Higher Education Acceleration and Transformation Project (P168961)

FINAL DRAFT FOR PUBLIC COMMENTS

The ESMF is publicly disclosed for comments within one month of publication in the UGC Website. After one month, the ESMF will be finalized by incorporating the comments received (if any).

Environmental and Social Management Framework (ESMF)

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University Grants Commission (UGC)
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Abbreviations

AIF	Academic Innovation Funds
ARIPA	Acquisition and Requisition of Immovable Property Act
AUW	Asian University for Women
BAC	Bangladesh Accreditation Council
BBS	Bangladesh Bureau of Statistics
BdREN	Bangladesh Research and Education Network
BOD	Biological Oxygen Demand
BSL	Biosafety Lab
CERC	Contingent Emergency Response Component
CHT	Chittagong Hill Tract
CIO	Chief Implementation Officer
COD	Chemical Oxygen Demand
COE	Centre of Excellence
CPD	Continuous Professional Development
CPR	Common Property Resources
CRO	Chief Resettlement Officer
CSO	Civil Society Organizations
DAE	Department of Agriculture Extension
DBH	Diameter at Best Height
DIA	Designated Implementing Agency
DLS	Department of Livestock Services
DoE	Department of Environment
DoF	Department of Fisheries
DPCC	District Project Coordination Committee
DSM	Design Supervision Management
E-waste	Electronic waste
EA	Environmental Assessment
ECA	Ecological Critical Area
ECA	Environmental Conservation Act
ECC	Environmental Clearance Certificate
ECoPs	Environmental Code of Practices
ECR	Environment Conservation Rules
EHS	Environmental, Health and Safety
EIA	Environmental Impact Assessment
EMF	Environmental Management Framework
EMIS	Environmental Management Information System
EMP	Environmental Management Plan
EMU	Environmental Management Unit
ERP	Emergency Response Plan
ES	Environmental Screening
ESA	Environmental and Social Assessment
ESCP	Environmental and Social Commitment Plan
ESDU	Environmental Social Development Unit
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment

ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESMU	Environment and Social Management Unit
ESR	Environmental Screening Report
ESS	Environmental and Social Standards
FAA	Flood affected area
FAO	Food and Agriculture Organization
FAP	Flood Action Plan
FGD	Focus Group Discussion
FPIC	Free, Prior and Informed Consent
FRSS	Fisheries Resource Survey System
GAP	Gender Action Plan
GBV	Gender Based Violence
GDR	General Department of Resettlement
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HEAT	Higher Education Acceleration and Transformation
HEQEP	Higher Education Quality Enhancement Project
HEQEPU	Higher Education Quality Enhancement Project Unit
HEMIS	Higher Education Management Information System
HIES	Household Income and Expenditure Survey
IEE	Initial Environmental Examination
ILO	International Labor Organization
IoL	Inventory of Loss
IP	Indigenous Peoples
IPP	Indigenous Peoples' Plan
IPPF	Indigenous Peoples Planning Framework
IVC	Inventory Verification Committee
JCC	Joint Coordination Centre
JVC	Joint Verification Committee
LAO	Land Acquisition Officer
LAP	Land Acquisition Plan
LMI	Learning Management Infrastructure
LMP	Labor Management Procedures
LMS	Land Market Survey
LRSP	Livelihood Restoration Support Plan
M&E	Monitoring and Evaluation
MEF	Ministry of Education
MERU	Monitoring Evaluation and Reporting Unit
MIS	Management Information System
MoEFCC	Ministry of Environment, Forest and Climate Change
MoF	Ministry of Finance
MoFL	Ministry of Fisheries and Livestock
MWB	Minimum Wages Board
NATP	National Agricultural Technology Project
NGOs	Non-Government Organizations
OHS	Occupational Health and Safety
OHSM	Occupational Health and Safety Management

OHSP	Occupational Health & Safety Plan
OMST	Operations and Monitoring Support Team
PA	Protected Area
PAH	Project Affected Households
PAP's	Project Affected Persons
PAU	Project Affected Unit
PBF	Performance Based Financing
PMO	Project Management Office
PMU	Project Management Unit
PPE	Personnel Protective Equipment
PRA	Participatory Rural Appraisal
PSC	Project Steering committee
PVAC	Property Valuation Advisory Committee
QA	Quality Assurance
RAC	Resettlement Advisory Committee
RAP	Resettlement Action Plan
RG	Risk group
ROW	Right of Way
RPF	Resettlement Policy Framework
SEP	Stakeholders Engagement Plan
SHED	Secondary Higher Education Department
SIA	Social Impact Assessment
SIMP	Social Impact Management Plan
SMF	Social Management Framework
SMP	Social Management Plan
TTO	Technology Transfer Office
UGC	University Grant Commission
UNCED	United Nations Conference on Environment and Development
UTTA	University Teachers' Training Academy
VLD	Voluntary Land Donation
WB	World Bank

Executive Summary

Introduction

In recent years, the World Bank has supported capacity building in higher education in South Asian countries, which creates a good platform to launch regional collaboration in this aspect. The Higher Education Acceleration and Transformation (HEAT) Project focuses on improving employability of university graduates and improving governance of higher education. The Project also aims to establish a regional network of higher education institutions in South Asia. The proposed project also supports the regional priority areas on the post 2015 education agenda identified by SAARC. The Project takes an approach which builds on and utilizes the synergies of national and regional support to higher education. First, the project will leverage digital connectivity among the participating countries (i.e: Bangladesh and Afghanistan). Second, the project would focus on employability and leadership, particularly for women, which is one of the major development concerns in the region. Third, the project would look into promoting collaborative research among academics across different institutions in the region. Fourth, the region faces some common issues of governance and management of the higher education sector and would benefit exchange of knowledge on quality assurance, performance-based financing and teacher management systems. Finally, South Asia lags in internationalization of higher education, providing potential scope for the project to initiate efforts in this aspect.

The proposed project also aligns with the government policies which guide development priorities and strategies at the higher education sector in Bangladesh, as specified in the Strategic Plan for Higher Education (SPHE) 2018-2030; and in Afghanistan as specified in National Higher Education Strategic Plan II (NHESP II, 2016-2020). In Bangladesh, the Strategic Plan for Higher Education (SPHE) 2018-2030 keeps the objectives and targets of National Education Policy 2010, Vision 2021 and 2041, the draft 7th Five Year Plan and other future looking plans such as Draft 8th Five-year plan, SDG action plan and Delta plan 2100.

This ESMF will also serve as the guideline for the staff designated by the implementing agencies and participating institutions - the UGC to oversee and monitor the social and environmental risk management compliance of the project components coming under their implementation responsibility. The ESMF will be a living document and will be reviewed and updated

Project Description

The project development objectives (PDO) are:

- ✓ to strengthen regionally the COVID-19 response, improve connectivity and quality of higher education for women
- ✓ to enhance resilience, graduate employability and improve governance of higher education nationally.

The Project has four components that embody 05 sub-components and will be implemented over a five-year period from 2021 to 2025/26. Component 1 is the regional component supporting collaboration in higher education across the South Asia region[1], Component 2 supports the Bangladesh higher education sector through a nationally focused sub-component and Component 3 supports the day to day management of the proposed operation and component 4 is the 'zero budget' contingent emergency response component (CERC). Given the ongoing COVID 19 crisis, the project components have been

[1] Including the possibility of countries beyond the strict boundaries of South Asia.

prioritized to identify short-term, medium term and long-term activities under the proposed project.

The direct beneficiaries of the proposed project will be students and teachers of higher education institutions in Bangladesh, Afghanistan and the participating countries (yet to be confirmed) including students and teachers benefitting from competitive grants, Bangladesh Research and Education Network (BdREN), Learning Management Infrastructure (LMI), Quality Assurance (QA), Continuous Professional Development (CPD) and the regional network activities in Bangladesh and Afghanistan. Female students of Bangladesh, Afghanistan and participating countries will benefit as special emphasis will be given to promote higher education and leadership for women through establishing a regional network. There will also be many indirect beneficiaries of the Project, including employers who will be able to recruit better quality graduates and/or will get opportunities to collaborate with universities in relevant research areas, future generations of university students, faculty and staff members who will benefit from program accreditations and the system-wide reforms/improvements.

According to the design of the project, the boundary of the project location will be regional through regional collaboration in research and students exchange program to promote women's education. In Bangladesh, all the major and minor civil construction related activities is expected to be conducted within the boundary of 153 public and private universities. Due diligence of the anticipated footprints is not completed at this stage except for AUW academic complex construction. AUW permanent campus will be constructed at Dakshin Pahartali, about 6 km from Chattogram city center on 140 acres of unutilized hilly khas land donated by Government in 2004[2].

Two alternative land/sites in Dhaka, owned by the Government of Bangladesh have already been identified as potential sites for the construction of UTTA. Other infrastructural renovations and upgradation works in women's colleges and universities will be carried out within the existing buildings and premises and no physical or economic displacement of people is expected.

The other infrastructure renovations and upgradation related activities will be:

- ✓ Establishing 7 new fab-labs[3]
- ✓ Transforming all existing fab labs into Centers of Excellence in digital manufacturing and facilitating link-up with private sector
- ✓ Setting-up 5 "i-labs" in 5 universities;
- ✓ Setting up business incubators
- ✓ Establish TTOs in at least 20 universities
- ✓ Establish office of Bangladesh Accreditation Council
- ✓ Establishment of IQACs, Career Service Centers and Alumni offices in the participating public and private universities

[2] ("International Coalition Plans New University for Asian Women". The Chronicle of Higher Education. 2002-03-22. Retrieved 2017-01-17).

[3] The innovation support facilities (fab labs, i-labs) established under this sub-component will have climate resilient features and energy efficient appliances and equipment. These facilities will support entrepreneurship/ business start-ups and vulnerability context will be considered if the potential beneficiaries are assessed to be vulnerable to climate and disaster risk which are previously described in the country context. "i-labs" are smaller and low-budget versions of fab-labs. The footprints of these facilities will vary depending on the proposed scale of activities by the host institution. For example, the existing Fab Lab at Sher-e- Bangla Agricultural University covers an area of approx. 1,200 sq. ft. and generates about 20-25 kg/month of solid wastes and 1-3 L/month of liquid wastes (personal communication from Prof. Solaiman and Dr. MA Wazed Miah on June 20, 2020).

- ✓ Upgradation/refurbishment of teaching-learning facilities with modern technology and upgradation of science and technology labs
- ✓ Upgradation of teaching and learning facilities at Women's Colleges and Universities in Bangladesh
- ✓ Strengthening of digital facilities of Colleges and Universities in Bangladesh
- ✓ Upgrading/renovation of childcare facilities, dorms and washroom facilities of Women's Colleges and Universities in Bangladesh

The project will also provide research funding into areas such as: (a) smart agriculture, computational biology, bio-medical sciences, nanotechnologies & engineering, sustainable materials, textile & leather technologies, climate change resilience, gender studies, etc.; (b) Collaborative research with industries and research institutes which target the patenting and commercialization of research outputs; and (c) liberal arts, social sciences, business and law streams contributing on societal vulnerability to climate related disaster risk, sustainable and climate responsible and responsive business models, and legal implications of climate change.

Policy, Legal and Regulatory Framework

All relevant national policies, strategies, plans, acts, rules and regulations laid out by the Government of Bangladesh pertaining to the environment and social aspects are discussed in Chapter 3.

Bangladesh has signed most international treaties, conventions and protocols on environment, pollution control, bio-diversity conservation and climate change, including the RAMSAR Convention, the Bonn Convention on Migratory Birds, the Rio de Janeiro Convention on Biodiversity Conservation, and the Kyoto Protocol on Climate Change. An overview of the relevant international treaties signed by GoB is provided in Chapter 3.

Since October 2018, all World Bank funded Investment Project Financing (IPF) are required to follow the **Environmental and Social Framework (ESF) consisting of ten (10) Environment and Social Standards (ESSs).** These ESSs set out their requirement for the HEAT project relating to the identification and assessment of environmental and social risks and impacts associated with any project. The ESSs support the project in achieving good international practice relating to environmental and social sustainability, assist them in fulfilling their national and international environmental and social obligations, enhance transparency and accountability and ensure sustainable development outcome through ongoing stakeholder engagement.

Environmental and Social Baseline

There are 153 nos. campus based higher education institutes located in all eight Divisions of Bangladesh. Majority (about 55%) are located in Dhaka Division. Around 65% are public universities and the remaining are private organizations.

Most higher education institutes in Bangladesh are located in urban areas. The wastes generated from this institutes are normally mixed with the general municipal solid wastes. The urban centers of Bangladesh generate around 23,688 tons/day of municipal solid wastes of which about 70% is organic solid waste (Alam and Qiao, 2020)[4]. From 2008, the use of sanitary landfills was initiated but in many

[4] Alam O. and Qiao X. (2020) An in-depth review on municipal solid waste management, treatment and disposal in Bangladesh, Sustainable Cities and Society 52, https://www.sciencedirect.com/science/article/pii/S2210670719307061

urban areas, most wastes are disposed in open areas and burnt. In some of the larger cities, small scale recycling and composting are done by some NGOs.

Solid wastes generation and management practices at Bangladesh Universities are not well documented. Limited research indicates that in most cases solid wastes are collected on campus through bins and then transferred to local dumps through municipal or informal collection systems.

Bangladesh's land area is typically divided into three geological categories: floodplain (80 %), Pleistocene terrace (8%), and tertiary hills (12 %). The floodplain comprises of a succession of ridges (abandoned levees) and depressions (back swamps or old channels). Differences in the elevation between adjoining ridge tops and depressions range from less than 1 meter on tidal floodplains, 1 meter to 3 meters on the main rivers and estuarine floodplains, and up to 5 to 6 meters in the Sylhet Basin in the north-east. Only in the extreme northwest do land elevations exceed 30 meters above mean sea level. The tertiary hill soils occupy the Chattogram hills in the south-east, and the low hills and hillocks of Sylhet in the north-east. The two major uplifted blocks (Pleistocene terrace) are known as Madhupur (in the central Bangladesh) and Barind tracts in the north-west.

The overall temperature and rainfall patterns in Bangladesh are shown in the figures below. The different climatic sub-regions are also shown. In this project, the main regions of interest are: North-eastern zone (Sylhet), northern part of Central zone (Mymensingh), North-western zone (Rangpur), Western Zone (Rajshahi), South-eastern Zone (Chattogram).

Bangladesh is a lower-middle income country of per capita income of US$1,480 equivalent in 2017 and one of the world's most populous country with an estimated 165 million people. The country achieved the lower middle-income country status in FY14. In recent decades, economic conditions have improved markedly. The GDP grew well above the average for developing countries, averaging 6.5 percent since 2010, with an officially projected growth of 8.13 percent in FY19, driven by manufacturing and service sectors. Progress on reducing extreme poverty and boosting shared prosperity has continued with the steadily declining poverty incidence from 44.2 percent in 1991 to a 13.8 percent in 2016[5], underpinned by strong human capital development and employment generation. Bangladesh's performance against the Millennium Development Goals (MDG) goals was impressive and against the South Asia Region average for most of the indicators. These progress notwithstanding, the pace of poverty reduction and the rate of job creation has slowed since 2010. Bangladesh needs more effort in improving its growth rate to meet its target of moving up the middle-income rankings by 2021 and eliminating poverty by 2030. For accelerating private sector-led growth with improved investment climate, the key challenges are the need for increased infrastructure and power, with much improved quality in spending public resources, better regulations and enhanced skills of its vast and rapidly increasing labor force. The country's ability to sustain economic and human development faces new and emerging challenges. The COVID-19 pandemic, which hit the country in March 2020, threatens to slow down economic growth to 1.2-2.9 percent in FY21, with adverse implications for human capital development.

Potential Key Environmental and Social Impacts

The overall impact assessment of the proposed project activities to be implemented reveals that most of the likely adverse impacts could be minimized or eliminated by adopting standard mitigation measures. There is also scope to enhance some of the beneficial impacts to be generated from the proposed project.

[5] latest available poverty data based on the international $1.90 per capita per day poverty line, measured based on the Purchasing Power Parity exchange rate

However, the issue of management of hazardous solid and liquid wastes generated from sub-projects needs to be carefully considered through effective screening mechanisms.

There are major potential social and environmental impacts associated with AUW academic building complex and UTTA construction works. Therefore, separate ESIAs (with appropriate ESMPs) have been or will be prepared to manage potential impacts.

There will also be potential social and environmental impacts for other subprojects that will have some physical or construction related activities as well as research subprojects.

The project will involve large scale civil works in the hilly terrain (construction of AUW academic complex) and in an urban area (UTTA) which will pose safety issues for the laborers as relevant to the two contexts. The proposed project will entail employment of a significant number of project workers. The engagement of migrants or seasonal workers raises many complex issues, particularly regarding potential transmission risks for COVID-19. A Labor Management Procedure (LMP) have been prepared by the SHED-UGC as a stand-alone document, to cover all requirements of ESS2.

Separate ESIAs (and ESMPs) address potential impacts on resources and pollution management for the AUW campus and UTTA development works. For the other subprojects (with some construction or research related activities), potential resource impacts can include: use of water resources, construction materials and fuels. Potential pollution related impacts of subprojects can include: non-hazardous and hazardous solid wastes (from construction and research activities); non-hazardous and hazardous liquid wastes (from construction and research activities) and electronic-wastes (e-wastes) from classrooms, offices, labs, etc.

Activities under this project may give rise to a number of risks to community health and safety. The construction materials of construction of AUW academic complex and UTTA may be carried through the populated urban areas. Adequate traffic management, provision of alternative access points/roads, road-crossing safety procedures should be put in place. Labor influx during the construction phase may affect the local community and increase the risk of GBV. The other pertains to the exposure and/or increased risks of diseases by the community due to influx of people during construction and operation. For all the construction work, the ESMP should include the obligation of the contractors to safeguard the community health and safety aspects along with OHS. The civil works will affect the local communities living and working in the vicinity of the sites. Adequate engineering, health and safety measures should be adopted to avoid any issue on community health. Contractors will require developing site-specific procedures or plans so that adequate precautions are in place to prevent or minimize an outbreak of COVID-19. A Community Health & Safety Plan will be required from contractors, which will also include procedures on incident investigation and reporting, recording and reporting of non-conformances, emergency preparedness and response procedures and community awareness raising activities. Provision should require contractors to make arrangements of adequate cautions and warning signs for the potential risks in the site. Any accidents or fatalities on either of the sites should be responded on an emergency basis and will have to be immediately reported to the Bank team. The potential exclusion risk of persons with disabilities will be assessed both from the aspects of infrastructure design as well as education services, as per the concept of universal access. WBG EHS guidelines have been followed in the preparation of the ESIA, ESMF and labor related plans. COVID-19 spread among construction and project workers will also need to be taken into consideration during implementation of the projects, given the nature of how the

disease spreads from human to human. A public interaction protocol, good practices, good hygiene protocol will be posted in various locations and communities and workers will be made aware of how to contain transmission.

This project consists of large, medium and small-scale construction activities. Though AUW academic complex sub-project will not require any land acquisition it may affect some business squatters and vendors during construction period. Moreover, due to the movement of heavy vehicles, the sub-project may cause construction induced impacts. However, a detailed assessment will be done, and based on the assessment RAP/ARAP will be prepared, if required. The UTTA site is expected to be in the heart of Dhaka city. The location for the UTTA is yet to be determined. Two alternative land/sites in Dhaka, owned by the Government of Bangladesh have already been identified as potential sites for the construction of UTTA. Even if the land acquisition is not required for the UTTA site after the proposed sites identified and based on screening, if squatters are found to be present in the project site, RAP or ARAP will be prepared, if necessary.

Aside from the construction of the AUW academic complex and UTTA, other construction activities will be minor and will be conducted within the premises of existing eligible public and private universities and women colleges. As the eligible educational institutes are not selected yet, the exact locations are unknown. There are no long term or significant impacts anticipated. Given that no large-scale infrastructure development is anticipated at this stage, the probability of land acquisition, requisition, relocation, and related impact on squatters or livelihoods is very low.

Separate ESIAs (and ESMPs) address potential impacts on biodiversity for the AUW academic complex and UTTA development works. For the other subprojects (with some construction or research related activities), potential biodiversity impacts can include: use of biological specimens (for research); disturbances to flora and fauna due to construction or research activities and pollution of habitats through improper waste disposal

AUW academic complex will be constructed on AUW owned land, UTTA will be constructed in Dhaka where no defined IP/communities reside according to the Bangladesh bureau of Statistics and remaining rehabilitation works will be conducted within the premises of existing universities and colleges. Although the project will not work specifically in areas where concentrations of IPs are located, the AUW education program will induct and encourage enrollment of IP students and those from marginalized areas and backgrounds. Students with disabilities will be included and encouraged to enroll. Currently all public universities, colleges and some private and international universities (i.e. AUW) have 1% to 3% quota for the IP/communities for the enrolment to the universities. This quota is applicable for the poor IP students. Quota and scholarship also available for the disable students. However, during project consultations, IP community leaders, principals of IP schools and colleges will be invited to inform them about the project benefits and encourage them to enroll IP students to the higher educations. If there are any such students or teachers in the selected public universities and/or government/non-government persons/s who opt to undertake the training and utilize the facilities provided by the project, they will be free to do so with equal access and opportunity as all other users. An Indigenous Peoples Planning Framework has been developed based on stakeholder consultations and assessment of baseline scenarios in this regard. In the operational phase, the UTTA can provide support and programs for IP teachers/researchers.

The AUW is in the rural area whereas the UTTA site may be in a congested urban area. During initial field visit no site of culture heritage has been identified at the AUW. The locations of the universities participating in the research grant activities are unknown, an assessment will be done to make sure that

project activities are not located near any heritage sites. A chance find guideline has been included in the ESMF and will be part of works contracts and in the bidding document requiring contractors to stop construction if cultural heritage is encountered during any work and to notify and closely coordinate with relevant mandated country authority for the salvaging and restoration of such cultural heritage.

Environmental and Social Management Procedures

HEAT project will use a structured approach to environmental and social management to allow the project development process following the newly developed 10 ESSs. Furthermore, the project will also follow the mitigation hierarchy of avoidance, minimization, mitigation and compensation/offset for negative impacts and enhancement of positive impacts where practically feasible. Chapter 6 describes what needs to be done at each stage of the overall project life –implementation of the project activities and reporting on progress.

Environmental and Social screening is essential to gather information on existing baseline status and to assess potential environmental and social impacts of the project activities. Based on the extent of environmental and social impacts obtained from the screening, the decision for further environment and social assessments. UGC under SHED must confirm the findings of the screenings carried out by the consultants. Moreover, alternative project activities/methods and/or operation will be considered and the impacts will be assessed to make the projects more environment friendly and socially acceptable. Environmental and social screening forms are provided in **Annex 3 and 4,** which can be further developed at the implementation stage. The environmental screening form addresses issues under ESS1, ESS3, ESS4 and ESS6. The social screening form addresses issues under ESS1, ESS2, ESS4, ESS5, ESS7 and ESS8. Based on the outcomes of the screening, relevant safeguards documents will be prepared.

The Contingent Emergency Response Component 4 (CERC) under the project is for situations of urgent need of assistance. In the event of such emergency, this component would allow the Government to request the Bank to re-categorize and reallocate financing from other project components to cover emergency response and recovery costs, if approved by the Bank. An exclusion list of subprojects for the CERC component of the project is provided in **Annex 17**. This will ensure that projects with high/substantial environmental or social risks will not be included in the Emergency Action Plan if the CERC is activated in the future due to an emergency. For subprojects not included in the exclusion list, environmental and social screening will be done as per other HEAT subprojects.

The main steps to be followed are:

- ✓ Step-1: Screening – to identify potential risks and determine whether further assessments are required. Screening outcome can lead to further study.
- ✓ Step-2: Scoping to identify types of environmental and social assessment study
- ✓ Step-3: Terms of Reference (ToR) for environmental and social assessment study
- ✓ Step-4: Preparatory work for environmental and social assessment study
- ✓ Step-5: Undertake environmental and social assessment study (ESIA/EIA/RAP/ARAP/ESMP/IPP etc.)
- ✓ Step-6: Undertake audit

Consultations and Engagements

The process of public consultation and participation in the project was initiated in the year 2008 (for AUW subproject), and from 2019 has been an integral part of the project preparation. Consultations and

engagements will also be undertaken for all potential sub-projects. Already, two standalone Stakeholder Engagement Plans (SEP) have been prepared for this project, one for Bangladesh and other for Afghanistan. Stakeholder consultations have been extensively reported in SEP containing Project background, Socio economic context, Consultation and Communication Strategy etc. applying ESS 10, which will be followed through the project cycles.

UGC under SHED with support of AUW has had three public consultations by UGC under SHED (MoE) with support of AUW. Other than this, UGC has conducted four focus group discussions (FGD) with various stakeholders. Additionally, 15 key informant interviews (KIIs) were also conducted with teachers, students, researchers, scientists, contractors, suppliers, NGO representatives, businessmen etc. Out of the 15 KIIs, three KIIs were done through videoconferencing from March - May 2020, during the lockdown imposed due to Covid-19. Since SHED and UGC are yet to determine the land plot for the construction of the UTTA , similar public consultation meetings will take place at a later date when the plot is decided. The consultation meetings were held to ensure people's participation right from the planning stage of the project, in particular from the people of the impacted area. All consultation outcomes are recorded. Stakeholders have shown positive attitude towards the project. Different entrepreneurs requested to engage them through the project cycles. A number of entrepreneurs showed positive attitude towards participating job-fair at different universities.

Future stakeholder engagement activities are also discussed with the stakeholder groups with relevant information and opportunities to voice their views on issues that matter to them.

Grievance Redress Mechanism

The fundamental objectives of the GRM, implemented through the GRC serving as a para-legal body, are to resolve any resettlement-related grievances locally in consultation with the aggrieved party to facilitate smooth implementation of the social and environmental action plans. Another important objective is to democratize the development process at the local level and to establish accountability to the affected people. The procedures will however not a person's right to go to the courts of law pre-empt.

Grievance redress committees (GRC) will be formed to receive and resolve complaints as well as grievances from aggrieved persons from the local stakeholders including the project-affected persons. Based on consensus, the procedure will help to resolve issues/conflicts amicably and quickly, saving the aggrieved persons from having to resort to expensive, time-consuming legal actions. The procedure will, however, not pre-empt a person's right to go to the courts of law. The Grievance Redress Committees (GRCs) will be established at three levels: (i) Local Level (ii) Project level and (iii) Ministry Level.

All the sub-project/local level complaints will be received at the relevant institution or University level where head of relevant institute or his/her designated official will be the convener of the sub-project level committee. This local GRC will ensure easy accessibility by the PAPs, local communities and interested stakeholders, so that any grievances can be solved directly or within a very short period of time. All cases at the sub-project level complains will be heard within two weeks of their receipt.

During consultations, various female activists mentioned that there had been sustained government support for education of girls and women since 1991. At the moment, gender parity exists in both primary and secondary education sector with the positive tilt towards girls. The present project would create a healthy and conducive environment for women to pursue tertiary level education. This would also

facilitate job opportunity for the graduates along with research facilities for the women graduates. The networking of women within the region would also foster cultural exchange and fraternity while creating job opportunity within the region and beyond. This way the project would empower women in Bangladesh and beyond will not only lead to increased household incomes and contribute towards building a more skilled labour force, but it will also make these individuals more socially mobile. Positive Vertical Social Mobility means that they have experienced an upgrade in their social class. It would also indirectly help in overcoming domestic violence, child marriage, GBV and other women related social vices.

The project will support the promotion of tertiary education, research facilities and infrastructural development at local level and promote collaboration on higher education and research at regional level. The project may also support refurbishment and upgradation of infrastructure of a few tertiary higher education institutions in Dhaka and other unidentified locations. Due to the potential safety issues associated with construction activities, including labor influx and their exposure to women in the project area as the result of the establishment of the AUW academic complex and UTTA and the relevant activities, addressing and mitigating GBV issues at the project site is crucial.

The GBV risk rating for the project is "Substantial" taking into account the risks associated with the civil works[6] as well inherent risks for SEA/SH in higher education institutes in Bangladesh[7]. The proposed HEAT project involves construction work (as outlined previously) in the project implemented areas which may increase the potential GBV risks in four areas: Sexual exploitation and abuse, workplace sexual harassment, human trafficking and non-sexual exploitation and abuse. Therefore, A GBV and GAP has been prepared. The action plan will focus on some corresponding mitigation measures—sensitizing the communities and other stakeholders, strengthening the institutional capacities— to mitigate project related potential risk of GBV in the project affected population. A survivor-centric approach will be followed - all through, victim/survivors' care and providing access to different referral mechanisms are considered key aspects of this plan. The Plan has a detailed a GBV/SEA/SH specific Grievance Redress Mechanism, response protocol for the survivors by the project management and related referral procedures. A first-cut of mapping of GBV service providers (SPs) focused exclusively on services that respond to gender-based violence in Bangladesh has been conducted by the World Bank. The mapping includes a total of 135 service providers nation-wide, within which around 50 SPs are based in the Chittagong division. Taking the existing list as a starting point, the MoE-UGC will carry out in-depth mapping in the specific project sites, including quality assessment of services in the future. Based on the quality assessment, one or two service providers will be shortlisted for taking onboard, upon discussion between Bank and MoE-UGC.
Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may also complaints directly to the Bank through the Bank's Grievance Redress Service (GRS) *(http://projects-beta.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service).*

Implementation of the ESMF and Budget

The Project will be implemented at the national level of Bangladesh and Afghanistan. Component one will

[6] According to Addressing Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) in Investment Project Financing involving Major Civil Works Good Practice Note
[7] According to Addressing Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) in Education Investment Operations: Good Practice Note and Guidance on SEA/SH Risk Screening Tool currently under discussion

be implemented under the joint responsibility of the MOE/SHED of Bangladesh and the MOHE of Afghanistan. A joint committee, known as the Regional Coordination Committee (RCC), will be established and headed by the Minister of Education (Government of Bangladesh) and the Minister of Higher Education (Government of Afghanistan). The RCC will meet at least twice a year to review progress against stated targets and to ensure that all implementation concerns are being addressed. In addition, the RCC will also review and approve the annual work plan and budget (AWPB).

Component 2 will be implemented under guidance of a Project Steering Committee in Bangladesh. The PSC is chaired by the Secretary of the SHED/MoE and will provide policy oversight and resolve critical issues. The UGC will provide coordinating support between the SHED/MoE. The UGC would implement the project using existing structure of its with additional technical support to be provided to respective divisions

For efficient and smooth implementation of the project, suitable institutional arrangements are necessary to manage and implement the ESMP and relevant safeguard document. Project Institutional arrangement consist of two committees as Project Steering Committee (PSC) at Ministry level and project Implementation Committee (PIC) at Project level. The ESMF also outlines specific responsibilities of the following:

- University Grant Commission (UGC)
- Monitoring Evaluation and Reporting Unit (MERU)
- RAP preparation NGO/firm
- RAP Implementing NGO/Consulting Firm
- Contractors
- Participating Institutions/Universities

Environmental and social safeguards training will help ensure that the requirements of the ESS and subsequent social safeguard are clearly understood and followed by all project personnel throughout the project period. The PIC will ensure, in collaboration with the PSC that these training are provided to all Project personnel. The social training program will be finalized before the commencement of the project. The training will be provided to the UGC and AUW representatives, construction contractors, and other staff engaged in the project. Training will cover all staff levels, ranging from the management and supervisory to the skilled and unskilled categories. The scope of the training will cover general environmental and social awareness and the requirements of the ESS5 and other ESSs, with special emphasis on sensitizing the project staff to the social and genders aspects of the area. Different raining programs will be initiated which can be realigned based on the needs.

All the ESMF related documents will be inserted with the bid documents for RAP implementation firm, construction and supervision firm and external monitor. Bid documents for preparation of RAP will be prepared by consulting firms who will need to incorporate relevant items from the ESMF.

The UGC will be responsible for the overall coordination and supervision of the M&E tasks and for reporting the results in the Results Framework to the Bank. UGC will use its existing Monitoring Evaluation and Reporting Unit (MERU) with support from Higher Education Management Information System (HEMIS) and will be responsible for supporting the project in undertaking the M&E work. The MERU will be responsible for: (i) collecting updated data from the relevant agencies, institutions and units of the project to produce project progress reports biannually; (ii) updating of the results indicators; (iii) conducting physical inspections; (iv) support M&E at the subproject level and (v) conducting planned

studies and assessments in a timely manner in partnership with public research institutions (such as BIDS, BBS, IMED etc.). MERU will work closely with the relevant section of the UGC. The international cooperation and collaboration unit will obtain relevant data from the OMST/MoHE to support the reporting and assessments.

The PIC with the support of UGC will prepare a monthly report to be submitted to the PSC. These reports will summarize the following:

- Progress in implementing this ESMP and subsequent other safeguard documents, etc.;
- Findings of the monitoring programs, with emphasis on any breaches of the control standards, action levels or standards of general site management;
- Summary of any complaints by external bodies and actions taken / to be taken; and
- Relevant changes or possible changes in legislation, regulations and international practices.

A total of budget USD 870,000 for implementation of this ESMF is proposed in Table 21 in the main document. This may be changed/updated during implementation. This budget does not include the cost of land acquisition and resettlement.

