**Adaptation Initiative for Climate Vulnerable Offshore Small Islands and Riverine Charland in Bangladesh**

**Draft Environmental and Social Management Framework**

**June 2020**

**Acronyms**

|  |  |
| --- | --- |
| AF | Adaptation Fund |
| BAEC | Bangladesh Atomic Energy Commission |
| BCCSAP | Bangladesh Climate Change Strategy and Action Plan |
| BRTA | Bangladesh Road Transport Authority |
| BWDB | Bangladesh Water Development Board |
| CPP | Cyclone Preparedness Program |
| DA | Department of Agriculture |
| DAE | Department of Agricultural Extension |
| DoE | Department of Environment |
| EbA | Ecosystem Based Adaptation |
| ESA | Environmental and Social Assessment |
| ESMF  ESMP | Environmental and Social Management Framework  Environmental and Social Management Plan |
| ESP | Adaptation Fund’s Environment and Social Policy |
| GAP | Gender Action Plan |
| GBM | Ganges, Brahmaputra, and Meghna rivers |
| GRM | Grievance Redress Mechanism |
| HBRI | House Building Research Institute |
| IE | Implementing Entity |
| MOEF | Ministry of Environment and Forestry |
| MOEFCC | Ministry of Environment, Forestry and Climate Change |
| NDC | Nationally Determined Contribution |
| M&E | Monitoring and Evaluation |
| NAPA | National Action Plan for Adaptation |
| PMU | Project Management Unit |
| SDG | Sustainable Development Goals |
| SES | UNDP’s Social and Environmental Standards |
| SESP | UNDP’s Social and Environmental Screening Procedure |
| SLR | Sea level rise |
| UNDP | United Nations Development Program |
| UP | Union Parishad |
| UNFCCC | United Nations Framework Convention on Climate Change |

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# Executive Summary

This Environmental and Social Management Framework (ESMF) has been prepared for the submission of the UNDP project proposal “Adaptation Initiative for Climate Vulnerable Offshore Small Islands and Riverine Charland in Bangladesh” to Adaptation Fund. The purpose of the framework is to assist in the assessment of potential environmental and social impacts. The framework will serve as guide in the preparation of Environmental and Social Management Plan(s), to ensure compliance with the requirements of UNDP’s Social and Environmental Standards and Adaptation Fund’s Environmental and Social Policy (ESP). The Environmnet and Social Management Plan (ESMP) will be implemented by the Department of Environment (DoE) and overseen by UNDP Project Manager hired to support implementation of the AF project and monitored throughout the project duration.

Initial analysis and screening conducted during the development phase using UNDP’s Social and Environmental Screening Procedure (SESP) and Adaptation Fund’s ESP identified potential social and environmental risks associated with various project interventions. The screening procedure established that based on the assessment of each risk, the project has been categorized overall as “Moderate” or ‘Category B’ or ‘Orange B’ as per UNDP’s SESP, AF’s ESP and DoE’s EIA guideline. Social and environmental assessment and management measures have been proposed to address potential risks, details of which are included in the Social and Environmental Screening Checklist in Annex 1.

Two categories of risks were highlighted in the framework:

1. Identified potential risks

The SESP has been conducted based on different project activities and outputs, and 19 potential risks have been identified. It was determined that the project, based on these identified risks, has been assessed as being “Moderate” risk and further assessment and management measures are proposed. Further screening is required to establish each risk’s significance on a site-specific basis, to appropriately target further assessment and preparation of site specific social and environmental management plan.

1. Currently unidentified sub-projects (USPs)

The indicative project activities and outputs under the four components have been established. However, as project activities are further defined, additional assessment will be required, to identify potential impacts on the sites of climate-resilient infrastructure, and the selection of beneficiaries, identities of which are not yet currently known. Adverse impacts that may arise from any proposed interventions that are considered Moderate or High significance, will be subject to further assessment and consultation with stakeholders to identify, and where possible, quantify the magnitude and severity of such impacts on households or groups of the two Islands and charland communities. Measures to avoid, minimize, mitigate or manage such impacts will be developed and implemented. Project activities identified as being of Moderate or High significance will not be allowed to start until suitable, agreed mitigation measures are set-up.

This ESMF has been developed on the basis of these risk categorizations to specify the processes that will be undertaken by the project for the additional assessment of potential impacts and identification and development of appropriate risk management measures, in line with UNDP’s Social and Environmental Standards (SES) and Adaptation Fund’s Environmental and Social Policy. This ESMF also details the roles and responsibilities of different stakeholders for its implementation and includes a detailed budget and monitoring and evaluation plan.

# 1. Introduction

Bangladesh is a small and densely populated country with a land area of 147,570 km2 and an extensive coastline of ~720 km located in the southern part of the country. The country is largely flat, low-lying deltaic terrain. Two-thirds of the country is less than 6 m above mean sea level. The deltaic terrain of Bangladesh has been formed by the deposition of alluvial discharges from the Ganges, Brahmaputra, and Meghna rivers (GBM). This process of deposition has created extensive network of islands and bars, known locally as small coastal islands (coastal chars) or riverine char islands (riverine chars). The terms depend on their proximity to Indian Ocean. [[1]](#footnote-1)

Bangladesh is ranked sixth among the world’s top ten countries most affected by extreme events in the last 20 years.[[2]](#footnote-2) The country is also one of the susceptible countries for natural disaster impacts due to its geographical location, major rivers, flat and low-lying topography, high population density and high level of poverty. These include climate-related disasters such as cyclone, storm surge, flood, extreme heat and drought, coupled with other disasters such as earthquake. Climate related disasters comprised 95% of all major disasters since 1990.[[3]](#footnote-3)

The climate change vulnerabilities are more pronounced in both the coastal and riverine chars than on the mainland. [[4]](#footnote-4) A high level of exposure to natural disasters coupled with limited access to the mainland contributes to char inhabitants lacking access to basic services. Although chars are agriculturally productive, the population have limited market access to the mainland, have poor access to basic water and sanitation, limited transportation services, and general low standards of living. There are very few alternative livelihood opportunities and limited infrastructure that resulted to reduced economic opportunities. Char communities are, therefore, restricted to adapt to the adverse climate change impacts, including to both climate induced slow and rapid onset disaster events.

Most of inland riverine chars in Bangladesh are prone to severe levels of erosion and flooding at least once a year. These conditions, in additon to very limited opportunities of the population, results to their vulnerabilities to climate change. Riverine charlands, because of its small size and geomorphological instability further compromise the adaptive capacity of the population since ecosystem services are easily disrupted.

Coastal chars, on the other hand, are prone to sea level rise (SLR), cyclones, ocean warming, acidification and salt water intrusion.[[5]](#footnote-5) Coastal chars are more sensitive to climate-related disasters compared to inland regions with higher elevation, as there are few natural buffers to cushion the impacts of cyclone, storm surge, elevated water levels and salt water intrusion. The adaptive capacity of population in coastal chars is lower compared to mainland communities because of their small size and geographical remoteness, that impact their access to educational services and social support system.

Based on multi-criteria risk assessment that considers remoteness from administrative centers, being detached from the mainland and limited accessibility, and where communities practice agriculture-based livelihoods, two candidate chars – one riverine, and another coastal chars, were selected. The riverine char, an inhabited char in Teesta River basin, is located in Lakshmitari Union in Gangachara upazila; while the coastal char is located in Mujibnagar, a union of Char Fasson, which is an upazila of the Bhola District. Hydrometeorological modelling for Lakshmitari showed shifts in the spatial and temporal distribution of rainfall occurrences, which include increase in seasonal monsoon precipitation, with greater frequency and intensity of extreme precipitation events; and decrease in precipitation for all other seasons; and increase in seasonal drought during dry season.

The local climate of Char Fasson, where Mujibnagar is located, is also changing. The mean annual termperature in the area showed an increasing trend from 1970 to 2010 and mean annual precipitation also increased during this period. Mujibnagar will continue to experience increase in average annual temperature, more variable seasonal precipitation, increase in mean annual precipitation, increase in frequency and intensity of floods, more intensity from cyclones, and increase in salinization of groundwater as a result of sea level rise.

The Ministry of Environment, Forestry and Climate Change (MoEFCC) of Bangladesh has identified the need to provide interventions to adapt to the climate change impacts brought by increasing floods, erosion, cyclones, saline intrusion and water stress, to the communities of Lakshmitari and Mujibnagar unions. In this context, MoEFCC and the United Nations Development Program (UNDP) designed the project “Adaptation Initiative for Climate Vulnerabe Offshore Small Islands and Riverine Charland in Bangladesh” to enhance the climate resilience of vulnerable communities in the above communities, with the following outcomes:

1. Enhanced resilience of households through climate resilient housing, renewable sources for electrification and the provisioning of safe drinking water;
2. Basic infrastructure that is more resilient to floods and cyclones; increased climate resilience of communities through climate risk mapping; and cyclone and flood preparedness that leaves no one behind;
3. Improved income and food security of vulnerable households through innovation and introduction of locally appropriate climate-resilient livelihood practices; and
4. Enhanced knowledge and capacity of communities, government and policymakers to promote climate resilient development on riverine and offshore islands.

The project has been prepared to be submitted to Adaptation Fund[[6]](#footnote-6) to secure resources of about $9.9 million dollars that will be invested to address the technical, financial and institutional barriers to climate resilient housing, infrastructure and livelihoods. The project interventions will benefit an estimated ~341,000 people, 31,000 of which are direct beneficiaries living on chars in Rangpur and Bhola districts. The project, which will be implemented by the MoEFCC following National Implementation Modality(NIM), will be implemented for five years.

As part of the preparation phase, the project was reviewed with Adaptation Fund’s Environment and Social Policy (ESP) and UNDP’s Social and Environmental Screening Procedure (SESP), which identified potential social and environmental risks associated with the project activities. The screening vis-à-vis AF’s ESP principles and UNDP’s SESP overarching principles and Social and Environmetnal Standards (SES) resulted in an overall social and environmental risk categorization of “Category B” or “Moderate”, which means that there are only few potential adverse impacts of the project, the impacts are localized, the intensity of impacts is low and its duration is short-lived. An updated Environmental and Social Management Framework, which is based on Annex J (Environmental Impact Assessment (EIA) with Environmental Management Plan) of AF proposal, has been prepared to identify the measures necessary to avoid, and where avoidance is not possible, mitigate the limited potential environmental and social risks, as well as to enhance the positive impacts from the project. The ESMF was formulated to take into consideration activities that have not yet been identified (unidentified sub-projects).

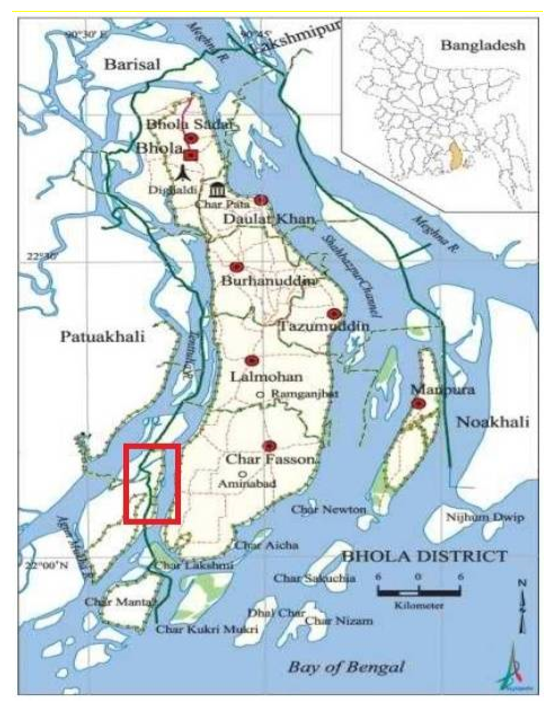
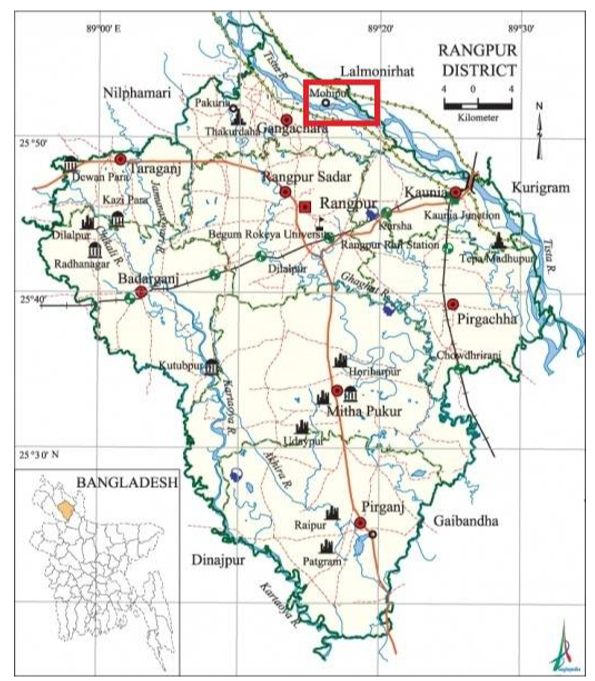
This document constitutes the project’s ESMF, and includes: i) overview of the project; ii) the relevant legal framework; iii) a description of the risks identified and the mitigation measures; iv) roles and responsibilities of the institutions involved in the project; v) stakeholder engagement plan; vi) gender action plan; and vii) implementation programme.

The ESMF will guide MOEFCC during the implementation of the project to ensure that the desired social and environmental sustainability outcomes are met, and that the project implementation complies with Adaptation Fund’s Environment and Social Policy and UNDP’s Social and Environmental Standards.

# 2. Overview of the project

## 2.1 Brief description of the project

The Adaptation Fund has approved about $9.9 million for Bangladesh to enhance resilience of vulnerable communities of small islands and riverine charland islands. The project “Adaptation Initiative for Climate Vulnerable Offshore Small Islands and Riverine Charland in Bangladesh” targets Lakshmitari Union, an inhabited char in Teesta River basin in northwest Bangladesh, and Mujibnagar, a union of Char Fasson, an upazila of Bhola district located in the Bay of Bengal. The interventions will benefit about 31,000 direct beneficiaries and 310,000 indirect beneficiaries living in the two char lands. The five-year project will be implemented by the Ministry of Environment, Forestry and Climate Change.



**Figure 1. Project Locations of Lakshmitari and Mujibnagar Unions**

The project aims to enhance resilience of households through climate resilient housing, renewable sources of electricity, and provisioning of safe drinking water through construction of rainwater harvesting system. The project also aims to increase the climate resilience of communities through climate risk mapping, cyclone and flood preparedness and basic infrastructure that is resilient to cyclones and floods. The project will also address to improve the income and food security of vulnerable households through innovation and introduction of locally appropriate climate resilient livelihood practices, and to enhance the knowledge and capacity of communities, government and policy makers to promote climate resilient development on riverine and offshore islands.

The interventions include the construction and repair of cyclone and flood resilient houses for the most vulnerable households, installation of community level nano-grids for electrification, construction of rainwater harvesting system, construction of cluster houses for vulnerable households that will serve as emergency shelters during flooding and cyclones, embankment repair, climate hazard mapping and capacity building under Cyclone Preparedness Program and climate resilient agriculture and livelihood. These interventions do not involve large-scale infrastructure development, and will only generate minor to moderate impacts, which can be readily mitigated.

The project is consistent with the relevant national climate change and environmental legal and institutional framework of Bangladesh. The project will contribute towards the achievement of national priorities as outlined in Bangladesh Climate Change Strategies and Action Plan (BCCSAP 2009) and Nationally Determined Contribution (NDC 2015). The following interventions identified by the NDC will be addressed by the project: i) food security, livelihood and health protection, including water security; ii) comprehensive disaster management; iii) coastal zone management, including saline intrusion control; iv) flood control and erosion control protection; v) climate-resilient infrastructure; and vi) increased rural electrification.

The project is also consistent with the six pillars of BCCSAP, which articulates how Bangladesh intends to scale up its effort to become resilient to climate change. These pillars include i) food security, social security and health; ii) comprehensive disaster management; iii) building resilient infrastructure; iv) increasing the knowledge base; v) mitigation and low carbon development; and vi) capacity building and institutional strengthening.

The project components, focusing on the concrete adaptation activities that will contribute to climate resilience, include the following:

* Enhanced climate resilience of households through climate resilient housing, electrification and climate-proof water provisioning;
* Increased climate resilience of communities through infrastructure that is resilient to cyclones and floods, climate risk mapping and inclusive cyclone preparedness;
* Improved income and food security of communities by innovating and providing assistance to selected households for climate-resilient livelihood activities;
* Enhanced knowledge and capacity of communities, government and policymakers to promote climate resilient development on chars

The expected outputs and activities planned for each component are summarized in Table 1.

**Table 1. Summary of Project Components and Activities**

| **Expected Outcomes** | **Expected Outputs** | **Project Activities** |
| --- | --- | --- |
| Component 1. Enhanced climate resilience of households through climate-resilient housing, electrification and climate-proof water provisioning. | 1.1 Cyclone and flood resilient houses for the most vulnerable households are supported | 1.1.1 Co-designing resilient houses that combine modern and traditional technology  1.1.2 Training local construction workers on cyclone and flood resilient construction techniques  1.1.3 Retrofitting houses against cyclone winds, storm surges and flooding |
| 1.2 Community-level nano-grids installed for electrification to enhance adaptive capacity | 1.2.1 Assessing electricity demand and designing nano-grids powered by solar or wind energy  1.2.2 Establishing community groups to operate and maintain renewable energy nano-grid infrastructure  1.2.3 Installing nano-grid infrastructure to provide electricity to households |
| 1.3 Locally appropriate rainwater harvesting systems for safe drinking water and home garden irrigation | 1.3.1 Assessing water demand and designing locally appropriate rainwater harvesting systems for households  1.3.2 Establishing community-based water-user groups for surface water preservation and distribution in water-stressed areas  1.3.3 Installing home-based rainwater harvesting systems for drinking and gardening |
| Component 2. Increased climate resilience of communities through infrastructure that is resilient to cyclones and floods, climate risk mapping and inclusive cyclone preparedness | 2.1 Climate-resilient infrastructure built to protect life and prevent asset loss | 2.1.1 Constructing cluster houses for particularly vulnerable households that will function as emergency shelters during flooding and cyclones |
| 2.2 Embankments repaired and innovative model for community embankment management introduced | 2.2.1 Repairing damaged embankments in Mujibnagar  2.2.2 Strengthening embankments in Mujibnagar and riverbanks in Lakshmitari through the installation of geotextile and EbA measures such as planting mangroves, other trees and vetiver grass  2.2.3 Forming community embankment management groups with locally appropriate incentives |
| 2.3 Climate-resilient investment on chars promoted through climate hazard maps and expanded cyclone early warning systems | 2.3.1 Developing climate hazard and vulnerability maps for selected chars in the Bay of Bengal and the Ganges-Brahmaputra-Meghna (GBM) basin  2.3.2 Establishing an effective and inclusive cyclone early warning system |
| 2.4 Cyclone Preparedness Programme (CPP) modernized, made gender responsive and expansive to provide timely clone early warning and response at scale | 2.4.1 Engaging community members in the CPP multi-hazard volunteer programme  2.4.2 Providing equipment for CPP volunteers and cyclone shelters  2.4.3 Providing and equipping a floating ambulance that is integrated with a mobile phone health system (M-health) to support stranded and critical patients during climate-induced disaster and post-disaster periods |
| Component 3. Improved income and food security of communities by innovating and providing assistance to selected households for climate-resilient livelihood practices | 3.1 Climate-resilient agriculture implemented and supported at a community level | 3.1.1 Establishing farmer field schools and training farmers for innovation and adoption of climate-resilient agricultural practices  3.1.2 Establishing cold storage facilities for agricultural produce and fish  3.1.3 Assessing irrigation needs and implementing solar irrigation systems in Lakshmitari to provide water during the dry season |
| 3.2 Diversified livelihoods developed and supported for the most vulnerable households | 3.2.1 Providing technology, skills and materials to selected households for making their incomes resilient to flooding, cyclones and saline intrusion |
| Component 4. Enhanced knowledge and capacity of communities, government and policymakers to promote climate resilient development on chars | 4.1 Local government institutions are capable of climate risk-informed planning and implementation | 4.1.1 Building the capacity of local government institutions, the Bangladesh Water Development Board and the Department of Agriculture extension service to promote climate-resilient approaches in char communities |
| 4.2 Knowledge and awareness generated to promote climate resilient approaches and strategies | 4.2.1 Establishing local innovation and knowledge centres to collect and disseminate innovative adaptation options  4.2.2 Collecting lessons learned and best practices on community-based and ecosystem-based adaptation interventions  4.2.3 Disseminating information and knowledge products on a regular basis using a range of modern and conventional media at local and national levels  4.2.4 Raising awareness about climate change among school children and other community members |

## 2.2 Expected economic, social, environmental and gender benefits

The project intends to increase resilience and reduce vulnerability to climate change of the people in two charland communities – Lakshmitari and Mujibnnagar through different interventions stated in Table 1. It is expected that the interventions to be implemented will generate economic, social and environmental benefits, with particular reference to local stakeholders and communities, including gender considerations. These benefits are detailed below.

**Economic Benefits.** The economic benefits of the project include increased income, increased assets, job and enterprise creation through different climate resilient interventions, and benefits of enhanced productivity from improved health. Project support increases the economic assets of women and their households and spurs enterprise development in the communities. The support to value chain and market development creates income enhancing opportunities for upstream and downstream market actors and provides opportunities across the value chains. Investments in safe drinking water supply and rural electrification through nano grid infrastructure also contribute to community managed asset creation, jobs, increased opportunities for private sector engagement in drinking water provision, and improves the overall health and resilience of beneficiary communities.

Shifting women’s livelihoods to climate resilient options will reduce the likelihood of the need for social protection and social safety net pay outs. Provision of safe drinking water will reduce the potential costs of water related illness, both for the household, and the country’s health system. High salinity in drinking water leads to increased cardiovascular disease incidence and intensity, which places a distinct financial burden on Bangladesh’s health system. By improving drinking water quality through rainwater harvesting systems, the incidence and intensity of cardiovascular disease in the targeted populations will decrease, thus reducing the burden on the health system, freeing up government resources for other priority areas. Overall, climate resilient livelihoods, drainage facilities improvement along the embankment and drinking water interventions will improve the socio-economic status of the coastal communities and contribute to the local economies and long-term resilient development of the country.

The proposed project will generate economic benefits in several ways. Firstly, project activities will support the protection of primary household assets (Output 1.1) including homes, livestock and personal possessions. The development of hazard maps (Output 2.3) will assist households to plan for floods and cyclones which will support the protection of lives and assets. In Mujibnagar, a cyclone early warning system will also be established which will assist households to prepare for imminent cyclones.

Secondly, the project will rehabilitate embankments and riverbanks (Output 2.2) through a combination of grey and ecosystem-based adaptation (EbA) interventions, which will protect valuable agricultural land against extreme flooding, erosion, storm surges, and saline intrusion. Engaging communities in the management of this protective infrastructure will provide additional economic benefits through alternative livelihood opportunities such as fish farming, climate resilient agriculture, and social forestry.

Thirdly, the interventions under Component 3 will improve agriculture, fisheries and livestock productivity, and thus the incomes of beneficiaries will significantly increase in all project areas. In addition, due to promotion of climate resilient innovative and proven livelihood interventions, almost all the people living in the two communities will benefit from technology adoption. Agriculture is the main economic activity in the two unions and local population rely mostly on agriculture for their livelihood. Agricultural productivity and farmer incomes will be increased through: i) training on the use of climate-resilient cultivars and best agricultural practices; ii) implementation of climate-proof irrigation system in Lakshmitari, which will support agricultural production during the Rabi (dry season), and iii) establishment of cold storage facilities in both Lakshmitari and Mujibnagar, which will improve economic competitiveness of farmers by allowing the storage of surplus crops, thereby increasing their market access and income.

**Social Benefits.** The proposed project activities will build the climate resilience of the vulnerable communities in the two target areas by improving their living conditions. This will be achieved by: i) building cluster homes for particularly vulnerable households, with priority given to women-led and landless families (Output 2.1); ii) strengthening and climate proofing the physical structure of existing houses (Output 1.1); and iii) providing electricity, sanitation and safe drinking wate to particularly vulnerable households within the community (Outputs 1.1, 1.2, and 1.3). By providing access to sanitation and safe water, the occurrence of water-borne diseases prevalent in target areas during flooding will be reduced. Under Component 2, the project will also establish and equip a mobile floating medical unit. This will ensure that even during climate-induced disaster events, medical services will remain available to attend to medical emergencies.

Component 3 of the project will increase agricultural productivity, develop alternative livelihoods and establish cold storage facilities. The activities under this component will strengthen food security, providing vulnerable households with improved year-round nutrition and equip them to better manage and survive post-disaster periods. This component will particularly support women by improving their food security and providing alternative livelihood options, which will enhance their self-sufficiency in the local communities. Since the climate resilient livelihood interventions target woen, it will increase their income and therefore their autonomy and empowerment. This increase in autonomy and income will allow women to allocate a greater portion of their income towards education and health of their households.

Component 4 will improve local knowledge on climate change through awareness raising programmes. This will provide the next generation with the knowledge and skills necessary to increase their adaptive capacity within the context of increasingly frequent and intense climate-induced disasters. The project will also promote capacity building at an institutinal level under this componetn. This will improve the incorporation of climate change considerations into local planning, ensuring that future infrastructure is developed to be climate-resilient. By developing climate-proof infrastructure, disruptions in medical and educational services will be reduced during and after disaster events.

**Environmental Benefits.** The poorly regulated large-scale switch to shrimp farming in the coastal districts of Bangladesh may cause serious impacts on mangroves, which may further exacerbate the salinization of soil. The environmentally sustainable adaptation measures financed by Adaptation Fund will have the additional benefit of changing baseline practices for the better. Recognizing that this development pathways in response to changing environmental conditions must be regulated and controlled to maintain ecosystem integrity, the project takes a proactive approach to shifting livelihood strategies while also building community and institutional capacity in sustainable agricultural and aquaculture practices.

**Gender Benefits.** This project incorporates gender considerations into all interventions, including for all training, support and awareness raising activities. Although the primary focus of the project is on households that have the greatest vulnerability, the position of women in Bangladesh – especially in relation to climate change impacts – makes them the most likely beneficiaries of the project interventions. The project interventions that focus on improving resilient infrastructure will benefit women in particular, as the twenty cluster houses will have women-led households as the prioritised beneficiaries. The use of these houses as shelters during cyclones and floods will also empower women, by positioning the owners of the cluster houses (i.e. women) as the authority governing these shelters for the duration of the cyclone or flood. This will also ensure that other women and girls are provided with safe shelters. The project will also focus on developing the livelihoods of the local communities, by improving agricultural knowledge and techniques and developing new alternative livelihood options. The development of alternative livelihoods (which will prioritise female beneficiaries) will empower women by providing them with the training and materials they require to become self-sufficient if they choose to. By improving the economic productivity and self-sufficiency of women through this activity, the project will support a shift towards greater empowerment of women. To support gender equality, the training and awareness-raising activities held at the knowledge and innovation centres will include a minimum of 50% female representation and will incorporate gender sensitivity training. This will include the training for the farmer field schools, community training for embankment management and community training for the maintenance of newly constructed infrastructure (i.e. nano-grids and rainwater harvesting systems).

