing disease burdens that disproportionately affect women and children. By devolving decision-making to community housing group, the project challenges structural inequalities, providing women and marginalized groups with a meaningful voice in adaptation planning and resource allocation.

Environmental benefits include ecosystem restoration through tree plantation and reduced reliance on kerosene and diesel, leading to lower greenhouse gas emissions and improved air quality. Rainwater harvesting reduces pressure on contaminated groundwater sources, while eco-toilets prevent pollution of surface water bodies critical for biodiversity and fisheries in the *haor* wetlands. Collectively, these interventions contribute to healthier ecosystems, which in turn provide natural buffers against climate shocks.

The project also incorporates a robust safeguards approach. Activities are screened for potential environmental and social risks, with mitigation measures built into design and implementation. For example, plantation efforts use native species to preserve biodiversity, while construction activities adhere to inclusive labor standards that prevent exploitation. Special provisions are made to ensure accessibility for people with disabilities, while displaced and landless households are prioritized in beneficiary selection.

In addressing structural inequalities, the project deliberately targets groups often excluded from adaptation finance women-headed households, landless farmers, Indigenous Peoples, and marginalized ethnic groups. By providing these groups with direct access to resilient housing, essential services, and participation in governance, the project transforms adaptation from a top-down intervention into a locally led, equity-driven process. This not only strengthens climate resilience but also advances social justice and sustainable development in the *haor* region.

The project is expected to generate a substantial pool of indirect beneficiaries beyond the 700 households receiving climate-resilient housing. The improved housing structures, raised plinths, tree belts, and nature-based buffering measures will reduce wave impact, drainage congestion, and localized flood exposure for surrounding households in each settlement, meaning that several nearby families benefit from enhanced safety even without receiving a new house. Moreover, the project strengthens community institutions, trains local masons and youth, and embeds improved construction practices and climate-resilient techniques throughout the ward, resulting in long-term spillover benefits as these skills are applied widely

in future housing repairs and new construction. The involvement of Union Parishads and integration of project practices into existing WASH and disaster management committees further extends benefits to broader ward and union populations, particularly through improved preparedness, risk communication, and more consistent social accountability. ***Taken togetherand applying conservative assumptions to avoid double countingthe project is expected to indirectly benefit approximately 50,000 to 55,000 people, reflecting the combined effects of community-wide risk reduction, capacity building, strengthened local governance, and the diffusion of resilient practices across the participating unions.***

The project's economic impact is substantial.

Avoided Flood Damages: The largest economic benefit of the project comes from avoided flood damages. On average, households in the *haor* region suffer flood-related losses of about BDT 100,000 (USD 870) annually, including the destruction of homes, assets, and crops. Over a 20-year period, this represents a net present value of BDT 850,000 per household. With resilient housing, nearly 70 percent of this damage can be prevented, amounting to BDT 357 million (USD 3.1 million) across 700 households. By protecting lives, homes, and livelihoods from recurrent flooding, resilient housing transforms a cycle of loss into long-term security and stability.

Productivity Gains: Frequent floods in the *haor* region disrupt livelihoods by displacing families and destroying productive days. On average, households lose nearly 60 workdays annually, valued at around BDT 30,000 (USD 260). With resilient housing, 70 percent of these disruptions can be avoided, generating productivity gains of BDT 420,000 per household over 20 years. For 700 households, this translates to BDT 252 million (USD 2.2 million). These gains reflect more than income preservation; they strengthen food security, ensure continuity in agricultural cycles, and stabilize local economies against climate shocks.

Employment and Skills Development: The project invests in building human capital through training for 100 masons and 50 engineers on climate-resilient construction techniques. This local workforce will earn incremental wages estimated at BDT 9 million (USD 78,000) annually. With 60 percent workforce retention over a 10-year period, the total additional income is projected at BDT 54 million (USD 0.47 million). Importantly, at least 30 percent of these opportunities will be directed toward women and youth, creating inclusive employment and embedding resilience expertise within the community for long-term sustainability.

Household Cost Savings: The provision of solar lighting, rainwater harvesting, and eco-sanitation systems reduces household expenditures by replacing kerosene, purchased drinking water, and medical treatment for waterborne diseases. On average, each household saves around BDT 10,000 (USD 87) per year, which amounts to BDT 6 million annually for all targeted households. Over 20 years, this equates to cumulative savings of BDT 120 million (USD 1.0 million). These savings ease the financial burden on vulnerable families, enabling them to invest more in education, food security, and small-scale income-generating activities.

Avoided Disaster Relief Costs: Each major flood event requires significant government and NGO expenditure on relief, including food distribution, temporary shelter, and cash support. For households in the *haor*, this averages around BDT 50,000 (USD 435) annually. With resilient housing, such needs are

greatly reduced, avoiding an estimated BDT 425,000 per household over 20 years. Across 700 households, this results in avoided public expenditure of BDT 255 million (USD 2.2 million). This reduction not only saves financial resources but also allows government and humanitarian actors to redirect funds toward long-term development rather than recurring emergency relief.

Reduced Healthcare Costs: Flooding and waterlogging lead to widespread outbreaks of waterborne diseases such as diarrhea, cholera, and skin infections, costing households around BDT 20,000 (USD 175) annually in treatment and medicine. By ensuring safe water, sanitation, and climate-resilient housing, the project is expected to reduce 70 percent of these costs. This translates to BDT 280,000 per household over 20 years, or BDT 168 million (USD 1.5 million) across 700 households. Reducing disease burdens not only saves money but also improves quality of life, reduces child mortality risks, and strengthens community resilience to climate impacts.

Property Value Uplift: Beyond avoided costs, resilient housing directly increases household asset value. Each elevated and disaster-resilient house is estimated to enhance property value by BDT 300,000 (USD 2,600). Across 700 households, this equates to BDT 180 million (USD 1.6 million). This uplift provides households with greater financial security, strengthens collateral for accessing microfinance, and builds intergenerational resilience through enhanced household assets.

Overall Economic Benefits: Taken together, the project delivers a comprehensive package of benefits that extend across individual households, communities, and the public sector. Over 20 years, avoided damages, productivity gains, employment creation, household savings, reduced relief expenditures, improved health, and asset value appreciation generate a combined economic benefit of approximately USD 12.1 million (BDT 1,332 million). This is more than double the project investment and demonstrates strong cost-effectiveness. When scaled across the wider *haor* region, the benefits could easily reach USD 20-25 million, underscoring the project's transformative potential in building climate-resilient, economically secure, and socially inclusive communities.

Beyond these quantifiable gains, the project also delivers significant intangible benefits that cannot be expressed in monetary terms such as uninterrupted child education, improved dignity and safety for women, reduced trauma of repeated displacement, and strengthened social cohesion. These non-monetary benefits are equally critical for achieving long-term resilience and well-being in the *haor* region.

Distribution of Quantified Economic Benefits Across Vulnerable Groups

The project's quantified economic benefitsestimated at USD 12.1 million over 20 yearsare distributed in line with PKSF's vulnerability-based targeting framework, which prioritizes households facing the highest climate risks and lowest adaptive capacity. Because the project provides climate-resilient housing only to households with land or secure use rights, landless households are not part of the direct target group; however, they may still benefit indirectly from improved safety, reduced local flooding, and stronger community systems. Among direct beneficiaries, ultra-poor and highly exposed households who constitute the majority of eligible participantsare estimated to receive approximately 68 percent of total quantified

benefits (USD 8.23 million), reflecting their disproportionate exposure to flood-related losses, health shocks, and livelihood disruptions. Female-headed households, who experience higher care burdens and greater economic vulnerability during disaster events, receive an estimated 14 percent of benefits (USD 1.69 million). Households with persons with disabilities, although a smaller share of the target population, gain significantly from reductions in displacement, mobility barriers, and health risks, and are projected to receive 5 percent of total benefits (USD 0.61 million). The remaining 13 percent of quantified benefits (USD 1.57 million) accrue to moderately vulnerable but eligible households, who also experience reduced losses, improved productivity, and enhanced resilience but at comparatively lower intensities. Overall, the distribution of economic gains is strongly pro-poor and aligned with PKSF's equity and social inclusion principles, ensuring that the greatest share of benefits reaches those who experience the greatest climate vulnerability.

Table: 5-Distribution of Economic Benefits

Beneficiary Group	Estimated Share of Total Economic Benefits	Exact Estimated Value (USD)	Notes
Ultra-poor & highly exposed households	68%	8,228,000	Highest baseline losses; largest avoided damages & health savings
Female-headed households	14%	1,694,000	Higher livelihood disruption; higher care burden
Persons with disabilities (PwDs)	5%	605,000	High intensity gains due to mobility & health risks
Moderately vulnerable but eligible households	13%	1,573,000	Lower baseline losses but still significant gains
Total	100%	12,100,000	

Social Benefits and Sustainability

Social inclusion in the project is pursued not only as a moral imperative but as a practical pathway to resilience. In the *haor* region, where repeated floods erode assets, force migration, and undermine social cohesion, exclusion compounds vulnerability. The project tackles this by addressing hidden layers of inequality such as the limited mobility of the elderly during floods, the unsafe living conditions faced by women and girls, and the absence of accessible facilities for people with disabilities. By tailoring housing, water, sanitation, and energy interventions to these realities, the project ensures that adaptation solutions are not just technically resilient but socially responsive to the lived experiences of the most marginalized.

Equity is advanced further through deliberate mechanisms that enhance agency rather than dependency. Households are supported to become long-term stewards of their housing, water, and sanitation systems, reducing reliance on external relief. Women are not only beneficiaries but are engaged in leadership roles in housing groups and disaster-preparedness groups, ensuring their voices shape governance in traditionally male-dominated spaces. Youth, often excluded from planning but central to future resilience, are trained in technical skills such as resilient construction and renewable energy maintenance, securing both livelihoods and generational continuity of knowledge.

The project also strengthens community solidarity, which is often fractured after disasters. Collective action in tree planting, housing maintenance, and water user groups creates networks of mutual support that reduce social isolation, particularly for widows, single mothers, and marginalized ethnic households. These forms of inclusion are vital "social infrastructure," building trust and cooperation that cannot be washed away like physical assets.

Finally, the benefits of inclusion extend into intangible but powerful dimensions: restoring dignity to households that no longer need to rebuild homes every year; ensuring that children can continue education without disruption; and giving women and girls safer, healthier spaces in their homes and communities. Such outcomes, though not easily expressed in monetary terms, are central to breaking cycles of intergenerational poverty and embedding resilience as a shared community asset. In this way, the project turns adaptation into an inclusive and empowering process, ensuring no one is left behind in the fight against climate change.

Environmental Benefits and Sustainability

The project contributes to environmental resilience by aligning human adaptation with the natural systems of the *haor*. Rather than treating nature as a backdrop, the interventions actively support ecosystem functions that sustain livelihoods. For example, the large-scale tree plantation program restores vegetative cover that stabilizes embankments, reduces wind-driven wave erosion, and enhances carbon sequestration. These trees also provide shade, fodder, and microhabitats, creating long-term co-benefits for both communities and biodiversity.

Resilient housing reduces the cycle of destruction and rebuilding, which traditionally demands large quantities of timber, clay, and bamboo. By breaking this cycle, the project eases unsustainable extraction of natural resources from already stressed ecosystems. Similarly, improved sanitation systems prevent untreated waste from entering canals and wetlands, protecting the water quality essential for fish breeding and aquatic plants that form the foundation of *haor* food chains.

The design also enhances disaster risk reduction in ways that benefit the environment. Elevated homes reduce soil scouring during floods, while rainwater harvesting lessens pressure on shallow aquifers that are increasingly strained by over-extraction. Solar energy adoption, though modest in scale, signals a structural shift toward renewable solutions in remote, energy-poor areas where kerosene and diesel remain common.

Importantly, the project institutionalizes a feedback loop between people and their environment. Community committees managing water, sanitation, and tree plantation schemes are trained to monitor ecological impacts, ensuring interventions evolve with environmental realities. In this way, the project moves beyond "do no harm" safeguards to actively regenerate ecosystem health, anchoring community resilience in the vitality of the *haor* landscape itself.

Addressing Structural Inequalities and Gender Considerations

The project directly tackles structural inequalities that increase vulnerability to climate risks. Women, who are disproportionately burdened by caregiving responsibilities and limited economic opportunities, are

actively included in skill development, employment, and leadership initiatives. This creates pathways to financial independence and positions women as key decision-makers in resilience building (WCSAGlobal, 2022).

Youth are engaged through targeted training, livelihood diversification, and participation in community activities. This addresses high levels of rural unemployment and reduces distress-driven migration, empowering young people to play constructive roles in local adaptation Accessibility measures ensure that persons with disabilities can benefit equally from housing, water, sanitation, and training services, enabling their meaningful participation in planning and decision-making processes.

Indigenous peoples and marginalized ethnic minorities receive culturally sensitive support that respects traditional knowledge systems and governance structures. The project is aligned with international best practices, including the Adaptation Fund's Environmental, Social, and Gender Policies. These policies are operationalized through participatory planning, free and informed consent, grievance redress mechanisms, and gender-sensitive indicators that guarantee accountability and equity.

By embedding these safeguards and proactive measures, the project ensures that environmental sustainability and social equity advance together, creating a model of inclusive, climate-resilient development.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project / programme., focusingontheimplementationandexecutionarrangements,inparticularthemechanismwhichwill provide more direct access to finance.

Cost-Effectiveness of the Proposed Project

The project demonstrates strong long-term cost-effectiveness by investing in durable, climate-resilient housing and community systems that continue to deliver benefits well beyond the project period. Unlike short-lived emergency responses that require repeated yearly spending, the proposed resilient structures and WASH systems have an expected service life of 20 years or more, significantly reducing recurrent losses for households in the *haor*. A one-time investment of approximately BDT 250,000-300,000 (~USD 2,200-2,600) replaces recurring annual damage costs of BDT 80,000 (~USD 700), resulting in cumulative avoided losses far exceeding the initial investment. Maintenance costs remain low (BDT 5,000-7,000 per year), and households manage these through community maintenance funds and trained local technicians, ensuring sustainability without external support.

Cost-effectiveness is further strengthened by localized implementation through PKSF's Partner Organizations, which reduces administrative overhead and builds long-term community capacity. Training of local masons, technicians, and Community Housing and Adaptation Groups (CHAGs) ensures that maintenance, repairs, and replication can be carried out locally at minimal cost, preventing dependency on external technical expertise. The bundled nature of interventions also enhances sustainability: solar systems reduce energy expenses, WASH facilities improve health and productivity, and tree planting reinforces soil stabilitycreating multiple long-term benefits at no additional marginal cost.

Direct access financing through PKSF ensures that resources reach households efficiently and remain embedded within local institutions. By integrating capacity-building, transparent governance, and community-led monitoring, the project enables beneficiaries and local institutions to sustain, operate, and expand the interventions beyond the project's lifespan. This long-term continuitysupported by durable infrastructure, low maintenance requirements, and strong local ownershipis the core basis of the project's sustainability-driven cost-effectiveness.

D. Describehowtheproject/programmeisconsistentwithnational,sub-nationalandlocalsustainable developmentstrategies,including,whereappropriate,nationaladaptationplan(NAP),national, sub-national or local development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

By reducing reliance on external intermediaries, optimizing unit costs through scale and community participation, and delivering multi-sectoral co-benefits, the project demonstrates a high degree of cost-effectiveness. The direct access financing mechanism ensures that resources reach the most vulnerable populations with minimal delay, maximizing the value of each amount invested.

1. **National Adaptation Plan (NAP), 2023**
   The NAP highlights housing and infrastructure resilience as a core component of building climate-resilient communities, particularly in climate-vulnerable hotspots such as *Haor* and char regions. Strategic Objective 1 explicitly calls for resilient settlements, adaptive infrastructure, and community-based planning. The proposed project's emphasis on low-cost, flood-resilient housing and integrated water management directly operationalizes these NAP priorities, helping Bangladesh implement its national adaptation pathways.
2. **Bangladesh Climate Change Strategy and Action Plan (BCCSAP), 2009**
   Under Pillar 1 (Food Security, Social Protection and Health) and Pillar 3 (Infrastructure), the BCCSAP emphasizes climate-resilient housing as a critical means of protecting vulnerable populations from recurrent floods, storms, and waterlogging. By delivering locally appropriate housing solutions, the project advances the BCCSAP's adaptation agenda while enhancing social protection measures for the poorest households in *Haor* areas.
3. **Nationally Determined Contributions (NDCs), 2021**

   Bangladesh's updated NDC under the Paris Agreement identifies adaptation interventions that strengthen housing, water, and infrastructure systems for vulnerable populations. By building climate-resilient housing and integrating renewable energy and sanitation measures, the project directly contributes to the NDC's adaptation priorities and demonstrates Bangladesh's commitment to global climate agreements under Article 7 of the Paris Agreement.

4. **Eighth Five Year Plan and National Poverty Reduction Strategy**

   Both the Seventh Five Year Plan and the National Poverty Reduction Strategy stress the importance of rural housing, social protection, and livelihood security for marginalized groups living in climate hotspots. The project responds directly by safeguarding household assets, reducing the risk of displacement, and building sustainable community resilience, thereby aligning with national poverty alleviation and social inclusion goals.

5. **Local Government Development Plans**:

   At the Union and Upazila levels in *Haor* regions, development plans consistently identify the urgent need for climate-resilient housing as a community priority. By actively engaging Union Parishads, local stakeholders, and community groups in project design and implementation, the initiative ensures ownership, responsiveness to local demand, and long-term integration into local governance structures.

6. ***Haor* Master Plan (2012-2032):**

The *Haor* Master Plan, developed by the Bangladesh *Haor* and Wetland Development Board, provides a comprehensive strategy for sustainable development in the *Haor* basin. It prioritizes flood-resilient housing, water management, infrastructure development, and livelihood diversification as key pillars for improving the resilience of *Haor* communities. The proposed project aligns closely with the Master Plan by delivering elevated housing solutions, protecting fisheries and agricultural land through improved water management, and supporting the long-term ecological balance of the *Haor* ecosystem. By complementing the *Haor* Master Plan, the project strengthens national and regional efforts to transform the *Haor* basin into a resilient and sustainable socio-ecological system. By aligning with these key strategies and plans, the project ensures coherence with Bangladesh's climate adaptation and development frameworks at all levels national, regional, and local. Its interventions are not only consistent with but also operationalize the goals outlined in the NAP, BCCSAP, NDCs, Local Government Development Plans, and the *Haor* Master Plan. This alignment guarantees policy relevance, long-term sustainability, and scalability of the proposed interventions.

Table 5.1: Alignment with National Strategies and How the Project Contributes

Plan / Strategy Referenced	Specific Objectives / Targets Addressed	How the Project Operationalizes These Provisions
National Adaptation Plan (NAP) 2023	Strategic Objective 1: Resilient settlements, climate-adaptive housing, and infrastructure in hotspots such as *Haor* and char areas.	Constructs elevated, flood-resilient houses; installs climate-smart WASH systems; promotes household-level adaptation through CHAGs—directly building resilient settlements in *Haor* regions.
Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009	Pillar 1: Social protection for climate-vulnerable groups. Pillar 3: Climate-resilient housing and protective infrastructure.	Provides durable elevated housing and safe WASH systems for vulnerable *Haor* households, directly reducing annual flood losses and strengthening social protection for the poorest.
Nationally Determined Contributions (NDCs) 2021	Adaptation Priority: Strengthening climate-resilient housing, water systems, sanitation, and renewable energy in vulnerable communities.	Delivers stilt/plinth houses, solar lighting, rainwater harvesting, and climate-resilient sanitation, supporting NDC adaptation commitments under Article 7.
Eighth Five Year Plan & National Poverty Reduction Strategy	Targets: Improved rural housing for low-income populations, enhanced disaster resilience, and protection of household assets.	Protects poor households from displacement and asset loss through flood-resilient housing and integrated WASH systems, contributing to rural poverty reduction and social protection.
Local Government Development Plans (Union &Upazila Plans)	Local priorities: Elevated housing, safe water, sanitation, and preparedness for recurrent flash floods in Haor areas.	Provides climate-resilient houses and WASH infrastructure based on community demand, strengthening locally identified adaptation priorities and community resilience.
Haor Master Plan (2012-2032)	Priorities: Flood-resilient housing (4.2); improved water and sanitation (3.5); ecosystem stabilization through homestead plantation (6.4).	Implements elevated housing, improved WASH systems, and homestead-level plantations that reduce erosion and strengthen the long-term ecological balance of the Haor basin.

Table 5.2 : SDG alignment

SDG	Relevant SDG Target(s)	How the Project Contributes
SDG 1: No Poverty	Target 1.5: Build resilience of vulnerable populations and reduce exposure to climate-related shocks.	Resilient housing and WASH reduce annual flood losses, protect household assets, and prevent climate-induced impoverishment.
SDG 5: Gender Equality	Target 5.5: Ensure women's full participation in decision-making.	Women participate actively in CHAGs and receive priority access to training and household-level adaptation roles.
SDG 6: Clean Water and Sanitation	Target 6.1-6.2: Safe drinking water and sanitation for all.	Rainwater harvesting, eco-toilets, and hygiene training ensure reliable WASH services during floods.
SDG 7 :Affordable and Clean Energy	Target 7.1: Access to modern and reliable energy.	Solar lighting systems provide safe, renewable energy during grid disruptions in Haor areas.
SDG 11: Sustainable Cities and Communities	Target 11.5: Reduce the impact of disasters on vulnerable communities.	Flood-resilient housing minimizes displacement, protects assets, and strengthens community safety.
SDG 13 :Climate Action	Target 13.1: Strengthen resilience and adaptive capacity to climate hazards.	The project builds climate-resilient settlements through elevated housing, WASH, renewable energy, and community-based adaptation.
SDG 15 :Life on Land	Target 15.1-15.3: Restore ecosystems and prevent land degradation.	Homestead tree planting reduces erosion, enhances soil stability, and supports local biodiversity in Haor ecosystems.

Integration of Project Activities into Local Planning Processes:

The project is closely aligned with local development and disaster management priorities across the Haor region. District Development Plans in Haor districts consistently highlight the need for safe, elevated housing; improved sanitation; and risk-reduction measures for highly exposed communities living in deeply flash flood-prone areas. Upazila Disaster Management Plans in Haor upazilas such as Khaliajuri, Mohanganj, Itna, Mithamoin, Austagram, Derai, Tahirpur, and Dowarabazar prioritize raised homesteads, safe water systems, erosion-control tree plantation, and community preparedness—reflecting the unique wave, flash flood, and waterlogging dynamics of the Haor basin. Union Parishad Development Plans across these areas also emphasize urgent needs for climate-resilient WASH facilities, stronger early warning mechanisms, and support for households living on low-lying land.

The project responds directly to these Haor-specific priorities by introducing flood-resilient housing designs suitable for prolonged inundation, rainwater harvesting systems that address post-monsoon water scarcity, eco-toilets adapted for waterlogged conditions, solar lighting for isolated settlements, and homestead-level tree plantation to reduce wave action and soil erosion. Through active engagement of Community Housing and Adaptation Groups (CHAGs) and close coordination with Partner Organizations, project lessons and monitoring results will be shared with Union Parishads and integrated into the annual Union and Upazila planning processes. This ensures strong institutional alignment, local ownership, and long-term incorporation of Haor-appropriate resilience solutions into local development and disaster management frameworks.

E. Describe how the project / programme meets relevant national technical standards, where applicable,such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund. Also describe, as needed, how the

project/programme will provide support to local actors and build their capacities to comply with the standards.

Compliance with National Technical Standards and Environmental and Social Policy

Alignment with National Standards and Regulations
The proposed project is fully aligned with the legal and technical framework of Bangladesh and will strictly adhere to all relevant standards to ensure quality, durability, and environmental sustainability.

Environmental Conservation Rules 1997 and Environment Protection Act 1995: Each sub-project activity will be subject to Environmental Assessment (EA) screening, and Environmental Clearance Certificates will be obtained from the Department of Environment (DoE) where applicable.

Water Supply and Sanitation Standards: Installation of eco-toilets and rainwater harvesting systems will follow Department of Public Health Engineering (DPHE) standards, ensuring safe sanitation and potable water access.

Renewable Energy Guidelines: All solar home systems and lighting solutions will be procured and installed in compliance with Sustainable and Renewable Energy Development Authority (SREDA) protocols.

Compliance with the Adaptation Fund's Environmental and Social Policy (ESP)
The project will ensure systematic application of the Adaptation Fund's ESP through a risk-based approach.

Screening and Categorization: All interventions will undergo environmental and social risk screening, with classification according to potential impacts.

Mitigation Measures: For interventions with moderate risks, Environmental and Social Management Plans (ESMPs) will be developed and implemented with robust monitoring and mitigation actions.

Gender Equality and Inclusion: Gender action plans will be mainstreamed across all components, with indicators to track women's participation in design, decision-making, and benefit-sharing.

Grievance Redress Mechanism (GRM): A transparent and inclusive GRM will be established at the community level, allowing beneficiaries to raise concerns and seek redress without barriers.

Capacity Building and Support to Local Actors: Recognizing that effective compliance depends on local capacity, the project will provide training, technical assistance, and continuous oversight:

Training for Builders and Engineers: Over 100 masons, artisans, and 50 engineers will be trained in climate-resilient construction methods, BNBC standards, sanitation technologies, and renewable energy systems.

Orientation for Local Authorities: Union Parishads, local groups, and implementing partners will be sensitized on environmental and social safeguards, compliance monitoring, and community engagement.

Technical Supervision and Oversight: Dedicated engineers and safeguard specialists will oversee construction, ensuring all works meet prescribed national and international standards.

Knowledge Materials and Tools: User-friendly manuals, construction checklists, and guides in Bangla will be distributed, enabling local builders and households to understand and comply with standards.

Through these measures, the project will not only ensure compliance with national and international standards but also strengthen local institutional and technical capacities, creating long-term sustainability in climate-resilient housing and infrastructure development.

F. Describe if there is duplication of project / programme with other funding sources, if any. Decribe how the project/programme will ensure coordination of different initiatives, sub-projects and small grants towards a common goal, enhances collaboration across sectors and outlines how activities avoid duplication and enhance efficiencies and good practice.

Avoidance of Duplication with Other Funding Sources: A thorough assessment has been conducted to ensure that this project does not duplicate funding or activities under existing government programmes or development partner projects. While Bangladesh has several initiatives targeting disaster risk reduction and climate adaptation such as the Ministry of Disaster Management and Relief's housing support and social safety net schemes these efforts generally provide basic emergency shelter, often without integration of climate-resilient designs, renewable energy, water and sanitation systems, or community-based capacity building.

Similarly, while NGOs and other development partners have piloted small-scale resilient housing in selected regions, no programme has comprehensively combined:

- Participatory risk mapping and household selection,
- Climate-resilient housing meeting BNBC standards,
- Solar energy and safe water solutions,
- Skills development for masons and engineers,
- Knowledge management and policy advocacy to scale up impact nationally.

Therefore, this project will complement, rather than duplicate, ongoing initiatives, filling critical gaps in integrated, community-owned, climate-resilient housing and services for the most vulnerable populations.

Coordination Mechanisms and Collaboration across Sectors

To ensure effective coordination and synergy, the project will adopt a multi-level governance and engagement framework emphasizing inclusiveness, transparency, and responsiveness.

Community Consultation Platforms: Regular participatory consultations will be held with households, local leaders, and community-based organizations to ensure that interventions reflect local needs, priorities, and indigenous knowledge.

Local Implementation Groups: At Union and Upazila levels, these groups will work closely with local government, NGOs, and development partners active in the area to harmonize activities, avoid duplication, and leverage complementary initiatives.

Regular Communication Channels: A structured communication system, including periodic meetings, progress-sharing workshops, and digital reporting tools, will be established to ensure smooth information flow among stakeholders at all levels.

Strong Monitoring and Feedback Systems: A robust monitoring mechanism will be applied to track implementation progress, identify challenges, and make timely adjustments. Community-based monitoring groups will also play a role in providing feedback and ensuring accountability.

Through these mechanisms, the project will foster strong collaboration across sectors and build a transparent, participatory, and adaptive implementation environment.

Harmonization and Integration with Other Projects: Where possible, the project will actively leverage and integrate resources and expertise from other relevant programmes:

- Training modules for masons and engineers will build on curricula already developed by the Housing and Building Research Institute (HBRI) and relevant NGOs.
- Community engagement will be coordinated with existing disaster preparedness groups and women's groups supported under the Comprehensive Disaster Management Programme.
- Renewable energy installations will align with SREDA guidelines and potentially benefit from cost-sharing under national solar promotion schemes.

Efficiencies, Good Practices, and Scaling Up: This integrated approach will:

- Reduce transaction costs by combining housing, energy, and water interventions under a single project management structure,
- Encourage cross-sector collaboration between local government, technical agencies, and civil society,
- Build a scalable model that can be replicated under government and donor-funded programmes, and
- Create evidence and learning products (e.g., design guidelines, policy briefs, training manuals) that support harmonized standards and capacity across the sector.

Through these measures, the project will not only avoid duplication but actively enhance efficiency, coherence, and good practices in climate-resilient housing and community-based adaptation.

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned and how this contributes to building and institutionalizing local

capabilities. Provide details on managing traditional and/or indigenous knowledge, where relevant.

Learning, documentation, and knowledge sharing are central to this project's Locally Led Adaptation (LLA) approach, and will be integrated from the start to support sustainability, replication, and institutional learning.

1.Participatory Learning-by-Doing: The project promotes community-driven innovation by engaging beneficiaries in the design, construction, and monitoring of resilient homes. Local feedback will be gathered at each stage through community consultations, reflection sessions, and household surveys to inform adaptive learning.

2. Documentation of Local Solutions and Practices: Field teams and community monitoring groups will help document indigenous knowledge, innovations in housing design, and community adaptation practices. These will be compiled into:

- Illustrated manuals on resilient housing
- Case studies featuring beneficiaries and local builders
- Short videos and infographics in local languages

3. Knowledge Sharing Platforms: Workshops will be organized at local, regional, and national levels involving government, NGOs, academia, and development partners. Partner Organizations (POs) will share learning with other POs under PKSF's network, promoting south-south knowledge exchange.

4. Policy Influence and Upscaling: Key findings and successful models will be shared with the Ministry of Disaster Management and Relief, Ministry of Environment, Forest and Climate Change, and Local Government Division to advocate for replication through public schemes.

5. Digital Knowledge Hub: A web-based platform hosted by PKSF will feature all learning materials, progress updates, and toolkits accessible to policymakers, NGOs, and community groups across the country.

6. Capacity Strengthening: Over 500 local masons, Union Parishad representatives, and community volunteers will be trained, creating a local knowledge base that continues beyond the project life.

Through these mechanisms, the project not only delivers physical infrastructure but also builds long-term human and institutional capacity for adaptation in the Haor region and beyond.

Consultative Process and Inclusivity

The project will follow a structured, inclusive, and iterative consultative process during preparation and implementation to ensure that the voices of vulnerable and marginalized groupsincluding women, persons with disabilities, the elderly, and landless householdsare not only heard but also shape key decisions.

Planned Consultative Approach:

1. **Community Mobilization and Dialogue Sessions:**Initial community consultations will be held in each target union to understand local housing challenges, climate risks, and adaptation needs. Special sessions will be conducted with women's groups, youth, and persons with disabilities to ensure their perspectives are gathered separately and safely.

2. **Participatory Vulnerability Assessments (PVAs):**Local stakeholders will co-lead PVAs to identify households most exposed to climate hazards and define key housing features that match their needs. This process will help avoid top-down assumptions and instead tailor housing models based on lived realities.

3. **Household-Level Interviews and Focus Groups:**Feedback will be collected on materials, design preferences, and maintenance capacity, allowing localized and gender-sensitive adaptation measures to be embedded in design.

4. **Formation of Community Adaptation and Housing Groups (CHAGs):**At least 40% of group members will be women, and members from vulnerable groups will be prioritized. These groups will lead in beneficiary selection, local procurement monitoring, and ensuring social equity during implementation.

5. **Alignment with the Adaptation Fund's Environmental and Social Policy (ESP):**The consultative process is designed to ensure compliance with the Adaptation Fund's ESP principles, especially:

    - Access and Equity
    - Marginalized and Vulnerable Groups
    - Gender Equality and Women's Empowerment
    - Core Labour Rights

Capturing diverse knowledge: The project will capture diverse knowledge through community-led processes rather than relying only on formal documentation. The Community Housing and Adaptation Groups (CHACs), along with women's groups, youth volunteers, and trained local masons, will act as active knowledge generators by documenting traditional housing practices, locally tested innovations, lived flood experiences, and lessons from both successful and unsuccessful construction activities. This knowledge will be gathered through community reflection sessions, participatory scorecards, oral-history sharing, and simple visual tools suitable for low-literacy contexts. PKSF and Partner Organization field teams will help communities organise and synthesise this information, but ownership of the learning process will remain with local actors. By elevating community experience and traditional insights alongside technical inputs, the project ensures that knowledge flows upward from communities and is continuously integrated into adaptive management.