COVID-19 Management

All participating institutions must put in place approved COVID-19 risk management measures based on a comprehensive risk assessment for the proposed sub-project. Appropriate mitigation measures and protocols must be provided. Where appropriate, standard operating procedures should be developed and maintained.

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Chapter 1: Introduction

1.1 Project Background

In recent years, the World Bank has supported capacity building in higher education in South Asian countries, which creates a good platform to launch regional collaboration in this aspect. The Higher Education Acceleration and Transformation (HEAT) Project focuses on improving employability of university graduates and improving governance of higher education. The Project also aims to establish a regional network of higher education institutions in South Asia. The Project takes an approach which builds on and utilizes the synergies of national and regional support to higher education. First, the project will leverage digital connectivity, established through different World Bank national projects, among the participating countries (Bangladesh and Afghanistan). Second, the project would focus on employability and leadership, particularly for women, which is one of the major development concerns in the region. Third, the project would look into promoting collaborative research among academics across different institutions in the region. Fourth, the region faces some common issues of governance and management of the higher education sector and would benefit exchange of knowledge on quality assurance, performance-based financing and teacher management systems. Finally, South Asia lags in internationalization of higher education, providing potential scope for the project to initiate efforts in this aspect.

Bangladesh has a growing higher education system with two main providers of higher education in the country: (i) 153 public and private universities[8], directly under the supervision of the University Grants Commission (UGC) and (ii) around 2,000 government and non-government tertiary colleges affiliated with the National University (NU). In addition, there is are two regional universities (Asian University for Women and Islamic University of Technology), which operate as fully independent institutions. Together, the sector caters to around 2.7 million students[9] in 2017 which is a significant increase compared to the 1.5 million students in 2010. UGC, an attached body of Ministry of Education (MoE), is the oversight apex body for all public and private universities and the intermediary between the Government and the universities for regulating the affairs of the universities. Female students account for around 44 percent of higher education enrollment. The Government of Bangladesh (GoB) has prepared a Higher Education Strategic Plan 2018-30 that signals a strong commitment by the Government to enhance investments in higher education, comprehensively identifies issues and challenges and recommends solutions. The Bank has supported the higher education sector in Bangladesh through the HEQEP Project since 2008, providing a strong basis for future reforms.

The Asian University for Women (AUW) provides an exceptional example of effectively promoting female higher education and employability, especially for those from underserved community, serving as a model of Center of Excellence for the region. AUW was established in 2008 to educate the next generation of female leaders in the region. This university mostly enrolls underprivileged women (e.g. from the garment sector, and minorities) and prepares them through high quality and rigorous undergraduate programs as high skilled professionals for the job market. In addition to subject specific specialization, AUW emphasizes on confidence-building and higher order cognitive and soft skills development, including problem-solving, teamwork, communication and negotiation skills. It manages to provide internships to all its students, leading to high graduate employment in top employers, while many graduates continue

[8] 49 public and 104 private – however, only 140 universities are academically functional (45 public and 95 private).
[9] There were 0.9 million students in universities and 1.7 million students in tertiary colleges in 2016.

to pursue postgraduate degrees in top ranked global universities. AUW has also managed to maintain academic continuity during the COVID quarantine period through online programming. The institute has identified a need to strengthen their crisis response mechanisms to ensure their ability to support academic continuity during future emergencies.

Through this Project, the World Bank (WB) would support improved research, teaching and learning environment in the universities for better student learning outcomes and skills development with the intent of graduating employable students for a more competitive and rapidly changing local and regional job market.

The proposed project also aligns with the government policies which guide development priorities and strategies at the higher education sector in Bangladesh, as specified in the Strategic Plan for Higher Education (SPHE) 2018-2030; and in Afghanistan as specified in National Higher Education Strategic Plan II (NHESP II, 2016-2020). In Bangladesh, the Strategic Plan for Higher Education (SPHE) 2018-2030 keeps the objectives and targets of National Education Policy 2010, Vision 2021 and 2041, the 7th Five Year Plan and other future looking plans such as Draft 8th Five-year plan, SDG action plan and Delta plan 2100.

1.2 Project Rationale

This project consists of large, medium and small-scale constructions activities including construction of AUW academic complex, UTTA, establishing 7 new fab-labs, setting up 5 “i-labs” in 5 universities, upgradation/renovation of childcare facilities, and Upgrading washroom facilities of Women’s Colleges and Universities in Bangladesh etc. Though AUW academic complex sub-project will not require any land acquisition but it may affect some business squatters and vendors during construction. According to the AUW-ESIA study, no PAPs are found within the boundary of AUW land. However, there are presence of 5 to 6 small scale squatter businesses on the Chottogram City Corporation land which is very adjacent to the AUW land. These squatters may be affected during construction period. Moreover, due to movement of heavy vehicles, sub-project may cause construction induced impacts. However, detailed assessment will be done and based on the assessment RAP/ARAP will be prepared, if required. The UTTA site is expected to be in the heart of Dhaka city. Preliminary, UGC has identified two government lands. Based on the screening, if one site is being selected among these two lands, no land acquisition may require. Even if land acquisition is not required for the UTTA site, after the proposed sites identified and based on screening, if squatters are found to be present in the project site, RAP or ARAP will be prepared, if necessary.

Aside from the construction of the AUW academic complex and UTTA, other construction activities will be minor and will be conducted within the premises of existing eligible public and private universities and women colleges. As the eligible educational institutes are not selected yet, exact location is unknown. There are no long term or significant impacts anticipated. Given that no large-scale infrastructure development is anticipated at this stage the probability of land acquisition, requisition, relocation, and related impact on squatters or livelihoods is very low. Subsequent Resettlement Action Plans (RAPs) will be developed during project preparation. The RAPs and/or ARAPs will be reviewed, consulted upon, approved and disclosed both within the country and on the World Bank's web site prior the commencement of the civil works.

Due to the overall potential impacts on health and safety issues associated with construction activities, relocation of squatters, livelihood impacts on the neighborhood, impacts on gender and labor influx as the result of the establishment of the AUW academic complex and UTTA and the relevant activities such

as student exchange etc., the associated risk is classified as 'Substantial' from the initial risk assessment of the proposed interventions.

The number, type and locations of the component interventions will be decided over the project implementation stage. Beneficiary groups and sites for any small infrastructures will be known in the implementation level and therefore, social issues and impacts could not be identified and specified for mitigation at the preparation stage. UGC will screen sites for project interventions and identify the target group beneficiaries at the implementation level for preparation and implementation of any social action plans. Hence, there is a need for procedural guidance for social preparation and management. UGC has therefore prepared Environmental and Social Management Framework (ESMF) as a constituent part for guidance in the implementation stage.

The rationale for developing the framework is based on the consideration that all subprojects under the project will only be identified and prepared during the implementation of HEAT. Therefore, detailed site investigations will be carried out as part of identifying specific project activities and related designs at the selected locations to ascertain the precise nature of the social impacts. The ESMF will provide the necessary background for social and environmental considerations, a checklist of potential social and environmental issues of the project activities to be considered and built into the design of the project so that socially sustainable implementation can take place, including social and environmental screening of the projects and guidance on the preparation of specific assessments and plans.

This ESMF will also serve as the guideline for the staff designated by the implementing agencies and participating institutions – with the UGC to oversee and monitor the social safeguards compliance of the project components under their implementation responsibility. The ESMF will be a living document and will be reviewed and updated periodically as needed.

1.3 Objectives of the ESMF

The ESMF is intended to be used as a practical tool during project formulation, design, implementation, and monitoring in HEAT project. This document will be followed during project preparation and implementation for ensuring environmental and social integration in planning, implementation, and monitoring of project supported activities. For ensuring good environmental and social management in the proposed project, the ESMF will provide guidance on pre-investment works/studies (such as environmental and social screening, environmental and social assessment, environmental and social management plans, etc.), provide set of steps, process, procedure, and mechanism for ensuring adequate level of environmental and social consideration and integration in each investment in the project-cycle; and describes the principles, objectives and approach to be followed to avoid or minimize or mitigate impacts. While this ESMF document has been prepared to identify the potentially negative impacts of the project, the specific objectives are to:

- integrate the environmental and social concerns into the identification, design and implementation of all project interventions in order to ensure that those are environmentally sustainable and socially feasible;
- ensure all relevant environmental and social issues are mainstreamed into the design and implementation of the projects and also in the subsequent phases of the project;
- consider in an integrated manner the potential environmental and social risks, benefits and impacts of the program and identify measures to avoid, minimize and manage risks and impacts while enhancing benefits;

- ensure compliance with national and World Bank requirements. The ESMF presents potential impacts of the project, mitigation, enhancement, contingency and compensation measures, environmental and social management and monitoring plan, and institutional framework including inter-agency cooperation for implementing ESMP. The ESMF will facilitate compliance with the Government of Bangladesh's policies, acts and rules as well as with the World Bank's environmental and social standards (ESSs) of the newly adopted Environmental and Social Framework (ESF), and guide conducting the detailed ESA/IEE/ESIAs, RAP/ARAP, IPP, and ESMP of the later stages of the project as appropriate to the project components and sub-components.

Project will address the following issues:

- ✓ Protect human health
- ✓ Minimize environmental degradation as a result of either individual subprojects or their cumulative effects;
- ✓ Enhance positive environmental outcomes; and
- ✓ Ensure compliance with World Bank ESF

The nine Environment and Social Standards (ESS) need to be considered in this project:

ESS1: Assessment and Management of Environmental and Social Risks and Impacts;
ESS2: Labor and Working Conditions;
ESS3: Resource Efficiency and Pollution Prevention and Management;
ESS4: Community Health and Safety;
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities;
ESS8: Cultural Heritage;
ESS10: Stakeholder Engagement and Information Disclosure.

1.4 Approach and Methodology of the ESMF

The ESMF has been prepared following the standard methodology consisting of the steps listed below:

- Review of the program details and meeting/discussions with the project team
- Review of the policy and regulatory requirements
- Conduct reconnaissance field visit by group of experts and project team and initial scoping and screening to determine the key environmental and social parameters and aspects that are likely to be impacted by the program activities
- Collect and analyze of baseline environmental and social data with the help of secondary literature review and field data collection
- Consult with the stakeholders including beneficiary/affected communities and developing the consultation process
- Assess the potential and likely impacts of the program activities
- Prepare an outline environmental and social management issues according to the requirements of the ESSs of the ESF
- Compile thematic issues into the ESMF

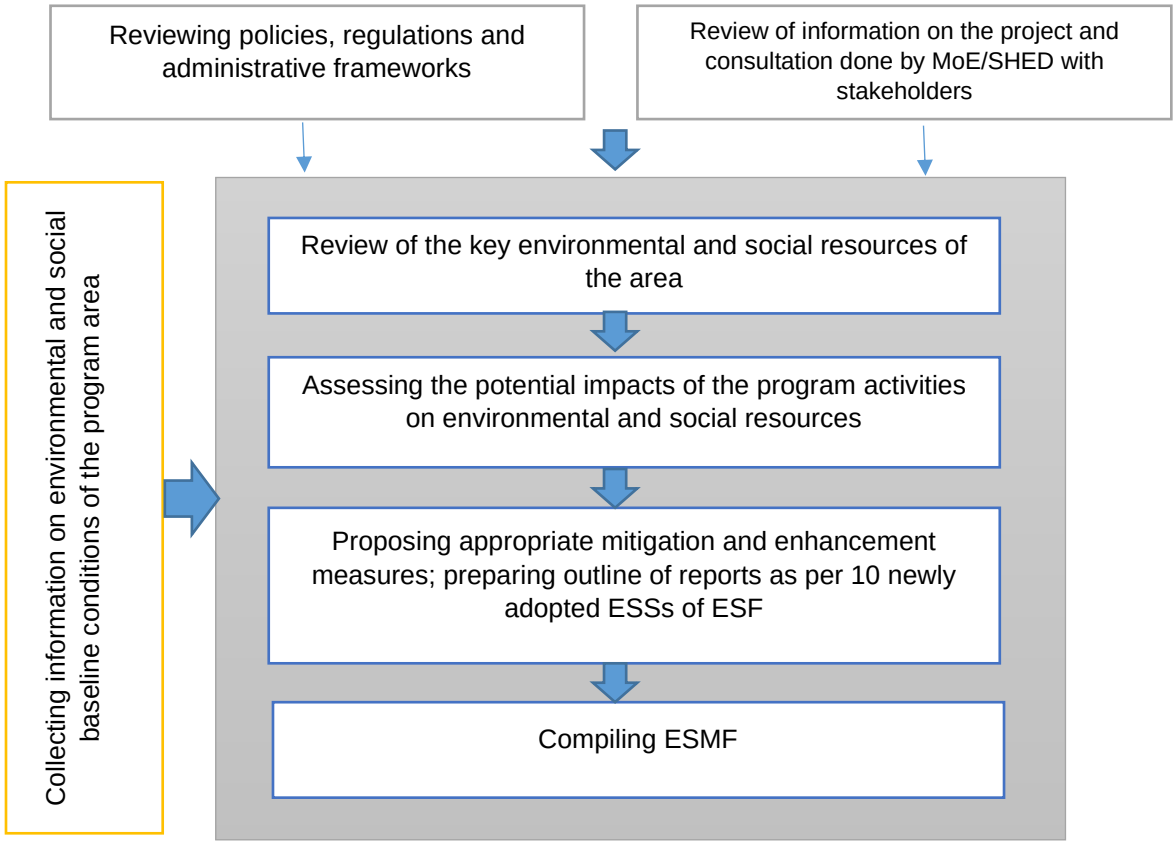


Figure 1: ESMF Preparation Approach

1.5 Structure of this ESMF

Chapter 2 presents a simplified description of the project, its various components and other salient information relevant for environmental and social assessment. Chapter 3 reviews the prevailing World Bank and national regulatory requirements relevant to environmental and social assessment. Description of the baseline environmental and social conditions is presented in Chapter 4. Potential environmental and social impacts of the project are described in Chapter 5. Environmental and Social management procedures to be followed during the project implementation and also screening and necessary assessments have been discussed under Chapter 6. The chapter also presents the outline of environmental and social management plan (ESMP) that may be required for specific sub-projects (subject to screening findings). Chapter 7 elaborates the requirements of Stakeholder Engagement and Disclosure along with describing the consultations that have been carried out with the stakeholders and also the requirements of similar consultations to be carried out while conducting the IEE/EIAs/SIAs, RAP/ARAP, IPP and ESMP. Chapter 8 provides details of the Grievance Redress Mechanism for the project. Finally, Chapter 9 describes implementation, institutional framework and capacity building plan to implement the ESMF as well as its monitoring aspects.

This ESMF also consists of five additional thematic frameworks/plans on LMP, GAP, RPF, SEP and IPP to meet requirements of the new WB ESF. These are provided in relevant Annexes.

1.6 Lessons Learnt from HEQEP EMF and SMF Implementation

The project was rated Category B, triggering OP 4.01 Environmental Assessment, OP 4.10 Involuntary Settlement and OP 4.12 Indigenous People. At the time of restructuring in December 2013, the environmental safeguards were rated 'satisfactory' based on the due diligence demonstrated by the implementing agency (UGC) in the previous year of environmental safeguard implementation. Due to the potential environmental impacts from relatively limited scale and magnitude of the infrastructure renovation/refurbishing/extension works and academic research output, the project retained its Category B for the AF. There were no major social or environmental issues during project implementation. The Monitoring, Evaluation and Reporting Unit (MERU) provided regular and timely progress reports on component-wise activity on a semiannual basis. The MERU produced 17 semiannual synthesis reports that discussed in detail the project progress, implementation issues, and possible solutions. These reports also updated on critical areas of World Bank monitoring requirements including compliance with environmental and social safeguards, citizen engagement, and governance and accountability status.

The major environmental safeguards steps undertaken were:

- UGC/HEQEPU developed its own monitoring plan to oversee environmentally critical sub-projects.
- UGC/HEQEPU assigned 2 professional staffs as additional responsibility to review the environmental safeguard issues in sub-projects.
- As part of the capacity building on environmental issues in UGC/ HEQEPU, selected staffs received training in EMF application and environmental management.
- To assist capacity building and to provide subsequent guidance and review of the EMF's application, the Government of Bangladesh (GOB) contracted specialist services for environmental management.
- Environmental Impact Assessment of Academic Innovation Funds (AIF) sub-projects, where required (based on screening of subproject proposals).

Most HEQEP sub-projects had very little environmental impact as there was only small refurbishment/ renovation works. All renovation/ refurbishment and installation of equipment were done after classes concluded or during vacation period. The generated wastes were disposed in onsite university waste bins. Chemical wastes were neutralized before being released into university's main drainage system. It is important to mention here that liquid chemical waste containing organic solvents and toxic substances were detoxified and kept in sealed container for few days before being finally released in a water tank near the laboratory. Other solid wastes like syringe, needles etc. were put in a poly bags and burnt in designated incinerators. Also, the projected created awareness on the safe disposal of e-Wastes during subproject visits.

HEQEP Social Management Framework included following safeguard checklist: whether small ethnic communities are covered by the Academic Innovation Funds (AIF) sub-projects, agricultural lands degradation protected, equal inclusion right to the Tribal People are guaranteed, places/ objectives of cultural and religious significance (places of worship, ancestral burial grounds) are protected, etc. The project undertook a number of social awareness activities using the national media (i.e. meet the press, TV talk shows on higher education project and the AIFs in particular) which helped to create a positive public disposition about the project and its contribution/impact to higher education in the country.

The major social safeguards steps undertaken were:

- UGC/HEQEPU developed its own monitoring plan to oversee social safeguard issues for sub-projects.
- UGC/HEQEP assigned 3 professional staffs as additional responsibility to review the social safeguard issues in sub-projects.
- Social safeguard Impact Assessment of AIF sub-projects, where required (based on screening of subproject proposals).

Those universities or entities in universities who received grants under HEQEP invariably had developed some kind of SOP, not always formally in a written form, but usually approved by appropriate authorities (Academic Committee in Departments or Academic Council for the university). Such SOPs were always in practice, and proper utilization of HEQEP grants was often associated with updating the SOPs and following them in all academic activities.

Chapter 2: Project Description

2.1 Project area and its beneficiaries

The intent of the project is to enhance graduate employability for a more competitive and rapidly changing job market within and outside the country and improve governance of higher education nationally. The project also aims at improving quality and relevance of higher education for women regionally through exchange program.

The direct beneficiaries of the proposed project will be students and teachers of higher education institutions in Bangladesh, Afghanistan and the participating countries (yet to be confirmed) including students and teachers benefitting from competitive grants, BdREN, LMI, QA, CPD and the regional network activities in Bangladesh and Afghanistan. Female students of Bangladesh, Afghanistan and participating countries will be benefited as special emphasis will be given to promote higher education and leadership for women through establishing a regional network. There will also be many indirect beneficiaries of the Project, including employers who will be able to recruit better quality graduates and/or will get opportunities to collaborate with universities in relevant research areas, future generations of university students, faculty and staff members who will benefit from program accreditations and the system-wide reforms/improvements.

2.2 Project Development Objectives (PDO)

The project development objectives (PDO) are:

- ✓ to strengthen regionally the COVID-19 response, improve connectivity and quality of higher education for women
- ✓ to enhance resilience, graduate employability and improve governance of higher education nationally.

2.3 Project Components

The Project has four components that embody 05 sub-components and will be implemented over a five-year period from 2021 to 2025/26. Component 1 is the regional component supporting collaboration in higher education across the South Asia region[10], Component 2 supports the Bangladesh higher education sector through a nationally focused sub-component, Component 3 supports the day to day management of the proposed operation and component 4 is the 'zero budget' contingent emergency response component. Given the ongoing COVID 19 crisis, the project components have been prioritized to identify short-term, medium term and long-term activities under the proposed project.

The project components and sub-components as summarized at **Table 1.**

[10] Including the possibility of countries beyond the strict boundaries of South Asia.

Table 1: Key Activities of Component/Subcomponent

Component/Subcomponent	Key Activities
COMPONENT 1: SOUTH-ASIAN HARMONIOUS AREA FOR RESEARCH AND EDUCATION	
Sub-component 1.1: Building System Resilience and digital connectivity	Sub-component 1.1.1: Emergency response The sub-component will offer technical support for up to 150 higher education institutions to implement the emergency guidelines. This will include the establishment of a response committee, a rapid review of readiness for re-opening, the review of draft emergency response plans based on the template, reviews of related policies such as IT-policies, quality assurance and accreditation policies. Sib-component 1.1.2 Efforts to improve connectivity across national research and education networks Main activities are (i) technical assistance to participating countries to strengthen the service provision offered by NREN, (ii) development of a standard package of services that NRENs in South Asia can offer students and higher education institutions; (iii) support the participation and membership of the AfgREN in the Asia-Pacific Advanced Network (APAN) and work closely with APAN to strengthen cooperation across SAR RENs; (iv) put in place the last-mile connectivity for participating colleges, institutions and universities in Afghanistan and Bangladesh ; (v) support the development and implementation of policies and strategies to ensure connectivity of the most disadvantaged students by providing means-tested access to devices and broadband access, and (vi) the establishment of a 24/7 helpdesk to support remote teaching and learning. Component 1.1.3: The establishment of a South Asian Higher Education The project will also finance technical assistance at the regional level to assist central authorities (UGC or Equivalent) to develop a South Asian Higher Education Portal to be initially hosted by the BdREN in Bangladesh. The Portal will host both curated and new content, including teaching and learning materials, tutorial support, freely accessible online courses offered by regional institutions, a learning corner and platforms for teaching and learning material. This sub-component will also finance and support the development of policies and strategies aimed at developing resilience in the higher education system through digitalization. The portal will also host all outputs produced under Sub-Component 1.1.1 on the Pandemic Response. While the material on the portal will directly benefit Afghanistan and Bangladesh, there will also be spillover benefits to other countries in the region and beyond.

Component/Subcomponent	Key Activities
Sub-component 1.2: Regional Network of Women's Higher Education Institutions	<u>Subcomponent 1.2.1: Regional Network Activities</u> This subcomponent will support (1) implement a model of increasing employability, which includes setting up a Career Service Center and alumni office, partner with employers in the public and private sector to offer job placements and internships to their students. (2) Modernize their curricula, strengthen faculty's pedagogical and content knowledge through short-term in-service training and longer-term academic training, and support student assessment methods and remedial teaching to ensure that no student falls behind. (3) Upgrade their teaching and learning environment, services (e.g. childcare) to strengthen female enrolment, and support for digital connectivity to the research and education networks in their countries. (4) Undertake joint research and joint master programs on topics including related to gender in education, and transitions from education to the labor market. This sub-component will also support (i) strengthening student recruitment and admissions; (ii) remedial programs to ensure preparation for a competitive and rigorous program; (iii) strengthening of teaching and learning at all stages of student programs, (iv) improving employability and labor market outcomes; (vii) curricular reforms, (viii) improved methods of student assessments; (ix) enshrining civic and social values in student programs; (x) digital program development; and (xi) development of modules focused on women's leadership. <u>Subcomponent 1.2.2: Building of the AUW Academic</u> This sub-component will support the infrastructure development of a climate resilient academic complex at Asian University for Women (AUW) which will become a hub for the regional network. The academic complex development would include the building of the main seminar rooms, lecture halls, theaters, and faculty offices. This campus will increase the enrollment capacity of AUW from 700 to 3,000 students. Further campus construction (beyond the academic complex) is expected to consist of a state-of-the-art auditorium, a sports field, gymnasium and swimming pool, a complete set of student, staff and faculty housing, we which will be established in a phased manner using alternative financing sources and over an extended period of time.
COMPONENT 2: TRANSFORMING HIGHER EDUCATION IN BANGLADESH	
Sub-Component 2.1: BUSINESS CONTINUITY UNDER COVID-19	The following set of activities will be financed through this sub-component: ▪ *Develop National Learning Management Infrastructure (LMI)*: A national/central Learning Management Infrastructure (LMI) will be established. The LMI will facilitate the development, management and delivery of on-line courses.

Component/Subcomponent	Key Activities
	▪ *Subsidize connectivity and devices to students and staff:* UGC and participating universities in BdREN will offer a subsidized connectivity package (Wi-Fi router and internet credit) to students and staff. ▪ *Upgrade the Bangladesh Research and Education Network (BdREN)*: BdREN's capacity will be strengthened and participation of universities will be increased to support envisioned activities and delivery of services under LMI
Sub-Component 2.2: Strengthening the Market Relevance of Higher Education Programs in Bangladesh	The sub-component will support to focus on employability skills of university students through enhanced exposure programs for university students and employment service activities Under this sub-component University Teachers' Training Academy (UTTA) with provision of residential amenities will be constructed. As part of faculty professional development 5,000 teachers from public and private universities will be trained. Under competitive grant scheme main activities will be (a)COVID-19 related research and development; (b) upgrading teaching-learning facilities with modern communication technology; (c) upgradation of science and technology labs for STEM disciplines; (d) updating/modernizing curricula and teaching-learning material; (e) upgradation/renovation of childcare facilities and ensuring campus safety for women; (f) competitive research grants for STEM and Humanities/Social Sciences/Liberal Arts; (g) establishing 7 new fab-labs; (h) transforming all existing fab labs into Centers of Excellence in digital manufacturing and facilitating link-up with private sector; (i) set-up 5 "i-labs" in 5 universities; (j) set-up business incubators tagged with successful fab-labs/i-labs to convert innovative ideas into commercially useful products and (k) IP management cells and Technology Transfer Offices (TTO) will be established at least in 20 universities
Sub-Component 2.3: Improving the Governance and Quality of the Higher Education Sector	This sub-component will support activities to enhance the overall management capacity of the higher education sector in Bangladesh. Technical assistance will be provided to support implementation of (i) Improving Higher Education Management, (ii) Enhanced Quality Assurance Mechanisms to all the 153 universities in Bangladesh and (iii) Strengthening of Institutional and Program Accreditation and at least 30 programs will be accredited in universities under Bangladesh Accreditation Council (BAC).
COMPONENT 3: Enhancing Project Management Results	The component supports project management capacities of the Bangladesh: Ministry of Education and UGC; and in Afghanistan: The Ministry of Higher Education (MoHE). The activities under this component include: (i) project management; (ii) monitoring and

Component/Subcomponent	Key Activities
monitoring and communication	Evaluation; (iii) communication; and (iv) Technical Assistance (TA) and help create a grievance redress mechanism (GRM).
Component 4: Contingent Emergency Response Component (CERC)	This contingent emergency response component is included under the project for situations requiring urgent need for assistance. A zero-value component has been included to ensure that these funds can be deployed through the project.

2.4 Locations of Project Activities

According to the design of the project, the boundary of the project location will be regional through regional collaboration in research and students exchange program to promote women's education. However, in Bangladesh, all the major and minor civil construction related activities is expected to be conducted within the boundary of 153 public and private universities. Due diligence of the anticipated footprints is not completed at this stage except AUW academic complex construction. AUW permanent campus will be constructed at Dakshin Pahartali, only 6 km from Chattogram city center on 140 acres of unutilized hilly khas land donated by Government in 2004[11].

Aside from the construction of the AUW academic complex construction, two alternative land / sites in Dhaka, owned by Government of Bangladesh have already been identified as potential sites for construction of UTTA. However, exact site will be finalized based during implementation.

Other construction activities will be minor and will be within the premises of existing eligible public and private universities and women colleges in Bangladesh. As the eligible educational institutes are not selected yet, exact location is unknown. No project civil works will take place in areas where there are concentrations of Indigenous Peoples.

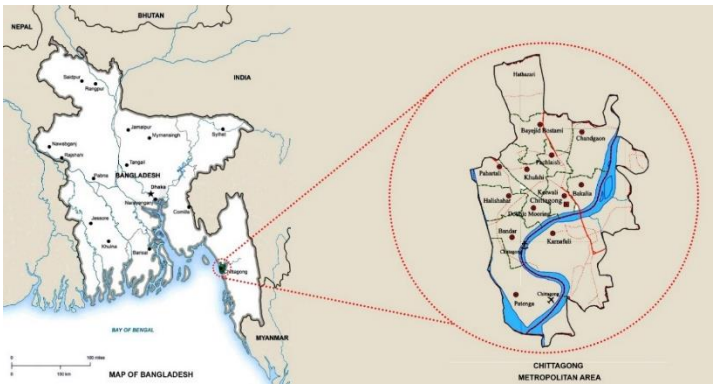
The other construction related activities will be:

- ✓ Establishing 7 new fab-labs
- ✓ Transforming all existing fab labs into Centers of Excellence in digital manufacturing and facilitating link-up with private sector
- ✓ Setting-up 5 "i-labs" in 5 universities;
- ✓ Setting up TTOs in at least 20 universities
- ✓ Establish office of Bangladesh Accreditation Council
- ✓ Establishment of IQACs, Career Service Centers and Alumni offices in the participating public and private universities

[11] ("International Coalition Plans New University for Asian Women". The Chronicle of Higher Education. 2002-03-22. Retrieved 2017-01-17

- ✓ Upgradation/refurbishment of teaching-learning facilities with modern technology and upgradation of science and technology labs
- ✓
- ✓ Teaching and learning of upgradation of Women's Colleges and Universities in Bangladesh
- ✓ Strengthening of digital facilities of Colleges and Universities in Bangladesh
- ✓ Upgrading/renovation of childcare facilities, dorms and washroom facilities at Women's Colleges and Universities in Bangladesh

The project will also provide research funding into areas such as: (a) smart agriculture, computational biology, bio-medical sciences, nanotechnologies & engineering, sustainable materials, textile & leather technologies, climate change resilience, gender studies, etc.; and (b) Collaborative research with industries and research institutes which target the patenting and commercialization of research outputs.



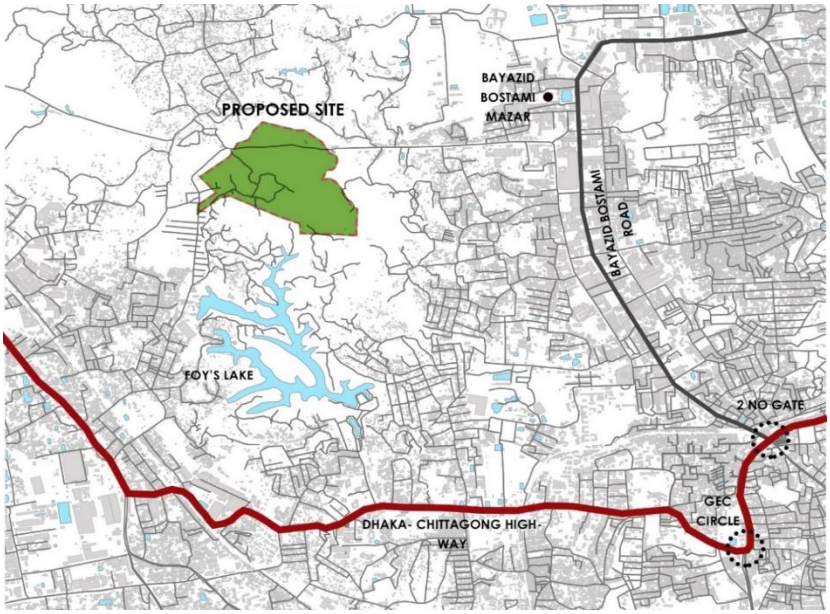


Figure 2: Location of AUW Campus

Chapter 3: Policy, Legal and Regulatory Framework

This Chapter presents a review of the national policy, legal, and regulatory framework relevant to the environmental and social aspects of the project. In addition to the national environmental and social Framework, World Bank environmental and social safeguard policies are also discussed.

3.1 Review of National Environmental and Social Policy, Legal and Regulatory framework

All relevant national policies, strategies, plans, acts, rules and regulations laid out by the Government of Bangladesh pertaining to the environment and social aspects are briefly discussed in **Annex 1. Table 2** below lists only the applicable key GOB acts, rules and regulations and their relevance to this project.