## 2.3 Anticipated social and environmental risks

Adaptation Fund’s ESP and UNDP’s Social and Environmental Screening Procedure (SESP) were applied to identify potential social and environmental risks associated with proposed interventions under the project. Each project component and activity are scrutinized for its potential and social environmental impacts. All project components are screened including upstream (planning support, policy advice and capacity building), as well as downstream (site-specific, physical interventions). The analysis identified various social and environmental impacts associated with different components and activities under the project. The SESP template (Annex 1) details specific environmental and social risks that are applicable to the project. The significance of each risk, based on its impact and probability of occurrence has been assessed as low, moderate or high. Based on the assessment of each risk, the project has been categorized overall as “Moderate”. [[7]](#footnote-7) The “moderate” risk categorization is due to the following risks, as identified in the SESP (Annex 1).

The following risks were assessed as **“Moderate”**:

**Risk 1:** Disruption of livelihood and restriction of availability and access to resources

Retrofitting and repair of houses, including raising of plinths, installation of nano-grids and construction of rainwater harvesting will result to temporary displacement of people for a period of time, depending on the length of repair and retrofitting. Other interventions may disrupt the livelihood of affected people, restricting their income. Activities under the project may also temporarily restrict other people on their access to their source of livelihood such as agriculture.

**Risk 2:** Likelihood of temporary displacement and/or disruption of access to source of livelihood

Interventions that involves repair of houses, raising of plinths, installation of nano-grids, and construction of rainwater harvesting may cause temporary displacement and/or disrupt people’s access to their source of livelihood.

**Risk 3:** Exclusion of women from participating and decision making

The project interventions that focus on improving resilient infrastructure will benefit women in particular, as the twenty cluster houses will have women-led households as the prioritised beneficiaries. The development of alternative livelihoods (which will prioritise female beneficiaries) will empower women by providing them with the training and materials they require to become self-sufficient if they choose to.

**Risk 4:** Exclusion of landless, differently abled and other vulnerable groups from participating and decision making

Without management measures, the establishment of community-level groups in different interventions could exclude marginalized stakeholder groups in decision making process, thereby restricting them from participating in the project and excluding them from attaining project benefits.

**Risk 5:** Cluster houses may become structurally unsafe during extreme cyclone events

The cluster houses that function as disaster shelters could become structurally unsafe during extreme cyclone events due to the number of individuals taking shelter and the strength of the cyclone.

**Risk 6:** Generation of solid and liquid wastes

If not managed, construction wastes that will be generated from various interventions to increase resilience of households will impact land and water bodies (if wastes were transported near coast or river or not managed/dispose properly). Moreover, unregulated wastes will pose as hazards to safety and health of both workers and the communities of two sites.

**Risk 7:** Accidental spills of oil and fuel, and unmanaged solid wastes

The repair of 14.5 km of embankment, including 1 km of breached embankment entails the use of machinery that will transport aggregates. This in turn may accidentally cause the spillage of oil and fuel that may impact soil and water bodies. The construction wastes that will be generated will likewise impact the environment in the form of siltation of water bodies. Solid wastes from construction will also be generated. If not properly disposed, this will create problem in nearby agricultural areas and water bodies.

**Risk 8:** Potential introduction and use of pesticides

Interventions to make agriculture climate resilient may negatively impact the environment if pesticide use is introduced.

**Risk 9:** Generation of medical related wastes

If not properly managed, medical wastes will pose health risks to medical personnel and to the community. If not properly collected, these wastes will cause diseases and may negatively impact the environment.

**Risk 10:** Limitation in capacity among community members, that may exclude them from fully participating in project activities. Risks 10 is assessed as “Low”

Enhancing the capacity of the local communities to take concerted action in addressing climate change impacts, and to adapt livelihoods and agriculture to climate change, are some of the key outputs of the project.

**Risk 11:** Potential conflict regarding access to cold storage

As the cold storage units being established by the project will not be large enough to store the food produce of all community members it is possible that conflict over cold storage access could arise.

**Risk 12**: Beneficiary selection challenges

There is the potential for conflict to arise if community members feel that they should be prioritised for certain interventions. The beneficiary criteria will be based on vulnerability assessments, but subjective self-perceptions of vulnerability may be contradicted by the assessments.

**Risk 13:** Discrimination against minority/religious/landless

Discrimination against minority groups is unlikely but possible as only very small numbers of minority groups are resident in the target areas, including the landless, women-led households and minority religions.

**Risk 14:** Women could face abuse or harassment when taking shelter in the cluster houses during cyclones

There is a high incidence rate of women becoming the victims of harassment in cyclone shelters due to the general confusion, close proximity and lack of gendered washrooms in cyclone shelters.

**Risk 15:** Interventions focusing on gender equality may cause conflict regarding traditional gender norms

Interventions that focus on disaggregated gender targets and prioritise equal participation by both men and women may run counter to established gender norms. This may result in conflict between groups who have different perspectives on gendered roles and responsibilities.

**Risk 16:** Introduction of invasive alien species that may negatively affect ecosystem

While it was specified that vetiver grass, mangrove trees and other native and indigenous trees will be used for ecosystem-based adaptation to restore embankments, there is a risk that alien invasive species will be used that may cause negative effects on native species.

**Risk 17**: Construction sites could pose a risk to community members

Certain project interventions will involve small earthworks, i.e. to raise plinths, to do excavations for repairing the embankments and constructing the cluster houses. Excess sediment may pose a risk post construction. The earthworks and construction sites for the cluster houses may also be hazardous during the night or other low visibility periods.

**Risk 18**: The repair of embankments could be substandard leading to breaches during floods or cyclones

The project will involve the repair of two embankments in the target areas. If they are not repaired according to design specifications, these could be breached during high water events, leading to damage to assets and livelihoods.

**Risk 19**: Plinths for retrofitted houses

The plinths raised for retrofitting houses may shift or subside during high water events. This may cause the plinths to sink during floods or to become unstable once waters have receded.

Detailed information on project specific risks is contained in the completed and updated SESP in Annex 1.

No project activities that could result in physical and economic displacement, reduced access to land or resources, or require livelihood restoration support for resettled and/or economically displaced communities, including ethnic minorities, can commence until required further studies and ESMP have been completed and approved and the identified social and environmental mitigating and monitoring measures are put in place.

Further assessment is required as project locations of climate-resilient structures for households and communities, identity of beneficiary and affected households, and associated physical and economic displacement arising from different interventions, have yet to be defined during inception phase.

# 3. Legal framework

The discussion of legal framework is based on the identified risks in Section 2.3. The framework covers the national regulatory and institutional framework in Bangladesh, international and UNDP requirements.

## 3.1 National regulatory and institutional framework

3.1.1 National regulatory framework based on identified risks

The applicable national laws and regulations of Bangladesh based on identified risks identified in Section 2.3 are the following:

**Human rights.** Article 19 of Bangladesh Constitution provides for the State to endeavour to ensure equality of opportunity to all its citizens and for adopting effective measures to remove social and economic inequality between citizens and ensure equitable distribution of wealth among citizens and opportunities to attain uniform level of economic development. Article 27 declares that all citizens are equal before the law and are entitled to equal protection of law.[[8]](#footnote-8)

**Gender equality and women’s empowerment**. The Constitution of Bangladesh stated in paragraph 3 of its preamble that it shall be the fundamental aim of the State to realise through the democratic process a socialist society, free from exploitation and that the rule of law, fundamental human rights and freedom, equality and justice, political, economic and social, will be secured for all citizens.[[9]](#footnote-9) The Constitution further affirms no discrimination on the basis of sex and enjoyment by women of equal rights with men. Women can participate in all spheres of national life, and was assured representation in all spheres of national life.[[10]](#footnote-10) Article 28 bars discrimination by the State against any citizens on grounds of, amongst others, sex.[[11]](#footnote-11) Based on the above, it can be concluded that Bangladesh’s Constitution recognizes the equality of gender, that women are equal in status with men, and that measures need to be undertaken to bring women at par with men.

**Applicable environmental legislation in Bangladesh**

The Constitution of the Peoples’ Republic of Bangladesh (1972) which is supreme law of the country has provision to protect the environment. In Article 18A, **(**15th Amendment, 2012) it is state that “*The state shall Endeavour to protect and improve the environment and preserve and safeguard the natural resources, biodiversity, wetlands, forest and wildlife for the present and future citizens”.* In Article 31 it is stated that *Right to Life has been extended to include right to safe environment*

Bangladesh has a wide range of laws and regulations related to environmental parameters. The most recent and the most important of the environmental laws are the Environment Conservation Act (ECA) of 1995, Environment Conservation Rules (ECR) of 1997, Guidelines for Industrial and Development Projects (1997) and Environmental Court Act of 2000.

**Environment Conservation Act (ECA 1995),** which includes environmental guidelines to control and mitigate environmental pollution, conservation and improvement of environment and provisions for obtaining an Environmental Clearance Certificate (ECC) for development projects.

**Environment Conservation Rules (ECR 1997),** which provide a first set of rules under the Environment Conservation Act giving categories of development projects and requirements for Initial Environmental Examination (IEE), Environmental Impact Assessment (EIA), and preparation of Environmental Management Plan (EMP), and the procedure for obtaining an Environmental Clearance Certificate (ECC). Also quality standards for air, surface water, groundwater, drinking water, industrial effluents, emissions, noise and vehicular exhausts are given. The ECR spells out rules and regulations for the enforcement of the ECA. Under the ECR, various development interventions are grouped into three main categories: Green (no environmental assessment required), Orange A (IEE required), Orange B (IEE required) and Red (EIA required) – in accordance with increasing potentials for adverse environmental impacts.

**Guidelines for Industrial and Development Projects (1997)** were prepared by the Department of Environment (DOE), the regulatory and enforcement organization under the Ministry of Environment and Forests (MOEF). The document provides guidance for preparing an EIA.

**Other relevant legislation in Bangladesh**

* Environment Court Act (2000), describing environment related legal proceedings.
* Water Supply and Sanitation Act (1996), regulates the management and control of water supply and sanitation in urban areas.
* The Ground Water Management Ordinance (1985) describes the management of groundwater resources and licensing of tube wells.
* The Forest Act (1927) for the protection of forest reserves, protected forests and village forests.
* The Private Forests Ordinance Act (1959) deals with the conservation of private forests and afforestation of wastelands.
* Bangladesh Wildlife Act (1974) describes the preservation of wildlife sanctuaries, parks and reserves.
* The Protection and Conservation of Fish Act (1950) deals with the protection and conservation of fishes in Government-owned water bodies
* The Embankment and Drainage Act (1952) describes the protection of embankments and drainage facilities.
* The Antiquities Act (1968) describes the preservation of cultural heritage, historic monuments and protected sites.
* Acquisition and Requisition of Immovable Property Ordinance (1982) describes procedures and provides guidelines for the acquisition and requisition of land.
* Bangladesh Labour Law (2006) deals with occupational rights and safety of factory workers; provision of comfortable work environment and reasonable working conditions.

**Biodiversity conservation and sustainable natural resource management.** Bangladesh has ratified the UN Convention on Biological Diversity where the country elaborated its National Biodiversity Strategy and Action Plan in 2004. Other major legislative policies and approaches for the conservation of biodiversity include the following: i) National Conservation Strategy (NCS); ii) Bangladesh Wildlife (Preservation) (Amendment) Act, 1974; iii) Bangladesh Forest Act, 1978; iv) National Environment Management Action Plan (NEMAP); and v) The Bangladesh Environment Conservation Act (1995) and Environment Conservation Rules (1997).

The Bangladesh Environment Conservation Act (1995) provides guidelines and measures for the conservation of the environment. The Department of Environment, headed by the Director General, is tasked to take necessary and expedient measures for the conservation of the environment, including control and mitigation of environmental pollution that will adversely impact the environment, including natural habitats.

The Land Use Policy of 2001 has provided guidelines for the protection of agricultural land, water bodies and the optimal use of other land, as well as for restriction or minimization of the acquisition of land for non-productive use. The policy states that for a balanced eco-environment and human health, 25 % of the total land should be under forest cover. This can be done through afforestation on char and other suitable lands.

**Climate change mitigation and adaptation**. See section 3.1.2 for discussion on Bangladesh’s national regulatory framework on climate change.

**Community health, safety and working conditions.** Article 15 of Bangladesh Constitution states that the fundamental responsibility of the State to attain, through planned economic growth, a constant increase of productive forces, with a view of securing for its citizens the right to work that is the right to guaranteed employment at a reasonable wave with regard to the quantity and quality of work.[[12]](#footnote-12) Bangladesh Labour Act (2013) includes 87 sections of amendments to boost workers’ rights, including better access to freedom of association (i.e., forming of trade unions), and improving occupational health and safety conditions. The new Act amended the 2006 Labour Act to make it more aligned with the policy of International Labour Organisation.

**Displacement and resettlement.**  Land acquisition is governed by the Acquisition and Requisition of Immovable Property Act, 2017 (Act 21 of 2017). The new act supersedes the Acquisition and Requisition of Immovable Property Ordinance 1982 (Ordinance II of 1982). Based on the new Act and the formal Ordinance, if the Government of Bangladesh needs any property in any locality or is likely to be needed for any public purpose or in the public interest, the Government can acquire the land provided that the property is not used by the public for religious worship, graveyard and cremation ground. Both the 1982 Ordinance and Act 21 of 2017 require that compensation be paid for (i) land and assets permanently acquired (including standing crops, trees and houses); and (ii) any other damages caused by such acquisition. The Deputy Commissioner (DC) determines (a) market value of acquired assets on the date of notice of acquisition (based on the registered value of similar property bought and/or sold in the area over the preceding 12 months), and (b) 200% premium on the assessed value for land and 100% for non‐land assets on the land due to compulsory acquisition. There are also provisions for payment of crop compensation to tenant cultivators.

**Pollution Prevention and Resource Efficiency.** Relevant laws and regulations on pollution prevention and resource efficiency are detailed in Section 3.1.3.

3.1.2 National regulatory framework on climate change

Bangladesh has made important progress in strengthening the regulatory and institutional framework that allows the country to face the effects of climate change in a timely and efficient manner, as evidenced by a series of national regulatory instruments that have the purpose of reducing and managing climate change.

Bangladesh has ratified the UN Convention on Biological Diversity where the country elaborated its National Biodiversity Strategy and Action Plan in 2004, the Convention to Combat Desertification, the UN Framework Convention on Climate Change (UNFCC) and the Kyoto Protocol. The country signed and ratified the Paris Agreement in April and September 2016, respectively, with entry into force in November 2016. It has prepared two National Communications for the UNFCCC and a National Action Plan for Adaptation (NAPA). NAPA was developed between 2003 and 2005 with support from GEF, and was updated in 2009. The 2009 update identified 38 adaptation measures.[[13]](#footnote-13)

In 2008, adaptation priorities from the NAPA were updated and embedded in a new Bangladesh Climate Change Strategy and Action Plan (BCCSAP).[[14]](#footnote-14) The BCCSAP describes 44 immediate, short, medium and long-term programmes, based on six pillars: i) food security, social protection and health; ii) comprehensive disaster management; iii) infrastructure; iv) research and knowledge management; v) mitigation and low carbon development; vi) capacity building and institutional strengthening.[[15]](#footnote-15)

The BCCSAP was revised in 2009, allowing more involvement of relevant stakeholders. The framework for enactment of the BCCSAP is Bangladesh’s Vision 2021 (and its concretisation in the 7th Five Year Plan).[[16]](#footnote-16) These documents also contain chapters on climate change – and the National Planning Commission integrates climate change into the Annual Development Programme.

To enhance climate change adaptation activities in all key policies and sectors, Bangladesh has established two innovative funds: the Bangladesh Climate Change Trust Fund (BCCTF) from the Government’s own budget and the Bangladesh Climate Change Resilient Fund (BCCRF) with the support of development partners.

3.1.3 Applicable national environmental laws

The following are the environmental laws / regulations applicable to the project.

**Table 2. Relevant Environmental Laws / Regulations for the Project**

| **Parameters** | **Law / Regulation** | **Enforcing Agency** | **Enforced / Regulated Item** |
| --- | --- | --- | --- |
| Water pollution | * Environmental Conservation Act, 1995 * Environmental Conservation Rules, 1997 * Environmental Court Act, 2000 * The Local Government Ordinance, 1983 | MoEFCC / DoE  UPs | * Promulgation of standards for water quality * Promulgation of discharge limits * Prosecution of offenders * Control of environmental sanitation in rural areas |
| Air pollution | * Environmental Conservation Act, 1995 * Environmental Conservation Rules, 1997 * Environmental Court Act, 2000 * Brick Burning Control Act, 1989 (amended 2002) * Motor Vehicle Act, 1983 * Clean Air Act (draft 2019) | MoEFCC / DoE  BRTA / Police | * Promulgation of standards for air quality * Promulgation of emission standards of motor vehicles and industries * Prosecution of offenders * Prosecution of offending vehicles |
| Noise pollution | * Environmental Conservation Act, 1995 * Environmental Conservation Rules, 1997 * Noise Pollution (Control) Rules 2006 | MoEFCC / DoE | * Promulgation of standards for noise levels |
| Toxic, solid or hazardous waste pollution | * Environmental Conservation Act, 1995 * Environmental Conservation Rules, 1997 * Nuclear Safety and Radiation Protection Ordinance, 2000 * Solid Waste Management Rules 2010 * Medical Waste Management and Administration Act 2010 | MoEFCC / DoE  BAEC | * Promulgation of standards and rules for the management of solid waste * Promulgation of standards and rules for the management of radioactive materials |
| Marine pollution | * Environmental Conservation Act, 1995 * Environmental Conservation Rules, 1997 * Environmental Court Act, 2000 * Marine Fisheries Ordinance 1983 * Marine Fisheries Rules 1983 | MoEF / DoE | * Promulgation of standards for water quality * Enactment of discharge limits * Prosecution of offenders |
| Pollution of fisheries | * The Protection and Conservation of Fish Act, 1950 | MoEF | * Promulgation of regulatory measures |
| Pesticides and fertilizers | * The Agricultural Pesticides Ordinance, 1971 | DA | * Approval of permissible pesticides |
| Forest conservation | * Environmental Conservation Act, 1995 * Environmental Conservation Rules, 1997 * The Forest Act, 1927 | MoEF / DoE | * Declaration of Ecologically Critical Areas * Reserve Forest, Protected Forest, Village Forest |

## 3.2 International conventions

Bangladesh is a party to several multilateral treaties relating to human rights. As applicable to the project, the country has ratified or acceded to International Convention on the Elimination of All Forms of Racial Discrimination and the International Covenant on Economic, Social and Cultural Rights. In terms of labour rights, the country has ratified the Forced Labour Convention (1930) and the Equal Remuneration Convention (1951).

Major international environmental treaties ratified or Bangladesh is a party include the United Nations Framework Convention on Climate Change (1992), Kyoto Protocol to the United Nations Framework Convention on Climate Change (1997), Convention on Biological Diversity (1992), Convention on Wetlands of International Importance especially as Waterfowl Habitat (1971), International Plant Protection Convention (1978), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Bangladesh is also a party to the Convention for the Safeguarding of the Intangible Cultural Heritage (2003).

## 3.3 UNDP’s Applicable Social and Environmental Standards Based on Identified Risks

UNDP is working to strengthen new frameworks for development, disaster risk reduction and climate change by supporting countries’ efforts to achieve the new Sustainable Development Goals, which guide global development priorities for the next 15 years. UNDP’s climate change adaptation works across the following six signature programmes to support building resilience of vulnerable communities: i) supporting integrated climate change strategies; ii) advancing cross-sectoral climate resilient livelihoods; iii) ecosystem-based adaptation; iv) fostering resilience to food security; v) climate resilient integrated water resource and coastal management; and vi) promoting climate resilient infrastructure and energy. UNDP helps countries secure climate change adaptation finance from multilateral, bilateral and vertical funds such as the Adaptation Fund.

UNDP’s Social and Environmental Standards (SES) have been applied during the development of the project. The SES objectives are to: (i) strengthen the social and environmental outcomes of programmes and projects; (ii) avoid adverse impacts to people and the environment; (iii) minimize, mitigate, and manage adverse impacts where avoidance is not possible; (iv) strengthen UNDP and partner capacities for managing social and environmental risks; and (v) ensure full and effective stakeholder engagement, including through a mechanism to respond to complaints from project-affected people.

UNDP will not support activities that do not comply with national law and obligations under international law, whichever is the higher standard (hereinafter "Applicable Law"). UNDP seeks to support governments to adhere to their human rights obligations and empower individuals and groups, particularly the most marginalized, to realise their rights and to ensure that they fully participate throughout UNDP’s programming cycle.

A social and environmental assessment was prepared following UNDP’s Social and Environmental Screening Procedure and a Social and Environmental Screening Template was prepared.[[17]](#footnote-17) The project is deemed to be a moderate risk (Category B) project.

**Moderate risk:** Projects that include activities with potential adverse social and environmental risks and impacts, that are limited in scale, can be identified with a reasonable degree of certainty, and can be addressed through application of standard best practice, mitigation measures and stakeholder engagement during Project implementation. Moderate Risk activities may include physical interventions (e.g. buildings, roads, protected areas, often referred to as “downstream activities) as well as planning support, policy advice, and capacity building (often referred to as “upstream” activities) which may present risks that are predominantly indirect, long-term or difficult to identify. *Source: UNDP 2014. Social and Environmental Screening Procedure.*

The screenings conducted during project development indicate that all three policy principles and five of the seven project-level standards have been triggered due to ‘moderate’ risks, as detailed in Table 3:

**Table 3. Social and Environmental Standards (SES) requirements**

| **UNDP SES** | **Does it apply to the project (Yes/No)** | **Identified Risks and Mitigating Measures** |
| --- | --- | --- |
| Principle 1: Human Rights | Yes | The project is committed to supporting “universal respect for, and observance of, human rights and fundamental freedoms for all.”  The project aims to increase climate resilience and reduce the vulnerability of the people and the environment. In the course of construction and operationalization of resilient houses, embankments and other infrastructure, the project could potentially temporarily restrict the access to resources, discriminate against women, and prevent the participation of marginalized and vulnerable groups. If not carefully implemented and without mitigating measures, the project could potentially violate human rights of affected people.  The project is committed to addressing any human rights violations, such as discrimination against women. The process of fostering gender equality and empowerment of women is expected to reduce the occurrence of most common form of human rights violation (i.e., violation against women). A grievance redress mechanism has also been developed for the project.  The project will provide support for the most vulnerable socio-economic groups, i.e., women, the elderly and the landless, especially those belonging to extremely poor households. The project adopts the principle of positive discrimination and includes specifically the most discriminated, marginalized and the poorest people in the community. |
| Principle 2: Gender Equality and Women’s Empowerment | Yes | The project will promote gender equality, women empowerment and will ensure that women are not discriminated against or reinforce gender-based discrimination and/or inequalities.  The project incorporates gender considerations into all interventions, including for all training, support and awareness raising activities. Recognizing that women are affected disproportionately by climate change impacts, and although the interventions prioritise women, the implementation may potentially exclude them from decision making or the project implementation, if mechanisms are not set-up properly. |
| Principle 3: Environmental Sustainability | Yes | The IE will ensure that environmental sustainability is mainstreamed into the project. The interventions will use and promotes UNDP’s precautionary approach to natural resource conservation, and ensure that all activities under the project will not cause negative environmental impacts. The project will also integrate low-emission, climate-resilient objectives, avoid unwarranted increase in greenhouse gas emissions, and reduce GHG intensity. |
| Standard 1: Biodiversity Conservation and Natural Resource Management | Yes | As the fish farms are integrated into the community management of embankments and fish farming will be developed in the innovation centers. Without any management measures, there is a risk that fishes in the farm will be affected. Also, there is a potential to introduce invasive species in the ecosystem-based adaptation component during embankment repair. The project will be designed and implemented that will prevent the unjustified reduction or loss of biological diversity in the two sites.  The project will also not introduce known invasive species in the project. Moreover culture of native fish species, planting of indigenous mangrove species will be promoted. Vetiver grass is native to Bangladesh. The planting of mangrove trees will only consider indigenous species. |
| Standard 2: Climate Change Mitigation and Adaptation | Yes | The project will neither produce significant GHG emissions nor contribute to increased exposure and/or vulnerability to climate change. In addition, the development outcomes (i.e. climate-resilient housing, electrification and climate-proof water provisioning, and embankments) will further increase the resiliency of the communities in the two sites. But without management measures to implement interventions, climate change impacts will be exacerbated.  The project interventions will be designed in an integrated manner that will increase the adaptive capacity of vulnerable char communities in Bangladesh. These benefits will be geared towards assisting the most vulnerable members of the target communities. As no major infrastructure or resource utilization is included in the project interventions, there will be no large-scale emissions associated with the project. On the contrary, the establishment of solar power for 600 households will provide a small mitigation benefit in the form of reduced reliance on wood and fossil fuels. |
| Standard 3: Community Health, Safety and Working Conditions | Yes | The project interventions may pose significant risks to human health and safety, which may lead to morbidity or mortality, if no mitigating measures are introduced. The project may create hazardous areas during the construction of cluster houses and the rehabilitation and repair of embankments. To mitigate this, best practice and national construction standards will be adhered to. All hazardous areas will be clearly demarcated with reflective tape and any excavations will be fenced off to protect communities in the vicinity of the construction sites. There is a further minor risk that the cluster houses, during their function as disaster shelters will be damaged during cyclones. To prevent this from occurring local community members will be trained to identify signs of structural weakening, and construction experts will conduct periodic assessments of the structures to ensure their stability. |
| Standard 4: Cultural Heritage | No | Not applicable. There are no cultural heritage sites within the project sites. |
| Standard 5: Displacement and Resettlement | Yes | Voluntary and temporary displacement of households is predicted to occur during the retrofitting of houses or the raising of plinths for increasing the climate resilience of houses. If management measures are not implemented, displacement may limit access to resources or pose impoverishment risks.  The project will ensure that in-depth consultations are conducted with any households that may be at risk of requiring resettlement. An updated resettlement action planning framework has been prepared. Any involuntary relocation or resettlement will only be conducted after extensive community consultation and negotiation with any affected households. Benefits including reimbursement for the cost of the house, further livelihood support and provisioning of new land will all be included in any negotiated package. A grievance redress mechanism has also been developed (see Annex J) and will be in place to address any concerns of affected community members. |
| Standard 6: Indigenous Peoples | No | Indigenous peoples are not present in the project sites. |
| Standard 7: Pollution Prevention and Resource Efficiency | Yes | The interventions under the project, which includes upgrading of houses, installation of community-level nano-grids, construction of rainwater harvesting system, building of climate resilient infrastructure and repair of embankments, will generate solid and liquid wastes, that if not mitigated, will result to adverse environmental impacts. The climate change adaptation activities under the project will be designed and implemented to avoid or minimize the impacts on land, air, water and people, and maximize energy efficiency and minimize the use of resources, in accordance to international standards. |

By design, the project is expected to have greater social and environmental benefits than adverse impacts and has integrated the relevant SES requirements to ensure that potential negative impacts are avoided or mitigated throughout the project’s implementation, and that the expected social and environmental positive outcomes are achieved.