Systems, tools, or platforms that enable local institutions to access knowledge beyond the project Local institutions will access knowledge through a combination of low-tech and structured systems that ensure accessibility beyond the project period. These include printed community-friendly manuals, locally maintained knowledge boards, and shared digital folders managed by POs that compile community

innovations, technical guidance, and lessons from other regions. Union Parishads and CHACs will also receive simplified toolkits and visual guides that translate national standards and best practices into haor-relevant formats. PKSF will maintain an online repository where POs and local institutions can access updated designs, training materials, and case studies, ensuring continuity of learning beyond the project.

How adaptive management informs decision-making and course correction
Adaptive management will occur through regular feedback loops between communities, POs, and PKSF. CHAC reflection meetings and community monitoring scorecards will surface problems such as construction delays, material issues, or challenges faced by vulnerable households. These insights will be reviewed during PO coordination meetings and quarterly joint reviews with PKSF. Decisions such as revising construction guidance, adjusting beneficiary support, modifying training content, or refining siting criteria will be made jointly based on this community-generated evidence. This ensures that learning continuously shapes implementation rather than remaining a reporting exercise.

Embedding KM capacity in permanent institutions
Knowledge management capacity will be embedded within long-standing institutions specifically Union Parishads, CHACs, and PKSF's partner organizations to ensure continuity after project completion. CHACs will be trained in simple knowledge documentation and reporting tools, while POs will integrate community-generated lessons into their ongoing programs. PKSF will institutionalize successful practices through its Environmental and Climate Change Unit and disseminate them across its national network of POs.

Designing outputs for different audiences, languages, and literacy levels
Knowledge products will be adapted to the needs of diverse audiences by using multiple formats and languages. Communities will receive highly visual materials using diagrams, photos, and color-coded guidance suitable for low-literacy households. Technical guidelines for masons and engineers will be more detailed but still simplified for practical use. Union Parishads and POs will receive structured manuals and templates aligned with local planning processes. Where needed, materials will be translated into local dialects, and audio-visual formats will be used for groups with limited literacy, ensuring that knowledge is accessible and meaningful for all stakeholders.

H. **Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund. Provide details on how the consultative process considered and addressed gender-based, economic and other inequalities and encouraged vulnerable and marginalized individuals to meaningfully participate in and lead adaptation decisions**.

The design of this project was informed by an inclusive and participatory consultative process. This process was structured to ensure that the perspectives, needs, and priorities of the most climate-vulnerable populations including women, persons with disabilities, elderly people, landless households, and marginalized ethnic groups were central to shaping the proposed interventions.

A wide range of stakeholders contributed to this process. Community members were engaged extensively, including female-headed households, landless and extreme poor families, elderly individuals, and representatives of Indigenous and marginalized ethnic communities. Local government institutions, such as Union Parishads and Upazila Disaster Management Committees, participated alongside technical agencies including the Department of Public Health Engineering, the Housing and Building Research Institute, and the Sustainable and Renewable Energy Development Authority. Civil society organizations, especially local women's groups, microfinance institutions, and community-based organizations active in the target areas, also played a key role. In addition, representatives of development partners and UN agencies implementing related programmes were consulted to promote alignment and avoid duplication.

To ensure broad and inclusive participation, a combination of methods was employed. Community workshops and focus group discussions were held in villages across the project area. Special focus groups were organized separately for women, youth, and marginalized groups to create safe spaces for sharing experiences and articulating priorities. In total, 5 focus groups were conducted. Key informant interviews were carried out with Union Parishad Chairpersons, Upazila Engineers, school teachers, religious leaders, and other respected community figures. Household surveys were administered to families to collect baseline information on flood vulnerability, housing conditions, access to safe water and sanitation, and community expectations for support. Finally, stakeholder validation workshops were organized to present the draft project design and collect feedback to ensure consensus and ownership.

The consultative process explicitly addressed gender-based, economic, and other inequalities. Women comprised at least [50%] of all focus group participants and were encouraged to take active roles in facilitating discussions and decision-making. Meetings were held in accessible venues to ensure participation by persons with disabilities, and communication materials were prepared in plain language with visual aids to accommodate diverse literacy levels. For Indigenous and marginalized ethnic groups, consultations were conducted in preferred local languages with interpretation support where necessary. Recognizing the economic constraints faced by many households, the project provided transport stipends and refreshments to remove barriers to participation for low-income community members.

Feedback gathered through this process directly shaped the project's design. Selection criteria for housing support and services were refined to prioritize female-headed households, persons with disabilities, and families with chronic poverty or repeated disaster losses. Communities emphasized the need for housing designs that accounted for increasing flood depths, leading to the inclusion of elevated plinths and stilt options. Women participants, in particular, highlighted the importance of safe sanitation and reliable lighting to support health and dignity, informing the integration of eco-toilets and solar energy solutions. The consultations also underscored the need for local training and employment opportunities, which led to a focus on skills development for masons, artisans, and women-led groups in resilient construction.

This consultative process fully adhered to the Environmental and Social Policy and Gender Policy of the Adaptation Fund. All engagements were based on free, prior, and informed consent, with a strong emphasis on culturally sensitive and gender-responsive approaches. Concerns and suggestions raised by stakeholders were documented and incorporated into the project design, ensuring that planned activities are socially inclusive and responsive to the lived realities of vulnerable and marginalized populations.

This approach has established a strong foundation of community ownership and trust that will support meaningful participation and leadership by vulnerable groups throughout the implementation and monitoring of the project.

I. Providejustificationforfundingrequested,focusingonthefullcostofadaptationreasoning.

Bangladesh does not have sufficient domestic resources to finance the scale of adaptation required to address the worsening impacts of climate change. As one of the most climate-vulnerable countries in the world, it faces frequent and devastating floods that erode development gains and place enormous strain on national budgets. Yet the poorest and most marginalized households in rural floodplains are often the most deprived of support, trapped in a cycle of asset loss, displacement, disease, and declining livelihoods. Without targeted external financing, these communities will remain locked in poverty and left behind in the face of escalating climate risks.

Traditional coping strategies, such as manually raising plinths or reinforcing mud and thatch walls, provide only temporary relief. They cannot withstand the intensity of floods now projected under future climate scenarios. For these families, adaptation is not optional it is a matter of survival. However, the incremental costs of building climate-resilient housing, installing safe water and sanitation systems, and adopting renewable energy solutions are far beyond their reach. Local development programmes typically focus on poverty reduction or disaster recovery and cannot cover the additional costs of climate-proofing homes, services, and livelihoods.

The requested funding therefore represents the full cost of adaptation needed to secure the lives and dignity of the most climate-exposed populations. Specifically, it will finance:

- Climate-resilient housing on elevated plinths and stilts, designed to withstand higher flood levels;
- Safe water and sanitation systems that protect health during inundation;
- Solar lighting and energy systems that ensure safety and functionality when grid power fails;
- Training for masons, builders, and community members to embed technical capacity and enable long-term replication of resilient practices; and
- Knowledge generation and policy engagement to ensure that the solutions are scaled and sustained beyond the project's lifespan.

Each of these interventions directly addresses the adaptation deficit in haor and flood-prone districts, where exposure is extremely high, sensitivity is acute, and adaptive capacity is minimal. The proposed measures cannot be delivered through local resources alone, but with targeted international financing they become transformativebreaking cycles of disaster dependence and building long-term resilience.

The project has been designed to ensure efficiency and value for money by prioritizing locally appropriate, cost-effective materials, and embedding strong community ownership. By training local masons and promoting participatory management, the project reduces costs, creates local employment, and ensures sustainability of adaptation measures beyond donor support.

This investment will allow those least responsible for climate change, yet most affected by its consequences, to access safe housing, clean water, sanitation, and energy. It will protect their health and livelihoods and serve as a scalable model for safeguarding other climate-vulnerable communities across Bangladesh.

J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project / programme. In particular, describe how the project/programme supports long-term development of local governance processes, and improves the capacity of local institutions (including through simpler access modalities), and how it can ensure that communities can effectively implement adaptation actions, facilitate and manage adaptation initiatives over the long term without being dependent on project-based donor funding.

Sustainability has been a central consideration in designing this project. The interventions are structured not as stand-alone, externally driven activities, but as investments that strengthen local capacity, systems, and ownership, enabling communities and institutions to maintain and scale adaptation solutions over the long term without relying indefinitely on donor funding.

First, the project emphasizes local governance and community ownership as foundational pillars of sustainability. From the outset, participatory vulnerability assessments and planning processes will ensure that community members and local government institutions jointly define priorities and monitor progress. By establishing and supporting Union and *Upazila*-level implementation groups including local elected representatives, women's groups, and disaster management groups the project will embed decision-making capacity close to the community level. This approach strengthens accountability and ensures that investments reflect the real needs and aspirations of vulnerable households.

Second, the project invests heavily in capacity development for local institutions and actors. Over 500 masons and 50 engineers will be trained in climate-resilient construction techniques aligned with the Bangladesh National Building Code. Community leaders and local government officials will be oriented on technical standards, environmental and social safeguards, and transparent beneficiary selection. These skills and institutional processes will remain in place long after project completion, enabling communities to continue constructing, maintaining, and replicating resilient housing solutions using locally available resources.

Third, the integration of simplified access modalities and locally appropriate technologies is designed to improve sustainability and reduce dependency on external expertise. Construction designs will prioritize affordable, locally sourced materials, and solar lighting and rainwater harvesting systems will be sized and configured to enable easy maintenance by trained community members. By demonstrating the feasibility and affordability of these approaches, the project will catalyze demand and support replication through government social protection and housing programmes.

Fourth, the project will generate a suite of knowledge products and policy advocacy tools, including practical construction manuals in Bangla, video documentation of good practices, and policy briefs, to promote mainstreaming of resilient housing and integrated services in national strategies. By aligning with government policies and priorities, the project will create an enabling environment for sustained financing and scale-up.

Finally, the project's participatory approach ensures that communities gain confidence and agency to plan, manage, and monitor adaptation initiatives themselves. Households and local institutions will be empowered with the knowledge and tools to identify evolving risks and mobilize their own resources and networks to address them over time. The integration of climate adaptation with skills development, health, and livelihoods will further contribute to the resilience of local economies, reducing reliance on periodic project-based donor assistance.

Through these measures, the project will not only deliver immediate protection from climate hazards but also lay the foundation for long-term, community-driven adaptation, strengthening the capacity of institutions and households to thrive in a changing climate.

Table:6 Comparative Cost-Effectiveness Analysis of Adaptation Options Over a 20-Year Horizon

Option / Measure	Actual Unit Cost (From Budget)	Benefits (Economic / Social / Environmental)	20-Year Quantified Returns	Cost-Effectiveness (20-year horizon)
A. Climate-resilient housing,	Housing: 3,700/HH	• Prevents house collapse,	Avoided housing loss: $300-$550/yr	IRR = 12%-18% B/C Ratio = 1.4 - 2.2: 1

Option / Measure	Actual Unit Cost (From Budget)	Benefits (Economic / Social / Environmental)	20-Year Quantified Returns	Cost-Effectiveness (20-year horizon)
Solar + RWH + eco-toilet+Trees + training	WASH: 900/HH Tree planting: 67/HH Training + Local governance: 178/HH Total Real Investment = $6,592 per HH	displacement & asset loss • Reduces waterborne disease & WASH disruption • Ensures lighting during outages • Protects homestead from wave erosion (*afal*) • Strengthens local institutions and masons	Health savings: $40-$60/yr Energy savings: $25-$40/yr Livelihood protection: $80-$120/yr Total Annual Return = $445-$770	Still strongly positive; avoids repeated reconstruction and humanitarian costs.
B.No-Action Scenario	$0	• Recurrent flooding destroys homes every 2-5 yrs • Erosion leads to land loss • Tube-wells contaminated • High disease burden • Emergency shelter & repair costs	Housing losses: $1,000-$2,500 per event Severe floods every 2-5 yrs → $5,000-$15,000 over 20 yrs Health costs: $50-$100/yr	Negative: No resilience gains; escalating financial loss & social insecurity.
C. Cash Assistance During Floods	$120-$200 per household per event	• Temporarily protects food and health needs• Does not reduce future losses• No asset creation	Provides 1-2 months of consumption support onlyNo avoided loss	Not cost-effective Repeated every flood event; no long-term benefits.
D. Post-disaster Reconstruction Grants	$800-$1,500 per HH per event	• Repairs collapsed homes but doesn't change vulnerability• Families re-exposed next year	2-4 cycles in 20 years → $2,400-$6,000/HH Still loses assets, income, livestock	Not cost-effective Total cost approaches or exceeds preventive investment, but without resilience.

K. Provideanoverviewoftheenvironmentalandsocialimpactsandrisksidentifiedasbeing relevantto the project / programme.

A preliminary screening of the project has been conducted in alignment with the Adaptation Fund Environmental and Social Policy to identify potential environmental and social impacts and risks. The project is expected to generate predominantly positive impacts by improving the safety, health, and resilience of highly vulnerable communities. However, some moderate and low-level risks have been identified that will require mitigation measures.

Potential environmental impacts include localized disturbance during the construction of climate-resilient housing, installation of sanitation facilities, and placement of solar panels. These activities may temporarily generate dust, noise, and construction waste. There is also a minor risk of soil erosion or vegetation clearance on housing sites, especially where elevated plinths or stilt foundations are constructed. These risks will be managed through site-specific environmental management measures, compliance with the Bangladesh National Building Code, and adherence to good construction practices.

From a social perspective, the project is designed to deliver inclusive and equitable benefits, especially for marginalized and vulnerable households. However, several risks have been identified. There is a moderate risk of tension or perceived unfairness around beneficiary selection if transparent processes are not rigorously applied. The project also recognizes that if gender dynamics and power imbalances within households or communities are not addressed proactively, women, persons with disabilities, and marginalized groups could face barriers to fully accessing benefits or participating in decision-making.

The project also assessed potential risks related to land tenure and resettlement. While no large-scale land acquisition or physical displacement is anticipated, in some cases, construction of resilient housing may require verification of tenure status or negotiation of community agreements for land use. These issues will be managed through participatory planning and robust grievance redress mechanisms.

No significant adverse impacts on Indigenous Peoples, cultural heritage, or critical habitats have been identified at this stage. Nonetheless, safeguards will be applied to ensure that all activities are screened and monitored, and that any unforeseen issues are addressed promptly in consultation with affected communities.

Overall, the project is considered to carry a low to moderate environmental and social risk profile. A detailed Environmental and Social Management Plan (ESMP) will be prepared during inception to guide mitigation, monitoring, and reporting of these risks in compliance with Adaptation Fund policies and national regulations.

Table:7- Environmental and social principle

Environmental & Social Principle	No further assessment required	Risk Category	Justification (Including Risks & Mitigation)
1. Compliance with the Law		Low	Activities follow national housing, WASH, and safety regulations; minor risk of administrative delays. Mitigation includes PO ensuring all approvals and compliance.
2. Access and Equity	✓	Low	All households receive equal access; small risk of exclusion of ultra-poor. Transparent criteria and CHAC oversight ensure fairness.
3. Marginalized & Vulnerable Groups	✓	Low	Vulnerable households may be unintentionally overlooked. Prioritization criteria and inclusive consultations address this.
4. Human Rights		Low	No activities threaten rights; participation barriers may arise. Community engagement and grievance mechanisms mitigate risks.
5. Gender Equality & Women's Empowerment	✓	Low	Women may be underrepresented in decision-making. Minimum 50% female representation and women-led O&M activities mitigate risk.
6. Core Labour Rights		Medium	Construction involves casual labor; risks include unsafe work conditions or unfair wages. Enforcement of PPE, wage standards, and child labor prohibition mitigate this.
7. Indigenous Peoples		Low	Project areas do not include recognized Indigenous communities; risk of inadvertent exclusion is minimal. Screening before implementation mitigates this.
8. Involuntary Resettlement		Low	No land acquisition is involved; minor risks if homestead boundaries are unclear. Verification of land ownership/use prevents issues.
9. Protection of Natural Habitats	✓	Low	Work occurs on existing homesteads, with minor disturbance risk. Avoiding sensitive areas and proper supervision mitigate impacts.
10. Conservation of Biological Diversity		Low	Tree planting generally positive; survival risk exists without maintenance. Use of native species and care guidelines reduces risk.
11. Climate Change		Low	Designs are climate-resilient; poor construction could reduce performance. Certified masons and PO supervision ensure quality.

Environmental & Social Principle	No further assessment required	Risk Category	Justification (Including Risks & Mitigation)
12. Pollution Prevention & Resource Efficiency		Low	Small risk of improper disposal of construction waste. Simple waste-management measures mitigate this.
13. Public Health	✓	Low	WASH systems improve health; misuse could reduce effectiveness. Hygiene training and O&M support mitigate risk.
14. Physical & Cultural Heritage	✓	Low	No known heritage sites at locations; chance finds may occur. A chance-find protocol will be used.
15. Lands & Soil Conservation		Medium	Plinth and stilt construction may disturb soil or trigger erosion. Proper compaction, drainage, and tree line maintenance mitigate impacts.

PARTIII:IMPLEMENTATIONARRANGEMENTS

A. **Describe the arrangements for project / programme implementation. Please describe how the implementation modalities enable giving local institutions and communities more direct access to financeanddecision-makingpoweroverhowadaptationactionsaredefined,prioritized,designedand implemented.**

The project will be implemented through an inclusive, multi-tiered structure designed to ensure that local institutions and communities have direct access to resources, decision-making power, and ownership of adaptation actions.

The Project Implementing Entity will be the Palli Karma-Sahayak Foundation (PKSF), a national institution with extensive experience in managing community-driven development and climate adaptation programmes across Bangladesh. PKSF will be responsible for overall coordination, financial management, compliance with fiduciary and environmental and social standards, and reporting to the Adaptation Fund.

Implementation at the community level will be carried out through PKSF's network of Partner Organizations (POs), which are established civil society organizations with strong local presence and trust. The POs will directly engage with Union Parishads, community-based organizations, and beneficiary households to identify priorities, finalize site selection, manage construction and service delivery, and monitor progress.

This decentralized approach enables resources to flow efficiently to the communities where adaptation needs are greatest, while maintaining strong accountability mechanisms.

To strengthen local ownership, the project will establish Union and Upazila-level Implementation Groups comprising elected representatives, women's groups, disaster management groups, and representatives of vulnerable households. These groups will be actively involved in designing and endorsing selection criteria for beneficiaries, approving construction designs and adaptation measures, and overseeing the implementation process. Regular meetings and participatory monitoring sessions will ensure that decisions are transparent and reflect the perspectives of the most affected groups.

At the household level, participatory vulnerability assessments will be conducted to identify and prioritize needs. Communities will be able to choose among locally appropriate housing designs and decide on the integration of renewable energy and water-sanitation solutions based on their circumstances. Training and awareness-raising activities will further empower communities to make informed decisions about adaptation options and maintain investments over time.

Financial flows will be structured to enable local organizations and communities to access funding directly through the POs for construction materials, skilled labor, and training activities, with clear disbursement procedures and reporting requirements to ensure transparency. This direct access modality reduces dependency on centralized structures, speeds up delivery, and increases the sense of ownership among local stakeholders.

This implementation arrangement is designed to blend technical oversight and quality assurance with community-led prioritization, design, and monitoring. By integrating participatory governance structures, simplified financing channels, and strong capacity-building components, the project will ensure that local institutions and communities are not only beneficiaries but also leaders and custodians of climate adaptation investments.

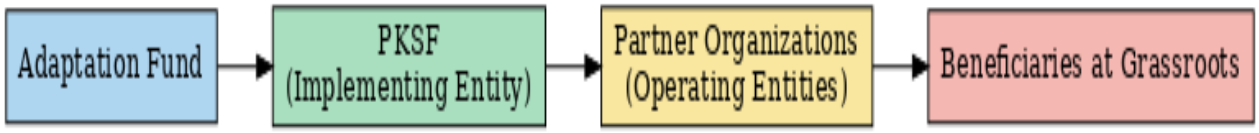


Figure:4-Fund flow

Mechanisms for Downward Accountability to Local Stakeholders

The project embeds downward accountability throughout its design and implementation to ensure that communities not implementing agencies remain the primary decision-makers and beneficiaries. Accountability begins with transparent targeting and public disclosure, where beneficiary lists, selection criteria, construction timelines, and budgets are publicly displayed at and reviewed in open community meetings. Community members can question, refine, or contest decisions before they are finalized.

Decision-making authority is devolved to Groups, which include ultra-poor households, women, and persons with disabilities. These groups validate site selection, housing layout preferences, local labor choices, and construction sequencing. PO and PKSF staff serve in supportive, not directive, roles, ensuring that technical input does not displace community choice.

A three-tier grievance redress system, accessible through verbal reporting, complaint boxes, phone/SMS, women-only feedback spaces and information centers, allows any resident to raise concerns about exclusion, discrimination, construction quality, or staff behavior. All grievances are logged locally, reviewed publicly, and escalated if unresolved, guaranteeing that the voices of marginalized households can influence decisions.

Monitoring is also community-centered. Communities use simplified monitoring checklists to track progress, verify construction quality, and confirm adherence to agreed safety elements. Results are shared in open forums where PKSF, PO, and group members jointly review progress and corrective actions. These steps ensure that communities have continuous oversight, direct channels for feedback, and the authority to shape project implementation reflecting a robust system of downward accountability consistent with Principle 7.

B. **Describethemeasuresforfinancialandproject/programmeriskmanagement. Pleasedescribehowlocal stakeholders contribute to the design and management project risk management.**

A comprehensive approach to financial and project risk management has been integrated into the project design to ensure that resources are used efficiently, transparently, and in alignment with the objectives of the Adaptation Fund.

At the financial management level, PKSF will apply its established fiduciary systems, which meet international standards for oversight, accountability, and transparency. This includes robust budgeting, internal controls, and procurement procedures, supported by an automated financial management information system. All disbursements to Partner Organizations (POs) and implementing partners will be subject to clear eligibility criteria, signed agreements, and pre-defined milestones. PKSF will carry out regular internal audits and financial reviews, complemented by independent external audits. These mechanisms will help to detect and address any financial irregularities or mismanagement early.

To mitigate project risks related to delays, quality, or operational challenges, the project will establish a multi-level monitoring and risk management framework. At the national level, a Project Steering Group will convene periodically to review progress, assess risks, and provide strategic guidance. Technical Working Groups comprising specialists in engineering, environmental and social safeguards, and renewable energy will support risk identification and solutions as needed.

At the local level, Implementation group will play a central role in identifying and managing risks throughout the project cycle. During project preparation and inception, participatory assessments will be conducted to map potential risks including construction delays, material shortages, climate-related disruptions, and social tensions and develop mitigation strategies. For example, if a flood event interrupts

construction schedules, contingency plans will prioritize phased implementation and temporary protective measures to safeguard partially completed structures.

Local stakeholders will contribute directly to designing risk mitigation plans by participating in community workshops and validation meetings where potential risks and responses are discussed. Community members and beneficiaries will also be trained to monitor progress and report any issues through a transparent grievance redress mechanism, which will be accessible to all groups, including women, persons with disabilities, and marginalized communities.

Specific risk management measures include the use of vetted and qualified contractors and masons trained in resilient construction standards; regular site inspections to verify quality and adherence to safety protocols; environmental screening of all sites to prevent negative impacts; and clear documentation and approval procedures for any design modifications.

Financial and operational risks will be tracked through quarterly progress reports, financial statements, and field verification visits. Any significant deviations from plans will trigger corrective action and be reported to the Project Steering Committee and the Adaptation Fund in accordance with reporting obligations.

By combining PKSF's strong institutional systems with active involvement of local stakeholders in risk identification, monitoring, and management, the project will maintain high standards of accountability, transparency, and resilience to unforeseen challenges.

C. **Describethemeasuresforenvironmentalandsocialriskmanagement,inlinewiththeEnvironmental and Social Policy and Gender Policy of the AdaptationFund. Describe the role of local actors in developing and managing these measures.**

The project is designed to comply fully with the Environmental and Social Policy and Gender Policy of the Adaptation Fund. A range of measures will be implemented to identify, prevent, and manage any environmental and social risks that could arise during implementation.

During project preparation, an initial environmental and social screening was carried out, confirming that the project carries a low to moderate risk profile. Potential environmental risks mainly include localized disturbances during construction, such as dust generation, noise, minor soil erosion, and management of construction waste. Social risks could include unintentional exclusion of vulnerable groups, grievances over beneficiary selection, and potential safety concerns at construction sites.

To address these risks, a detailed Environmental and Social Management Plan (ESMP) will be prepared and applied. This plan will include clear procedures for environmental screening and classification of all sub-projects. Before any construction begins, each housing site and community intervention will be assessed to confirm that no critical habitats, cultural heritage sites, or environmentally sensitive areas will be affected. For activities with moderate risks, mitigation measures will be integrated into work plans, including site-specific waste management, erosion control, and safety measures.

At the social level, transparent beneficiary selection criteria and processes will be established, with clear communication to communities to prevent misunderstandings or perceptions of bias. Special attention will be given to ensuring that women, persons with disabilities, elderly people, and marginalized groups are not excluded and that their specific needs are reflected in design and implementation. Housing designs will incorporate principles of universal accessibility and privacy to promote dignity and inclusion.

The project will establish a grievance redress mechanism that is accessible, confidential, and responsive. Communities will receive information about how to submit complaints or concerns through community meetings, posters, and local focal persons. All grievances will be tracked, resolved, and documented transparently.

Local actors will play a central role in developing, managing, and monitoring environmental and social safeguards. Implementation groups will participate in the environmental and social screening of proposed activities and will help develop mitigation measures tailored to local contexts. Community representatives will oversee compliance with safeguards during construction and service delivery. They will also monitor social risks such as exclusion, discrimination, or unintended negative impacts and will participate in regular review meetings to assess progress and recommend adjustments.

Training sessions will be provided to Partner Organizations, local government officials, and community committees on safeguard policies, participatory monitoring tools, and grievance resolution. By building local knowledge and capacity, the project will ensure that environmental and social safeguards are understood, respected, and sustained beyond the project's duration.

This approach combines rigorous compliance with Adaptation Fund standards and active local ownership, ensuring that environmental and social risks are managed effectively and that the project delivers inclusive, equitable, and sustainable adaptation benefits.

D. **Describe the monitoring and evaluation arrangements and provide a budgeted M&E plan, in compliance with the Evaluation Policy, Environmental and Social Policy and the Gender Policy of the AdaptationFund.Describehowthemonitoringandinnovationarrangementdeploysinnovativetoolsto enable monitoring by the community and local actors.**

The project will implement a comprehensive Monitoring and Evaluation system fully aligned with the Adaptation Fund's Evaluation Policy, Environmental and Social Policy, and Gender Policy. PKSF will lead the overall coordination of monitoring activities with support from Partner Organizations, Community Housing and Adaptation groups (CHAGs), and Union Parishads. A dedicated M&E team within PKSF will prepare detailed monitoring plans, data collection tools, and reporting formats, ensuring that all indicators in the results framework generate sex-disaggregated and age-disaggregated information, including youth aged 15-24. Routine monitoring will take place throughout implementation and will include quarterly documentation of progress, challenges, financial status, and compliance with environmental and social safeguards. Physical progress will be verified through regular field visits by PKSF and PO engineers, complemented by community feedback gathered through CHAC meetings and grievance channels.

In accordance with mandatory Adaptation Fund requirements, the project will submit Annual Project Performance Reports (PPRs) using the official AF template. These will include progress toward targets, financial updates, ESP and Gender Policy compliance, and risk management information. At the end of the project, PKSF will prepare a Project Completion Summary Report and submit independently audited final financial statements. All required reporting activities are fully integrated into the project's M&E budget and professional service allocations.

The M&E system includes a baseline study at project inception, annual monitoring of outcome indicators, and two independent evaluations: a Mid-Term Evaluation at the halfway point and a Final Evaluation at project completion. These independent evaluations will review performance, compliance with AF policies, gender outcomes, and overall project impact. Their costs are covered under the existing evaluation budget line. To strengthen accountability and promote local ownership, community members will be trained to use simple monitoring tools, enabling CHACs and beneficiaries to track construction quality, tree survival, housing performance, drainage functionality, and WASH system conditions. This community-based monitoring approach ensures that women, youth, marginalized groups, and persons with disabilities participate meaningfully in tracking project progress and raising issues when needed.

Knowledge generated through monitoring and evaluations will be shared through learning products, community meetings, and training activities, supporting adaptive management and informing future resilience programming. All monitoring and evaluation activitiesincluding reporting, surveys, independent evaluations, community monitoring, and financial auditsare fully resourced within the existing project budget, ensuring full compliance with all Adaptation Fund requirements while strengthening transparency, learning, and community empowerment.

E. **Includearesultsframeworkfortheprojectproposal,withasetofmeasurablemilestones,targets and smart indicators, in compliance with the Gender Policy of the Adaptation Fund.**[1]

Table-8: Project Results Framework with SMART Indicators

Outcome	Indicator	Target	Milestones
Enhanced flood resilience of vulnerable households through safe and durable housing	Number of climate-resilient houses constructed and occupied by vulnerable households	700 climate-resilient houses built	Year 1: 50 houses; Year 2: 200; Year 3: 300; Year 4: All 700 completed and occupied
Improved health, hygiene, and sustainable energy access in flood-prone areas	Number of households with solar lighting, eco-toilets, rainwater harvesting systems and tree plantation	700 households equipped	Year 1: pilot 50; Year 2: 200; Year 3: 300; Year 4: 700 fully covered
Strengthened local capacity and ownership of climate-resilient housing solutions	Number of beneficiaries, masons and engineers trained; Number of community members sensitized	100 masons, 50 engineers, 2,000 community members	Year 1: 500 trained; Year 2: 500; Year 3: 500; Year 4: all remaining trainees trained

2. Core Indicator 1 - Number of Beneficiaries

Indicator	Baseline	Target at Project Approval
Total Direct Beneficiaries	0	5300
Direct Beneficiaries - Women	0	2120

[1] https://www.adaptation-fund.org/wp-content/uploads/2022/07/New-Design-Evaluation-Policy.pdfTheAFutilizedOECD/DACterminologyforitsresults framework.Projectproponentsmayusedifferentterminology,buttheoverall principle should still apply

Direct Beneficiaries - Men	0	3180
Direct Beneficiaries - Youth (15-24)	0	500 (Including men and women)
Indirect Beneficiaries	0	50,000+

3. Core Indicator 2 - Assets Produced/Strengthened

Asset Type	Baseline	Target
Climate-resilient houses	0	700
Solar lighting systems	0	700
Rainwater harvesting systems	0	700
Eco-toilets	0	700
Climate-resilient trees	0	15,400
CAHGs	0	28
Trained masons/engineers	0	150
Community members trained	0	2,000

4. Core Indicator 4 : Institutional Capacity Strengthened

Institutional Indicator	Baseline	Target
Local institutions with strengthened capacity	0	7
Functional groups	0	28
Local workforce trained	0	150

5. Core Indicator 6: Resilience of Infrastructure/Services

Service/Infrastructure Indicator	Baseline	Target
Physical assets strengthened	0	1,400 assets (700 houses + 700 WASH)
Households with resilient WASH access	0	700
Households with resilient energy access	0	700

F. **Demonstratehowtheproject/programmealignswiththeResultsFrameworkoftheAdaptationFund, including its core impact indicators.**

Alignment with the AF Results Framework

The project's outcomes and objectives are fully aligned with key Adaptation Fund Outcomes and Standard Results Framework Indicators, ensuring measurable and direct contributions to strengthened climate resilience in the Haor region. The project objective supported by resilient housing, WASH, renewable energy, and capacity-building investments corresponds to AF Outcome 4, reflecting its emphasis on safeguarding vulnerable infrastructure and services against flash floods and wave-driven erosion. Each project outcome is mapped to one most relevant AF outcome and indicator, demonstrating clear logic and

traceability: resilient housing reduces physical exposure to climate hazards, WASH and renewable energy assets enhance adaptive capacities and basic service continuity, and capacity-building empowers local institutions and community groups to sustain and replicate resilient practices. The grant allocations reinforce these linkages, ensuring adequate financing to achieve tangible resilience benefits for households, institutions, and communities.

Table:9 Alignment with the AF Results Framework (1)

Project Level (Objective / Outcome)	Key Project Indicator(s)	Most Relevant Adaptation Fund Outcome	Most Relevant AF SRF Indicator / Core Indicator	Grant Amount (USD)	How the Project Contributes
Overall Project Objective: Enhance climate resilience of vulnerable Haor households through climate-resilient housing, integrated WASH and renewable energy systems, and strengthened community capacity.	• # of households with climate-resilient housing • # with improved access to WASH & renewable energy • # of people with increased adaptive capacity	Outcome 4: Increased adaptive capacity within relevant development sector services and infrastructure assets	**4.1.2** Number of physical infrastructure assets strengthened/constructed to withstand climate variability and change	4,565,578	Housing, WASH, renewable energy, and training increase adaptive capacity, reduce climate-induced losses, and strengthen infrastructure to withstand flash floods and *afal*-driven erosion.
Outcome 1: Enhanced flood resilience of vulnerable households through the construction of 700 climate-resilient houses with elevated plinths and	• # of climate-resilient houses constructed and occupied	Outcome 4: Increased resilience of infrastructure and built environment to climate change	**4.1.2** Number of physical assets strengthened/constructed to withstand climate conditions	3,687,040	The elevated/stilted climate-resilient houses withstand flash floods and wave erosion, reducing damage, displacement, and recurrent household losses.