Table 2: Summary of applicable environmental, social and safeguards regulations of GoB

S.No.	Policies/Act/Rules	Key provisions and purpose
1.	Bangladesh Environmental Conservation Act (ECA), 1995	This umbrella Act includes laws for conservation of the environment, improvement of environmental standards, and control and mitigation of environmental pollution. According to this act (Section 12), no industrial unit or project shall be established or undertaken without obtaining, in a manner prescribed by the accompanying Rules, an Environmental Clearance Certificate (ECC) from the Director General of DoE.
2.	Bangladesh Environmental Conservation Rules (ECR), 1997	The Rule 7 classifies industrial units and projects into four categories depending on environmental impact and location for the purpose of issuance of ECC. These categories are: Green, Orange A, Orange B, and Red. The ECR'97 describes the procedures for obtaining Environmental Clearance Certificates (ECC) from the Department of Environment for different types of proposed units or projects.
3.	Bangladesh Environment Court Act, 2010	Bangladesh Environment Court Act, 2010 has been enacted to resolve the disputes and establishing justice over environmental and social damage raised due to any development activities.
4.	The Protection and Conservation of Fish Act (1950)	This Act provides power to the government to: make and apply rules to protect fisheries; prohibit or regulate erection and use of fixed engines; and construction of temporary or permanent weirs, dams, bunds, embankments and other structures.
5.	Protection and Conservation of Fish Rules (1985)	Section 6 states, "No person shall destroy or make any attempt to destroy any fish by poisoning of water or the depletion of fisheries by pollution, by trade effluents or otherwise in inland waters.
6.	Bangladesh Wildlife (Protection and Preservation) Act 2012	The Act protects 1,307 species of plants and animals, including 32 species of amphibian, 154 species of reptile, 113 species of mammal, 52 species of fish, 32 species of coral, 137 species of mollusk, 22 species of crustacean, 24 species of insect, six species of rodent, 41 species of plant and 13 species of orchid. Of these, eight amphibian, 58 reptile, 41 bird, and 40 mammal species are listed as endangered in the IUCN Red Data Book (2000, updated in 2015).
7.	Biodiversity Act, 2017	It provides for the creation of the National Committee and the Biodiversity Management and Surveillance Committees at local levels (i.e. Districts, Upazilas, Municipalities, and Unions). In general, all these committees are mandated to: assist the Government in implementing the National Biodiversity Strategy and Action Plan (NBSAP) and to visit the

S.No.	Policies/Act/Rules	Key provisions and purpose
		biodiversity enriched areas in their respective territories; and, monitor the progress of implementation of the NBSAP.
8.	Forest Act 1927 (Amendment 2000)	The act empowers the government to regulate the felling, extraction, and transport of forest produce in the country.
9.	Embankment and Drainage Act, 1952	The Act consolidates the laws relating to embankments and drainage providing provision for the construction, maintenance, management, removal and control of embankments and water courses for the better drainage of lands and for their protection from floods, erosion or other damage by water.
10.	Bangladesh Water Act, 2013	As per this Act, all forms of water (e.g., surface water, ground water, sea water, rain water and atmospheric water) within the territory of Bangladesh belong to the government on behalf of the people. Without prior permission issued by the Executive Committee, no individuals or organizations will be allowed to extract, distribute, use, develop, protect, and conserve water resources, nor they will be allowed to build any structure that impede the natural flow of rivers and creeks.
11.	Bangladesh Labor Act, 2006	It provides the guidance of employer's extent of responsibility and workmen's extent of right to get compensation in case of injury by accident while working.
12.	Bangladesh National Building Code, 2006	The BNBC clearly sets out the constructional responsibilities according to which the relevant authority of a particular construction site shall adopt some precautionary measures to ensure the safety of the workmen. The Code also clarifies the issue of safety of workmen during construction.
13.	The Noise Pollution Control Rules, 2006	The Noise Pollution Control Rules have been established in order to manage noise generating activities which have the potential to impact the health and wellbeing of workers and the surrounding communities.
14.	The Water Supply and Sanitation Act (1996)	Regulates the management and control of water supply and sanitation in urban areas.
15.	The Antiquities Act (1968)	Describes the preservation of cultural heritage, historic monuments and protected sites
16.	Acquisition and Requisition of Immovable Property Act(ARIPA), 2017	The principal legal instrument governing land acquisition in Bangladesh is the Acquisition and Requisition of Immovable Property.

3.2 Applicable International Treaties Signed Framework

Bangladesh has signed most international treaties, conventions and protocols on environment, pollution control, bio-diversity conservation and climate change, including the RAMSAR Convention, the Bonn Convention on Migratory Birds, the Rio de Janeiro Convention on Biodiversity Conservation, and the Kyoto Protocol on Climate Change. An overview of the relevant international treaties signed by GoB is shown in table below.

Table 3: Relevant International Treaty or Conventions and Responsible agency

Treaty	Year	Brief Description/Relevance to the Project	Relevant Department
Protection of birds (Paris)	1950	Protection of birds in wild state Broadly applicable for birds in and around the project influence area; mitigation measures included in ESMP address potential impacts on birds as well.	DoE/DoF
Ramsar Convention	1971	Protection of wetlands. Broadly applicable for wetlands in and around the project influence area; mitigation measures included in ESMP address potential impacts on wetlands and associated resources as well.	DoE/DoF
Protocol on Waterfowl Habitat	1982	Amendment of Ramsar Convention to protect specific habitats for waterfowl. Broadly applicable for wetlands in and around the project influence area; mitigation measures included in ESMP address potential impacts on wetlands and associated ecological resources as well.	DoE/DoF
World Cultural and Natural Heritage (Paris)	1972	Protection of major cultural and natural monuments. Not applicable since no major cultural or natural monuments are known to exist in the project influence area. However, Chance Find Procedures have been included in the ESMP	DoArch
CITES convention	1973	Ban and restrictions on international trade in endangered species of wild fauna and flora. Not directly relevant to the project since the project does not involve in any international trade of endangered species of wild fauna and flora. General restrictions have however been included in the Environmental Code of Practice.	DoE/DoF
Bonn Convention	1979	Conservation of migratory species of wild animals. Broadly applicable to the migratory birds in and around the project influence area. Project activities are not likely to have any significant impacts on these species; precautionary measures have nonetheless been included in ESMP.	DoE/DoF

Treaty	Year	Brief Description/Relevance to the Project	Relevant Department
Prevention and Control of Occupational hazards	1974	Protect workers against occupational exposure to carcinogenic substances and agents. Broadly applicable to the construction and O&M activities under the project. Appropriate mitigation and protective measures have been included in the ESMP.	MoH
Occupational hazards due to air pollution, noise & vibration (Geneva)	1977	Protect workers against occupational hazards in the working environment. Broadly applicable to the construction and O&M activities under the project. Appropriate mitigation and protective measures have been included in the ESMP.	MoH
Occupational safety and health in working environment (Geneva)	1981	Prevent accidents and injury to health by minimizing hazards in the working environment. Broadly applicable to the construction and O&M activities under the project. Appropriate mitigation and protective measures have been included in the ESMP.	MoH
Occupational Health services	1985	To promote a safe and healthy working environment. Broadly applicable to the construction and O&M activities under the project. Appropriate mitigation and protective measures have been included in the ESMP.	MoH
Convention on oil pollution damage (Brussels)	1969	Civil liability on oil pollution damage from ships. Not applicable since no oil carrying cargos are involved in the proposed project.	DoE/MoS
Civil liability on transport of dangerous goods (Geneva)	1989	Safe methods for transport of dangerous goods by road, railway and inland vessels. Broadly applicable to transportation of substances such as fuels during the project construction phase. Appropriate mitigation measures are included in the ESMP.	MoC
Safety in use of chemicals during work	1990	Occupational safety of use of chemicals in the work place. Broadly applicable to the construction and O&M activities under the project. Appropriate mitigation and protective measures have been included in the ESMP.	DoE
Convention on oil pollution	1990	Legal framework and preparedness for control of oil pollution.	DoE/MoS

Treaty	Year	Brief Description/Relevance to the Project	Relevant Department
		Broadly applicable to the construction and O&M activities under the project. Appropriate mitigation and protective measures have been included in the ESMP.	
UN framework convention on climate change (Rio de Janeiro)	1992	Regulation of greenhouse gases (GHGs) emissions. Broadly applicable to the construction and O&M activities under the project. Appropriate mitigation and protective measures have been included in the ESMP to minimize emissions of GHGs.	DoE
Convention on Biological Diversity (Rio de Janeiro)	1992	Conservation of bio-diversity, sustainable use of its components and access to genetic resources. Broadly applicable to the construction and O&M activities under the project. Appropriate mitigation and protective measures have been included in the ESMP for the conservation of biodiversity.	DoE
International Convention on Climate Changes (Kyoto Protocol)	1997	International treaty on climate change and emission of greenhouse gases. Broadly applicable to the construction and O&M activities under the project. Appropriate mitigation and protective measures have been included in the ESMP to minimize emissions of GHGs.	DoE
Strategic Action Plan for Bay of Bengal	2012 endorsement; 2016 signed by MoFL/MoEFCC of GoB	This Strategic Action Program (SAP) is based on the Trans boundary Diagnostic Analysis (TDA) which was endorsed in March 2012 by the eight countries of the BOBLME. The TDA draws on over ten years of studies, reviews and analyses. It identifies the main trans boundary issues and their causes, and it reviews the driving forces at work in the BOBLME, such as the socio-economic, institutional, legal and administrative circumstances and the projected impact of climate change on the region. These forces all pose a range of constraints and challenges and have the potential to influence the success of actions implemented to address the main areas of concern.	MoFL/MoEFCC

Treaty	Year	Brief Description/Relevance to the Project	Relevant Department
		The SAP is a negotiated policy document that sets out a program of actions which address the causes of the major fisheries, environmental and social and economic issues. The development of the SAP has been guided by the BOBLME Project Steering Committee which comprised senior-level government officers from the fisheries and environmental agencies in each country. This SAP is the 2015 versions, expanded with the signatures of 16 government partner institutions, endorsing it for the implementation of the 2nd phase.	

3.3 World Bank's Environmental and Social Framework (ESF)

Since October 2018, all World Bank funded Investment Project Financing (IPF) are required to follow the Environmental and Social Framework (ESF) consisting of ten (10) Environment and Social Standards (ESSs). These ESSs set out their requirement for the HEAT project relating to the identification and assessment of environmental and social risks and impacts associated with any project. The ESSs support the project in achieving good international practice relating to environmental and social sustainability, assist them in fulfilling their national and international environmental and social obligations, enhance transparency and accountability and ensure sustainable development outcome through ongoing stakeholder engagement.

The ESF sets out its commitment to sustainable development, through Bank Policy and a set of Environmental and Social Standards that are designed to support HEAT subprojects, with the aim of ending extreme poverty and promoting shared prosperity. The part of Bank's Environmental and Social Policy for investment project financing sets out the requirement that the Bank must follow regarding projects it supports through Investment Project Financing that include:

- Environmental and social risk classification
- Use and strengthening of project environmental and social framework

✓ Environmental and social due diligence
✓ Special project types.
✓ Environmental and Social Commitment Plan (ESCP)
✓ Information disclosure
✓ Consultation and participation
✓ Monitoring and implementation support.
✓ Grievance mechanism and accountability

On the other hand, following set of standards are requirements for project to abide by:

1. Environmental and Social Standard 1: Assessment and Management of Environmental and Social Risks and Impacts;
2. Environmental and Social Standard 2: Labor and Working Conditions;
3. Environmental and Social Standard 3: Resource Efficiency and Pollution Prevention and Management;
4. Environmental and Social Standard 4: Community Health and Safety;
5. Environmental and Social Standard 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;
6. Environmental and Social Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
7. Environmental and Social Standard 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities;
8. Environmental and Social Standard 8: Cultural Heritage;
9. Environmental and Social Standard 10: Stakeholder Engagement and Information Disclosure.

Brief description of the 10 ESSs, their objectives and requirements are given in **Annex 2.**

Table 4 summarizes the ESS requirements and their relevance to the project.

Table 4: WB ESS requirements and relevance to the project

World Bank ESS Policy, Standards, Directive	Objectives	Requirements	Relevance & Extent of Relevance to the sub-project/project
World Bank Environment and Social Policy for Investment Project Financing	It sets out the mandatory requirements of the Bank in relation to the projects it supports through Investment Project Financing.	The types of E&S risk and impacts that should be considered in the environmental and social assessment. The use and strengthening of the Borrower's environmental and social framework for the assessment, development and implementation of World Bank financed projects where appropriate.	Applicable to the project
ESS-1 Assessment and Management of Environmental and Social Risks and Impacts	Identify, assess, evaluate, and manage environment and social risks and impacts in a manner consistent with the ESF. Adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable, and they are not disadvantaged in sharing development benefits and opportunities	The types of E&S risk and impacts that should be considered in the environmental and social assessment. The use and strengthening of the Borrower's environmental and social framework for the assessment, development and implementation of World Bank financed projects where appropriate.	E&S risks and Impacts have been preliminary identified based on consultations with primary stakeholders including communities and implementing agency.

World Bank ESS Policy, Standards, Directive	Objectives	Requirements	Relevance & Extent of Relevance to the sub-project/project
ESS-2 Labor-and-Working-Conditions	Promote safety and health at work. Promote the fair treatment, non-discrimination, and equal opportunity of project workers. Protect project workers, with particular emphasis on vulnerable workers. Prevent the use of all forms of forced labor and child labor. Support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law. Provide project workers with accessible means to raise workplace concerns.	Requirements for the Borrower to prepare and adopt labor management procedures. Provisions on the treatment of direct, contracted, community, and primary supply workers, and government civil servants. Requirements on terms and conditions of work, non-discrimination and equal opportunity and workers organizations. Provisions on child labor and forced labor. Requirements on occupational health and safety, in keeping with the World Bank Group's Environmental, Health, and Safety Guidelines (EHSG).	A separate LMP has been prepared, which defines measures to be taken to address this ESS2.
ESS-3 Resource-Efficiency-and-Pollution-Prevention-and-Management	Promote the sustainable use of resources, including energy, water, and raw materials. Avoid or minimize adverse impacts on human health and the environment caused by pollution from project activities. Avoid or minimize project-related emissions of short and long-lived climate pollutants. Avoid or minimize generation of hazardous and non-hazardous waste. Minimize and manage the risks and impacts associated with pesticide use. Requires technically and financially feasible measures to improve efficient consumption of energy, water, and raw materials, and introduces specific requirements for water efficiency where a project has high water demand.	Requires an estimate of gross greenhouse gas emissions resulting from project (unless minor), where technically and financially feasible. Requirements on management of wastes, chemical and hazardous materials, and contains provisions to address historical pollution. ESS-3 refers to national law and Good International Industry Practice, in the first instance the World Bank Groups' EHSGs.	The Project will involve major construction activities related to AUW campus and UTTA development works. Separate ESIAs and ESMPs will address potential resource efficiency and pollution issues. Sub-projects with small-scale physical works (like refurbishments, renovations, etc.) will be screened and ESIA or site-based ESMP will be used to minimize potential impacts. Sub-projects related to research activities will also be screened and potential issues (such as generation of hazardous wastes) will be minimized using ESIA or site based ESMPs.
ESS-4 Community-Health-and-Safety	Anticipate or avoid adverse impacts on the health and safety of project-affected communities during project life-cycle from routine and non-routine circumstances. Promote quality,	Requirements on infrastructure, taking into account safety and climate change, and applying the concept of universal access, where technically and financially feasible. Requirements on traffic and road	In the project corridor there is likely to be i) road excavation, use of vibratory equipment, construction debris handling and disposal

World Bank ESS Policy, Standards, Directive	Objectives	Requirements	Relevance & Extent of Relevance to the sub-project/project
	safety, and climate change considerations in infrastructure design and construction, including dams. Avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials. Have in place effective measures to address emergency events. Ensure that safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.	safety, including road safety assessments and monitoring. Addresses risks arising from impacts on provisioning and regulating ecosystem service. Measures to avoid or minimize the risk of water-related, communicable, and non-communicable diseases. Requirements to assess risks associated with security personnel, and review and report unlawful and abusive acts to relevant authorities.	etc. during construction; ii) high likelihood of direct exposure to increased construction related traffic and equipment especially at road sections traversing settlement area with limited carriageway/roadway width, and sensitive receptors such as schools, religious place, health centre/hospitals; iii) high dust levels from earthworks/hill cutting, high noise and emission level from traffic congestion and idling of vehicles; and iv) influx of migrant workers could potentially cause local discomfort or potential conflicts with local people.
ESS-5 Land-Acquisition-Restrictions-on-Land-Use-and-Involuntary-Resettlement	Avoid or minimize involuntary resettlement by exploring project design alternatives. Avoid forced eviction. Mitigate unavoidable adverse impacts from land acquisition or restrictions on land use by providing compensation at replacement cost and assisting displaced persons in their efforts to improve, or at least restore, livelihoods and living standards to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher. Improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure. Conceive and execute resettlement	Applies to permanent or temporary physical and economic displacement resulting from different types of land acquisition and restrictions on access. Does not apply to voluntary market transactions, except where these affects third parties. Provides criteria for "voluntary" land donations, sale of community land, and parties obtaining income from illegal rentals. Prohibits forced eviction (removal against the will of affected people, without legal and other protection including all applicable procedures and principles in ESS5). Requires that acquisition of land and assets happens only after payment of compensation and resettlement has occurred. Requires community engagement and consultation, disclosure of	A separate RPF has been prepared, which defines measures to be taken to address this ESS5.

World Bank ESS Policy, Standards, Directive	Objectives	Requirements	Relevance & Extent of Relevance to the sub-project/project
	activities as sustainable development programs.	information and a grievance mechanism.	
ESS-6 Biodiversity-Conservation	Protect and conserve biodiversity and habitats. Apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity. To promote the sustainable management of living natural resources.	Requirements for projects affecting areas that are legally protected designated for protection or regionally/internationally recognized to be of high biodiversity value. Requirements on sustainable management of living natural resources, including primary production and harvesting, distinguishing between small-scale and commercial activities. Requirements relating to primary suppliers, where a project is purchasing natural resource commodities, including food, timber and fiber.	Sub-project activities that can affect biodiversity (e.g. construction works, research activities, etc.) will be identified through screening. Potential impacts will be mitigated based on ESIA or site based ESMPs.
ESS-7 Indigenous-Peoples	Ensure that the development process fosters full respect for affected parties' human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods. Promote sustainable development benefits and opportunities in a manner that is accessible, culturally appropriate and inclusive. Improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation with affected parties. Obtain the Free, Prior, and Informed Consent (FPIC) of affected parties in three circumstances. Recognize, respect and preserve the culture, knowledge, and practices of Indigenous Peoples, and to provide them with an opportunity to adapt to changing conditions in a manner and in a timeframe acceptable to them.	Applies when the Indigenous Peoples are present or have a collective attachment to the land, whether they are affected positively or negatively and regardless of economic, political or social vulnerability. The option to use different terminologies for groups that meet the criteria set out in the Standard. The use of national screening processes, providing these meet World Bank criteria and requirements. Coverage of forest dwellers, hunter gatherers, and pastoralists and other nomadic groups. Requirements for meaningful consultation tailored to affected parties and a grievance mechanism. Requirements for a process of free, prior and informed consent in three circumstances.	A separate IPPF has been prepared, which defines measures to be taken to address this ESS7.
ESS-8 Cultural-Heritage	Protect cultural heritage from the adverse impacts of project activities and support its	Requires a chance finds procedure to be established. Recognition of the need to ensure peoples' continued	The alignment of the sub-project yet to define. So, it is not sure

World Bank ESS Policy, Standards, Directive	Objectives	Requirements	Relevance & Extent of Relevance to the sub-project/project
	preservation. Address cultural heritage as an integral aspect of sustainable development. Promote meaningful consultation with stakeholders regarding cultural heritage. Promote the equitable sharing of benefits from the use of cultural heritage.	access to culturally important sites, as well as the need for confidentiality when revealing information about cultural heritage assets that would compromise or jeopardize their safety or integrity. Requirement for fair and equitable sharing of benefits from commercial use of cultural resources. Provisions of archaeological sites and material, built heritage, natural features with cultural significance, and moveable cultural heritage.	to have any ancient monuments and/or archaeological site(s), protected, and religious structures/shrines of local importance. This ESMF has suggested a guideline to address the ESS8.
ESS-9 Financial-Intermediaries	Sets out how Financial Intermediaries (FI) will assess and manage environmental and social risks and impacts associated with the subprojects it finances. Promote good environmental and social management practices in the subprojects the FI finance. Promote good environmental and sound human resources management within the FI.	Financial Intermediaries (FIs) to have an Environmental and Social Management System (ESMS) - a system for identifying, assessing, managing, and monitoring the environmental and social risks and impacts of FI subprojects on an ongoing basis. FI to develop a categorization system for all subprojects; with special provisions for subprojects categorized as high or substantial risk. FI borrowers to conduct stakeholder engagement in a manner proportionate to the risks and impacts of the FI subprojects.	Not relevant as there is no financial intermediary involved.
ESS-10 Stakeholder-Engagement-and-Information-Disclosure	Establish a systematic approach to stakeholder engagement that helps Borrowers identify stakeholders and maintain a constructive relationship with them. Assess stakeholder interest and support for the project and enable stakeholders' views to be taken into account in project design. Promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life-cycle. Ensure that appropriate project information is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner.	Requires stakeholder engagement throughout the project life cycle, and preparation and implementation of a Stakeholder Engagement Plan (SEP). Requires early identification of stakeholders, both project-affected parties and other interested parties, and clarification on how effective engagement takes place. Stakeholder engagement to be conducted in a manner proportionate to the nature, scale, risks and impacts of the project, and appropriate to stakeholders' interests. Specifies what is required for information disclosure and to achieve meaningful consultation.	Two separate SEP has been prepared to address ESS10. One for Bangladesh and one for Afghanistan.

World Bank ESS Policy, Standards, Directive	Objectives	Requirements	Relevance & Extent of Relevance to the sub-project/project
Environmental and Social Directive for Investment Project Financing	This Directive applies to the Bank and sets out the mandatory requirements for the implementation of the Environmental and Social Policy for Investment Project Financing (IPF).	It lays down the following responsibilities of the Bank to manage ES risks and impacts as below: a) undertake its own due diligence of the ES risks and impacts related to the Project; b) support the Borrower to engage in meaningful consultation with stakeholders, in particular affected communities, and in providing Project-based grievance mechanisms; c) assist the Borrower in identifying appropriate methods and tools to assess and manage the potential ES risks and impacts of the Project; d) agree with the Borrower on the conditions under which the Bank is prepared to provide support to the Project, as set out in the ESCP; and e) monitor the ES performance of a Project in accordance with the ESCP and the ESSs.	Applies to Bank in addressing E&S aspects of this project
Bank Directive Addressing Risks and Impacts on Disadvantaged or Vulnerable Individuals or Groups	This Directive establishes directions for Bank staff regarding due diligence obligations relating to the identification of, and mitigation of risks and impacts on, individuals or groups who, because of their particular circumstances, may be disadvantaged or vulnerable	It requires the Bank task team to support the borrower in establishing arrangements for the undertaking and preparation of the environmental and social assessment of the project as required by ESS1. It reviews the terms of reference for the environmental and social assessment to verify that (a) identifies (or requires the identification of) groups or individuals affected by the project that may be disadvantaged or vulnerable; and (b) requires an assessment of project risks and impacts, and identification of differentiated mitigation measures, as they pertain to the disadvantaged or vulnerable individuals or groups that are identified.	Applies to Bank in addressing E&S risks and impacts on disadvantaged and vulnerable persons or groups that are identified in this project corridor
World Bank's Guidance note on managing the risks of adverse	The document provides guidelines to address issues and risks arising from influx of migrant labor leading to gender-based violence, forced labor etc.	Requires HPRIDC to prepare a labor influx management and GBV risk mitigation plan	A separate GVB/GAP has been prepared to address impacts on gender.

World Bank ESS Policy, Standards, Directive	Objectives	Requirements	Relevance & Extent of Relevance to the sub-project/project
impacts on communities from temporary project induced labor influx, 2016			
Good Practice Note on Road Safety	Road Safety - To identify, evaluate and monitor the potential traffic and road safety risks to workers, affected communities and road users throughout the project life-cycle and, where appropriate, will develop measures and plans to address them. The Borrower will incorporate technically and financially feasible road safety measures into the project design to prevent and mitigate potential road safety risks to road users and affected communities".	Requirements on traffic and road safety, including road safety assessments and monitoring.	Yes
World Bank Groups' EHSGs, IFC, 2007			
General EHS Guidelines, April, 2007, IFC	The General EHS Guidelines contain information on cross-cutting environmental, health, and safety issues potentially applicable to all industry sectors	Requirements on environmental, health, and safety issues during construction of project road.	Yes
EHS Guidelines for Construction Materials Extraction, April, 2007, IFC	The EHS Guidelines contain the performance levels and measures that are considered to construction materials extraction activities such as aggregates, limestone, slates, sand, gravel, clay, gypsum, feldspar, silica sands, and quartzite	Requirements on the resource management of construction materials extraction activities such as aggregates, limestone, slates, sand, gravel, clay, gypsum, feldspar, silica sands, and quartzite	Yes

3.4 GAP analysis of World Bank requirements and national laws

Infrastructure development and use of public and private lands for land-based developments are governed by institutional legal mandates and national laws of land acquisition and management. There are some gaps between existing land acquisition law of the country and WB ESSs on Involuntary Resettlement and on indigenous peoples in terms of identification of affected persons and compensation packages, and participation of community groups of diverse interests and vulnerabilities. Gaps between GoB LA law (new Act 21 of 2017) including policies related small ethnic communities and suggested gap filling measures are given in Table 5 below.

Table 5: Gaps between GoB laws and World Bank ESSs

WB ESF Standard	**Gaps**
ESS1: Assessment and Management of Environmental and Social Impacts and Risks	(i) ESIA study screening and scoping do not guarantee coverage of all ESS standards in the assessment. (ii) The stakeholder engagement during the conduct of the ESIA is limited and the ESIA report is not disclosed. (iii) The ESIA system in Bangladesh does not require analysis of alternatives.
ESS2: Labor and Working Conditions	(i) The Labor Act 2006 does not specifically require that development be assessed and reviewed in terms of labor and working conditions including OHS requirements before approval. (ii) The Labor Act 2006 does not require development projects to prepare Labor Management Plans/Procedure or OHS Plan.
ESS3: Resource Efficiency and Pollution Prevention and Management	Existing energy and water conservation policies, laws and regulations do not require development projects to assess resource efficiency issues and incorporate resource efficiency measures in their ES risk management plans.
ESS4: Community Health and Safety	Covered under ESIA but the systems do not provide clear requirements for the development project and implementation. Health issues are within the purview of MHFW, but it is currently not involved in project preparation and oversight.
ESS5: Land Acquisition, Land Use Restriction and Involuntary Resettlement	Bangladesh: ARIPA 2017 (i) does not require the preparation of RAP; (ii) does not provide compensation or assistance to those who do not have formal legal claim to the land; (iii) does not provide transitional allowances for restoration of livelihoods for informal settlers; (iv) relies on cash compensation, no developmental objectives; (v) no provision to give special attention to the vulnerable groups (vi) valuation of lost asset is not based on "replacement cost' standard
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	No equivalent requirements on: (i) the application of hierarchy of measures; (ii) the preparation of Biodiversity Management Plan; (iii) differentiated measures on types of habitats; (iii) conduct of due diligence on primary suppliers.
ESS7: Indigenous People	No equivalent requirements on: (i) coverage of IP impacts in the ESIA; (ii) special treatment or differentiated approach to IPs and vulnerable groups; (iii) conduct of FPIC; (iv) development of IP Plan.
ESS8: Cultural Heritage	No equivalent requirements on: (i) the application of hierarchy of measures; (ii) the development of Cultural Heritage Management Plan; (iii) the development and adoption of project-specific Change Find Procedures; and (iv) the engagement of cultural heritage experts.
ESS9: Financial Intermediaries	Not applicable to country system. Project proponents regardless of funders are subject to the same country laws.
ESS10: Stakeholder Engagement and Information Disclosure	The ECA/ECR does not specifically require consultation but the ESIA guidelines issued by DOE and other agencies recommends public consultations during scoping and the preparation of the ESIA. There is also no provision for any stakeholder engagements during project implementation

3.5 Application of WB ESSs on the project

Key environmental and social risks and impacts of the proposed program are anticipated to occur largely during the construction phase and within existing footprints. Key impacts include: (ii) health & safety of workers and communities within the project areas construction supplies, materials and equipment; (iii) exposure of population in urban and semi-urban centers along the ROW and transport routes to noise, vibrations, air pollution and safety risks; (iv) siltation and sedimentation of waterways close to the physical works; (v) significant land acquisition along the expanded ROW; (vi) physical displacement of houses and some mosques, temples, madrasah and graves; (vii) temporary economic displacement and, (viii) increased risk of GBV and road accidents.

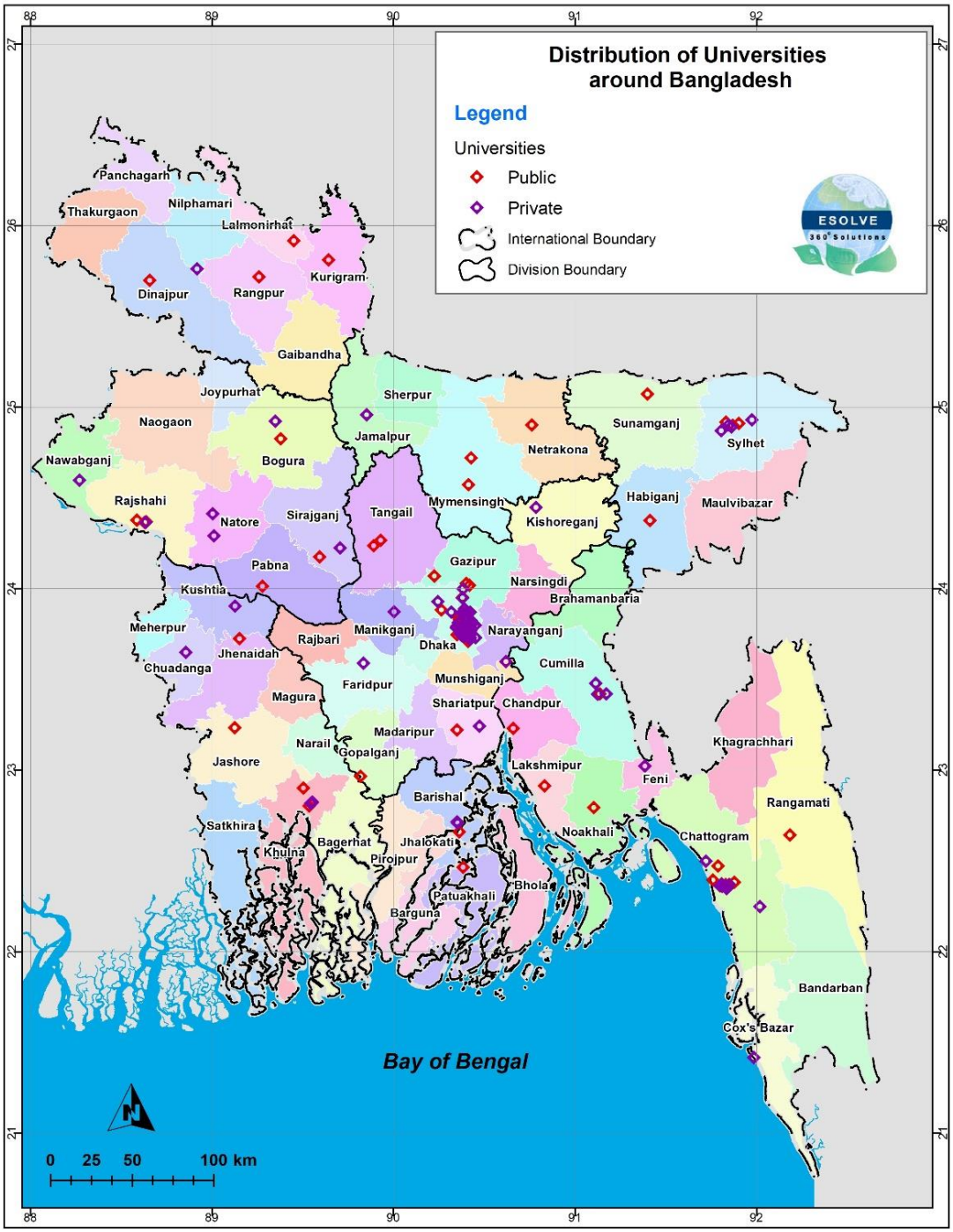
All ESSs will be applicable in the project, except the ESS 9: Financial Intermediaries.

Environmental and Social Risk Classification (ESRC) of the project has been classified as 'Substantial, with Environmental Risk Rating as 'Substantial' and Social Risk Rating as 'Substantial'.

Chapter 4: Environmental and Social Baseline

4.1 Environmental Baseline

This project will provide funding for research, renovation and other construction works to higher education institutes across Bangladesh. Therefore, the environmental baseline considers the national situation.



Data Source: UGC Bangladesh (2016) and https://en.wikipedia.org/wiki/List_of_universities_in_Bangladesh

Figure 3: Location of Universities around Bangladesh

The number of universities by Divisions of Bangladesh is list in the table below.

Table 6: List of Universities by Division

Division	Private University	Public University	Total
Barishal	2	2	4
Chattogram	15	10	25
Dhaka	67	19	86
Khulna	4	5	9
Mymensingh	1	4	5
Rajshahi	6	6	12
Rangpur	1	4	5
Sylhet	4	5	9
Grand Total	**100**	**55**	**155**

Note: Two Public Universities in Dhaka Division are non-campus based.
Data Source: UGC Bangladesh (2016) and https://en.wikipedia.org/wiki/List_of_universities_in_Bangladesh

Biosafety labs (BSL) are required for handling pathogens. There are different levels of laboratories depending on the level of pathogenicity of microorganisms handled in the lab. Risk Group 1 (RG1) is non-pathogenic and poses no risk to healthy individuals or animals. RG2 causes human or animal disease, but this is rarely severe. Effective treatment and preventative measures are available with a limited risk of spreading infection. RG3 pathogens cause serious human or animal disease, but do not ordinarily spread from one infected individual to another. Effective treatment and preventive measures are available. RG4 pathogens usually cause serious human or animal disease and can be readily transmitted from one individual to another, directly or indirectly. Effective prevention and treatment measures are not usually available for this group. To avoid exposure to these infectious agents, biohazard control and/or biosafety policies and procedures should be in place in research and diagnostic laboratories.