## 3.4 Adaptation Fund’s Applicable Environment and Social Policy

The Environment and Social Policy (ESP) of Adaptation Fund ensures that all projects and programmes supported by the Fund promote positive environmental and social benefits, and mitigate or avoid adverse environmental and social risks and impacts. Adaptation Fund requires that at the time of proposal review of projects, the Implementing Entity (UNDP Bangladesh) has the capacity and the commitment to comply with the ESP; that the IE has identified the environmental and social risks associated with the project; and the IE has initiated the process of managing these risks in a collaborative way.

In addition to UNDP’s Social and Environmental Screening Checklist, AF’s ESP will support the IE in screening, identifying, and managing environmental and social risks of the project. The IE is committed to abide by the ESP in all the projects, including this project, being funded by the Fund. The IE will ensure that the environmental and social management plan and monitoring plan for this project will demonstrate compliance with ESP.

Based on the screening and assessment done, it can be concluded that there are two categories of ESP principles that are applicable to the project: those that always apply to all projects (including this project), and those that are relevant to the project. Principles that always apply to the project includes Principle 1 (Compliance with the law), Principle 4 (Human rights), and Principle 6 (Core labour rights). Those that are applicable to the project include Principle 2 (Access and equity), Principle 3 (Marginalized and vulnerable groups), Principle 5 (Gender equality and women’s empowerment), Principle 8 (Involuntary Resettlement), Principle 10 (Conservation of biological biodiversity), Principle 12 (Pollution prevention and resource efficiency), and Principle 15 (Land and soil conservation).

Based on the screening as detailed in Table 4, the environmental and social impacts of the project were identified vis-à-vis Adaptation Fund’s 15 Environment and Social Policy principles. It can be concluded that there are only few potential adverse impacts of the project, the impacts are mostly localized, the intensity of impacts is low and the duration of impacts is short-lived. Majority of the impacts are reversible and can readily be mitigated. Hence, under Adaptation Fund’s Environment and Social Policy, it is proposed that the categorization of the project is B.

The screenings conducted during project development indicate that eleven out of the fifteen principles have been triggered, as detailed in Table 4.

**Table 4. Environmental and Social Principle requirements**

| **AF’s Environmental and Social Principles** | **Does it apply to the project? (Yes/No)** | **Identified Risks and Mitigating Measures** |
| --- | --- | --- |
| Principle 1: Compliance with the law  Projects/programmes supported by the Fund shall be in compliance with all applicable domestic and international law. | Yes | The construction of cluster houses may become structurally unsafe during extreme cyclone events (Risk 5) and repair of embankment may lead to breaches during floods or cyclones (Risk 17 and 18). The IE will ensure compliance of the project to Bangladesh’s domestic laws (including applicable building codes) and applicable international laws and treaties.  As it applies to the project, the IE will ensure that all the regulatory and environmental permits will be secured prior to commencement. The project will also abide all applicable international laws. |
| Principle 2: Access and equity  Projects/programmes supported by the Fund shall provide fair and equitable access to benefits in a manner that is inclusive and does not impede access to basic health services, clean water and sanitation, energy, education, housing, safe and decent working conditions, and land rights.  Projects/programmes should not exacerbate existing inequities, particularly with respect to marginalized or vulnerable groups. | Yes | There is potential for the disruption of livelihood and restriction of availability and access to resources (Risk 1) during different interventions under the project. With regard to access to the use of cold storage, there is also potential conflict among beneficiaries (Risk 11 and 12).  The project will provide fair and equitable access to the beneficiaries of the project (~32,000 direct beneficiaries) that will be inclusive and will not be an impediment to basic health access, clean water and sanitation, education, housing, safe and decent working conditions and land rights.  The IE will further conduct stakeholder mapping in order to identify the potential beneficiaries, rivals, disputants, marginalized, or vulnerable people. |
| Principle 3: Marginalized and vulnerable groups  Projects/programmes supported by the Fund shall avoid imposing any disproportionate adverse impacts on marginalized  and vulnerable groups including children, women and girls, the elderly, indigenous people, tribal groups, displaced people, refugees, people living with disabilities, and people living with HIV/AIDS. In screening any proposed project/programme, the implementing entities shall assess and consider particular impacts on marginalized and vulnerable groups. | Yes | Among the risks identified for the project include the exclusion of landless, differently abled, and other vulnerable groups from participating and decision making (Risk 4), limitation in the capacity among community members that will exclude them from fully participating in project activities, and discrimination against minority and the landless (Risk 13).  The project will improve the adaptive capacity of the most vulnerable community members in the two chars in rural Bangladesh by focusing on the most vulnerable socio-economic groups – the women and the landless belonging to extremely poor households.  Using acceptable methods, the IE will further identify and quantify considered as marginalized and vulnerable. The activities under the project may pose potential adverse impacts on these marginalized and vulnerable people. |
| Principle 4: Human rights  Projects/programmes supported by the Fund shall respect and where applicable promote international human rights. | Yes | Without project intervention, there is a potential that the minority and the landless will be discriminated, specially during selection of beneficiary (Risk 13).  The IE will promote human rights in the project based on the Universal Declaration of Human Rights. This will be achieved by creating awareness with all stakeholders in the project operations, including during project design, implementation, monitoring and evaluation.  The project is committed to addressing any human rights violations, such as discrimination against women. The process of fostering gender equality and empowerment of women is expected to reduce the occurrence of most common form of human rights violation (i.e., violation against women). A grievance redress mechanism has also been developed for the project. |
| Principle 5: Gender equality and women’s empowerment  Projects/programmes supported by the Fund shall be designed and implemented in such a way that both women and men 1) have equal opportunities to participate as per the Fund gender policy; 2) receive comparable social and economic benefits; and 3) do not suffer disproportionate adverse effects during the development process. | Yes | During beneficiary selection, there are risks that women will be excluded from participating and decision making (Risk 3). Women could also face abuse or harassment in cluster houses during cyclones (Risk 14). Further, interventions focusing on gender equality may cause conflict among community members regarding traditional gender norms (Risk 15).  Aside from AF’s ESP and UNDP’s SES, the project will be guided by Article 2 of the United Nations Framework Convention on Climate Change (UNFCCC), which refers to “anthropogenic interaction” or the interaction of women and men — within the climate system.  This project incorporates gender considerations into all interventions, including for all training, support and awareness raising activities. Although the primary focus of the project is on households that have the greatest vulnerability, the position of women in Bangladesh – especially in relation to climate change impacts – makes them the most likely beneficiaries of the project interventions. The project interventions that focus on improving resilient infrastructure will benefit women in particular, as the twenty cluster houses will have women-led households as the prioritised beneficiaries. The use of these houses as shelters during cyclones and floods will also empower women, by positioning the owners of the cluster houses (i.e. women) as the authority governing these shelters for the duration of the cyclone or flood. This will also ensure that other women and girls are provided with safe shelters. The project will also focus on developing the livelihoods of the local communities, by improving agricultural knowledge and techniques and developing new alternative livelihood options. The development of alternative livelihoods (which will prioritise female beneficiaries) will empower women by providing them with the training and materials they require to become self-sufficient if they choose to (Risk 10). By improving the economic productivity and self-sufficiency of women through this activity, the project will support a shift towards greater empowerment of women. To support gender equality, the training and awareness-raising activities held at the knowledge and innovation centers will include a minimum of 50% female representation and will incorporate gender sensitivity training. This will include the training for the farmer field schools, community training for embankment management and community training for the maintenance of newly constructed infrastructure (i.e. nano-grids and rainwater harvesting systems). |
| Principle 6: Core labour rights  Projects/programmes supported by the Fund shall meet the core labour standards as identified by the International Labour Organisation. | Yes | There are risks that women will be discriminated on work opportunity for different interventions (Risk 3 and Risk 15). There is also risk that groups belonging to minority will be discriminated in hiring of labourers (Risk 13).  Bangladesh has been an active member state of the International Labour Organisation since 22 June 1972 and has ratified 35 ILO Conventions including seven fundamental conventions. The IE will respect, promote and realise in good faith core labour standards stated in the 1998 ILO Declaration of Fundamental Principles and Rights at Work, specifically the elimination of all forms of forced or compulsory labour (conventions ILO 29 and ILO 105); elimination of worst forms of child labour (conventions ILO 138 and ILO 182); and elimination of discrimination in respect of employment and occupation (conventions ILO 100 and ILO 111).  Prioritisation of women participation may be used to provide fair and equal opportunity for women to seek employment as labourers. All forms of negative discrimination in respect of employment and occupation will be eliminated. The proposed project will not engage in child labour in any of its activities. All forms of forced or compulsory labour will be eliminated.  Bangadesh Labour Act, 2006 will be complied with during project implementation. |
| Principle 7: Indigenous peoples  The Fund shall not support projects/programmes that are inconsistent with the rights and responsibilities set forth in the UN Declaration on the Rights of Indigenous Peoples and other applicable international instruments relating to indigenous peoples. | No | Indigenous peoples are not present in the project implementation sites; hence, this principle is not relevant to the project. |
| Principle 8: Involuntary resettlement  Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids or minimizes the need for involuntary resettlement. When limited involuntary resettlement is unavoidable, due process should be observed so that displaced persons shall be informed of their rights, consulted on their options, and offered technically, economically, and socially feasible resettlement alternatives or fair and adequate compensation | Yes | The retrofitting of houses or the raising of plinths to increase the climate resilience of houses may result in temporary displacement while infrastructure interventions are being completed (Risk 19). There is also risk that there will be temporary displacement or disruption of access to source of livelihood when implementing various interventions (Risk 2).    The project will ensure that in-depth consultations are conducted with any households that may be at risk of requiring resettlement. The possibility of involuntary resettlement has been considered for the repair of embankments and a resettlement policy has been prepared for this possibility (see Annex K) (Risk 17). Any involuntary relocation or resettlement will only be conducted after extensive community consultation and negotiation with any affected households. Benefits including reimbursement for the cost of the house, further livelihood support and provisioning of new land will all be included in any negotiated package. A grievance mechanism has also been developed (see Annex J) and will be in place to address any concerns of affected community members. |
| Principle 9: Protection of natural habitats  The Fund shall not support projects/programmes that would involve unjustified conversion or degradation of critical natural habitats, including those that are (a) legally protected; (b) officially proposed for protection; (c) recognized by authoritative sources for their high conservation value, including as critical habitat; or (d) recognized as protected by traditional or indigenous local communities. | Yes | Ecosystem-based adaptation measures such as planting of mangroves, other trees and vetiver grass could lead to long-term alteration of natural habitats in terms of species assemblages and structure, which may result in various disturbances and negative environmental impacts. The introduction of invasive alien species, for example, may negatively affect ecosystem (Risk 16). The construction of embankment will also disturb small areas of natural habitat.  The EbA interventions will most likely lead to restoration of natural habitats. The IE will consult and include relevant stakeholders in during pre-construction and implementation phases of the project.  All necessary impact assessments will be conducted before the implementation of interventions. Furthermore, all national environmental laws will be respected during the selection and implementation of adaptation interventions.  The IE has identified Char Kukri Mukri, a 40-hectare char land and mangrove forest, as the nearest natural habitat from the project. The site was declared a wildlife sanctuary in 1981. The site is about 22 km Mujibnagar Union. The activities under the project will not result in adverse impacts on Char Kukri Mukri. |
| Principle 10: Conservation of biological diversity  Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids any significant or unjustified reduction or loss of biological diversity or the introduction of known invasive species. | Yes | As the fish farms are integrated into the community management of embankments and fish farming will be developed in the innovation centers, the project will be designed and implemented that will prevent the unjustified reduction or loss of biological diversity in the two sites.  Invasive alien species, jf introduced, may negatively affect ecosystem (Risk 16). The project will not introduce known invasive species in the project. Vetiver grass is native to Bangladesh. The planting of mangrove trees will only consider indigenous species. |
| Principle 11: Climate change  Projects/programmes supported by the Fund shall not result in any significant or unjustified increase in greenhouse gas emissions or other drivers of climate change. | No | The project will not result to emission of carbon dioxide gas from the use of fossil fuel and from changes in land use, methane and nitrous oxide emissions from agriculture, emission of hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride, other halocarbons, aerosols, and ozone.  As no major infrastructure nor large-scale agriculture activities is included in project interventions, it is expected that no large-scale emissions will come from the project. On the contrary, the establishment of solar power for 600 households will provide mitigation benefit as it will reduce reliance on wood and fossil fuels. |
| Principle 12: Pollution prevention and resource efficiency  Projects/programmes supported by the Fund shall be designed and implemented in a way that meets applicable international standards for maximizing energy efficiency and minimizing material resource use, the production of wastes, and the release of pollutants. | Yes | Interventions under the project, specifically civil works, will generate construction wastes and other solid and liquid wastes (Risk 6). In addition, there is increased possibility of accidental spills from oil and fuels and other solid wastes not being managed properly (Risk 7). Interventions to make agriculture climate resilient may negatively impact the environment if pesticide use is introduced (Risk 8). The operation of floating ambulance may also generate medical related wastes (Risk 9).  The climate change adaptation activities under the project will be designed and implemented to maximize energy efficiency and minimize the use of resources, in accordance to international standards. These activities include upgrading of houses to make it cyclone and flood resilient, installation of community-level nano-grids, construction of rainwater harvesting system, building of climate resilient infrastructure and repair of embankments, implementation of climate resilient agriculture and development of diversified livelihoods.  The project will prepare a waste and pollution prevention and management plan to maximize energy efficiency and minimize material resource use. |
| Principle 13: Public health  Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids potentially significant negative impacts on public health. | No | No potentially significant negative impacts on public health are likely. Therefore, it can be concluded that the project demonstrates compliance to Principle 13, and that no further health impact assessment is necessary. |
| Principle 14: Physical and cultural heritage  Projects/programmes supported by the Fund shall be designed and implemented in a way that avoids the alteration, damage, or removal of any physical cultural resources, cultural sites, and sites with unique natural values recognized as such at the community, national or international level. Projects/programmes should also not permanently interfere with existing access and use of such physical and cultural resources | No | There is no identified cultural heritage in or near the project, hence, this principle is not applicable to the project. |
| Principle 15: Lands and soil conservation  Projects/programmes supported by the Fund shall be designed and implemented in a way that promotes soil conservation and avoids degradation or conversion of productive lands or land that provides valuable ecosystem services. | Yes | If no management plan will be implemented, the implementation of climate resilient agriculture may potentially introduce and use pesticides, which may also alter and contaminate the land and groundwater (Risk 8). Moreover, accidental spills of oil and fuel, and unamaged solid wastes (Risk 7) may also degrade productive lands in the two chars. Even the repair of embankments, which could be breached during floods or cyclones because of poor workmanship and substandard materials (Risk 18) can lead to soil degradation of productive lands in the two chars.  Principle 15 concerns the stewardship of land to either be maintained in its natural state, where possible, or if it is converted to promote and protect its functioning. Soil conservation refers to a set of measures to prevent, mitigate or control soil erosion and degradation. There are two aspects to the principle: promotion of soil conservation and avoidance of degradation or conversion of valuable lands. This applies to soils and lands directly affected by the project/programme as well as those influenced indirectly, or as a secondary or cumulative effect. Soil conservation should be incorporated in project/programme design and implementation. |

## 3.5 Gaps in policy framework

Applicable legal and policy frameworks will be further assessed during the implementation of the ESMF to determine applicable standards (national, international, AF’s ESP, or UNDP’s SES) must be followed for each risk area.

# 4. Environmental and social impacts and mitigation measures

## 4.1 Assessment of potential social and environmental risks

The relevant risks identified for the project through the risk screening are described in Table 5.

**Table 5. Potential social and environmental risks**

| **No** | **Risk category** | **Potential risk** | **Related project activities** | **Description of potential Impact** | **Level of Impact** | **Probability** | **Risk Assessment** | **Expected project benefit** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Social | Rehabilitation activities to enhance climate resilient households (repair and retrofitting of cyclone and flood resilient houses, installation of community level nano grids, and construction of rainwater harvesting systems), and cluster houses, could temporarily disrupt the livelihood or may restrict availability and access to resources of affected people, particularly marginalized and vulnerable groups | Component 1 (Output 1.1, 1.2 and 1.3), Component 2 (Output 2.1) | Retrofitting and repair of houses, including raising of plinths, installation of nano-grids and construction of rainwater harvesting will result to temporary displacement of people for a period of time, depending on the length of repair and retrofitting. Other interventions may disrupt the livelihood of affected people, restricting their income. Activities under the project may also temporarily restrict other people on their access to their source of livelihood such as agriculture. | Moderate | Likely | Moderate | The project aims to increase the climate resilience of households of vulnerable households through the retrofitting and repair of houses. It also aims to provide reliable electricity from renewable source through the nano grid installation. The rainwater harvesting system will serve as alternative to the current well water which is problematic because of saltwater intrusion (in the case of Mujibnagar) and oftentimes inundated with flood water. |
| 2 | Social | Repair and construction of embankment could result to temporary displacement and/or temporarily disruption of access to source of livelihood | Component 2 (Output 2.2) | Implementation of repair and construction activities may result to temporary displacement or relocation if there are existing houses that will be affected by the repair and construction of embankment. The intervention will also prevent access to sources of livelihood of communities living in chars. Storage of aggregates used for repair of embankment may prevent people access to their sources of livelihood, which includes agriculture, fish farming, fishing from river or coastal areas, or other livelihoods. | Moderate | Not likely | Moderate | The project will enhance the climate resilience of the communities of the two chars, by supporting the restoration of embankments, which when repaired and constructed, will be a vital line of defense against floods and storm surges. Resettlement action plan will be prepared to lessen the adverse impacts on people and to maximize the socio-economic benefits to affected people. |
| 3 | Social | Stakeholders, particularly women, could potentially be excluded from participating and decision making in interventions under the project | Applicable to all components | Women may have unequal access to resources, opportunities and benefits from the project that will further exacerbate existing inequalities | Moderate | Moderately likely | Moderate | The project will promote gender equality, women empowerment and will ensure that women are not discriminated against or reinforce gender-based discrimination and/or inequalities. |
| 4 | Social | Stakeholders, including landless, differently abled and other vulnerable groups could potentially be excluded from participating and decision making in interventions under the project | Applicable to all components | Without management measures, the establishment of community-level groups in different interventions could exclude marginalized stakeholder groups in decision making process, thereby restricting them from participating in the project and excluding them from attaining project benefits. | Moderate | Not likely | Moderate | The project will improve the adaptive capacity of the most vulnerable community members in the two chars in rural Bangladesh by focusing on the most vulnerable socio-economic groups – the women and the landless belonging to extremely poor households. |
| 5 | Social | Limitation in capacity among community members, who will be part of maintenance of embankments, CPP volunteer training programme, and other interventions, that may exclude them from fully participating in project activities, and decision-making | Component 2 (Output 2.2 and Output 2.4) | Without the required capacity to participate as member of the community that will take part in different interventions, this may lead to decreased participation of local stakeholders participating in project activities and decision-making processes, that prevents them from receiving project benefits | Moderate | Highly likely | Moderate | Enhancing the capacity of the local communities to take concerted action in addressing climate change impacts, and to adapt livelihoods and agriculture to climate change, are some of the key outputs of the project. |
| 6 | Social | Potential conflict regarding access to cold storage | Component 3 (Output 3.1.2) | As the cold storage units being established by the project will not be large enough to store the food produce of all community members, it is possible that conflict over cold storage access could arise. | Low | Not likely | Low | The introduction of non-electrical cold storage facility, which will use vaporization process to preserve fruits and vegetables, will allow farmers and traders to store surplus or unsold vegetables at any time by paying minimum amount for two weeks to avoid seasonal clearing as well as to create bulk amount for selling to distant markets. |
| 7 | Social | Beneficiary selection challenges | Applicable to all components | There is the potential for conflict to arise if community members feel that they should be prioritised for certain interventions. The beneficiary criteria will be based on vulnerability assessments, but subjective self-perceptions of vulnerability may be contradicted by the assessments. | Low | Not likely | Low | The selection of right beneficiaries based on intersectional vulnerability of households will greatly help the marginalised households in the two charland communities. |
| 8 | Social | Discrimination against minority/religious/landless | Applicable to all components | Discrimination against minority groups is unlikely but possible as only very small numbers of minority groups are residents in the target areas, including the landless, women-led households and minority religions. | Low | Not likely | Low | The upholding of human rights, that includes the inclusion and non-discrimination on the grounds of ethnicity, religion, status, including as member of a minority, among other factors, will ensure sustainable development, poverty alleviation and ensuring fair distribution of development opportunities and benefits to target communities. |
| 9 | Social | Women could face abuse or harassment when taking shelter in the cluster houses during cyclones | Component 2 (Output 2.1.1) | There is a high incidence rate of women becoming the victims of harassment in cyclone shelters due to the general confusion, close proximity and lack of gendered washrooms in cyclone shelters. | Low | Not likely | Low | The twenty cluster houses, which will be used as shelters during cyclones and floods will prioritise women-led households as beneficiaries. The responsibility to manage these cluster houses by women during cyclone or flood will empower other women and girls to take refuge in safe shelters, without fear of harassment. |
| 10 | Social | Interventions focusing on gender equality may cause conflict regarding traditional gender norms | Applicable to all components | Interventions that focus on disaggregated gender targets and prioritise equal participation by both men and women may run counter to established gender norms. This may result in conflict between groups who have different perspectives on gendered roles and responsibilities. | Low | Not likely | Low | The incorporation of gender interventions in all project components, including training, support and awareness will ensure that women, who are one of the most vulnerable in terms of climate change impacts, will benefit from the interventions under the project. |
| 11 | Environmental | Ecosystem based adaptation through the planting of vetiver grass, mangrove trees and other native trees may introduce invasive alien species that may negatively affect ecosystem | Component 2 (Output 2.2) | While it was specified that vetiver grass, mangrove trees and other trees will be used for ecosystem-based adaptation to restore embankments, there is a risk that alien invasive species will be used that may cause negative effects on native species. | Moderate | Moderately likely | Moderate | The project will not introduce invasive alien species, and will instead promote environmentally sustainable adaptation measures that will bring benefit for the environment and the community. The project will aim to maintain ecosystem integrity by taking proactive approach in all interventions. |
| 12 | Environmental | Construction sites could pose a risk to community members | Components 1 and 2 | Certain project interventions will involve small earthworks, i.e. to raise plinths, to do excavations for repairing the embankments and constructing the cluster houses. Excess sediment may pose a risk post construction. The earthworks and construction sites for the cluster houses may also be hazardous during the night or other low visibility periods. | Low | Not likely | Low | Ensuring civil work sites will not pose hazards to community members will ensure community’s health and safety. |
| 13 | Environmental | Cluster houses may become structurally unsafe during extreme cyclone events | Component 2 (Output 2.1.1) | The cluster houses that function as disaster shelters could become structurally unsafe during extreme cyclone events due to the number of individuals taking shelter and the strength of the cyclone. | Moderate | Moderately likely | Moderate | Structurally sound cluster houses will ensure the resilience of beneficiary families from climate change impacts. |
| 14 | Environmental | The repair of embankments could be substandard leading to breaches during floods or cyclones | Component 2 (Outputs 2.2.1 and 2.2.2) | The project will involve the repair of two embankments in the target areas. If they are not repaired according to design specifications, they could be breached during high water events, leading to damage to assets and livelihoods. | Low | Not likely | Low | The project will protect the charland from flood and storm surge, thereby protecting the vulnerable communities of target sites. |
| 15 | Environmental | Plinths for retrofitted houses | Component 1 (Output 1.1.1 and 1.1.3) | The plinths raised for retrofitting houses may shift or subside during high water events. This may cause the plinths to sink during floods or to become unstable once waters have receded. | Low | Not likely | Low | Community members will be empowered and capacitated as they will be trained to assist with retrofitting and conduct periodic assessments on the structural stability of plinths. |
| 16 | Environmental | Repair and retrofitting of houses, installation of community level nano grids, and construction of rainwater harvesting systems and cluster houses will generate solid and liquid wastes (concrete washout, lumber, wires, nails, etc.) that may impact surroundings and may compromise health and safety of workers and the community | Component 1 (Output 1.1, 1.2, 1.3); Component 2 (Output 2.1) | If not managed, construction wastes that will be generated from various interventions to increase resilience of households will impact land and water bodies (if wastes were transported near coast or river). Moreover, unregulated wastes will pose as hazards to safety and health of both workers and the communities of two sites. | Moderate | Highly likely | Moderate | The proper management of wastes generated from various interventions to increase household resilience will positively impact the environment as well as the health and safety of the communities. |
| 17 | Environmental | The repair of embankment may result in accidental spills of oil and fuel, and unmanaged solid wastes that may impact nearby fish farms and may also impact coastal and riverine environment. | Component 2 (Output 2.2) | The repair of 14.5 km of embankment, including 1 km of breached embankment entails the use of machinery that will transport aggregates. This in turn may accidentally cause the spillage of oil and fuel that may impact soil and water bodies. The construction wastes that will be generated will likewise impact the environment in the form of siltation of water bodies. Solid wastes from construction will also be generated. If not properly disposed, this will create problem in nearby agricultural areas and water bodies. | Moderate | Highly likely | Moderate | The proper management of wastes will definitely improve the overall quality of the environment, and improves the well-being of the community and the workers.  The project is committed to restore the embankment to protect and enhance the resilience of the community against climate change hazards. |
| 18 | Environmental | Implementation of climate resilient agriculture may potentially introduce use of pesticides | Component 3 (Output 3.1) | Interventions to make agriculture climate resilient may negatively impact the environment if pesticide use is introduced. | Moderate | Not likely | Moderate | The project will support producers and farmers to adopt organic farming that would reduce the use of fertilizers and harmful pesticides, thus reducing the contamination of soil and water bodies. |
| 19 | Environmental | The operation of floating ambulance may generate medical related wastes | Component 2 (Output 2.4) | If not properly managed, medical wastes will pose health risks to medical personnel and to the community. If not properly collected, these wastes will cause diseases and may negatively impact the environment. | Moderate | Not likely | Moderate | The project follows SES standard on pollution prevention and resource efficiency. The project also aims to bring health benefits to affected communities, that will improve the socio-economic well-being of people living in the two sites. |

## 4.2 Mitigation measures

This section describes the mitigation measures that will be implemented to avoid, minimize or mitigate each of the potential risks identified. The mitigation measures have been included as part of the design of the project, both as specific activities under the project’s components, and in specific management instruments (community restoration plans, stakeholder engagement programme, or gender action plan), and applying a mitigation hierarchy, focusing on measures to prevent the impacts from occurring in the first place.