Project Level (Objective / Outcome)	Key Project Indicator(s)	Most Relevant Adaptation Fund Outcome	Most Relevant AF SRF Indicator / Core Indicator	Grant Amount (USD)	How the Project Contributes
stilt foundations.					
Outcome 2: Improved health, hygiene, drinking water security, and renewable energy access in vulnerable households through solar lighting, rainwater harvesting, eco-toilets, and tree plantation.	• # of households with solar, RWH, eco-toilets • # of trees planted	Outcome 6: Diversified and strengthened livelihoods and sources of income for vulnerable people	**6.1.1** Number and type of adaptation assets created/strengthened to support climate-resilient basic services	754,000	Solar lighting provides energy during flood-induced grid failure; elevated eco-toilets reduce contamination; RWH provides safe drinking water when tube-wells are submerged; trees act as natural wave buffers and reduce erosion.
Outcome 3: Strengthened local capacity, skills, and ownership for climate-resilient housing, WASH O&M, and disaster preparedness.	• # of masons & engineers trained • # of CHAC/community groups functional • # of beneficiaries trained	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socio-economic and environmental losses	**2.1.2** Number of targeted institutions with increased capacity to minimize exposure to climate variability risks	124,538	Training local masons, engineers, and community groups ensures long-term maintenance, replication, and institutionalization of resilient housing and flood adaptation practices.

The project's component-level results are closely aligned with the Adaptation Fund's Strategic Results Framework, ensuring that each investment produces measurable, output-level contributions to resilient infrastructure, strengthened livelihoods, and enhanced institutional capacity. Component 1 directly advances Output 4 by constructing climate-resilient housing capable of withstanding flash floods and wave erosion in the haor landscape. Component 2 supports Output 6 by delivering critical WASH, renewable energy, and nature-based assets that safeguard health and improve livelihood security during climate shocks. Component 3 aligns with Output 2.2 by building the capacities of local institutions, masons, engineers, and community groups to sustain and expand resilient practices. Together, these components operationalize the Fund's outputs through tangible, community-level investments that significantly reduce the vulnerability of haor households and ensure long-term adaptation benefits.

Table: 10 Alignment with the AF Results Framework (2)

Project Component	Project Outputs	Fund Output (Most Relevant)	Fund Output Indicator (Most Relevant)	Budget (USD)	How the Project Contributes
Component 1 Community Engagement, Vulnerability Assessment, and Climate-Resilient Housing Construction	Output 1.1: 700 climate-resilient houses designed and constructed with elevated plinths and stilt foundations for identified vulnerable households	AF Output 4: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	Indicator 4.1.2 - Number of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change	3,687,040	Elevated and stilted houses withstand flash floods and wave-driven erosion in haor areas, reducing displacement, protecting lives and assets, and ensuring long-term safety of the most vulnerable households.
Component 2 Integration of WASH, Renewable Energy & Tree Plantation	Output 2.1: 700 solar lighting systems installed Output 2.2: 700 rainwater harvesting systems installed Output 2.3: 700 eco-toilets constructed Output 2.4: 15,400 climate-resilient trees planted	AF Output 6 - Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	Indicator 6.1.1 - Number and type of adaptation assets (tangible and intangible) created or strengthened in support of individual or community livelihood strategies	754,000	Solar lighting ensures safe energy access; RWH provides drinking water when tube-wells are submerged; eco-toilets prevent contamination; trees strengthen natural buffersimproving health, reducing disease risks, and protecting livelihoods.

Project Component	Project Outputs	Fund Output (Most Relevant)	Fund Output Indicator (Most Relevant)	Budget (USD)	How the Project Contributes
Component 3 Capacity Building & Local Skills Development	Output 3.1: CHAGs formed Output 3.2: Training curriculum and modules developed Output 3.3: Masons, engineers, women, youth, and community members trained on resilient construction, WASH, and climate adaptation	AF Output 2.2 Increased readiness and capacity of national and subnational institutions to directly access and program adaptation finance	Indicator 2.1.2 Number of targeted institutions with increased capacity to minimize exposure to climate variability risks	124,538	Strengthens local technical and institutional capacity; ensures trained masons and CHACs can maintain, repair, and replicate resilient housing; establishes long-term community governance systems for adaptation.
TOTAL PROJECT COST				**4,565,578**	

G. **Include a detailed budget with budget notes, a budget on the Implementing Entity managementfeeuse,andanexplanationandabreakdownoftheexecutioncosts[2]. (Annex-1)**

H. **Includeadisbursementschedulewithtime-boundmilestones .**

Table: 11 (Disbursement schedule)

Description	Upon Agreement Signature	One Year After Project Start	Year 2	Year 3	Year 4	Total
Project Funds	371,749	247,833	1,237,732	1,723,632	1,033,632	4,614,578
Implementing Entity Fee	57,813	38,542	96,356	96,356	96,356	385,422
Total	**429,563**	**286,375**	**1,334,088**	**1,819,988**	**1,129,988**	**5,000,000**

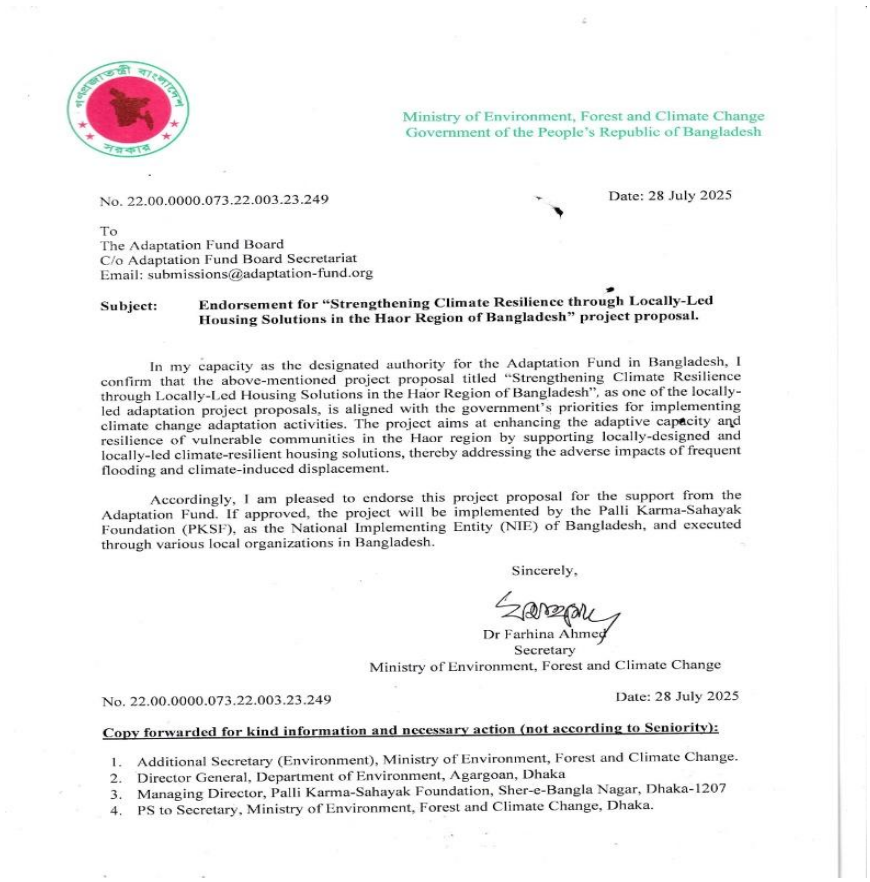
[2] IE and EE fees calculator: https://www.adaptation-fund.org/document/ie-and-ee-fees-calculator/

PARTIV:ENDORSEMENTBYGOVERNMENTANDCERTIFICATIO N BY THE IMPLEMENTING ENTITY

A. Recordofendorsementonbehalfofthegovernment[3]

Provide thename and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. Theendorsementletter(s) shouldbeattachedasanannextotheproject/programmeproposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:

[3] EachPartyshalldesignateandcommunicatetothesecretaria ttheauthoritythatwill endorseonbehalfofthenationalgovernmentheprojectsand programmes proposed by the implementing entities.



Ministry of Environment, Forest and Climate Change
Government of the People's Republic of Bangladesh

No. 22.00.0000.073.22.003.23.249 Date: 28 July 2025

To
The Adaptation Fund Board
C/o Adaptation Fund Board Secretariat
Email: submissions@adaptation-fund.org

Subject: Endorsement for "Strengthening Climate Resilience through Locally-Led Housing Solutions in the Haor Region of Bangladesh" project proposal.

In my capacity as the designated authority for the Adaptation Fund in Bangladesh, I confirm that the above-mentioned project proposal titled "Strengthening Climate Resilience through Locally-Led Housing Solutions in the Haor Region of Bangladesh", as one of the locally-led adaptation project proposals, is aligned with the government's priorities for implementing climate change adaptation activities. The project aims at enhancing the adaptive capacity and resilience of vulnerable communities in the Haor region by supporting locally-designed and locally-led climate-resilient housing solutions, thereby addressing the adverse impacts of frequent flooding and climate-induced displacement.

Accordingly, I am pleased to endorse this project proposal for the support from the Adaptation Fund. If approved, the project will be implemented by the Palli Karma-Sahayak Foundation (PKSF), as the National Implementing Entity (NIE) of Bangladesh, and executed through various local organizations in Bangladesh.

Sincerely,

Dr Farhina Ahmed
Secretary
Ministry of Environment, Forest and Climate Change

No. 22.00.0000.073.22.003.23.249 Date: 28 July 2025

Copy forwarded for kind information and necessary action (not according to Seniority):

1. Additional Secretary (Environment), Ministry of Environment, Forest and Climate Change.
2. Director General, Department of Environment, Agargoan, Dhaka
3. Managing Director, Palli Karma-Sahayak Foundation, Sher-e-Bangla Nagar, Dhaka-1207
4. PS to Secretary, Ministry of Environment, Forest and Climate Change, Dhaka.

B. Implementing Entity certification

Provide the name and signature of the Implementing Entity Coordinator and the date of signature.Providealsotheproject/programmecontactperson'sname,telephonenumberand email address.

PALLI KARMA-SAHAYAK FOUNDATION (PKSF)
www.pksf.org.bd

Ref: 53.23.0000.028.01.25. 5477 Date: 08 September 2025

Implementing Entity Certification

I certify that the proposal titled *'Strengthening Climate Resilience through Locally-Led Housing Solutions in the Haor Region of Bangladesh'*, as one of the locally-led adaptation project proposals has been prepared in accordance with the guidelines provided by the Adaptation Fund Board and prevailing National Development and Adaptation Plans [e.g., Bangladesh Climate Change Strategy and Action Plan (BCCSAP), National Adaptation Plan (NAP) and Nationally Determined Contributions (NDCs)]. Subject to the approval of the Adaptation Fund Board, I commit to implementing the project in compliance with the Environmental and Social Policy of the Adaptation Fund, with the understanding that the Implementing Entity (IE) will be fully responsible (both legally and financially) for the implementation of this project.

We thank you for your cooperation.

Md. Fazlul Kader
Managing Director and
Implementing Entity Coordinator
Palli Karma Sahayak Foundation (PKSF)
Date: September 2025
Tel and Email: +8801711839441, md@pksf-bd.org

Project Contact Person
Dr. Fazle Rabbi Sadeque Ahmed
Deputy Managing Director
Palli Karma Sahayak Foundation (PKSF)
Tel. and Email: +8801552310099, frsa1962@yahoo.co.uk

PKSF Bhaban, E-4/B, Agargaon Administrative Area, Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh
PABX: +88-02-222218331-33, 222218335-39
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pksf@pksf.org.bd
facebook.com/pksf.org
youtube.com/@PKSF1990

List of abbreviation:

Abbreviation	Full Form
PKSF	Palli Karma-Sahayak Foundation
NGO	Non-Governmental Organization
LOE	Letter of Endorsement
DA	Designated Authority

EE	Executing Entity
PMU	Project Management Unit
MRA	Microcredit Regulatory Authority
WASH	Water, Sanitation, and Hygiene
PPRs	Project Performance Reports
ToR	Terms of Reference
RO Plant	Reverse Osmosis Plant
CHAGs	Community Housing and Adaptation Groups
ESMP	Environmental and Social Management Plan
ESP	Environmental and Social Policy
M&E	Monitoring and Evaluation
AF	Adaptation Fund
IE	Implementing Entity
EOI	Expression of Interest
USD	United States Dollar
CHAC	Community Housing and Adaptation Committee
UNION WASH Committee	Union Water, Sanitation, and Hygiene Committee

Annexes

G. Budget (Annex-1)

Project/Programme Title:Strengthening Climate Resilience through Locally-Led Housing Solutions in the Haor (Flash flood prone) Region of Bangladesh

Outcome	Output	Activity	Financing Source	Financial Instrument	Budget Account Description	Detail Budget Account Description	Notes and Assumptions*	Unit desription	Number of Unit	Unit Rate	Total (USD)	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	AF Funding
Outcome-1 Enhanced flood resilience of vulnerable households through safe and durable housing	Output 1.1 Design and Construct climate resilient houses with elevated plinths and stilts for identified vulnerable houses	Activity 1.1 Design and Construct climate resilient houses	AF	Grant	Construction	Reconstruction of resilient house	A1	Households	700	3,700	2,590,000	185,000	740,000	1,110,000	555,000	2,590,000
			AF	Grant	Professional / Contractual Services	Professional Services-Firm/EE	A2	Number	7	2,640	887,040	221,760	221,760	221,760	221,760	887,040
			AF	Grant	Travel	Local EE staff travel	A3	Number	7	500	168,000	42,000	42,000	42,000	42,000	168,000
			AF	Grant	IT Equipment	Computer,Laptop, printer, Printer ,Camera for EES	A4	IE Number	7	6,000	42,000	42,000	-	-	-	42,000
		Sub total activity 1.1:									***3,687,040***	***490,760***	***1,003,760***	***1,373,760***	***818,760***	***3,687,040***
Total outcome-1											***3,687,040***	***490,760***	***1,003,760***	***1,373,760***	***818,760***	***3,687,040***
Outcome-2 Improved health, hygiene and sustainable energy access in flood prone areas	Output 2.1: Solar lightining system installed	Activity 2.1: Install solar system	AF	Grant	Installation	Installation of solar system	A5	Households	700	300	210,000	15,000	60,000	90,000	45,000	210,000
	Output 2.2: Rainwater harvesting system installed	Activity 2.2: Install rainwater harvesting system	AF	Grant	Construction	Construction of sanitary latrines	A6	Households	700	300	210,000	15,000	60,000	90,000	45,000	210,000
	Output 2.3: Eco-toilets installed	Activity 2.3: Install eco toilets	AF	Grant	Construction	Rainwater harvesting system	A7	Households	700	300	210,000	15,000	60,000	90,000	45,000	210,000

Outcome	Output	Activity	Financing Source	Financial Instrument	Budget Account Description	Detail Budget Account Description	Notes and Assumptions*	Unit description	Number of Unit	Unit Rate	Total (USD)	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	AF Funding
	Output 2.4: Tree planted in the household area	Activity 2.4: Homestead tree planting	AF	Grant	Construction	Purchase of tree saplings	A8	Number	15,400	2	30,800	7,700	7,700	7,700	7,700	30,800
			AF	Grant	Construction	Labour cost for planting trees	A9	Number	15,400	1	15,400	3,850	3,850	3,850	3,850	15,400
			AF	Grant	Construction	Transport of tree saplings	A10	Lumpsum	1	1,000	1,000	250	250	250	250	1,000
		Activity 2.5: Prepare training,Monitoring manuals and guidelines on Climate Change issues and project management	AF	Grant	Office Supplies	Office supplies Cost	A11	Month	48	800	38,400	19,200	19,200	-	-	38,400
		Activity 2.6: Office Supplies for EE	AF	Grant	Office Supplies	Administrative Cost	A12	Month	48	800	38,400	9,600	9,600	9,600	9,600	38,400
Total outcome-2											***754,000***	***85,600***	***220,600***	***291,400***	***156,400***	***754,000***
Outcome-3: Capacity enhancement and local skill development	Output 3.1: Groups are formed.	Activity 3.1.1 Select beneficiary and form groups	AF	Grant	Group formation	Travel	A13	Batch	28	250	7,000.00	3,500	3,500	-	-	7,000
	3.2: Training materials developed.	Activity 3.2.1 Office Supplies for EE	AF	Grant	Lump sum	Stationaries	A14	Lumpsum	336	58	19,488.00	4,872	4,872	4,872	4,872	19,488
		3.2.2 Prepare training	AF	Grant	Lump sum	Office supplies	A15	Lumpsum	7	150	1,050.00	450	600			1,050

Outcome	Output	Activity	Financing Source	Financial Instrument	Budget Account Description	Detail Budget Account Description	Notes and Assumptions*	Unit description	Number of Unit	Unit Rate	Total (USD)	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	AF Funding
		material on climate resilient housing														
	3.3: Training for beneficiaries conducted	3.3.3 Organise training for beneficiaries	AF	Grant	Lump sum	Training	A16	Lumpsum	180	500	90,000.00	22,500	22,500	22,500	22,500	90,000
		3.3.4 Travel, Monitoring, Communication Cost for Training	AF	Grant	Lump sum	Training	A17	Lumpsum	14	500	7,000	1,750	1,750	1,750	1,750	7,000
Total outcome-3											**124,538**	**33,072**	**33,222**	**29,122**	**29,122**	**124,538**
Total project activity cost											**4,565,578**	**609,432**	**1,257,582**	**1,694,282**	**1,004,282**	**4,565,578**
Project execution cost		Office rent -IE	AF	Grant		Office rent	A18	Month	48	875	42,000	10,500	10,500	10,500	10,500	42,000
		Prepare and disseminate knowledge products	AF	Grant		Printing newsletter, booklet, brochure and other knowlegde products for training/workshop/conference	A19	Number	14	500	7,000	1,750	1,750	1,750	1,750	7,000
		Total Project execution cost									49,000	12,250	12,250	12,250	12,250	49,000

Outcome	Output	Activity	Financing Source	Financial Instrument	Budget Account Description	Detail Budget Account Description	Notes and Assumptions*	Unit desription	Number of Unit	Unit Rate	Total (USD)	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	AF Funding
		Total project cost									4,614,578	621,682	1,269,832	1,706,532	1,016,532	4,614,578
IE Fee			AF	Grant		IE FEE	A20	Number	4	107,457	385,422	**107,457**	72,655.00	102,655	102,655.00	385,422
Grant total											**5,000,000**	**729,139**	**1,342,487**	**1,809,187**	**1,119,187**	**5,000,000**

Annex-2

Grievance Redress Mechanism (GRM) of PKSF

PKSF has an established and operational Grievance Redress Mechanism (GRM) to address complaints or grievances related to environmental and other project-related issues. The mechanism functions effectively at both the central (PKSF) and Partner Organization levels and ensures that all grievances are handled in a transparent, participatory, and timely manner.

At the PO level, the Union Parishad (U/P) Chairman or a nominated representative serves as the Local Grievance Redress (LGR) Focal Point. At the PKSF central level, the Programme Officer (Environment) or another staff member nominated by the Project Coordinator of the PMU acts as the Central Grievance Redress (CGR) Focal Point.

Aggrieved individuals or entities may submit their complaints in sealed envelopes to the relevant partner organization's office. Each complaint is recorded in the Grievance Register (GR), and a receipt with the GR reference number is provided to the complainant. Partner organizations do not open the envelopes; instead, they promptly inform the LGR focal point and arrange hearings according to the focal point's instructions.

Open hearings are conducted by the LGR focal point, facilitated by the partner organization, to discuss and resolve complaints based on applicable guidelines. Female complainants are assisted by a female U/P member, and complainants from tribal communities are supported by a tribal representative. A copy of each complaint is also sent by mail or email to the Project Coordinator at PKSF headquarters for recordkeeping and monitoring.

If a grievance remains unresolved at the local level, the PO forwards the case, along with all proceedings, to the CGR focal point within seven days. These cases are registered at the central office and resolved within fifteen days. Should the decision of the CGR focal point be unsatisfactory to the complainant, the matter may be escalated to the Managing Director (MD) of PKSF, whose decision is final. The MD may seek the advice of the PKSF Chairman for particularly critical or sensitive cases.

A decision mutually agreed upon by the complainant and the relevant authorities at any stage is binding on the concerned PO and PKSF. It is important to note that the GRM does not preclude the right of any aggrieved individual to pursue legal recourse in the courts of law. The focal person for the Central Grievance Redress (CGR) at PKSF is as follows:

Dr. AKM Nuruzzamn,
General Manager (Environment and Climate Change),
Palli Karma-Sahayak Foundation (PKSF),
Email: nuruzzamanpksf@gmail.com.

The aggrieved persons or entities has the option to lodge the complaints directly to the Central Grievance Redress (CGR) focal point if they are against the PO, to the PKSF MD if they are against the PKSF project management. or directly to the Governing body/chairman of PKSF if there is any issue related to PKSF itself. The institutional arrangement of Grievance Redress Mechanism is illustrated below:

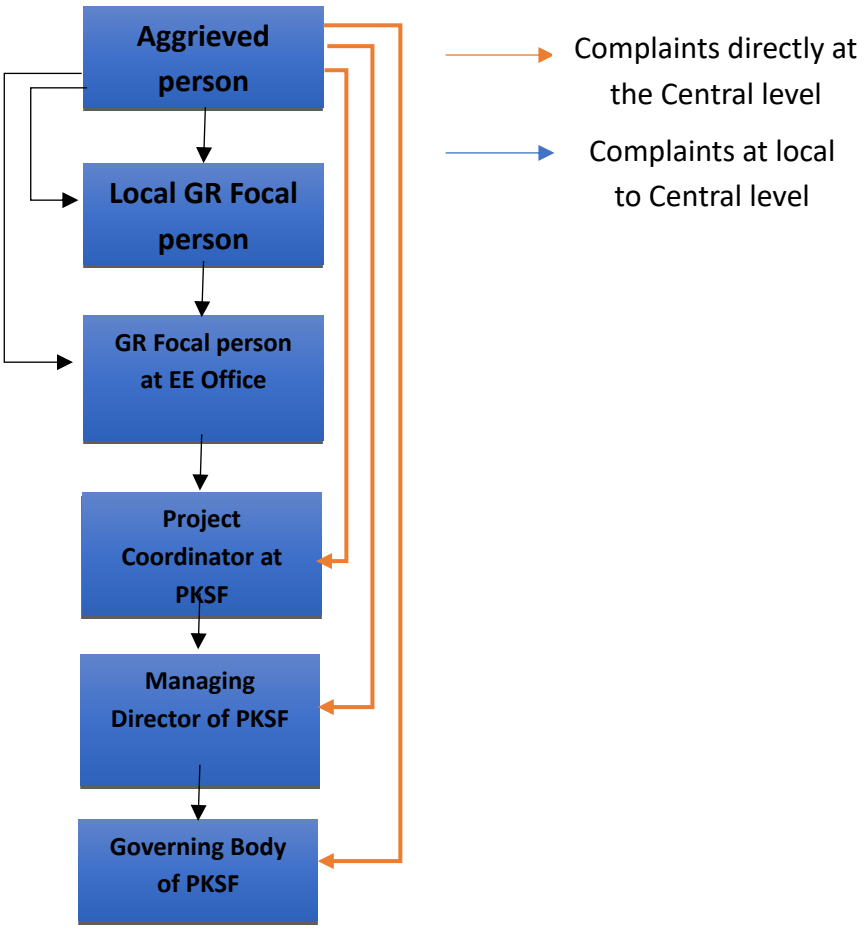

Figure 1: Institutional arrangement of grievance redress mechanism

Annex-3

March, 2025

Stakeholder consultation report

1.0 Introduction

A team of two members of Environment and Climate Change Unit (ECCU) of Palli Karma-Sahayak Foundation (PKSF) has visited three upazilas (sub-district) of Kishoreganj district namely *Itna*, *Mithamain and Nikli*. The purpose of the visit is to understand the impacts of climate change on lives and livelihoods of haor region and the probable adaptation solutions to reduce those impacts. During this visit, five Focused Group Discussions (FGDs) in three upazilas were carried out at the community level. Besides, the team carried out four key informant interviews (KIIs) with union parishad chairman, upazila agriculture extension officer, district agriculture officer and district fisheries officer. The FGDs covered both female and male groups as well as mixed group.

2.0 Stakeholder analysis

2.1 Summary of the Stakeholder Consultations

PKSF has carried out consultation meetings at different levels of stakeholders including community people, local level disaster management offices and government and non-government representatives. Consultations at the community level suggest that settlements and agriculture are the two most affected sectors to the flash flood and flood. They opined that that poverty concentration is very high in the haor region of Bangladesh. A significant amount of their income is used to repair their homestead each year. Moreover, when there is a crop loss due to flash floods and floods, the agriculture wage labour does not get work for about a month, which push them further poverty situation. Tube wells and sanitation systems are submerged due to floods in this area. They informed that they do not get early warning for their locality. The participants suggested that their homesteads need to be protected from flood by raising plinths, strengthening the structure along with rain-water harvesting systems.

Like community people, the Disaster Risk Reduction Officer (DRRO) at the district level informed that Floods in 2024 was devastating and wiped-out houses, roads, crops everything on its way. People's miseries knew no bounds. Agriculture Extension Officer at the upazila (sub-district) level informed that the only *boro* rice crops were fully damaged and the farmers required to plant second time. In some areas, farmers could not do it.

2.2 Stakeholder Engagement Plan

Stakeholder engagement during the project implementation will begin at the inception workshop to be held at the initial stage of the project. PKSF will organize a project launching ceremony at national level where government and non-government organisations including but not limited to Ministry of Environment, Forests and Climate Change (MoEFCC), National Housing Authority (NHA), Housing and Building Research Institutes (HBRI), Department of Fisheries (DoF), Local Government Engineering Department (LGED), Water Resource Planning Organization (WARPO), Water Development Board (WDB), Department of Public Health and Engineering (DPHE), Bangladesh Fisheries Research Institute (BFRI),

Department of Environment (DoE), Bangladesh Climate Change Trust (BCCT), Universities, NGOs and civil societies will be invited to attend the ceremony.

Stakeholder engagement will be performed using best practices and principles so that the project demonstrates:

- **Commitment** when the need to understand, engage, and identify the community is recognized and acted upon early in the process;
- **Integrity** through mutual respect and trust;
- **Respect** for rights, cultural beliefs, values, and interests of stakeholders and affected communities are recognised;
- **Transparency** when community concerns are responded to in a timely, open, and effective manner;
- **Inclusiveness** when broad participation is encouraged and supported by appropriate participation opportunities; and
- **Trust** through open and meaningful dialogue that respects and upholds a community's beliefs, values, and opinions.

Table 1: Stakeholder engagement strategies

Type of stakeholders	Engagement Purpose	Proposed Strategy for stakeholder engagement of stakeholders
Government organisations	Share project information with relevant stakeholders, enhance transparency and accountability.	1. Project website, online monitoring system, workshops, seminars. Another preferred medium is email. 2. For official communications - Official Letters. These written communications can be sent via email and hard copy via courier or post office. 3. Regular project updates are to be provided on annual basis through meetings (face-to-face and/or Skype/zoom) at the project level. One assigned focal person and their alternate should be assigned by each organization to the project to ensure continuity. 4. At the national level, project updates should be shared through seminars and websites. 5. Annual presentations to stakeholders should also be conducted by the PKSF and POs.
PO and communities	Increase knowledge and understanding of climate change,	1. Classroom training, group formation and group meetings, implementation of technologies, etc.

Type of stakeholders	Engagement Purpose	Proposed Strategy for stakeholder engagement of stakeholders
	transfer technologies for increasing resilience	
NGOs, POs and beneficiary communities	Successful implementation of the project and wider dissemination of its results	1. Sharing of best practices among POs, beneficiary groups needs to be conducted. Peer-to-peer learning will contribute to capacity building and scaling up of the project. 2. Continued updating of evaluation data, maintenance of project-supported infrastructure, holding regular meetings, and capacity building and training activities will hold the interest and support of local communities, POs even beyond project life. 3. Conducting regular meetings and work planning with community stakeholders will increase transparency and ownership. 4. Developing common communication materials and branding for unified messaging that will sustain the interest of end-users and stakeholders at the *upazila* and community levels. 5. Closer coordination among PKSF and POs in undertaking field work and site visits at the project sites is needed. 6. Active participation and engagement at all project activities in the project sites will ensure continued support.
All levels of stakeholders		1. PKSF will follow its information disclosure policy. 2. Website of PKSF and Implementation Partners should also provide access to data/information and recent news and developments of the project. 3. For sharing technical and sensitive information, a closed social media group and email loop can be formed. 4. Regular project management meetings should be held where substantive and implementation issues and concerns will be discussed. 5. Meetings with the POs and beneficiary groups on a regular basis should also be established.

These strategies will be implemented through the stakeholder engagement plan during the implementation of the project. The SEP is summarised in Table 2.

Table 2: Proposed stakeholder engagement plan

Activity	Timing	Objectives of Engagement	Target stakeholders
Design and construct climate resilient houses	Yr.1, 2, 3,	To promote climate- resilient homestead for the flash flood affected communities in the haor region of Bangladesh	Department of Public Health Engineering (DPHE), Ministry of Environment, Forests and Climate Change, House Building Research Institute (HBRI), POs, Beneficiaries and local contractors.
Install solar system	Yr.1, 2, 3, 4	To support livelihood activities and children's education in haor region of Bangladesh.	
Install rainwater harvesting system	Yr.1, 2, 3, 4	To promote climate-adaptive sustainable safe drinking water system	DPHE, POs, community people and PKSF
Install eco toilets	Yr.1, 2, 3, 4	To promote climate sanitation system in the haor region	DPHE, POs, community people and PKSF
Homestead tree planting	Yr.1, 2, 3, 4	To promote nature-based solution for strengthening homestead against flash floods, floods and stroms.	Beneficiary groups, POs, Department of Forests, PKSF
Select beneficiary and form groups	Yr.1, 2, 3, 4	To deliver the support services	PKSF, POs, local government representatives and community people
Prepare training material on climate resilient housing	Yr.1	To enhance capacity of the flood vulnerable community on climate change adaptation	PKSF, POs, Communities and consultants
Organise training for beneficiaries	Yr.1, 2, 3, 4	To enhance capacity on climate change, innovative and climate resilient livelihood for male and female members	PKSF, POs, and community people
Prepare and disseminate knowledge products	Yr.1, 2, 3, 4	To aware all levels of stakeholders and share lessons learned	All levels of stakeholders

3.0 Addressing Ethnic Minority in the project

Regarding ethnic minority, the project design team did not find any ethnic minority people in the proposed areas. However, if any such people of community is found during the implementation of the project, the PMU will take appropriate measures. The PMU will visit all them to get their consent before starting the activities in the particular area. Public meetings will be arranged in selected communities by the PKSF and POs with the them and their leaders to provide them information about the project's activities. During this visit, the safeguard officer of the PMU will undertake screening of the ethnic minority communities with the help of the community leaders and local authorities. The screening will cover the following aspects: (i) name(s) of community group(s) in the area; (ii) total number of ethnic people in the area; (iii) percentage to that of total area/locality population (iv) number and percentage of ethnic community households along the zone of influence of the proposed subcomponent. (v) any land acquisition required from any ethnic community for the activity? (vi) if so, any alternatives to avoid land acquisition? (vii) If no, will this subcomponent be excluded? (viii) Will an ethnic person be required if an activity passes through any ethnic community? (ix) If no, why? If the results of the screening indicate the presence of ethnic households in the zone of influence of the proposed activities, a social impact assessment will be undertaken for those areas.

Annex 1: Report on Community Consultation Meetings in Kishoreganj District

Discussion with female group, Nokusha, Itna Sadar Union, Itna, Kishoreganj

Understanding climate change

The FGD reveals that women have lack of understanding climate change. They are aware about daily weather and different types of disasters including early flash floods. After discussion, they could relate the changing behavior of flash floods with climate change. They have informed that occurrences of early flash floods have increased over the last three to five years. Ten years back, rain started Jaishtya-Ashar (June-July) but now a days it starts Chaitro-Boishakh (March-April). They also observe increased thunderstorm and fog compare to ten years back. Besides, they are experiencing more intensive rain during monsoon that they would not do before.

Photo: Focus Group Discussion with Female group, Nokusha, Itna, Kishoreganj

Problems related to climate change in their locality

Early flash flood is the main climate change related problems in the haor areas as stated by the female representatives of Itna upazila (subdistrict). They also stated that frequency of such disasters are gradually increasing. Another severe problem associated with this flood is strong wave which is locally known as '*Afal*'. In addition, thunderstorm and fog are also emerging problems in their locality.

Time of occurrence

The FGD participants informed that flash floods usually occurred in the month of Jaishtya-Ashar (June-July). But over the few years, it is occurring one to two months earlier i.e. in the month of Chaitro-Boishakh (March-April). The thunder storms occur through the monsoon and fog in the month of December to February.