Generally, BSL1, BSL2, BSL3, and BSL4 are suitable when working with agents belonging to RG1, RG2, RG3, and RG4, respectively. There are two BSL3 Labs in Bangladesh: one at icddrb and another at Institute of Epidemiology Disease Control and Research (IEDCR)[12].

[12] Icddr,b (2011) Health and Science Bulletin, vol 9, issue 3,

4.1.1 Physical environment

Land Type

Bangladesh's land area is typically divided into three geological categories: floodplain (80 %), Pleistocene terrace (8%), and tertiary hills (12 %). The floodplain comprises of a succession of ridges (abandoned levees) and depressions (back swamps or old channels). Differences in the elevation between adjoining ridge tops and depressions range from less than 1 meter on tidal floodplains, 1 meter to 3 meters on the main rivers and estuarine floodplains, and up to 5 to 6 meters in the Sylhet Basin in the north-east[13]. Only in the extreme northwest do land elevations exceed 30 meters above mean sea level. The tertiary hill soil occupies the Chattogram hills in the south-east, and the low hills and hillocks of Sylhet in the north-east. The two major uplifted blocks (Pleistocene terrace) are known as Madhupur (in the central Bangladesh) and Barind tracts in the north-west.

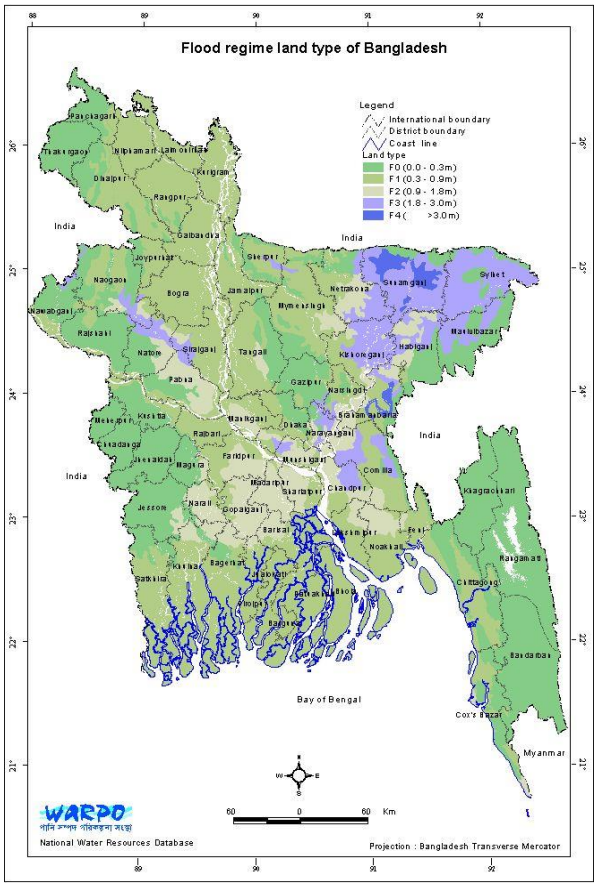


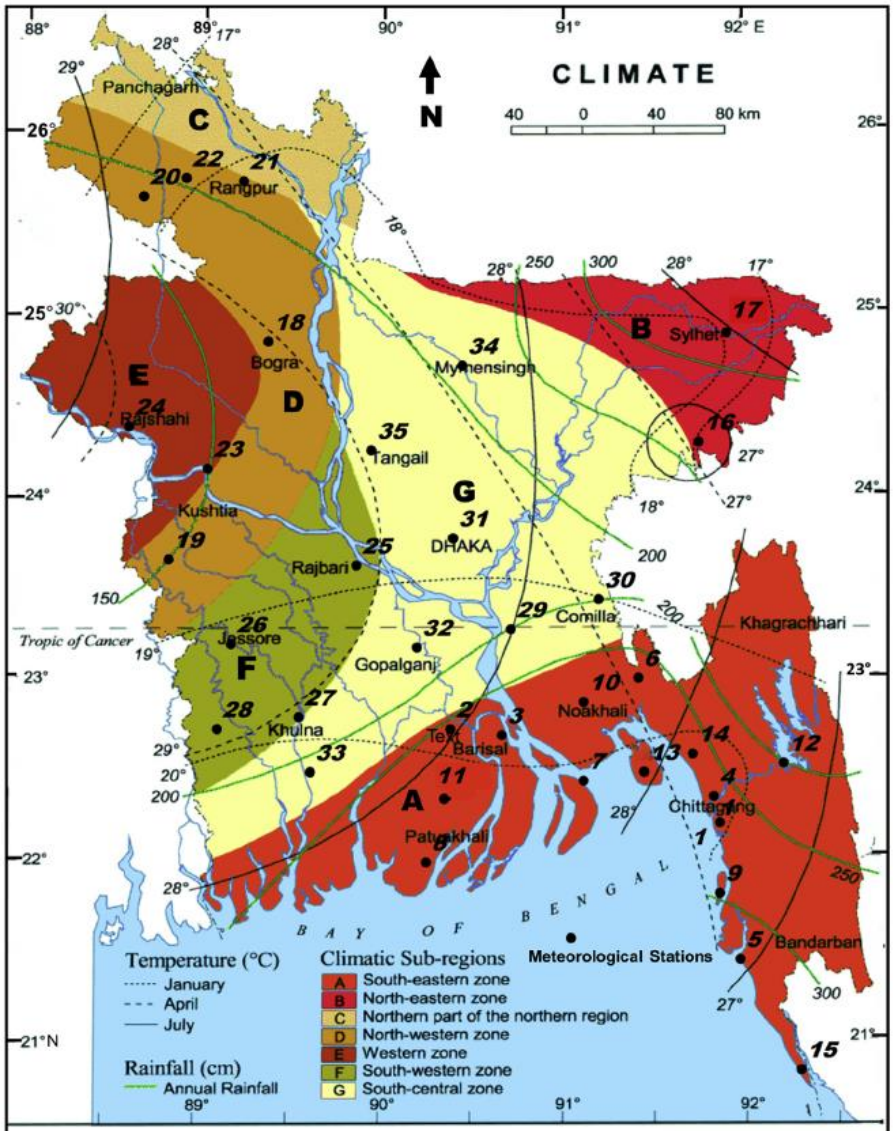
Figure 4: Land Types of Bangladesh

Given that a large proportion of the country is floodplain, Bangladesh's land type is classified according to depth of seasonal inundation. All land types except highlands are exposed to monsoon flooding for part or whole of the year. Land area with different flood depths are shown in the figure above.

[13] Huq S., Karim Z., Asaduzzaman M. and Mahtab F., (2013) Vulnerability and Adaptation to Climate Change for Bangladesh, Springer-Science and Business Media, BV

Climate

The overall temperature and rainfall patterns in Bangladesh are shown in the figures below. The different climatic sub-regions are also shown. In this project, the main regions of interest are: North-eastern zone (Sylhet), northern part of Central zone (Mymensingh), North-western zone (Rangpur), Western Zone (Rajshahi), South-eastern Zone (Chattogram).

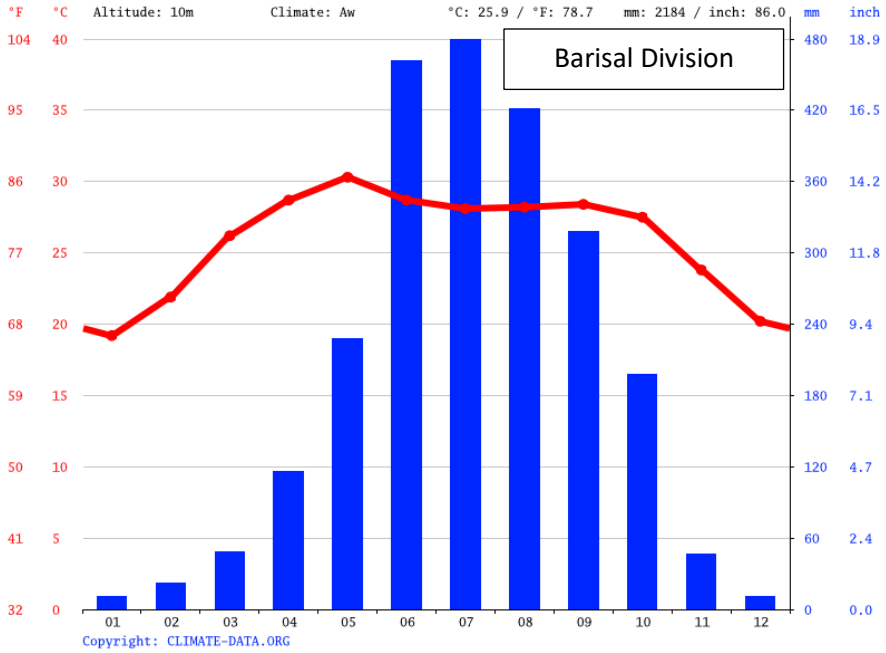


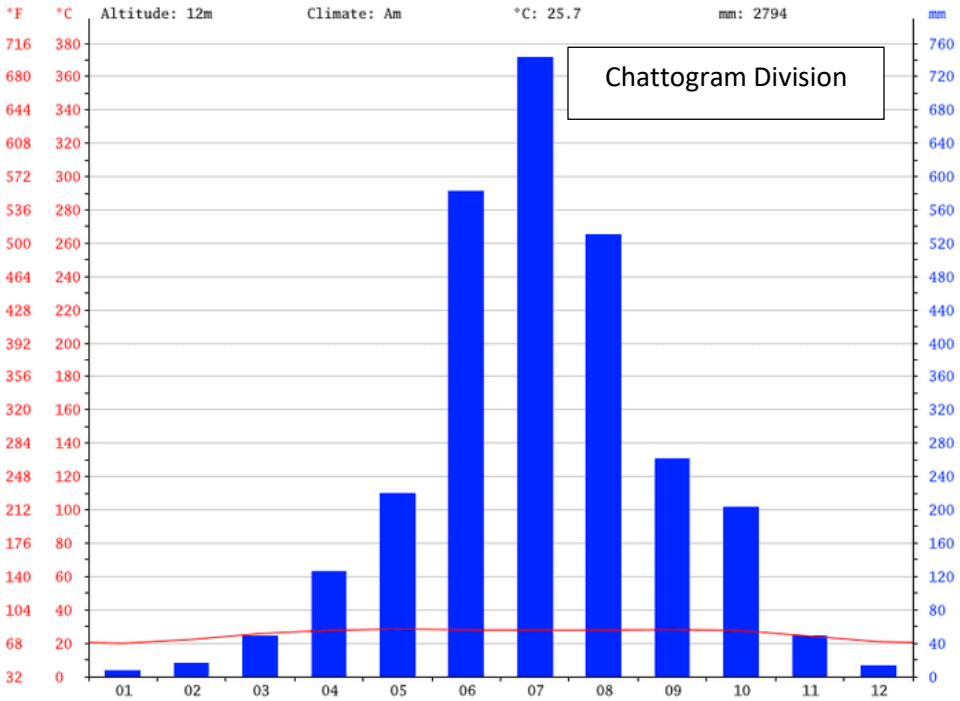
Source: Khan et al (2018)[14]

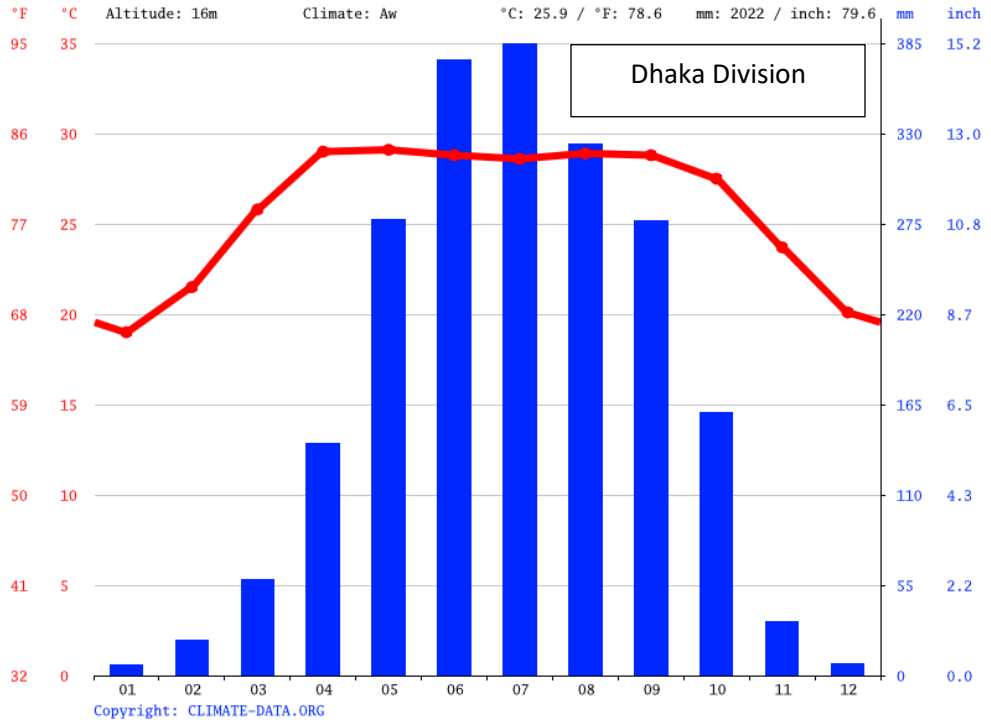
Figure 5: Climate Regions of Bangladesh

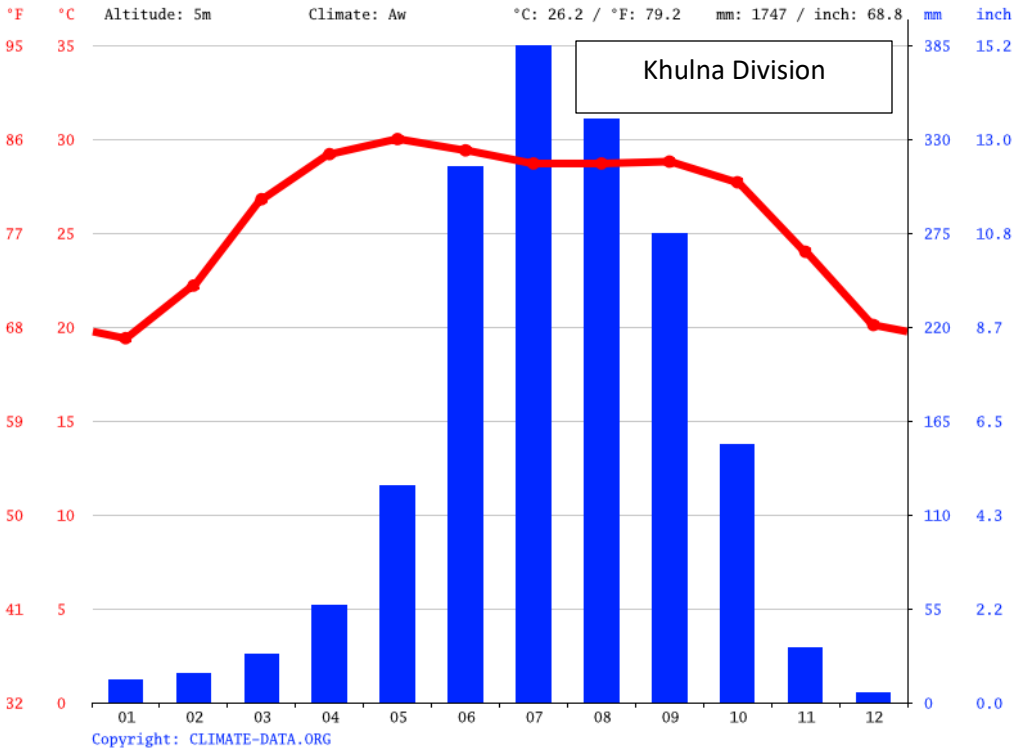
The basic climate parameters for selected Divisions (Barisal, Chattogram, Dhaka, Khulna, Mymensingh, Rajshahi, Rangpur, Sylhet) are shown in the figures below.

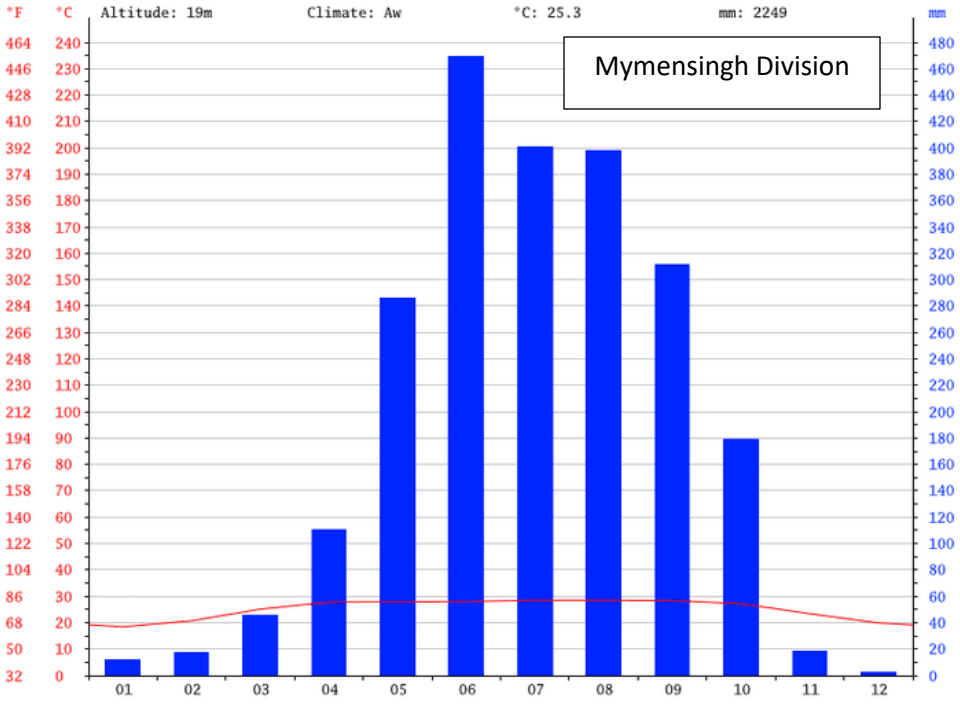
[14] https://www.sciencedirect.com/science/article/pii/S2405844018348928

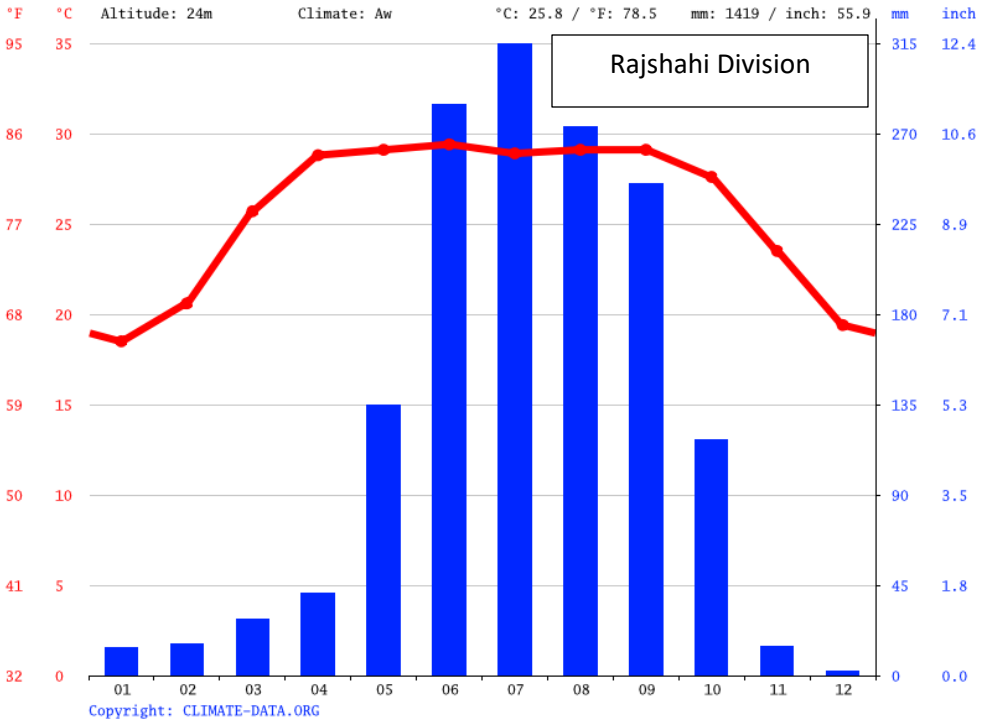

°F °C Altitude: 10m Climate: Aw °C: 25.9 / °F: 78.7 mm: 2184 / inch: 86.0 mm inch
Barisal Division
104 40 480 18.9
95 35 420 16.5
86 30 360 14.2
77 25 300 11.8
68 20 240 9.4
59 15 180 7.1
50 10 120 4.7
41 5 60 2.4
32 0 0 0.0
01 02 03 04 05 06 07 08 09 10 11 12
Copyright: CLIMATE-DATA.ORG

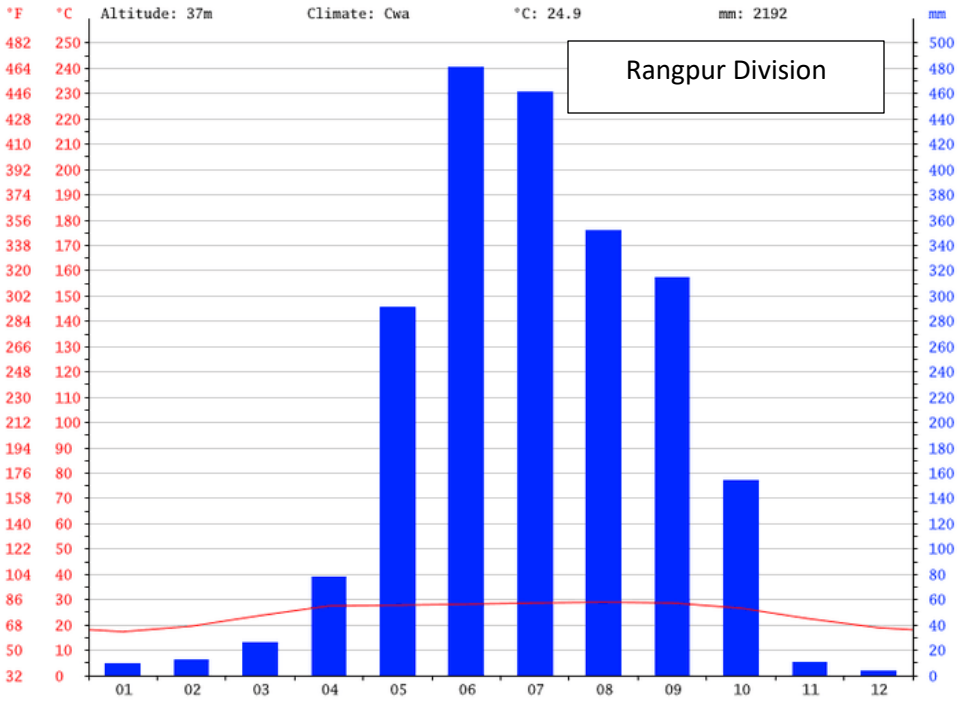

°F °C Altitude: 12m Climate: Am °C: 25.7 mm: 2794 mm
Chattogram Division
716 380 760
680 360 720
644 340 680
608 320 640
572 300 600
536 280 560
500 260 520
464 240 480
428 220 440
392 200 400
356 180 360
320 160 320
284 140 280
248 120 240
212 100 200
176 80 160
140 60 120
104 40 80
68 20 40
32 0 0
01 02 03 04 05 06 07 08 09 10 11 12

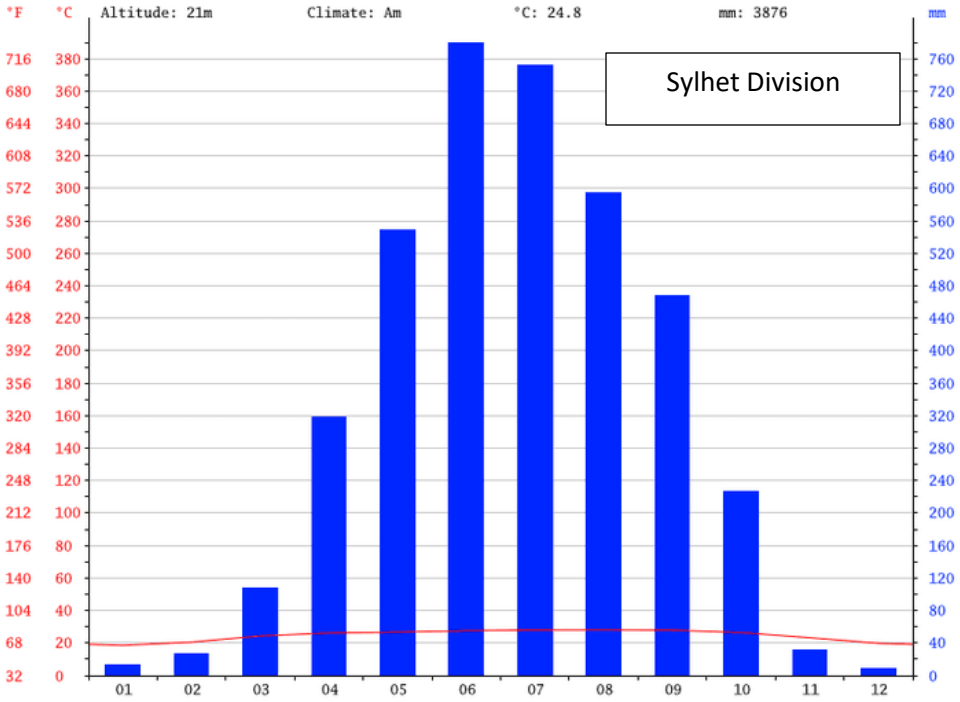

°F °C Altitude: 16m Climate: Aw °C: 25.9 / °F: 78.6 mm: 2022 / inch: 79.6 mm inch
Dhaka Division
95 35 385 15.2
86 30 330 13.0
77 25 275 10.8
68 20 220 8.7
59 15 165 6.5
50 10 110 4.3
41 5 55 2.2
32 0 0 0.0
01 02 03 04 05 06 07 08 09 10 11 12
Copyright: CLIMATE-DATA.ORG


°F °C Altitude: 5m Climate: Aw °C: 26.2 / °F: 79.2 mm: 1747 / inch: 68.8 mm inch
Khulna Division
95 35 385 15.2
86 30 330 13.0
77 25 275 10.8
68 20 220 8.7
59 15 165 6.5
50 10 110 4.3
41 5 55 2.2
32 0 0 0.0
01 02 03 04 05 06 07 08 09 10 11 12
Copyright: CLIMATE-DATA.ORG


°F °C Altitude: 19m Climate: Aw °C: 25.3 mm: 2249 mm
Mymensingh Division
464 240 446 230 428 220 410 210 392 200 374 190 356 180 338 170 320 160 302 150 284 140 266 130 248 120 230 110 212 100 194 90 176 80 158 70 140 60 122 50 104 40 86 30 68 20 50 10 32 0
480 460 440 420 400 380 360 340 320 300 280 260 240 220 200 180 160 140 120 100 80 60 40 20 0
01 02 03 04 05 06 07 08 09 10 11 12


°F °C Altitude: 24m Climate: Aw °C: 25.8 / °F: 78.5 mm: 1419 / inch: 55.9 mm inch
Rajshahi Division
95 35 86 30 77 25 68 20 59 15 50 10 41 5 32 0
315 12.4 270 10.6 225 8.9 180 7.1 135 5.3 90 3.5 45 1.8 0 0.0
01 02 03 04 05 06 07 08 09 10 11 12
Copyright: CLIMATE-DATA.ORG





Source: www.en.climate-data.org

Figure 6: Climate in Divisions of Bangladesh

Waste Management

Most higher education institutes in Bangladesh are located in urban areas. The wastes generated from this institutes are normally mixed with the general municipal solid wastes. The urban centers of Bangladesh generate around 23,688 tons/day of municipal solid wastes of which about 70% is organic solid waste (Alam and Qiao, 2020)[15]. From 2008, the use of sanitary landfills was initiated but in many urban areas, most wastes are disposed in open areas and burnt. In some of the larger cities, small scale recycling and composting are done by some NGOs. In rare cases, renewable energy/fuel production is done by anaerobic digestion, pyrolysis or gasification of biomass, agricultural wastes, discarded tyres and animal residues (Alam and Qiao, 2020).

Solid waste management practices at Bangladesh Universities are not well documented. Limited research indicates that in most cases solid wastes are collected on campus through bins and then transferred to local dumps through municipal or informal collection systems. A research on two public universities estimated that around 300 to 500 kg/day of solid wastes were generated from Khulna University and Khulna University of Engineering and Technology (Roy 2018)[16]. The generation rates can be considerably higher in other universities, e.g. at Chittagong University around 1509 kg/day was reported in 2013 (Rahman et al 2013)[17]. At higher education institutes located in non-major cities, the waste generation rates can be significant, e.g. at Patuakhali Science and Technology University 850 kg/day was reported in 2016 (Adhikary et al 2016)[18]. In very few exceptional cases are on-site treatment facilities, such as composting of biodegradable wastes, practiced. In many cases there is insufficient budget, facilities and guidelines for solid waste management in tertiary education institutes. Most private universities are located in rented premises in urban areas. Therefore, their solid wastes are usually mixed with normal municipal waste management system.

Medical and biohazardous wastes are usually landfilled or in some cases incinerators are used. It is expected that some universities dealing with biohazardous materials may have onsite small incinerators. However, there is no data currently on this issue.

The e-waste management is improving in cities like Dhaka and Chattogram. There is greater awareness about the general health and environmental hazards associated with e-wastes. However, large-scale collection, treatment and safe disposal of e-wastes have not been implemented yet.

In terms of wastewater management, most universities have onsite septic tank systems. These are usually connected to the city drainage system and the partially treated wastewater is discharged to local water bodies. Some private universities located on their own campuses, have onsite sewage treatment plants, e.g. at North South University in Dhaka. In some campuses, the use of treated wastewater as a firefighting

[15] Alam O. and Qiao X. (2020) An in-depth review on municipal solid waste management, treatment and disposal in Bangladesh, Sustainable Cities and Society 52, https://www.sciencedirect.com/science/article/pii/S2210670719307061
[16] Roy. T (2018) Solid Waste Management Scenario in Two Public University Campuses: KUET and Khulna University, Sustainable Cities and Communities, https://www.bip.org.bd/SharingFiles/journal_book/20181204074615.pdf
[17] Rahman M.A et al (2013) Solid waste generation, characteristics and disposal at Chittagong university campus, Chittagong, Bangladesh, Discovery Science, Vol 4, No. 11, https://www.semanticscholar.org/paper/Solid-waste-generation%2C-characteristics-and-at-Hossain-Rubaiyat/c94e1f182122117f477cfdf7337e60ac47593c86
[18] Adhikary P. et al (2016) Solid Waste Management System at PSTU Campus, http://iccesd.com/proc_2016/Papers/ICCESD-2016-581.pdf

resource has been studied (Islam et al 2019)[19]. In terms of treatment and disposal of toxic liquid wastes from university laboratories, there is no data on this issue.

4.1.2 Biological environment

The bio-ecological zones of Bangladesh are shown in the figure below.