Potential risks and corresponding mitigating measures are shown in Table 6. Potential risks are limited in scale and can be mitigated through standard construction best practices, application of mitigation measures based on experience of similar projects, and stakeholder engagement during project implementation. The majority of potential risks are associated with the interventions to make households and communities climate resilient.

**Table 6. Mitigation measures and monitoring requirements**

| **No.** | **Risk** | **Type** | **Mitigation Measures** | **Conditions under which the measure is required** | **Monitoring** |
| --- | --- | --- | --- | --- | --- |
| 1 | Rehabilitation activities to enhance climate resilient households (repair and retrofitting of cyclone and flood resilient houses, installation of community level nano grids, and construction of rainwater harvesting systems), and cluster houses, could temporarily disrupt the livelihood or may restrict availability and access to resources of affected people, particularly marginalized and vulnerable groups | Social | * Consultations will be undertaken in a transparent manner to identify the 900 vulnerable households in Lakshmitari and Mujibnagar that will prioritise women-led and poor people living close to or outside the embankments. The consultation will include the hazards faced by each household, including temporary dislocation during retrofitting of houses. * Local construction workers will be trained on climate-resilient building techniques through workshops to allow fast construction that will only briefly disrupt the livelihoods or access to resources of affected households. * Partner NGOs, local government and community members will coordinate the accommodation of affected people who will be temporarily displaced during repair of their houses. * If the beneficiary is landless, the government will provide land, e.g. khas or vacant government owned land | * Specific project sites and types of activities under Component 1 will be established during project implementation. The ESMP and/or other management plans to be prepared should include the necessary screening assessment, and management procedures to lessen impacts on affected people. | * Monitoring procedure as describe in Section 6.4 * Mid-term review; Supervision missions * Annual project performance reports * Monitoring and evaluation procedures to track implementation progress of rehabilitation activities |
| 2 | Repair and construction of embankment could result to its realignment that may lead to temporary displacement and/or disruption of access to source of livelihood | Social | * The project will ensure that in-depth consultations will be conducted with any households that maybe at risk of requiring resettlement (in case there are houses that will be in conflict with infrastructure (Component 2)). The resettlement policy framework has been prepared for the project. * Any resettlement or relocation will only be conducted after extensive community consultation and negotiation with any affected households. Benefits, including reimbursement for the cost of the house, further livelihood support and provisioning of new land will all be included in any negotiated package. * A grievance redress mechanism will be developed for the project and will be set-up to address any concerns of affected community. | * Preparation of Resettlement Action Plan or Livelihood Restoration Plan * Prior to project implementation | * Report from implementation of Resettlement Action Plan or Livelihood Restoration Plan * Mid-term review; Supervision missions * Annual project performance reports |
| 3 | Stakeholders, particularly women, could potentially be excluded from participating and decision making in interventions under the project | Social | * As indicated in the Gender Action Plan, the project has four components which will incorporate gender considerations. Component 1 will include a strong gendered focus on supporting, among others, women-led households. The other three components will also include gender-sensitive planning that responds to gender differences and places emphasis on women’s vulnerability. * Training and capacity building program for the CBOs/WMOs on disaster emergency management, climate change adaptation, first aid, as well as capacity technical workshops on the establishment, use, and maintenance of climate early warning system, including the interpretation and application of tailored climate information services, targets community members, including women, to enhance their capacity to address their adaptation deficit. | Throughout project implementation | * Report from the implementation of Gender Action Plan * Mid-term review; Supervision missions * Annual project performance reports |
| 4 | Stakeholders, including landless, differently abled and other vulnerable groups could potentially be excluded from participating and decision making in interventions under the project | Social | * The project has developed a clear beneficiary selection process where during the first phase of implementation, the final selection of beneficiaries will be based on the intersectional vulnerability of households, including prioritisation of: i) female-headed households; ii) households where an adolescent girl is solely responsible for household income; ii) households with indigenous people; and iii) households with people with disabilities. In addition, the selection will proportionally reflect the percentage of ethnic and religious minority households, to ensure that those with additional barriers to accessing resources are not further marginalised. * The selection criteria will ensure that selection is not based on any religious or other discriminatory reason but will be based solely on the vulnerability assessment and strict beneficiary selection criteria. * Potential project-related concerns and/or grievances of local communities and project stakeholders will be addressed through a complaint’s register along with a Grievance Redress Mechanism | Throughout project implementation | * Mid-term review; Supervision missions * Annual project performance reports |
| 5 | Limitation in capacity among community members, who will be part of maintenance of embankments, CPP volunteer training programme, and other interventions, that may exclude them from fully participating in project activities, and decision-making | Social | * Project interventions that include capacity building of local carpenters, masons and electricians on climate resilient construction skills will be one of the priority activities. | During beneficiary selection | * Mid-term review; Supervision missions * Annual project performance reports |
| 6 | Potential conflict regarding access to cold storage | Social | * To support equal access to cold storage, the units will be located at the innovation centres at both of the target sites. Access to use the fridges will be determined through a beneficiary system based on assessed vulnerability for household-level food insecurity and need for short-term storage for crops intended for resale. The register will be managed by the project representatives at the innovation centres. Proportional access will be provided to store household food and crops/fish intended for sale. | During beneficiary selection | * Mid-term review; Supervision missions * Annual project performance reports |
| 7 | Beneficiary selection challenges | Social | * The project is based on similar existing programmes currently being undertaken in Bangladesh. The project has developed a clear beneficiary selection process (Annex B) that will be communicated to target communities during the project inception. Furthermore, in the event that any community members feel they are being discriminated against, they can file a complaint through the project’s grievance redress mechanism. | During beneficiary selection | * Mid-term review; Supervision missions * Annual project performance reports |
| 8 | Discrimination against minority/religious/landless | Social | * The selection criteria will ensure that selection is not based on any religious or other discriminatory reason but will be based solely on the vulnerability assessment and strict beneficiary selection criteria (see Annex B). | During beneficiary selection | * Mid-term review; Supervision missions * Annual project performance reports |
| 9 | Women could face abuse or harassment when taking shelter in the cluster houses during cyclones | Social | * The cluster houses that function as cyclone shelters will be designed to have separate wash facilities for women and for men. These cluster houses will also belong predominantly to women-led households, ensuring that women will, in general, hold the greatest authority over these shelters during cyclone events. The structure of the cluster houses will also ensure that if necessary, there are multiple rooms where women and children could be separate from men during cyclone events. | Pre-construction phase | * Mid-term review; Supervision missions * Annual project performance reports |
| 10 | Interventions focusing on gender equality may cause conflict regarding traditional gender norms | Social | * Gender sensitivity will be incorporated into all trainings and community level interventions, including farmer field schools, innovation centre training and awareness raising campaigns. This will reduce the occurrence of any conflict arising from the difference in perspective regarding the attendance of women or men at specific trainings and the support of women for the development of livelihoods. | Throughout project implementation | * Mid-term review; Supervision missions * Annual project performance reports |
| 11 | Ecosystem based adaptation through the planting of vetiver grass, mangrove trees and other trees may introduce invasive alien species that may negatively affect ecosystem | Environmental | * Adoption of land-use approach for biological means of protection against erosion while providing livelihood for local communities, as shown in Coastal Embankment Rehabilitation Project (CERP) * The project will ensure that invasive alien species will not be introduced * The project will coordinate with MoEFCC for suitable native species of mangroves and trees that will be used for ecosystem-based adaptation | Pre-construction phase | * Mid-term review; Supervision missions * Annual project performance reports |
| 12 | Construction sites could pose a risk to community members | Environmental | * All construction activities will be conducted under the oversight of experienced professionals who will also train local staff on best construction practices. To ensure that sediment is not mobilised through current movement that will result in an impact, all excess sediment will be moved an acceptable distance from the construction site. Further, any earthworks should be undertaken during the dry season and compacted sufficiently to reduce sediment movement. All construction sites will be properly demarcated to ensure that hazardous areas, such as holes, pits and exposed sharp objects do not pose a threat to nearby communities (i.e. areas will be fenced off or demarcated with reflective hazard tape) | Construction phase | * Mid-term review; Supervision missions * Annual project performance reports |
| 13 | Cluster houses may become structurally unsafe during extreme cyclone events | Environmental | The cluster house cyclone shelters will be designed according to rigorous standards to ensure they can withstand the extreme impacts of high-powered cyclones (refer to Annex A). To reduce the risk of extensive structural damage, local community members will be trained to identify signs of structural weakening, and construction specialists will conduct periodic assessments of these structures, especially after cyclones. | Construction phase | * Mid-term review; Supervision missions * Annual project performance reports |
| 14 | The repair of embankments could be substandard leading to breaches during floods or cyclones | Environmental | Prior to installation, a full site evaluation will be undertaken to assess each site. Appropriate measures will be taken to ensure that the repairs are conducted in line with best practice and meet the design specifications. Furthermore, the community training for embankment management will incorporate training to support community monitoring of embankment condition to support proactive embankment maintenance instead of reactive embankment repair. | Construction phase | * Mid-term review; Supervision missions * Annual project performance reports |
| 15 | Plinths for retrofitted houses | Environmental | The plinths will be designed, raised and compacted according to design specifications and best practices (see Annex A) to ensure that collapses will not occur during flood events. Community members who are trained to assist with retrofitting will also receive training to conduct periodic assessments on the structural stability of the plinths. |  | * Mid-term review; Supervision missions * Annual project performance reports |
| 16 | Repair and retrofitting of houses, installation of community level nano grids, and construction of rainwater harvesting systems and cluster houses will generate solid and liquid wastes (concrete washout, construction debris, lumber, wires, nails, chemicals, etc.) that may impact surroundings and may compromise health and safety of workers and the community | Environmental | **Soil and water pollution**   * As there is potential for accidental spills of oil and fuel from machineries, workers will be trained on proper maintenance and use of equipment * Preventive and control measures shall be consistent with good international practice, such as the World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines)[[18]](#footnote-18) * To ensure that sediment is not mobilised through current movement that will result in an impact, all excess sediment will be moved an acceptable distance from the construction site.   **Air and noise pollution**   * All retrofitting and construction works shall only be done during day time * All machineries and equipment shall be regularly maintained * The communities will be informed of scheduled retrofitting and construction of household interventions   **Occupational and community health and safety**   * All construction activities will be conducted under the oversight of experienced professionals who will also train local staff on best construction practices * All workers shall be properly trained on occupational health and safety * Workers must wear personal protective equipment (PPE) at all times during construction * Communities will be informed of scheduled construction and retrofitting * All construction sites will be properly demarcated to ensure that hazardous areas, such as holes, pits and exposed sharp objects do not pose a threat to nearby communities (i.e. areas will be fenced off or demarcated with reflective hazard tape). | Pre-construction and construction phases | * Mid-term review; Supervision missions * Annual project performance reports |
| 17 | The construction and repair of embankment may result in accidental spills of oil and fuel, and unmanaged solid wastes that may impact nearby fish farms and may also impact coastal and riverine environment. | Environmental | **Source of embankment materials**   * The materials required for the construction of embankments will be gathered from the nearest sources, and cannot be collected from borrow pit as indicated in BWDB Design Guideline (2010). * In Lakshmitari, embankment materials can be collected from the river bed where temporarily submerged chars are formed * In Mujibnagar, embankment materials can be collected from riverside submergible char   **Soil and water pollution**   * There is potential for accidental spills from heavy equipment and machineries that will be used for embankment repair. Workers will be trained on proper maintenance and use of equipment * Compliance on relevant Bangladesh’s regulations on water and solid, toxic and hazardous wastes pollution[[19]](#footnote-19) * Preventive and control measures shall be consistent with good international practice, such as the World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines)[[20]](#footnote-20) * To ensure that sediment is not mobilised through current movement that will result in an impact, all excess sediment will be moved an acceptable distance from the construction site. * Any earthworks should be undertaken during the dry season and compacted sufficiently to reduce sediment movement. * Work shall be done during dry period to prevent erosion of sediments that will impact riverine and coastal environment   **Air and noise pollution**   * All construction and repair of embankments shall only be done during day time * All machineries and equipment shall be regularly maintained * The communities will be informed of scheduled retrofitting and construction of household interventions * Establishment of temporary dirt roads to access work areas and temporary dumping sites for excavated materials can increase soil erosion and degrade the landscape. Regular water sprinkling will be done to prevent air pollution.   **Occupational and community health and safety**   * All construction activities will have oversight of experienced professionals who will also train local staff on best embankment construction practices * All workers shall be properly trained on occupational health and safety * Workers must wear personal protective equipment (PPE) at all times during construction * Communities will be informed of scheduled construction and retrofittingEmbankments proposed for construction / rehabilitation will be demarcated and barricaded, or notices shall be posted to prevent access from the communities * Compliance of workers to World Bank’s EHS Guidelines | Pre-construction and construction phases | * Mid-term review; Supervision missions   Annual project performance reports |
| 18 | Implementation of climate resilient agriculture may potentially introduce use of pesticides | Environmental | * The Project will support farmers to adopt improved farming techniques (e.g. organic agriculture, soil and water conservation) that would reduce the use of fertilizers and harmful pesticides, thus reducing the contamination of soil and water bodies. * Though not foreseen, but if potentially harmful pesticides are needed, they will be properly managed, stored, used, following national and international standard regulation and procedures. | Throughout project implementation | * Mid-term review; Supervision missions * Annual project performance reports |
| 19 | The operation of floating ambulance may generate medical related wastes | Environmental | * The project will follow Environmental Conservation Act, 1995 and Environmental Conservation Rules, 1997 in the management of solid wastes * The project will follow the guideliines of Safe Management of Wastes from Health Care Activities (World Health Organization) in the proper disposal of medical wastes | Throughout project implementation | * Mid-term review; Supervision missions * Annual project performance reports |

# 5. Procedures for screening, assessing and managing social and environmental impacts

The Environmental and Social Policy (ESP) of Adaptation Fund requires that environmental and social risks associated with all the activities that will be undertaken by a project have been identified at the time of submission of the proposal. The ESP has no provision for projects where comprehensive risks identification has not been possible or has not been done by the time the proposal is submitted. Based on the screening of anticipated environmental and social impacts, three policy principles and five of the seven project-level standards of the SES have identified impacts; while eleven out of the fifteen ESP principles have been triggered. Those that have not been triggered – Cultural heritage and Indigenous peoples (SES); and Indigenous peoples, Climate change, Public health and Physical and cultural heritage (ESP), are currently unknown, since, among others, the exact locations of various interventions and the identity of beneficiaries are still not established.

Hence, the screening, assessment and management of social and environmental impacts is required for:

1. Identified potential impacts: potential impacts which are currently identified by the SESP, based on the broad scope of project activities, in order to further define and assess their relevance and relative importance on a site-specific basis;
2. Unidentified sub-projects (USPs): unknown impacts from project activities which are at this stage not yet fully specified.

## Screening

5.1.1 Identified potential impacts

The SESP has identified anticipated project risks of different activities under the project. The risks were assessed based on the project activities, outputs and outcomes currently identified. The 19 risks identified were either rated Low or Moderate.

* + 1. Currently unidentified sub-projects

To achieve the outcome of the project, outputs and project activities will depend on the selection of beneficiaries, the identities of which are not currently known and are therefore not included in the existing SESP. Moreover, the sites of climate-resilient infrastructure for electrification, water provisioning, and community infrastructure have yet to be specified. Such activities will (i.e., the selection of beneficiaries and establishing the exact locations of household and community infrastructure), as they emerge, require screening using the SESP methodology. For example, in the course of establishing the location of infrastructure, there is the possibility of archaeological deposits becoming exposed during ground excavation within the project. Currently, this policy principle (cultural heritage) has not been triggered, but in case there is a chance archaeological find during the course of excavation, this will require screening using SESP methodology to ensure that any impacts are identified, the significance of the find has been established, and any required impact management actions are developed and applied. Another instance is during beneficiary selection, which is a future activity, there is a possibility that potential household belongs to ethnic minority. Hence, project-level standard concerning Indigenous People will be triggered, hence will require updating of the screening using SESP methodology.

Currently, the USPs, or the activities where risks have not been established yet, are related to the following AF’s principles - Cultural heritage and Indigenous peoples (SES); and SES’ project-level standards - Indigenous peoples, Climate change, Public health and Physical and cultural heritage (ESP). Other risks which may arise during project implementation, which have not been established in the SESP screening, will be included and updated.

The SESP screening will be updated as project outputs become more specific, including the selection of beneficiary households and exact locations

## Assessment

After the screening, which was described in 6.1 above, further assessments may be required for project risks classified as Moderate to establish the magnitude and severity on households, the communities in the two charlands, and the general population. Assessment of adverse impacts is commensurate with the significance of identified risk, and may require the preparation of ESMP.

Assessment will be done for both identified and unidentified sub-projects, as described below.

* + 1. Identified potential impacts

Assessment will include consultations with affected communities to consult on potential impacts of different activities and management measures to be implemented, and to ensure the full participation of the two charland communities in all phases of the project. The assessment will verify, through consultations with stakeholders, households or groups that might be affected, the magnitude and severity of impacts, and corresponding measures that will be implemented to avoid, minimize, mitigate, and manage such impacts. The findings of the assessment will recommend on future actions on possible revision of the SESP, together with recommendations for management plans that need to be developed.

The assessment of potential social and environmental risks is described in Section 5.1.

* + 1. Currently unidentified sub-projects

As described in Section 6.1.2, the screening process will identify risks that are currently unidentified, and further targeted assessments, which will be carried out by hiring competent independent local specialists, under the guidance of UNDP’s Safeguards Specialist. Further guidance can be found in this link - <https://info.undp.org/sites/bpps/SES_Toolkit/SES%20Document%20Library/Uploaded%20October%202016/Final%20UNDP%20SES%20Assessment%20and%20Management%20GN%20-%20Dec2016.pdf>. Project activities will be further screened vis-à-vis the UNDP’s SESP as needed during the course of required assessments.

During project design, participatory exercises were conducted by UNDP to identify locations and beneficiaries for the implementation of project interventions. The exact locations of climate resilient infrastructure for households and communities, and the identities of the beneficiaries, have yet to be determined. During the first phase of implementation, the final selection of beneficiaries will be based on the intersectional vulnerability of households, including prioritisation of: i) female-headed households; ii) households where an adolescent girl is solely responsible for household income; ii) households with indigenous people; and iii) households with people with disabilities. In addition, the selection will proportionally reflect the percentage of ethnic and religious minority households, to ensure that those with additional barriers to accessing resources are not further marginalised.

The final selection will prioritise the following beneficiaries:

* Gender: female-headed households (including those widowed, divorced or separated/abandoned).
* Age: for livelihoods, women between 18-49; for other support, households with children and the elderly.
* Income: households with income of less than US$1.25 per person per day.
* Household Status:
  + Women and girl beneficiaries from households where there are no able male members to earn livelihoods.
  + Women from households where there are a greater number of dependent members on the women (household members that are chronically ill; physically, mentally and/or visually impaired or disabled).
  + Indigenous (“Adivasi”) households.
* Land: for agricultural livelihoods, households that possess less than 30 decimals (1,214 m2) of previously usable agricultural land and possess less than 50 decimals (2,023 m2) of land in total. For housing support, priority will be given to people living on land exposed to extreme climatic events, people with only homestead land and landless people who arrange public land through official/customary process.
* Other requirements to assess eligibility:
  + Hindu minority households will be represented in proportion to their overall population in the wards.
  + The beneficiary cannot have been a recipient of GoB’s or any NGO’s schemes of similar nature and/or quantity of support within the last two years.

Exclusion list has been proposed (Annex J) to avoid or lessen negative impacts on the environment and people, although USPs may still arise during beneficiary selection and land allocation to be used for household and community infrastructure. The exclusion list will be relayed to relevant stakeholders during different stakeholder engagement activities.

## Management

An Environmental and Social Management Plan(ESMP) will be developed for the project, based on the updated SESP, assessment reports, and other management plans, including Gender Action Plan. The project will prepare one ESMP each for Lakshmitari and Mujibnagar. The ESMP, as indicated in Annex 3 of the Guidance Note of the SES, should include the following: i) mitigation measures and actions that aims to avoid, or if avoidance is not possible, reduction of potentially significant adverse social and environmental impacts to acceptable levels; ii) monitoring requirements, with linkages to the impacts assessed in the environmental and social assessment and the mitigation measures described in the ESMP; iii) capacity development and training to support timely and effective implementation of social and environmental project components and mitigation measures, where environmental and social assessment of the existence, role, and capability of the responsible parties on site or at the agency and ministry level are described and assessed; iv) stakeholder engagement, which includes information on tools to inform and involve affected people, summary of stakeholder engagement plan, and description of processes for receiving and addressing stakeholder concerns and grievances; and v) implementation action plan, which includes the schedule and cost estimates of implementing ESMP.

During pre-construction, it is important to constitute the Technical Team under the Project Management Unit (PMU) that will review the provisions of the ESMF. The ESMF will serve as guide for the formulation of specific ESMPs. ESMP will serve as guide for the contractor / firm / NGO partner prior to mobilization. The contracted firms will submit applicable plans prior to mobilization, including the securing of all necessary permits and clearances, camp layout (if applicable), traffic management, water supply, and waste disposal. During construction, the firms will be oriented on how to mitigate the identified significant adverse impacts from embankment construction and repair, borrow material management, community and occupational health and safety, and decommissioning.

## Monitoring procedures

5.4.1 Environmental and social monitoring

Environmental and social safeguards monitoring provide a systematic review of planning, implementation and operation of different interventions and their mitigation measures to ensure that environmental concerns are addressed, environmental assets are protected, and people are protected. Throughout the implementation, the project will conduct three types of monitoring: 1) compliance, 2) community, and 3) effect monitoring.

The Technical Team under the Project Management Unit (PMU), under the supervision of the Executing Entity (Department of Environment under MoEFCC) will conduct a compliance monitoring at the construction stage to check whether environmental mitigation measures are being followed and implemented properly. Community monitoring will be conducted by the residents or community people who reside at the project site. They will monitor various environmental and social issues at the both construction and post-construction stages that would cover two specific aspects: 1) Compliance of mitigation measures and 2) Effectiveness of the proposed interventions. The implementing agency and other appropriate authority (if applicable) will be responsible for effect monitoring. During the effect monitoring, they would check whether interventions are functional and served their intended purposes.

Table 7 details the environmental and social monitoring plan for the project.

Table 7. Environmental and Social Monitoring Plan

| **Indicators** | **Parameters** | **Location** | **Standards** | **Frequency of Monitoring** | **Responsibility** | |
| --- | --- | --- | --- | --- | --- | --- |
| **Implementation** | **Supervision** |
| **Social** | | | | | | |
| 1. Housing and community complex | Incidence of involuntary resettlement, displacement due to lack of access to resources and livelihood, grievance | Climate-resilient interventions for households | AF’s ESP  UNDP’s SES; Project’s Resettlement Action Plan; Project’s Grievance Redress Mechanism | Compliance monitoring: Monthly  Community monitoring: Monthly  Effect monitoring: Quarterly | Department of Environment (DoE) / Ministry of Environment, Forestry and Climate Change (MoEFCC) | UNDP |
| 1. Cultural heritage | No. of cultural heritage site | Within 1 km from project site | AF’s ESP  UNDP’s SES | Compliance monitoring: Monthly  Community monitoring: Monthly  Effect monitoring: Quarterly | DoE / MoEFCC | UNDP |
| 1. Sanitation / latrine | No. of latrines constructed, waste discharge, water supply, community health | Retrofitted houses / cluster houses | Project output | Compliance monitoring: Monthly  Community monitoring: Monthly  Effect monitoring: Quarterly | NGO / Firm | DoE / MoEFCC |
| 1. Community health and safety | No. of incidents from the community[[21]](#footnote-21), | Project sites | AF’s ESP | Compliance monitoring: Weekly  Community monitoring: Monthly  Effect monitoring: Quarterly | Responsible Parties | DoE / MoEFCC / UNDP |
| 1. Occupational health and safety | No. of incidents from the workers, PPEs, training conducted | Project sites | ILO, AF’s ESP, UNDP’s SES | Compliance monitoring: Weekly  Community monitoring: Monthly  Effect monitoring: Quarterly | Responsible Parties | DoE / MoEFCC / UNDP |
| **Environmental** | | | | | | |
| 1. Land | Presence of spoils, solid wastes, construction debris, hazardous and dangerous materials | Project sites | Environment Policy (1992), AF’s ESP, UNDP’s SES | Compliance monitoring: Weekly  Community monitoring: Monthly  Effect monitoring: Quarterly | Responsible Parties | DoE / MoEFCC / UNDP |
| 1. Pathways / Road | Unstable road / pathways, presence of dust, stagnant water, potholes | Temporary road leading to embankments; Pathways leading to constructed / retrofitted houses and community infrastructure | Bangladesh Environment Conservation Act 1995 and Bangladesh Environment Conservation Rule 1997, AF’s ESP, UNDP’s SES | Compliance monitoring: Weekly  Community monitoring: Monthly  Effect monitoring: Quarterly | Responsible Parties | DoE / MoEFCC / UNDP |
| 1. Flora and fauna | Presence of alien invasive species for EbA;  Runoff of sediments on fish farms | Riverine and coastal sites near embankments | AF’s ESP and UNDP’s SES | Compliance monitoring: Weekly  Community monitoring: Monthly  Effect monitoring: Quarterly | Bangladesh Water Development Board | DoE / MoEFCC / UNDP |
| 1. Solid waste | Presence of solid waste in all intervention sites | Project sites | Bangladesh Environment Conservation Act 1995 and Bangladesh Environment Conservation Rule 1997, AF’s ESP, UNDP’s SES | Compliance monitoring: Weekly  Community monitoring: Monthly  Effect monitoring: Quarterly | Responsible Parties | DoE / MoEFCC / UNDP |
| 1. Hazardous waste | Storage, transport and disposal of medical wastes from floating ambulance;  Incidence of pesticide use | Floating ambulance; Climate resilient agriculture intervention | Bangladesh Environment Conservation Act 1995 and Bangladesh Environment Conservation Rule 1997, World Bank Group EHS Guidelines | Compliance monitoring: Weekly  Community monitoring: Monthly  Effect monitoring: Quarterly | NGO with support from local government institutions;  Ministry of Health and Family Welfare | DoE / MoEFCC / UNDP |
| 1. Air | PM10, PM2.5, SO2 | Embankment, locations where retrofitting of structures are implemented | Bangladesh Environment Conservation Act 1995 and Bangladesh Environment Conservation Rule 1997, WHO Guidelines | Compliance monitoring: Weekly  Community monitoring: Monthly  Effect monitoring: Quarterly | Responsible Parties | DoE / MoEFCC / UNDP |
| 1. Noise | (Equivalent noise level(dBA), Leq, Max Noise level(dBA), Lmax) | Embankment, project site of beneficiaries | Bangladesh Noise Pollution Control Regulation Act 2008, WHO Guidelines | Compliance monitoring: Weekly  Community monitoring: Monthly  Effect monitoring: Quarterly | Responsible Parties | DoE / MoEFCC / UNDP |
| 1. Water supply | pH, turbidity, hardness, Cl, TDS, Mn, As, Fe, total coliform, fecal coliform) | Project site of beneficiaries, construction camp | Bangladesh Water Act 2013 | Compliance monitoring: Weekly  Community monitoring: Monthly  Effect monitoring: Quarterly | NGO / Firm | DoE / MoEFCC / UNDP |
| 1. Drainage | TDS, turbidity, total coliform, fecal coliform | Embankment, construction camp | Bangladesh Water Act 2013 | Compliance monitoring: Weekly  Community monitoring: Monthly  Effect monitoring: Quarterly | Bangladesh Water Development Board | DoE / MoEFCC / UNDP |

* + 1. Indicative cost

The environment specialist of the project implementing agency will estimate the cost of the environmental mitigation and enhancement measures and will incorporate with the tender document. Many of the activities to be carried out as a part of ESMF would not involve any additional direct cost, e.g., employing the local workforce, where appropriate; keeping sub-project vehicles in good operating condition; good housekeeping, avoiding spills; prohibiting the use of fuelwood for heating bitumen; etc. On the other hand, some activities would require additional cost. Table 8 provides an indicative budget for the ESMF and environmental management. For example, environmental monitoring during both construction and operational phases would involve direct cost. Certain mitigation measures (including health and safety precautions) will be covered as part of overall construction expenses in the project budget; these include temporary sanitation facilities, health and safety signs, awareness pamphlets, water sprinkling on aggregates and unpaved surfaces, plantation, and protective gear. Required cost will be included in the tender/bidding document of particular intervention so that contractor fully comply with implementing required safeguards measures during civil works and other operatuons. The Department of Environment have adequate and qualified safeguards specialist and will deploy them during project implementation since this project will be implemented by them.