Affected occupational group

Most of the people are engaged in agriculture and fishing. The FGD reveal that most of the farmers do fishing during monsoon. However, both farmers and fishermen are severely affected by flash floods and intensive rain. The farmers lose their only standing crop i.e., *boro* rice due to early flash floods. They don't have second option for growing another crop in the same year. During flood, fishing is also restricted because local government leases the water bodies for revenue generation. As women are also engaged in agriculture-based activities including crop threshing, drying, processing, storage, marketing etc. they are equally affected. Besides, vulnerabilities of women increase because they are burdened by additional household work.

Affected sectors

Crop agriculture particularly *boro* crop is the primary affected sector in the haor region. It is severely affected by early flash floods. In addition, plinths of *hati*/village are severely damaged by *afal*, houses are vulnerable to nor'wester, tube wells and latrines are subject to flooding and damage by storm etc. They also informed that some of the areas are not connected with national grid electricity due to remoteness. It challenges the education of the children in the deep haor zone.

Existing adaptation activities

The government along with some development partners (IFAD, CARE, USAID, Spanish Trust Fund, etc.) have developed large scale infrastructure including embankment, sub-merged road, high-ways, village protection wall etc. But these are not sufficient to protect lives and livelihoods from the adverse effects of climate change. Besides, there is no participation of the local community in designing these infrastructure and decision-making on these initiatives. In many cases, these interventions emerged as maladaptation. Recently the government of Bangladesh started the Climate Adaptation and Livelihood Project (CALIP), which a supplementary project of Haor Infrastructure and Livelihood Project (HILIP, a multi-donor funded project). They are providing training and livelihood support to increase resilience of the vulnerable community.

Suggested potential adaptation interventions

The FGD carried out the following adaptation activities:

- Construct Climate resilient housing
- Rain water harvesting
- Provide boat and net for fishing
- Livestock and duck rearing and
- Solar panel distribution
- Handicrafts for women etc.
- Tree plantation
- WASH facilities

List of Participants

Sl. No.	Name of Participants	Mobile no.
1	Mst Parul	01405805908
2	Mst Saleha Begum	01935665540
3	Amana Begum	01920045665
4	Halima Khatun	01968993964
5	Ayna Moty	01629327981
6	MstJulesha Akter	01724197202
7	Rabia Khaton	01920168978
8	MstKhosada Akther	01959173993
9	Mst Babita Begum	01954399085
10	Mst Taslima Begum	01962087881
11	Aysha Akter	01908823642
12	Rabia Khatun	01778192049
13	Mst Amena Bibi	01946773536
14	MstAsdon Bibi	01993729305
15	Mst Shahida Begum	01776734172
16	MstNuronnesa Begum	01776734172
17	Mst Lovely Akter	01968983262

Discussion with farmers' group, Nokusha, Itna Sadar Union, Itna, Kishoreganj

Understanding climate change

The FGD reveals that farmers are not well aware about climate change but they realize changes in weather system. They informed that early flash flood increased over the last three years in their locality. They said that earlier rain started Jaishtya-Ashar (June-July) but now a days it starts Chaitro-Boishakh (March-April). They also observe increased thunder storm, cold wave and fog compare to ten years back. Besides, they are experiencing more intensive rain during monsoon that they would not do before. It is to be noted that this observation is similar to that of the female groups.

Problems related to climate change in their locality

Flood is the main climate change related disaster in this area as the participants informed the visitors. In addition, storm and cold wave also affect their lives and livelihoods.

Time of occurrence

The FGD participants informed that flash floods usually occurred in the month of Jaishtya-Ashar (June-July). But over the few years, it is occurring one to two months earlier i.e. in the month of Chaitro-Boishakh (March-April). The thunder storm occur through the monsoon and fog in the month of December to February.

Affected occupational group

The participants informed that people are engaged in various occupations. The major occupational group is farmers. They informed that farmers do fishing in the monsoon when they do not have farming activities. They also informed that some people engaged in driving rickshaw or van, brick Klein etc. The participants confidently stated that among different occupational groups like fisherman, service holder, shopkeeper etc., farmers are affected the most by flood and flash flood in their locality.

Affected sectors

The participants informed that flood severely damages crop and homestead plinths, dense fog affects crops and vegetables, storm affects houses particularly that of poor households and trees. They also informed that supply of safe drinking water suffers greatly during floods because of inundation of the tube wells. Moreover, quality of ground water is also a problem due to iron contamination.

Existing adaptation activities

During monsoon, the male members go outside for work. Some people catch fish but they cannot make profit due to unavailability of fish, some other are engaged in cow fattening (very limited as observed in the village) and duck rearing.

Suggested potential adaptation interventions

The FGD carried out the following adaptation activities:

- Cultivation of short duration and high value crop
- Construct village protection wall
- Planting koros tree surrounding the village/hat to protect wave erosion
- Alternative livelihood options
- Rainwater harvesting etc.

Discussion with mixed group (female and male), Uriondo village, *Mithamain* Sadar union, *Mithamain*, Kishoreganj

Understanding climate change

The participants were asked about their perception on climate change. They informed that rainfall has been intensified than before, frequency of disaster has increased, early flood increased, onset of rain has been early etc. They said that earlier flood started in the month of Jaisthya (May-June) but now a days it comes in the month of Falgun-Chaitra (February-March).

Problems related to climate change in their locality

Early flood is the main disaster in their locality as the participants discussed during the FGD. Hail storm is also observed in this area.

Time of occurrence

The FGD participants informed that early floods usually occur in the month of Falgun-Chaitra (March-April).

Affected occupational group

The participants stated that famers are mainly affected by early floods.

Affected sectors

The participants argued that agriculture is the most affected sector to early flood and hail storm. Then it affects livestock resources causing injury and death and have to sell at low price. The 2017 flood causes huge deaths to duck and fish. Flood causes scarcity of fodder for livestock. It damages homesteads plinths and roads. The participants also informed that water borne and vector borne diseases, diarrhea etc. break out. The female participants informed that they face difficulties in cooking food during flood as it causes scarcity of fuel. They also informed that flash flood in 2024 was also damaged *hati*s, roads, crops and livestock etc.

Existing adaptation activities

The government has emergency food and cash support programme to overcome the crop loss. In addition, government provides subsidized fertilizer and seeds for next crop. Besides some people are engaged in catching fish, some women engaged in tailoring, handicrafts etc.

Suggested potential adaptation interventions

The FGD carried out the following adaptation activities:

- The farmers suggested for crop diversification (mustard, ground nut, potato etc.) and short duration crop varieties
- Women suggested for capacity building training on some off-farm activities like handi-crafts, tailoring etc.

List of participants

Sl. No.	Name of Participants	Mobile Number
1	Mst Nargis Akter	01540582156
2	Mst Ayesha Khatun	01950486112
3	Mst Salma Khatun	01728821276
4	Rupnaher Begum	01967114375
5	Rafiqul Islam	01581535852
6	Mst Monira	01701334998
7	Mst Juhura Khatun	01947218084
8	Saddam	01754142825
9	Sopon Mia	01952194458
10	Gulsan	01580432546
11	Amena Khatun	01752388810
12	Morjina Akter	01581743583
13	Mst Masuma Akter	01581623284
14	Md Mamin	01957429900
15	Mst Nargis Khatun	01576653428

Discussion with mixed group (male), Chatir Char village, Chatir char union, Nikli, Kishoreganj

Understanding climate change

The participants of this village are aware about weather and climate change as the team observed during discussion. Some of the participants can distinguish between weather and climate. This is mainly because they are member of a climate change related project title REECALL project, which was financed by Oxfam and implemented by People's Oriented Programme Initiatives (POPI), a national level NGO. The participants argued that unpredicted and early floods have been increased over the last few years due to climate change. They observe hailstorm at the end of the month of Agrohayon (November-December) which they did not see before. They also observed increased dense fog. They also informed that rainfall has been intensified than before, frequency of disaster has increased, early flood increased, onset of rain has been early etc. They said that earlier flood started in the month of Jaisthya (May-June) but now a days it comes in the month of Falgun-Chaitra (February-March).

Problems related to climate change in their locality

The participants informed that unpredicted and early flood, hailstorm, dense fog etc. are major climate change related problems in their locality. They also informed that continuous three days' rainfall in December 2016 caused severe damage to rice plants.Some participant argued that water logging is also a problem for them.

Time of occurrence

The FGD participants informed that ten years back, early floods used to occur in the month of Boishakh (May-June) but now a day it occurs in the month of Falgun-Chaitra (February-March).

Affected occupational group

The participants stated that wage labour and fishermen highly affected by climate change related disaster like early floods.

Affected sectors

The participants argued that agriculture is the most affected sector in this area. They also stated that flood affects health and education in their locality. Additionally, children and students feel reluctant of study due to lack of electricity. Though there is national grid connection, the load shedding is too high to perceive as a disaster.

Existing adaptation activities

The government is providing subsidy to agriculture which includes seeds and fertilizers, food assistance which includes 30 kg rice, cash of BDT. 500 per month etc. under VGF and fish-card for catching fish. REECALL is providing livelihood support which includes net, boat, duck, hen and other micro enterprise. This project is also providing training to women of various income generating activities.

Photo: FGD in Chatir Char Union, Nikli, Kishoreganj

Suggested potential adaptation interventions

The FGD carried out the following adaptation activities:

- The farmers suggested for crop diversification (mustard, ground nut, potato etc.) and short duration crop varieties
- Seasonal cow fattening and duck rearing
- Cage fish culture
- Women suggested for capacity building training on some off-farm activities like handi-crafts, tailoring,
- Distribution of solar panel etc.

List of participants

Sl. No.	Name of Participants	Mobile Number
1	ABU SALACK	01612008684
2	SAIFUL ISLAM	01600472296
3	ALIMULLA	01790718791
4	ANAMUL HAQUE	01605121511
5	KHAIRUL ISLAM	01785731185
6	MD.IMRAN HOSEN	01994384000
7	MD.ATAUR RAHMAN	01957917202
8	MD MAEAN UDDIN	01911551341
9	MD.A.RAZZAK	01764559611
10	MD MINTU MIN	01923566522
11	IMRAN AHMAD	01994384002
12	MD ABDUL HAQUE	01916167851
13	HABIBUR RAHMAN	01760518857
14	MUHAMMED ALI	01734151002
15	AKRAM HOSSEN	01922842610

16	BUL BUL AHMED	01932472161
17	MD BABUL MIA	01311727647
18	MD SHIQUL ISLAM	01925730114
19	SUPATH	01984671920
20	MD TAUFIQUL ISLAM	01980866921
21	AL AMIN	01911551281

Discussion with male group, Norshingpur bazar, Shingpur union, Nikli, Kishoreganj

Problems related to climate change in their locality

The participants informed that river erosion, flood, early flood etc. are major climate change related problems in their locality.

Time of occurrence

The FGD participants informed that floods used to occur in the month of Sraban-Vadra (July-August) but now a day it occurs in Chaitro (February-March).

Affected occupational group

The participants stated that famers are mainly affected by early floods.

Affected sectors

The participants argued that agriculture is the most affected sector. Besides, fisherman cannot catch fish because local government provides lease to rich people.

Existing adaptation activities

The government has emergency food (30 kg rice, 5 liter oil) and cash (BDT. 500) support programme to overcome the crop loss. In addition, government provides subsidized fertilizer and seeds for next crop. Some people catch fish taking dadon (informal loan from money lender).

Suggested potential adaptation interventions

The FGD carried out the following adaptation activities:

- Protection of river erosion
- Construction of embankment
- Construction of village protection wall
- Stop leasing of water bodies
- Handicrafts for women
- Crop diversification (Maize, mug, pepper etc.)
- Micro enterprise etc.

Annex 2: Key Informant Interviews

Discussion with Mr. Rafiul Islam, Agriculture Officer, *Mithamain*, Kishoreganj

Photo: Discussion with Upazila Agriculture Officer, Mithamain, Kishoreganj

Mr. Rafiul Islam informed that the haor farmers cultivate only one crop i.e.*boro* rice. In spite of having opportunities of multiple cropping. He said that this crop is highly vulnerable to flash flood. Mr. Islam argued that flash flood has been intensified by silt deposition in the river bed. He informed that there are lot of fallow land which can be brought under cultivation. Department of Agriculture Extension (DAE) is working on it. DAE is also trying to diversify crops based on land classification and agro-ecological zone. In the last two years, they demonstrated aus rice in 400 hectres of land. Mr. Islam said that farmers are gradually encouraging to cultivate multiple crop. He suggested to introduce maize, ground nut, potato and other vegetables based on land type.

Discussion with Mr. Md. ShafiqulIslm, Deputy Director, Department of Agriculture Extension (DAE), Kishoreganj

Mr. Md. Shafiqul Islam suggested to promote maize, cauliflower, carrot, onion etc. in the fallow land which would increase income of the farmers leading their enhanced capacity. He said that there is huge demand of these crops and vegetable in the local and national markets. He also suggested to promote BINA dhan-7, a short duration amon paddy variety in the haor region. He informed that there is lack of crop drying and threshing areas for which farmers have to sell their crop at low price. He suggested to develop some community-based crop drying areas in the affected communities.

Photo: Discussion with Deputy Director, DAE,

Discussion with Mr. Shankar Ranjan Das, Additional District Fisheries Officer (ADFO), Kishoreganj

Mr. Shankar Ranjan Das opined that flood has both negative and positive impacts on fisheries. He said that flood wash away the cultured pond. On the other hand it created opportunities for open water fishing particularly for poor community. Sometimes, rivers and beels are leased to the rich people for revenue generation from the local resources. It limits the area of catching fish of the fishermen. He suggested for cage and pen culture and develop beel nursery. In addition to this, Mr. Ranjan suggested some other adaptation options including village protection wall, tree plantation, and duck rearing, cow fattening, developing crop threshing and drying areas etc.

Conclusion and recommendations

The communities in Kishoreganj are on the frontlines of climate change. The shift in rainfall patterns has rendered their traditional agricultural calendar obsolete, turning the harvest season into a period of anxiety and loss. While physical infrastructure like roads has improved mobility, the protection of the homestead (*Hati*) and the crop (*Boro*) remains fragile. The "*Afal*" waves threaten to erase villages, while early floods threaten to erase incomes. Based on the discussions, the following activities may be recommended:

- Combine concrete protection walls with biological shielding (tree planting) to save *Hati*s from erosion.
- Aggressively distribute short-duration rice seeds that mature by mid-March.
- Implement a subsidized Solar Home System program specifically for the ultra-poor. This is not just an energy intervention, but an educational and livelihood intervention.
- Provide assets (ducks, sewing machines) alongside the energy access required to make them productive.
- Provide training to women on trailoging and handicrafts
- Develop climate resilient houses against nor’wester and storms

Annex-4

Strengthening Climate Resilience through Locally-Led Housing Solutions in the Haor (Flash Flood Prone) Region of Bangladesh

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Environment and Social Management Framework

Palli Karma-Sahayak Foundation (PKSF)

Contents

List of Abbreviation

AF	Adaptation Fund
BCCRF	Bangladesh Climate Change Resilience Fund
BCCSAP	Bangladesh Climate Change Strategy and Action Plan
BECA	Bangladesh Environmental Conservation Act
CBO	Community Based Organization
CGR	Central Grievance Redress
DG	Director General
DoE	Department of Environment
EA	Environmental Assessment
ECA	Ecological Critical Area
ECC	Environmental Clearance Certificate
ECR	Environmental Conservation Rules
EDA	Enhanced Direct Access
ESIA	Environmental and Social Impact Assessment
ESS	Environmental and Social Standards
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ES	Environmental Screening’
FGD	Focus Group Discussion
GIS	Geographical Information System
GR	Grievance Register
GRM	Grievance Redress Mechanism
GoB	Government of Bangladesh
LDC	Least Developed Country
LGR	Local Grievance Redress
MD	Managing Director
MoEF	Ministry of Environment and Forest
NAP	National Agriculture Policy
NGO	Non-Government Organization
NEMAP	National Environmental Management Action Plan
NOC	No Objection Certificate
NSDWSSP	National Safe Drinking Water Supply and Sanitation Policy
OHS	Occupational Health and Safety
EE	Executing Entity
PKSF	Palli Karma-Sahayak Foundation
PMU	Project Management Unit
SDGs	Sustainable Development Goals
SOD	Standing Orders on Disaster

1.0 Introduction

Bangladesh is globally recognized as one of the most climate-vulnerable countries due to its low-lying topography, high population density, and dependence on climate-sensitive livelihoods. Climate change is already affecting the timing, intensity, and distribution of rainfall, leading to more frequent and severe floods, cyclones, and other hazards that disproportionately impact poor and marginalized communities.

The haor region in north-eastern Bangladesh is a particularly fragile agroecological system. It is home to millions of people and is critical for national food security, but it is increasingly affected by climate-induced flash floods and destructive wind-driven waves locally known as "*afal*". Flash floods during pre-monsoon and monsoon seasons can destroy the single *boro* rice crop and severely damage housing and basic services.

Most haor households live under direct flood exposure and lack resources to invest in resilient housing. Climate-resilient housing, integrated with safe water, sanitation, and clean energy, is therefore a foundational strategy to break the cycle of disaster, asset loss, and indebtedness.

Palli Karma-Sahayak Foundation (PKSF), as the National Implementing Entity (NIE) to the Adaptation Fund, is proposing the project "Strengthening Climate Resilience through Locally-Led Housing Solutions in the Haor (Flash Flood Prone) Region of Bangladesh". The project adopts a locally led adaptation approach, devolving decision-making and resources to local institutions and communities, with a strong focus on women, ultra-poor households, and other marginalized groups.

PKSF has an institutional Environmental and Social Management Framework (ESMF) and 10 Environmental and Social Standards (ESS), which are consistent with Government of Bangladesh laws and international safeguard standards. This project-level ESMF developed incorporated with PKSF's ESMF and is aligned with the Environmental and Social Policy (ESP) and Gender Policy of the Adaptation Fund.

1.1 Purpose of the ESMF

The purpose of this Environmental and Social Management Framework (ESMF) is to ensure to ensure that project activities do not cause unintended environmental and social harm, and that positive environmental and social outcomes are maximized for haor communities. The ESMF will facilitate compliance with the PKSF's Environmental and Social Safeguard (ESS) policies which is fully consistent with Adaptation Fund's safeguard policies and with policies, acts, and rules of the Government of Bangladesh. The ESMF will contribute to the goal of environmental sustainability by:

- Enhancing environmental and social outcomes of the proposed activities;
- Preventing and/or mitigating any negative environmental and social consequences that may arise at the community level; and
- Ensuring the long-term sustainability of the benefits of the proposed interventions by securing the natural resource base on which the selected communities are dependent.

More specifically, the objectives of the ESMF are:

- To identify the environmental and social impacts of the proposed interventions.
- To prepare an environmental and social management plan, and
- To prepare a monitoring and evaluation plan for environmental and social management activities.

1.2 Methodology

The ESMF adapted to the haor context and the requirements of the Adaptation Fund. The methodology followed in preparing the ESMF consists of the following steps:

- Review the relevant literature for conceptualizing ESS in the context of the funding proposal;
- Review of national policy and regulatory requirements, PKSF's ESS, and Adaptation Fund ESP and Gender Policy;
- Undertake initial scoping and screening to identify key ES aspects linked to planned project components;
- Collect and analysis of baseline ES data, with the help of secondary literature review, and field data collection.
- Consult with the stakeholders including beneficiary/ affected communities and developing the consultation process.
- Review the potential and likely impacts of the project activities and carrying out the screening of the sub-project.
- Outline the detailed procedures to be followed to comply with the AF and GoB rules and regulations including preparation of various ES documents, monitoring mechanism, stakeholder engagement, disclosure requirement, grievance redress and institutional arrangement.

1.3 Project Description

The Strengthening Climate Resilience through Locally-Led Housing Solutions in the Haor (Flash Flood Prone) Region of Bangladesh project will finance community-based adaptation activities centred on climate-resilient housing and integrated basic services for highly vulnerable households in the haor belts of north-eastern Bangladesh. Palli Karma-Sahayak Foundation (PKSF) will serve as the National Implementing Entity (NIE) and Executing Entity (EE), working through a network of selected Partner Organizations (POs) that will act as Executing Entities (EEs) in the project locations. These EEs will be identified through a rigorous, pre-defined selection process, ensuring proven experience in the haor context, community mobilization, and climate-resilient infrastructure and livelihood support.

The primary objective of the project is to enhance the climate resilience of vulnerable haor households by promoting affordable, inclusive, locally led climate-resilient housing solutions that are integrated with safe water, sanitation, renewable energy and community-based capacity development. The project will design, pilot and scale up innovative housing models such as elevated plinth and stilted structures with improved structural design to withstand flash floods; providing safe shelter to 700 of the most exposed households. These houses will be complemented by rainwater harvesting systems, flood-resilient eco-toilets and solar lighting for approximately 700 households, alongside the plantation of around 15,400 native, flood-

tolerant trees to stabilize homesteads, reduce wave energy and enhance local ecosystems. Through intensive training of local masons, engineers and community members, as well as inclusive community institutions that actively engage women and marginalized groups in risk mapping and decision-making, the project aims to:

(i) To design, pilot, and scale up climate-resilient housing for flood-prone and vulnerable Haor communities.
(ii) To build community knowledge and capacity in climate-resilient construction, water and sanitation integration, and disaster preparedness.
(iii) To promote inclusive, locally led adaptation by engaging community members in decision-making and implementation.

1.4 Physical Interventions under the Project

The project will support the following physical interventions with direct environmental and social implications:

1. Design and construction of 700 climate-resilient houses with elevated plinths and/or stilt-based foundations, improved structural design to withstand flash floods and *afal* waves, and climate-resilient layout.
2. Installation of rainwater harvesting systems, flood-resilient eco-toilets, and solar systems for approximately 700 households.
3. Plantation of about 15,400 native, flood-tolerant trees around homesteads and village mounds to stabilize soil, reduce wave energy, and enhance local ecosystems.
4. Additional small-scale works such as minor earthworks to raise homestead platforms, drainage improvements, and construction of safe access paths and ramps.

2.0 Policy, Legal and Institutional Framework

The project will comply with all relevant laws, rules, and policies of the Government of Bangladesh and with PKSF's Environmental and Social Standards, as well as the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

2.1 National Legal and Policy Framework

Key national laws and policies relevant to this project include:

Constitution of the People's Republic of Bangladesh:

The Constitution of Bangladesh guarantees equal rights and equality before law of its citizens. Article 27 of Bangladesh Constitution guarantees equality of citizens before the law and Article 28 prohibits discrimination on grounds of religion, sex, caste, race and place of birth. The same article also stipulates measures of 'affirmative actions' by the State in favour of the backward section of the citizens. The

Constitution defines the rights of every citizen to have access to education where the State is responsible for the provision of Basic Necessities for the citizens. Article 17 of the Constitution indicates of Free and compulsory education where the State shall adopt effective measures by: (a) Establishing a uniform, mass-oriented and universal system of education and extending free and compulsory education to all children to such stage as may be determined by law; (b) Relating education to the needs of society and producing properly trained and motivated citizens to serve those needs; removing illiteracy within such time as may be determined by law. Article 19 (1) of the Constitution also stresses on Equality of opportunity where the State shall endeavor to ensure equality of opportunity to all citizens.

Article 23 stressing on National Culture demands that the State shall adopt measures to conserve the cultural traditions and heritage of the people, and so to foster and improve the national language, literature and the arts that all sections of the people are afforded the opportunity to contribute towards and to participate in the enrichment of the national culture. Besides the Constitution, there is also a corpus of legal, institutional and policy dispositions for the safeguards of the tribal peoples' rights in Bangladesh. Much of it is focused for the CHT; however, there are also specific laws for the tribal peoples in the plains.

Bangladesh Environment Conservation Act (BECA), 1995:

The national environmental legislation known astheEnvironmental Conservation Act, 1995 (BECA'95) is currently the main legislative document relating to environmental protection in Bangladesh, which replaced the earlier environment pollution control ordinance of 1992and has been promulgated in Environmental Conservation Rules, 2023 (ECR'23). This Act was amended in 2000, 2002 and 2010. The main objectives of ECA'95 is: i) conservation of the natural environment and improvement of environmental standards; and ii) control and mitigation of environmental pollution.

The main strategies of the act can be summarized as:

- Declaration of ecologically critical areas, and restriction on the operation and process, that can be continued or cannot be initiated in the ecologically critical areas.
- Regulation with respect to vehicles emitting smoke is harmful to the environment.
- Environmental clearances.
- Remedial measures for injuries to ecosystems.
- Regulation of projects and other development activities.
- Promulgation of standards for quality of air, water, noise and soil for different areas for various purposes.
- Promulgation of standard limit for discharging and emitting waste.
- Formulation and declaration of environmental guidelines.

Department of Environment (DoE) implements the Act. DoE is under the Ministry of Environment and Forest and is headed by a Director General (DG). The DG has complete control over the DoE. The power of DG, as given in the Act, may be outlined as follows:

- The DG has the power to shut down any activities considered harmful to human life or the environment. The operator has the right to appeal and procedures exist for this purpose. However, if the incident is considered an emergency, there is no opportunity for appeal.
- The DG has the power to declare an area affected by pollution as an ecologically critical area. The DoE governs the type of work or activities that can take place in such an area.

- Before beginning new development project, the project proponent must obtain environmental clearance from the DoE. The procedures to obtain such clearance are in place.
- Failure to comply with any part of ECA'95 may result in punishment by a maximum of 10 years' imprisonment or a maximum fine of BDT a million or both.

Environment Conservation Rules (ECR), 1997 and 2023:

The Environment Conservation Rules, 1997 were issued under the Environment Conservation Act, 1995 and subsequently amended in 2002 and 2003. They provided, among other things, the procedures for obtaining environmental clearance, the categorization of industries and development projects, and environmental quality standards for water, air and noise, including permissible discharge and emission limits. The Rules also introduced "inclusion lists" of projects requiring different levels of environmental investigation. Under the Act, the Government is empowered to declare Ecologically Critical Areas (ECAs) and restrict certain activities within them. On this basis, areas such as the Sundarbans mangrove forest, Cox's Bazar-Teknaf Sea shore, Saint Martin's Island, Sonadia Island, HakalukiHaor, TanguarHaor, MarjatBaor, Gulshan-Baridhara Lake, and the four rivers surrounding Dhaka city: Buriganga, Shitalakshya, Turag and Balu have been declared ECAs and specified activities have been prohibited or restricted.

In March 2023, the Government promulgated the Environment Conservation Rules, 2023, which repeal and replace the 1997 Rules and retain the basic approach of classifying all industrial units and development projects into four categories according to their pollution potential and environmental risk: (i) Green, (ii) Yellow, (iii) Orange and (iv) Red. Green category projects are considered relatively pollution-free and may obtain an Environmental Clearance Certificate (ECC) from the Department of Environment (DoE) without a separate Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA). Yellow and Orange category projects are required to submit prescribed forms, general information, feasibility details, process flow diagrams and layout plans (including waste treatment facilities), together with an IEE as part of their applications for locational and environmental clearance. Red category projects are those with potentially significant adverse environmental impacts and must prepare both an IEE (for locational clearance) and a full EIA, including an Environmental Management Plan (EMP) and monitoring plan, for environmental clearance, along with feasibility reports and no-objection certificates from relevant local authorities. In line with ECR 2023 and earlier practice under ECR 1997 (for Orange-B and Red categories), all higher-risk projects in the orange and red categories are required to prepare and submit an appropriate EMP together with their IEE/EIA documentation when seeking environmental clearance.

Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009:

The Government of Bangladesh adopted the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) as a knowledge-based, 10-year programme (formulated in 2008 and revised/published in 2009) to guide the national response to climate change. The BCCSAP is built around six thematic pillars: (i)Food security, social protection and health**,** to ensure that the poorest and most vulnerable groups, particularly women and children, have secure access to food, safe housing, livelihoods and basic services under a changing climate; (ii)Comprehensive disaster management**,** to strengthen and climate-proof Bangladesh's disaster risk management systems in the face of more frequent and intense natural hazards; (iii)

Infrastructure**,** to maintain and climate-resiliently upgrade critical infrastructure such as coastal and river embankments, cyclone shelters and urban drainage; (iv) **Research and knowledge management,** to improve understanding of the scale, timing and distribution of climate impacts and to inform future investment and policy decisions; (v) **Mitigation and low carbon development,** to identify and implement low-emission development options as the economy grows; and (vi) **Capacity building and institutional strengthening,** to enhance the ability of government, civil society and the private sector to plan and implement climate actions. In total, the BCCSAP sets out **44 programmes** across these six themes, with a consistent emphasis on protecting and empowering poor and vulnerable communities.

National Housing Policy (NHP), 2016 / 2017:

The National Housing Policy (NHP) 2016 (updated and endorsed in 2017) is the principal policy framework guiding the housing sector in Bangladesh. It builds on earlier policies from 1993 and 1999 and is grounded in the recognition of housing as a basic right and a precondition for human dignity, social stability and economic development. The policy's core objectives are to ensure equal access to adequate, safe and affordable housing and workplaces for all citizens, irrespective of nationality, religion, language or social status; to promote sustainable human settlement development; and to support economic growth, social development, environmental conservation, equitable distribution of housing, optimum use of land and resources, and protection of biodiversity, cultural diversity and the rights of present and future generations. The NHP 2016/2017 redefines the role of government as a facilitator and enabler, focusing on creating an enabling environment for public, private, cooperative and community initiatives rather than acting solely as a direct provider of housing. It addresses key areas such as land use and planning, housing finance, infrastructure and basic services, building materials and technologies, human resource development, and rental and social housing, with particular emphasis on low-income groups, slum dwellers and disaster-prone communities. The policy also calls for the improvement of living conditions in informal settlements, slum upgrading, and the provision of minimum standards of living, while encouraging resilient building practices and institutional, technological and financial measures to reduce disaster and climate risks in housing, which is directly relevant to climate-resilient housing and settlement initiatives in flood- and hazard-prone areas such as the haor and coastal regions.

National Water Policy, 1999:

The National Water Policy was promulgated in 1999 with the intention of guiding present and future public and private actions to ensure the optimal development and management of water resources for the benefit of individuals and society as a whole. The policy aims to contribute to national goals of economic development, poverty alleviation, food security, public health and safety, a decent standard of living for all citizens, and protection of the natural environment**.** It requires that all agencies and departments entrusted with water resources management functions: regulation, planning, construction, operation and maintenance; enhance environmental amenities and ensure that environmental resources are protected, restored and conserved in the course of their activities, with **environmental needs and objectives treated on an equal footing with resource management needs.** The policy contains numerous clauses on environmental protection, including the use of **modern, environmentally sound technologies and infrastructure, conservation of biodiversity and sustainable land and water management,** and **controls**

on the unplanned conversion of agricultural land and ecologically sensitive areas, thereby promoting environmentally sustainable development in the water sector.

National Safe Drinking Water Supply and Sanitation Policy (NSDWSSP / NPSWSS), 1998:

The National Safe Drinking Water Supply and Sanitation Policy, adopted in 1998, sets out the basic framework for improving public health and environmental quality through the provision of safe water supply and sanitation services. It articulates the Government's goal of ensuring that all people have access to safe water and sanitation at an affordable cost, and provides broad sectoral guidelines to achieve this. The key objectives of the policy include: (i) managing water supply and sanitation services to meet the basic needs of all citizens; (ii) bringing about positive behavioral change and improved attitudes towards hygiene, water use and sanitation; (iii) reducing the incidence of water-borne diseases; (iv) strengthening the capacity of local government institutions and communities to plan, implement and manage Water Supply and Sanitation(WSS) systems; (v) ensuring the sustainability of water supply and sanitation services through appropriate operation, maintenance and cost-sharing arrangements; (vi) promoting conservation, sound management and increased use of surface water, and controlling water pollution in the context of groundwater scarcity and contamination; and (vii) taking necessary measures to capture and use rainwater as an additional safe water source.

National Agricultural Policy, 2010

The overall objective of the National Agriculture Policy is to make the nation self-sufficient in food by increasing the production of all crops, including cereals, and ensuring a dependable food security system for all. One of its specific objectives is to take necessary measures to ensure environmental protection and promote **environment-friendly sustainable agriculture** through increased use of organic manure and strengthening of integrated pest management (IPM) programmes. The policy recognizes that existing agricultural technologies are not sufficient to cope with unfavorable environmental conditions such as climate change, floods, droughts, storms, salinity, pests and diseases, and river erosion, and therefore calls for the development and dissemination of more resilient technologies. It further stresses the importance of raising awareness so that chemical fertilizers and pesticides used to boost crop production do not become a source of environmental pollution.