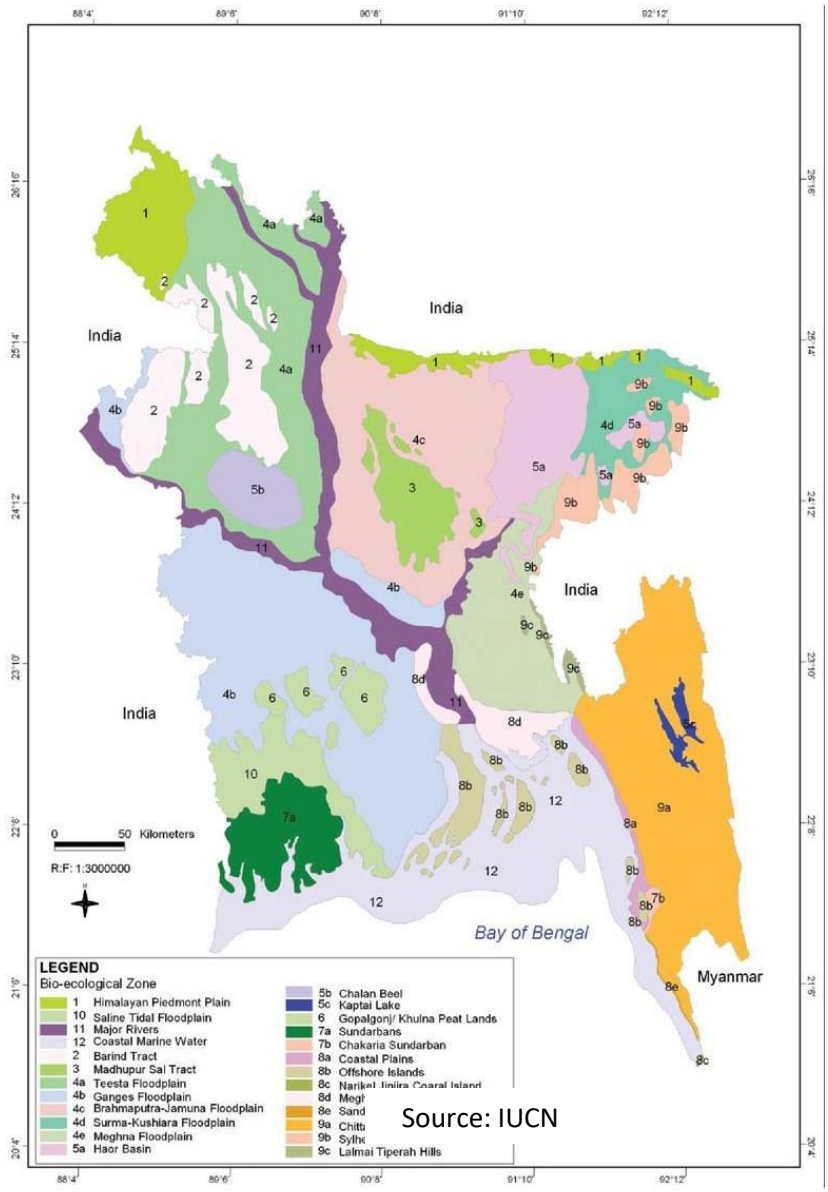


Figure 7: Bio-ecological Zones of Bangladesh

[19] Islam M.A. et al (2019) Assessment of Treated Wastewater to Meet Fire Fighting Water Demand in A University Campus of Bangladesh, Conference: WasteSafe 2019 – 6th International Conference on Integrated Solid Waste & Faecal Sludge Management in South-Asian Countries
https://www.researchgate.net/publication/332277631_Assessment_of_Treated_Wastewater_to_Meet_Fire_Fighting_Water_Demand_in_A_University_Campus_of_Bangladesh

The proposed project activities should avoid ecologically critical or sensitive areas, like forests and wetlands. In such context, the delineation of the bio-ecological zone is necessary to understand the biological and physical characteristics of the project areas and to identify the bio-ecological critical areas.

4.2 Social and economic condition

Socio-economic condition in Bangladesh: Bangladesh is a lower-middle income country of per capita income of US$1,480 equivalent in 2017 and one of the world's most populous country with an estimated 165 million people. The country achieved the lower middle-income country status in FY14. In recent decades, economic conditions improved markedly. The GDP grew well above the average for developing countries, averaging 6.5 percent since 2010, with an officially projected growth of 8.13 percent in FY19, driven by manufacturing and service sectors. Progress on reducing extreme poverty and boosting shared prosperity has continued with the steadily declining poverty incidence from 44.2 percent in 1991 to a 13.8 percent in 2016[20], underpinned by strong human capital development and employment generation. Bangladesh's performance against the Millennium Development Goals (MDG) goals was impressive against the South Asia Region average for most of the indicators. These progresses notwithstanding, the pace of poverty reduction and the rate of job creation has slowed since 2010. Bangladesh needs more effort in improving its growth rate to meet its target of moving up the middle-income rankings by 2021 and eliminating poverty by 2030. For accelerating private sector-led growth with improved investment climate, the key challenges are the need for increased infrastructure and power, with much improved quality in spending public resources, better regulations and enhanced skills of its vast and rapidly increasing labor force. The country's ability to sustain economic and human development faces new and emerging challenges. The COVID-19 pandemic, which hit the country in March 2020, threatens to slow down economic growth to 1.2-2.9 percent in FY21, with adverse implications for human capital development.

Socio-economic condition in Afghanistan: Afghanistan continues to face socio-economic challenges despite notable progress in rebuilding the economy, including strengthening public institutions and restoring infrastructure and basic social services. The country maintained macroeconomic stability and established the conditions for slow recovery of the economy. Real GDP growth, after accelerating to 2.7 percent in 2017 from a low of 1.5 percent in 2015, is projected to decline by 3 percent in 2020 given the. Poverty reduction remains a formidable challenge. National poverty estimates show that poverty in Afghanistan has increased from 38.3 percent in 2012-13 to 54.5 percent in 2016-17. With the population continuing to grow at 3 percent a year, the per capita GDP fell at during the same period from US$ 669 to US$551, making it one of the poorest countries. At the same time, the economy continues to rely heavily on public sector. Political instability, weak institutions, inadequate infrastructure and difficult business environment have hampered private sector growth – which has dropped from 9.4 percent in 2003-12 to only 2.1 percent in 2013-16. Public expenditures comprise 25.6 percent of GDP; with foreign grants currently financing more than two-thirds of budget expenditure and substantial off-budget security needs. A large trade deficit of nearly 38 percent of GDP is also financed almost entirely by aid. With aid expected to more than halve to around 20 percent of GDP by 2030, new sources of growth, employment, revenues and exports are needed, especially for the growing population. Risks to the economy are rising with withdrawal of international security forces starting 2011, coupled with political uncertainties and declining aid resulting to slowdown of economic growth, while fiscal pressures amount with declining security.

[20] latest available poverty data based on the international $1.90 per capita per day poverty line, measured based on the Purchasing Power Parity exchange rate

Chapter 5: Potential Key Environmental and Social Impacts

This section discusses the guideline to predict the potential and mostly typical impacts on the key environmental and social parameters of the project area based on the overall baseline, assessment of project components/sub-components and the primary assessment of the activities.

The overall impact assessment of the proposed project activities to be implemented reveals that most of the likely adverse impacts could be minimized or eliminated by adopting standard mitigation measures; there is also scope to enhance some of the beneficial impacts to be generated from the proposed project. However, the issue of management of hazardous solid and liquid wastes generated from sub-projects needs to be carefully considered.

5.1 Potential Social and Environmental Impacts (ESS 1)

There are major potential social and environmental impact associated with construction of a new AUW academic complex and UTTA construction works. Therefore, separate ESIAs (with appropriate ESMPs) have been /will be prepared to manage potential impacts.

There will also be potential social and environmental impacts for other subprojects that will have some physical or construction related activities, such as:

- ✓ Establishing 7 new fab-labs
- ✓ Transforming all existing fab labs into Centers of Excellence in digital manufacturing and facilitating link-up with private sector
- ✓ Setting-up 5 “i-labs” in 5 universities;
- ✓ Setting up TTOs in at least 20 universities
- ✓ Establish office of Bangladesh Accreditation Council
- ✓ Establishment of IQACs, Career Service Centers and Alumni offices in the participating public and private universities
- ✓ Upgradation/refurbishment of teaching-learning facilities with modern technology and upgradation of science and technology labs
- ✓ Upgradation/renovation of childcare facilities
- ✓ Teaching and learning of upgradation of Women’s Colleges and Universities in Bangladesh
- ✓ Strengthening of digital facilities of Colleges and Universities in Bangladesh
- ✓ Upgrading dorms and washroom facilities of Women’s Colleges and Universities in Bangladesh

The project will also provide research funding into areas such as:

a) Natural science, Bioscience, Engineering and Technology, Information Technology, Agriculture, Nanotechnology and Materials Science and Computer Science and ICT, smart agriculture, computational biology, bio-medical sciences, nanotechnologies & engineering, sustainable materials, textile & leather technologies, climate change resilience, gender studies, etc.; and
b) Collaborative research with industries and research institutes which target the patenting and commercialization of research outputs. These can also have potential social and environmental impacts depending on the location and scope of the research works.
c) liberal arts, social sciences, business and law streams will contribute in producing vital research on societal vulnerability to climate related disaster risk, sustainable and climate responsible and responsive business models, and legal implications of climate change.

The potential social and environmental impacts of each subproject will be formally identified through a screening process, as described in Chapter 6.

5.2 Impact on Labor, Working Conditions and Labor Risks Including Risks of Child Labor and Forced Labor, Human Trafficking (ESS 2)

The project will involve large scale civil works in the hilly terrain Chattogram for construction of AUW academic complex and construction of UTTA in Dhaka. Minor civil works will be involved for developing childcare facilities and upgrading washroom facilities in women universities and colleges, and develop and upgrade research and laboratory facilities in different universities in Bangladesh. Civil works for all these construction will pose safety issues for the laborers as relevant to the location and scale of works.

The proposed AUW academic complex and UTTA construction will entail employment of a significant number of direct, contracted, migrated and primary supply workers. However, majority of the unskilled labors will be from the locality where as skilled labors may have to be hired from other regions of the country. For construction of entire AUW campus, approximately 1,445,400 skilled and unskilled man days required over the project period and in different time intervals. However, World Bank will fund only for the construction of AUW academic complex. Construction of AUW academic complex will require only 127,036 man-days only over the project period. It is expected that around 200 workers are required per-day during construction period and among them 30% may reside onsite during construction. Estimate number of required labors for construction of UTTA will be identified once the feasibility study is completed. However, as the UTTA will be constructed in Dhaka, all the labors can be hired locally. The number of required labors for renovation and upgradation will be minimal and can be hired locally.

Though project will create substantial number of jobs, it is expected that labor influx will not be significant as the construction will be over the period of 3 to 5 years. Most of the unskilled labors will be hired locally. As all the construction will be conducted in the urban areas, it is expected that skilled and unskilled labors will be hired locally. The contractor will be responsible for the accommodation of the stay in labor and ensured labor travel from off site. Some accommodation on site, water supply and sanitation services, etc. on the site will be provided by the contractor. However, this labor engagement may raise many complex issues, particularly regarding potential transmission risks for COVID-19 both within the worksite and for nearby communities. These risks are not only from workers that are mobilized from abroad or returning from abroad, but also workers moving from other regions, where it is likely that migrant workers are expected to work on the project. The labor site plan and facilities will be a part of the ESMP.

As mentioned above, the project does not expect a significant influx of labor at any given phase of construction. Issues such as child labor in the supply chain, forced labor, GBV, occupational health and safety have been addressed in the AUW ESIA and LMP, and GBV and GAP. The engagement of male labor may lead to an increase in prostitution, sexual harassments and GBV in the locality. Furthermore, it is noted that the research workers, teachers and students of the universities may be subject to sexual harassment, sexual exploitation and other gender-based offences. The GBV and GAP address these issues in details.

An LMP has been prepared by the SHED-UGC as a stand-alone document, to cover all requirements of ESS2. This covers ESF requirements pertinent to direct, contracted, community and primary supply workers. The salient points and appropriate requirements from these documents have been incorporated in the ESCP. A specific Grievance Redress Mechanism (GRM) has been outlined for the workers to report any issues relating workplace safety and other concerns. The LMP also includes the assessment of risks

and impacts and required mitigation measure to ensure health and safety of the contractor's workers that may be exposed to health risks (especially COVID-19). Issues such as child labor, forced labor, gender and GBV issues, occupational health and safety will be addressed in the bidding and contract documents as well as ensuring required training and awareness program. Adequate OHS protections in accordance with EHSGs and GIIP in relation to protection from COVID-19 will also be implemented. The LMP directed to localize the economic benefits with minimal opportunities for outside labor to service work that require specialized/skilled labor that is not present in project localities. Beside this the Contractor will be required to write, adopt and implement a written Labor Influx Management Plan as part of the bidding document and contract before employing any labor in the work. To ensure the health and safety of workers during the construction will require the contractors to prepare and implement Occupational Health & Safety Plan (OHSP) following the World Bank Group Environment, Health and Safety Guidelines and local legislations.

The project will support exchange program for teachers and students. An Emergency Plan will be developed during project implementation for any student or teacher subject to any accident while supported by the project. Both Bangladesh and Afghanistan will have their own Emergency Plan.

In Afghanistan, it is not anticipated that there will be workers according to the ESS2 definition. However, the ESMP and ESCP will provide details of the mechanisms required, similar to the Bangladesh mitigation measures discussed above, should this situation change after board approval.

5.3 Impacts on Resources and Pollution Levels (ESS 3)

Separate ESIAs (and ESMPs) address potential impacts on resources and pollution management for the AUW academic complex and UTTA development works. This includes potential impacts during construction and operation phases.

For the other subprojects (with some construction or research related activities), potential resource impacts can include:

- Use of water resources (surface or groundwater)
- Use of construction materials: sand, cement, bricks, wood
- Use of fuels (to run generators and vehicles)

Potential pollution related impacts of subprojects can include:

- Non-hazardous and hazardous solid wastes (from construction and research activities)
- Non-hazardous and hazardous liquid wastes (from construction and research activities)
- E-wastes from servers, classrooms, offices, labs, etc.

The above impacts are likely to occur during the operation phase of the infrastructures funded under this project. Therefore, long-term mitigation and management measures are required to ensure that the potential cumulative impacts are minimized. For example, for the proposed AUW, it is mentioned in the ESIA that the design of campus buildings will include energy efficient technology available in the market for cooling purposes, solar panel will be encouraged to use for lighting the street lights in the campus and natural light will be used as much as possible in the main building.

At this stage it is not possible to quantify the amount of wastes likely to be generated from the subprojects. For example, an old 15-inch computer monitor may contain up to 1 kg of lead and circuit

boards can also contain lead in the solder of their circuit boards[21]. In 2010, it was estimated that 0.035 million tones/yr of computer wastes were generated across Bangladesh[22]. E-wastes can contain at least 40 types of metals, including some heavy metals like lead, mercury, chromium, cadmium.

General waste generation rates from universities were reported in the baseline section of this report. Generation rates varied from 0.11 kg/person/day to 0.19 kg/person/day. Thus, for proposed AUW campus with approx. 3,500 population, the expected general waste generation is estimated to be 676 kg/day.

In order to identify and quantify potential impacts of wastes generated by subprojects, environmental screening form (Annex 3) requires proponents to give estimates of the types and quantities of wastes expected to be generated. Proponents will also have to demonstrate sufficient capacity to manage the wastes properly. The subproject will not be funded if the review of the environmental screening form finds that the proponent will not be able to minimize the potential impacts of wastes generated (during preparation and operation of the subproject).

The design of the buildings will be encouraged to ensure natural light and air circulation to reduce the dependency on electricity. The open area of the AUW and UTTA complex will be encouraged to utilize solar panels for street lights.

5.4 Impact on Community Health and Safety (ESS 4)

Activities under this project may give rise to a number of risks to community health and safety. The construction materials of construction of AUW academic complex and UTTA may be carried through the populated urban areas. Adequate traffic management, provision of alternative access points/roads, road-crossing safety procedures be put in place. Labor influx during the construction phase may affect the local community and increase the risk of GBV. The other pertains to the exposure and/or increased risks of diseases by the community due to influx of people during construction and operation. For all the construction work, the ESMP should include the obligation of the contractors to safeguard the community health and safety aspects along with OHS. The civil works will affect the local communities living and working in the vicinity of the sites. Adequate engineering, health and safety measures should be adopted to avoid any issue on community health. Contractors will require developing site-specific procedures or plans so that adequate precautions are in place to prevent or minimize an outbreak of COVID-19. A Community Health & Safety Plan will be required from contractors, which will also include procedures on incident investigation and reporting, recording and reporting of non-conformances, emergency preparedness and response procedures and community awareness raising activities. Provision should have been made for contractors to make arrangements of adequate cautions and warning signs for the potential risks in the site. Any accidents or fatalities on either of the sites should have been responded on an emergency basis and will have to be immediately reported to the Bank team. The potential exclusion risk of persons with disabilities will be assessed both from the aspects of infrastructure design as well as education services, as per the concept of universal access. WBG EHS guidelines have been followed in the preparation of the ESIA, ESMF and labor related plans. COVID-19 spread among construction and project workers will also need to be taken into consideration during implementation, given the nature of how the

[21] Royte E (2005). "E-gad! Americans discard more than 100 million computers, cellphones and other electronic devices each year. As "e-waste" piles up, so does concern about this growing threat to the environment". Smithsonian Magazine. Smithsonian Institution

[22] Hossain et al (2010) Study on E-waste Situation in Bangladesh, Environment and Social Development Organization, https://www.env.go.jp/recycle/circul/venous_industry/pdf/env/h27/02_4.pdf

disease spreads from human to human. A public interaction protocol, good practices, good hygiene protocol will be posted in various locations and communities and workers will be made aware of how to contain transmission.

5.5 Impacts on Land Acquisition, Restriction on Land Use and Involuntary Resettlement (ESS 5)

Overall impacts on land acquisition and resettlement is expected to be low. The AUW academic complex will be constructed on land owned by AUW. Other infrastructural renovations and upgradation works for labs, ICT infrastructure, facilities in women's colleges and universities will be carried out within the existing buildings and premises and no physical or economic displacement of people is expected. Two alternative land/sites in Dhaka, owned by the Government of Bangladesh have already been identified as potential sites for the construction of UTTA. As the two identified sites are in Dhaka, there are possibilities of the presense of squatters, cncrouchers and vendors who might be affected during implementation.

Though AUW academic complex will not require any land acquisition it may affect some business squatters and vendors during construction. Moreover, due to the movement of heavy vehicles, the sub-project may cause construction induced impacts. However, a detailed assessment will be done, and based on the assessment RAP/ARAP will be prepared, if required.

It is expected that no land acquisition is required for construction of UTTA as both preliminary selected sites are owned by government. Once the site selection will be finalized based on screening and if any risk and impacts are anticipated, RAP or RAP will be prepared following the guidelined of RPF and ESMF.

Aside from the construction of the AUW academic complex and UTTA, other construction activities will be minor and will be conducted within the premises of existing eligible public and private universities and women colleges. As the eligible educational institutes are not selected yet, the exact location is unknown.However, no land acquisition and resettlement impacts and risk are expected.

Overall, the project is not expected any long term or significant impacts and risks on land acquisition, resettlement and livelihood. However, project may cause construction induced impacts due to movement of heavy vehicles, transportation of heavy materials etc. Land requisition may be required during construction of UTTA. Therefore, the ESMF has included a social risk assessment and a Resettlement Policy Framework (RPF) has been prepared. Subsequent Environmental and Social Management Plans (ESMP) and Resettlement Action Plans (RAPs) will be developed during project implementation. The ESMPs and RAPs will be reviewed, consulted upon, approved, and disclosed both within the country and on the World Bank's website prior to the commencement of the civil works.

The national laws on land acquisition, labor, gender policy and policies relevant to inclusion in education are weak in implementation. The national laws and processes governing land acquisition in the country do not recognize squatters/those with informal or user rights, replacement value, livelihood impacts, consultation, grievance redress, etc. Labor Laws exist and can be identified as a comprehensive piece of legislation but are followed or enforced inconsistently across sectors.

The social risk rating of the Afghanistan activities is low to moderate as the proposed project involves no civil works, as the proposed activities will only support the scholarships, faculty professional development and digital exchange programs.

5.6 Impacts on Biodiversity (ESS 6)

Separate ESIAs (and ESMPs) address potential impacts on biodiversity for the AUW academic complex and UTTA development works.

For the other subprojects (with some construction or research related activities), potential biodiversity impacts can include:

- Use of biological specimens (for research)
- Disturbances to flora and fauna due to construction or research activities
- Pollution of habitats through improper waste disposal

In order to identify and quantify potential pollution impacts of subprojects, environmental screening form (Annex 3) requires proponents to give estimates of the types and quantities of wastes expected to be generated. Information regarding the environmental setting of the proposed subproject is required in the environmental screening form. Proponents will also have to demonstrate sufficient capacity to manage the wastes properly and prohibit the disposal to nearby rivers, canals or in drainage channels which lead to disposal affecting natural habitats. The subproject will not be funded if the review of the environmental screening form finds that the proponent will not be able to minimize the potential impacts of wastes generated (during preparation and operation of the subproject).

5.7 Impacts on Indigenous People (ESS 7)

AUW academic complex will be constructed on AUW owned land, UTTA will be constructed in Dhaka where no defined IP/communities reside according to the Bangladesh bureau of Statistics and remaining rehabilitation works will be conducted within the premises of existing universities and colleges. Although the project will not work specifically in areas where concentrations of IPs are located, the AUW education program will induct and encourage enrollment of IP students and those from marginalized areas and backgrounds. Students with disabilities will be included and encouraged to enroll. Currently all public universities, colleges and some private and international universities (i.e. AUW) have 1% to 3% quota for the IP/communities for the enrollment to the universities. This quota is applicable for the poor IP students. Quota and scholarship also available for the disable students. However, during project consultations, IP community leaders, principals of IP schools and colleges will be invited to inform them about the project benefits and encourage them to enroll IP students to the higher educations. If there are any such students or teachers in the selected public universities and/or government/non-government persons/s who opt to undertake the training and utilize the facilities provided by the project, they will be free to do so with equal access and opportunity as all other users. An Indigenous Peoples Planning Framework has been developed based on stakeholder consultations and assessment of baseline scenarios in this regard. In the operational phase, the UTTA can provide support and programs for IP teachers/researchers.

5.8 Impact on Cultural Heritage (ESS 8)

The AUW is in the rural area whereas the UTTA site may be in a congested urban area. During initial field visit no site of culture heritage has been identified at the AUW. The locations of the universities participating in the research grant activities are unknown, an assessment will be done to make sure that project activities are not located near any heritage sites. A chance find guideline has been included in the ESMF and will be part of works contracts and in the bidding, document requiring contractors to stop construction if cultural heritage is encountered during any work and to notify and closely coordinate with

relevant mandated country authority for the salvaging and restoration of such cultural heritage. Chance find guidelines are provided in Annex 18.

Table 7: Summary of Potential Environmental and Social impacts and their Significance

Potential Impacts	**Duration of Impact**	**Spatial Extent**	**Reversible or not**	**Likelihood**	**Magnitude**	**Sensitivity**	**Significance Prior to Mitigation**	**Significance after Mitigation**
Impacts related to project siting								
Land cover and land use changes	Long term	Local	No	Certain	Very High	Moderate	Substantial negative	Moderate negative
Loss of natural vegetation and trees/mangroves	Long term	Local	Yes	Certain	High	Moderate	Substantial negative	Moderate negative
Loss of aquatic habitat	Long term	Local	No	Likely	Moderate	Mild	Moderate negative	Negligible negative
Loss of terrestrial habitats	Long term	Local	No	Likely	High	Moderate	Substantial negative	Low negative
Drainage congestion and water logging	Long term	Local but beyond project foot print	Yes	Likely	High	Mild	Moderate negative	Low negative
Loss of agriculture land	Long term	Local	No	Likely	Moderate	Moderate	Moderate negative	Low negative
Impacts on Vulnerable and disadvantage	Long term	Local	No	Likely	Moderate	Moderate	low	Positive
Impacts during project implementation phase								
Air pollution	Short term	Local	Yes	Certain	High	Moderate	Substantial negative	Low negative
Noise	Short term	Local	Yes	Likely	High	Moderate	Substantial negative	Negligible negative

Potential Impacts	**Duration of Impact**	**Spatial Extent**	**Reversible or not**	**Likelihood**	**Magnitude**	**Sensitivity**	**Significance Prior to Mitigation**	**Significance after Mitigation**
Water pollution	Long term	Local but beyond project foot print	No	Certain	High	Moderate	Substantial negative	Low to moderate negative
Soil contamination	Short term	Local	Yes	Certain	High	Mild	Moderate negative	Low negative
Solid wastes and hazardous wastes	Short term	Local	Yes	Certain	High	Mild	Substantial negative	Low negative
Impacts on aquatic habitat	Long term	Local but beyond project foot print	No	Certain	Moderate	Moderate	Substantial negative	Low negative
Site clearance and restoration	Short term	Local	Yes	Certain	Moderate	Mild	Moderate negative	Low negative
Occupational health and safety	Short term	Local	Yes	Certain	High	High	Substantial negative	Low to moderate negative
Labor Impacts and risks of child labor, forced labor, human trafficking	Short term	Local	Yes	Certain	Moderate	Moderate	Moderate negative	Low to moderate negative
Involuntary Resettlement	Short term	Local	Yes	Likely	Moderate	Moderate	Moderate negative	Low
Small Ethnic Communities	Short term	Local	Yes	Likely	Low	Low	Low	Low to moderate positive
Impact on Cultural Heritage	Short term	Local	Yes	Certain	Moderate	Moderate	Moderate negative	Low to moderate negative

Potential Impacts	**Duration of Impact**	**Spatial Extent**	**Reversible or not**	**Likelihood**	**Magnitude**	**Sensitivity**	**Significance Prior to Mitigation**	**Significance after Mitigation**
Impacts during operational period								
Changes in water courses	Long term	Local	No	Likely	Negligible	Moderate	Low negative	Low negative
Loss of ecological connectivity	Long term	Local	No	Certain	Moderate	Moderate	Moderate negative	Low negative
Impact on terrestrial habitat	Long term	Local	Yes	Likely	Moderate	Moderate	Moderate negative	Low negative
Loss of vegetation	Long term	Local	Yes	Likely	Moderate	Moderate	Moderate negative	Low negative
Generation of solid waste	Long term	Local	Yes	Certain	Moderate	Moderate	Moderate negative	Low negative
Air pollution	Long term	Local	Yes	Likely	Moderate	Mild	Moderate negative	Low negative
Noise generation	Long term	Local	Yes	certain	high	high	high	Moderate negative
Water pollution	Long term	Local	No	Certain	Moderate	Moderate	Moderate negative	Low to moderate negative
Changes in land use pattern	Long term	Local	No	Certain	Moderate	Moderate	Moderate negative	Low negative
Impacts on local livelihoods	Long term	Local	No	Certain	Moderate	Moderate	Moderate negative	Low negative
Increased risk of road accidents	Long term	Local	No	Likely	Negligible	Moderate	Low negative	Low negative

Chapter 6: Environmental and Social Management Procedures

Heat project will use a structured approach to environmental and social management to allow the project development process following the newly developed 10 ESSs, follow the mitigation hierarchy of avoidance, minimization, mitigation and compensation/offset for negative impacts and enhancement of positive impacts where practically feasible. Following sections describe what needs to be done at each stage of the overall project life –implementation of the project activities, and reporting on progress.

6.1 Environmental and Social Screening

Environmental and Social screening is essential to gather information on existing baseline status and to assess potential environmental and social impacts of the project activities. Screening identifies the consequence of the proposed project in broader sense based on similar project experiences, stakeholder's perceptions and expert judgment, without having very much detailed investigation. Critical issues are also identified through the screening which needs detailed investigation. Based on the extent of environmental and social impacts obtained from the screening, the decision for further environment and social SHED must confirm the findings of the screening carried out by the consultants. Moreover, alternative project activities/methods and/or operation will be considered and the impacts will be assessed to make the projects more environment friendly and socially acceptable. Environmental and social screening forms are provided in Annex 3 and 4, which can be further developed at the implementation stage. The environmental screening form addresses issues under ESS1, ESS3, ESS4 and ESS6. The social screening form addresses issues under ESS1, ESS2, ESS4, ESS5, ESS7 and ESS8.

Screening is usually carried out with the help of simple matrix that includes a set of check list to identify the baseline status and proposed potential environmental and social impacts of the project intervention. During screening, if it is found that the project may create major irreversible damage or may violate an existing rules or regulations, the sub-components/activities under sub-projects will be rejected. For instance, any activities that may encroach into an ecologically critical area or a national/ global heritage site will be rejected.

The Contingent Emergency Response Component (CERC) under the project is for situations of urgent need of assistance. In the event of an eligible crisis or emergency, the project will contribute to providing immediate and effective response to said crisis or emergency. This will allow for rapid reallocation of project proceeds in the event of future natural or man-made disaster or crisis that has caused or is likely to imminently cause a major adverse economic and/or social impact during the life of the project. A zero-value component has been included to ensure funds can be deployed through the project depending on the specific needs that may arise. In the event of such emergency, this component would allow the Government to request the Bank to re-categorize and reallocate financing from other project components to cover emergency response and recovery costs, if approved by the Bank. An exclusion list of subprojects for the CERC component of the project is provided in Annex 17. This will ensure that projects with high/substantial environmental or social risks will not be included in the Emergency Action Plan if the CERC is activated in the future due to an emergency. For subprojects not included in the exclusion list, environmental and social screening will be done as per other HEAT subprojects.

6.2 Environmental and Social Impact Assessment (ESIA)

The purpose of ESIA is to give the environment and people its due importance in the decision-making process by clearly evaluating the environmental and social consequences of the proposed study before action is taken. Early identification and characterization of critical environmental and social impacts allows the public and the government to form a view about the environmental viability and social acceptability of a proposed development project and what conditions should apply to mitigate or minimize those risks and impacts.

The ESIAs will utilize a well-planned and all-inclusive communication and consultation strategy and include a baseline survey covering the prevailing status of income, employment, education, age, skills and other socio-economic aspects along with cultural and community aspects in the areas. The assessment will feed into the individual Resettlement Plans prepared for each site and will be incorporated, along with consultation feedback from those identified in the PAP census and all other relevant stakeholders, in the development of mitigation measures, especially livelihood strategies.

Project will undertake a survey for identification of the persons and their families likely to be affected by the project. Every survey shall contain the following information of, the project affected families:

- ✓ Members of families who are residing, practicing any trade, occupation or vocation in the project affected area;
- ✓ Project Affected Families who are likely to lose their immovable assets, commercial establishment, agricultural land, employment or are alienated wholly or substantially from the main source of their trade occupation or vocation.
- ✓ Families belonging to indigenous categories
- ✓ Vulnerable persons
- ✓ Families that are landless (not having homestead land, agriculture land or ether homestead or agriculture land) and are below poverty line, but residing in the affected area
- ✓ Losing access to private property or common property resources

Based on the social impact assessment, project will prepare an action plan to mitigate or minimize the adverse impacts as identified during the survey. The draft mitigation plan in form of resettlement action plan (RAP) will be again disseminated among the affected individuals/ community. The feedback received from the affected groups will be incorporated to the extent possible before finalization of the RAPs.

When ESIA identifies small ethnic communities with distinct characteristics different with the mainstream population of the country, a special approach will be followed as per the Bank ESS7 on indigenous peoples, if any. A free, prior and informed consultation approach will be followed for meaningful consultation with the small ethnic communities and identification of their priorities for additional measures for maximizing project benefits to them. Measures will be taken to avoid any adverse social effected to these communities and a small ethnic community development plan (SECDP) will be prepared for following implementation of the project activities in areas inhabited by small ethnic communities.

However, according to the project planning, the activities those need ESIA will be implemented at different periods and hence, multiple ESIAs would be required clustering the similar activities prior to the actual intervention start. In the preparation phase, the ESIA shall achieve the following objectives:

- To establish the environmental and social baseline in the study area, and to identify any significant environmental issue;
- To assess these impacts and provide for measures to address the adverse impacts by the provision of the requisite avoidance, mitigation and compensation measures;
- To integrate the environmental issues in the project planning and design;
- To develop appropriate management plans for implementing, monitoring and reporting of the environmental mitigation and enhancement measures suggested.

6.3 Specific Activities and Responsibilities in the Environmental and Social Assessment Process

In Bangladesh, the environmental assessment procedure will pass through three major tiers in order to optimize the resources required for conduction of environmental assessment studies, these three tiers are: A) Screening, B) Initial Environmental Examination (IEE), and C) Detailed Environmental and Social Impact Assessment (ESIA). Screening decides whether the ESIA process should be applied to a development project and if it is required, its type, that is, IEE or ESIA. The major activities and the relevant responsibilities for each sub-activity are shown in the table below.