Table 8. Indicative cost for environmental management and monitoring

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Environmental Management Parameters** | **No. of Unit** | **Unit Cost (US$)** | **Total Cost (US$)** | **Funding Source** | **Responsibility** |
| Environmental mitigation and enhancement | | | | | |
| Construction / repair of regulators and drainage cum flushing inlet / sluice | LS | LS | 87,000 | Government of Bangladesh | PMU, contractor, community |
| Drainage channel reexcavation | LS | LS | 35,000 | Government of Bangladesh | PMU, contractor, community |
| Embankment protection through EbA | 15.5 km | 12,400 | 192,200 | Adaptation Fund | PMU, contractor, community |
| Environmental awareness and training | | | | | |
| Environmental awareness sessions | 10 | 250 | 2500 | Adaptation Fund | PMU, consultants, community |
| Training on environmental health and safety | 10 | 500 | 5000 | Adaptation Fund | PMU, consultants |
| Training on environmental assessment and monitoring | 6 | 500 | 3000 | Adaptation Fund | PMU, consultants |
| Environmental monitoring and audit | | | | | |
| Environmental impact assessment | 2 | 10,000 | 20,000 | Adaptation Fund | PMU |
| Environmental monitoring | 54 person days | 75 | 4050 | Adaptation Fund | PMU, consultant, community |
| Water quality monitoring (pH, turbidity, hardness, Cl, TDS, Mn, As, Fe, total coliform, fecal coliform) | 10 samples | 105 | 1075 | Adaptation Fund | PMU, consultant |
| Air quality monitoring (PM10, PM2.5, SO2) | 4 samples | 200 | 800 | Adaptation Fund | PMU, consultant |
| Noise level (Equivalent noise level(dBA), Leq, Max Noise level(dBA), Lmax) | 4 samples | 268.75 | 1075 | Adaptation Fund | PMU, consultant |

* + 1. Environmental clauses for tender document

Some special environmental clauses shall be included in the Tender Document under General / Particular Specification. These clauses are aimed at ensuring that the Contractor carries out following responsibility in implementing the ESMP and other environmental and safety measures. The Contractor shall report to the Engineer promptly and in writing particulars of any accident or unusual or unforeseen occurrences on the site, whether these are likely to affect progress of the work or not.

**Environmental and Social Management Plan (ESMP):** The Contractor shall carry out all mitigation and enhancement measures (including those related to mitigation of air/noise/ water pollution; drainage/ traffic congestion) as specified in the ESMP.

**Temporary Works:** The Contractor shall make sure that all equipment and safeguards required for the construction work such as temporary stair, ladder, ramp, scaffold, hoist, runaway, barricade, chute, lift, etc. are substantially constructed and erected, so as not to create any unsafe situation for the workmen using them or the workmen and general public passing under, on or near them.

**Health and Safety:** The Contractor shall observe and maintain standards of Health and Safety towards all of his employees not less than those laid down by the national standards or statutory regulations and must provide or ensure that appropriate safety and /or health signs are in place at their work sites where hazards cannot be avoided or reduced.

Where appropriate, to prevent workers falling from heights, the Contractor shall make sure that every temporary floor openings shall either have railing of at least 900mm height or shall be constantly attended; every floor hole shall be guarded by either a railing or a hinged cover, or constantly attended; every stairway floor opening shall be guarded by railing at least 900 mm high on the exposed sides; every ladder-way floor opening or platform shall be guarded by a guard railing; every open sided floor or platform 1.2m or more above adjacent ground level shall be guarded by a railing on all open sides.

The Contractor shall provide all appropriate protective clothing and equipment for the work to be done and ensure its proper use. Where required, safety nets, belts, harnesses and lines shall be provided by the contractor. The Contractor shall provide and maintain in prominent and well-marked positions all necessary first-aid equipment, medical supplies and other related facilities. A sufficient number of trained personnel will be required to be available at all times to render first aid.

**Earthworks:** During excavation of trenches in natural soils, the Contractor shall make sure that the first 300mm to 450mm of topsoil be excavated and stored on one side of the trench and the rest of the excavated soil is stored separately/ on the other side; during backfilling of trench, the topsoil should be placed on the top again.

**Disposal and Pollution:** The Contractor shall not dispose any waste, rubbish or offensive matter in any place not approved by the Engineer or Statutory Authority having jurisdiction. The Contractor shall not discharge into any water course oil, solids, noxious or floating materials. The Contractor shall take all reasonable precautions to keep public or private roads clean of any spillage or droppings from his vehicles or equipment. Any spillage or droppings which accrue shall be cleaned without delay to the satisfaction of the Engineer. The Contractor shall construct sanitary latrine or septic tank system or install portable cabin toilet for disposal of human waste in the site office and temporary labour sheds for workers/ employees; the Contractor shall provide waste bins/ cans for collection of solid waste at appropriate locations (as directed by the Engineer), and ensure proper transfer/disposal of solid waste with support from the Union Parishad or other Local Government bodies.

* + 1. Documentation and disclosure

The approved ESMP will be disclosed to the public prior the implementation of intervention activities. More information on dissemination and disclosure of information is included in section 7.3.

## Roles and responsibilities

* + 1. Roles and responsibilities of UNDP (Implementing Entity)

As Multilateral Implementing Entity(MEA), UNDP will be responsible for independent project oversight and implementation support through specialized technical support services and quality assurance throughout the project funding cycle. UNDP provides oversight and quality assurance roles, which include environmental and social safeguard standards. Such oversight, including safeguard standards, will be carried out by UNDP Country Office in Bangladesh, the UNDP Global Environmental Finance Unit in the Bangkok Regional Hub, and the UNDP Headquarters in New York.

* + 1. Roles and responsibilities of Department of Environment (Executing Entity)

The Department of Environment under the Ministry of Environment, Forestry and Climate Change (MoEFCC) is the Executing Entity or the Implementing Partner of the project. MoEFCC, which will be accountable for the execution of the project, will implement the project’s environmental and social safeguard standards, in compliance with Adaptation Fund’s Environment and Social Policy, UNDP’s Social and Environmental Standards, and relevant environmental regulations of Bangladesh. MoEFCC will be responsible and accountable for the execution of the project, including ensuring that the objectives and components of the project are delivered, and for the effective use of project resources.

* + 1. Roles and responsibilities of responsible parties

The following Responsible Parties will assist MoEFCC in successfully delivering project outcomes and components.

**Table 9. Responsible Parties for each project component**

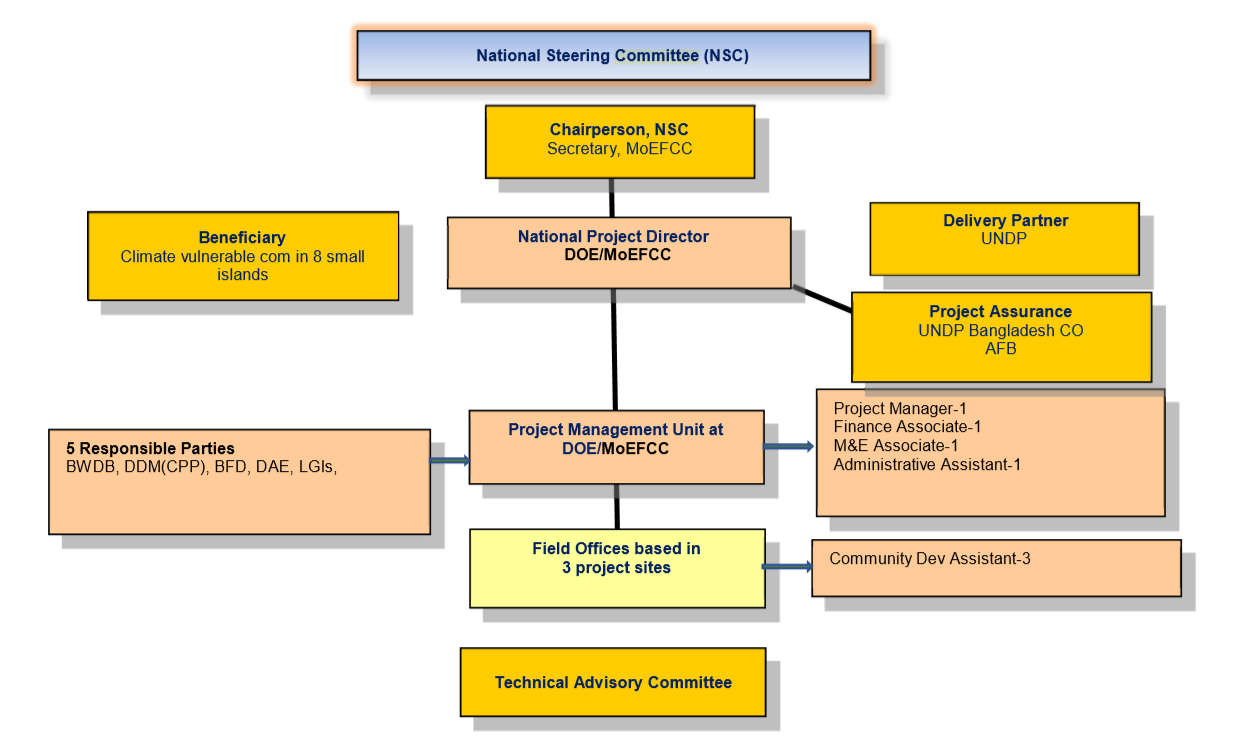
| Components | Responsible Parties | Modality |
| --- | --- | --- |
| Resilient housing | NGO / Firm | UNDP will award a contract to a competent NGO or Firm using its procurement policy |
| Nano-grid installation, solar storage and irrigation | NGO / Firm | MoEFCC / UNDP will complete the procurement following GoB’s public procurement rule or UNDP’s procurement policy |
| Rainwater harvesting | NGO / Firm | UNDP will award a contract to a competent NGO or Firm using its procurement policy |
| Climate-resilient infrastructure / cyclone shelters | NGO / Firm | UNDP will award a contract to a competent NGO or Firm using its procurement policy |
| Embankments and local management arrangement | Bangladesh Water Development Board | MoEFCC will enter into an LoA with BWDB and a community-based organization |
| Expansion of early warning | Cyclone Preparedness Programme / Department of Disaster Management | MoEFCC / UNDP will enter into an LoA with DDM |
| Floating ambulance | Ministry of Health and Family Welfare/Local govt institutes | MoEFCC / UNDP will enter into an LoA with MoHFW |
| Climate-resilient livelihoods, including skills and technology | NGOs with support from Local Government Institutions | UNDP will award a contract to a competent NGO using its procurement policy |
| Solar irrigation pumps, community level nano-grids | Firm/IDCOL | MoEFCC / UNDP will procure goods and services on the basis of public procurement rule or UNDP’s procurement policy |
| Capacity of Local Government Institutions, Bureau of Water Development Board, Department of Agricultural Extension | Bureau of Water Development Board, Department of Agricultural Extension, National Institute of Local Government | MoEFCC and UNDP will jointly support to conduct capacity building / training |

* + 1. Roles and responsibilities of Project Steering Committee

The project implementation will be governed by the Project Steering Committee (PSC) or the National Steering Committee (NSC), which will be responsible for overseeing the project implementation, review of the compliance of the project with the GoB, UNDP and AF requirements, and will ensure the implementation of the social and environmental management plan of the risks identified. The PSC will meet semi-annually, or as necessary to discuss project progress and stakeholder performance. The committee will be comprised of the following members:

1. Chairperson (role represented by the Executing Entity) who will take project ownership and chairs the NSC. For the project, the Chairperson will be the Chief Accounts Officer of MoEFCC, who is also the Secretary of MoEFCC.
2. Responsible Parties will be the key partners of the government that will support delivery of project components. Responsible parties include i) Bangladesh Water Development Board (BWDB); ii) Cyclone Preparedness Programme (CPP) under the Department of Disaster Management; iii) Bangladesh Forest Department (BFD); iv) Department of Agricultural Extension (DAE); and v) Local Government Institutions (LGIs). The parties will ensure the realization of project benefits from the perspective of project beneficiaries.
3. A Delivery Partner representative will provide guidance regarding the technical feasibility of the project, compliance with donor requirements and rules pertaining to the use of project resources. This role will be fulfilled by UNDP.
4. A Project Assurance Team will provide project guidance and oversight. This role will be fulfilled by UNDP.
5. Technical Advisory Committee will provide technical support to the National Steering Committee to ensure technical specification and quality of project’s development intervention. This committee will be headed by the Director General of the Department of Environment.
6. Project Beneficiaries comprised beneficiaries from the two islands and additional beneficiaries from six islands where CPP activities will be expanded.
7. A Project Management Unit (PMU) will be responsible for the development and implementation of all the components of the project. The PMU will consist of:
   1. National Project Director, nominated by MoEFCC, who will be responsible for the overall direction, strategic guidance and timely delivery of project outputs;
   2. Project Manager, recruited by UNDP, who will manage the implementation and day-to-day operation of the project under the direct supervision of NPD and will be accountable to UNDP;
   3. A Technical Team, recruited by UNDP, that will: i) develop programme standards; ii) provide technical support and guidance; iii) implement the policy research, dialogue and advocacy components of the project; iv) guide the implementation of social, gender and environmental safeguards plans; implement capacity building, knowledge management and communication activities; and vi) monitor project progress and support project M & E.
   4. An Operations Team, recruited by UNDP, that will manage finance, general administration, procurement, internal auditing and risk management functions of the project. This role involves i) managing funds; ii) programme quality assurance; iii) fiduciary risk management; iv) procurement; and v) timely delivery of financial and programme reports to Adaptation Fund.
8. Other Representatives which include representatives from: i) Local Government Division; ii) Rural Development and Cooperatives Division; iii) Ministry of Agriculture; iv) Ministry of Fisheries and Livestock; v) Ministry of Planning; vi) Ministry of Finance; vii) Implementation, Monitoring and Evaluation Division; viii) Bangladesh Forest Research Institute; ix) Local Government Engineering Department; x) Universities and research institutes; xi) NGO / private sector representatives.

The organogram of the National Steering Committee is shown in **Figure 2**.



**Figure 2. Organisational chart of National Steering Committee**

## 5.6 Capacity development and training

The project will develop an inception workshop at the start of the project to assist all parties to understand and take ownership of the project. In addition, training will be conducted to ensure that relevant project personnel understand the ESMF, and the ESMP to be prepared, as well as the Social and Environmental Policies of UNDP and the Adaptation Fund. The **Technical Team of the Project Management Unit (PMU),** under the guidance of MoEFCC, will spearhead the capacity building and training for the implementation of social, gender and environmental safeguards plans. The training will be targeted to the following representatives:

1. Responsible Parties
2. PMU personnel
3. Community based organisations
4. Other Representatives

MoEFCC and UNDP are responsible for the overall implementation of capacity building and training on safeguards related issues.

Local government representatives and staff will be trained on relevant ecosystem-based and community-based adaptation measures, including the environment and social management plan, so they can relay these measures and plans to the communities. Staff from Bangladesh Water Development Board will also be trained to incorporate community-based approach to embankment management into their activities, including relevant environment and social management plan provisions. Extension staff from the Department of Agriculture will also be trained on relevant guidelines of UNDP on Pollution Prevention and Resource Efficiency on the use, management of use, storage and disposal of chemicals, including pesticides, that may be triggered in the adoption of beneficiary communities of climate-resilient agricultural techniques.

The proposed innovation and knowledge centres that will be established in the two sites (2 in Mujibnagar and 2 in Lakshmitari) that will also host the farmer field schools will, among other functions, include communicating the environment and social management plan, including grievance mechanism and gender action plan. The outreach of the centres will include radio programmes, project websites, brochures, and relevant public events. This will be supported through social media to effectively communicate the potential risks on the environment and people, specifically during construction phase of different interventions, and mechanisms to mitigate these impacts and management measures to lessen the activities’ impacts. The communities will also be informed through this outreach about the grievance redress mechanism, in case they have complaints related to project implementation.

# 6. Stakeholder engagement plan

## 6.1 Objective

The Stakeholder Engagement Plan developed for the project seeks to ensure that project activities are conducted in an inclusive fashion, building from the consultations conducted in the proposal preparation phase, and assuring broad representation of local stakeholders, including the vulnerable and marginalized sectors, including women and community-based organisations.

## 6.2 Project stakeholders

The project key stakeholders were identified through a stakeholder analysis (see Annex D) including inputs from the consultations conducted at the national and local levels.

**Table 10. Key stakeholders for the project**

| **Name** | **Role** |
| --- | --- |
| Adaptation Fund | Adaptation Fund will invest about $10 million in two charland communities in Bangladesh to: i) assist households to enhance the resilience of their houses and livelihoods to climate change induced flooding, cyclones, saline intrusion and droughts; ii) improve community level infrastructure, including embankments with modern climate-resilient technology and effective local management practices; iii) assist the Bangladesh Cyclone Preparedness Programme (CPP)1 under Disaster Management Department, to enhance its activities in the remote coastal char targeted by the project, in order to provide timely early warnings and effective emergency response; and iv) the technology, approaches and knowledge generated by the project will be used to build the capacity of the local and national government; and communities to make climate-resilient investments and policies. |
| UNDP | UNDP Bangladesh will support the implementation. Will monitor the project implementation and achievement of the project outcomes and outputs and ensure the efficient use of funds. |
| DoE | MoEFCC will be responsible and accountable for the execution of the project, including ensuring that the objectives and components of the project are delivered, and for the effective use of project resources |
| Bangladesh Water Development Board | The Char Development and Settlement Project (CDSP) is coordinated by the Bangladesh Water Development Board (BWDB) and consists of four phases, the last of which (CDSP IV) recently finished (2011–December 2018). The four phases represent a series of projects that have been supporting the development of newly-accreted land (chars) in Bangladesh for over two decades. BWDB will be trained on relevant ecosystem-based and community—based adaptation measures so they can effectively facilitate the implementation of embankment repair and strengthening in char communities. |
| Department of Disaster Management | DDM will expand the CPP to char communities in Mujibnagar to provide timely early warning of cyclones and adequate on-site responses at the necessary scale. This will include tailoring early warnings and cyclone preparedness to local requirements and using the local language. |
| Bangladesh Forest Department | The Bangladesh Forest Department is responsible for large scale afforestation initiative in coastal chars in Bangladesh to combat climate change-induced hazards. The proposed project’s activities will complement this widespread afforestation initiative by developing climate hazard maps and risk scenarios which will highlight areas most at risk to the impacts of disaster events. |
| Department of Agriculture Extension | The Department of Agriculture Extension will support communities in the adoption of climate-resilient agricultural techniques. |
| Ministry of Health and Family Welfare | The Ministry of Health and Family Welfare (MoHFW), in partnership with NGOs, will design and implement a floating ambulance that will be permanently stationed in Mujibnagar. |
| House Building Research Institute | The House Building Research Institute will assist the project in local enterprise development to make non-fired bricks as alternative livelihood. |
| Local Government Institutions | Local government institutions will be trained on relevant ecosystems- based and community-based adaptation measures, so they can facilitate the implementation of different interventions among char communities. |
| IDCOL | IDCOL is a  non-bank financial institution (NBFI) established by the GoB. IDCOL is playing a major role in bridging the financing gap for developing medium to large-scale infrastructure and renewable energy projects in Bangladesh. The company now stands as the market leader in private sector energy and infrastructure financing in Bangladesh. It will assess the irrigation needs and implement solar irrigation systems and nano/mini-grids in project sites to provide water during the dry season. |
| Partner NGO 1 | The NGO project partner will work with local construction workers and household members to retrofit houses, which will include raising houses on plinths to resist flooding and strengthening roofs against cyclone winds. |
| Partner NGO 2 | In collaboration with local government and community members, the partner NGO will assess the electricity need of households and design nano-grids to provide electricity to small groups of houses. |
| Partner NGO 3 | The project partner NGO will provide the necessary technical expertise to assess the water need of households through surveys. The NGO will also design rainwater harvesting system with sufficient capacity to supply year-round household needs. The project partner NGO will install rainwater harvesting systems for 500 selected households, in collaboration with household members. |
| Partner NGO 4 | Twenty cluster houses (i.e. multiple houses in a single robust building) will be constructed by the project partner NGO. |
| Partner NGO 5 | Established local NGO will identify vulnerable households that will receive livelihood assistance that will prioritise woman-led households and those caring for the disabled and the elderly. The partner NGO will support the selected households to determine feasible diversified livelihood options. The partner NGO will provide support to these households in the form of technology, training and material provisioning. |
| Beneficiary households (direct) | Vulnerable households that will directly benefit from retrofitting and construction of household level and community level infrastructure. Final selection of direct beneficiaries will prioritise the following:   * Gender: female-headed households (including those widowed, divorced or separated/abandoned). * Age: for livelihoods, women between 18-49; for other support, households with children and the elderly. * Income: households with income of less than US$1.25 per person per day. * Household Status:   + Women and girl beneficiaries from households where there are no able male members to earn livelihoods.   + Women from households where there are a greater number of dependent members on the women (household members chronically ill; physically, mentally and/or visually impaired or disabled).   + Indigenous (“Adivasi”) households. * Land: for agricultural livelihoods, households that possess less than 30 decimals (1,214 m2) of previously usable agricultural land and possess less than 50 decimals (2,023 m2) of land in total. For housing support, priority will be given to people living on land exposed to extreme climatic events, people with only homestead land and landless people who arrange public land through official/customary process. * Other requirements to assess eligibility:   + Hindu minority households will be represented in proportion to their overall population in the wards.   + The beneficiary cannot have been a recipient of GoB’s or any NGO’s schemes of similar nature and/or quantity of support within the last two years. |
| Beneficiary households (indirect) | No direct role in relation to the project activities but will benefit from different interventions. |
| Local construction workers | Local construction workers will be trained on climate-resilient building techniques and standards of cyclone and flood resilient houses,  for use in the broader community. |
| Community groups 1 | Community groups will be established from among the beneficiary households. They will be trained and equipped to operate and maintain the nano-grids. |
| Community-based water-user group 2 | Community members will be supported to establish water-user groups. These groups will be trained to: i) manage the preservation and distribution of surface water in areas that experience water stress during the dry season and/or because of saline intrusion; and ii) assist community members with the maintenance of rainwater harvesting systems. The training will be provided by the project partner NGO and will ensure that the water-user groups are capacitated to be self-sufficient before the end of the project period. |
| Social forestry programmes and the community embankment management groups | Bangladesh Water Development Board (BWDB) will collaborate with social forestry programmes and the community embankment management groups for strengthening embankments in Mujibnagar and riverbanks in Lakshmitari through the installation of geotextile and EbA measures such as planting mangroves, other trees and vetiver grass. |
| Community embankment management groups | Community embankment management groups will be responsible for the maintenance of embankments. Members will come from local communities. Incentives will be provided to community members to increase participation. These incentives include fish farms or social forestry next to embankments. |
| Cyclone Preparedness Program volunteers | Community members will be engaged in the CPP volunteer training programme on Mujibnagar. The training programmes will include search and rescue, water rescue, first aid and the use of light rescue equipment, and will incorporate gender, psycho-social and disability considerations. CPP volunteers will also be trained to assist with embankment repair and strengthening. CPP volunteers will be equipped with the necessary personal equipment, including protective clothing, torches and signal flags. |
| Health care workers | During non-disaster periods, health care workers on the floating ambulance will also communicate with patients via mobile phone, i.e. through a Mobile Health Support System (M-Health). This system will allow health care workers to maintain contact with patients that have critical or chronic conditions. The floating ambulance will be integrated with the existing healthcare infrastructure in the region, including the community clinic on Mujibnagar and other clinics on Char Fasson. |
| Permanent staff of Farmer Field Schools | Permanent staff of farmer field schools will be responsible for hosting workshops for local farmers to learn about proven innovative food production techniques, including: i) hydroponics; ii) fish farms; iii) vertical gardens; iv) the selection and use of climate-resilient cultivars; and v) other climate-resilient agricultural practices. |
| Farmers | Farmers living in Mujibnagar and Lakshmitari will be trained through farmer field schools that will be established in the two sites to increase their awareness of different climate-resilient agricultural techniques. |
| Teachers and religious leaders | Teachers and religious leaders will be trained to disseminate climate change information to school children and other community members through schools and community awareness programmes in Mujibnagar, Lakshmitari and the surrounding areas. This will include information on the nature of climate change, its impacts in Bangladesh and local adaptation options. |
| School children and other community members | School children and community members will receive climate change information through school and community awareness programs. |

## 6.3 Stakeholder engagement programme

This section presents the stakeholder activities that will be conducted during the implementation phase of the project, considering that stakeholder engagement is an ongoing process that may involve, to varying degrees, the following elements: stakeholder analysis and planning, dissemination of information, consultation and meaningful participation, grievance redress, and inclusion of stakeholders in monitoring and evaluation. The stakeholder engagement processes included in this program will be based on the following principles:

* Use a range of engagement fora, promoting group discussion to enable quality dialogue and conversations that allow people to develop a more complex understanding of the project activities and their relation to climate change adaptation in the region.
* Information should be presented in different ways to accommodate the various learning styles and needs in the communities.
* Promote feedback loops and enable opportunities for stakeholders to have input into decisions.
* Foster trust, respect and ownership of the project activities and products.
* Respect different viewpoints and inputs.
* Provide transparent and gender-inclusive processes.
  + 1. Participatory planning, consultation and beneficiary selection

A wide range of stakeholders have been consulted during the development of this project proposal. Firstly, the proposed project’s Executing Entity, the Ministry of Environment, Forest and Climate Change (MoEFCC) was consulted through the iterative process of refining the project design. Stakeholders that took part in the consultative process also included: i) Bangladesh Water Development Board (BWDB); ii) Housing and Building Research Institute (HBRI); iii) Local Government Engineering Department (LGED); iv) local-level Non-Governmental Organisations (NGOs); v) academic and research institutions; vi) relevant UN agencies; and vii) representatives from the private sector. There was a particular focus on consultation with communities in the target areas of Mujibnagar and Lakshmitari. These consultations specifically included women and considered the voices of marginalised groups such as landless char dwellers. During the project preparation phase, consultations between national institutions proposing the project and institutions and communities in the target areas of the project were carried out. Consultations were done through planning workshops, focus group sessions, and semi-structured interviews and meetings. The consulting process contributed to: i) clearly identifying the roles and responsibilities of the principal participants in the project; ii) guaranteeing their full knowledge regarding the formulation of the project and its objectives; and iii) using the experience and input of participants in defining the project strategy and activities. The details of these consultations are further described below.