Renewable Energy Policy Framework in Bangladesh:

Bangladesh's renewable and clean energy agenda is guided primarily by the Renewable Energy Policy of 2008 and its subsequent updates, together with emerging instruments such as the Renewable Energy Policy 2025, the Integrated Energy and Power Master Plan (IEPMP) 2023, and the Energy Efficiency and Conservation Master Plan. The 2008 policy's objectives include harnessing the country's renewable resource potential, enabling and encouraging public and private investment in renewable energy, developing sustainable energy supplies to substitute depleting fossil fuels, and scaling up the contribution of renewables to national electricity and heat production, with initial national targets of 5% of power demand from renewable energy by 2015 and 10% by 2020. The policy also mandates the creation of a dedicated agency; now the Sustainable and Renewable Energy Development Authority (SREDA) as the focal point for planning, promotion and coordination of renewable and other clean energy technologies,

including support for demonstration projects, market development, local manufacturing and financing mechanisms. Recognizing evolving climate and energy security challenges, the Government has recently approved a new Renewable Energy Policy 2025, raising ambition to supply at least 20% of national power demand from renewable sources by 2030 and further increasing medium and long-term clean energy targets, alongside instruments such as net metering and rooftop solar promotion. For projects such as climate-resilient, energy-efficient housing in vulnerable regions, this policy framework provides a clear mandate to integrate solar PV and other clean energy technologies, reduce greenhouse gas emissions, and support low-carbon, climate-resilient development pathways.

Standing Orders on Disaster (SOD), 2010 (updated 2019):

The Standing Orders on Disaster, first issued in 1997 and revised in 2010, are the Government of Bangladesh's principal operational framework for disaster risk management, setting out in detail the duties and responsibilities of ministries, divisions, agencies and local government bodies before, during and after disasters. The 2010 edition represents a substantial improvement over the earlier English version (1999), introducing an explicit outline of the national disaster-management regulative framework; core groups for emergency response at different administrative levels; a multi-agency disaster incident management system; clarified risk-reduction roles and responsibilities for all disaster management committees; new outlines for local-level disaster management plans; revised storm warning signals; and updated guidance on cyclone-shelter design. Conceptually, the SOD adopts a **comprehensive, all-hazard, all-sector approach,** with strong emphasis on disaster risk reduction as well as emergency response and recovery. It is designed to strengthen the capacity of institutions at every tier of government and community structures, with specific focus on community vulnerability and capacity development for adopting disaster-resistant housing, agriculture and livelihood practices in relation to hazards such as cyclones, tidal surges, tsunamis, earthquakes, tornadoes, floods, waterlogging, salinity, high tides and cold waves. The SOD also provides guidance on the planning, construction, management and maintenance of shelters including use of GIS for site selection, ensuring safe access and communications, and provision for emergency water, sanitation, food and livestock making it directly relevant to community-based, climate-resilient housing and settlement interventions in hazard-prone areas.

Haor-specific Policy and Planning Frameworks

The Government of Bangladesh has established dedicated institutions and planning frameworks for the haor and wetland belt that directly shape any intervention in the region. The Department of Bangladesh Haor and Wetland Development (formerly the Bangladesh Haor and Wetland Development Board), under the Ministry of Water Resources, holds the specific mandate to conserve, manage and develop haor and wetland ecosystems and the livelihoods of their residents. Its flagship instrument is the Master Plan of Haor Area (2012-2032), prepared by the Bangladesh Haor and Wetland Development Board, which provides a 20-year integrated development framework for about 373 haors covering roughly 859,000 ha across seven north-eastern districts. The Plan aims to preserve, protect and restore haor ecosystems while protecting highly exposed communities from wave erosion and flash floods, expanding eco-friendly settlement areas, ensuring housing for the poor, and improving rural livelihoods in line with national visions and sectoral policies. Formulated on integrated water resources management (IWRM) principles, it sets out investment portfolios and projects across themes such as flood and wave-erosion management, climate-resilient settlement and housing, navigation and rural connectivity, water supply and sanitation, fisheries and agriculture, afforestation and wetland conservation, and tourism. For the proposed climate-resilient housing project in the haor region, this framework is highly relevant: it provides spatial planning guidance, identifies priority areas for protecting villages and homesteads from wave attack and flash

floods, promotes nature-based solutions (e.g. swamp forest restoration and homestead tree belts), and calls for improved, safe and climate-resilient housing and basic services for poor haor communities ensuring that project interventions are aligned with national and haor-specific priorities and do not undermine the ecological integrity of the wetland system.

2.2 Adaptation Fund Gender Policy

The project is guided by the Adaptation Fund (AF) Gender Policy and Gender Action Plan, first approved in 2016 (for FY 2017-2019) and updated in 2021 (GAP 2021-2023). The AF Gender Policy adopts a principles-based gender mainstreaming approach and aims to ensure that all Fund-supported projects and programmes provide women and men regardless of age, race, ethnicity, religion, class, language, ability or gender identity, equal opportunities to access resources, strengthen their agency, build resilience and address gender-differentiated vulnerabilities to climate change. It commits the Fund and its partners to uphold women's rights as universal human rights and to strive towards gender equality and the empowerment of women and girls, while recognizing that in certain contexts men and boys may also face specific vulnerabilities. The Policy systematically integrates key principles from the AF Environmental and Social Policy, particularly on access and equity, consideration of marginalized and vulnerable groups, and human rights, and requires implementing entities to conduct gender analyses, design gender-responsive activities, prevent and respond to gender-based risks (including GBV/SEAH), and monitor and report on gender outcomes through tools such as project-level gender action plans and the AF Gender Scorecard.

2.3 Adaptation Fund Environmental and Social Policy (ESP)

The Adaptation Fund's Environmental and Social Policy (ESP), first approved in 2013 and revised in 2016 (and further updated in 2025), is an operational policy and guideline that ensures Fund-supported projects and programmes achieve climate-resilient development without causing unnecessary environmental or social harm. The ESP requires all Implementing Entities (IEs) to maintain an environmental and social management system that identifies and assesses risks at the earliest stage of project design, applies the mitigation hierarchy (avoid, minimize, mitigate, compensate), and monitors and reports on the effectiveness of mitigation measures throughout implementation. At its core, the ESP is built around 15 environmental and social principles including compliance with the law; access and equity; consideration of marginalized and vulnerable groups; human rights; gender equality and women's empowerment; core labor rights; indigenous peoples; involuntary resettlement; protection of natural habitats; conservation of biodiversity; climate change; pollution prevention and resource efficiency; public health; physical and cultural heritage; and lands and soil conservation; which all AF-funded projects must respect and, where relevant, operationalize through project-level ES screening, categorization and Environmental and Social Management Plans (ESMPs). The ESP also mandates meaningful, inclusive stakeholder consultation, transparency and grievance mechanisms, and places primary responsibility for ES risk management on Implementing and Executing Entities, making it a central reference for the ESMF and safeguard arrangements of the proposed climate-resilient housing project in the haor region.

2.4 Implications of Government Policies, Acts and Rules on Haor LLA Housing Project Activities

The regulatory requirements for environmental management are anchored in the Bangladesh Environment Conservation Act, 1995 and the Environment Conservation Rules, 2023 (ECR 2023). ECR 2023, which replaces the earlier 1997 Rules (ECR 1997 and its amendments), is primarily structured around regulating industrial and larger-scale development activities through a categorical system (Green, Yellow,

Orange and Red) and associated requirements for environmental clearance. Under the earlier ECR 1997, major water-resources and flood-control works such as construction or reconstruction of embankments, polders and dikes were classified as 'Red' category projects, but the Rules did not explicitly distinguish small-scale, community-level rehabilitation or construction of dispersed structures such as individual houses, small platforms, eco-toilets, rainwater harvesting systems or homestead tree plantations. Given that the Haor LLA Housing Project will be implemented by PKSF's Executing Entities (EEs) through community-based, small-scale interventions primarily climate-resilient housing, WASH and solar systems, and homestead greening; a more flexible but still robust approach to environmental categorization and clearance is required. In line with ECR 2023 and PKSF's ESMF, all proposed sub-projects will therefore be screened by the EEs, and where required an Initial Environmental Examination (IEE) and/or site-specific Environmental and Social Management Plan (ESMP) will be prepared and appropriate mitigation measures implemented as part of project design and execution. Sub-projects found to carry significant or irreversible environmental or social impacts inconsistent with the ECR 2023, PKSF's ESS, or the Adaptation Fund's Environmental and Social Policy will not be financed under the Haor LLA Housing Project.

3.0 PKSF Safeguard Policies and ESMF

PKSF has adopted comprehensive safeguard policies and guidelines for Environmental and Social (ES) management of its projects and programme activities. These policies require that all projects proposed for PKSF financing undergo an ES assessment to ensure that they are environmentally and socially sound and sustainable, thereby improving project design and decision-making. The ES guideline is structured around 10 Environmental and Social Standards (ESS), which are aligned with globally recognized good practice:

- ESS1: Assessment and Management of Environmental and Social Risks and Impacts
- ESS2: Labour and Working Conditions
- ESS3: Resource Efficiency and Pollution Prevention and Management
- ESS4: Community Health and Safety
- ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
- ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- ESS7: Tribal Peoples/Traditional Local Communities
- ESS8: Cultural Heritage
- ESS9: Financial Intermediaries
- ESS10: Stakeholder Engagement and Information Disclosure

There are only limited differences between the safeguard requirements of the Government of Bangladesh, the Adaptation Fund's Environmental and Social Policy (ESP) and PKSF's ESS. PKSF's standards are broadly consistent with the 15 environmental and social principles of the Adaptation Fund, including on access and equity, marginalized and vulnerable groups, indigenous peoples, biodiversity, pollution prevention, public health and lands and soil conservation. While the Adaptation Fund ESP articulates some elements more explicitly such as dedicated principles on climate change, Indigenous Peoples and a strong emphasis on preventing and responding to sexual exploitation, abuse and harassment (SEAH) under its gender and ES requirements. These aspects are substantively addressed within PKSF's framework, particularly under ESS1 (risk assessment and management, including climate-related risks), ESS2 (labor and working conditions, including protection from harassment and abuse), ESS3 (pollution prevention and resource efficiency), ESS4 (community health and safety), ESS7 (Tribal Peoples/Traditional Local Communities) and ESS10 (stakeholder engagement and information disclosure). For this project, the ESMF therefore applies

PKSF's ESS as the operational standard while ensuring full consistency with, and no contradiction to, the Adaptation Fund's ESP and Gender Policy.

Requirements of the ESMF

Table 1: Requirements of the ESMF

ESSs	Requirements	Relevancy with the project
ESS-1 Assessment and Management of ES Risks and Impacts	Carry out ES screening and ES categorization of all sub-projects; identify potential ES risks and impacts; prepare appropriate ES management instruments (e.g., site-specific ESMPs); integrate mitigation measures into design, construction and operation; prepare and implement ES monitoring and reporting plans	Relevant- provides the core basis for ES risk and impact assessment and mitigation. All housing, WASH, solar and tree-plantation activities in the haor area will be screened and, where needed, covered by site-specific ESMPs to manage localized risks (e.g., drainage, erosion, OHS, community safety, biodiversity).
ESS-2 Labor and Working Conditions	Ensure safe and healthy working conditions, including occupational health and safety (OHS) measures, provision of PPE and first-aid; access to medical treatment options for project workers; fair terms and conditions of employment; non-discrimination and equal opportunity; equal wages for men and women for work of equal value; prohibition of forced labor and child labor; worker grievance mechanisms and Codes of Conduct (including SEAH-related provisions).	Relevant and provides guidance for addressing labor related issues. The project will employ Direct and Contracted workers. Itwill guide development and enforcement of OHS procedures for construction in flood-prone haor settings, fair employment practices, equal pay for women and men, and prevention of child labor and SEAH in all project works.
ESS-3 Resource Efficiency and Pollution Prevention and Management	Requirements for efficient use of materials, energy and water; management of solid, liquid and hazardous wastes; safe handling, storage and disposal of chemicals and hazardous materials; measures to prevent, minimize and control pollution and emissions; consideration of cumulative and historical pollution issues where relevant.	Relevant and provides guidance for managing waste and pollution and promoting resource efficiency. It will guide proper siting and design of eco-toilets and drainage, safe management and disposal of wastes, promotion of reuse/recycling.
ESS-4 Community Health and Safety	Takes into account community health and safety risks arising from project activities; promotes the concept of universal access (including for women, children, elderly persons and persons with disabilities); addresses traffic and transport safety (including road and boat safety), with risk assessments and monitoring; requires	Relevant and addresses community safety and public health in flood-prone haor settlements. It will guide safe siting and structural design of elevated houses, eco-toilets and rainwater harvesting systems to withstand flash floods; ensure safe access (paths, ramps) for all users;

ESSs	Requirements	Relevancy with the project
	appropriate measures for infectious disease prevention and control (e.g. COVID-19), emergency preparedness, fire and electrical safety, and safe management of any hazardous materials to protect neighboring communities.	manage community risks during construction (open pits, material transport by boat/vehicle); protect drinking-water sources from contamination; and apply context-appropriate health, hygiene and infection-prevention measures for workers and community members during training and construction.
ESS-5 Land Acquisition Restrictions on Land Use and Involuntary Resettlement	Addresses impacts from land acquisition, restrictions on land use and involuntary resettlement; requires avoidance or minimization of such impacts; where unavoidable, requires compensation, livelihood restoration and meaningful consultation.	Not expected to be triggered but will be verified at screening. The project is designed to avoid involuntary land acquisition and physical or economic displacement. Climate-resilient houses and associated facilities will be constructed on existing homestead land provided voluntarily by beneficiary households, with documented consent. Any sub-project requiring involuntary land acquisition or resettlement will be deemed ineligible under the project.
ESS-6 Biodiversity Conservation	Provides requirements for conservation of biodiversity and sustainable management of living natural resources (forests, wetlands, fisheries, agriculture); differentiates between small-scale and commercial activities; seeks to avoid significant conversion or degradation of natural habitats and critical habitats and to promote ecosystem services.	Relevant and provides guidance for addressing biodiversity and ecosystem issues in the haor wetlands. The project will support homestead and community tree plantation and minor earthworks in a sensitive wetland landscape. It will guide the selection of native, flood-tolerant species (e.g., swamp trees and local varieties), prevent planting or works that degrade haor wetlands or fish habitats, and promote nature-based solutions (tree belts as wave buffers, soil stabilization) that enhance biodiversity while protecting homesteads.
ESS-7 Indigenous Peoples	Applies when the Indigenous Peoples are present or have a collective attachment to the land, whether they are affected positively or negatively and regardless of economic, political or social vulnerability.	Currently not known to be triggered, but will be confirmed through screening. The identified haor project areas are not currently known to host distinct Tribal Peoples or traditional communities as defined under ESS-7. However, ES screening will explicitly

ESSs	Requirements	Relevancy with the project
		check for their presence; if any such groups are identified, the project will apply ESS-7 and Adaptation Fund Indigenous Peoples requirements, and design culturally appropriate engagement and benefit-sharing measures.
ESS-8 Cultural Heritage	Illustrates the need to preserve and protect various types of cultural heritage in the project areas.	Not expected to be triggered. The project does not plan interventions at known cultural or religious heritage sites.
ESS-9 Financial Intermediaries	Specifies how FIs will assess and manage ES risks and impacts.	PKSF will apply its ESMF and ESS framework to all sub-projects financed under the Haor LLA Housing Project and will require Executing Entities (EEs) to implement the ES screening, ESMPs and mitigation measures set out in this ESMF. PKSF will oversee ES performance through its PMU, conduct supervision and reporting, and ensure that EEs maintain adequate ES capacity and procedures.
ESS-10 Stakeholder Engagement and Information Disclosure	Requires stakeholder engagement throughout the project life cycle, and preparation and implementation of a Stakeholder Engagement Plan (SEP). Requires early identification of stakeholders, both project-affected parties and other interested parties, and clarification on how effective engagement takes place.	Relevant andPKSF will prepare a project-specific SEP for the Haor LLA Housing Project, identifying key stakeholders (beneficiary households, women's groups, persons with disabilities, community leaders, Union Parishads, EEs etc.), analyzing their needs and influence, and setting out the modalities for continuous engagement, risk communication and feedback. It will also underpin the design and operation of a Grievance Redress Mechanism (GRM) at community, EE and PKSF levels, ensuring that concerns related to targeting, construction quality, ES issues or SEAH can be raised and addressed in a timely, transparent and safe manner.

4.0 Assessment of Environmental and Social Impacts

4.1 Introduction

Adverse environmental and social (ES) impacts of project interventions in the haor region can be both direct and indirect, depending on the sensitivity of the physical environment and the scale and siting of activities. While direct impacts (for example, from house construction, earthworks or installation of WASH and solar systems) are often more visible, indirect effects such as changes in drainage patterns, pressure on common resources and shifting land-use practices can be equally significant over time. In the haor basin, where settlements are embedded within a highly dynamic floodplain-wetland system, even small interventions may interact with seasonal inundation, flash floods and wave action (*afal*) in complex ways (BHWDB, 2012[4]).

Most impacts of the proposed project are expected to be localized and site-specific given the small-scale, community-based nature of the housing, WASH, solar and homestead greening activities. However, experience from similar programmes in haor and other flood-prone areas of Bangladesh shows that community involvement, local ownership, environmentally compatible siting and respect for natural hydrology are critical determinants of both impact magnitude and long-term sustainability. This section therefore provides an overview of the physical environmental baseline of the haor region and presents a preliminary assessment of potential direct and indirect ES impacts associated with the proposed locally led climate-resilient housing interventions.

4.2 Physical Environment of the Project Area

4.2.1 Landform and Geo-hydrology

The proposed project will be implemented in selected haorupazilas in the north-eastern floodplain of Bangladesh, a region characterized by large, bowl-shaped depressions (haors) that function as seasonal wetlands. The Master Plan of Haor Area estimates that the broader haor region covers about 1.99 million ha, with 373 haors and major beels covering roughly 858,000-859,000 ha and accommodating around 19.4 million people across seven districts: Sunamganj, Sylhet, Habiganj, Moulvibazar, Netrakona, Kishoreganj and Brahmanbaria (BHWDB, 2012).

Topographically, these haors remain deeply inundated during the monsoon and post-monsoon months, turning into extensive water bodies, while in the dry season only the elevated village mounds (kandas), natural levees and embankments stand above water. Hydrology is dominated by intense rainfall in the upstream Meghalaya and Tripura hills and rapid inflows through the Surma-Kushiyara and their tributaries, which routinely generate pre-monsoon flash floods that damage standing *boro*

rice and housing (Bokhtiar et al., 2024[5]).

[4]Bangladesh Haor and Wetland Development Board (BHWDB). 2012. *Master Plan of Haor Area, Volume I: Summary Report*. Ministry of Water Resources, Government of the People's Republic of Bangladesh.

[5]Bokhtiar, S.M., Islam, M.J., Samsuzzaman, S., Jahiruddin, M., Panaullah, G.M., Salam, M.A., & Hossain, M.A. 2022. "Constraints and Opportunities of Agricultural Development in Haor Ecosystem of Bangladesh." *Ecologies*, 5(2): 17.

These geomorphological and hydrological characteristics make the haor basin highly sensitive to climate variability and change, especially changes in rainfall intensity and timing that can exacerbate early flash floods, prolonged inundation and wave attack (*afal*) on homestead mounds. This context underpins the need for elevated, flood-resilient housing and climate-robust WASH and energy systems, combined with careful siting on stable, less erosion-prone mounds and preservation of natural drainage.

4.2.2 Biodiversity (Baseline)

Haor wetlands are recognized as one of Bangladesh's most important freshwater biodiversity reservoirs, supporting a mosaic of open water, seasonally flooded grasslands, swamp forests and homestead vegetation (BHWDB, 2012). Flagship systems such as TanguarHaor demonstrate this ecological value: IUCN Bangladesh (2012) reports that TanguarHaor hosts around 141-143 freshwater fish species (roughly half of the country's freshwater fish diversity) and more than 200 species of resident and migratory waterbirds, and still retains patches of freshwater swamp forest dominated by *hijal(Barringtonia acutangula)* and *koroch* (*Pongamia pinnata*) (IUCN Bangladesh, 2012; Bevanger et al., 2001[6]).

More broadly, haor systems provide critical spawning and nursery grounds for major carps and other indigenous fishes and support diverse aquatic and semi-aquatic plant communities (IUCN Bangladesh, 2012). At the same time, studies note that haor biodiversity is under pressure from overfishing and destructive fishing gears, conversion of wetlands to intensive *boro* cultivation, drainage and embankment works, pollution and unregulated resource extraction, which collectively reduce habitat quality and ecological resilience (Bevanger et al., 2001).

At the micro-scale relevant for this project, the main biodiversity interface will be at homesteads and village mounds. Tree felling, unplanned earth cutting or poor waste management could contribute to local vegetation loss and disturbance of nesting or feeding sites; conversely, homestead greening with native, flood-tolerant species, careful siting to avoid remaining swamp forest patches or key bird congregation and fish-breeding areas, and good construction and waste-handling practices can produce net positive outcomes for local biodiversity and ecosystem services.

4.2.3 Water Quality (Baseline)

Water quality in the haor basin reflects both natural hydrological dynamics and human activities. A recent study of Hail Haor in Moulvibazar district found that key physio-chemical parameters (temperature, pH, electrical conductivity, total dissolved solids and most nutrients) generally remain within national and international surface-water standards, but dissolved oxygen (DO) levels during the dry summer sometimes drop below desirable thresholds for aquatic life, while chemical oxygen demand (COD) values indicate significant organic and chemical pollution from upstream tea estates, settlements and agriculture (Uddin et al., 2021[7]).

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[6]IUCN Bangladesh. 2012. *Biodiversity of TanguarHaor: A Ramsar Site of Bangladesh* (Volumes I-III). IUCN, International Union for Conservation of Nature, Bangladesh Country Office.
Bevanger, K., Datta, A.K., Eid, A.T., & Shirin, M. 2001. *TanguarHaor Wetland Biodiversity Conservation Project: An Appraisal*. NINA NIKU Project Report 16. Norwegian Institute for Nature Research (NINA)

[7]Uddin, M.J., Rahman, A., Ovi-Uz-Zaman, M., Rahman, S., Nurnabi, M., & Adhikary, K.K. 2021. "A Study on Water Quality of Hail Haor Ecosystem of Bangladesh." *Journal of the Asiatic Society of Bangladesh (Science)*, 47(1): 91-97.

A complementary investigation around DingaputhaHaor in Netrokona revealed that many tube-well and surface-water samples used for drinking and cooking exceeded national standards for iron and some other parameters, and that both tube-well and haor water near hanging latrines showed high biological oxygen demand (BOD), phosphorus and fecal contamination. The poor hygienic conditions, with tubewells often too close to latrines and widespread use of contaminated haor water for cooking due to excessive iron content in tubewell water (Rahman et al., 2017[8]).

These studies highlight that safe drinking water and sanitation remain major challenges in haor settlements, particularly during prolonged inundation when open water is heavily used for domestic purposes and latrines may overflow or be submerged. For the project, this baseline supports the integration of: (i) rainwater harvesting systems with appropriate first-flush and storage hygiene; (ii) elevated, flood-resilient eco-toilets and (iii) hygiene promotion and support for households to manage sanitation and drainage in ways that reduce pathogen loads entering the haor system.

4.2.4 Air Quality (Baseline)

Although the haor region is less industrialized than major metropolitan areas, it is affected by the broader national problem of poor air quality. A World Bank assessment, Breathing Heavy: New Evidence on Air Pollution and Health in Bangladesh, estimated that average annual $PM_{2.5}$ concentrations in 2019 were far above WHO Air Quality Guidelines nationwide and noted that even Sylhet division, which has the cleanest air in the country, experiences average $PM_{2.5}$ levels roughly 80% above the WHO guideline (World Bank, 2022[9]). In rural haorupazilas, ambient air quality is influenced by regional transport of fine particulates, emissions from brick kilns and traffic along major corridors, as well as household biomass use (fuelwood, crop residues, cow dung) and seasonal burning of rice straw, which contribute to high indoor and local outdoor $PM_{2.5}$ exposures. While the proposed project is not expected to generate major air emissions, construction activities (earthworks, transport and handling of sand, bricks and cement) may cause short-term, localized dust and exhaust emissions around work sites.

These impacts can be effectively managed through good construction practices such as proper storage of loose materials, water spraying to reduce dust emission, avoiding unnecessary earth disturbance, and scheduling dusty activities away from peak community use periods and by promoting cleaner household energy options (e.g., improved cookstoves, solar lighting) in line with the project's renewable energy component. This is consistent with ESS-2 and ESS-4 requirements on worker and community health and safety and supports national efforts to reduce air-pollution-related health risks.

4.3 Environmental and social screening and categorization

The 'environmental screening' is a mandatory requirement for the design of a project or sub-project. The purpose of the environmental screening is to get relevant concerns addressed early on before further decision and/or design of a sub-project and to ensure that actions to mitigate environmental impacts or enhance environmental opportunities are budgeted for. It is the first step to understand the possible environmental impacts and also to identify the environmental categorization of the project or sub-project.

[8]Rahman, S., Ahmed, M.A., Islam, M.A., Tithi, S.F.K., & Kamal, L.M. 2017. "Assessment of Drinking Water Quality and Hygienic Conditions of the People Living around the DingaputhaHaor Area of Netrokona District, Bangladesh." *Research & Reviews: Journal of Ecology and Environmental Sciences*, 5(2).
[9]World Bank. 2022. *Breathing Heavy: New Evidence on Air Pollution and Health in Bangladesh*. Washington, DC: World Bank Group.

The participation and consultation with local communities are important in identifying the potential impacts of the project interventions. The PKSF has carried out screening of the project in consultation with experts as well as communities. The screening results are presented below:

Table 2: Environmental and Social Screening of the Project

Exclusion criteria	YES	NO	Remark
Will the activities involve associated facilities and require further due diligence of such associated facilities?	☐	☒	The project will not involve large associated facilities. Interventions are small-scale, household- and community-level (housing, WASH, solar, homestead plantation) and their impacts are familiar to PKSF and its EEs.
Will the activities involve trans-boundary impacts including those that would require further due diligence and notification to downstream riparian states?	☐	☒	The activities will be implemented in downstream floodplains of transboundary rivers but will not construct any dams, barrages or cross-river infrastructure, and will not alter river flows or sediment regimes; therefore, no transboundary impacts are expected.
Will the activities adversely affect working conditions and health and safety of workers or potentially employ vulnerable categories of workers including women, child labour?	☐	☒	The project will involve small-scale construction (houses, eco-toilets, rainwater harvesting systems, access paths) using local contractors and community labor. No child labor, forced labor or harmful conditions will be permitted. PKSF's ESS2 and national labor laws will guide OHS measures, equal opportunity and protection of vulnerable workers.
Will the activities potentially generate hazardous waste and pollutants including pesticides and contaminate lands that would require further studies on management, minimization and control and compliance to the country and applicable international environmental quality standards?	☐	☒	The project will generate small quantities of construction-related waste And limited waste from solar PV systems (batteries). These will be managed through project ESMPs and contracts, including safe handling, temporary storage and reuse/recycling arrangements and good practices.
Will the activities involve the construction, maintenance, and rehabilitation of critical infrastructure (like dams, water impoundments, coastal and river bank infrastructure) that would require further technical assessment and safety studies?	☐	☒	The project will support only small-scale community infrastructure (elevated climate-resilient houses, eco-toilets, rainwater harvesting systems, solar installations and access paths/ramps). It will not construct or rehabilitate critical infrastructure such as dams, large embankments, major water impoundments or large-scale riverbank protection, and therefore no additional dam-safety or similar studies are required.
Will the proposed activities potentially involve resettlement and dispossession, land acquisition, and economic displacement of persons and communities?	☐	☒	The project will not finance activities that involve involuntary land acquisition, resettlement or economic displacement. Houses and associated facilities will be constructed on existing homestead land with documented voluntary consent from beneficiary households. Where existing houses are

Exclusion criteria	YES	NO	Remark
			improved or replaced, works will be phased so that families can continue to reside safely (e.g., using other rooms or temporary arrangements on their own land).
Will the activities be located in protected areas and areas of ecological significance including critical habitats, key biodiversity areas and internationally recognized conservation sites?	☐	☒	The project will be implemented in existing settlements and village mounds and will avoid protected areas, critical habitats and internationally recognized sites (e.g., core zones of TanguarHaor Ramsar site and ECAs). ES screening will exclude any sub-projects proposed within such sensitive areas or that could significantly affect them.
Will the activities affect indigenous peoples that would require further due diligence, free, prior and informed consent (FPIC) and documentation of development plans?	☒	☐	The identified haor project locations are not currently known to host Indigenous Peoples or tribal communities as defined in national law and AF ESP. ES screening will explicitly check for their presence; if any such groups are identified in future locations, the sub-project design will follow AF requirements on Indigenous Peoples, including culturally appropriate engagement and FPIC.
Will the activities be located in areas that are considered to have archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values or contains features considered as critical cultural heritage?	☐	☒	The project will not deliberately target sites of archaeological, historical, cultural or religious significance. Any chance finds or proximity to such sites identified during screening or implementation will trigger simple chance-find procedures and consultation with communities and relevant authorities before proceeding.
Will the activities affect human rights that would require further due diligence?	☐	☒	The activities are designed to enhance the rights and well-being of vulnerable households by improving safe housing, WASH and energy. Interventions will be selected and implemented through participatory processes on beneficiaries' own land, in line with national law and AF ESP, and are not expected to adversely affect human rights.
Will the activities have potential to occur SEAH that require studies and due diligence?	☒	☐	The project may engage women and men in construction-related work and community processes, creating some potential SEAH risks (e.g., harassment while travelling to worksites or during interactions with co-workers). A SEAH-sensitive Code of Conduct, awareness-raising, safe reporting channels and a gender sensitive GRM will be implemented to prevent, detect and respond to SEAH risks.
Will the activities have potential to promote gender inequality?	☒	☐	There is a potential risk of unequal participation or wage discrimination against women in construction and related activities. The project's gender-

Exclusion criteria	YES	NO	Remark
			responsive design, stakeholder engagement plan and HR policies (including equal pay for equal work and promotion of women's leadership in community decision-making) will be applied to ensure that interventions reduce, rather than reinforce, gender inequalities.

The screening of the proposed project "Strengthening Climate Resilience through Locally-Led Housing Solutions in the Haor (Flash Flood Prone) Region of Bangladesh" confirms that the project will generate some environmental and social (ES) impacts that require targeted mitigation measures, but that these impacts are site-specific, reversible and manageable. Typical impacts will arise from small-scale construction of elevated houses, eco-toilets, rainwater harvesting systems, solar panel installations, access paths and minor earthworks for plinth raising, as well as from homestead tree planting. These may include temporary disturbance (dust, noise, traffic and boat movement), localized soil erosion and drainage obstruction, construction and household waste (including solar batteries and electronic components), and community and worker health and safety risks if personal protective equipment (PPE) and safe work practices are not followed. With the application of the ESMF and site-specific ESMPs covering good construction practices, drainage and erosion control, waste and battery management, occupational health and safety (OHS) and PPE for workers and SEAH-sensitive Codes of Conduct. The cumulative ES impact of the project is assessed as Low. On this basis, the project is classified as Category C (Lower Risk) under the Adaptation Fund Environmental and Social Policy and PKSF's Environmental and Social Standards.

Under the Environment Conservation Rules, 2023 (ECR 2023), the small-scale, community-based construction and service-delivery activities supported by the project (housing units, sanitation facilities, rainwater harvesting, solar systems, homestead greening) are expected to fall primarily within the yellow category of projects, as they do not involve large industrial facilities or critical infrastructure such as dams, large embankments or major river training works. In line with ECR 2023, Yellow-category projects require submission of basic environmental documentation, including an Environmental Management Plan (EMP), as part of the environmental clearance process. For this project, the ESMF and the cluster or site-specific Environmental and Social Management Plan (ESMP) prepared by PKSF and its Executing Entities (EEs) will meet these ESMP requirements and will be integrated into project design, procurement and supervision. During project preparation, No Objection(s) have been or will be obtained from the National Designated Authority (NDA) for the Adaptation Fund and relevant national authorities (e.g., the Department of Environment), and the project dEEs not trigger any additional stand-alone environmental clearances beyond those already addressed through this framework and the government's own review processes.

The project will be implemented through multiple Executing Entities (EEs), PKSF Partner Organizations active in the haor region across several upazilas in the selected districts. Accordingly, the project will ensure site-specific ES screening and due diligence by EEs for all sub-projects, using the screening form and procedures set out in this ESMF. PKSF, through the Project Management Unit (PMU), will review and clear the screening results and ESMPs, provide capacity support, and supervise implementation, thereby ensuring that the overall Category C classification is maintained and that no high-risk activities are financed under the project.

4.4 Typical Environmental Impacts

4.4.1 Loss of Topsoil of Agricultural Land

Raising homestead plinths and constructing climate-resilient houses, eco-toilets, rainwater harvesting systems and access paths will require earthworks and fill materials. In many haor villages, the most readily available source of soil is nearby agricultural land. Unsafely cutting soil from the topsoil layer of crop fields would reduce soil fertility and crop productivity by removing nutrient-rich horizons. This is a particular concern for *boro* rice cultivation, which already faces high climate risk. Such impacts can be avoided or minimized by sourcing fill from non-productive land e.g., existing borrow pits, soil from pond and canal excavation, degraded village edges. Where soil is taken from existing ponds or borrow pits, this can also contribute to improved water depth and fish production if done in a planned and community-agreed manner.