Table 8: Major activities and responsibilities during different project stages

Project Stage	Steps/ Activities	Description	Responsibility
Step-1: Screening			
Planning and Pre-feasibility	Undertake Screening	Prepare a document containing environmental and social information covering potential environmental and social impacts, mitigation measures, evidence of public consultation etc. Take no further action for projects, which do not require environmental assessment.	MoE/SHED as proponent or qualified professionals/ Consultants
Step-2: Scoping to identify types of environmental and social assessment study			
Pre-feasibility/ planning	Scoping Exercise	Identify, by using checklists and based on preliminary field examination the necessity to conduct an IEE or an ESIA,	MoE/SHED as proponent assisted by qualified professionals/ Consultants
		Produce environment related document to competent authority for approval.	
Step-3: Terms of Reference (ToR) for environmental and social assessment study			
Pre-feasibility/ planning	Preparation of ToR	Define the main environmental and social concerns and issues related to any infrastructure program, which must be addressed by environmental and social assessment.	MoE/SHED assisted by professional environmental and social assessment

Project Stage	Steps/ Activities	Description	Responsibility
			team/consultant
	Approval of ToR	Review, comment and approve ToR	DoE, Bangladesh
Step-4: Preparatory work for environmental and social assessment study			
Pre-feasibility and planning	Assigning the work	Determine whether to conduct environment and social assessment using in-house staff or whether to outsource it.	MoE/SHED assisted by professional environmental and social assessment team/ consultant
	Environmental and social Assessment team formation	Form team as per approved ToR.	Environmental and social Assessment Team
	Prepare Work Plan	Establish a work plan that gives appropriate weight to all activities.	
Step-5: Undertake environmental and social assessment study			
Step-5.1: Desk Studies			
Planning and design	Secondary data	Collect and review relevant and appropriate published data, such as maps, reports etc.	Environmental and social Assessment Team
	Initiation, interaction and consultation	Discuss the proposed infrastructure and its potential environmental impacts with knowledgeable persons and concerned stakeholders.	
	Preparation of information summary	Draft a summary of the information that is relevant to the project and its possible environmental effects.	
	Methods and Techniques	Determine the methods by which the field work for Environmental and social Assessment will be conducted.	
	Work Plan	Revise the work plan on the basis of desk studies	

Project Stage	Steps/ Activities	Description	Responsibility
Step-5.2: Field Work			
Planning and design	Field equipment	Collect and arrange field equipment required for Environmental Assessment Studies	Environmental and social Assessment Team
	Field survey for collection of baseline information	Survey at project location, interaction with the local community and investigate the issues identified during desk study; collect baseline (physical, biological and socioeconomic aspects) information	
Step-5.3: Data Analysis and Interpretation			
Planning and design	Impacts Identification	Establish what environmental impacts will be taken place as result of interaction of environmental settings and infrastructure construction, rehabilitation and maintenance activities.	Environmental and social Assessment Team
	Impact Prediction	Establish the extent of environmental consequences of the proposed infrastructure construction and operation.	
	Impact assessment	Judge whether the consequences are significant enough to require action to be taken.	
	Mitigation Measures	Design mitigation measures to avoid, reduce, minimize & compensate for adverse impacts & maximize beneficial impacts.	
	Environmental and social Management Plan	Prepare ESMP covering monitoring and project management to ensure the implementation of mitigation measures.	
	Stakeholder/ Public Consultation	Carry out at various stages in the assessment process to ensure quality, comprehensiveness and effectiveness and make sure that stakeholders' views are adequately addressed.	Environmental and social Assessment Team/ MoE/SHED
Review and Approval	Review & approval of	Check completeness, adequacy, credibility, facilitate the decision-making process; decide if project should proceed or if further alternatives must be examined.	MoE/SHED will review and forward to DoE

Project Stage	Steps/ Activities	Description	Responsibility
	environmental and social assessment report		for approval of IEE/ESIA report
		Approval of environmental and social assessment report or rejection.	DoE, Bangladesh
Design Implementation	Implementation of ESMP, Monitoring	Determines compliance with ESMP.	MoE/SHED or appointed professionals
Step-6: Undertake audit			
Environmental and social Audit	Auditing	Environmental and social audit: immediately after Construction and two years after project completion.	MoE/SHED or appointed professionals

6.4 Environment and Social Management Plan (ESMP)

This section presents the outline environmental and social management plan (ESMP) of the project.

Scope and Objectives of ESMP

The basic objective of the ESMP is to manage adverse impacts of program interventions in a way that minimizes the possible adverse impact on the environment and people of the program influence area. The specific objectives of the ESMP are to:

- ✓ Identify the mitigation measures during ESMF and ESIA; and facilitate implementation of those during implementation of the project;
- ✓ Maximize and sustain potential program benefits and control negative impacts;
- ✓ Draw responsibilities for program proponent, contractors, consultants, and other members of the program team for the environmental and social management of the program;
- ✓ Define a monitoring mechanism and identify monitoring parameters in order to:
- ✓ Ensure the complete implementation of all mitigation measures,
- ✓ Ensure the effectiveness of the mitigation measures,
- ✓ Maintain essential ecological process, preserving biodiversity and where possible restoring degraded natural resources and habitats; and
- ✓ Assess environmental training requirements for different stakeholders at various levels.

The ESMP will be managed through a number of tasks and activities and site-specific management plans. One purpose of the ESMP is to record the procedure and methodology for management of mitigation measures identified for each negative impacts of the program. The management will clearly delineate the responsibility of various participants and stakeholders involved in planning, implementation and operation of the program.

Inclusion of Relevant Components of ESMP in Contract Documents

The specific IEE/ESIA should include a section on special environmental clauses (SECs) to be incorporated in the Tender Document under General/Particular Specification. These clauses are aimed at ensuring that the Contractor carries out his responsibility of implementing the environmental and social management plan (ESMP), monitoring plan as well as other environmental and safety measures. Such clauses may specify, for example, penalties for non-compliance as well as incentives to promote strong compliance. The various contractors must be made accountable to implement the plans and mitigation measures which pertain to them through contract documents and/or other agreements of the obligations and importance of the environmental and social components of the program. In addition, the specific ESIA will ask to submit an Environment Management Action Plan (EMAP) to encompass all of the detailed plans, measures and management systems they are required to develop and implement, to be based on the ESMF recommendation and ESIA findings, their work methodology, work force involvement, equipment's standard, and work scheduling.

Payment Milestones

Payments to contractors would be linked to environmental performance, measured by completion of the prescribed environmental and social mitigation measures. Contractors would be required to join forces with the executing agency, project management unit, supervising consultants and local population for the mitigation of adverse impacts of the program. For effective implementation of the proposed mitigation and monitoring measures they would attract trained and experienced environmental management staff.

Guideline to Incorporate Environmental Management in Bid Documents

The main consultants of project will be responsible to incorporate environmental management requirements in the bidding documents, with the assistance of the environmental consultants. The generic guidelines to incorporate environmental aspects in the bidding documents are listed below. These are examples only and shall be further elaborated and expanded upon based on the findings and recommendations of the phase-specific ESIAs.

- Prepare cost estimates, to be incorporated in Bid Documents.
- Contractor version of the Environmental Management Plan along with the ECoPs to be incorporated in the bid document 's work requirements.
- Penalty clauses for not complying with ESMP requirements to be incorporated.

Indicative penalty clauses are presented below (Addendum to Clause 17.2 Contractor 's Care of the Works of FIDIC).

- ✓ The contractor has to follow all traffic safety measures as defined in the technical specification.
- ✓ The contractor has to follow all environmental mitigation and management measures as defined in the technical specification read along with the Environmental Management Plan for the specific project activities.

- ✓ The contractor has to ensure that prior to every monsoon season, during the construction period; all the temporary and permanent cross drainage structures are free from debris as defined in the Technical Specifications read along with the ESMP.
- ✓ The contractor has to ensure that a comprehensive Health and Safety program is in place for the duration of construction. Implementation of the program will include, among other aspects, ensuring that sufficient numbers and good quality Personnel Protective Equipment (PPE), should be provide to staff and labor all time as defined in the labor codes read along with the ESMP.
- ✓ Since many contractors do not have clear understanding the need of environmental management, some quote very low price for implementation of ESMP and eventually cannot implement ESMP as per specific requirement of ESMP and project design. To avoid this problem, fixed budget may be assigned for ESMP implementation. The contractors may need orientation on the requirement of the ESMP in the pre-bidding meeting.

Environmental Codes of Practice (ECoPs)

The environmental codes of practice (ECoPs) are generic, non-site-specific guidelines. The ECoPs consist of environmental management guidelines and practices to be followed by the contractors/ implementation organizations for sustainable management of all environmental issues. The contractor will be required to follow them and also use them to prepare site-specific management plans.

ECoP 1: Waste Management

ECoP 2: Fuels and Hazardous Substances Management

ECoP 3: Water Resources Management

ECoP 4: Drainage Management

ECoP 5: Soil Quality Management

ECoP 6: Erosion and Sediment Control

ECoP 7: Top Soil Management

ECoP 8: Topography and Landscaping

ECoP 9: Borrow Areas Management

ECoP 10: Air Quality Management

ECoP 11: Noise and Vibration Management

ECoP 12: Protection of Flora

ECoP 13: Protection of Fauna

ECoP 14: Protection of Fisheries

ECoP 15: Road Transport and Road Traffic Management

ECoP 16: Construction Camp Management

ECoP 17: Workers Health and Safety.

6.5 Mitigation measures to address environmental and social impacts

Typical mitigation measures to address potential environmental and social impacts are outlined in the table below. These need to be modified and adjust for each sub-project based on screening and other appropriate environmental and social assessments.

Table 9: Mitigation measures to address environmental and social impacts

Issues/ Activities	Potential Environmental and social Impacts	Proposed Mitigation Measures	Responsibility	
			Implementation	Supervision
Land Acquisition/ Requisition	• Encroachment of agricultural land, cultural sites, fish habitat etc. • Loss of agricultural production, fish resources; • Loss of income and livelihoods; • Social conflict.	− Avoid agricultural land, social/religious institutes, fish habitat during finalization of the alignment of the approach road and location of the bridge; − Prior to start construction adequate compensation should be given to the PAPs in-time according to RAP. − Adequate compensation should be given for standing crops; − Avoid agricultural land, if possible; − Create job opportunities for the PAPs.	UGC	MoE/SHED
Housing and Commercial Structures	• Loss of housing and commercial structures; • Dust pollution; • Loss of income and livelihoods.	− Avoid the housing and commercial structure during the finalization of the alignment and location of the bridge; − Proper compensation should be given before starting the removal or dismantling works; − Create job opportunities for the PAPs. − Water spraying on the bear surface or dust pollution source;	UGC and Contractor	MoE/SHED
Loss of vegetation/ tree	• Accident risk during removal of trees/vegetation's in the project sites; • Birds and others species can migrate from the trees/vegetation's; • Impacts on the local climatic condition.	− Prior to start construction, all vegetation should be removed from the proposed construction sites with the c consultation of the local relevant authorities; − Avoid disturbance and careful during construction vehicle and equipment movement; − Proper H&S measures (use of appropriate PPE such as hand gloves, safety shoes and helmet) for the workers should be taken during removal of trees, bushes & crops; − To mitigate the ecological impact, tree plantation plan can be considered in the design & accordingly tree plantation will be done in an appropriate location to be determined by the project after consultation with the concerned authority;	UGC and Contractor	MoE/SHED

Issues/ Activities	Potential Environmental and social Impacts	Proposed Mitigation Measures	Responsibility	
			Implementation	Supervision
		– Proper H&S measures (use of appropriate PPE such as hand gloves, safety shoes and helmet) for the workers should be taken during removal of trees, bushes & crops; – To mitigate the ecological impact, tree plantation plan can be considered in the design & accordingly tree plantation will be done in an appropriate location to be determined by the project after consultation with the concerned authority; – The engineer shall approve such felling; only when the proponent secures receive a "clearance" for such felling from the project, as applicable; – Tree felling, if unavoidable, shall be done only after compensatory plantation of at least two saplings for every tree cut is done; – During the tree removal from the bridges and approaches construction sites diameter at best height (DBH) of the trees is 6 inches, only such trees should be considered by the contractor for compensation and plantation; – Tree plantation at the suitable locations after completion of the construction activities.		
Removal of Utilities	• Vulnerable for workers health and safety; • During movement of heavy Construction machineries equipment's can damage the utility services if not previously removed; • Due to carelessness or incautiousness death from sudden electric shocks may occur.	– Prior to start construction, the utility services (electrical cables, telephone line, water supply pipeline, gas supply pipeline and internet line) should be shifted with the consultation of the relevant organizations; – Inform the local community before starting removal or demolishing work; – Carefully remove the utilities that are connected to any structures; – Proper Health and safety measures for the workers should be taken during shifting of these lines to avoid any incidents.	Contractor	MoE/SHED

Issues/ Activities	Potential Environmental and social Impacts	Proposed Mitigation Measures	Responsibility	
			Implementation	Supervision
Dismantling	• Dust pollution in the construction site; • Health hazard for the workers and community during dismantling works; • Noise level increase; • Vibration effects on the structures on the surrounding of the project area; • Surface water contamination, blockage of navigation and drainage, impacts on aquatic animal;	− Notify the adjacent community before starting the demolishing work; − During the removal or demolition of existing structures if required will be fully removed by the contractor; − Spraying of water in the dry land or from where there is a possibility to generate dust; − Banned fishing, swimming, boat movement activities in the construction sites, if applicable; − Proper H&S measures for the workers such as using of appropriate PPE (helmet, Earplug, musk, safety shoes, hand gloves etc.) should be taken to avoid any accidents; − Construct noise barrier around the dismantling site; − Stop the engine when it is not required; − Monitor Noise level as per DoE guidelines; − Impact wise mitigation measures are given.	UGC and Contractor	MoE/SHED
Archaeological/ Historical/ Social/ Cultural/ Religious Sites	• Encroachment of Archaeological/ Historical/ Social/ Cultural/ Religious sites • Air and dust pollution; • Noise level may create uncomforting for the local community; • Vibration can affect on social/ cultural/ religious site.	− Avoid Archaeological/Historical/Social/Cultural/ Religious sites during the site selection and improvement works; − Spraying water on the dry surface to reduce dust pollution; − Vehicles transporting construction material to be covered; − Create noise barrier around the construction sites; − Limit the speed of vehicles; − Stop the demolish work for short time like prayer time. − Realignment of bridge approach road (in case of bridge) if required.	Contractor	MoE/SHED
Child labor	• Engagement of Child Labor or Forced Labor in the project.	− The risk of child labor will be mitigated through Certification of laborer's age. This will be done by using the legally recognized documents such as the National Identification Card, and Birth Certificate. Further, sessions on raising awareness will be	**Contractor/ Sub-contractor/**	**UGC/ AUW and/or universities Authority**

Issues/ Activities	Potential Environmental and social Impacts	Proposed Mitigation Measures	Responsibility	
			Implementation	**Supervision**
		conducted on a regular basis to the communities to sensitize on prohibition and negative impacts of child and forced Labor. Nonetheless, the contractor will be required in the contract to commit against the use of child/ forced labor. Contractor is under an obligation to engage a Labour Expert to ensure the mitigation measure.		
COVID-19	• Risk of potential transmission of COVID-19	The risk of transmitting COVID 19 by reason of Labour Influx may be mitigated by focusing on the localizing the economic benefits with minimal opportunities for outside labour to service work that require specialized/skilled labour that is not present in project localities. conducting pre-employment health checks; • controlling entry and exit from site/workplace; • reviewing accommodation arrangements, to see if they are adequate and designed to reduce contact with the community; • reviewing contract durations, to reduce the frequency of workers entering/exiting the site; • rearranging work tasks or reducing numbers on the worksite to allow social/physical distancing, or rotating workers through a 24-hour schedule; • providing appropriate forms of personal protective equipment (PPE); • putting in place alternatives to direct contact, like tele-medicine appointments and live stream of instructions; • quarantining immediately of any suspected COVID 19 employees. • Contractor is under an obligation to designate a Covid 19 focal point.	**Contractor/ Sub-contractor/**	**UGC/ AUW and/or universities Authority**
Labor Influx	Risk on labor influx	The risk will be mitigated by writing, adopting and implementing a written Labour Influx Management Plan as part of the bidding document, code of conduct,	**Contractor/ Sub-contractor**	**UGC/**

Issues/ Activities	Potential Environmental and social Impacts	Proposed Mitigation Measures	Responsibility	
			Implementation	Supervision
		contract before employing any labor in the work and ensuring necessary training. Contractor engaged Labour Expert will be responsible to ensure the mitigation measure.		**AUW and/or universities Authority**
Sexual harassment	sexual harassment of women and girls, exploitative sexual relations, and illicit sexual relations with minors from the local community.	The risk of GBV will be mitigated Implementing a code of conduct, contract before employing any labor in the work and ensuring necessary training. The Contractor's monthly training program will also cover topics related to Code of Conduct such as sexual harassment, particularly towards women and children, violence, including sexual and/or gender-based violence and respectful attitude while interacting with the local community. Contractor engaged Labour Expert will be responsible to ensure the mitigation measure.	**Contractor/ Sub-contractor**	**UGC/ AUW and/or universities Authority**
Female workers	Discrimination against female workers	The Risk will be mitigated by Implementing a code of conduct, contract before employing any labor in the work and ensuring necessary training. The Contractor's monthly training program will also cover topics related to Code of Conduct such as sexual harassment, particularly towards women and children, violence, including sexual and/or gender-based violence and respectful attitude while interacting with the local community. Contractor engaged Labour Expert will be responsible to ensure the mitigation measure.	**Contractor/ Sub-contractor/**	**UGC/ AUW and/or universities Authority**
Hazardous work	Risk on Hazardous work and process	The Risk will be mitigated by Contractor, providing personal protective equipment (PPE) for workers, such as safety shoes, helmets, safety vests, masks, gloves, protective clothing, goggles, full-face eye shields and ear protection based on the work requirements. Workers shall maintain the PPE properly by cleaning dirty ones and replacing damaged ones. Contractor must engage Contractors must engage a minimum of one Occupational Health and Safety representative who will be responsible to ensure the mitigation measure.	**Contractor/ Sub-contractor/**	**same**

Issues/ Activities	Potential Environmental and social Impacts	Proposed Mitigation Measures	Responsibility	
			Implementation	Supervision
Accidents	Accidents or emergencies: exposure to unsafe machineries, flammable chemicals/fuel, construction materials, landslide at workplace.	The Risk will be mitigated by Contractor hiring trained operators for the safe operation of specialized vehicles such as forklifts, including safe loading and unloading. Moving equipment with restricted rear visibility shall be outfitted with audible back-up alarms. Flagman will be provided to each moving equipment operator to guide the movement of equipment. Contractor shall mark all energized electrical devices and lines with warning signs. The Contractor shall mark the fire escape routes and train the workers on emergency evacuation from the terminal in case of fire. Emergency drills shall be conducted on a regular basis. Contractor engaged Occupational Health and Safety representative will be responsible to ensure the mitigation measure.	**Contractor/ Sub-contractor/**	**same**
Occupational Health and safety	General understanding and implementation of occupational health and safety requirements. Work related diseases	The Risk will be mitigated by Contractor, providing training to all workers on basic ESHS risks associated with the proposed construction works and the workers' responsibility. The training program shall be repeated on a monthly basis. Contractor's site engineers will arrange weekly toolbox talks to the construction workers on ESHS risks associated with the construction activities that will be carried on that particular week. Contractor engaged Occupational Health and Safety representative will be responsible to ensure the mitigation measure.	**Contractor/ Sub-contractor/**	**same**
Vulnerable group	Women and children are particularly vulnerable to trafficking practices	The risk of trafficking will be mitigated through arranging sessions on raising awareness will be conducted on a regular basis. Nonetheless, the contractor will be required in the contract to work against trafficking, implementing a code of conduct, making it a contractual obligation before employing any labor in the work and ensuring necessary training. Contractor engaged Labour Expert will be responsible to ensure the mitigation measure.	**Contractor/ Sub-contractor/**	**same**

6.6 Required site specific management plans (ESS 1-10)

Sand or soil borrowing plan (if required from river bed, agriculture land and wetlands): will be prepared and implemented by the contractors on the basis of the ECoPs Plan will describe among others the methodology to be adopted, restrictions to be followed, prior survey to be conducted, and documentation to be maintained for the sand extraction. The Plan will be submitted to the DSM (Design Supervision Management) Consultant for their review and approval before initiating the sand extraction activity.

Pollution Prevention Plan: will be prepared and implemented by the contractors on the basis of the ECoPs and WBG EHS Guidelines (2007) that will be part of the bidding documents. The Plan will be submitted to the DSM for their review and approval before contractor mobilization.

Waste Disposal and Effluent Management Plan: will be prepared and implemented by the Contractor on the basis of the ESMP, ECoP, and WBG EHS Guidelines (2007), which will be part of the bidding documents. The Plan will be submitted to the DSM for their review and approval before contractor mobilization.

Drinking Water Supply and Sanitation Plan: Separate water supply and sanitation provisions will be needed for the temporary facilities including offices, labor camps and workshops in order not to cause shortages and/or contamination of existing drinking water sources. A Plan will be prepared by the contractors on basis of the ESMP and ECoPs, which are part of the bidding documents. The Plan will be submitted to the DSM for their review and approval before contractor mobilization.

Occupational Health and Safety (OHS) Plan: will be prepared and implemented by each contractor on the basis of the WBG EHS Guidelines (2007), ECoPs, mitigation plan, and other relevant standards. The Plan will be submitted to the DSM for their review and approval before contractor mobilization.

Traffic Management Plan: will be prepared by each contractor after discussion with MoE/ SHED and authorities responsible for roads and traffic. The Plan will be submitted to the DSM for their review and approval before contractor mobilization. The Plan will identify the routes to be used by the contractors, procedures for the safety of the local community particularly pedestrians, and monitoring mechanism to avoid traffic congestion.

Construction Camp Management Plan: will be prepared by each contractor. The Plan will include the camp layout, details of various facilities including supplies, storage, and disposal. The Plan will be submitted to the DSM for their review and approval before camp establishment.

Fuel and Hazardous Substances Management Plan: will be prepared by each contractor in accordance with the standard operating procedures, relevant guidelines, and where applicable, material safety data sheets (MSDS). The Plan will include the procedures for handling the oils and chemical spills. The Plan will be submitted to the DSM for their review and approval before contractor mobilization.

Emergency Preparedness Plan: will be prepared by each contractor after assessing potential risks and hazards that could be encountered during construction. The Plan will be submitted to the DSM/MoE for their review and approval before contractor mobilization.

Plantation Plan: A plantation plan will be prepared for the trees to be planted on the project construction site. The Plan will include the species to be planted, the plantation methodology, and plantation layout.

Environmental Management of Resettlement Sites plan: will be prepared by the Contractor in compliance with the stand-alone ESMP prepared for Resettlement Sites and presented in the main ESIA.

Health, Safety and Environment Plan: will be prepared by MoE/SHED to address solid waste and emergencies associated with workers and community health and safety and to properly manage waste effluents generated from the maintenance works. The Plan will be submitted to the World Bank for review and approval prior to completion of construction.

Resettlement Action Plan (RAP): RAP will be prepared (if require) following the guidelines of RPF.

Stakeholder Engagement Plan (SEP): Two standalone SEP's have been prepared. One for Bangladesh and One for Afghanistan.

Labor Management Plan (LMP): A separate LMP has been prepared for this project.

GBV and Gender Action plan (GAP): A separate GAP has been prepared for this project.

Communication Strategy: A formal communication strategy will be prepared for the project laying out various communication needs and outreach tools and explaining the responsibility of PIC to convey the project impacts and its implications for various stakeholders. A key aspect of this strategy shall be the communication of any project related impacts.

Biodiversity conservation and monitoring: Detailed ecological studies will be carried out, during ESIA study in the project impact area, to broaden the existing baseline data. The ESIA of the project should identify potential sites of sensitive ecological area, mangrove area, fish conservation area, locations of dolphin conservation, habitat for coastal birds, sea turtle, etc. in the project area. The proposed study will confirm these locations, identify additional locations and islands/chars of conservation significance and prepare detailed conservation plans and implement these plans. A consulting firm will be hired to carry out the studies and to conduct biodiversity monitoring during the construction and post-construction periods.

Chapter 7: Consultations and Engagement

7.1 Purpose of the stakeholder's engagement

Consultations with affected people and communities are the starting point for all resettlement related activities. Experience indicates that involuntary resettlement generally leads the affected population to facing severe problems in the socio-economic life making them apprehensive towards the Project. Project aims to provide a two-way communication channel between the stakeholders and the scheme proponents. In the year of 2008, AUW first initiated to construct the AUW own campus. AUW interfaced with the Chittagong Development Authority (CDA) regarding hill cutting under the guidance of the Ministry of Housing and Works. During the same period, AUW also involved the Department of Environment (DOE) for an environmental clearance certification encompassing all environmental impact issues before commencing on the construction. In keeping with the same, the process of public consultation and participation in the project was initiated in the year 2008, after that 2019, 2020 and has been an integral part since all studies and assessments are undertaken. Already, a standalone Stakeholder Engagement Plan (SEP) has been prepared for this project. Stakeholder consultations have been extensively reported in SEP containing Project background, Socio economic context, Consultation and Communication Strategy etc. applying ESS 10, which will be followed through the project cycles. This chapter mainly focuses on the people's opinion about relocation, resettlement, project messages, planning about resettlement relocation of the displaced households.

As defined by the ESF and ESS10, stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks. According to ESS10, Stakeholder engagement is most effective when initiated at an early stage of the project development process, and is an integral part of early project decisions and the assessment, management and monitoring of the project. UGC with the support of AUW and other stakeholders will ensure the following engagement procedures:

- ✓ UGC will engage with stakeholders throughout the project life cycle, commencing such engagement as early as possible in the project development process and in a timeframe that enables meaningful consultations with stakeholders on project design. The nature, scope and frequency of stakeholder engagement will be proportionate to the nature and scale of the project and its potential risks and impacts.
- ✓ UGC and AUW will engage in meaningful consultations with all stakeholders and will provide stakeholders with timely, relevant, understandable and accessible information, and consult with them in a culturally appropriate manner, which is free of manipulation, interference, coercion, discrimination and intimidation.
- ✓ The process of stakeholder engagement will involve the following, as set out in further detail in this ESS: (i) stakeholder identification and analysis; (ii) planning how the engagement with stakeholders will take place; (iii) disclosure of information; (iv) consultation with stakeholders; (v) addressing and responding to grievances; and (vi) reporting to stakeholders.

- ✓ UGC and AUW will maintain and disclose as part of the environmental and social assessment, a documented record of stakeholder engagement, including a description of the stakeholders consulted, a summary of the feedback received and a brief explanation of how the feedback was taken into account, or the reasons why it was not.

7.2 World Bank requirements for stakeholder engagement

The World Bank's Environmental and Social Framework (ESF) came into effect on October 1, 2018. The Framework includes Environmental and Social Standard (ESS) 10, "Stakeholder Engagement and Information Disclosure", which recognizes "the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice". ESS10 emphasizes that effective stakeholder engagement can significantly improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.

As defined by the ESF and ESS10, stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks. According to ESS10, Stakeholder engagement is most effective when initiated at an early stage of the project development process, and is an integral part of early project decisions and the assessment, management and monitoring of the project. SHED and UGC will ensure the following engagement procedures:

- SHED and UGC will engage with stakeholders throughout the project life cycle, commencing such engagement as early as possible in the project development process and in a timeframe that enables meaningful consultations with stakeholders on project design. The nature, scope and frequency of stakeholder engagement will be proportionate to the nature and scale of the project and its potential risks and impacts.
- SHED and UGC will engage in meaningful consultations with all stakeholders and will provide stakeholders with timely, relevant, understandable and accessible information, and consult with them in a culturally appropriate manner, which is free of manipulation, interference, coercion, discrimination and intimidation.
- The process of stakeholder engagement will involve the following, as set out in further detail in this ESS: (i) stakeholder identification and analysis; (ii) planning how the engagement with stakeholders will take place; (iii) disclosure of information; (iv) consultation with stakeholders; (v) addressing and responding to grievances; and (vi) reporting to stakeholders.
- SHED and UGC will maintain and disclose as part of the environmental and social assessment, a documented record of stakeholder engagement, including a description of the stakeholders consulted, a summary of the feedback received and a brief explanation of how the feedback was taken into account, or the reasons why it was not.

SHED has prepared this draft ESMF based on the nature and scale of the project and its potential risks and impacts. Stakeholders have been identified and if any new stakeholders are identified will be included

with this SEP. This SEP will be disclosed for public review and comment before the project is placed for the World Bank appraisal. According to ESS10, this SEP has also developed a grievance redress mechanism that allows project-affected parties, student, faculty, future students and others to raise concerns and provide feedback related to the environmental and social performance of the project together with components related activities other than safeguard matters and to have those concerns addressed in a timely manner.

7.3 Stakeholder Engagement at COVID-19 outbreak

Ongoing COVID-19 pandemic situation, managing public consultation and stakeholder engagement in the Project needs to adhere to national requirements and any updated guidance issued by WHO. The alternative ways of managing consultations and stakeholder engagement will be in accordance with the local applicable laws and policies, especially those related to media and communication. The suggestions set out below are subject to confirmation that they are in accordance with existing laws and regulations applying to the project. With growing concern about the risk of virus spread, there was an urgent need to adjust the approach and methodology for continuing stakeholder consultation and engagement. Taking into account the importance of complying with national law requirements, below are some suggestions for stakeholder consultation amidst COVID-19 outbreak

- Identify and review planned activities under the project requiring stakeholder engagement and public consultations.
- Assess the level of proposed direct engagement with stakeholders, including location and size of proposed gatherings, frequency of engagement, categories of stakeholders.
- Assess the level of risks of the virus transmission for these engagements, and how restrictions that are in effect in the country / project area would affect these engagements.
- Identify project activities for which consultation/engagement is critical and cannot be postponed without having significant impact on project timelines.
- Assess the level of ICT penetration among key stakeholder groups, to identify the type of communication channels that can be effectively used in the project context.

Based on the above, specific channels of communication that will be used while conducting further stakeholder consultation and engagement activities need additional considerations. The following are some considerations while selecting channels of communication, in light of the current COVID-19 situation:

- Avoid public gatherings (taking into account national restrictions), including public hearings, workshops and community meetings;
- If smaller meetings are permitted, conduct consultations in small-group sessions, such as focus group meetings; If not permitted, make all reasonable efforts to conduct meetings through online channels, including WebEx, Zoom and Skype;
- Be sure that everyone involved in stakeholder planning articulate and express their understandings on social behavior and good hygiene practices, and that any stakeholder engagement events be preceded with the procedure of articulating such hygienic practices.
- Diversify means of communication and rely more on social media and online channels. Where possible and appropriate, create dedicated online platforms and chat groups appropriate for the purpose, based on the type and category of stakeholders;

- Employ traditional channels of communications (TV, newspaper, radio, dedicated phone-lines, and mail) when stakeholders to do not have access to online channels or do not use them frequently. Traditional channels can also be highly effective in conveying relevant information to stakeholders, and allow them to provide their feedback and suggestions;
- Where direct engagement with project affected people or beneficiaries is necessary, identify channels for direct communication with each affected household via a context specific combination of email messages, mail, online platforms, dedicated phone lines with knowledgeable operators;
- Each of the proposed channels of engagement should clearly specify how feedback and suggestions can be provided by stakeholders;
- However, in situations where none of the above means of communication are considered adequate for required consultations with stakeholders, IA should discuss whether the project activity can be rescheduled to a later time. Where it is not possible to postpone the activity or where the postponement is likely to be for more than a few weeks, IA should consult WB Teams to obtain advice and guidance.

7.4 Stakeholder identification and consultation method

Stakeholder engagement process for the HEAT project has started from identification, mapping and analysis. It is anticipated that this Stakeholder Engagement Plan (SEP) will help clarify the stakeholder identification procedure at the national and regional level for the forthcoming stages. The following techniques are being used during the engagement process:

Table 10: SEP Techniques

Engagement Technique	Appropriate application of the technique
Correspondences (Phone, Emails, Text, instant messaging)	Distribute information to SHED, UGC and officials of different government agencies, NGOs, Local Government, and organizations/agencies, Invite stakeholders to meetings and follow-up
One-on-one meetings	Seeking views and opinions Enable stakeholder to speak freely about sensitive issues Build personal relationships Record meetings
Formal meetings	Present the Project information to a group of stakeholders Allow group to comment – opinions and views Build impersonal relation with high level stakeholders Disseminate technical information of the HEAT project Record discussions
Public meetings/workshop	Present Project information to a large group of stakeholders, especially communities Discuss about the all project components Allow the group to provide their views and opinions Build relationship with the communities, especially those impacted Distribute non-technical information Facilitate meetings with presentations, PowerPoint, posters etc. Record discussions, comments, questions.

Engagement Technique	Appropriate application of the technique
Focus group meetings	Present Project information to a group of stakeholders Focus group discussion with the present students Allow stakeholders to provide their views on targeted baseline information Build relationships with communities Allow small groups of people (women, youth, vulnerable people, disabled people, etc.) to provide their views and opinions Record responses
Project on website/Information Centre/information Boards	Establish Information Board in each project area Present project information and progress updates Disclose ESIA, ESMP, draft SEP and relevant project documentation Disclose component wise project activities
Direct communication with affected people	Share information on timing of project activities Collect the opinion about the project
Radio/TV emissions/media	Arrange for broadcast Radio/TV emissions and local/national newspaper to bring the project to large public awareness.
Project information on site	Share information on project activities Provide information on construction materials that will be needed to incite potential suppliers
Project leaflet	Brief project information to provide regular update Site specific project information in local language
Surveys	Gather opinions and views from individual stakeholders Gather baseline data and develop database for monitoring impacts Record data and analysis
During COVID-19	
Video Conference/Phone Calls for all appropriate meetings-Focus Group, Interviews, One-One	Share information on project activities and timing of activities Collect the opinion about the project Discuss about the all project components Allow the group to provide their views and opinions Build relationship with the communities, especially those impacted Distribute non-technical information Record discussions, comments, questions Allow small groups of people (women, youth, vulnerable people, disabled people, etc.) to provide their views and opinions Facilitate meetings with presentations, PowerPoint, posters, online polls etc. All channels of communication need to clearly specify how stakeholders can provide their feedback and suggestions
Virtual Workshops (WebEx, Skype, and in low ICT capacity situations, audio meetings)	*Virtual registration of participants*: Participants can register online through a dedicated platform. *Distribution of workshop materials to participants, including agenda, project documents, presentations, questionnaires and discussion topics*: These can be distributed online to participants. *Review of distributed information materials*: Participants are given a scheduled duration for this, prior to scheduling a discussion on the information provided.