**a) Consultation workshop**

The consultation workshop has been conducted on 19 December 2016, with key stakeholders including MoEF, DoE, the UNDP Country Office, C3ER (Consultant of the project), and Bureau of Water Development Board.

The key issues discussed during the workshop includes:

* DoE shall organize a stakeholder validation meeting with the relevant ministries and resource persons from different divisions.
* Institution wise implementation issues need to be explored based on their experiences during CDSP, CDMP and similar projects.
* A steering committee meeting would take place headed by the secretary of MoEF
* The project shall be scaled down to do fewer innovative and high impact focused activities
* The options for earthen, timber, non-fire brick, sunburnt brick structures could be explored
* Afforestation could be kept as an optional activity
* The proposed project needs to be linked with National (e.g. 7th Five Year Plan) and Global (e.g. Sustainable Development Goal) policies
* The fund can be increased to US$ 15 Million
* It could be explored if MoEF can co-finance the project
* Options for cluster village and the compact village could be explored
* The feasibility of a floating house in the context of Bangladesh was questioned. Rather it was suggested that the activity window needs to scale down and focus on adding sanitation options.
* The idea of *Killa* was appreciated
* Result framework needs to quantify the specifications and baseline and indicators need to be elaborated.

**b) Community consultations and validation workshop**

Community consultations were done in ward no 1, 2, 3, 4 and 9 of the Mujibnagar Union, Bhola on 23 November 2017 and Rangpur on 06 December 2017. Members of the communities, local government institutions officers, national government institution officials, potential beneficiaries, and other potential stakeholders were consulted through in-depth interview (IDI), key informant interview (KII), and focus group discussion (FGD).

Validation workshop was held on 24 December 2018 where a total of 30 representatives from the relevant ministries, line agencies, experts, NGOs, private sectors and relevant officials of the MoEFCC, DoE, UNDP Bangladesh, Centre for Climate Change and Environmental Research(C3ER) attended the workshop. All of these consultations lead to the identification and their interest in the project. Key issues during the workshop include:

1. Composition of the Project Steering Committee will be revised. Project board and senior supplier will be removed. Project steering committee will be headed by Secretary and Project implementation committee would be headed by Director General, Department of Environment.
2. The proposed project will be implemented by the Ministry of Environment, Forest and climate change, while Department of Environment will execute the project.
3. The project implementation will follow the National Execution (NEX) Modalities.
4. A committee shall be constituted for the selection of NGOs/local firms/private companies to execute particular activities at the local level following proper procurement process.
5. The MoEFCC endorsed this project proposal in principle and agreed for submission of Project Proposal to the AFB by 7 January 2019 with incorporation of suggested revision provided in the validation workshop. However, detail implementation modality with implementing partner’s endorsement will be provided in the TAPP and Project Document after endorsement of the proposal by AFB.
6. UNDP will submit final project proposal to MoEFCC by 3 January 2019.
7. MoEFCC as the Designated Authority of Adaptation Fund in Bangladesh shall issue a Letter of Endorsement (LoE) to facilitate the formal submission of the proposed project to AF by 7 January 2019.

* + 1. Capacity building

Capacity building activities have been integrated in all project components, in order to address the barrier of weak capacities that is hindering climate change adaptation in the intervention area. Enhancing capacities will lead to better mobilization of local organisations and leaders, helping more precise articulation and incorporation of community needs into the project implementation and for future initiatives.

**Table 11. Capacity building activities included in each component**

|  |  |
| --- | --- |
| **Component 1** | * Project partner NGO will provide assistance to 900 most vulnerable households selected, in the form of technical advice, labour, tools and materials. * Local construction workers such as carpenters and masons will be trained to ensure the adoption of climate-resilient construction techniques and standards beyond the selected most vulnerable households * Partner NGO will assist landless people to secure khas land (government-owned vacant land) for their houses, in consultation with the community to avoid land-use conflicts. * Community groups will be trained and equipped to operate and maintain the nano-grids * Community members will be trained to: i) manage the preservation and distribution of surface water in areas that experience water stress during the dry season and/or because of saline intrusion; and ii) assist community members with the maintenance of rainwater harvesting systems |
| **Component 2** | * Community embankment management groups will be provided with incentives such as fish farms or social forestry next to embankments. * Community members will be engaged in the CPP volunteer training programme on Mujibnagar. The training programmes will include search and rescue, water rescue, first aid and the use of light rescue equipment, and will incorporate gender, psycho-social and disability considerations. These CPP training programmes will seek to increase the representation of women in the volunteer corps by a further 25%. In addition to the above training, CPP volunteers will also be trained to assist with embankment repair and strengthening. The CPP volunteers will be equipped with the necessary personal equipment, including protective clothing, torches and signal flags. |
| **Component 3** | * Local farmers will be trained in farmer field schools about proven innovative food production techniques, including on the use of: i) hydroponics; ii) fish farms; iii) vertical gardens; iv) the selection and use of climate-resilient cultivars; and v) other climate-resilient agricultural practices. * House Building Research Institute will assist most vulnerable households to develop alternative livelihoods to make non-fired bricks. * The partner NGO will provide support in the form of technology, training and material provisioning to vulnerable households who will receive livelihood assistance |
| **Component 4** | * Building the capacity of local government institutions, the Bangladesh Water Development Board and the Department of Agriculture extension service to promote climate-resilient approaches in char communities * Teachers and religious leaders will be trained to disseminate climate change information to schoolchildren and other community members through schools and community awareness programmes in Mujibnagar, Lakshmitari and the surrounding areas. |

* + 1. Disclosure and dissemination of information

Knowledge will be generated and information collected through Activity 3.1.1. Establishing farmer field schools and training farmers for innovation and research on climate resilient agricultural practices along with Activity 4.2.1. Establishing local innovation and knowledge centres to collect and disseminate innovative adaptation options. Under these activities, knowledge will be generated on both flood- and drought-resilient crop varieties as well as climate-resilient agricultural livelihood options. Such information will be collected through research and field trials.

Knowledge will be generated, collected, and disseminated through the activities in: Output 4.2. Knowledge and awareness generated to promote climate resilient approaches and strategies. The activities under this output will build the capacity of: i) agricultural extension staff of the Bangladesh Water Development Board and the Department of Agriculture to promote climate-resilient agriculture in char land communities; and ii) local government representatives on the relevant ecosystem-based and community-based adaptation measures so that they can facilitate the uptake of these measures among char land communities. Lessons learned and best practices on community-based and ecosystem-based adaptation interventions will be collected and disseminated on a regular basis by the local knowledge centres established by the project, as well as by the project offices in each target area. Sharing of project experiences will be supported through: i) attendance of national and provincial climate change and disaster risk management forums; ii) presentations at regional forums and meetings; iii) the organisation of exchange site visits between participating communities; and iv) the development of manuals and training materials. Knowledge on climate change adaptation will be disseminated to schoolchildren and community members. This will be done by training religious leaders and school teachers to disseminate climate change information to schoolchildren and other community members through schools and community awareness programmes. School curricula will also be augmented to incorporate information on climate change. In addition, outreach mechanisms will be established, through inter alia: i) project websites; ii) brochures; and iii) public events. These outreach mechanisms will be supported through social media to effectively communicate project updates and disseminate information about climate change impacts and adaptation options.

To facilitate the dissemination of knowledge, there will be a broad range of knowledge products designed and developed, which are likely to include:

* local media news items, including TV, radio, online news websites;
* technical reports;
* briefing papers for policymakers;
* case studies, photo stories and short videos;
* booklets, posters and brochures;
* public and school presentations;
* climate hazard maps;
* evacuation mock drills to prepare for disaster scenarios;
* trainings, meetings, exchange visits and workshops for community members, community leaders, CBOs, and civil authorities regarding climate change and disaster risk reduction; and
* community briefs and guidelines on ecosystem-based adaptation options, rainwater harvesting mechanisms, solar irrigation systems, environmental awareness, and crop diversification.

## Gender assessment and action plan

* + 1. Background

Bangladesh is a developing nation with almost half of the population being women who are involved in agriculture and economic activities. As such women bear significant share of contribution to development. Therefore, the impending impacts of climate change particularly the increasing frequency and intensity of extreme climatic events affecting agriculture, water resources and the livelihoods of poor women not only impede the development activities, but also exerts direct vulnerability to women.

Being the primary victim of climate change impacts, women can play a central role in climate change adaptation. Women also could play a key role in mitigating climate change by optimizing energy efficiency, using low-footprint energy sources and techniques, and influencing a household’s and community’s consumption patterns. Therefore, when it comes to decision-making and implementation towards building resilient communities in the face of climate change, the full and meaningful participation of women is essential.

Women living in chars are highly dependent to locally available natural resources to meet the daily needs of their families. Also, they face water, sanitation and health challenges due to unfavorable climatic conditions. For example, salinity intrusion causes unavailability of drinking water, health issues by creating itching problems, high blood pressure, loss of agricultural products, etc. On the other hand, drought can cause scarcity of drinking water, heat strokes, burning of crops, etc. Women bear the burden of fetching water for their families and spend significant amounts of time hauling water daily from distant sources. The water is rarely enough to meet the needs of the household and is often contaminated, such that women also pay the heaviest price for poor sanitation. Moreover, damage of sanitation systems creates sufferings for women. Lack of toilet facilities increases physical insecurity for them. Many women refrain from using the toilet during the day and consequently suffer from urinary tract infections. Pregnant women, lactating mothers and differently disabled women suffered the most, as they found it difficult to move before and after the cyclone hit.

This project has evaluated the impacts of climate change from both male and female perspectives in both offshore island and riverine char areas. Limited or no access to health care infrastructure inadequacy, lack of water and sanitation facilities, as well as lack of secured livelihood and income had made the condition of both men and women more vulnerable, however, these impacts affect women more than men. Furthermore, these lead to both areas experiencing socio-economic problems causing poverty, unemployment, child labour, early marriage, migration, educational instability, social unrest and finally psychosocial problems that ultimately increase the difficulties experienced by the inhabitants of these chars. From the field visit, it has been found both coastal and riverine chars are facing school dropout, which is ascribed mostly to remoteness from the mainland. As a result, in both chars, due to educational drop out, female students are getting married at an early age. The early marriage of young girls, in turn, causes health hazards. The rate of maternal and child mortalities is high in these areas. During the post-disaster period, women and children suffer from several diseases and one of the major reasons is the lack of water and sanitation facilities.

* + 1. Mainstreaming of gender in climate change policies

**Bangladesh Climate Change Strategy and Action Plan (BCCSAP)** has been prepared in 2008 and revised in 2009. This is now an approved document of the Government. This is expected to be the blueprint for subsequent integration of climate change issues such as mitigation, adaptation, technology transfer and development, and capacity building into the mainstream planning process. The serious consequences of climate change, including especially the consequences for Bangladesh, lead naturally to the question of what should be our response. Two types of response need to be considered. The first relates to adaptation, and the second relates to mitigation.

A review of how gender is addressed in the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) was carried out by the German international cooperation agency (GIZ) in 2012. The review noted that of the 44 BCCSAP programs, only four mentioned gender specifically. Also, the BCCSAP does not refer to women as actors in addressing climate change. The Asia Foundation (2014) noted that BCCSAP considers gender issues on the basis of specific programs. However, specific attempts to integrate or mainstream gender across all sectors and programs are not made. For example, of the nine programs with 29 activities under the BCCSAP theme “Food Security, Social Protection and Health,” only one activity has a specific linkage with “women and gender relations,” in which a comprehensive study is planned to assess the impact of climate change on women and gender relations and to develop recommendations to address these in all actions under the BCCSAP.

The National Adaptation Programme of Action (NAPA) for Bangladesh has been prepared by the Ministry of Environment and Forest (MOEF), Government of the People’s Republic of Bangladesh as a response to the decision of the Seventh Session of the Conference of the Parties (COP7) of the United Nations Framework Convention on Climate Change (UNFCCC). Through the action plans of the NAPA, the UNFCCC recognizes that men and women have different roles in securing livelihoods in the developing world. The action plans include gender in a more comprehensive manner throughout the document. It was recognized in the action plans that climate change experience will vary depending on their gender, poverty levels and their location (coastal or non- coastal, rural or urban). The NAPA identified poverty reduction and security of livelihoods with a gender perspective as the most important set of criteria for prioritization of adaptation needs and activities.

The objective of the **Bangladesh Climate Change and Gender Action Plan (2013)** is ‘to mainstream gender concerns into climate change-related policies, strategies and interventions ensuring access to, participation in, contributions towards and benefits for the diverse group of stakeholders for the sustainable and equitable development of Bangladesh. Gender considerations were integrated into four of the six main pillars as identified in the BCCSAP by the BCCGAP: i) food security, social protection and health; ii) comprehensive disaster management; iii) infrastructure and iv) mitigation and low carbon development. The remaining two pillars of the BCCSAP- research and knowledge management and capacity building and institutional strengthening, were mainstreamed within the four pillars throughout the document as cross-cutting topics. BCCGAP established clear objectives, activities and indicators, highlighting the specific contribution women do and can make within each of the four pillars as well as the required interventions necessary to incorporate the role of women effectively over a timeframe of five years, from 2013/14-2018/19.

Although the **National Forest Policy (1994)** states that ‘Women will be encouraged to participate in homestead and farm forestry, and participatory afforestation programs’, it does not provide specific directives to achieve the stated goal or set out other gender-specific goals (e.g. decision-making relating to forests and forest resources). The **Forestry Sector (Amendment) Rules 2009** address gender issues, according to the 2014 national report on the implementation of the Beijing Declaration and Platform for Action (1995).

In the consultation process for the **Country Investment Plan (CIP)** for agriculture, food security and nutrition (2011) included engaging with women farmers and the Ministry of Women and Children Affairs (MoWCA). Gender is articulated throughout the CIP.

The **National Women Development Policy (2011)** briefly promotes women’s role in environmental management and the importance of ensuring facilities for and the security of pregnant women in the event of natural disasters. However, the Asia Foundation noted in one of their survey’s respondents indicated that National Women Development Policy missed an opportunity to highlight climate change-related risks for women.

The **Department of Environment** has drafted gender policy in 2016 to promote gender equality. The purpose of this policy is to mainstream gender issues in the development process of the department to enhance participation of women and men in sustainable and equitable way. This policy is designed to improve the performance of DoE in an effective way with skills, talents and opportunities for both women and men. DoE’s draft Gender Policy is in line with National Women Development Policy, 2011. The policy integrates gender equity goals and objectives into its entire organisational processes and structure. The ultimate goal of this policy is to eliminate all forms of discrimination against women. To attain this goal, specific strategies were followed including awareness raising initiatives, women’s participation in top-level positions and providing technical and financial resources for implementation of the policy.

The national policies recognize the importance of women in climate change adaptation and promotes their participation in different activities. This project is well aligned with the national policies as it highly promotes activities that will benefit both men can women equally. The project not only aims to fulfill the basic needs and safety of women in vulnerable areas, it also emphasizes on capacity and knowledge building of women so that they can equally participate in different activities like men. Including women in all the activities will further enhance the sustainability of the project.

* + 1. Gender action plan

The proposal contains four components, which all incorporate gender considerations. During project design, participatory exercises to identify locations and beneficiaries for the implementation of project interventions will be done with target beneficiaries. These interventions include: i) climate-resilient housing; ii) livelihood support; iii) drinking water solutions; iv) lighting solutions; and v) capacity-building. This process of identification accounted for current and future investments in climate resilience from the government and other development players, such as NGOs, so that duplication is avoided. The housing solutions will only be provided to households – and especially women-headed households – who are extremely vulnerable to climate change impacts because of their location and poor infrastructure. The livelihood solutions will be made available to those who are engaged in poorly adapted livelihoods, and that require support to shift towards climate-resilient livelihoods. The plinth-raise of cluster houses or mini-disaster houses will be provided where land is available for construction and where cyclone shelters are far away or unreachable. Successful resilience practices will be distributed as widely as possible through including all people in the targeted islands.

During the first phase of implementation, the final selection of beneficiaries will be based on the intersectional vulnerability of households, including prioritisation of: i) female-headed households; ii) households where an adolescent girl is solely responsible for household income; ii) households with indigenous people; and iii) households with people with disabilities. In addition, the selection will proportionally reflect the percentage of ethnic and religious minority households, to ensure that those with additional barriers to accessing resources are not further marginalised.

The final selection will prioritise the following beneficiaries:

* Gender: female-headed households (including those widowed, divorced or separated / abandoned).
* Age: for livelihoods, women between 18-49; for other support, households with children and the elderly.
* Income: households with income of less than US$1.25 per person per day.
* Household Status:
  + Women and girl beneficiaries from households where there are no able male members to earn livelihoods.
  + Women from households where there are a greater number of dependent members on the women (household members chronically ill; physically, mentally and/or visually impaired or disabled).
  + Indigenous (“Adivasi”) households.
* Land: for agricultural livelihoods, households that possess less than 30 decimals (1,214 m2) of previously usable agricultural land and possess less than 50 decimals (2,023 m2) of land in total. For housing support, priority will be given to people living on land exposed to extreme climatic events, people with only homestead land and landless people who arrange public land through official/customary process.
* Other requirements to assess eligibility:
  + Hindu minority households will be represented in proportion to their overall population in the wards.
  + The beneficiary cannot have been a recipient of GoB’s or any NGO’s schemes of similar nature and/or quantity of support within the last two years.

Component 1, in particular, will include a strong gendered focus on supporting women-led households, improve gender equality and social inclusion. The other three components will also include gender-sensitive planning that responds to gender differences and identifies opportunities and reduces and places emphasis on women’s vulnerability. For instance, component one comprises of: i) plinth raising and house strengthening for reducing flood/storm surge exposure; ii) community-level nano-grid facilities; and iii) household-level rainwater harvesting options implemented for safe drinking water supply, which will all improve the health and well-being of women and children.

It is apparent that women and children are the most vulnerable and are likely to be affected more by the impacts of climate change. All other components such as climate information system, knowledge management & research and capacity building and institutional reformation involve activities that increase the capabilities to cope with climate change adaptation. Training and capacity building program for the CBOs/WMOs on disaster emergency management, climate change adaptation, first aid, as well as capacity technical workshops on the establishment, use, and maintenance of climate early warning system, including the interpretation and application of tailored climate information services, will target community members as well as women and children to enhance their capacity to address their adaptation deficit.

Component 2 of the proposed interventions are designed to develop the resilience of women by ensuring their livelihood, health and by increasing their capacity. The raised platform cluster houses will provide better security to women in times of flood. Also, it will ensure improved water supply and sanitation for them. They will also be able to do homestead gardening which will enhance their economic capacity. Moreover, women can actively take part in embankment management activities. Elements of component 2 and component 3 are designed specifically to address the most pressing issues facing women in the project target areas, which include limited access to alternative livelihoods and provision of health services. These components will enhance the ability of women to influence their livelihood strategies by: i) increasing livelihood and income generating opportunities; ii) increasing the sustainability of livelihoods; iii) ensuring access to skills building for beneficiaries on non-climate sensitive livelihood diversification; and iv) ensuring the provision of public health services for the most vulnerable rural inhabitants.

Alternative livelihood options are assessed, designed and implemented in the participation of the ultra-poor women for non-climate sensitive livelihood (e.g., sewing, livestock rearing, shop, poultry) through training and the provision of material to support livelihood diversification and income risk reduction. Training and capacity building of the beneficiaries on non-climate sensitive livelihood diversification and income protection will be delivered.

The floating ambulance will provide service to women during emergency especially for pregnant women. The floating ambulance will have provision for child delivery. Also, it will have an intensive care that will be able to give support to babies for a few days until better treatment is arranged. Other primary treatments and necessary medicines for women will be also available in the floating ambulance. This will help to ensure better health for mother and children.

The natural cold storage and solar powered irrigation pump will help to improve agriculture in the study area. Women will be also involved to use and maintain these facilities which will increase their capacity. Also, agricultural improvement will lead to better food security that will help to ensure better health and nutrition for women.

## Complaints register and grievance redress

6.5.1 UNDP’s grievance redress standards

UNDP will ensure that grievance mechanism is in place so that individuals and communities potentially affected by the project have access to effective mechanisms and procedures for raising concerns about the social and environmental performance of the UNDP Project. UNDP will ensure that its Implementing Partners and its own Project managers provide clear and constructive responses to potential grievances, correct non-compliance where it has occurred, and share the results of grievance processes.

When necessary, UNDP will ensure that an effective Project-level grievance mechanism is available. The mandate and functions of a project-level grievance mechanism could be executed by the Project Board or through an Implementing Partner’s existing grievance mechanisms or procedures for addressing stakeholder concerns. Where needed, UNDP and Implementing Partners will strengthen the Implementing Partners’ capacities to address Project-related grievances.

Project-level grievance mechanisms and UNDP’s Stakeholder Response Mechanism (7.5.3) will address concerns promptly through dialogue and engagement, using an understandable and transparent process that is culturally appropriate, rights compatible, and readily accessible to all stakeholders at no cost and without retribution. They will be gender- and age-inclusive and responsive and address potential access barriers to women, the elderly, the disabled, youth and other potentially marginalized groups as appropriate to the Project. These grievance mechanisms and Stakeholder Response Mechanism will not impede access to judicial or administrative remedies as may be relevant or applicable.

Monitoring activities will be commensurate with the Project’s risks and impacts. UNDP requires that (i) the progress of implementation of mitigation/ management plans required by the SES is monitored, (ii) complaints/grievances are tracked and monitored; (iii) follow-up on any identified corrective actions is tracked; and (iv) any required monitoring reports on SES implementation are finalized and disclosed.

* + 1. Project level grievance redress mechanism

The Department of Environment will implement the project level Grievance Redress Mechanism (GRM) which will be implemented by the Project Management Unit (PMU) under the leadership of the Department of Environment Secretary who will oversee the grievance mechanism. The project level GRM, which will align with the standard UNDP, will be implemented in two phases: i) Phase 1 to support safeguards implementation; ii) Phase 2, will cover all components and overall project implementation. A formal grievance redress process for Phase 2 will be outlined in the project’s operations manual, and a protocol will be set-up and distributed to project staff and Responsible Parties. The project level protocol will build on existing institutional grievance management mechanism which includes a toll-free helpline service.

A publicized telephone number will be maintained throughout the project to serve as a point of contact for enquiries and concerns. All enquiries, concerns and complaints will be recorded on a register and the appropriate manager will be informed. Where there is a community issue raised, the following information will be recorded:

* time, date and nature of enquiry, complaint or concern;
* type of communication (e.g. telephone, letter, personal contact);
* name, contact address and contact number;
* response and investigation undertaken as a result of the enquiry, complaint or concern;
* actions taken and name of the person taking action.

All enquiries, complaints and concerns will be investigated and a response given to the complainant in a timely manner. The National Project Coordinator will be responsible for undertaking a review of all enquiries, complaints and concerns and ensuring progress toward resolution of each matter. Some enquiries, complaints and concerns may require an extended period to address. The complainant(s) will be kept informed of progress towards rectifying the concern. The project team will seek to resolve the complaint as soon as possible, and thus avoid escalation of issues. A summary list of complaints received and their disposition must be published in a report produced annually. Stakeholders and complainants can also access MoEFCC’s Complaints Attention Center, which provides attention and solutions to information inquiries, complaints and suggestions.

* + 1. Stakeholder response mechanism

The Stakeholder Response Mechanism (SRM) is available when Implementing Partner and UNDP project-level stakeholder engagement processes have not resolved issues of concern. UNDP Bangladesh management will lead in Stakeholder Response, with support from the headquarters.

Any person or community potentially affected by the project may file a request for a response from the SRM, if they have previously raised their concerns with Implementing Partners and/or with UNDP through standard channels and have not been satisfied with the response. The request must include how the affected person or community has been adversely affected by the UNDP project.

* + 1. UNDP’s accountability mechanism

One of the objectives of UNDP’s Social and Environmental Standards is to ensure full and effective stakeholder engagement, including through a mechanism to respond to complaints from project-affected people. The Standards are underpinned by an Accountability Mechanism with two key components: i) A Compliance Review to respond to claims that UNDP is not in compliance with applicable environmental and social policies; and ii) A Stakeholder Response Mechanism (SRM) that ensures individuals, peoples, and communities affected by projects have access to appropriate grievance resolution procedures for hearing and addressing project-related complaints and disputes.