4.4.2 Drainage Congestion / Waterlogging

Construction of raised plinths, access paths and small structures may interfere with natural drainage channels and local overland flow, which are particularly important in the haor landscape during pre-monsoon and monsoon floods. Poorly placed or oversized structures could cause drainage congestion and prolonged waterlogging around homesteads or on adjacent agricultural land, potentially damaging crops, affecting homestead stability. To avoid these impacts, drainage and existing micro-channels must be carefully assessed during design; plinths and access paths should be aligned so as not to block natural flow paths, and culverts or openings should be included where necessary to maintain cross-drainage. These considerations will be integrated into site selection, house layout and ESMPs.

4.4.3 Impacts on Biodiversity

The project will be implemented within existing settlements and homesteads, and will not involve clearing of natural forests, swamp forest patches or conversion of open haor waterbodies. However, raising plinths and constructing houses may lead to the removal of small patches of grasses, herbs, shrubs and homestead trees. If not managed, this can slightly reduce local habitat for birds, small mammals, reptiles and beneficial insects. Conversely, the project's planned homestead and village plantation activities using native, flood-tolerant species can have positive impacts on biodiversity by increasing tree cover, providing perches and nesting sites, and stabilizing soil against wave attack. Site selection and ES screening will ensure that no works take place in or immediately adjacent to ecologically sensitive features (e.g., remaining swamp forest, key fish-breeding or bird congregation sites). Construction and waste disposal will be managed so as not to pollute haor waters and aquatic habitats.

4.4.4 Dust and Noise Pollution

Small-scale construction activities (earth cutting, filling, transport and handling of sand, bricks and other materials, mixing of concrete) may generate dust and noise, especially during the dry season. Dust can temporarily affect nearby households, particularly children, elderly persons and those with respiratory conditions, while noise from machinery, material unloading and increased traffic can cause short-term disturbance. These impacts are temporary and localized but will be addressed through standard mitigation measures such as: avoiding unnecessary earth disturbance; water spraying during dry, windy conditions;

proper storage/covering of sand and soil; limiting work to daylight hours; and avoiding very noisy activities during sensitive times (e.g., at night, during school examinations or religious events).

4.4.5 Water Pollution

If not properly designed and managed, eco-toilets, soak pits, wastewater drains and construction-related waste can contribute to local contamination of surface water and shallow groundwater. Common risks include leakage from pits or tanks during floods, discharge of wastewater directly into yards or nearby ponds, and dumping of construction debris into khal/beels. These can increase bacterial contamination, nutrients and suspended solids in local waterbodies and exacerbate existing water-quality problems in the haor. To prevent water pollution, the project will promote elevated and flood-resilient sanitation systems; safe distances between toilets and waterpoints; proper wastewater disposal (e.g. soak pits, small vegetated drainage channels); and safe collection and disposal of construction waste. Rainwater harvesting systems, when properly maintained, will also reduce reliance on potentially contaminated surface water for drinking.

4.4.6 Soil Erosion and Slope Instability

In the haor context, soil salinity is not a major concern, but soil erosion and slope instability of homestead mounds are significant risks. Raising plinths and modifying existing mounds, if done without proper compaction, terracing and protection, can make slopes more prone to erosion from rainfall, flood currents and wave action (*afal)*

). This may damage house foundations, latrines and access paths, and can contribute to local siltation of adjacent low-lying areas. To reduce these risks, design will incorporate: (i) appropriate side slopes and compaction; (ii) turfing or vegetation cover on exposed slopes; (iii) homestead tree and shrub belts acting as wave barriers; and (iv) avoidance of very steep or unstable fill configurations. ESMPs will include practical guidance for contractors and communities on good earthwork practices suited to haor conditions.

4.5 Social Impacts

4.5.1 Labor and Working Conditions (Occupational Health and Safety)

The project involves small-scale construction and installation works (elevated houses, eco-toilets, rainwater harvesting, solar systems, access paths and homestead plantation), which can be carried out primarily with local labor. Risks of serious accidents are relatively low but not negligible: workers may be exposed to hazards such as falls from height, slips on wet surfaces, injuries from handling heavy materials, and minor cuts or bruises during carpentry and masonry. In many cases, beneficiaries themselves and local skilled masons will undertake the works.

To address labor and OHS issues, the project will apply PKSF's ESS2 and national labor laws, ensuring: (i) no child labor or forced labor; (ii) fair terms and conditions and equal pay for equal work for women and men; (iii) provision and use of appropriate personal protective equipment (PPE) such as gloves, masks, boots and basic fall protection where relevant; (iv) basic safety orientation for workers on safe handling of materials, tools and working at height; and (v) access to first-aid and, where needed, referral to health services. Given that most works will be community-based and of short duration, no labor camps are

envisaged; this reduces many social risks, but ESS2 provisions will still apply to all direct and contracted workers.

4.5.2 Community Health and Safety

Construction and installation activities may pose temporary risks to nearby community members, including children and older persons, due to open excavations, stacked materials, moving vehicles or boats, and increased noise and dust. Beneficiaries will often continue to live in their houses or on the same mounds while reconstruction or new construction is ongoing, which increases the potential for small accidents (e.g., trips, falls, contact with tools or materials). There may also be limited odor or nuisance from temporary storage of construction materials or from sanitation systems if not properly sited and ventilated.

To manage these risks, the project will:

- Require contractors and community builders to fence or mark hazardous areas, keep access paths clear, and store materials safely;
- Phase works so that households can safely use alternative rooms or temporary spaces on their own land during critical construction steps;
- Promote universalaccess in house and toilet design (ramps, handrails, non-slippery surfaces) to improve safety for persons with disabilities, elderly persons and children;
- Provide hygiene and health education related to water, sanitation, waste handling and indoor air quality; and
- Implement SEAH-sensitive Codes of Conduct and a community grievance mechanism (GRM) so that any concerns about worker behavior, harassment or safety can be raised and addressed promptly.

Because construction materials (bricks, sand, cement, tin, timber) will mainly be sourced from nearby markets and transported by small vehicles or boats over short distances, the project is not expected to significantly increase traffic or emissions. Nevertheless, basic traffic and boating safety measures (safe loading, avoiding over speeding, awareness of children around vehicles and boats) will be promoted under ESS4.

4.5.3 Impacts on Indigenous/Tribal People and Cultural Heritage

4.5.3.1 Defining the ‘Tribal Peoples’ under the Haor Locally-Led Climate-Resilient Housing Project

Bangladesh has a rich but relatively small ethnic and cultural diversity beyond the Bengali majority; ethnic minorities are estimated at around 1-2 percent of the total population. Although the Government of Bangladesh has endorsed the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), it does not formally recognize any groups as “indigenous peoples” in its legal and policy framework, and commonly uses terms such as “tribal peoples” or “ethnic minorities.” For the purposes of this project, the term “Tribal Peoples” (TPs) will be used in a way that is fully aligned with the Adaptation Fund Environmental and Social Policy (ESP), Principle 7 on Indigenous Peoples, and consistent with international practice.

In the context of the Haor project, PKSF will therefore identify Tribal Peoples/Indigenous Peoples functionally, based on the presence of the following characteristics in a given geographic area, rather than relying solely on administrative labels:

a) Self-identification as members of a distinct indigenous social and cultural group, and recognition of this identity by other groups and local authorities;
b) Collective attachment to geographically distinct habitats, ancestral territories, or areas of seasonal use or occupation (e.g. specific haor mounds, beels, fishing or grazing grounds), as well as to the natural resources in these areas;
c) Customary cultural, economic, social or political institutions that are distinct from those of the mainstream society or dominant local population (for example, traditional leadership structures, customary rules on land and resource use, or distinct livelihood systems); and
d) A distinct language or dialect, often different from standard Bangla, including cases where such language or dialect has existed but is no longer actively spoken due to historical pressures, yet continues to underpin a group's distinct cultural identity.

Where one or more communities in the haor project area are found to meet these characteristics, they will be treated as Tribal/Indigenous Peoples for the purposes of this ESMF. In such cases, the project will apply the Adaptation Fund ESP requirements on Indigenous Peoples, including culturally appropriate consultation, respect for customary rights and institutions, equitable access to benefits, and where relevant, free, prior and informed consent (FPIC) before undertaking any activities that may significantly affect their lands, resources or cultural heritage.

4.5.3.2 Screening of indigenous/tribal people

A screening checklist was developed considering the GCF IPP requirements for screening the impacts of the project on the IP/TP. Following table shows the screening results.

Table 3: Screening of IP/TP for project

Impacts on indigenous/tribal people and cultural heritage		
1.	Are indigenous peoples present in the Project area (including Project area of influence)?	No
2.	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No
3.	Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)?	No
4.	Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No

Impacts on indigenous/tribal people and cultural heritage		
5.	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.	Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	No
7.	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No
8.	Would the Project potentially affect the physical and cultural survival of indigenous peoples?	No
9.	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	No

Bangladesh is ethnically and linguistically dominated by Bengali-speaking people, but a number of smaller ethnic and tribal groups live in different parts of the country. National census and other estimates suggest that Indigenous/tribal peoples constitute roughly 1-2% of the total population, concentrated mainly in the Chattogram Hill Tracts and in certain plains districts (e.g., parts of northern and north-eastern Bangladesh). In the broader Sylhet region, there are recognized ethnic communities such as Khasi, Manipuri and others, but these groups are primarily located in tea garden and hill areas, rather than in the low-lying haor depressions where this project will operate.

The proposed haor project locations have been selected in predominantly Bengali settlements on existing village mounds, and initial screening has not identified any distinct Indigenous or tribal communities whose collective lands, cultural identity or livelihoods would be directly affected by the planned housing and WASH interventions. On this basis, no adverse impacts on Indigenous Peoples are anticipated, and ESS7 is not expected to be triggered. However, the ES screening process will explicitly check for the presence of any such groups in all new locations. If a sub-project were proposed in an area where Indigenous or tribal communities are present or have collective attachment to the land, additional assessment and consultation would be undertaken in line with PKSF ESS7 and the Adaptation Fund's requirements, including culturally appropriate engagement and benefit-sharing.

4.5.3.2 Cultural Heritage

The project is not designed to intervene in archaeological sites, historical monuments, major religious structures or locations known for high cultural or artistic value. Activities will be confined to existing homesteads and settlements, and no works are planned within recognized cultural heritage sites. However, it is possible that small local features such as family graveyards, shrines, or trees of local cultural significance may exist on or near some homesteads.

To prevent adverse impacts on such cultural features, ES screening and community consultations will identify any known local cultural or religious sites in the vicinity of proposed works. Where these are present, house design and siting will be adjusted to avoid disturbance. In addition, contractors and community workers will follow simple chance-find procedures during excavation; any unexpected

artefacts or cultural features discovered will be reported immediately, work will be stopped in the affected area, and guidance will be sought from the community and relevant authorities before proceeding.

4.5.4 Human rights

Human rights in the country are protected by the Constitutions of Bangladesh. It is enshrined as fundamental rights in Part III of the Constitution. The government has established the Human Rights Commission to protect the rights of its citizen. The Human Rights Commission Act was enacted in 2009. The act defines human rights as "Right to life, right to liberty, right to equality and Right to dignity of a person guaranteed by the constitution of the People's Republic of Bangladesh and such other human rights that are declared under different international human rights instruments ratified by the People's Republic of Bangladesh and are enforceable by the existing laws of Bangladesh." Bangladesh is a signatory of all UNHR related conventions and treaties. A list of some treaties and conventions are presented in the table below as an example:

Table 4: Bangladesh position on UNHR related conventions and treaties including tribal people

Sl. No	Name of treaty	Signature date	Ratification date
1	Convention against Torture and Other Cruel Inhuman or Degrading Treatment or Punishment		05 Oct 1998 (a)
2	Optional Protocol of the Convention against Torture (CAT-OP)		
3	International Covenant on Civil and Political Rights (CCPR)		06 Sep 2000 (a)
4	Second Optional Protocol to the International Covenant on Civil and Political Rights aiming to the abolition of the death penalty (CCPR-OP2-DP)		
5	Convention for the Protection of All Persons from Enforced Disappearance (CED)		
6	Interstate communication procedure 11under the International Convention for the Protection of All Persons from Enforced Disappearance (CED, Art.32)		
7	Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)		06 Nov 1984 (a)
8	International Convention on the Elimination of All Forms of Racial Discrimination (CERD)		11 Jun 1979 (a)
9	International Covenant on Economic, Social and Cultural Rights (CESCR)		05 Oct 1998 (a)
10	International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families (CMW)	07 Oct 1998	24 Aug 2011
11	Convention on the Rights of the Child (CRC)	26 Jan 1990	03 Aug 1990
12	Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict (CRC-OP-AC)	06 Sep 2000	06 Sep 2000
13	Optional Protocol to the Convention on the Rights of the Child on the sale of children child prostitution and child pornography (CRC-OP-SC)	06 Sep 2000	06 Sep 2000

14	Convention on the Rights of Persons with Disabilities (CRPD)	09 May 2007	30 Nov 2007

Any violation of these treaties by any person, groups, or organizations will be considered as criminal offends and applies to national laws and acts as mentioned above. It is to be noted that some of the treaties like Convention on the Elimination of All Forms of Discrimination against Women(CEDAW), International Covenant on Economic, Social and Cultural Rights (CESCR), Convention on the Rights of the Child (CRC) and Convention on the Rights of Persons with Disabilities (CRPD) are closely linked with the project activities. These are also supported by the definition of Human Rights in the National Human Rights Commission acts, 2009 as stated above.

The project interventions are community based and will not require external labor. Hence, risks associated with violation of human rights, particularly women, disable and other ethnic minorities (if any) are very limited or absent from external source.

4.5.5 Sexual Exploitation, Abuse and Sexual Harassment (SEAH)

Sexual Exploitation, Abuse and Sexual Harassment are critical element in the society of Bangladesh because empirical evidence is very limited. Almost two-thirds (72.6 per cent) of women who are, or have ever been, married have experienced some form of violence by an intimate partner.[10] It also found that over one-third (35.3 per cent) of women who have never been married faced non-partner physical or sexual violence, as did over one-quarter (28.3 per cent) of currently or formerly married women. There are a number of studies that also show evidences of either sexual harassment or exploitation or abuse particularly in different work places.10 above

The Penal Code of 1860 - Bangladesh's key penal statute, inherited from the colonial period - contains provisions on protecting women from various forms of physical and sexual violence. In 1992, the Committee on the Elimination of All Forms of Discrimination Against Women issued its General Recommendation No. 19. It affirmed that sexual harassment is a form of gender-based violence and, therefore, a form of discrimination within the meaning of article 1 of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW).[11] The Government of Bangladesh ratified the CEDAW on 6 November 1984. Article 11 commits Member States to eliminate discrimination against women in the field of employment, and to ensure the equality of women and men. As discussed above, the CEDAW Committee's General Recommendation No. 19 (1992), entitled "Violence against women", affirms that gender-based violence, including sexual harassment, is a form of discrimination. Commenting on article 11 of CEDAW, which relates to discrimination against women in employment, the CEDAW Committee emphasized that equality in employment can be seriously impaired when women are subjected to gender-specific violence, such as sexual harassment in the workplace. In addition, the government has ratified the UN Declaration on the Elimination of Violence against Women, 1993 and the Beijing Declaration and Platform for Action, 1995.

The government has enacted the Repression against Women and Children (Special Provision) Act, 1995, prescribing the death penalty as the punishment for killing a woman or child by committing rape. Five

[10] Bangladesh Bureau of Statistics, Report on Violence Against Women (VAW) Survey 2015, 2016.
[11] CEDAW, adopted in 1979 by the United Nations General Assembly is regarded as the 'international bill of rights for women'. More information is available on the UN's website, http://www.un.org/womenwatch/daw/cedaw

years later, the Act was repealed and replaced with the Women and Children Repression Prevention Act, 2000 (WCRPA).[12]

Honorable High Court adopted a policy on Sexual Harassment Free Educational and Working Environment and ruled to implement this policy at all types of organizations in the country. As per the policy, each organization will form a committee to receive, investigate and remedial measure against complains on sexual exploitation, abuse and harassment. PKSF strictly follow this policy.

However, there is less possibility to occur SEAH by the project interventions. Because, selected women members will directly involve many of the activities as these will be implemented at their homestead and neighboring areas. In addition, some female worker may require to away to work. They might have risks to SEAH while working in the project site or traveling from home to project site and vice versa. However, the risk is very limited or negligible. But the challenge is that if any woman is affected, she does not want to disclose due to either shyness or fear of loss of dignity. At the EE level, there may be female staffs who will have to travel frequently in the selected villages. These staffs may also face similar types of difficulties. Similarly at the PMU level, female staffs may be recruited. These female staffs would require to frequent field visits in the remote areas of the country. Thus, they might be exposed to SEAH. High Court's guideline on sexual harassment will be applied in this project-to-project SEAH.

Assessment of SEAH related risks associated with the proposed activities

Different types of stakeholders will be involved during the implementation of the project. At the central level, PKSF will establish the project management unit (PMU) where the desired number of female staffs are expected to be recruited. These staff will be required to travel in the remote areas alone or with male colleagues. In this case, the female staff may be affected by SEAH-related risks. They have also possibility to get affected in the office. On the other hand, selected EEs also may recruit female staff who will also require to travel at the village levels for community mobilization, Community Adaptation and Housing Group (CAHG) activities, monitoring physical interventions etc. They will also be required to travel to Dhaka or other areas for training under this project. All these travels may increase the risk of SEAH. Furthermore, at the community level female labor may take participate in the earthwork for plinth raising. They may be affected in various ways that include but are not limited to lack of sanitation facilities at work place, eve teasing, sexual exploitation and harassment, wage discrimination etc.

Action plan matrix for protection of GVB and SEAH

SL#	Identified risks	Mitigation measures	Responsibility	Source of Budget
1.	Wage discrimination	• Awareness raising through CAHG meetings. • Ensure equal payment to male and female labor during earth work.	EE and CAHG members	No additional budget is required

[12] ILO (2020). Overview of laws, policies and practices on gender-based violence and harassment in the world of work in Bangladesh, International Labour Office, CH-1211 Geneva 22, Switzerland,

SL#	Identified risks	Mitigation measures	Responsibility	Source of Budget
		• Establish grievance redress mechanism at community level.		
2.	Sexual harassment and/or eve teasing due to lack of sanitation facilities at work place	• Temporary separate sanitation facilities at the work place for both male and female members. • Establish grievance redress mechanism at community level. • SEAH awareness session in CAHG.	EE and local contractors	Budget is built in the relevant activity.
3.	Sexual harassment and/or eve teasing on the way to and from work place	• Establish grievance redress mechanism at community level. • SEAH awareness session in CAHG.	IE under the supervision of EE	
4.	Risks associated with SEAH at PKSF level	• PKSF's guideline will be applicable for this project • For travel to remote areas, official vehicle will be ensured instead of public transport.	PKSF	No additional budget is required
5	Risks associated with SEAH at EE level	• Training related to project management will incorporate SEAH and GBV related sessions to enhance awareness. • Accommodation of female staff will be arranged separately considering individual requirement of female staff. • Necessary security and privacy will be maintained.	PKSF and EE	Existing training budget

***** In every case, gender policy and GRM of PKSF will be applicable. PKSF strongly follow the zero-tolerance policy on SEAH and GBV. It is applicable both for PKSF and EEs.

4.5.7 Gender equality

Traditionally women and men play clear distinct role in the society of Bangladesh. Usually, men are related to income earning and responsible maintaining cost of living of the household and women usually maintain household works including child care, cooking, etc. As a result, a culture of men's guardianship and women's dependency prevails, with women traditionally restricted to the private sphere.[13] Such inequality and power imbalances between women and men are among the root causes of gender-based violence in Bangladesh.[14] However, women's labor force participation has increased persistently in recent years, emerging as one of the most noticeable changes in Bangladesh's labor market.[15] This is happening mainly due to the governments recognition of the importance of women participation in the labor market for sustainable development of the country.

ILO Convention No. 111[16] addresses discrimination in employment on a number of grounds, including sex, race, color, religion, political opinion, national extraction, and social origin. It requires that Member States declare and pursue a national policy designed to promote equality of opportunity and treatment, with a view to eliminating discrimination. The Government of Bangladesh ratified the Convention in 1972. Bangladesh has ratified and enacted this convention.

Agreed conclusions of the Commission on the Status of Women on the elimination and prevention of all forms of violence against women and girls, 2013, In its agreed conclusions on "Women's economic empowerment in the changing world of work" [17], adopted in 2017, the Commission urged governments at all levels to enact, strengthen and enforce laws and policies to eliminate all forms of violence and harassment against women of all ages in the world of work, in the public and private spheres. It also urged states to provide a means of effective redress in cases of non-compliance. The Commission's agreed conclusions in 2018 reiterated the call for government programmes and strategies for preventing and eliminating sexual harassment against all women and girls, including harassment in the workplace and in schools. These conclusions emphasized effective legal, preventive and protective measures for survivors/victims of sexual harassment or those who are at risk of sexual harassment.[18]

The basis of Bangladeshi laws on gender equality in workplaces stems from the Constitution itself. Article 28 enshrines the principle of equality and non-discrimination, with article 28(2) specifically stating that

[13] Sohela Nazneen, "The Women's Movement in Bangladesh: A Short History and Current Debates", FES Bangladesh Country Study, 2017
[14] UN General Assembly Human Rights Council, Report of the Special Rapporteur on violence against women, its causes and consequences, Rashid Manjoo: Mission to Bangladesh (20-29 May 2013), A/AHC/26/38/Add.2(2014).
[15] Selim Raihan and Sayema Haque Bidisha, Female employment stagnation in Bangladesh: A research paper on Economic Dialogue on Inclusive Growth in Bangladesh (Asia Foundation, 2018).
[16] 90 ILO, Discrimination (Employment and Occupation) Convention, 1958 (No. 111).
[17] Commission on the Status of Women, Women's Economic Empowerment in the Changing World of Work: 2017 Commission on the Status of Women Agreed Conclusions, 2017.
[18] Commission on the Status of Women, Challenges and Opportunities in Achieving Gender Equality and the Empowerment of Rural Women and Girls: 2018 Commission on the Status of Women Agreed Conclusions, 2018, p.11

“women shall have equal rights with men in all spheres of the State and of public life”. To ensure gender equality, the country has enacted constitutional law, Criminal laws (Penal Code, 1860), Nari O ShishuNirjatan Daman Ain (Women and Children Repression Prevention Act), 2000); Domestic Violence (Prevention and Protection) Act, 2010; and Bangladesh Labour Act, 2006.

The project interventions have limited risk to make discrimination between male, female and other disadvantaged group of people in the project area due to gender sensitive design. The contractor may provide low wage to the female labors. Besides, children and adolescent girls may engage in the project interventions. These problems will be solved by implementing community based approached. The CAHG members are the key actors at the local level for implementing the proposed activities, the project will engage 80% female while forming the CAHGs. They will actively participate in the project. So, discrimination should not take place.

5.1 Environmental and Social Management Plan (ESMP)

Based on the assessment of environmental and social (ES) impacts in Chapter 4, an Environmental and Social Management Plan (ESMP) has been prepared for the Haor Locally-Led Climate-Resilient Housing Project. The ESMP matrix below outlines the typical ES impacts, corresponding mitigation measures, indicative budget needs, and roles and responsibilities for implementation and supervision, along with the significance level of each residual impact.

Table 6: Environmental and Social Management Plan (ESMP) of the Proposed Haor Project

ES impacts	Mitigation measures	Budget	Responsibility	Level of Significance
Loss of topsoil of agricultural land due to earth filling for plinths and access paths	- Avoid cutting soil from fertile topsoil of productive *boro* fields. - Prioritize collection of soil from non-productive areas (e.g., existing borrow pits, degraded village edges) and the lower layers of ponds/borrow pits.	Not required (built into design & supervision)	**Implementation:** EE, local contractors, community/household. **Supervision:** PMU	Low-Medium (with mitigation)
Drainage congestion / local waterlogging around homesteads and adjacent lands	- Conduct simple drainage checks at each site during design (identify natural flow paths and low points). - Align plinths, houses and access paths so they do not block natural drainage; incorporate culverts/openings where required. - Avoid filling natural drains and small khals; if unavoidable, provide alternative drainage routes.	Not required	**Implementation:** EE, local engineers/masons. **Supervision:** EE, PMU	Low- Medium (with mitigation)
Soil erosion and slope instability of raised mounds (due to wave action and poor earthwork)	- Use appropriate side slopes and compaction for raised plinths. - - Turf or plant grass/creepers on newly exposed slopes. - Promote homestead tree and shrub belts as natural wave barriers (*hijal*, *koroch* and other native species where suitable). - Prohibit very steep, uncompacted fills in ESMP and contracts.	Budget line item (for tree plantation)	**Implementation:** EE, local contractors/CAHG **Supervision:** EE, PMU	Low-Medium (with mitigation)
Localized loss of grasses and small vegetation at	- Integrate homestead greening into design: plant native, flood-tolerant trees and shrubs on and around raised plinths.	Budget line item (Tree Planation)	**Implementation:** EE, CAHG/households. **Supervision:** EE, PMU	Low (with mitigation)

ES impacts	Mitigation measures	Budget	Responsibility	Level of Significance
homestead level	- Promote small homestead gardens where feasible. - Avoid cutting mature trees unless absolutely necessary for safety; where removal is unavoidable, plant at least 2-3 replacement trees per tree removed.			
Dust and noise pollution during construction	- Limit earthworks and material handling to daytime hours. - Water spraying and stored sand/soil during dry, windy conditions. - Use manual methods where feasible; avoid unnecessary use of noisy machinery. - Store materials away from schools, health posts and sensitive receptors.	Not required	**Implementation:** Local contractors, mason **Supervision:** EE, PMU	Low (short-term, reversible)
Water pollution from eco-toilets, waste water and construction waste	- Design and construct elevated and flood-resilient eco-toilets; maintain at least 30 ft horizontal distance from drinking-water sources where possible. - Provide properly designed soak pits or vegetated drains for waste water; avoid direct discharge into ponds/haor. - Prohibit disposal of construction debris into haor water, khals or beels; - Identify safe community-approved disposal or reuse options.	Budget line item (eco-friendly toilet)	**Implementation:** EE, local contractors, households. **Supervision:** EE, PMU	Low-Medium (with mitigation)
Improper management of solid and hazardous waste (incl. solar batteries & e-waste)	- Require suppliers/contractors to provide take-back/return arrangements for batteries and defective panels. - Store used batteries and e-waste safely (off the ground, under cover) until collected. • Raise community awareness on not discarding batteries or e-waste into ponds, fields or haor.	Budget line item (Installation of solar lighting systems)	**Implementation:** EE, suppliers/contractors, households, CAHG**.** **Supervision:** EE, PMU	Low (With mitigation)

ES impacts	Mitigation measures	Budget	Responsibility	Level of Significance
Occupational health and safety (OHS) risks for workers (falls, injuries, tool handling)	- Apply PKSF Environmental Health and Safety (EHS) Guidelines. - Provide basic PPE (e.g., gloves, masks, boots, helmets where needed) and first-aid kits at work sites. - Conduct short toolbox/orientation sessions on safe working at height, handling of materials, and basic electrical safety. - Prohibit child labor and forced labor; ensure equal pay for equal work.	Budget line item (Construction of climate-resilient houses)	**Implementation:** EE, local contractors. **Supervision:** EE, PMU	Low-Medium
Injury risk to beneficiaries living on-site during construction/reconstruction	- Phase works to allow families to use alternative rooms or spaces on the same homestead safely. - Use temporary barriers/partitions between active construction areas and living spaces. - Keep tools and materials away from children's play areas; clearly mark hazardous zones.	Budget line item (Construction of climate-resilient houses)	**Implementation:** Contractors, households, EE. **Supervision:** EE, PMU	Low
Community health and safety (movement of materials, small vehicles/boats, temporary hazards)	- Plan material transport to minimize congestion; use safe loading practices on boats/vehicles. - Keep access paths clear of debris; store materials in designated, safe zones. - Coordinate with local leaders so that schools and vulnerable locations are not unduly exposed to risks.	Not required	**Implementation:** Local contractors, EE. **Supervision:** EE, PMU	Low-Medium (localized)
SEAH risks (harassment or abuse of women, girls or other vulnerable groups)	- Develop and enforce Code of Conduct for all project workers (including SEAH provisions). - Provide basic SEAH-awareness training to EE staff, contractors and community groups. - Integrate confidential channels into the project GRM for SEAH-related complaints, with gender	Budget line item (trainingsession)	**Implementation:** EE, contractors. **Supervision:** PMU	Low-Medium (safeguarded through prevention measures)

ES impacts	Mitigation measures	Budget	Responsibility	Level of Significance
	sensitive protocols and referral pathways.			
Risk of exclusion of vulnerable groups (women-headed households, persons with disabilities, ultra-poor)	- Apply transparent, inclusive beneficiary selection criteria with community validation and attention to gender, disability and poverty status. - Ensure that house and WASH designs incorporate universal access features (ramps, handrails, wider doors where feasible). - Monitor beneficiary profiles and address any observed exclusion through corrective action.	Not Required	**Implementation:** EE, CAHG. **Supervision:** PKSF PMU	Low
Increased exposure of houses and assets to climate hazards (flash floods, wave action) due to poor design	- Apply haor-specific technical guidelines for elevated, flood- and wave-resilient housing (plinth/stilt height, structural design, anchoring). - Integrate disaster risk reduction features (strong connections, wind-resistant roofs, safe access routes). - Align with SOD and local disaster management plans and promote early-warning awareness and evacuation planning through CAHG meetings.	Budget line item (Construction of climate-resilient houses)	**Implementation:** EE, engineers/masons, CAHG **Supervision:** EE, PMU	Low- Medium (reduced through resilient design and awareness building)

The "Level of Significance" reflects the residual impact after mitigation (Low / Medium). No interventions with high, irreversible or large-scale impacts (Category A / Red) will be financed under this project. The project will provide capacity building training to EE staff and relevant community representatives on ES safeguards and implementation procedures, including: ES screening; use of the ESMP matrix; preparation of site-specific ESMPs; roles and responsibilities of EEs, PKSF's PMU and CAHG; documentation and reporting; and operation of the GRM and SEAH-sensitive response mechanisms.

5.2 Environmental and Social Monitoring Plan

The environmental and social monitoring is another part of the ESMP. This monitoring involves: (i) planning a survey and realistic sampling programme for systematic collection of data/information relevant to environmental and social management; (ii) conduct of the survey; (iii) analysis of samples and data/information collected, and interpretation of data and information; and (iv) preparation of reports to

ensure ES compliance. ES staff of PMU will carry out the monitoring activities whether the above mitigation measures are implementing properly at the field level. This monitoring will also ensure whether any new or additional negative or positive impacts are found during implementation of the project. Based on this, the ESS staff will suggest measures to address those new impacts. The following table provides the template for the ES monitoring Plan. The plan consists of two types of monitoring: 1) monitoring for effectiveness of mitigation measures; and 2) general ES effects monitoring. The information contained in the template needs to be completed by the EEs.

Templates for Environmental Monitoring Plan

A) MITIGATION MONITORING							
Mitigation, &Environmental Indicator	Location	Procedures / methods	Frequency / Duration	Baseline / ES Performance Standards	Responsibilities		Estimated Cost
					Implementation	Analysis/ Reporting	
Activities at the beginning of the sub project							
Mitigation/ Indicator							
Mitigation/ Indicator							
Activities at Implementation Stage							
Mitigation/ Indicator							
Mitigation/ Indicator							
Operation & Maintenance Phase Activities							
Mitigation/ Indicator							
Mitigation/ Indicator							

B) ENVIRONMENTAL AND SOCIAL IMPACT MONITORING							
ES Impact & Indicator	Location	Procedures / methods	Frequency / Duration	Baseline / Environmental Standards	Responsibilities		Estimated Cost
					Implementation	Analysis/ Reporting	
Activities at the beginning of sub project							
Impact/ Indicator							
Impact/ Indicator							
Operation & Maintenance Phase							
Impact/ Indicator							
Impact/ Indicator							

Frequency/ Duration monitoring:
The number of times (annual/biannual) biophysical or social samples will be collected, and the total time period during which the sampling occurs.

Baseline / Environmental Standards:
The baseline-preconstruction - condition of the indicator variable(s) will be determined with initial baseline sampling. The baseline level of the indicator will be used to gauge the effects of mitigation measure or impact when compared to monitoring data collected during and after construction phase. Existing environmental standards or criteria for the indicator variable are also identified and subsequently compared to the indicator during all phases of the sub-project to assist with determination of whether the mitigation measure is effective, or whether an impact has been registered.

Responsibility:

Implementation

If EE lacks in-house expertise, it will outsource the implementation of the monitoring programme to an environmental specialist or firm.

Analysis / Reporting
The analysis and subsequent reporting of the results and recommendations of the environmental monitoring plan is a joint responsibility between the consultant of the plan, and the EE. The consultant is responsible to prepare a timely report which clearly indicates the performance of all mitigation measures, and whether other unpredicted impacts are occurring. EE then will prepare all necessary reports that need to be submitted to PKSF.