Engagement Technique	Appropriate application of the technique
	Discussion, feedback collection and sharing: Participants can be organized and assigned to different topic groups, teams or virtual "tables" provided they agree to this. Group, team and table discussions can be organized through social media means, such as webex, skype or zoom, or through written feedback in the form of an electronic questionnaire or feedback forms that can be emailed back. *Conclusion and summary:* The chair of the workshop will summarize the virtual workshop discussion, formulate conclusions and share electronically with all participants. All channels of communication need to clearly specify how stakeholders can provide their feedback and suggestions
Social media and online channels	Create dedicated online platforms and chat groups appropriate for the purpose, based on the type and category of stakeholders. Information can be disseminated through digital platform (where available) like Facebook, Twitter, WhatsApp groups, Project weblinks/ websites All channels of communication need to clearly specify how stakeholders can provide their feedback and suggestions
Traditional means of communications (TV, newspaper, radio, phone calls and mails)	Clear description of mechanisms for providing feedback via mail and / or dedicated telephone lines given. All channels of communication need to clearly specify how stakeholders can provide their feedback and suggestions

7.5 Project Stakeholders

Stakeholders are people, groups, or institutions, which are likely to be impacted (either negatively or positively) by the proposed Project interventions or those who can influence the outcome of the Project. The primary stakeholders include all directly affected persons such as title owners losing land, physically displaced people living on their own land, squatters and businessmen residing in project area and indirectly affected persons and communities/ host communities. The secondary stakeholders are NGOs, community-based organizations, community development projects, governance agencies, development partners, media, community leaders, civil society, traders, construction laborers and consultants in the project area. During preparation of the ESMF, UGC with the support of AUW has identified different primary and secondary stakeholders. A summary of potential project stakeholders is given in the table below. Detailed project stakeholder analysis is described with SEP.

Table 11: Project stakeholders' group and interested parties

Stakeholder group	Interest/cause in engagement
International level	
International Universities	Universities from China, India, Nepal and Afghanistan have shown interest with the exchange program. Other Universities in the region could also join as project matures.
Researchers, scientist and teachers	International Researcher, teachers may be interested with the research programs, faculty exchange programs and work as Experts for improving Pedagogy.
International Students	International Students will be interested with the exchange program and research plus undertaking undergraduate and postgraduate studies (particularly female students at AUW)
Ministry of Higher Education, Afghanistan	Legislative and executive authorities. Functions of supervision and monitoring
International development partners and NGOs	As different international universities, students, teachers and researchers will be beneficiary of this project, development partners may be interested
Suppliers and vendor	Up gradation of laboratories, equipment's, construction works etc.
National level	
Administrative body of Ministry of Planning, Ministry of Finance and Ministry of Education	Legislative and executive authorities. Functions of supervision and monitoring
Bangladeshi students, teachers and researchers	Local students and researchers are interested as the project will strengthen employability of the graduates, will be able to participate in student exchange programs for higher studies, opportunity to work with national and international researchers. A good number of students are interested in career service center. Teachers and researcher from different universities are also interested with the new curricula and technologies.
Secondary and Higher Education Department of MOE,	Main implementation body of the HEAT project
University Grants Commission	Will assist SHED in day to day activities of project
NGOs	Represents the interests of different interested parties and vulnerable groups
Mass media (Print and Electronic)	They are intermediaries for informing the general public about the planned activities of the project developer and for information disclosure in connection with the proposed HEAT project.
Different government Agencies like DoE, RAJUK, NHA, DESCO, DESA, WASA, CDA, CCC, CWASA, PGCB etc.	Permission from all these agencies is required during the project implementation at different stages. As project has construction activities and require utility and local government services, these groups are highly interested with this project.

Stakeholder group	Interest/cause in engagement
Business community/entrepreneurs including different chamber of commerce and industries, Corporate bodies and MNCs	Business specific research, internship of the students, job opportunity for the students, job fair etc. and inputs for curricula development
Public, private and international universities and colleges of Bangladesh	For the activities of component 1, most of the private and public universities are interested.
Project employees and Project's vendors, suppliers, contractors, sub-contractors and labors	Different labors, contractors, sub-contractors, suppliers and vendors will be engaged with this project.
Project affected People	Faculty development building project site is yet to be confirmed. As such should there be land acquisition title, non-titled people may be affected
Medical and Health Facilities	Nearby medical and health facilities need to be informed about project activities as individuals related to project activities may need medical help during the life cycle of the project. This is especially relevant due to the COVID-19 pandemic.
Civic and Women organizations in the area	Different women organizations in the project will be highly interested with the project as during the implementation and operational stage, there may be issues of GBV and employment of local women in the project. At AUW Public consultation meeting on 14 March 2019, some 76 entities were present that included over 10 organizations (GHASHFUL, PACE etc.) and media entities that work on Gender and GBV related issues.
IT vendors	Due to Covid-19, IT vendors need to be told to give additional support for connections to help stakeholder engagements, facilitate online classes and help with other network/connectivity issues as project activities are hugely anticipated to shift to revolve around online learning.
Human Rights Organizations	To monitor compliance of HR and labor rights during implementation stage
Local level	
Local community leaders	Represents interests of affected communities (land users, local businessmen etc.) and vulnerable groups
Local government and administrative bodies	Due to the development and construction works, local administrative permissions are required
Local land users and other local population	Potential vulnerable groups, affected communities and other interested parties living in close vicinity to the project areas
Local community people and businessmen	Project may cause direct and indirect impact on them

7.6 Public consultation and Participation

The UGC with the support of AUW authority has carried 3 (two) public consultations, besides 13 key informant interviews (KIIs) and 5 focus group discussions (FGD) and a good number of formal meetings with UGC as part of the process of developing the RPF of the AUW component and SEP for the project. Since, the UGC is still to determine the land plot for the construction of the 'Centre of Excellence', similar Public Consultation Meeting will take place at a later date when the plot is decided. The consultation was held to ensure People's participation right from the planning stage of the project, in particular from the people of the impacted area. The discussion and the concerns and responses are extensively documented in SEP. A summary with the key points of these consultations, KIIs and FDGs are given below:

Table 12: Summary of Consultation Meetings and FGDs

No.	Date	Venue	Main Participant Groups	Number of Participants
1	17 November 2018	Meeting Room, Chattogram Development Authority (CDA)	CDA officials, DoE representatives, AUW teachers, students and other relevant stakeholders and local press etc	15
2	6-7 February 2019	AUW Temporary Campus Conference Room	16 AUW students (1st year, 3rd year, final year and recent Graduates were interviewed by the Bank consultants. The students were from Afghanistan, Bhutan, Nepal, Sri Lanka and Bangladesh	16
3	14 March 2019	Hotel Lord's Inn, Chattogram	Local people, male and female member, students, teacher's Local community leader	76
4	13 February 2019	House of Mr. Faruk, Abedin gate, Bangla Bazar, Bayezid, Chittagong	AUW female students	8
5	13 February 2019	Abu Taher Master Bari, M. Hasem Plot, 312 Line, ward 2, Anser Camp	Mixed group	9
6	From October 2018 to 30 June 2019	UGC office	UGC officials	11
7	March 2020-May 2020	All consultations by phone or VC due to COVID-19.	Students, teachers and entrepreneur	9

7.7 Outcomes of consultation meetings

During preparation of ESMF, UGC has taken different stakeholders' opinion and those are incorporated with the entitlement matrix preparation. A summary of consultation outcomes is given below:

Table 13: Summary of consultation outcomes

Date	No. of Participants	Venue	Main points discussed	Views of Stakeholders
17 Nov. 2008	15	Meeting Room, Chattogram Development Authority (CDA)	AUW interfaced with the Chittagong Development Authority (CDA) regarding hill cutting under the guidance of the Ministry of Housing and Works. During the same period, AUW also involved the Department of Environment (DOE) for an environmental clearance certification encompassing all environmental impact issues before commencing on the construction.	**CDA:** CDA suggests that it is important to AUW to have the approval from all concerned departments before finalizing the Master Plan. DOE: DOE suggested to submit the detailed plan, ESIA for the environmental clearance.
6-7 Feb 2019	16 AUW students (1st year, 3rd year, final year and recent Graduates were interviewed by the Bank consultants. The students were from Afghanistan, Bhutan, Nepal, Sri Lanka and Bangladesh.	AUW Temporary Campus Conference Room	Knowledge of the Graduates and the present students on the 'main campus Project'. The participants informed that since the Master Plan was developed in 2008, a three-dimensional model is displayed in the Ground Floor where all has access to see the model. Students were informed about the project objectives, components, future plan of action, disclosures, security issues etc. On being probed if they had any suggestions to be incorporated in the project, the students had the following comments: -	**Suggestions from the current students:** • Provision of full-time access to Library for research related works, high speed internet facility at the dorms and campus to make best use of the time in exploring relevant website linked with the study • As the main campus is away from City Center, there should be some good and safe commuting system either arranged by AUW or by CCC. • Some arrangement to visit religious sites like Masjid, Temple, and Church etc. could be made by AUW authority on religious festival days. • Provision of Bank and ATM Booth within the campus to draw and receive money from abroad. • Provision of more books and periodicals in the Library, games and sports facilities within campus and provision of indoor games and cultural events at a larger scale. • Adequate health care facility with special focus on medicine and gynecology specialists so to retain students within campus unless the cases demand referral to Hospitals.

Date	No. of Participants	Venue	Main points discussed	Views of Stakeholders
				• Provision of Psychologist/women Counselors to support the students in need. • Provisioning of a standard marketplace outside the campus to buy daily necessities. • Overall effective safety and security measures of the dormitories from natural and man-made hazards including fire and wild animals. • Afghani students face hurdles in acquiring Bangladeshi Visa from Afghanistan as Bangladesh does not have any embassy in Kabul and they have to collect visa from Pakistan. Students from Afghanistan expect Ministry of Foreign Affairs of Bangladesh will look into this matter and develop a convenient modus operandi for the Afghan students. Students from other countries have requested to form a smooth process to receive the visa.
14 March 2019	76	Hotel Lord's Inn, Chattogram	The Meeting informed local inhabitants and other stakeholders related to this project about the Environmental and Social Impact Assessment process and collected recommendation/ opinion from the stakeholders. It primarily focused on the construction of the Academic Complex of AUW. The stakeholders in general were very positive on the construction of the permanent campus issue and opined that they had been waiting since 2008 to see the permanent campus of AUW.	• CDA has issued all related clearances for the project construction to go ahead. Water supply at the campus would be a combination of ground water, rainwater harvesting and recycled water for flashing purposes. As there would be over 3000 students and around 1000 faculty members and staffs, provision of Sewage Treatment Plant must be kept within the project. • DoE informed that Environmental Clearance is already given for the project. However, if project design is changed, new clearance has to be taken. • Local community leaders and local government representatives demanded that the project would need many day laborers and the local people should get priority so that they develop affinity with the project.

Date	No. of Participants	Venue	Main points discussed	Views of Stakeholders
			There were concerns about the drainage system as the area is hilly. The House was informed that a detail drainage network and hydrological study and map were developed by IWFM, BUET.	• There were concerns of forest fire from the stakeholders as the area was in a hilly area and full of jungles. The House was informed that all types of fire safety assessment has been done and measures taken. • Provision of places for religious activities was missing in the Master Plan. The House was informed that the matter would be communicated to the appropriate authority.
13 Feb. 2019	8 (all female students of AUW)	House of Mr. Faruk, Abedin gate, Bangla Bazar, Bayezid, Chittagong	• Briefing on the project and potential environment and social impacts • Project activities under different components • Mitigation measures and grievance redress mechanism • Project objectives and scope of work • Stakeholders engagement process and World bank policies on disclosure • Future plan of action • Stakeholders opinion about the project	They appreciate the authority that the project related information's are disclosed to them. They request the project authority if project focuses on the job-oriented curricula and job placement opportunities.
13 Feb. 2019	9 males from the local communities	Central Graveyard, Arefin Nagar, Bayezid, Chittagong		The locals around the project area wanted job opportunities during the construction. They are also worried about the increased movement of vehicular traffic around the project site.
13 Feb. 2019	9 (mixed group)	Abu Taher Master Bari, M. Hasem Plot, 312 Line, ward 2, Anser Camp		Local people are in favor of the project but they request project authority to disclose project information on a regular basis. They are worried that once the AUW campus will be constructed, poor and vulnerable people might be evicted from the area by the influential businessmen.
From October 2018 to 30 June 2019	UGC	UGC	• The project preparation team has made good progress in project design; • UGC conducted several stakeholder workshops and shared the draft project design that was endorsed by the participating faculty members and Vice Chancellors of public and	• All the stakeholders requested UGC to conduct stakeholder's consultation on a regular basis. • University faculty informed that they want to join with the exchange program and research activities. • Different business entrepreneurs requested UGC to engage them during development and update the curriculum.

Date	No. of Participants	Venue	Main points discussed	Views of Stakeholders
			private universities, and industry representatives; • Finalized the ESIA TORs and fiduciary assessment for UGC and AUW; • Meeting with partners in the regional network was held; • Bangladesh Higher Education DP Forum Meeting was held;	
March 2020 - May 2020 (Covid-19)	9 consultations (mixed group of students, teachers, entrepreneurs)-	All consultations by phone or VC due to COVID-19.	• Explained purpose of project and components. • To get views on quality of higher education, how this project can help students and teachers nationally and internationally	• Entrepreneurs requested to keep them updated, so that they can take part in Career days, offer internships, learn about new ideas or research. They were particularly interested in project's initiatives on patents. • Some AUW students brought up safety issue. Currently, the AUW campus is very safe, women can walk around wearing anything they are comfortable with (western clothes, national clothes etc.), campus is guarded by female guards. However, when students leave campus to go to shop at the end of the road. There are always men waiting outside to see local and international students, pass comments. Even there is a large gathering of male rickshaw-pullers which make the women uncomfortable. Therefore, the students asked if project can do something about safety in new campus (better linkages to market, better roads, more guards etc.). They were also concerned if civil works will bring about any safety issues too.

During consultation with different stakeholders including land and different structure owners, squatters, CPR management and wage earners etc., UGC has registered all the concerns raised by the potential affected people. Majority of the concerns are on compensation related and timely disbursement. Squatters, landless and vulnerable people are worried whether compensation will be paid to them or not.

7.8 Future stakeholder engagement activities

Stakeholder engagement activities will need to provide stakeholder groups with relevant information and opportunities to voice their views on issues that matter to them. The activity types and their frequency are adapted to the three main project stages: project preparation (including design, procurement of contractors and supplies), construction, and operation and maintenance.

Table 14: Future stakeholder engagement activities

Target stakeholders	Topic(s) of engagement	Method(s) used	Responsibilities
PREPATORY			
• Project Affected community • People potentially affected by land acquisition • People residing in project area • Road side residential and business squatters • Vulnerable households • Local government • Media • Transport workers • Local businessmen	• All the safeguard documents will be disclosed • Land acquisition process • Assistance in gathering official documents for authorized land uses • Compensation rates, methodology • Project scope and rationale • Resettlement principles • Resettlement and livelihood restoration options • Grievance mechanism process • Future consultation	• Public meetings, separate FGD for women and vulnerable • Face-to-face meetings • Disclosure of written information: brochures, posters, flyers, website Information boards or desks in local language • Grievance procedures through consultation, information brochures The following modes to be adopted specifically for the vulnerable groups: • Robust engagement with local community-based organizations. • The project would arrange separate consultation sessions for different target groups • Resources allocation towards local administration representatives and councilors. • Engagement of local CBO's who work with vulnerable people at the community level to help disseminate information and organize consultations • Manageable and gendered FGD to be arranged so that women can speak freely • The project must have adequate means to reach the disabled ones in the community. If need be, teams must visit the disabled ones in their habitat • Notice board for employment recruitment • Training sessions • National workshop (after COVID-19	• UGC, PIC, and PSC • Specialists responsible for land acquisition • Safeguard consultants
Construction Phase			
• Project Affected People • People potentially	• Grievance mechanism • Health and safety impacts	• Public meetings, open houses, trainings/workshops • Separate meetings as needed for women and vulnerable • Individual outreach to PAPs as needed	• UGC, PIC, PSC • Specialists responsible

affected by land acquisition • People residing in project area • Vulnerable households • Contractors • Local Government • Local NGOs and CBOs • DC office • Local Press • Local businessmen • Transport workers	(RAP, community H&S, community concerns) • Employment opportunities • Project status	• Disclosure of written information: brochures, posters, flyers, website Information boards in UGC local offices • Notice board(s) at construction sites • Grievance mechanism The following modes to be adopted specifically for the vulnerable groups: • Robust engagement with local community-based organizations. • The project would arrange separate consultation sessions for different target groups • Resources allocation towards local administration representatives and councilors.	for land acquisition • Safeguard consultants • Contractor • NGO • External Monitor

7.9 Description of information disclosure methods

As a standard practice, the Project safeguard documents including RPF and RAP released for disclosure are accompanied by making available the registers of comments and suggestions from the public that are subsequently documented by the UGC-PIC in a formal manner. UGC-PIC will continue applying the similar approach to disclosure for any additional safeguard appraisal materials that will be prepared as part of the project development. The PD will continue applying the similar approach to disclosure for any additional E&S appraisal materials that will be prepared as part of the project development. This ESMF in Bangla, and English will be made available for public review in accordance with the World Bank. The RPF will be released in the public domain simultaneously with the E&S documents and will be available for stakeholder review during the same period of time

Distribution of the disclosure materials will be through making them available at venues and locations frequented by the community and places to which public have unhindered access. Free printed copies of the safeguard documents in Bangla and English will be made accessible for the general public at the following locations:

- The Project office in Dhaka;
- All interested public and private universities;
- AUW Temporary Campus at MM Ali Road, and Project office at Dakshin Pahartali in Chattogram
- Regional and Local administrations affecting the Project site
- Other designated public locations to ensure wide dissemination of the materials
- Newspapers, posters, radio, television;
- Information centers and exhibitions or other visual displays;
- Brochures, leaflets, posters, nontechnical summary documents and reports;

Official correspondence, meetings

Electronic copies of the safeguard documents will be placed on the project website (http://www.UGC.gov.bd). This will allow stakeholders with access to Internet to view information about the planned development and to initiate their involvement in the public consultation process. The website will be equipped with an on-line feedback feature that will enable readers to leave their comments in relation to the disclosed materials. The mechanisms which will be used for facilitating input from stakeholders will include press releases and announcements in the media, notifications of the aforementioned disclosed materials to local, regional and national NGOs as well as other interested parties.

Chapter 8: Grievance Redress Mechanism

8.1 Introduction

Project-affected-people for the construction activities in the HEAT project and any other stakeholder may submit comments or complaints at any time by using the project's Grievance Redress Mechanism (GRM). The overall objectives of the GRM are to:

- Provide a transparent process for timely identification and resolution of issues affecting the project and people, including issues related to the environmental impact, resettlement and compensation program.
- Strengthen accountability to beneficiaries, including project affected people.
- Compensation payment,
- Failure to fulfill commitments,
- Poor management of construction activities,
- Accidents due to inappropriate planning of vehicle movement,
- Cultural conflicts between migrant workers and local communities,
- Disturbance due to excessive noise or other nuisance during construction or operation to unfair treatment of workers or unsafe working conditions.
- GBV and gender issues
- Complain on labor influx
- Complain or comment from different public, private and international universities
- Complain, comments or suggestions from students, teachers, researchers, business entrepreneurs etc.

The GRM will be accessible to all Internal, external, regional and international stakeholders, including affected people, community members, civil society, media, vulnerable people and other interested parties. External stakeholders including international and regional can use the GRM to submit complaints, feedback, queries, suggestions, or even compliments related to the overall management and implementation of the HEAT project. The GRM is intended to address issues and complaints in an efficient, timely, and cost-effective manner. **Individual GRM will be available in the individual report of LMP (ESS 2), RPF (ESS5), IPPF (ESS7) and GBV/GAP**

During COVID-19, if grievances are raised, there will be various options to submit grievances through mediums such as websites, emails, phones and other appropriate communication methods, which will be recorded and dealt with accordingly. A training program will be arranged with different stakeholders on how to raise grievances during this pandemic.

8.2 Objectives of GRM

The fundamental objectives of the GRM, implemented through the GRC serving as a para-legal body, are to resolve any resettlement-related grievances locally in consultation with the aggrieved party to facilitate smooth implementation of the social and environmental action plans. Another important objective is to democratize the development process at the local level and to establish accountability to the affected people. The procedures will however not a person's right to go to the courts of law pre-empt.

8.3 Grievance Redress Committees (GRC)

Grievance redress committees (GRC) will be formed to receive and resolve complaints as well as grievances from aggrieved persons from the local stakeholders including the project-affected persons. Based on consensus, the procedure will help to resolve issues/conflicts amicably and quickly, saving the aggrieved persons from having to resort to expensive, time-consuming legal actions. The procedure will, however, not pre-empt a person's right to go to the courts of law.

8.4 Composition of GRC

The Grievance Redress Committees (GRCs) will be established at three levels: (i)Local Level (ii) Project level and (iii) Ministry Level.

8.4.1 Local Level GRC

All the sub-project/local level complaints will be received at the relevant institution or University level where head of relevant institute or his/her designated official will be the convener of the sub-project level committee. This local GRC will ensure easy accessibility by the PAPs, local communities and interested stakeholders, so that any grievances can be solved directly or within a very short period of time. All cases at the sub-project level complains will be heard within two weeks of their receipt.

Table 15: GRC membership at local level

Representatives from respective universities at the rank of Associate Professor or above	Convener
Representative of the Implementing consulting firm	Member Secretary
Representative from concerned local government	Member
Representative of the affected people – Member Woman representative of affected people in case of women aggrieved persons	Member
Field level Safeguard Specialist	Member

8.4.2 Project Level GRC

If the resolution attempt at the sub-project/local level fails, the GRC will refer the complaint with the minutes of the hearings of the local GRC to project level for further review. With active assistance from the safeguard specialist of implementation support unit, the committee will make a decision and communicate it to the concerned GRC. The PIC will make periodic visit to the subproject sites, interact with the communities and affected persons, and pick up issues of concerns, complaints and suggestions to register with the GRM books. The decisions on unresolved cases will be communicated to the GRC within one week of the complaint receipt. PD will be the convener, and safeguard specialist will be the member secretary of the Project level GRC.

The members of the local GRC will be given below.

Table 16: GRC membership at project level

1. Project Director (PD)	Convener
2. Safeguard Specialist at PIC	Member-Secretary
3. Representative from respective areas local government	Member
4. Representative from respective areas Local Women's Group	Member
5. Representative from respective areas PAP Group	Member

The membership of the GRCs will ensure proper presentation of complaints and grievances as well as impartial hearings and investigations, and transparent resolutions. Where grievances are among the affected persons, the membership composition of the GRCs will take into account any traditional conflict resolution arrangements that communities may practice. If the aggrieved person is a female, UGC will ask the concerned female UP Member or Municipal Ward Councilor to participate in the hearings. All cases at the project level will be heard within four weeks of their receipt. Grievances received through any channel will be registered and a notification of receipt with assurance of necessary review and resolution given in writing to the aggrieved persons.

8.4.3 Ministry level GRC

If a decision at project level is again found unacceptable by the aggrieved person(s), UGC can refer the case to the ministry level GRC or PSC level with the minutes of the hearings at local and project levels. All the unsolved cases at the PSC level, decisions on unresolved cases, if any, will be made in no more than four weeks by an official designated by the Secretary, MoE.

Table 17: GRC membership at Ministry level

1. Secretary of the SHED/MoE	Convener
2.Projec director (PD)	Member-Secretary
2. Safeguard/communication Specialist	Member
3. Social Safeguard specialist	Member
4. External Monitor	Member

A decision agreed with the aggrieved person(s) at any level of hearing will be binding upon UGC. There will be budgetary allocation for local, project and ministry committee members for participating meetings and refreshments during meeting. To ensure that grievance redress decisions are made in formal hearings and in a transparent manner, the Convener will apply the following guidelines:

- Reject a grievance redress application with any recommendations written on it by a GRC member or others such as politicians and other influential persons.
- Remove a recommendation by any person that may separately accompany the grievance redress application.
- Disqualify a GRC member who has made a recommendation on the application or separately before the formal hearing: Where a GRC member is removed, appoint another person in consultation with the Project Director.
- The Convener will also ensure strict adherence to the impact mitigation policies and guidelines adopted in this ESMF and the mitigation standards, such as compensation rates established through market price surveys.

The affected persons and their communities will be informed of the project's grievance redress mechanism in open meetings at important locations and in PAP group meetings. Bangla translations of the ESMF in the form of information brochures will be distributed among the affected persons. The PAPs will also be briefed on the scope of the GRC, the procedure for lodging grievances cases and the procedure of grievance resolution at the project level.

To ensure impartiality and transparency, hearings on complaints will remain open to the public. The GRCs will record the details of the complaints and their resolution in a register, including intake details, resolution process and the closing procedures. SHED-UGC, AUW and other universities will maintain the following three Grievance Registers:

Intake Register: (1) Case number, (2) Date of receipt, (3) Name of complainant, (4) Gender, (5) Father or husband, (6) Complete address, (7) Main objection (loss of land/property or entitlements), (8) Complainants' story and expectation with evidence, and (8) Previous records of similar grievances.

Resolution Register: (1) Serial no., (2) Case no., (3) Name of complainant, (4) Complainant's story and expectation, (5) Date of hearing, (6) Date of field investigation (if any), (7) Results of hearing and field investigation, (8) Decision of GRC, (9) Progress (pending, solved), and (10) Agreements or commitments.

Closing Register: (1) Serial no., (2) Case no., (3) Name of complainant, (4) Decisions and response to complainants, (5) Mode and medium of communication, (6) Date of closing, (7) Confirmation of complainants' satisfaction, and (8) Management actions to avoid recurrence.

If AP's are not satisfied with the resolution, can appeal to UGC for further investigation. Even if the case is not resolved with UGC, can appeal to court according to the law of the land.

Grievance resolution will be a continuous process in project level activities and implementation of those. The PIC will keep records of all resolved and unresolved complaints and grievances (one file for each case record) and make them available for review as and when asked for by Bank and any other interested persons/entities. The PIC also prepare periodic reports on the grievance resolution process and publish these on the UGC website.

The UGC intends to strengthen the GRM through information and communication technology to ensure that all complaints including those of sexual exploitation and abuse are immediately reported to the Government. UGC will integrate the GRM on a web-based dashboard, to adequately and promptly address any potential grievance related to Gender Based Violence and SEA. The complaints registered in this system will be managed by a dedicated administrator that will liaise immediately any GBV and SEA complaints with the contractors, consultant and UGC/PIC for immediate measures. If the GRM receives a case on sexual exploitation and abuse related to the project, it will be recorded, and the complainant will be referred to the relevant assistance, if needed, for referral to any other service providers. The supervision consultant will keep the information confidential to protect privacy of GBV and SEA complainants. In cases, where the perpetrator(s) is linked to project activities then the contractor will take appropriate actions as per the Code of Conduct signed by the particular person and under the effective law in Bangladesh. UGC will report activities and outcomes of GBV and SEA surveillance and management to the World Bank on a regular basis. **For further details, please see the GBV and Gender Action Plan (GAP) .**

To ensure that grievance redress decisions are made in formal hearings and in a transparent manner, the Convener will apply the following guidelines:

i. A standard application format will be used for receiving grievances which will be available at the office of NGO /Consulting firm. This application format would be concurred by the PD.
ii. Reject a grievance redress application with any recommendations written on it by a GRC member or others such as politicians and other influential persons.
iii. Remove a recommendation by any person that may separately accompany the grievance redress application.
iv. Disqualify a GRC member who has made a recommendation on the application separately before the formal hearing.

v. Where a GRC member is removed, appoint another person in consultation with the Project Director.
vi. The Convener will also ensure strict adherence to the impact mitigation policies and guidelines adopted in this RAP and the mitigation standards, such as compensation rates established through market price surveys.

The following steps will be followed for the successful implementation of GRM.

- ***Step 1:*** Project stakeholders will be able to provide feedback and report/record complaints through several channels: in person at offices (LGI, jamaat, project office, AUW, and UGC offices) and at project sites, and by mail, telephone, and email.
- ***Step 2:*** Complaints and feedback will be compiled by the secretary in each level and recorded in a register. He or she will place the grievances to the committee and the complained person with the goal to resolve complaints within 15 days of receipt.
- ***Step 3:*** Within seven (7) days of the date a complaint is submitted; the responsible person will communicate with the complainant and provide information on the likely course of action and the anticipated timeframe for resolution of the complaint. If complaints are not resolved within 15 days, the responsible person will provide an update about the status of the complaint/question to the complainant and again provide an estimate of how long it will take to resolve the issue.
- ***Step 4:*** This step involves gathering information about the grievance to determine the facts surrounding the issue and verifying the complaint's validity, and then developing a proposed resolution. Depending on the nature of the complaint, the process can include site visits, document reviews, a meeting with the complainant (if known and willing to engage), and meetings with others (both those associated with the project and outside) who may have knowledge or can otherwise help resolve the issue. It is expected that many or most grievances would be resolved at this stage. All activities taken during this and the other steps will be fully documented, and any resolution logged in the register.
- ***Step 5:*** This step involves informing those to submit complaints, feedback, and questions about how issues were resolved, or providing answers to questions. Whenever possible, complainants should be informed of the proposed resolution in person. If the complainant is not satisfied with the resolution, he or she will be informed of further options, which would include pursuing remedies through the World Bank, as described below. Data on grievances and/or original grievance logs will be made available to World Bank missions on request, and summaries of grievances and resolutions will be included in periodic reports to the World Bank.

If a person who submits a grievance is not satisfied with the resolution at the first or second tiers, he or she may request it be elevated to the next tier. If they are not satisfied with the ultimate resolution, they may pursue legal remedies in court or pursue other avenues. Throughout the entire process, UGC will maintain detailed record of all deliberations, investigations, findings, and actions, and will maintain a summary log that tracks the overall process.

8.5 Gender–Based Violence (GBV) at the project sites and addressing them

During consultations, various female activists mentioned that there had been sustained govt. support for education of girls and women since 1991. At the moment gender parity exists in both primary and secondary education sector with the positive tilt towards girls. The present project would create a healthy and conducive environment for women to pursue tertiary level education. This would also facilitate job opportunity for the graduates along with research facilities for the women graduates. The networking of women within the region would also foster cultural exchange and fraternity while creating job opportunity within the region and beyond. This way the project would empower women in Bangladesh and beyond will not only lead to increased household incomes and contribute towards building a more skilled labour force, but it will also make these individuals more socially mobile. Positive Vertical Social Mobility means that they have experienced an upgrade in their social class. It would also indirectly help in overcoming domestic violence, child marriage, GBV and other women related social vices.

The project will support the promotion of tertiary education, research facilities and infrastructural development at local level and promote collaboration on higher education and research at regional level. The project may also support refurbishment and upgradation of infrastructure of a few tertiary higher education institutions in Dhaka and other unidentified locations. Due to the potential safety issues associated with construction activities, including labor influx and their exposure to women in the project area as the result of the establishment of the AUW academic complex and UTTA and the relevant activities, addressing and mitigating GBV issues at the project site is crucial.

Major civil works are likely to aggravate the risk of GBV in both public and private spaces in the form of Sexual Exploitation and Abuse (SEA) and Workplace Sexual Harassment (SH) by a range of perpetrators in different ways. To confirm if an act of violence is an act of GBV, the LITMUS Test is: whether the act reflects and/or reinforces unequal power relations between males and females. Many, but not all forms of GBV are criminal acts in national laws and policies. Manifestations of GBV include, but are not limited to:

- Physical violence (such as slapping, kicking, hitting, or the use of weapons);
- Emotional abuse (such as systematic humiliation, controlling behavior, degrading treatment, insults, and threats);
- Sexual violence, which includes any form of non-consensual sexual contact, including rape;
- Early/forced marriage, which is the marriage of an individual against her or his will often occurring before the age of 18, also referred to as child marriage;
- Economic abuse and the denial of resources, services, and opportunities (such as restricting access to financial, health, educational, or other resources with the purpose of controlling or subjugating a person); and
- Intimate Partner Violence perpetrated by a former or current partner, includes a range of acts of violence.

GBV at the major construction sites under IPF may have either one or other forms as mentioned below:

- Both the Projects (UGC and AUW) demand male workers. This is likely to increase the demand for sex work.
- Forced early marriage in the local community may occur where marriage to an employed man is seen as the best livelihood strategy for an adolescent girl.
- Higher wages for workers in the local community can lead to an increase in transactional sex

including incidents of sex between laborers and minors.

- Major civil work projects cause shifts in power dynamics between community members and within households. Male jealousy, a key driver of GBV, can be triggered by labor influx on a project when workers are believed to be interacting with community women, or community women are getting better wages than their male members of the family. This may lead to abusive behavior within the homes of those affected by the project.
- Job opportunities of local women and girls are generally limited. However, with a major civil work in the neighborhood, they may avail job opportunities in the project area and as a result be victims of SEA and workplace SH.

According to the ESF, the Borrower is responsible for the identification and assessment of environmental and social risks and impacts associated with projects including addressing GBV risks and impacts under following ESSs:

- ESS 1: Assessment and Management of Environmental and Social Risks and Impacts;
- ESS 2: Labor and Working Conditions;
- ESS 4: Community Health and Safety; and
- ESS 10: Stakeholder Engagement and Information Disclosure.