The Social and Environmental Compliance Unit (SECU) investigates alleged non-compliance with UNDP’s Social and Environmental Standards and Screening Procedures from project-affected stakeholders and recommends measures to address findings of non-compliance. The Stakeholder Response Mechanism (SRM), on the other hand, helps project-affected stakeholders, UNDP’s partners and others jointly address grievances or disputes related to the social and/or environmental impacts of UND-supported projects.

Affected people can either ask SECU to pursue a compliance review to examine UNDP’s compliance with UNDP social and environmental commitments, or they can attempt to resolve complaints and disputes through the SRM or they can simultaneously ask both for compliance review and resolution of their concerns.

Affected people can submit all SECU and SRM requests via the online webform located at [**https://undp.tnwreports.com/?lang=en-US**](https://undp.tnwreports.com/?lang=en-US). Affected people may also submit requests via telephone hotline, email or the post.

|  |  |  |
| --- | --- | --- |
| **Mode of Communication** | **Details** | **Remarks** |
| Telephone/Cell phone | 001-844-595-5206 | Cost incurred by caller |
| Skype | 001-844-595-5206 | Caller needs to connect to wifi or should have mobile data plan |
| Email | [project.concerns@undp.org](mailto:project.concerns@undp.org) | Submission of communication in any language. There are no strict format or language requirements. |
| Post | Attn: SECU/SRM, OAI, UNDP 1 U.N. Plaza, 4th Floor New York, NY USA 10017 | Submission of communication in any language. There are no strict format or language requirements. |

Affected people who will file complaint must include the following information:

* Name, address, telephone/cell number, and other contact information.
* Whether the complainant(s) wish to keep their identity confidential, and if so, why.
* Name, location, and nature of the UNDP project (if known).
* How the complainants believe they have been, or are likely to be, adversely affected by the UNDP-supported project.
* If a third party, such as a civil society organisation, is filing a complaint on behalf of an affected individual or community, the complaint should include evidence the third party is working on behalf of the individual or community.
* Although helpful, it is not necessary to cite to specific UNDP standards or policies (such as the UNDP's Social and Environmental Standards).

# 7. Implementation schedule and cost estimates

| **Activity** | **Year** | | | | | **Responsible institution** | **Budget (BDT Million)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 2021 | 2022 | 2023 | 2024 | 2025 |
| 1. **Enhanced climate resilience of households** |  |  |  |  |  |  |  |
| 1. Cyclone and flood resilient houses |  |  |  |  |  | MoEFCC / UNDP | 126.99 |
| 1. Community level nano-grid facility |  |  |  |  |  | MoEFCC / UNDP | 12.27 |
| 1. Locally appropriate rainwater harvesting |  |  |  |  |  | MoEFCC / UNDP | 21.17 |
| 1. Project technical support |  |  |  |  |  | PMU at DoE / MoEFCC | 6.23 |
| 1. **Increased climate resilience of communities** |  |  |  |  |  |  |  |
| 1. Climate resilient mini-cyclone shelter / cluster houses built to protect life and prevent asset loss |  |  |  |  |  | MoEFCC / UNDP | 66.40 |
| 1. Embankment / drainage facility improvement |  |  |  |  |  | BWDB / UNDP | 31.13 |
| 1. Embankment / river bank strengthening through EbA |  |  |  |  |  | MoEFCC / UNDP | 17.33 |
| 1. Climate-resilient investment on chars promoted through climate hazard maps and expanded cyclone early warning systems |  |  |  |  |  | MoEFCC / CPP / DDM / UNDP | 1.33 |
| 1. Procurement of CPP equipment |  |  |  |  |  | MoEFCC / UNDP / DDM | 31.96 |
| 1. Procurement of mobile ambulance |  |  |  |  |  | MoEFCC / MoHFW / UNDP | 17.61 |
| 1. Project technical support |  |  |  |  |  | PMU at DoE / MoEFCC | 26.62 |
| 1. **Improved income and food security of communities** |  |  |  |  |  |  |  |
| 1. Establish and maintain demonstration sites |  |  |  |  |  | MoEFCC / LGIs / UNDP | 2.37 |
| 1. Training in farmer field schools |  |  |  |  |  | MoEFCC / LGIs / UNDP | 13.49 |
| 1. Procurement and installation of cold storage facilities |  |  |  |  |  | MoEFCC / LGIs / UNDP | 16.60 |
| 1. Solar powered pump |  |  |  |  |  | MoEFCC / LGIs / UNDP | 42.58 |
| 1. Financial assistance for alternative livelihoods |  |  |  |  |  | MoEFCC / LGIs / UNDP | 188.83 |
| 1. Project technical support |  |  |  |  |  | PMU at DoE / MoEFCC | 18.09 |
| 1. **Enhanced knowledge and capacity of communities, government and policy makers** |  |  |  |  |  |  |  |
| 1. Workshops to increase capacity of local government and extension officers |  |  |  |  |  | PMU at DoE / MoEFCC | 3.11 |
| 1. Construction of climate resilient innovation centres |  |  |  |  |  | PMU at DoE / MoEFCC | 14.94 |
| 1. Information dissemination via radio broadcasts, public billboards, pamphlets and advocacy |  |  |  |  |  | PMU at DoE / MoEFCC | 8.22 |
| 1. Regional workshops / seminars |  |  |  |  |  | PMU at DoE / MoEFCC | 2.24 |
| 1. Exchange visits between different communities |  |  |  |  |  | PMU at DoE / MoEFCC | 2.66 |
| 1. Project technical support |  |  |  |  |  | PMU at DoE / MoEFCC | 19.85 |
| TOTAL PROJECT COST (including Project Management and Implementing Entity fees) |  |  |  |  |  |  | 829.62 |

# Annex 1. Social and Environmental Screening Checklist

*The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document. Please refer to the* [*Social and Environmental Screening Procedure*](http://www.undp.org/content/undp/en/home/librarypage/operations1/undp-social-and-environmental-screening-procedure.html) *and* [*Toolkit*](https://intranet.undp.org/unit/bpps/DI/SES_Toolkit) *for guidance on how to answer the 6 questions.*

**Project Information**

|  |  |
| --- | --- |
| ***Project Information*** |  |
| 1. Project Title | Adaptation Initiative for Climate Vulnerable Offshore Small Islands and Riverine Charland in Bangladesh |
| 1. Project Number | N/A |
| 1. Location (Global/Region/Country) | Bangladesh |

**Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability**

|  |
| --- |
| **QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?** |
| ***Briefly describe in the space below how the Project mainstreams the human-rights-based approach*** |
| The project has a specific human rights approach to improve the adaptive capacity of the most vulnerable community members in two chars in rural Bangladesh and will focus on the most vulnerable socio-economic groups, i.e., women and the landless belonging to extremely poor households. It will improve the climate resilience and adaptive capacity of ~32,000 vulnerable char dwellers by improving their housing and provisioning them with clean water and electricity. The project will also support the improvement of agricultural livelihoods and the development of new climate resilient livelihood options. The majority of alternative livelihood support will be focused towards women, which will empower women, who, among other members of the rural Bangladesh society, are most susceptible to human rights violation in different spheres of their lives.  Through this approach, the project adopts the principle of positive discrimination and includes specifically the most discriminated, marginalized and the poorest people in the communities. Both in principle and in practical terms, human rights will be upheld and promoted. By including all of the most disadvantaged people in the community-based activities, they will be provided with an opportunity to assert their socio-political and economic rights.  Although there are existing human rights issues in the project areas (e.g., discrimination against women), the project itself will not result in any violation of human rights. Instead, it is committed to addressing human rights violations as much as possible. The process of fostering gender equality and empowerment of women is expected to reduce the occurrence of the most common human rights violations in the area (i.e. violence against women). A grievance redress mechanism has also been developed for the project and is included in the Environmental and Social Management Plan prepared as part of the project (see Annex 5).  The project will promote human rights based on the Universal Declaration of Human Rights. This will be achieved by creating awareness with all stakeholders in the project operations, including during project design, implementation, monitoring and evaluation. |
| ***Briefly describe in the space below how the Project is likely to improve gender equality and women’s empowerment*** |
| This project incorporates gender considerations into all interventions, including for all training, support and awareness raising activities. Although the primary focus of the project is on households that have the greatest vulnerability, the position of women in Bangladesh – especially in relation to climate change impacts – makes them the most likely the key beneficiaries of the project interventions. The project interventions that focus on improving resilient infrastructure will benefit women in particular, as the twenty cluster houses will have women-led households as the prioritised beneficiaries. The use of these houses as shelters during cyclones and floods will also empower women, by positioning the owners of the cluster houses (i.e. women) as the authority governing these shelters for the duration of the cyclone or flood. This will also ensure that other women and girls are provided with safe shelters. The project will also focus on developing the livelihoods of the local communities, by improving agricultural knowledge and techniques and developing new alternative livelihood options. The development of alternative livelihoods (which will prioritise female beneficiaries) will empower women by providing them with the training and materials they require to become self-sufficient if they choose to. By improving the economic productivity and self-sufficiency of women through this activity, the project will support a shift towards greater empowerment of women. To support gender equality, the training and awareness-raising activities held at the knowledge and innovation centres will include a minimum of 50% female representation and will incorporate gender sensitivity training. This will include the training for the farmer field schools, community training for embankment management and community training for the maintenance of newly constructed infrastructure (i.e. nano-grids and rainwater harvesting systems). |
| ***Briefly describe in the space below how the Project mainstreams environmental sustainability*** |
| The project focuses on improving the social condition of the target populations, however, environmental sustainability is an important aspect of this. Environmental sustainability will be promoted by the project in a number of ways. Firstly, the project will generate environmental co-benefits through the establishment of solar energy for at least 600 houses. This will provide clean energy to the local communities, reducing the dependence on fuelwood or fossil fuels and avoiding the associated GHG emissions. The implementation of solar energy will also serve as a model for other rural areas of Bangladesh, thereby mainstreaming decentralised renewable energy solutions. Secondly, the project will incorporate environmental awareness-raising campaigns for local schools and communities. This will improve local understanding of climate change, but also of the importance of environmental sustainability and maintaining functional ecosystems. Thirdly, Ecosystem-based Adaptation measures, such as planting grass and mangrove trees, will be used to strengthen embankments and eroding riverbanks. This will provide biodiversity co-benefits that would not result from regular embankment construction, as well as providing some mitigation co-benefits through carbon sequestration by trees and mangroves in particular. |

**Part B. Identifying and Managing Social and Environmental Risks**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **QUESTION 2: What are the Potential Social and Environmental Risks?**  *Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses). If no risks have been identified in Attachment 1 then note “No Risks Identified” and skip to Question 4 and Select “Low Risk”. Questions 5 and 6 not required for Low-Risk Projects.* | **QUESTION 3: What is the level of significance of the potential social and environmental risks?**  *Note: Respond to Questions 4 and 5 below before proceeding to Question 6* | | | | **QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?** | |
| *Risk Description* | *Impact and Probability (1-5)* | *Significance*  *(Low, Moderate, High)* | *Comments* | | *Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.* | |
| Risk 1: Disruption of livelihood and restriction of availability and access to resources | I = 3  P = 1 | Moderate | Some project interventions may disrupt the livelihood of affected people, restricting their income. Activities under the project may also temporarily restrict other people on their access to their source of livelihood such as agriculture. | | Local construction workers will be trained on climate-resilient building techniques through workshops to allow fast reliable construction that will only briefly disrupt the livelihoods or access to resources of affected households. Partner NGOs, local government and community members will coordinate the accommodation of affected people who will be temporarily displaced during repair of their houses. If the beneficiary is landless, the government will provide land, e.g. khas or vacant government owned land | |
| Risk 2: Temporary displacement and/or disruption of access to source of livelihood | I = 3  P = 1 | Moderate | Interventions that involve repair of houses, raising of plinths, installation of nano-grids, and construction of rainwater harvesting may cause temporary displacement and/or disrupt people’s access to their source of livelihood. | | Consultations will be undertaken in a transparent manner to identify the 900 vulnerable households in Lakshmitari and Mujibnagar that will prioritise women-led and poor people living close to or outside the embankments. The consultation will include the hazards faced by each household, including temporary dislocation during retrofitting of houses.  To prevent prolonged temporary physical and economic displacement, local construction workers will be trained on climate-resilient building techniques.  Partner NGOs, local government and community members will coordinate the accommodation of affected people who will be temporarily displaced during repair of their houses. If the beneficiary is landless, the government will provide land, e.g. khas or vacant government owned land | |
| Risk 3: Exclusion of women from participating and decision making | I = 3  P = 1 | Moderate | The project interventions that focus on improving resilient infrastructure will benefit women in particular, as the twenty cluster houses will have women-led households as the prioritised beneficiaries. The development of alternative livelihoods (which will prioritise female beneficiaries) will empower women by providing them with the training and materials they require to become self-sufficient if they choose to.  To support gender equality, the training and awareness-raising activities held at the knowledge and innovation centers will include a minimum of 50% female representation and will incorporate gender sensitivity training. | | As indicated in the Gender Action Plan, the project has four components which will incorporate gender considerations. Component 1 will include a strong gendered focus on supporting, among others, women-led households. The other three components will also include gender-sensitive planning that responds to gender differences and places emphasis on women’s vulnerability.  Training and capacity building program for the CBOs/WMOs on disaster emergency management, climate change adaptation, first aid, as well as capacity technical workshops on the establishment, use, and maintenance of climate early warning system, including the interpretation and application of tailored climate information services, targets community members, including women, to enhance their capacity to address their adaptation deficit. | |
| Risk 4: Exclusion of landless, differently abled and other vulnerable groups from participating and decision making | I = 3  P = 1 | Moderate | Without management measures, the establishment of community-level groups in different interventions could exclude marginalized stakeholder groups in decision making process, thereby restricting them from participating in the project and excluding them from attaining project benefits. | | The project has developed a clear beneficiary selection process where during the first phase of implementation, the final selection of beneficiaries will be based on the intersectional vulnerability of households, including prioritisation of: i) female-headed households; ii) households where an adolescent girl is solely responsible for household income; ii) households with indigenous people; and iii) households with people with disabilities. In addition, the selection will proportionally reflect the percentage of ethnic and religious minority households, to ensure that those with additional barriers to accessing resources are not further marginalised.The selection criteria will ensure that selection is not based on any religious or other discriminatory reason but will be based solely on the vulnerability assessment and strict beneficiary selection criteria.  Potential project-related concerns and/or grievances of local communities and project stakeholders will be addressed through a complaint’s register along with a Grievance Redress Mechanism | |
| Risk 5: Limitation in capacity among community members, that may exclude them from fully participating in project activities (Human rights) | I = 1  P = 1 | Low | Enhancing the capacity of the local communities to take concerted action in addressing climate change impacts, and to adapt livelihoods and agriculture to climate change, are some of the key outputs of the project. | | Project interventions that include capacity building of local carpenters, masons and electricians on climate resilient construction skills will be one of the priority activities. | |
| Risk 6: Potential conflict regarding access to cold storage | I = 1  P = 1 | Low | As the cold storage units being established by the project will not be large enough to store the food produce of all community members it is possible that conflict over cold storage access could arise. | | To support equal access to cold storage, the units will be located at the innovation centres at both of the target sites. Access to use the fridges will be determined through a beneficiary system based on assessed vulnerability for household-level food insecurity and need for short-term storage for crops intended for resale. The register will be managed by the project representatives at the innovation centres. Proportional access will be provided to store household food and crops/fish intended for sale. | |
| Risk 7: Beneficiary selection challenges | I = 1  P = 1 | Low | There is the potential for conflict to arise if community members feel that they should be prioritised for certain interventions. The beneficiary criteria will be based on vulnerability assessments, but subjective self-perceptions of vulnerability may be contradicted by the assessments. | | The project is based on similar existing programmes currently being undertaken in Bangladesh. The project has developed a clear beneficiary selection process (Annex B) that will be communicated to target communities during the project inception. Furthermore, in the event that any community members feel they are being discriminated against, they can file a complaint through the project’s grievance redress mechanism (refer to Annex 5). | |
| Risk 8: Discrimination against minority/religious/landless | I = 1  P = 1 | Low | Discrimination against minority groups is unlikely but possible as only very small numbers of minority groups are resident in the target areas, including the landless, women-led households and minority religions. | | The selection criteria will ensure that selection is not based on any religious or other discriminatory reason but will be based solely on the vulnerability assessment and strict beneficiary selection criteria (see Annex B). | |
| Risk 9: Women could face abuse or harassment when taking shelter in the cluster houses during cyclones | I = 2  P = 1 | Low | There is a high incidence rate of women becoming the victims of harassment in cyclone shelters due to the general confusion, close proximity and lack of gendered washrooms in cyclone shelters. | | The cluster houses that function as cyclone shelters will be designed to have separate wash facilities for women and for men. These cluster houses will also belong predominantly to women-led households, ensuring that women will, in general, hold the greatest authority over these shelters during cyclone events. The structure of the cluster houses will also ensure that if necessary, there are multiple rooms where women and children could be separate from men during cyclone events. | |
| Risk 10: Interventions focusing on gender equality may cause conflict regarding traditional gender norms | I = 1  P = 1 | Low | Interventions that focus on disaggregated gender targets and prioritise equal participation by both men and women may run counter to established gender norms. This may result in conflict between groups who have different perspectives on gendered roles and responsibilities. | | Gender sensitivity will be incorporated into all trainings and community level interventions, including farmer field schools, innovation centre training and awareness raising campaigns. This will reduce the occurrence of any conflict arising from the difference in perspective regarding the attendance of women or men at specific trainings and the support of women for the development of livelihoods. | |
| Risk 11: Introduction of invasive alien species that may negatively affect ecosystem | I=2  P=1 | Moderate | While it was specified that vetiver grass, mangrove trees and other trees will be used for ecosystem-based adaptation to restore embankments, there is a risk that alien invasive species will be used that may cause negative effects on native species. | | The project will adopt land-use approach for biological means of protection against erosion while providing livelihood for local communities.  The project will ensure that invasive alien species will not be introduced. The project will coordinate with MoEFCC for suitable native species of mangroves and trees that will be used for ecosystem-based adaptation | |
| Risk 12: Construction sites could pose a risk to community members ( | I = 1  P = 1 | Low | Certain project interventions will involve small earthworks, i.e. to raise plinths, to do excavations for repairing the embankments and constructing the cluster houses. Excess sediment may pose a risk post construction. The earthworks and construction sites for the cluster houses may also be hazardous during the night or other low visibility periods. | | All construction activities will be conducted under the oversight of experienced professionals who will also train local staff on best construction practices. To ensure that sediment is not mobilised through current movement that will result in an impact, all excess sediment will be moved an acceptable distance from the construction site (see Annex 5). Further, any earthworks should be undertaken during the dry season and compacted sufficiently to reduce sediment movement. All construction sites will be properly demarcated to ensure that hazardous areas, such as holes, pits and exposed sharp objects do not pose a threat to nearby communities (i.e. areas will be fenced off or demarcated with reflective hazard tape) | |
| Risk 13: Cluster houses may become structurally unsafe during extreme cyclone events | I = 3  P = 1 | Moderate | The cluster houses that function as disaster shelters could become structurally unsafe during extreme cyclone events due to the number of individuals taking shelter and the strength of the cyclone. | | The cluster house cyclone shelters will be designed according to rigorous standards to ensure they can withstand the extreme impacts of high-powered cyclones (refer to Annex A). To reduce the risk of extensive structural damage, local community members will be trained to identify signs of structural weakening, and construction specialists will conduct periodic assessments of these structures, especially after cyclones. | |
| Risk 14: The repair of embankments could be substandard leading to breaches during floods or cyclones | I = 1  P = 1 | Low | The project will involve the repair of two embankments in the target areas. If they are not repaired according to design specifications (See Annex A) they could be breached during high water events, leading to damage to assets and livelihoods. | | Prior to installation, a full site evaluation will be undertaken to assess each site. Appropriate measures will be taken to ensure that the repairs are conducted in line with best practice and meet the design specifications. Furthermore, the community training for embankment management will incorporate training to support community monitoring of embankment condition to support proactive embankment maintenance instead of reactive embankment repair. | |
| Risk 15: Plinths for retrofitted houses | I = 1  P = 1 | Low | The plinths raised for retrofitting houses may shift or subside during high water events. This may cause the plinths to sink during floods or to become unstable once waters have receded. | | The plinths will be designed, raised and compacted according to design specifications and best practices (see Annex A) to ensure that collapses will not occur during flood events. Community members who are trained to assist with retrofitting will also receive training to conduct periodic assessments on the structural stability of the plinths. | |
| Risk 16: Construction sites could pose a risk to community members | I = 1  P = 1 | Low | Certain project interventions will involve small earthworks, i.e. to raise plinths, to do excavations for repairing the embankments and constructing the cluster houses. Excess sediment may pose a risk post construction. The earthworks and construction sites for the cluster houses may also be hazardous during the night or other low visibility periods. | | All construction activities will be conducted under the oversight of experienced professionals who will also train local staff on best construction practices. To ensure that sediment is not mobilised through current movement that will result in an impact, all excess sediment will be moved an acceptable distance from the construction site (see Annex 5). Further, any earthworks should be undertaken during the dry season and compacted sufficiently to reduce sediment movement. All construction sites will be properly demarcated to ensure that hazardous areas, such as holes, pits and exposed sharp objects do not pose a threat to nearby communities (i.e. areas will be fenced off or demarcated with reflective hazard tape) | |
| Risk 17: Generation of solid and liquid wastes | I=3  P=3 | Moderate | If not managed, construction wastes that will be generated from various interventions to increase resilience of households will impact land and water bodies (if wastes were transported near coast or river). Moreover, unregulated wastes will pose as hazards to safety and health of both workers and the communities of two sites. | | To mitigate soil and water pollution, workers will be trained on proper maintenance and use of equipment. To ensure that sediment is not mobilised through current movement that will result in an impact, all excess sediment will be moved an acceptable distance from the construction site.  To lessen impacts of air and noise pollution, all retrofitting and construction works shall only be done during day time. All machineries and equipment shall also be regularly maintained. The communities will also be informed of scheduled retrofitting and construction of household interventions.  Impacts on occupational and community health and safety will be mitigated by strictly implementing oversight of experienced professionals who will also train local staff on best construction practices. All workers shall be properly trained on occupational health and safety. Workers must wear personal protective equipment (PPE) at all times during construction. Communities will be informed of scheduled construction and retrofitting. All construction sites will be properly demarcated to ensure that hazardous areas, such as holes, pits and exposed sharp objects do not pose a threat to nearby communities (i.e. areas will be fenced off or demarcated with reflective hazard tape). | |
| Risk 18: Accidental spills of oil and fuel, and unmanaged solid wastes | I = 3  P = 3 | Moderate | The repair of 14.5 km of embankment, including 1 km of breached embankment entails the use of machinery that will transport aggregates. This in turn may accidentally cause the spillage of oil and fuel that may impact soil and water bodies. The construction wastes that will be generated will likewise impact the environment in the form of siltation of water bodies. Solid wastes from construction will also be generated. If not properly disposed, this will create problem in nearby agricultural areas and water bodies. | | The materials required for the construction of embankments will be gathered from the nearest sources, and cannot be collected from borrow pit as indicated in BWDB Design Guideline (2010). In Lakshmitari, embankment materials can be collected from the river bed where temporarily submerged chars are formed**.** In Mujibnagar, embankment materials can be collected from riverside submergible char.  To mitigate the impacts on soil and water, workers will be trained on proper maintenance and use of equipment**.** The project will comply with relevant Bangladesh’s regulations on water and solid, toxic and hazardous wastes pollution[[22]](#footnote-22)**.** To ensure that sediment is not mobilised through current movement that will result in an impact, all excess sediment will be moved an acceptable distance from the construction site.Any earthworks should be undertaken during the dry season and compacted sufficiently to reduce sediment movement. Work shall be done during dry period to prevent erosion of sediments that will impact riverine and coastal environment.  To lessen the impact on air and noise environment, all construction and repair of embankments shall only be done during day time**.** All machineries and equipment shall be regularly maintained**.** The communities will be informed of scheduled retrofitting and construction of household interventions**.** Regular water sprinkling will be done to prevent air pollution.  To protect workers and the community, all construction activities will have oversight of experienced professionals who will also train local staff on best embankment construction practices. All workers shall be properly trained on occupational health and safety. Workers must wear personal protective equipment (PPE) at all times during construction. Communities will also be informed of scheduled construction and retrofittingEmbankments proposed for construction / rehabilitation will be demarcated and barricaded, or notices shall be posted to prevent access from the communities. | |
| Risk 19: Potential introduction and use of pesticides | I = 3  P = 1 | **Moderate** | Interventions to make agriculture climate resilient may negatively impact the environment if pesticide use is introduced. | | The Project will support farmers to adopt improved farming techniques (e.g. organic agriculture, soil and water conservation) that would reduce the use of fertilizers and harmful pesticides, thus reducing the contamination of soil and water bodies. Though not foreseen, but if potentially harmful pesticides are needed, they will be properly managed, stored, used, following national and international standard regulation and procedures. | |
| Risk 20: Generation of medical related wastes | I = 3  P = 3 | **Moderate** | If not properly managed, medical wastes will pose health risks to medical personnel and to the community. If not properly collected, these wastes will cause diseases and may negatively impact the environment. | | The project will follow Environmental Conservation Act, 1995 and Environmental Conservation Rules, 1997 in the management of solid wastes.  The project will follow the guideliines of Safe Management of Wastes from Health Care Activities (World Health Organization) in the proper disposal of medical wastes | |
|  | **QUESTION 4: What is the overall Project risk categorization?** | | | | | |
| **Select one (see** [**SESP**](http://www.undp.org/content/undp/en/home/librarypage/operations1/undp-social-and-environmental-screening-procedure.html) **for guidance)** | | | | | **Comments** |
| ***Low Risk*** | | | **☐** | |  |
| ***Moderate Risk*** | | | **X** | | **If the appropriate mitigation measures are put in place during the project, the project will have an extremely low environmental and social risk over the life of the project.** |
| ***High Risk*** | | | **☐** | |  |
|  | **QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?** | | | | |  |
| Check all that apply | | | | | **Comments** |
| ***Principle 1: Human Rights*** | | | **X** | | The project will promote human rights based on the Universal Declaration of Human Rights. This will be achieved by creating awareness with all stakeholders in the project operations, including during project design, implementation, monitoring and evaluation.  The project will provide support for the most vulnerable socio-economic groups, i.e., women, the elderly and the landless, especially those belonging to extremely poor households. The project adopts the principle of positive discrimination and includes specifically the most discriminated, marginalized and the poorest people in the community. |
| ***Principle 2: Gender Equality and Women’s Empowerment*** | | | **X** | | In order to remove the long standing discrimination of women by the male-dominated Bangladesh society, aspects of the project are directly targeted towards women from vulnerable households. The results framework will also include disaggregated gendered results to ensure that women benefit equally from all interventions and trainings. |
| ***1. Biodiversity Conservation and Natural Resource Management*** | | | **X** | | The project does not have any components that will result in adverse impacts on the environment. Fish farms are, however, integrated into the community management of embankments (Output 2.2.), and fish farming will be developed in the innovation centres (Output 4.2.). These fish farms will be developed sustainably and in line with best practices for aquaculture. In addition, ecosystem-based adaptation through the planting of vetiver grass, mangrove trees and other trees may introduce invasive alien species that may negatively affect natural habitat and/or ecosystem. |
| ***2. Climate Change Mitigation and Adaptation*** | | | **X** | | The project interventions are designed in an integrated manner that will increase the adaptive capacity of vulnerable char communities in Bangladesh. These benefits will be geared towards assisting the most vulnerable members of the target communities. As no major infrastructure or resource utilization is included in the project interventions, there will be no large-scale emissions associated with the project. On the contrary, the establishment of solar power for 600 households will provide a small mitigation benefit in the form of reduced reliance on wood and fossil fuels. |
| ***3. Community Health, Safety and Working Conditions*** | | | **X** | | The project may create hazardous areas during the construction of cluster houses and the rehabilitation and repair of embankments. To mitigate this, best practice and national construction standards will be adhered to. All hazardous areas will be clearly demarcated with reflective tape and any excavations will be fenced off to protect communities in the vicinity of the construction sites. There is a further minor risk that the cluster houses, during their function as disaster shelters will be damaged during cyclones. To prevent this from occurring local community members will be trained to identify signs of structural weakening, and construction experts will conduct periodic assessments of the structures to ensure their stability. |
| ***4. Cultural Heritage*** | | | **☐** | | The project has no impact on cultural heritage. |
| ***5. Displacement and Resettlement*** | | | **X** | | Voluntary and temporary displacement of households is predicted to occur during the retrofitting of houses or the raising of plinths for increasing the climate resilience of houses. People who undergo voluntary and temporary resettlement, likely for only a few days, will either reside with neighbours or will be provided with local accommodation by the partner NGOs responsible for the retrofitting of the houses |
| ***6. Indigenous Peoples*** | | | **☐** | | The project has no impact on indigenous peoples. |
| ***7. Pollution Prevention and Resource Efficiency*** | | | **X** | | Repair and retrofitting of houses, installation of community level nano grids, and construction of rainwater harvesting systems and cluster houses will generate solid and liquid wastes (concrete washout, lumber, wires, nails, etc.). The repair of embankment may result in accidental spills of oil and fuel, and unmanaged solid wastes that may impact nearby fish farms and may also impact coastal and riverine environment. Implementation of climate resilient agriculture may potentially introduce use of pesticides. The operation of floating ambulance may generate medical related wastes. |