Estimated Cost:
It includes survey, laboratory works (if required) and reporting costs. The item-wise budget should be prepared for better cost estimation and accountability. If the works is outsourced, all the costs will be included in the consultant budget.

5.3 ES Monitoring at PKSF Level

In addition to the environmental monitoring plan prepared and implemented by the EE, PKSF will develop its own monitoring mechanism to ensure proper implementation of the environmental mitigation activities to avoid any negative environmental consequence from the sub-projects. The monitoring will be carried by 2 levels: i) internal monitoring and ii) external monitoring/evaluation.

5.3.1 Internal Monitoring

As part of their routine monitoring of the sub-project implementation, PKSF will strengthen the ability of the ES staff at PMU to do the environmental monitoring. Each quarter, the ES personnel will conduct monitoring visits to check on the implementation EEs' environmental monitoring efforts. Every ES employee will create their own monitoring report on a quarterly basis and share it with the PKSF's Environment and Climate Change Unit (ECCU). The ES staff will go over the report and may hold a separate conversation with other PMU staff members on ES monitoring data, applying E

Es, and next steps. On a specific percentage, the Project Coordinator will also conduct field visits. S/He will monitor the ES safeguard issues in the selected sub-projects.

5.3.2 Third Party Assessment/External Monitoring/Evaluation

PKSF will hire the services of a consulting firm to carry out the external monitoring/evaluation of the project and its sub-project. The team will include an environmental specialist who will assess the implementation of environmental mitigation and monitoring activities and also evaluate impact on environment. Based on the evaluation result, PKSF will take remedial measures (if required). The timing and frequency of the external monitoring will be decided by the PKSF based on the number of the sub-project to be funded under the proposed project. The independent environment evaluation will ensure correctness of the sub-project wise Environmental assessment and implementation of the environmental management plan (Monitoring and mitigation).

5.4 Stakeholder Engagement

Stakeholder engagement is central to the locally led adaptation (LLA) approach of the Haor LLA Housing Project. Key stakeholders include direct beneficiary households, community groups, Union Parishads, Upazila Parishads, PKSF partner organizations, local government agencies, civil society organizations, and research institutions.

Stakeholder engagement during the project implementation will begin at the inception workshop to be held at the initial stage of the project. PKSF will organize a project launching ceremony at national level where National Designated Authority (NDA) representatives, representatives of relevant government ministries and departments including but not limited to Ministry of Environment, Forests and Climate Change (MoEFCCC), National Housing Authority (NHA), Housing and Building Research Institutes (HBRI), Water Resource Planning Organization (WARPO), Water Development Board (WDB), Department of Public Health and Engineering (DPHE), Department of Environment (DoE), Bangladesh Climate Change Trust (BCCT), Universities, NGOs and civil societies will be invited to attend the ceremony.

A detailed Stakeholder Engagement Plan (SEP) will be implemented to ensure free, prior, and informed consultations; participatory vulnerability mapping and housing selection; inclusive group formation; accessible communication; and continuous feedback mechanisms. Engagement will pay particular attention to women, people with disabilities, the elderly, and marginalized groups.

Stakeholder engagement will be performed using best practices and principles so that the project demonstrates:

- **Commitment** when the need to understand, engage, and identify the community is recognized and acted upon early in the process;
- **Integrity** through mutual respect and trust;
- **Respect** for rights, cultural beliefs, values, and interests of stakeholders and affected communities are recognised;
- **Transparency** when community concerns are responded to in a timely, open, and effective manner;
- **Inclusiveness** when broad participation is encouraged and supported by appropriate participation opportunities; and
- **Trust** through open and meaningful dialogue that respects and upholds a community's beliefs, values, and opinions.

Table 5: Stakeholder Engagement Strategies

Type of stakeholders	Engagement Purpose	Proposed Strategy for stakeholder engagement of stakeholders
Government organisations	Share project information with relevant stakeholders,	1. Project website, online monitoring system, workshops, seminars. Another preferred medium is email.

Type of stakeholders	Engagement Purpose	Proposed Strategy for stakeholder engagement of stakeholders
	enhance transparency and accountability.	2. For official communications -Official Letters. These written communications can be sent via email and hard copy via courier or post office. 3. Regular project updates are to be provided on a monthly and/or quarterly basis through meetings (face-to-face and/or Skype/zoom) at the project level. One assigned focal person and their alternate should be assigned by each organization to the project to ensure continuity. 4. At the national level, project updates should be shared through seminars and websites. 5. Annual presentations to stakeholders should also be conducted by the EE.
EEs and communities	Increase knowledge and understanding of climate change, transfer technologies for increasing resilience	1. Classroom training, group formation and group meetings, implementation of technologies, etc.
NGOs, EEs and beneficiary communities	Successful implementation of the project and wider dissemination of its results	1. Sharing of best practices among EEs, CAHGs needs to be conducted. Peer-to-peer learning will contribute to capacity building and scaling up of the project. 2. Continued updating of evaluation data, maintenance of project-supported infrastructure, holding regular meetings, and capacity building and training activities will hold the interest and support of local communities, EEs even beyond project life. 3. Conducting regular meetings and work planning with community stakeholders will increase transparency and ownership. 4. Developing common communication materials and branding for unified messaging that will sustain the interest of end-users and stakeholders at the *upazila* and community levels. 5. Closer coordination among PKSF and EEs in undertaking field work and site visits at the project sites is needed. 6. Active participation and engagement at all project activities in the project sites will ensure continued support.
All levels of stakeholders		1. PKSF will follow its information disclosure policy, which is consistent with Adaptation Fund. 2. Website of PKSF and Implementation Partners should also provide access to data/information and recent news and developments of the project.

Type of stakeholders	Engagement Purpose	Proposed Strategy for stakeholder engagement of stakeholders
		3. For sharing technical and sensitive information, a closed social media group and email loop can be formed. 4. Regular project management meetings should be held where substantive and implementation issues and concerns will be discussed. 5. Meetings with the EEs and CAHGs on a regular basis should also be established.

5.5 Roles and Responsibilities in ES Risk Management

PKSF, as the NIE and Executing Entity, will ensure overall compliance with AF ESP and Gender Policy, national laws, and PKSF ESS. PKSF will establish a Project Management Unit (PMU) with an ESS Specialist, approve ES screening and ESMPs, provide capacity building to EEs, and oversee ES monitoring and reporting.

Executing Entities (eEs) will be responsible for field-level ES screening, preparation and implementation of ESMPs, integration of ES requirements in contracts, day-to-day monitoring, reporting, and operation of the GRM at local level. Contractors and suppliers must comply with ES clauses, labour standards, OHS requirements, and SEAH Codes of Conduct. Community groups and beneficiary households will participate in decision-making, support environmental management measures, and take responsibility for long-term operation and maintenance of housing and associated facilities.

5.6 Grievance Redress System

The Grievance Redress Mechanism (GRM) will be established at the central (PKSF) and sub-project levels to deal with any complaints/grievances about environmental issues. At the sub-project level, the Union Parishad (U/P) Chairman or CAHG members nominated representative from the community group will be the Local Grievance Redress (LGR) focal Point. At the PKSF central level, the Project Coordinator or any other person/staff nominated by the Project Coordinator will be Central Grievance Redress (CGR) focal Point. The aggrieved persons or entities will submit the complaints/grievances in sealed envelopes to the selected partner's office duly entered in the Grievance Register (GR) and will collect a receipt with entry reference to the GR. Partners will not open the envelopes, but inform the LGR focal point about receipt of complaints and schedule hearings as per his/her advice. In open meetings, the selected/implementing partner will facilitate the LGR focal Point to hear and discuss the complaints and resolve them in view of the applicable guidelines of the ESMF. The aggrieved person, if female, will be assisted by a female member in hearing, and if from a tribal community, by a tribal representative. LGR focal Point with the help of EE will ensure sending a copy of the complaint by postal mail, fax or other means to the Project Coordinator at the PKSF headquarters.

The EEs will forward the unresolved cases with all proceedings to the CGR focal Point within 7 days of taking decision by the LGR focal Point. Unresolved cases forwarded by EEs will be registered in the office of the CGR focal Point and disposed within 15 days. If any decision made by CGR focal Point is unacceptable to the aggrieved persons, he/she will forward the complaints with all proceedings to the PKSF Managing Director (MD) through the Project Coordinator. The MD will review and resolve the cases which will be final for PKSF. The MD may seek advices from the PKSF Chairman for any critical issues as per his discretion. A decision agreed by the complainants at any level of hearing will be binding on the concerned EEs and PKSF. The GRM will, however, not pre-empt an aggrieved person's right to seek redress in the courts of law.

Complainants will retain the right to submit concerns directly to the Adaptation Fund's secretariat/complaints channels if they are not satisfied with the project-level response. The institutional arrangement of Grievance Redress Mechanism is illustrated in the following figure:

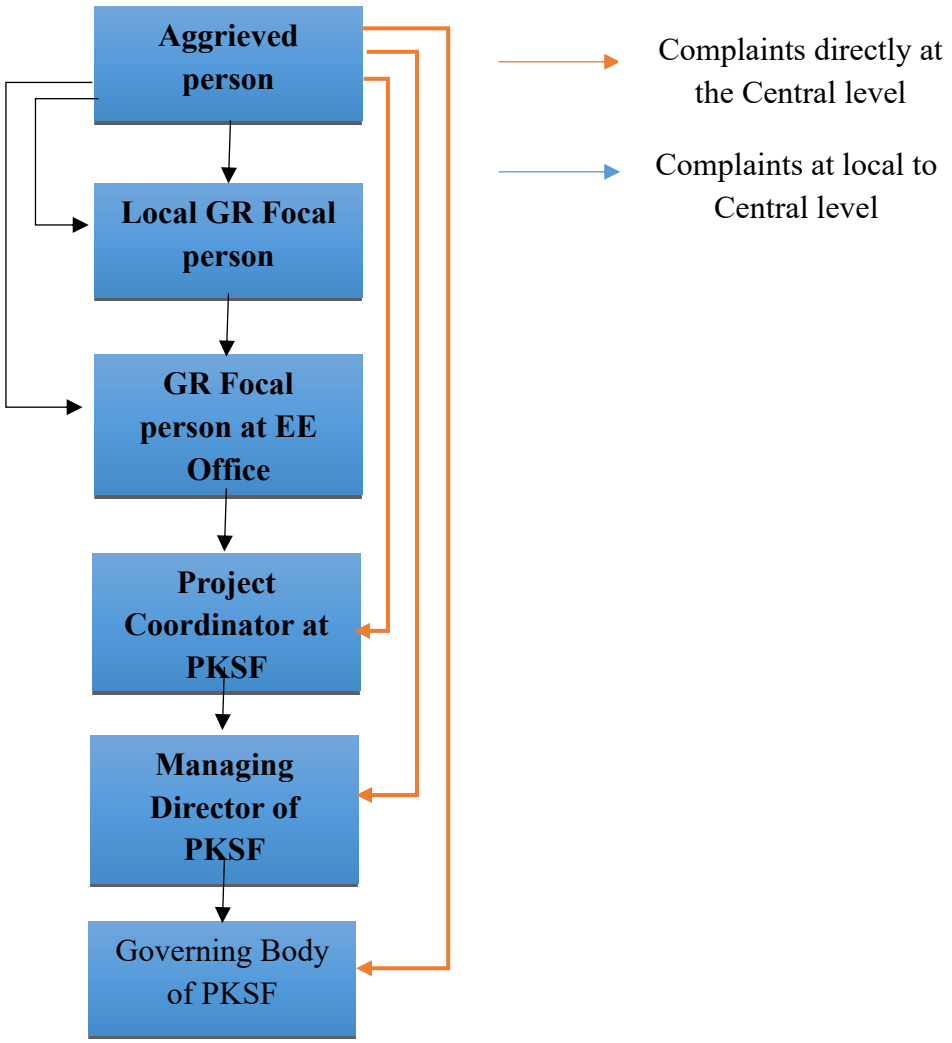


Figure: Institutional Arrangement of the GRM

PKSF and EEs will keep the records of all resolved and unresolved complaints and grievances and make them available for review as and when asked for by the development partners and others interested in climate change issues. The provision of GRM and the process will be well disclosed to the community and the likely affected persons before implementation of sub-projects. The disclosure will be done by the EEs and ensured by PKSF ESS responsible person.

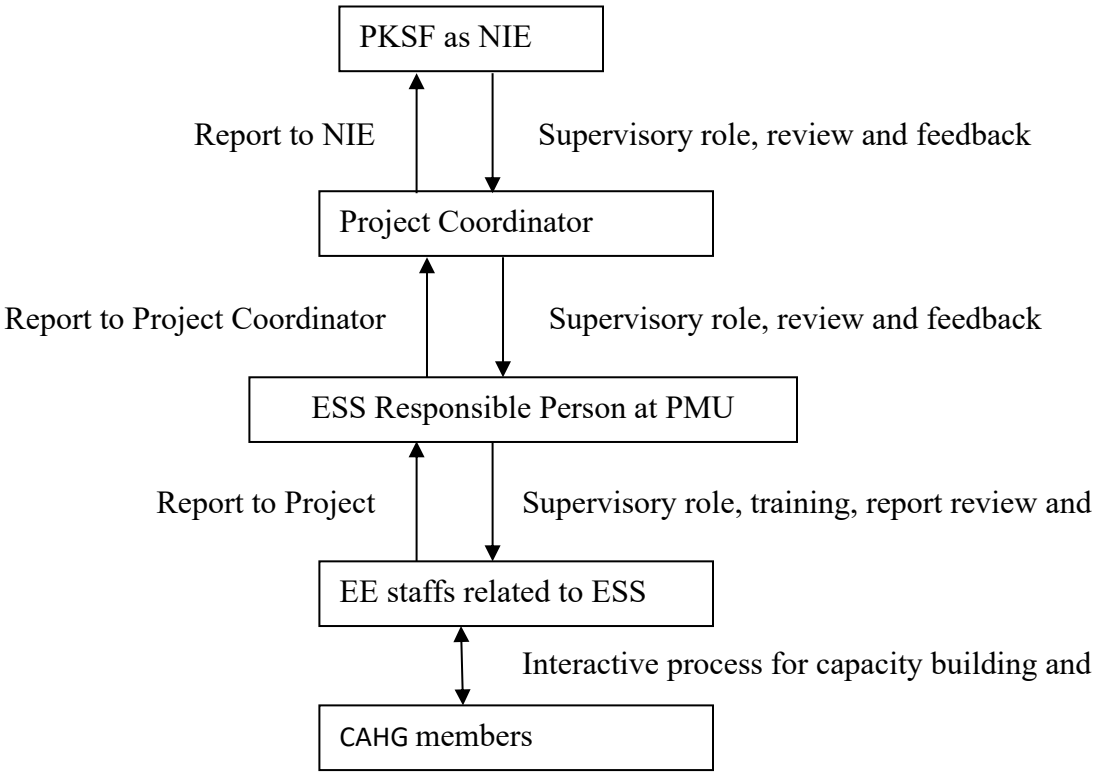
GRM focal person at PKSF level:
Dr. AKM Nuruzzaman,
General Manager (Environment and Climate Change), PKSF
Mobile: +88 01844481322
Email: nuruzzamanpksf@gmail.com

5.7 Information disclosure

PKSF and EEs will disclose key ES documents and information to stakeholders in appropriate languages and formats, including the ESMF, summaries of ES risks and mitigation measures, site-specific ESMPs for higher-risk clusters, GRM procedures, and monitoring results. Disclosure will use multiple channels such as community meetings, UP notice boards, EE offices, printed materials in Bangla, and online platforms.

5.8 Implementation arrangement

The PMU will be responsible to implement the ESMP. A ESS responsible person will be set at the PMU who will carry out the environmental related activities of the project. It will include but not limited to prepare environmental and social management guideline, provide training to EEs staffs, prepare monitoring plan and monitoring tools, engage third party to evaluate effectiveness of the ES system, visit field level activities, ensure due diligence of EEs and so on. S/He will regularly report to the Project Coordinator who report to the senior management of PKSF. The CAHG members will also be involved in the ES management at local level. The EE staffs will provide training to the CAHG members on environmental and social consequences and management of the project's interventions. These issues will be discussed in the CAHG meetings so that community people become fully informed about environmental and social issues. A diagram of the implementation arrangement is provided below:



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Annex-5
Gender Assessment and ActionPlan

Strengthening Climate Resilience through Locally-Led Housing Solutions in the Haor Region of Bangladesh

Palli Karma-Sahayak Foundation (PKSF)

Contents

Abbreviations&Acronyms

AF	Adaptation Fund
BCCSAP	BangladeshClimateChangeStrategyandActionPlan
CAHG	ClimateChangeAdaptationGroup
ccGAP	ClimateChangeandGenderActionPlan
CEDAW	ConventionontheEliminationofallFormsofDiscriminationagainstWomen
EDA	EnhancedDirectAccess
ESMF	EnvironmentalandSocialManagementFramework
ESP	Environmental and Social Policy
GBV	GenderBasedViolence
GoB	GovernmentofBangladesh
GRM	GrievanceRedressMechanism
HH	Household
IPCC	IntergovernmentalPanelonClimateChange
MCH	MaternalCareHealth
MDG	MillenniumDevelopmentGoal
M&E	MonitoringandEvaluation
MoEF	MinistryofEnvironmentandForest
NGO	Non-GovernmentOrganization
EE	Executing Entity
PKSF	PalliKarma-SahayakFoundation
SEAH	SexualExploitation,AbuseandHarassment
UDMC	UnionDisasterManagementCommittee
UN	UnitedNations
UNDP	UnitedNationsDevelopmentProgramme
UNFCCC	UnitedNationsFrameworkConventiononClimateChange
WDP	Women'sDevelopmentPolicy
WHO	WorldHealthOrganisation

1. Introduction

The Adaptation Fund (AF) requires all funded projects to be grounded in a robust gender assessment and supported by a project-level Gender Action Plan (GAP) that operationalizes its Gender Policy and Environmental and Social Policy (ESP). The main objective of the Gender Assessment is to screen the gender aspects of the projects to be financed by Adaptation Fund, and to subsequently strengthen the gender responsive actions within the project. The current project aims to reduce this vulnerability by addressing their adaptive capacity from multiple levels. The gender assessment report should be considered as an integral part of the project proposal including other annexure like the Feasibility Study, Environmental and Social Management Framework (ESMF) etc.

The Gender Assessment synthesizes national and local gender dynamics, with a focus on poverty, housing, water, sanitation, care burdens, and climate risks in the haor basin. It identifies gender-differentiated vulnerabilities and capacities, and the entry points to address structural inequalities within the project's three components (housing; WASH and renewable energy; and capacity building). The Gender Action Plan then translates this analysis into concrete actions, indicators, responsibilities, and timelines, aligned with AF Gender Policy, PKSF's Environmental and Social Standards (ESS), and the project's results framework.

2. An overview of the proposed project

The project "Strengthening Climate Resilience through Locally-Led Housing Solutions in the Haor (Flash Flood Prone) Region of Bangladesh" targets extremely flood-exposed, ultra-poor households in the haor basin, where over 70% of households live under direct flood exposure and repeatedly lose assets and homes. The project aims to break the cycle of disaster, indebtedness, and forced migration by piloting and scaling climate-resilient housing integrated with safe water, sanitation, renewable energy, and nature-based solutions.

The objectivesof the project are:

4. To design, pilot, and scale up climate-resilient housing for flood-prone and vulnerable Haor communities.
5. To build community knowledge and capacity in climate-resilient construction, water and sanitation integration, and disaster preparedness.
6. To promote inclusive, locally led adaptation by engaging community members in decision-making and implementation.

The intervention is structured in three main components:

1. Community Engagement, Vulnerability Assessment, and Climate-Resilient Housing Design & Construction: Constructing around 700 elevated or stilted houses for highly vulnerable households, with priority for women-headed households and other marginalized groups.
2. Integration of Water, Sanitation, and Renewable Energy: Providing solar lighting, rainwater harvesting, eco-toilets, and tree plantation around beneficiary homesteads.
3. Capacity Building and Local Skills Development: Forming Community Adaptation and Housing Group (CAHG), developing training materials, and training beneficiaries, masons, engineers, and community leaders on climate-resilient housing and basic services.

The project is explicitly designed as inclusive and locally-led: Community Adaptation and Housing Group (CAHG) are formed with at least 80% women, and the project directly targets structural inequalities faced by women, youth, people with disabilities, Indigenous and marginalized ethnic groups.

3. Gender Assessment in the National Context

Bangladesh has achieved notable progress in reducing poverty and improving gender equality, particularly in education, health, and women's participation in public life. However, gender disparities continue to persist, especially in rural areas where women often combine low-paid work with extensive household responsibilities. Women shoulder much of the unpaid care work such as collecting water, caring for family members, and managing household food production despite representing a smaller share of the formal workforce. These structural inequalities influence women's economic opportunities, mobility, and resilience to climate impacts.

3.1 Social Aspects

Bangladesh has made commendable advances in girls' education, maternal health, and women's representation in local governance. Yet gender gaps remain visible in labor force participation, access to skilled employment, and leadership roles. While around 80% of working-age men engage in the labor market, the rate for women stands at approximately 43-44% (World Bank 2024-25). Women continue to undertake the majority of unpaid care and domestic work, which affects their time, mobility, and ability to pursue formal employment.

Social norms influence women's mobility and economic opportunities, with restrictions more common in rural, traditional settings. Historical data shows that fewer girls enrolled in secondary school and that many women preferred to be accompanied when travelling, which affects access to markets and services. Although these norms are gradually evolving-thanks to increased awareness, education initiatives, and economic transitions—many households still prioritize women's domestic responsibilities.

Recent surveys highlight positive shifts: women increasingly believe that financial empowerment enhances their capabilities and independence. Nonetheless, time poverty remains a concern, as women often balance both paid and unpaid work. Cultural expectations continue to shape women's roles, but attitudes are changing as families recognize the value of women's contribution both inside and outside the home.

3.2. Gender norms and vulnerabilities

Field observations indicate that women often manage a full day of responsibilities, combining household duties with income-generating activities when needed. Men's participation in domestic work is increasing but still limited, contributing to women's time constraints. Women from low-income households are more likely to engage in agricultural labor, while those from relatively better-off families may have fewer opportunities due to social perceptions about women's work.

Employment opportunities for women remain constrained by traditional norms, with some occupations considered more suitable for men. Even in sectors where women contribute significantly, such as agriculture, their participation in market-oriented tasks like selling produce is often limited. Wage disparities persist, and women's bargaining power is reduced when mobility and choices are restricted. These factors can increase women's vulnerability to climate-related shocks, particularly when livelihoods are affected by disasters.

3.3. Access and control over resources and opportunities

Vulnerability in the project area is shaped by unequal access to resources, limited livelihood opportunities, and social norms. Women-particularly from female-headed, landless, or low-income households often face challenges in accessing formal employment, credit, and social protection. Climate impacts may exacerbate these constraints, especially for those with limited land ownership, financial assets, or education.

Land Ownership

Land ownership remains largely male-dominated, reflecting long-standing cultural practices. Women's access to land and other productive assets varies across households, with many women contributing to agricultural work without

owning or directly controlling resources. Limited ownership can reduce women's financial security during climate shocks, highlighting the need for inclusive approaches that support women's access to and control over productive assets.

Education

Education continues to be a strong driver of empowerment. While gender gaps in literacy have narrowed significantly due to government initiatives—such as stipends and free textbook distribution challenges remain for some rural families. Economic stress during disasters can influence decisions related to girls' schooling and marriage, emphasizing the importance of continued awareness and support.

Access to Services

Women in remote rural areas may face challenges in accessing government services, financial institutions, and healthcare due to mobility constraints, limited resources, and distance from service centers. NGOs and community-based organizations, including PKSF and its Partner Organizations, play an important role in reaching women with credit, social support, and skills training over 90% of PKSF's loan recipients are women.

Health

Women's access to healthcare may be affected by socio-economic factors and cultural preferences. Community clinics often provide essential services, although more advanced care typically requires travel to larger facilities. During disasters, access may be further limited by transportation challenges and resource shortages.

Mobility and Participation

Men generally have greater mobility and decision-making authority within households and communities, while women face more constraints due to social expectations. In times of disaster, restrictions on women's mobility can make it more difficult for them to evacuate or access services. When men migrate for work, women take on additional responsibilities at home, sometimes without full decision-making authority or support.

Power and Decision-Making

Women's roles in household and community decision-making are expanding, particularly due to increased participation in local governance and development programs. However, decision-making authority still varies widely across families and communities. Studies show that women participate more actively in decisions related to food, household management, and daily needs, while men often take the lead on financial and property-related matters. National and international policies including CEDAW, UNFCCC decisions, and government gender strategies emphasize the importance of strengthening women's voice in climate and development planning.

Despite remaining barriers, women's knowledge, responsibilities, and experiences position them as central actors in resilience-building. Their involvement in food security, disaster preparedness, water management, and household adaptation practices is crucial for effective climate resilience in vulnerable regions.

Table 1: Role of women in decision-making

SL	Type of Decision	Percentage
1	Food related (Meal preparation, distribution etc.)	86.78
2	Meeting food deficit	33.58
3	Selling assets (land, house, livestock, seeds)	9.40
4	Selling agricultural production (crops, seeds)	6.88

5	Buying household assets (livestock, ornament, trees.)	11.10
6	Buying agricultural production (crops, seeds etc.)	7.35
7	Receive credit from mohajon/relatives/bank/NGO/GO	14.50
8	Agricultural work (crop cultivation, land mortgage etc.)	5.84
9	Household work (Collection of Water, Collection of natural resource etc.)	47.91
10	Household decision making (Engage in new income generating activity, conceiving a baby, Using savings, ownership of VGD/ VGF	11.59
11	Female and children healthcare decision making	16.32
12	Decision making about communication (Female going outside the homestead, going for work, education for children)	11.06
13	Decision making on disaster preparedness/coping/adaptation (Going to a shelter, Engaging in alternative livelihood activity	11.48

4. Position of Women in Bangladesh

The Constitution of Bangladesh (Articles 27, 28, 29, and 31) guarantees equality and non-discrimination on the basis of sex, religion, ethnicity, or place of birth, providing a strong foundation for affirmative action and inclusive development. Articles 27 and 28 underscore equality before the law and equal opportunities for women and men in all spheres of public life. While these commitments have been progressively upheld since independence, there remains scope for further strengthening gender equality, particularly within the private and household spheres.

Bangladesh has made significant strides through national policies and international commitments such as the Millennium Development Goals (MDGs), CEDAW (1979), and the Beijing Platform for Action (1995). Over several decades, the Government, civil society, and women's organizations have played key roles in promoting awareness, enhancing women's participation in public life, and expanding opportunities for education and employment. As a result, women have become increasingly visible in the labor force, development initiatives, and local government bodies.

Gender parity has been achieved in primary and secondary education, and the government has established dedicated institutions for girls and women at higher levels. However, challenges remain—particularly high dropout rates among rural girls, gaps in technical and tertiary education, and safety concerns in transit and school environments. Barriers such as inadequate school facilities, early marriage, and economic pressures continue to affect girls' access to quality education.

Bangladesh has adopted policies such as the Labor Act (2006), which promotes equal wages and non-discrimination in employment. However, many women work in the informal sector, where enforcement of labor standards is more challenging. Occupational segregation, wage gaps, and limited access to skills development continue to influence women's economic participation.

Progress under SDG-5 (Gender Equality) is notable. Total fertility rates have fallen sharply—from 7 births per woman in the mid-1970s to 2.01 in 2019—reflecting improved access to education, contraception, and economic opportunities. Women's life expectancy has also risen dramatically, and maternal mortality has decreased significantly. Girls now slightly outnumber boys in primary and secondary education, although their representation at tertiary levels remains lower due to socio-cultural factors, including early marriage. Women's participation in the ready-made garments (RMG) sector has created important employment opportunities, despite continuing challenges related to working conditions and wage levels.

Overall, while Bangladesh has made strong progress, continued efforts are needed to close remaining gaps—particularly in higher education, skilled employment, wages, and workplace safety.

4.1 Reasons for Gender Discrimination in Bangladesh

Despite multiple policies and initiatives, gender inequality persists due to a combination of structural, social, and economic factors.

Structural and Social Norms

Long-standing social traditions influence perceptions of women's roles, with many communities still expecting women to prioritize household responsibilities over public engagement or formal employment. These norms vary across regions but continue to shape women's participation in education, work, and decision-making.

Limited Policy Implementation

While policies ensure women's safety and equal rights in education, workplaces, and public spaces, implementation challenges remain. Concerns regarding violence, safety, and resource constraints often make families cautious about allowing girls to travel alone or participate fully in education and employment.

Mindsets and Social Expectations

Cultural perceptions around men's and women's roles can influence family decisions regarding girls' education, mobility, and employment. Son preference in some communities may affect women's opportunities, while employers sometimes favor hiring men due to traditional views on work roles.

Early Marriage

Early marriage continues to be a barrier to girls' education, health, and employment opportunities. Married adolescents may face challenges in continuing their education or building skills for the workforce, limiting their long-term economic prospects. Efforts to reduce early marriage have contributed to progress, but continued support is needed.

Gender and Climate Adaptation

Household decision-making patterns influence adaptation strategies. Female-headed households—often with fewer resources and labor—may face constraints in adopting certain climate-resilient practices. Social norms around mobility and domestic responsibilities can also limit women's ability to diversify income sources or engage fully in climate adaptation activities. Differences in access to assets and opportunities further shape how men and women respond to climate risks.

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5.0 National Legal and Policy Framework

5.1 Constitution of the People's Republic of Bangladesh:

The Constitution of Bangladesh guarantees equal rights and equality before law of its citizens. Article 27 of Bangladesh Constitution guarantees equality of citizens before the law and Article 28 prohibits discrimination on grounds of religion, sex, caste, race and place of birth. The same article also stipulates measures of 'affirmative actions' by the State in favour of the backward section of the citizens. The Constitution defines the rights of every citizen to have access to education where the State is responsible for the provision of Basic Necessities for the citizens. Article 17 of the Constitution indicates of Free and compulsory education where the State shall adopt effective measures by: (a) Establishing a uniform, mass-oriented and universal system of education and extending free and compulsory education to all children to such stage as may be determined by law; (b) Relating education to the needs of society and producing properly trained and motivated citizens to serve those needs; removing illiteracy within such time as may be determined by law. Article 19 (1) of the Constitution also stresses on Equality of opportunity where the State shall endeavor to ensure equality of opportunity to all citizens.

Article 23 stressing on National Culture demands that the State shall adopt measures to conserve the cultural traditions and heritage of the people, and so to foster and improve the national language, literature and the arts that all sections of the people are afforded the opportunity to contribute towards and to participate in the enrichment of the national culture. Besides the Constitution, there is also a corpus of legal, institutional and policy dispositions for the safeguards of the tribal peoples' rights in Bangladesh. Much of it is focused for the CHT; however, there are also specific laws for the tribal peoples in the plains.

5.2 National Gender and Climate Policy Framework

In the context of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the Beijing Platform of Action, Bangladeshhasdeveloped several policies andsectoral strategies to ensure gender equality, including the Women's Development Policy (WDP), 2011 andthe National Action Plan (NAP) to implement the WDP. Bangladesh's Women's Development Policy (WDP) 2011 and associated National Action Plan emphasize women's safety and security in disasters, access to rehabilitation services, and special focus on disabled women, aligning closely with the project's objectives. The National Adaptation Plan, BCCSAP, and haor-specific planning instruments (e.g., Haor Master Plan) recognize the heightened vulnerability of women and poor households in climate hotspots and call for gender-responsive resilience measures, including climate-resilient housing and basic services.

Bangladesh has several policies and strategies to promote gender equality addressing climate change. The government recognizes the importance of having both women and men equally involved in adapting to climate change and other environmental challenges. However, despite affirmation from the government of its intention to mainstream gender in national and climate change policies, such efforts remain inconsistently applied.

Table 2: Key national laws and policies

No	Keynationallaws and policies	Genderprovisions
1)	NationalBiodiversity Strategy and Action Plan (2016-2021) MoEFCC	• Translate measures set out in the Convention on BiologicalDiversity. • Recommends inclusion and recognition of women's existing active role in biodiversity conservation to offer them equal opportunity. • Increase capacity of rural women to enable them to engage actively in biodiversity conservation at both household and community levels.
2)	BangladeshDelta Plan (BDP) 2100 Ministry of Water Resources(MoWR)	• A plan with a long-term vision for "achieving safe, climate resilient and prosperous delta." • Gender reference is minimal in this planning document. It mentions women as "vulnerable", but does not portray them as potential change agents in the process towards building climate and disaster resilient development. • Therearenospecificstrategiesorplansthatdirectlyrelatetogender equality.
3)	National Plan on Disaster Management (NPDM,2016-2020) MoDMR	• DRRandemergencymanagementareintegratedinthedisaster management policies. • The plan provides a directive to integrate gender in all its plans and actions.
4)	NationalSustainable Development Strategy	• FocusesontheconstitutionalobligationsofBangladeshtohavea people-centric approach with a vision for sustainable development.
5)	PerspectivePlan, 2021-2041. GeneralEconomics Division, Planning Commission	• Considersbothgenderandenvironmentasimportantperspectives for development by addressing those in separate chapters.