**Final Sign Off**

|  |  |  |
| --- | --- | --- |
| ***Signature*** | ***Date*** | ***Description*** |
| QA Assessor |  | UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have “checked” to ensure that the SESP is adequately conducted. |
| QA Approver |  | UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD)**,** Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have “cleared” the SESP prior to submittal to the PAC. |
| PAC Chair |  | UNDP chair of the PAC. In some cases, PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC. |

**2.1.1 SESP Attachment 1: Social and Environmental Risk Screening Checklist**

|  |  |
| --- | --- |
| **Checklist Potential Social and Environmental Risks** |  |
| **Principles 1: Human Rights** | **Answer  (Yes/No)** |
| 1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups? | Yes |
| 2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? [[23]](#footnote-23) | No |
| 3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups? | Yes |
| 4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them? | Yes |
| 5. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project? | No |
| 6. Is there a risk that rights-holders do not have the capacity to claim their rights? | No |
| 7. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process? | No |
| 8. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals? | No |
| **Principle 2: Gender Equality and Women’s Empowerment** |  |
| 1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls? | Yes |
| 2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits? | No |
| 3. Have women’s groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment? | No |
| 4. Would the Project potentially limit women’s ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? | No |
| **Principle 3: Environmental Sustainability:** Screeningquestions regarding environmental risks are encompassed by the specific Standard-related questions below |  |
| **Standard 1: Biodiversity Conservation and Sustainable** [**Natural**](#SustNatResManGlossary) **Resource Management** |  |
| 1.1 Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? | Yes |
| 1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities? | No |
| 1.3 Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5) | No |
| 1.4 Would Project activities pose risks to endangered species? | No |
| 1.5 Would the Project pose a risk of introducing invasive alien species? | No |
| 1.6 Does the Project involve harvesting of natural forests, plantation development, or reforestation? | No |
| 1.7 Does the Project involve the production and/or harvesting of fish populations or other aquatic species? | Yes |
| 1.8 Does the Project involve significant extraction, diversion or containment of surface or ground water?  *For example, construction of dams, reservoirs, river basin developments, groundwater extraction* | No |
| 1.9 Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development) | No |
| 1.10 Would the Project generate potential adverse transboundary or global environmental concerns? | No |
| 1.11 Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area?  *For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.* | No |
| **Standard 2: Climate Change Mitigation and Adaptation** |  |
| 2.1 Will the proposed Project result in significant[[24]](#footnote-24) greenhouse gas emissions or may exacerbate climate change? | No |
| 2.2 Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change? | No |
| 2.3 Is the proposed Project likely to directly or indirectly increase social and environmental [vulnerability to climate change](#CCVulnerabilityGlossary) now or in the future (also known as maladaptive practices)?  *For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population’s vulnerability to climate change, specifically flooding* | No |
| **Standard 3: Community Health, Safety and Working Conditions** |  |
| 3.1 Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities? | Yes |
| 3.2 Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)? | No |
| 3.3 Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)? | No |
| 3.4 Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure) | Yes |
| 3.5 Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions? | No |
| 3.6 Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)? | No |
| 3.7 Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning? | Yes |
| 3.8 Does the Project involve support for employment or livelihoods that may fail to comply with national and international labour standards (i.e. principles and standards of ILO fundamental conventions)? | No |
| 3.9 Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)? | No |
| **Standard 4: Cultural Heritage** |  |
| 4.1 Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect, and conserve Cultural Heritage may also have inadvertent adverse impacts) | No |
| 4.2 Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes? | No |
| **Standard 5: Displacement and Resettlement** |  |
| 5.1 Would the Project potentially involve temporary or permanent and full or partial physical displacement? | Yes |
| 5.2 Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)? | Yes |
| 5.3 Is there a risk that the Project would lead to forced evictions?[[25]](#footnote-25) | No |
| 5.4 Would the proposed Project possibly affect land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources? | No |
| **Standard 6: Indigenous Peoples** |  |
| 6.1 Are indigenous peoples present in the Project area (including Project area of influence)? | No |
| 6.2 Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples? | No |
| 6.3 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)?  *If the answer to the screening question 6.3 is “yes” the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.* | No |
| 6.4 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 |
| 6.5 Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples? | No |
| 6.6 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 |
| 6.7 Would the Project adversely affect the development priorities of indigenous peoples as defined by them? | No |
| 6.8 Would the Project potentially affect the physical and cultural survival of indigenous peoples? | No |
| 6.9 Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? | No |
| **Standard 7: Pollution Prevention and Resource Efficiency** |  |
| 7.1 Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or [transboundary impacts](#TransboundaryImpactsGlossary)? | Yes |
| 7.2 Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)? | Yes |
| 7.3 Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs?  *For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol* | No |
| 7.4 Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health? | Yes |
| 7.5 Does the Project include activities that require significant consumption of raw materials, energy, and/or water? | No |

# Annex 2. Stakeholder Analysis

The success of the project interventions lies in the identification of project key stakeholders, or stakeholder analysis, which is defined as the process of identifying project’s key stakeholders and assessing their interests in the project and the ways in which these stakeholders may influence the project’s outcomes.[[26]](#footnote-26) Stakeholder analysis provides the foundation for development of the project’s stakeholder engagement plan and facilitates the prioritization of engagement activities with different stakeholder groups and individuals. Stakeholder analysis was conducted to identify the key stakeholders for project design and implementation, as well as for the consultation process. The analysis comprised three main steps: i) stakeholder identification; ii) identify stakeholder interest in the project; and iii) stakeholder prioritization.

**Stakeholder identification.** The first step consists of desk review to identify the stakeholders in the project sites which include the target beneficiaries, those who will adversely impacted, either directly or indirectly by the project, any marginalized groups, women and men stakeholders, project supporters and opponents, and those responsible persons, offices or parties that will implement the project interventions.

For the purpose of the analysis, stakeholders were grouped into the following categories:

1. International organisations and cooperation partners
2. National and local government institutions / authorities
3. Non-government organisations
4. Project beneficiaries

**Identification of stakeholder interest in the project.** The results from the desk review were further analysed through stakeholder consultations on 19 December 2016 in Dhaka with representatives of MoEF, DoE and C3ER. This was followed with site visit and community consultations in ward no 1, 2, 3, 4 and 9 of the Mujibnagar Union, Bhola on 23 November 2017 and Rangpur on 06 December 2017. This was followed by validation workshop on 24 December 2018 where a total of 30 representatives from the relevant ministries, line agencies, experts, NGOs, private sectors and relevant officials of the MoEFCC, DoE, UNDP Bangladesh, Centre for Climate Change and Environmental Research(C3ER) attended the workshop. All of these consultations lead to the identification and their interest in the project.

**Stakeholder prioritization.** Prioritization facilitates identifying appropriate forms of engagement for different stakeholder groups. Stakeholders are organized based on their “importance” and “influence”. “Importance” means importance of stakeholder for the success of the project, while “influence” refers to the degree of influence of stakeholders over the project. Both Importance and Influence have the following ratings: High, Medium or Low. Interest at stake in relation to the project, on the other hand, is either Positive, Negative, or Unknown.

The stakeholder matrix that resulted from the analysis is included below.

**Table 1. Stakeholder analysis**

| **Name** | **Description** | **Role or Experience related to the project activities** | **Importance** | **Influence** | **Potential Interest** |
| --- | --- | --- | --- | --- | --- |
| **International Organisations / Cooperation Partners** | | | | | |
| Adaptation Fund | The Adaptation Fund was established under the Kyoto Protocol of the UN Framework Convention on Climate Change, and since 2010 has committed US@ 720 million to climate adaptation and resilience activities, including supporting 100 concrete adaptation projects. | Adaptation Fund will invest about $10 million in two charland communities in Bangladesh to: i) assist households to enhance the resilience of their houses and livelihoods to climate change induced flooding, cyclones, saline intrusion and droughts; ii) improve community level infrastructure, including embankments with modern climate-resilient technology and effective local management practices; iii) assist the Bangladesh Cyclone Preparedness Programme (CPP)1 under Disaster Management Department, to enhance its activities in the remote coastal char targeted by the project, in order to provide timely early warnings and effective emergency response; and iv) the technology, approaches and knowledge generated by the project will be used to build the capacity of the local and national government; and communities to make climate-resilient investments and policies. | High | High | Positive |
| UNDP | The United Nations Development Program (UNDP), as implementing entity, will be responsible for independent project oversight and implementation support through specialized technical support services and quality assurance throughout the project funding cycle. UNDP provides a three-tier oversight and quality assurance roles, which will include: i) day-today oversight of project quality, timeliness and safeguard standards; ii) oversight of project completion; and iii) oversight of project accounting and reporting. This will ensure that appropriate project management milestones are managed and completed. Such oversight will be carried out by the UNDP Country Office in Bangladesh, the UNDP Global Environmental Finance Unit in the Bangkok Regional Hub, and the UNDP Headquarters in New York. | UNDP Bangladesh will support the implementation. Will monitor the project implementation and achievement of the project outcomes and outputs and ensure the efficient use of funds. | High | High | Positive |
| **National and Local Government Institutions** | | | | | |
| DoE | The Department of Environment (DoE) under the Ministry of Environment, Forestry and Climate Change (MoEFCC) will be the executing entity for this project. The national executing entity (also referred to as the national ‘Implementing Partner’ in UNDP terminology), is required to implement the project in compliance with UNDP rules and regulations, policies and procedures (including the NIM guidelines. | MoEFCC will be responsible and accountable for the execution of the project, including ensuring that the objectives and components of the project are delivered, and for the effective use of project resources | High | High | Positive |
| Bangladesh Water Development Board | Together with community-based organisations, the Bangladesh Water Development Board (BWDB) will repair 14.5 km of embankment (including 1 km of breached embankment) in Mujibnagar.  BWDB will also coordinate the application of ecosystem-based adaptation (EbA) to strengthen 10 km of degraded embankments through the use of geotextiles and planting of vetiver grass and mangrove trees in Mujibnagar. BWDB will also coordinate the strengthening of 2 km of vulnerable riverbank in Lakshmitari using EbA with the use of geotextile and vetiver grass. BWDB will collaborate with social forestry programmes and community embankment management groups that will be established. | The Char Development and Settlement Project (CDSP) is coordinated by the Bangladesh Water Development Board (BWDB) and consists of four phases, the last of which (CDSP IV) recently finished (2011–December 2018). The four phases represent a series of projects that have been supporting the development of newly-accreted land (chars) in Bangladesh for over two decades.  BWDB will be trained on relevant ecosystem-based and community—based adaptation measures so they can effectively facilitate the implementation of embankment repair and strengthening in char communities. | High | High | Positive |
| Department of Disaster Management | The Department of Disaster Management (DDM) is the agency that implements the Cyclone Preparedness Programme (CPP). | DDM will expand the CPP to char communities in Mujibnagar to provide timely early warning of cyclones and adequate on-site responses at the necessary scale. This will include tailoring early warnings and cyclone preparedness to local requirements and using the local language. | High | High | Positive |
| Bangladesh Forest Department | The Bangladesh Forest Department (BFD) is the government agency responsible for conservation and management of forest, wildlife and coastal and wetland ecosystems and protected areas, wildlife sanctuary, national park, botanical garden, eco-park and safari park. The department is also responsible to increase land stability and increase resilience of ecosystems to climate change. | The Bangladesh Forest Department is responsible for large scale afforestation initiative in coastal chars in Bangladesh to combat climate change-induced hazards. The proposed project’s activities will complement this widespread afforestation initiative by developing climate hazard maps and risk scenarios which will highlight areas most at risk to the impacts of disaster events. | High | High | Positive |
| Department of Agriculture Extension | The Department of Agricultural Extension (DAE) is the government agency tasked with providing efficient and effective needs-based extension services to all categories of farmers to achieve sustainable agricultural and socioeconomic growth. DAE disseminates agriculture-related information and technology, and provide essential services and support to all Bangladeshi farmers. | The Department of Agriculture Extension will support communities in the adoption of climate-resilient agricultural techniques. | High | Medium | Positive |
| Ministry of Health and Family Welfare | The Ministry of Health and Family Welfare (MoHFW) is the government agency tasked to implement health and family planning policy in Bangladesh. | The Ministry of Health and Family Welfare (MoHFW), in partnership with NGOs, will design and implement a floating ambulance that will be permanently stationed in Mujibnagar. | Medium | Medium | Positive |
| House Building Research Institute | House Building Research Institute (HBRI) is under the Ministry of Housing and Public Works | The House Building Research Institute will assist the project in local enterprise development to make non-fired bricks as alternative livelihood. | Medium | Medium | Positive |
| Local Government Institutions | This refers to the local government institutions of Lakshmitari and Mujibnagar, the locations where project interventions will be implemented. | Local government institutions will be trained on relevant ecosystems- based and community-based adaptation measures, so they can facilitate the implementation of different interventions among char communities. | Medium | Medium | Positive |
| **Non-government Organisations** | | | | | |
| IDCOL | IDCOL is Bangladesh's leading diversified financial institution providing a wide range of financing products and fee-based services with private-sector infrastructure, renewable energy, energy efficient, and Public-Private Partnership (PPP) based projects as its focus areas. IDCOL’s key businesses include project finance, corporate finance, debt and equity arrangement, grant & technical assistance, training & capacity building and advisory services. IDCOL also works closely with government entities and regulators in Bangladesh to advise and assist in formulating policy and regulatory frameworks that support private investment and public-private partnerships in infrastructure development. | IDCOL, a locally established NGO will assess the irrigation needs and implement solar irrigation systems in Lakshmitari to provide water during the dry season. | Medium | Medium | Positive |
| Partner NGO 1 | Partner NGO has yet to be hired. | The NGO project partner will work with local construction workers and household members to retrofit houses, which will include raising houses on plinths to resist flooding and strengthening roofs against cyclone winds. | Medium | Low | Positive |
| Partner NGO 2 | Partner NGO has yet to be hired. | In collaboration with local government and community members, the partner NGO will assess the electricity need of households and design nano-grids to provide electricity to small groups of houses. | Medium | Low | Positive |
| Partner NGO 3 | Partner NGO has yet to be hired. | The project partner NGO will provide the necessary technical expertise to assess the water need of households through surveys. The NGO will also design rainwater harvesting system with sufficient capacity to supply year-round household needs. The project partner NGO will install rainwater harvesting systems for 500 selected households, in collaboration with household members. | Medium | Low | Positive |
| Partner NGO 4 | Partner NGO has yet to be hired. | Twenty cluster houses (i.e. multiple houses in a single robust building) will be constructed by the project partner NGO. | Medium | Low | Positive |
| Partner NGO 5 | Partner NGO has yet to be hired. | Established local NGO will identify vulnerable households that will receive livelihood assistance that will prioritise woman-led households and those caring for the disabled and the elderly. The partner NGO will support the selected households to determine feasible diversified livelihood options. The partner NGO will provide support to these households in the form of technology, training and material provisioning. | Medium | Low | Positive |
| **Project Beneficiaries** | | | | | |
| Beneficiary households (direct) | This includes ~10,500 direct beneficiaries in Mujibnagar (~48% women) and ~21,000 direct beneficiaries in Lakshmitari (~49% women | Vulnerable households that will directly benefit from retrofitting and construction of household level and community level infrastructure. Final selection of direct beneficiaries will prioritise the following:   * Gender: female-headed households (including those widowed, divorced or separated/abandoned). * Age: for livelihoods, women between 18-49; for other support, households with children and the elderly. * Income: households with income of less than US$1.25 per person per day. * Household Status:   + Women and girl beneficiaries from households where there are no able male members to earn livelihoods.   + Women from households where there are a greater number of dependent members on the women (household members chronically ill; physically, mentally and/or visually impaired or disabled).   + Indigenous (“Adivasi”) households. * Land: for agricultural livelihoods, households that possess less than 30 decimals (1,214 m2) of previously usable agricultural land and possess less than 50 decimals (2,023 m2) of land in total. For housing support, priority will be given to people living on land exposed to extreme climatic events, people with only homestead land and landless people who arrange public land through official/customary process. * Other requirements to assess eligibility:   + Hindu minority households will be represented in proportion to their overall population in the wards.   + The beneficiary cannot have been a recipient of GoB’s or any NGO’s schemes of similar nature and/or quantity of support within the last two years. | High | Low | Positive |
| Beneficiary households (indirect) | Indirect beneficiaries of the proposed project will total ~310,200 and will include the entire populations of Mujibnagar and Lakshmitari. | No direct role in relation to the project activities but will benefit from different interventions. | High | Low | Unknown |
| Local construction workers | Local construction workers of the two communities. | Local construction workers will be trained on climate-resilient building techniques and standards of cyclone and flood resilient houses,  for use in the broader community. | High | Low | Unknown |
| Community groups 1 | Community based groups that will be established to operate and maintain nano-grids. | Community groups will be established from among the beneficiary households. They will be trained and equipped to operate and maintain the nano-grids. | High | Medium | Unknown |
| Community-based water-user group 2 | Community based groups that will be established to manage rainwater harvesting systems. | Community members will be supported to establish water-user groups. These groups will be trained to: i) manage the preservation and distribution of surface water in areas that experience water stress during the dry season and/or because of saline intrusion; and ii) assist community members with the maintenance of rainwater harvesting systems. The training will be provided by the project partner NGO and will ensure that the water-user groups are capacitated to be self-sufficient before the end of the project period | High | Medium | Unknown |
| Social forestry programmes and the community embankment management groups | Community based groups that will implement strengthening embankments and riverbanks through EbA measures. | Bangladesh Water Development Board (BWDB) will collaborate with social forestry programmes and the community embankment management groups for strengthening embankments in Mujibnagar and riverbanks in Lakshmitari through the installation of geotextile and EbA measures such as planting mangroves, other trees and vetiver grass. | High | Medium | Unknown |
| Community embankment management groups | Community based group that will be responsible for maintaining embankments. | Community embankment management groups will be responsible for the maintenance of embankments. Members will come from local communities. Incentives will be provided to community members to increase participation. These incentives include fish farms or social forestry next to embankments. | High | Medium | Unknown |
| Cyclone Preparedness Program volunteers | Volunteers of the Cyclone Preparedness Program will come from Mujibnagar community members. | Community members will be engaged in the CPP volunteer training programme on Mujibnagar. The training programmes will include search and rescue, water rescue, first aid and the use of light rescue equipment, and will incorporate gender, psycho-social and disability considerations. CPP volunteers will also be trained to assist with embankment repair and strengthening. CPP volunteers will be equipped with the necessary personal equipment, including protective clothing, torches and signal flags. | Low | Low | Unknown |
| Health care workers | The floating ambulance will be staffed by trained health care workers. | During non-disaster periods, health care workers on the floating ambulance will also communicate with patients via mobile phone, i.e. through a Mobile Health Support System (M-Health). This system will allow health care workers to maintain contact with patients that have critical or chronic conditions. The floating ambulance will be integrated with the existing healthcare infrastructure in the region, including the community clinic on Mujibnagar and other clinics on Char Fasson. | Low | Low | Unknown |
| Permanent staff of Farmer Field Schools | Permanent staff of farmer field schools will be hired by the project. | Permanent staff of farmer field schools will be responsible for hosting workshops for local farmers to learn about proven innovative food production techniques, including: i) hydroponics; ii) fish farms; iii) vertical gardens; iv) the selection and use of climate-resilient cultivars; and v) other climate-resilient agricultural practices. | Low | Low | Unknown |
| Farmers | Farmer beneficiaries from the community. | Farmers living in Mujibnagar and Lakshmitari will be trained through farmer field schools that will be established in the two sites to increase their awareness of different climate-resilient agricultural techniques. | Low | Low | Unknown |
| Teachers and religious leaders | Teachers and religious leaders from the community who will train school children. | Teachers and religious leaders will be trained to disseminate climate change information to school children and other community members through schools and community awareness programmes in Mujibnagar, Lakshmitari and the surrounding areas. This will include information on the nature of climate change, its impacts in Bangladesh and local adaptation options. | Low | Medium | Unknown |
| School children and other community members | School children and community members from the two sites. | School children and community members will receive climate change information through school and community awareness programs. | Low | Low | Unknown |

1. Sarker, M. H., Huque, I., Alam, M., & Koudstaal, R. (2003). Rivers, chars and char dwellers of Bangladesh. International Journal of River Basin Management, 1(1). 61-80. [↑](#footnote-ref-1)
2. Global Climate Risk Index 2017, Germanwatch [↑](#footnote-ref-2)
3. EM-DAT: The OFDA/CRED – International Disaster Database. [www.ermdat.be](http://www.ermdat.be). Universite Catholique de Louvain Brussels – Belgium. [↑](#footnote-ref-3)
4. General Economics Division (GED) of the Bangladesh Planning Commission (BPC), 2017. [↑](#footnote-ref-4)
5. Gattuso, J. P., et. al (2015). Contrasting futures for ocean and society from different anthropogenic CO2 emissions scenarios. Science [↑](#footnote-ref-5)
6. The Adaptation Fund was established under the Kyoto Protocol of the UN Framework Convention on Climate Change, and finances projects and programs that help vulnerable communities in developing countries adapt to climate change. Initiatives are based on country needs, views and priorities. [↑](#footnote-ref-6)
7. As defined by UNDP’s SES, “Moderate” risk are those projects that include activities with potential adverse social and environmental risks and impacts that are limited in scale, can be identified with a reasonable degree of certainty, and can be addressed through application of standard best practice, mitigation measures and stakeholder engagement during Project implementation. [↑](#footnote-ref-7)
8. Article 19 and 27 of Bangladesh Constitution. <https://www.clcbd.org/journal/4.html>. [↑](#footnote-ref-8)
9. <https://www.clcbd.org/journal/4.html>. [↑](#footnote-ref-9)
10. Article 9-10 of Bangladesh Constitution. <https://www.clcbd.org/journal/4.html>. [↑](#footnote-ref-10)
11. Article 28 of Bangladesh Constitution. <https://www.clcbd.org/journal/4.html>. [↑](#footnote-ref-11)
12. Article 15 of Bangladesh Constitution. <https://www.clcbd.org/journal/4.html>. [↑](#footnote-ref-12)
13. Nakhooda, S.; Norman, M.; Barnard, S.; Watson, C.; Greenhill, R.; Caravani, A.; Canales Trujillo, N.; Hedger, M.; Whitley, S. (2014): Climate finance: is it making a difference? ODI. http://www.odi.org/sites/odi.org. uk/files/odi-assets/publications-opinion-files/9359.pdf and http:// www.climatechangecell.org.bd/Documents/NAPA%20october%20 2009.pdf [↑](#footnote-ref-13)
14. Nakhooda et al. (2014); BCCAP http://www.bcct.gov.bd/images/law/ Bangladesh%20Climate%20Change%20Strategy%20and%20 Action%20Plan%202009.pdf [↑](#footnote-ref-14)
15. MOEF (2009). [↑](#footnote-ref-15)
16. MoEF (2009); 7th Five Year Plan: http://www.plancomm.gov. bd/7th-five-year-plan/ [↑](#footnote-ref-16)
17. The Social and Environmental Screening is attached as Annex I. [↑](#footnote-ref-17)
18. available at http://www.ifc.org/ehsguidelines. [↑](#footnote-ref-18)
19. See Table 2. Relevant Environmental Laws / Regulations for the Project, for details of laws and regulations [↑](#footnote-ref-19)
20. available at http://www.ifc.org/ehsguidelines. [↑](#footnote-ref-20)
21. An incident, in the context of occupational health and safety, is an unintended event that disturbs normal operations. OSHA defines an incident as "an unplanned, undesired event that adversely affects completion of a task." Incidents ranged from near misses to fatal accidents. [↑](#footnote-ref-21)
22. See Table 2. Relevant Environmental Laws / Regulations for the Project, for details of laws and regulations [↑](#footnote-ref-22)
23. Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to “women and men” or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals. [↑](#footnote-ref-23)
24. In regard to CO2, ‘significant emissions’ corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.] [↑](#footnote-ref-24)
25. Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections. [↑](#footnote-ref-25)
26. Guidance Note - UNDP Social and Environmental Standards (SES) Stakeholder Engagement. October 2017. [↑](#footnote-ref-26)