6)	Mujib Climate Prosperity Plan (MCPP)-Decade 2030	• Intends to facilitate climate financing for vulnerable communities and to encourage women's empowerment. MCPP is formulated in honorof the Father of the Nation on his birth centenary.
7)	National Adaptation Programme ofAction(NAPA),2009. MoEFCC	• Suggests specific strategies for adaptation and recommends 15 projects to strengthen the immediate and urgent adaptation activities to address the current and anticipated adverse effects of climate change, including extreme events. NAPA was the first attempt to guide the coordination and implementation of adaptation initiatives in the country. However, differentiated gender impacts were not recognized.
8)	ClimateChangeand Gender Action Plan (cc-GAP). MoEFCC	Prepared with an aim to ensure the integration of gender equality into climate change-related policies, strategies and interventions. The ccGAP integrates gender considerations into four of the six main pillarsintheBCCSAP:(i)foodsecurity,socialprotectionandhealth; • (ii) comprehensive disaster management; (iii) infrastructure; and (iv) mitigation and low-carbon development. It is in the process of being updated in light of the revised BCCSAP.
9)	EighthFive-Year Plan,2020-2025	Acknowledgestheroleofwomeninthefoodandnutritionsecurityof Bangladesh and focuses on removing barriers to productive participationofwomeninagriculturalemploymentbyaddressingthe following issues, amongst others: 1) Socio-economicbackwardnessandconstraintsthatwomen endure in a male dominated society 2) Wagedifferencesbetweenmaleandfemaleinagriculture • Women'saccesstoinstitutionsandfacilitiesincludingextension and credit services and linkages with other services such as health and nutrition • 4) Women's access to markets and high value-added agriculture

10)	National Women Development Policy, 2011. *MoWCA*	Highlights the inclusive growth and participation of women in all spheresofnationallifeandfulfilsobjectives,suchasthefollowing: 1) Take steps to ensure that farming women have equal opportunityinobtainingagriculturalinputssuchasfertilizer, seed, farmer's card and credit facilities 2) Takeinitiativetoensureequalwagesforthesamejob • Putspecialemphasisonthehealthofwomenalongsidefood during post-disaster emergencies
11)	NationalAgriculture Policy, 2018.	Recognizes the direct and indirect contribution of women in different stagesofproduction.•Themainstrategiestowardsenhancedwomen's participation in the agriculture sector are envisaged as the following: 1) Recognitionofwomen'slaborandparticipationtoensureth eir social dignity and safety 2) Elimination of the wage differential between men and women laborinagricultureandensuringequalpayformenandwome n 3) Homesteadgardeningandpromotionofcashpayment 4) Agriculturaleducationandresearch 5) Encouraging women to participate in the formal economic spherebyprovidingsupporttotheirinvolvementinagricult ural product-based small and cottage industries 6) Trainingonfamilies'nutritionalsecurity,agriculturalproduction, storage, marketing, agricultural businesses and industries to build enhanced capacities 7) Participationofwomeninfoodsecurity-relatedplanning, decision making, supervision and distribution activities 8) Adoptionofspecificextensionactivitiesforwomenfar mers

5.3 Adaptation Fund Gender Policy

The project is guided by the Adaptation Fund (AF) Gender Policy and Gender Action Plan, first approved in 2016 (for FY 2017-2019) and updated in 2021 (GAP 2021-2023). The AF Gender Policy adopts a principles-based gender mainstreaming approach and aims to ensure that all Fund-supported projects and programmes provide women and men regardless of age, race, ethnicity, religion, class, language, ability or gender identity, equal opportunities to access resources, strengthen their agency, build resilience and address gender-differentiated vulnerabilities to climate change. It commits the Fund and its partners to uphold women's rights as universal human rights and to strive towards gender equality and the empowerment of women and girls, while recognizing that in certain contexts men and boys may also face specific vulnerabilities. The Policy systematically integrates key principles from the AF Environmental and Social Policy, particularly on access and equity, consideration of marginalized and vulnerable groups, and human rights, and requires implementing entities to conduct gender analyses, design gender-responsive activities, prevent and respond to gender-based risks (including GBV/SEAH), and monitor and report on gender outcomes through tools such as project-level gender action plans and the AF Gender Scorecard.

5.4 Adaptation Fund Environmental and Social Policy (ESP)

The Adaptation Fund's Environmental and Social Policy (ESP), first approved in 2013 and revised in 2016 (and further updated in 2025), is an operational policy and guideline that ensures Fund-supported projects and programmes achieve climate-resilient development without causing unnecessary environmental or social harm. The ESP requires all Implementing Entities (IEs) to maintain an environmental and social management system that identifies and assesses risks at the earliest stage of project design, applies the mitigation hierarchy (avoid, minimize, mitigate, compensate), and monitors and reports on the effectiveness of mitigation measures throughout implementation. At its core, the ESP is built around 15 environmental and social principles including compliance with the law; access and equity; consideration of marginalized and vulnerable groups; human rights; gender equality and women's empowerment; core labor rights; indigenous peoples; involuntary resettlement; protection of natural habitats; conservation of biodiversity; climate change; pollution prevention and resource efficiency; public health; physical and cultural heritage; and lands and soil conservation; which all AF-funded projects must respect and, where relevant, operationalize through project-level ES screening, categorization and Environmental and Social Management Plans (ESMPs). The ESP also mandates meaningful, inclusive stakeholder consultation, transparency and grievance mechanisms, and places primary responsibility for ES risk management on Implementing and Executing Entities, making it a central reference for the ESMF and safeguard arrangements of the proposed climate-resilient housing project in the haor region.

5.5 PKSF Safeguard Policies and ESMF

PKSF's institutional ESMF and 10 Environmental and Social Standards (ESS) are consistent with AF policies and Government of Bangladesh regulations. The Haor project ESMF sets out screening, risk categorization, environmental and social management plans, stakeholder engagement, information disclosure, and a grievance redress mechanism (GRM), all of which must be implemented in a gender-responsive way and used to capture and address GBV/SEAH-related complaints safely.

5.6 Policy Integration

Mainstreaming of gender would continue and all macro-economic and sectoral policies wouldintegrate gender as a crosscutting theme. Action plans should be drawn with a view to reduce inequalityandpromote an equalrelationshipbetween sexes.Toensureresultsfromactionsrelatedto gender equality all reporting of national progress including those related to SDG-5 would be based on sex disaggregated data to allow a better understanding the progress in the area of gender equality and women's empowerment. The framework for women's empowerment and gender equality comprises of 4 areas of strategic objectives:

Improvewomen'shuman capabilities: Thisdealswithwomen'sandgirls'accesstohealth care,life expectancy, nutrition, reproductive health, education, information, training, and other services that enables women to achieve better health and educational outcomes. This also includes women's freedom from violence and coercion.

Increase women's economic benefits: This relates to women's access to or control over productive assets, resources, services, skills, property, employment, income, information, technology, financial services,andother economicopportunities includingcommunityresources like land, water, forestetc.

Enhance women's voice and agency: This pertains to women's role as decision makers in public and private spheres including politics and promotion of their leadership is considered here. Changed attitudes on women's and girls' rights, women's enhanced knowledge of their rights and increasing their bargaining power are reflected on.

Createanenablingenvironmentforwomen'sadvancement: Thesocio-politicalenvironment,legal and policy support, and congenial social norms are the key in this area. Oversight, enforcement of laws, regular collection of sex-disaggregated data, gender and social analysis skills including the capacity to develop, implement, and monitor gender strategies, understanding of gender issues in the sector are the key areas.

Toimplementthesestrategicobjectives,sevenaction areashavebeenidentifiedthatwillcontributein achieving results in these four areas.

i. Increaseaccesstohumandevelopmentopportunities
ii. Enhanceaccesstoandcontroloverproductiveresources
iii. Increaseparticipationanddecisionmaking
iv. Establishconducivelegalandregulatoryenvironment
v. Improveinstitutionalcapacity,accountabilityandoversight
vi. Increaseprotectionandresiliencefromcrisisandshocks
vii. Promotepositivesocialnorms

6. Gender Assessment in the Context of the Proposed Project

Gender inequality and climate vulnerability intersect sharply in the *haor* basin, making a gender-responsive approach essential for the proposed climate-resilient housing project. The *haor* region spans seven wetland districts and is characterized by chronic poverty, fragile housing on low earthen mounds, and repeated flash floods and wave action that destroy homes, assets and basic services (LGED & CEGIS, 2012). Within this context, women and girls shoulder disproportionate unpaid care work, face high rates of child marriage, and often lack voice in community decision-making, all of which shape how they experience and can respond to climate risks (BBS, 2023; UNICEF & UNFPA, 2023).

a. Gender and Climate Change Vulnerability in the *Haor* Project Area

The Master Plan of *Haor* Area shows that about 29.6% of the *haor* population lives below the lower poverty line, with poverty rising to over 39% in Netrokona and around 34% in Kishoreganj, and around 28.5% of the *haor* population completely unemployed (LGED & CEGIS, 2012; Concern Worldwide, 2013). This is significantly higher than national rural averages and underscores the structural deprivation affecting households in the project area. Empirical work on *haor* livelihoods confirms that repeated floods, crop losses and erosion keep many families trapped in a "vicious cycle of poverty" despite borrowing and seasonal migration (Rabby, 2012; Islam, 2022).

Women's vulnerability is shaped not only by poverty but also by gendered roles and norms. The Bangladesh Time Use Survey 2021 shows that women spend 5.9 hours per day on unpaid domestic and care work, compared with 0.8 hours for men, meaning women perform about 7 times more unpaid care and domestic work (BBS, 2023; UN Women, 2024). This national pattern is intensified in remote *haor* unions, where flooded terrain makes collecting water, fuel, food and accessing services more time-consuming and physically demanding. Studies on *haor* communities describe women as heavily burdened with domestic and care responsibilities while simultaneously contributing to agriculture, fisheries and small-scale income activities, often without formal recognition or control over income (Abedin, 2019; Raihan, 2021).

Child marriage further entrenches gendered vulnerability. According to the UNFPA-UNICEF Global Programme to End Child Marriage, 51% of Bangladeshi women aged 20-24 were married before age 18, one of the highest rates in the world (UNICEF & UNFPA, 2023; Girls Not Brides, 2024). Evidence indicates that child marriage is more common in rural and poorer regions, mirroring the socioeconomic profile of many *haor* upazilas (UNICEF, 2023). Early marriage and adolescent pregnancy limit girls' education, mobility and participation in decision-making, and increase health risks; all of which reduce their capacity to benefit from and contribute to adaptation initiatives.

Climate-focused research in *Sunamganj* and other *haor* districts confirms that women in *haor* areas are highly susceptible to climate change impacts, facing floods, erosion and livelihood shocks alongside social discrimination and restricted decision space (Abedin, 2019). Recent UNFPA-supported work in *Sunamganj* highlights that over 670,000 women of reproductive age in the district face disrupted sexual and reproductive health services during floods, illustrating how climate shocks intersect with gendered health needs (UNFPA, 2025).

b. Gendered Implications of Housing, WASH and Basic Services

The project's focus on climate-resilient housing, safe water, sanitation and renewable energy directly touches sectors with strong gender dimensions.

Nationally, the latest Joint Monitoring Programme (JMP)-based figures indicate that around 59% of Bangladesh's population has access to safely managed drinking water, while only about 14.9% are served by piped water systems, and contamination of water sources especially for poorer households remains widespread (WHO/UNICEF JMP, 2022; WaterAid Bangladesh, 2022). Safely managed sanitation coverage in rural areas remains well below universal, and many poor households rely on latrines that are easily damaged, inundated or made unusable during floods (UNICEF, 2019).

In this context, women and girls typically:

1. Are primarily responsible for fetching water, managing sanitation and hygiene, and caring for sick family members, meaning that unsafe or distant facilities translate directly into longer working days and higher health risks (BBS, 2023; Fair Work, 2024).
2. Face heightened risks to privacy, dignity and safety when latrines collapse, overflow or are located far from the homestead, especially at night or during floods, increasing exposure to harassment and GBV/SEAH.
3. Experience interrupted education and limited mobility when schools, roads and markets are cut off by water, reinforcing early marriage and withdrawal from public life (UNICEF, 2023).

For housing specifically, haor settlements are often built on narrow, low earthen mounds deeply exposed to waves and flash floods. When fragile houses collapse or are repeatedly damaged, women who spend more time in and around the homestead and who often stay back to protect assets and care for children and elderly relatives are particularly exposed to injury, displacement and psychological stress (Abedin, 2019; Raihan, 2021).

The proposed project therefore has strong potential to reduce gendered vulnerabilities if it ensures that:

- Elevated, disaster-resilient houses incorporate women's preferences on layout, privacy and accessibility (e.g., safe internal toilets, separate washing spaces, ramps and handrails).
- Integrated eco-sanitation, rainwater harvesting and solar lighting reduce women's time burden, improve safety and support menstrual hygiene management.
- Women participate meaningfully in beneficiary selection, siting and design decisions, rather than being passive recipients of standardized infrastructure.

C. Gender, Disasters and Differential Risk

International and Bangladesh-specific evidence shows that disasters are not gender-neutral. Analyses by UN Women, UNDRR and UNDP highlight that women, children and youth often face significantly higher mortality and morbidity in disasters than men, largely because of unequal access to information, mobility, resources and decision-making power rather than any innate vulnerability (Neumayer &Plümper, 2007; UN Women, 2021; UNDP, 2022). In Bangladesh's 1991 cyclone, for example, around

90% of the 140,000 fatalities were women, reflecting barriers to early warning access, evacuation and shelter use (Ikeda, 1995; UNISDR, 2015).

Although the haor region is affected mainly by flash floods rather than cyclonic storm surges, the mechanisms are similar:

1. Women are more likely to be inside fragile houses or on homesteads when sudden floods arrive.
2. Care responsibilities, social norms and concerns about reputation can delay women's evacuation.
3. Overcrowded temporary shelters, embankments and elevated roads frequently lack safe, separate toilets and bathing spaces, exposing women and girls to increased GBV/SEAH and health risks (UN Women, 2021; Prothom Alo & MJF, 2025).

For the Haor LLA project, this means that resilient housing and WASH investments must be coupled with gender-sensitive disaster preparedness, early warning communication, and safe shelter and evacuation planning, ensuring that women and girls can use and benefit from protective infrastructure on equal terms with men.

D. Assessment of SEAH-Related Risks in the Proposed Haor Project

The proposed project is expected to deliver major benefits for women and girls safer housing, reduced time burdens, improved WASH and lighting, and more voice in local adaptation structures. However, it also carries moderate SEAH-related risks that must be proactively managed, drawing lessons from other housing and WASH programmes in Bangladesh and globally.

Different types of stakeholders will be involved during the implementation of the project. At the central level, PKSF will establish the project management unit (PMU) where the desired number of female staffs are expected to be recruited. These staff will be required to travel in the remote areas alone or with male colleagues. In this case, the female staff may be affected by SEAH-related risks. They have also possibility to get affected in the office. On the other hand, selected EEs also may recruit female staff who will also require to travel at the village levels for community mobilization, Community Adaptation and Housing Group (CAHG) activities, monitoring physical interventions etc. They will also be required to travel to Dhaka or other areas for training under this project. All these travels may increase the risk of SEAH. Furthermore, at the community level female labor may take participate in the earthwork for plinth raising. They may be affected in various ways that include but are not limited to lack of sanitation facilities at work place, eve teasing, sexual exploitation and harassment, wage discrimination etc. Risks for female community members and beneficiaries include:

- **Construction and contractor-related risks:** As construction teams (typically male) enter remote communities to build houses and WASH facilities, power imbalances and lack of oversight can create opportunities for harassment, exploitation or "sex-for-favours" dynamics, particularly where access to project benefits (housing slots, wage labour, training) is scarce.

- **Mobility and access to project activities:** Women may need to travel along isolated waterways or roads to attend trainings, community consultations or to access the grievance redress mechanism (GRM) increasing their exposure to harassment or assault.
- **Stigma and under-reporting:** Studies on GBV in South Asia and humanitarian contexts show that many SEAH incidents are never reported because of fear of stigma, blame or retaliation, especially in conservative rural communities (UN Women, 2021; UNFPA, 2023).

Risks for female staff and volunteers (PKSF, EEs, contractors):

- Female project staff and community volunteers will travel frequently to remote haor villages, often by boat and sometimes staying overnight. Inadequate or mixed-sex accommodation, lack of separate sanitation, and reliance on informal transport can increase SEAH risks.
- Hierarchical relationships (e.g., junior female staff supervised by senior male staff or contractors) may create situations where abuse of power or coercion is difficult to challenge, particularly in the absence of a clear Code of Conduct and safe reporting channels.

Risks in community forums and committees: Community Adaptation and Housing Group and community meetings may mirror local power dynamics where young women, widows or women from poorer or minority households feel unable to speak out about harassment or coercion.

Given these factors and strong social stigma around GBV/SEAH, the likelihood of under-reporting is high even if incidents occur. The project therefore treats SEAH risk as "limited but non-negligible" and commits to a zero-tolerance approach, including:

- A mandatory Code of Conduct for all PMU, EE and contractor staff explicitly prohibiting SEAH and abuse of power.
- Gender-sensitive recruitment, induction and supervision, including SEAH training for all staff and contractors.
- A confidential, gender sensitive and accessible GRM, with anonymous options, female focal points, and clear referral pathways to health, psychosocial and legal services where available.
- Safe logistics and site management, including separate, secure sanitation and accommodation for women, safe travel protocols, and explicit rules on staff- beneficiary interactions.

Table 3: Action plan matrix for protection of GVB and SEAH

SL#	Identified risks	Mitigation measures	Responsibility	Source of Budget
1.	Wage discrimination	• Awareness raising through CAHG meetings. • Ensure equal payment to male and female labor during earth	EE, contractors and CAHG members	No additional budget is required

		work. • Establish grievance redress mechanism at community level.		
2.	Sexual harassment and/or eve teasing due to lack of sanitation facilities at work place	• Temporary separate sanitation facilities at the work place for both male and female members. • Establish grievance redress mechanism at community level. • SEAH awareness session in CAHG.	EE and local	Budget is built in the relevant activity.
3.	Sexual harassment and/or eve teasing on the way to and from work place	• Establish grievance redress mechanism at community level. • SEAH awareness session in CCAH.	EE and PMU	
4.	Risks associated with SEAH at PKSF level	• PKSF's guideline will be applicable for this project • For travel to remote areas, official vehicle will be ensured instead of public transport.	PKSF	No additional budget is required
5	Risks associated with SEAH at EE level	• Training related to project management will incorporate SEAH and GBV related sessions to enhance awareness. • Accommodation of female staff will be arranged separately considering individual requirement of female staff. • Necessary security and privacy will be maintained.	PKSF and EE	Existing training budget

***** In every case, gender policy and GRM of PKSF will be applicable. PKSF strongly follow the zero-tolerance policy on SEAH and GBV. It is applicable both for PKSF and EEs.

7 Gender Mainstreaming in the Project

Gender mainstreaming in the proposed *haor* project is embedded across all three components and the full project cycle, from beneficiary selection to monitoring and learning. The project adopts an inclusive targeting approach that uses clear, gender-responsive criteria to identify the most vulnerable households for the approximately 700 climate-resilient houses and associated WASH and energy services. Within the broader caseload of ultra-poor and landless families living on highly exposed homesteads, particular priority is given to women-headed households, households with persons with disabilities, and other socially marginalized groups identified in the vulnerability mapping. Beneficiary lists are prepared transparently and validated in open community meetings where women are actively encouraged and supported to participate, and final lists are publicly displayed at community and Union Parishad level to reduce elite capture and ensure equitable access to benefits.

To strengthen participation, voice and leadership, the project promotes strong women's representation in Community Adaptation and Housing Group (CAHG) and other local structures responsible for planning, implementation oversight and grievance handling. Building on the community-driven design process described in the proposal, the project organizes dedicated women's and adolescent girls' consultations to feed directly into decisions on house layout, plinth height, toilet placement, water points and lighting, ensuring that women's safety, privacy and care-related needs are reflected in the standard designs. Female members receive basic leadership and facilitation training so that they can chair or co-chair meetings, present community priorities to local government, and play a visible role in monitoring construction quality and service functionality over time.

The project also treats women's economic empowerment and skills development as a core pathway for gender equality, rather than an add-on. Technical training planned under the project for at least 100 masons and 50 engineers or construction supervisors on climate-resilient housing, eco-sanitation and solar systems will reserve a minimum share of places for women and young women, and training schedules and venues will be adapted to their mobility and care constraints. In parallel, Executing Entities (EEs) are encouraged to recruit and promote female field staff, engineers and community facilitators, and to adopt human-resource practices that support gender equity, such as safe working conditions, equal pay for equal work and harassment-free workplaces. This combination of targeted training and institutional change is expected to open up non-traditional, better-paid roles for women in housing, WASH and renewable-energy value chains.

Creating safe and dignified environments, and managing SEAH risks, is another pillar of the gender mainstreaming strategy. A project-wide Code of Conduct will be mandatory for all PMU staff, EEs, contractors and site workers, explicitly prohibiting sexual exploitation, abuse and harassment and any abuse of power or exchange of project benefits for sexual favors. Activity design will integrate SEAH-sensitive measures: choosing safe and accessible venues for community meetings and trainings; providing separate, adequate sanitation facilities for women and men at worksites and training centres; planning safe travel arrangements for female staff and volunteers to remote haor locations; and ensuring that female beneficiaries can interact with female staff where possible. These measures are complemented by confidential reporting options within the grievance redress mechanism, including anonymous channels and female focal points at community level, so that women and girls can safely report concerns without fear of retaliation.

Finally, gender-responsive monitoring, learning and gender sensitive grievance redress mechanism (GRM) underpins the whole approach. All relevant results framework indicators including numbers of beneficiary households, trainees, committee members and GRM users will be disaggregated by sex, age and disability, and the M&E system will include specific gender indicators such as the proportion of committee members who are women, women's satisfaction with housing and WASH design, and perceived changes in time burden and safety. Community scorecards and other participatory monitoring tools will include questions on women's access, voice and experience of the services, and findings will be fed back into adaptive management. The GRM will be designed to be accessible to women, persons with disabilities and other marginalized groups through multiple entry points (in-person, phone, written and anonymous options) and gender-balanced local grievance committees, ensuring that the project not only delivers climate-resilient infrastructure, but also shifts local norms and institutions towards greater gender equality.

7.1 Proposed Gender Log frae

The purpose of a Gender Action Plan is to operationalize the constraints and opportunities for women and men that were identified during the gender analysis, towards fully integrating them into the project design, providing the framework for a gender-responsive and socially inclusive project. For this, particularly considering the disadvantaged position of women, steps will be taken to ensure that the realities of women are taken into account in the activities during the project's planning, executing, and monitoring phases. The specific indicators are also proposed to measure and track progress on these actions at the activity level, which can be incorporated into the detailed M&E plan which will be developed at the start of implementation, and provides concrete recommendations on how to ensure that the degree of gender-responsiveness and transformation continues to be measured throughout implementation. The gender expert will be involved in any of the activities for which gender expertise will be required. Furthermore, it is recommended that the project takes into consideration gender and social inclusion measures outlined above and these measures are tailored specifically for a Bangladesh context. Based on the approach a Gender logframe is developed for the project which is given in the Table below.

Table 5: Gender Action Plan Log frame- Haor LLA Project

Outcome	Output	Activity	Actions	Targets, Indicators & Timeline	Responsible institutions	Allocated budget (USD million) *
Outcome-1: Enhanced flood resilience of vulnerable households through safe and durable housing	**Output 1.1** Construct climate-resilient houses with elevated plinths and stilts for identified vulnerable households	**Activity 1.1** Design and construct climate-resilient houses	- Priorities women-headed households, households with persons with disabilities, and marginalized groups in selection of the 700 houses. - Register adult women as co-beneficiaries (joint names) wherever possible. - Conduct separate consultations with women and adolescent girls on house layout, internal privacy, location of doors/windows, safe access routes, and internal storage. - Ensure universal design features	**Targets (by Y3):** - 700 houses constructed on raised plinths/stilts according to resilient design standards (proposal). - 20% of beneficiary households are women-headed; - 50% of beneficiary households have an adult woman registered as co-beneficiary. - 100% of houses incorporate at least 3 gender-responsive / universal design features (e.g., private sleeping space, safe access, lockable doors). **Indicators:** - % Of women-headed HHs among 700 beneficiaries. - % Of houses meeting agreed gender/universal design checklist.	PMU and EEs	**3.687** (Total Outcome-1 budget)

			(e.g., ramps/handrails, wider doors where feasible, non-slippery access) to benefit older persons and persons with disabilities, with specific attention to women and girls with mobility limitations.	**Timeline:** Targeting & design Y1; construction Y1-Y3.		
Outcome-2: Improved health, hygiene and sustainable energy access in flood-prone areas	**Output 2.1** Solar lighting systems installed	**Activity 2.1** Install solar system	- Place 700 solar systems to maximize safety and convenience for women and girls (e.g., lights at entry points, near toilets, and along main access paths). - Consult women on location of switches and internal lights to support domestic work, childcare, and study time for girls. - Train women and youth as solar caretakers (basic O&M), with at least	**Targets (by Y3):** - 700 households equipped with functional solar systems. - 50% of women in beneficiary HHs report feeling safer at night in and around the homestead. - 30% of trained solar O&M caretakers are women/young women. **Indicators:** - Number of households with working solar units. - Women's perceived safety at night (HH survey). - % Of female trainees in solar O&M sessions.	PMU and eEs	**0.210** (budget line "Output 2.1: Solar lighting system installed")

			30% female participants. - Use women-focused awareness sessions on safe use of solar lights to reduce SEAH risk (e.g., discouraging loitering near women's bathing/toilet areas).	**Timeline:** Installation Y1-Y3; perception survey Y3-Y4.		
	Output 2.2 Rainwater harvesting systems installed	**Activity 2.2** Install rainwater harvesting system	- Install 700 roof-based rainwater harvesting (RWH) systems and consult women on location of storage tanks to minimize carrying distance and time. - Involve women in design discussion on water quality, cleaning routines and usage priorities (drinking, cooking, hygiene). - Train women (esp. women-headed HHs) in safe water handling and	**Targets (by Y3):** - 700 households with functional RWH systems, used regularly for domestic needs. - 60% of women report reduced time spent fetching water compared to baseline (target 20-30% reduction). - 50% of participants in RWHS O&M/safe water sessions are women. **Indicators:** - Number of RWH systems installed and operational. - Time spent by women on water collection per day (baseline vs endline).	PMU and EEs	**0.210** (budget line "Output 2.2: Rainwater harvesting system installed")

			simple maintenance of gutters/tanks. - Integrate awareness session on how RWHS reduces women's workload and health risks during flood seasons.	- % Of women attending RWHS training sessions. **Timeline:** Installation Y1-Y3; time-use & satisfaction surveys Y3-Y4.		
	Output 2.3 Eco-toilets installed	**Activity 2.3** Install eco toilets	- Provide 700 raised eco-toilets, ensuring internal privacy, lockable doors, safe access (steps/ramps), and adequate space for menstrual hygiene management (MHM). - Conduct FGDs and consultation with Women (including adolescent girls and women with disabilities) on design details: door direction, internal layout, washing	**Targets (by Y3):** - 700 eco-toilets installed and used by beneficiary households. - 80% of women and adolescent girls report improved privacy and dignity using toilets compared to previous situation. - 50% of households report men's participation in toilet maintenance and cleaning tasks. **Indicators:** - Number of eco-toilets constructed and functional. - Women's satisfaction with	PMU and EEs	**0.210** (budget line "Output 2.3: Eco-toilets installed")

			arrangements, lighting. - Place latrines where women and girls can access them safely, including at night (solar light near path/door). - Train women and men jointly on hygienic use and maintenance, emphasizing shared responsibility for cleaning and minor repairs. - Include sensitization session on GBV/SEAH risk related to unsafe sanitation in community awareness.	safety/privacy (scorecards/FGDs). - HH survey on division of sanitation tasks by sex. **Timeline:** Design & consultations Y1; installation Y1-Y3; satisfaction assessments Y2-Y4.		
	Output 2.4 Tree planted in the household area	**Activity 2.4** Homestead tree planting	- Plant 15,400 trees (windbreaks, fruit, timber and multipurpose species) around homesteads and access paths, with women's input on species selection	**Targets (by Y3):** - 15,400 trees planted with at least 80% survival at end of Y3. - 60% of designated tree caretakers are women or youth. - 50% of women in beneficiary HHs report that	PMU and EEs	**0.046** (saplings + planting labor + transport) based on Output 2.4

			(fuelwood, fruit, shade, fodder). - Identify women and youth in each beneficiary household as tree caretakers, provide brief training on planting, watering and protection (including during inundation). - Awareness session on how homestead greening contributes to food/nutrition, shade and reduced wind-damage to houses, and how benefits are shared within households. - Encourage women's groups to track survival of trees and raise issues through GRM/committees if replacement is needed.	trees contribute to food, fuel or shade benefits for their families. **Indicators:** - Number of trees planted & survival rate. - % Of female/youth caretakers in tree registers. - Women's reported use/benefits from trees (FGDs / HH survey). **Timeline:** Planting Y1-Y3; survival & benefit assessment Y3-Y4.		
Outcome-3: Capacity	**Output 3.1**Group	**Activity 3.1.1**Sele	- Ensure each housing/user	**Targets (by Y1):**	PMU and EEs	**0.010** (approx.

enhancement and local skill development	s are formed	ct beneficiaries and form groups	group includes women, youth and persons with disabilities; avoid elite capture. - Use women-focused meetings (where needed) to identify vulnerable women-headed households and confirm lists before finalization. - Ensure at least 40-50% women in groups linked to housing, WASH and tree-planting, and that women can hold leadership roles in CAHG (chair/secretary).	- Groups formed in 100% of project villages, with 80% women members. - 30% of group leaders (chair/secretary) are women. **Indicators:** - Group membership and leadership lists (sex, age, disability disaggregated). - Number of women-only validation meetings held and number of participants. **Timeline:** Group formation and validation Y1.		share of Outcome-3 budget for targeting & group formation) from Outcome-3 total 0.125
	Output 3.2 Training materials developed	**Activity 3.2.2** Prepare training material on climate-resilient housing	- Integrate gender and SEAH content into all training materials for masons, engineers, supervisors and community members (e.g., privacy	**Targets (by Y2):** - Training modules on climate-resilient housing, WASH and energy revised/produced with explicit gender sections. - At least 3 modules (masons,	PMU and EEs	**0.015** (approx. share of Outcome-3 budget for training design & materials) within 0.125 total

			needs, accessibility, safe behavior on worksites). - Include visuals and examples that feature women as decision-makers and workers (e.g., women supervisors, women care-takers of solar/WASH). - Ensure materials are accessible (Bangla, simple language, visuals) and suitable for women with lower literacy.	engineers, community groups) reviewed by gender/safeguards focal points before use. **Indicators:** - Number of training packages with integrated gender/SEAH content. - Existence of validated gender-sensitive materials (document review). **Timeline:** Material development & validation Y1-Y2.		
	Output 3.3 Training for beneficiaries conducted	**Activity 3.3.3** Organize training for beneficiaries	- Reserve at least 30% of seats in all technical trainings (masons, housing maintenance, WASH/solar caretakers) for women and young women; adapt schedules/venues to women's time and	**Targets (by Y4):** - At least 100 masons and 50 engineers/supervisors trained, with 30% women/young women overall. - 50 women engaged in paid project-related work (construction support, O&M, facilitation). **Indicators:**	PMU and EEs	**0.009** (approx. share of Outcome-3 budget for beneficiary training; training line 0.007 within 0.125 total)

			mobility constraints. - Conduct tailored sessions for women-headed households on house maintenance, WASH and small livelihood opportunities linked to time/cost savings. - Encourage EEs/contractors to recruit women who complete training into paid roles (community facilitators, WASH promoters, tree caretakers, etc.).	- Training attendance records (sex/age disaggregated). - Women trainees employed or using skills for income. **Timeline:** Trainings Y1-Y4.		
		Activity 3.3.4 Evaluations	- Integrate sex-, age- and disability-disaggregated indicators and specific gender outcome questions (time use, safety, decision-making) into baseline, mid-term	**Targets (by Y4):** - All key outcome indicators reported with sex/age/disability disaggregation. - At least 10 gender-focused stories/briefs produced. - Evaluations include a distinct gender & SEAH section with findings and	PMU and EEs	**0.090** (main evaluation line under Outcome-3; 90,000 of 124,538)

			and final evaluations. - Use female FGDs and key informant interviews to capture women's perspectives on housing design, WASH, solar, safety and SEAH risks. - Document case stories showing how women and girls benefit from and contribute to the project; share lessons with PKSF, GoB and AF.	recommendations. **Indicators:** - Evaluation reports and datasets. - Number of case studies/briefs with explicit gender focus. **Timeline:** Baseline Y1, mid-term Y3, final evaluation Y4.		

***Budget notes:** Outcome-level and output-level amounts are taken from Detailed Budget Plan and converted toUSD million**;** they reflect existing project allocations (not new/additional budgets).

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