The Borrower firstly identifies and **assesses** the risks of GBV, including social and capacity assessments, and includes measures for their mitigation in project design during project preparation. However, GBV risk assessment being a continuous process, it should take place throughout the project life cycle as GBV can occur at any moment. The Borrower secondly **addresses** the risks by identifying and implementing appropriate GBV risk mitigation and monitoring measures on an ongoing basis during project implementation. Thirdly, the Borrower **responds** to any identified GBV incidents, whether related to the project or not, ensuring that effective monitoring and evaluation (M&E) mechanisms, which meet the World Bank's internal safeguard and GBV reporting requirements, are in place to report on such incidents and to monitor follow up. No investigation should be conducted on GBV related complaints. The case (s) should be referred to the NGO assigned for the project by the Borrower to manage GBV cases for referral to the appropriate service providers. The results of the verification and the proposed response to the complainant will be presented for consideration to the GRM committee at the UGC and AUW.

Once the decision has been made on the course of action in response to the complainant, the GRC describes the actions to be taken in the grievance form along with the details of the investigation and the findings and the data is entered it into the MIS for record. It needs to be ensured that GBV related complaints are addresses in line with the World Bank guidelines provided by the GBV good practice note.

Actions against SEA and SH at the Universities: Bangladesh High Court has issued guidelines in May 2009 to help prevent sexual harassment at educational institutions and in workplaces. Complaint Committees should be formed at all public and private sector workplaces and educational institutions to receive complaints and to conduct investigations and make recommendations. It also asked all the universities to undertake awareness-raising programs on sexual harassment, including holding seminars and debates.

<u>The High Court in its directives indicated that:</u>

- There must be sufficient orientation before the formal classes start for a new session in educational institutions, and monthly, half yearly orientation in all workplaces and institutions;
- There must be arrangement for proper counseling for the concerned persons, if necessary;
- Awareness of the rights of female students and employees guaranteed and conferred by the

Constitution and the statutes should be created by notifying in simple words the relevant provisions of the Constitution and the statutes;

- The educational institutions and the employers will maintain regular communication and effective consultation with the administrative authorities to create awareness among the personnel in law enforcing agencies in this regard; and
- To prepare and publish booklets containing these guidelines and provisions of the Constitution and statutes regarding gender equality and sexual offences.

The High Court asked the Concerned Authority at all the educational institutions and work places to form a Complaint Committee in both public and private sectors in order to receive complaints, and to conduct investigation and make recommendations. The Complaint Committee will have minimum five members and majority of the members will be women. The head of the Complaint Committee should be a woman, if available. The Complaint Committee should have at least two members from outside the organization concerned, preferably from organizations working on gender issues and sexual abuse. The Complaint Committees will submit annual reports to the Government on the compliance of these guidelines.

Procedure of the Complaint Committee. Normally the complaint has to be lodged with the Complaint Committee within 30 working days of the occurrence. To verify the complaint the Complaint Committee will: i). In case of minor harassment, if it is possible, the Complaint Committee shall dispose of the complaint with the consent of the parties involved and shall report to the Concerned Authority of the educational institution or work place in public or private sector, as the case may be. ii) In all other cases the Complaint Committee shall investigate the matter. iii) The Complaint Committee will have the power to send registered notice by mail to the parties and the witnesses, conduct hearing, gather evidence, and examine all relevant papers. In this type of complaint, apart from oral evidence emphasis should be placed on circumstantial evidence. To conduct the work of the Complaint Committee effectively the related office of the educational institutions and workplaces in both public and private sectors will be bound to extend any cooperation, which is requested from them. The Complaint Committee will keep the identities of the complainant/s confidential. While recording the testimony of the complainant/s any question or behavior, which is intentionally base, insulting or harassing should be avoided. The testimony must be recorded in camera. If the complainant wants to withdraw the complaint or stop the investigation then the reason behind this has to be investigated and mentioned in the report. The Complaint Committee shall submit the investigation report with recommendation within 30 working days to the Concerned Authority of the educational institution or work place, as the case may be. The period of 30 days may be extended up to 60 days where it is found necessary. If it is proved that a false complaint has been filed intentionally then a report will be submitted to the Concerned Authority recommending appropriate action for the complainant/s. The Complaint Committee will take decisions on the basis of the view expressed by the majority of its members.

- *Punishment*: The Concerned Authority may suspend temporarily the accused person (other than students) and in case of students, may prevent them from attending their classes on the receipt of the recommendation of the Complaint Committee. If the accused is found guilty of sexual harassment, the Concerned Authority shall treat it as misconduct and take proper action according to the disciplinary rules of all work places and the educational institutions in both public and private sectors within 30 (thirty) days and/or shall refer the matter to the appropriate Court or tribunal if the act complained of constitutes an offence under any penal law.

The above guidelines are presently strictly followed and observed in all educational institutions including SHED, UGC and 153 Universities including AUW and work places in both public and private sectors. As such there are tangible measures for the women teachers, researchers and students alike in the Universities.

8.6 Grievance Logs

As noted previously, the AUW and UGC will maintain a grievance log. This log will include at least the following information:

- Individual reference number
- Name of the person submitting the complaint, question, or other feedback, address and/or contact information (unless the complaint has been submitted anonymously)
- Details of the complaint, feedback, or question/her location and details of his / her complaint.
- Date of the complaint.
- Name of person assigned to deal with the complaint (acknowledge to the complainant, investigate, propose resolutions, etc.)
- Details of proposed resolution, including person(s) who will be responsible for authorizing and implementing any corrective actions that are part of the proposed resolution
- Date when proposed resolution was communicated to the complainant (unless anonymous)
- Date when the complainant acknowledged, in writing if possible, being informed of the proposed resolution
- Details of whether the complainant was satisfied with the resolution, and whether the complaint can be closed out
- If necessary, details of GRC1 and GRC2 referrals, activities, and decisions
- Date when the resolution is implemented (if any).
- If AP's are not satisfied with the resolution, can appeal to UGC for further investigation. Even if the case is not resolved with UGC, can appeal to court according to the law of the land.

8.7 World Bank Grievance Redress System (GRS)

Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may also complaints directly to the Bank through the Bank's Grievance Redress Service (GRS) *(http://projects-beta.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service).* A complaint can be submitted to the Bank GRS through the following channels:

- By email: grievances@worldbank.org
- By fax: +1.202.614.7313
- By mail: The World Bank, Grievance Redress Service, MSN MC10-1018, 1818 H Street Northwest, Washington, DC 20433, USA

The complaint must clearly state the adverse impact(s) allegedly caused or likely to be caused by the Bank-supported project. This should be supported by available documentation and correspondence to the extent possible. The complainant may also indicate the desired outcome of the complaint. Finally, the complaint should identify the complainant(s) or assigned representative/s, and provide contact details. Complaints submitted via the GRS are promptly reviewed to allow quick attention to project-related concerns.

Chapter 9: Implementation of the ESMF and Budget

9.1 Implementation arrangements

The Project will be implemented at the national level of Bangladesh and Afghanistan. The regional network will be comprised by the participating government and nongovernment higher education institutions. In Bangladesh, the overall responsibility for the Project implementation would lie with the Secondary and Higher Education Division (SHED) of MoE while day-to-day implementation support will be provided by the University Grants Commission (UGC). In Afghanistan, the Ministry of Higher Education (MoHE) and Ministry of Finance (MoF) would jointly support the relevant project activities. MoHE will support the implementation of this project through the Operations and Monitoring Support Team (OMST) of the ongoing Higher Education Development Project (HEDP).

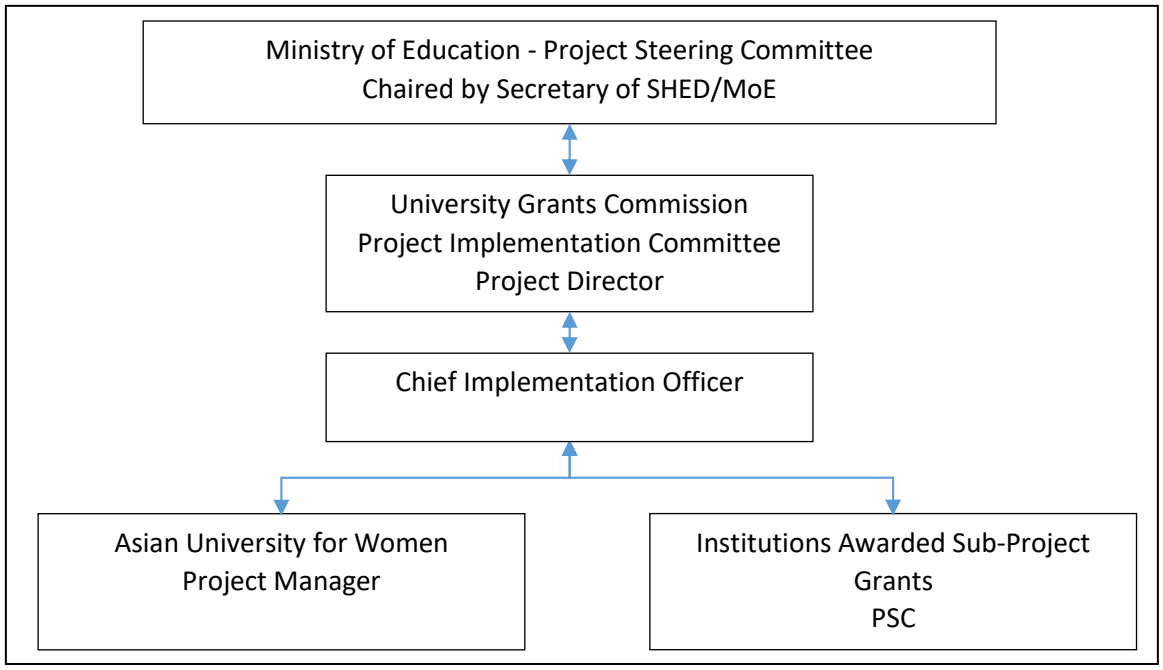


Figure 8: Overall Institutional Arrangements

UGC will be the project holder and responsible for managing the E&S risks of the project, including implementation of the ESMF and GRM. For the AUW sub-component/s, AUW will be responsible for these with overall guidance from the UGC. The project implementation team will be recruited from the market or delegated from the existing UGC and AUW team for this purpose. Funds for the WB supported construction work will be managed by UGC and the academic building after completion will be transferred to AUW. UGC will be responsible and accountable for the procurement, contract management and supervision of two contracts: 1) consulting services contract for design, procurement support and construction supervision, and 2) the civil works contract for the Academic building. Hence, the contractual relationship under each of these contracts will be exclusively between the two parties to the contract, i.e. UGC and the consulting firm for design, procurement support and construction supervision, and between UGC and the construction contractor for the AUW academic building. AUW is responsible for providing quality assurance to campus design and construction, hence quality assurance of ESMP and mitigation

measures implementation. UGC will hire a full time dedicated social Development and Resettlement specialist, an environmental specialist and a labor & OHS specialist to monitor the construction of AUW infrastructure. These three specialists will work with AUW's environment department for the quality assurance of ESMP and mitigation measure implementation for the construciton of infrastruture and all other activities implemented by AUW. UGC will also ensure similar expertise are included in the Design & Supervision firm. UGC, the key implementing agency and AUW, the quality assurance entity of design and construction, both will be responsible for the environmental and social compliance relevant to AUW campus related construction works.

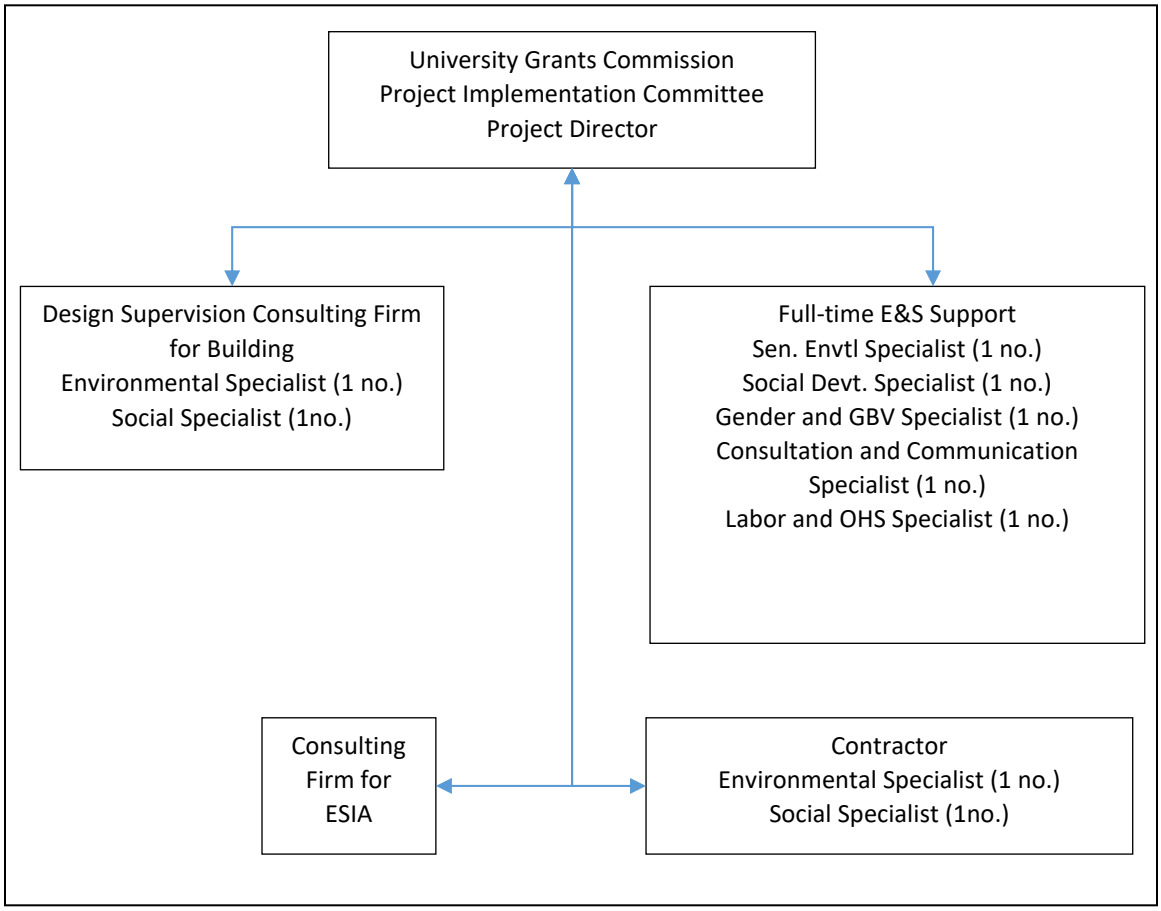


Figure 9: UGC Institutional Arrangements

For efficient and smooth implementation of the project, suitable institutional arrangements are necessary to manage and implement the ESMF. Project Institutional arrangement consist of PSC and PIC. Institutional arrangements required for implementation of Resettlement Plan includes capacity augmentation of UGC head office, AUW office, Deputy Commissioners offices, appointment of INGO/consulting firm, formation of various committees like: GRC, PAVC, RAC, etc. The Deputy Project Director at Head Office will function as the Chief Resettlement Officer (CRO). The CRO will have overall responsibility relating to resettlement and rehabilitation policy guidance, coordination, planning, monitoring and reporting. Secretarial Staffs at Head Office will assist the CRO. At the field level, the CRO will be assisted by PIC. Besides, an NGO will be appointed for the implementation of resettlement plan.

The resettlement expert of the Project Implementation Committee (PIC) would be engaged to carry out internal monitoring and evaluation of the project. External Monitoring Agency will be engaged for the project.

9.2 Roles and Responsibilities

For efficient and smooth implementation of the project, suitable institutional arrangements are necessary to manage and implement the ESMF and other relevant safeguard document. Project Institutional arrangement consist of two committees as Project Steering Committee (PSC) at Ministry level and project Implementation Committee (PIC) at Project level.

Formation and Responsibility of PSC: At the national level of Bangladesh, a Project Steering Committee (PSC) chaired by the Secretary of the SHED/MoE will provide policy oversight and resolved critical issues. The UGC will provide coordinating support between the SHED/MoE. The UGC would implement the project using existing structure of it's with additional technical support to be provided to respective divisions. There will be a Project Director (PD) at least at the level of Additional Secretary and he will be assisted by a Chief Implementation Officer (CIO) hired from the market. The CIO will lead the Technical Assistance (TA) team. Adequate technical staff and consultants will be hired to ensure oversight responsibility for all project components, including financial management, procurement, M&E, and administrative and communication. The CIO will be responsible for coordination of project activities under the guidance of PD.

Formation and responsibility of PIC at Project level: A Project Implementation Committee (PIC) will be established by UGC following the Planning Commission guideline to support the project implementation. The PIC will be chaired by the UGC chairman. The PD will be the member secretary of the PIC. PIC will be consisting of UGC Chairman, PD, Consultation and communication specialist, Social Safeguard and resettlement Specialist, Land Acquisition Specialist, Environment Specialist, Gender Specialist, Labor Expert and Communication and Consultation Specialist. UGC chairman will be the main responsible person to implement the project. PIC will implement the project under the overall guidance and supervision of the MoE/SHED and UGC to follow both Government and World Bank rules and regulations. The PIC will be also responsible for: (i) preparation and implementation of RAP and providing necessary advice for timely delivery; (ii) monitoring and evaluating implementation progress and suggesting necessary course corrections; (iii) resolving issues and conflicts that may emerge during implementation; (iv) facilitation coordination and convergence with other line ministries, division, and departments/agencies; and (v) keeping the good connection with PSC on overall performance and key issues relating to the project. The OMST/MoHE will mostly participate in the meetings using digital technology.

Responsibility of University Grant Commission (UGC)

The UGC will be responsible for the overall coordination and supervision of the M&E tasks and for reporting the results in the Results Framework to the Bank. UGC will use its existing Monitoring Evaluation and Reporting Unit (MERU) with support from Higher Education Management Information System (HEMIS) and will be responsible for supporting the project in undertaking the M&E work.

Responsibility of Monitoring Evaluation and Reporting Unit (MERU)

The MERU will be responsible to collect updated data from relevant agencies and relevant units of the UGC and gather data for different activities of the project from the beneficiary institutions to update

indicators in the Results Framework on a regular basis (mostly semiannually). The MERU will work closely with the relevant section of the UGC. The international cooperation and collaboration unit will obtain relevant data from the OMST/MOHE.

Roles and responsibility of RAP preparation NGO/firm: MoE/SHED with the support of UGC will hire NGO/consulting firm to support PIC for preparing RAP. During RAP preparation regularly keep good coordination with PIC for alignment demarcation, census, socio-economic and IOL survey and RAP preparation.

Roles and responsibility of RAP Implementing NGO/Consulting Firm: NGO/Consulting Firm will support the PIC when and where required. INGO/Consulting Firm will work closely with PIC. The role of INGO/Consulting Firm will be to facilitate sound implementation of the project. The INGO/Consulting Firm will work as a bridge between the Project Authority and the affected persons.

MoE/SHED approves the LAP and RAP of the project prepared by the UGC with the support of the consulting firm / INGO. MoE is also responsible for approve different committees like Grievance Redress Committee (GRC), Property Valuation Advisory Committee (PVAC) and Resettlement Advisory Committee (RAC) and Inventory Verification Committee (IVC) proposed in the RAP through gazette notification.

Roles and responsibility of Contractors: Contractors will need to follow the LMP, which has been prepared by the SHED-UGC as a stand-alone document, to cover all requirements of ESS2. The LMP includes the assessment of risks and impacts and required mitigation measure to ensure health and safety of the contractor's workers that may be exposed to health risks (especially COVID-19). The LMP directs contractors to localize the economic benefits with minimal opportunities for outside labor to service work that require specialized/skilled labor that is not present in project localities. Beside this the Contractor will be required to write, adopt and implement a written Labor Influx Management Plan as part of the bidding document and contract before employing any labor in the work.

Contractors need to address issues such as child labor, forced labor, gender and GBV issues, occupational health and safety specified in the bidding and contract documents as well as ensuring required training and awareness program. Adequate OHS protections in accordance with EHSGs and GIIP in relation to protection from COVID-19 will also be required to be implemented by contractors. To ensure the health and safety of workers during the construction contractors will be required to prepare and implement Occupational Health & Safety Plan (OHSP) following the World Bank Group Environment, Health and Safety Guidelines and local legislations.

Contractors will also need to prepare and implement site specific Environmental and Social Management Plans (ESMPs).

A specific Grievance Redress Mechanism (GRM) for the workers need to be implemented by contractors.

Roles and responsibility of Universities: Universities need to follows the environmental and social management procedures outlined in this ESMF. Screening of subprojects funded by the project need to be done (**Annexes 3 and 4**). Appropriate mitigation and monitoring measures (including site specific ESMPs, template provided in **Annex 5)** will need to be designed and implemented. Regular reporting (see section 9.6.2) is also required.

9.3 Specialist Responsibility

Senior Environmental Specialist at PIC: PIC will have a dedicated Senior Environmental Specialist to ensure implementation of ESIAs, site based ESMPs and ESMF and other environmental safeguards responsibilities, including occupational health and safety issues. (S)He will maintain liaison with MoE/SHED through UGC, AUW (AUW campus development) and other universities during the Project implementation. (S)He will organize training activities for stakeholders. (S)He will also monitor construction activities to ensure that environmental mitigation measures are properly implemented (especially waste management issues). (S)He will prepare monitoring reports as directed by the Project Director. A ToR for Senior Environmental Specialist attached with **Annex 7.**

Social Development and Resettlement Specialist at PIC: PIC will have a dedicated Social Safeguard and Resettlement Specialists to ensure implementation of RPF, RAP, IPP, ESMF and other social management responsibilities. He will maintain liaison with MoE/SHED through UGC, AUW (AUW campus development) and other universities during the Project implementation. He will also monitor construction activities to ensure that social mitigation measures are properly implemented. A ToR for Social safeguard specialist attached with **Annex 8.**

Gender and GBV Specialist at PIC: PIC will have one Gender and GBV specialist to ensure implementation of GBV and GAP. A ToR for Gender specialist attached with **Annex 10**.

Consultation and Communication Specialist: A consultation and communication specialist will be hired at PIC to implement SEP. As SEP is a living document, it needs to be updated when require. A ToR for SEP specialist attached with **Annex 9.**

Labor and OHS Specialist: A labor and OHS specialist will be hired at PIC to ensure implementation of Labor Management Plans prepared by the contractors following the guidelines of LMP.

9.4 Capacity Building

Environmental and social safeguards training will help ensure that the requirements of the ESS and subsequent social safeguard are clearly understood and followed by all project personnel throughout the project period. The PIC will ensure, in collaboration with the PSC that these training are provided to all Project personnel. The social training program will be finalized before the commencement of the project. The training will be provided to the UGC or AUW or CWU representatives, construction contractors, and other staff engaged in the Project. Training will cover all staff levels, ranging from the management and supervisory to the skilled and unskilled categories. The scope of the training will cover general environmental and social awareness and the requirements of the ESS5 and other ESSs, with special emphasis on sensitizing the project staff to the social and genders aspects of the area. Different raining programs will be initiated which can be realigned based on the needs.

Table 18: Training Programs

Contents	Participants	Responsibility	Schedule
Introduction to World Bank ESF	PSC, PIC, implementing agency and contractors	World Bank and MoE/SHED	Prior to the start of the Project activities.
ESF guidelines and ESMF	PSC, PIC, implementing agency and contractors	MoE/SHED with the support of WB safeguard team	Prior to the start of the Project activities.
Screening method, social survey procedures, ESMP preparation	Selected UGC or AUW or CWU representatives; PIC, Consulting firm/NGO	PIC/safeguard specialist	Prior to the start of the Project activities.
Training on ESS 2, ESS10 and ESS5 (labour and working conditions, resettlement; stakeholder engagement etc.)	PSC, PIC; Selected contractors' crew	PIC	Prior to the start of the field activities.
Preparation and review of ESMF, RPF, RAP, and IPP	PSC, PIC; Design, Monitoring and supervision consultant	PIC	Prior to the start of the field activities.
Grievance Mechanism and handling procedures	Contractors, PIC, consulting firms/NGO, Construction crew	PIC	Prior to the start of the construction activities. (To be repeated as needed)
Internal and External Monitoring procedures and reporting	PSC, PIC and INGO/consulting firms, contractors	PIC	Before and during the construction activities. (To be repeated as needed)
Issues related to COVID-19: use of PPE; working in COVID-19 environment; WHO, CDC and national guidelines on quarantine; compliance with local rules and regulations.	Officials of IA, locally active NGOs, Civil Work Contractors, Workers	PIC	Prior to mobilization of project staff and workers/ contractors
Occupational Health & Safety: ESMP implementation; GBV/SEA/SHA; Workplace risk management; Prevention of accidents at work sites; Health and safety rules; Solid and liquid waste management; Traffic and Road Safety; Preparedness and response to emergency situations	Officials of IA, locally active NGOs, Civil Work Contractors, Workers	PIC	Prior to mobilization of project staff and workers/ contractors
GBV Risk Module Raising awareness and measures to prevent and mitigate GBV/SEAH risks.	IA Local officials, Contractors Health Safety Officer, Labor Sardars (Leaders), Local NGOs, OCC Staffs	PIC	Within six months of Project effectiveness and thereafter yearly

Contents	Participants	Responsibility	Schedule
The topics and activities will be developed and included in the Project GRM.			
Waste Management Caretakers appointed by Educational Institutions will be trained for operation and maintenance, with a special focus on safe disposal of wastewater including necessary training and awareness on sanitation technology and management.	Caretakers of Educational Institutions	PIC	Upon assignment of the caretakers

9.5 Guidelines for Bid Documents

Bid documents for preparation of RAP will be prepared by interested firms need to incorporate relevant items from the ESMF and ESMPs. All the ESMF related documents will be inserted with the bid documents for RAP implementation firm, construction and supervision firm and external monitor. Therefore, during preparation of tender documents, the PIC need to ensure that:

- All relevant ESMF and ESMP items relevant for contractors and firms are included in tender documents (specifications and BOQs)
- Provide clear information to potential bidders regarding social considerations for the work package/s
- Submission of supporting documentation/materials of previous experience and track record on RAP preparation and implementation should be mentioned in the instructions to bidders
- Evaluation of submitted bids should include criteria for adequacy of RAP preparation and implementation responses and costing's

9.6 Monitoring

The UGC will be responsible for the overall coordination and supervision of the M&E tasks and for reporting the results in the Results Framework to the Bank. UGC will use its existing Monitoring Evaluation and Reporting Unit (MERU) with support from Higher Education Management Information System (HEMIS) and will be responsible for supporting the project in undertaking the M&E work. The MERU will be responsible for: (i) collecting updated data from the relevant agencies, institutions and units of the project to produce project progress reports biannually; (ii) updating of the results indicators; (iii) conducting physical inspections; (iv) support M&E at the subproject level and (v) conducting planned studies and assessments in a timely manner in partnership with public research institutions (such as BIDS, BBS, IMED etc.). The MERU will work closely with the relevant section of the UGC. The international cooperation and collaboration unit will obtain relevant data from the OMST/MoHE to support the reporting and assessments.

9.6.1 Internal and External monitoring

UGC will conduct regular monitoring and evaluation of the updating and implementation of the ESMF. Monitoring and evaluation are intended to help ensure that the resettlement action plan is prepared and implemented according to the resettlement policy framework. Moreover, external monitor of the project will review all the RAP/s prepared for this project. External monitor will establish dialogue with the

affected communities and ensure that their concerns and suggestions are incorporated and implemented in the project. External monitor will work closely with the PIC and internal monitoring team to implement the RAP and specifically responsible for implementation of proposed compensation, rehabilitation, and income restoration measures, consultations with affected persons (APs) during rehabilitation activities and assisting in grievance redress. He or she will prepare resettlement training programs and workshops for the staff of the PIC and contractors.

During project preparation, and as part of the ESMF, the UGC will develop a monitoring and reporting framework for resettlement activities. Central to this framework are the census of PAPs and the inventory of assets that constituted the basis for the agreed RAP. The UGC responsible for oversee the progress in resettlement preparation and implementation through regular progress reports, submitted through normal channels, monitoring key indicators of finance, inputs and activities. PIC will submit ESMF implementation progress report to PSC and UGC on a regular basis

In addition to internal monitoring, external (or independent) monitor will be engaged to provide an independent periodic assessment of resettlement implementation and impacts, to verify internal reporting and monitoring, and to suggest adjustment of delivery mechanisms and procedures as required. A social and economic assessment of the results of delivered entitlements and a measurement of the income and standards of living of the PAPs before and after resettlement are integral components of this monitoring activity. To function effectively, the organization responsible for external monitoring should be independent of the governmental agencies involved in resettlement implementation. Regular external monitoring should begin along with implementation activities and continue until the end of the project.

The following activities are the standard functions of the external monitors:

- Verification of internal reports, by field check
    - Interview a random sample of PAPs in open-ended discussions to assess their knowledge and concerns regarding the resettlement process, their entitlements and rehabilitation measures.
    - Participate as an observer in public consultations for PAPs at the project level. (Organizing these meetings is the responsibility of the implementing agency)
    - Observe the functioning of the resettlement operation at all levels to assess its effectiveness and compliance with the ESMF.
    - Check the type of grievance issues and the functioning of grievance redress mechanisms by reviewing processing of appeals at all levels and interviewing aggrieved PAPs.
    - Survey the standards of living of the PAPs (and that of an unaffected control group where feasible) before and after implementation of resettlement to assess the whether the standards of living of the PAPs have improved or been maintained.
    - Advise project management unit regarding possible improvements in the implementation of the ESMF.

UGC will establish procedures to monitor and evaluate the implementation of the plan and will take corrective action as necessary during implementation to achieve the objectives of the ESS. The extent of monitoring activities will be proportionate to the project's risks and impacts. For this project UGC will ensure competent professionals to monitor the implementation of ESMF, design corrective actions as necessary, provide advice to PIC, and NGO/consulting firms on compliance with ESS and periodic

monitoring reports will be prepared and affected persons will be informed about monitoring results in a timely manner.

Table 19: Monitoring process of key indicators

Monitoring Aspects & Relevant ESS	Potential Indicators
Delivery of Entitlements ESS1, ESS5	• Entitlements disbursed, compared with number and category of losses set out in the entitlement matrix. • Disbursements against timelines. • Identification of the displaced persons losing land temporarily, e.g. through soil disposal, borrow pits, contractors' camps, been included. • Timely disbursements of the agreed transport costs, relocation costs, income substitution support, and any resettlement allowances, according to schedule. • Documented evidence of land donation • Documented evidence of land acquisition completed with transfer of title • Documented evidence of land requisition/rented • Percentage of compensation paid for land acquisition/requisition or rented • Percentages of compensation paid for the affected structures/assets/crops/trees • Restoration of social infrastructure and services. • Affected businesses receiving entitlements, including transfer and payments for net losses resulting from lost business.
"Private-Private" disputes ESS5, ESS10	• clear and adequate rules for the recognition of relevant land tenure rights is provided • fair criteria and functioning, transparent and participatory processes for resolving competing tenure claims are established • efforts are taken to inform affected people about their rights and access to impartial advice are provided •
Consultation ESS1, ESS10	• Strategy for consultation and information disclosure is prepared • Consultations organized as scheduled • Project information's are disclosed • Affected, interested, disadvantage and vulnerable groups are identified • views of disadvantage and vulnerable groups are considered during designing the entitlement and special measures are taken • Schedules are planned for the various stakeholder engagement activities • Knowledge of entitlements by the relevant stakeholders including project affected people • If tribal people are affected, separate consultation has to be conducted with them
Grievances ESS2, ESS4, ESS5, ESS10	• Operationalization of the grievance redress mechanism proposed with ESMF. • Operationalization of the GRM for labor and GBV • Information on the resolution of the grievances • Process by which people affected by the project can voice their grievances and concerns • Process to document complaints and concerns • Grievance recording (e.g. MIS, grievance log book • Stipulated timeframes for acknowledgement and resolution of complaints • Awareness raising, to inform stakeholders about the GRM and appeals process • Grievance reports published and frequency
Communications and Participation ESS10	• Number of general meetings (for both men and women). • Percentage of women out of total participants. • Number of meetings exclusively with women.

Monitoring Aspects & Relevant ESS	Potential Indicators
	• Number of meetings exclusively with vulnerable groups. • Number of meetings at new sites. • Number of meetings between hosts and the displaced persons. • Level of participation in meetings (of women, men, and vulnerable groups). • Level of information communicated—adequate or inadequate. • Information disclosure. Translation of information disclosure in the local languages.
Budget and Time Frame ESS1, ESS5	• Social Safeguard Specialist/expert appointed and mobilized on schedule for the field and office work. • Capacity building and training activities completed on schedule. • Achieving resettlement implementation activities against the agreed implementation plan. • Funds allocation for resettlement to implementing agencies on time. • Receipt of scheduled funds by resettlement offices. • Funds disbursement according to the resettlement action plan. • Social preparation phase as per schedule.
Livelihood and Income Restoration ESS5	• Types of training and number of participants in each. • Number of displaced persons who have restored their income and livelihood patterns (women, men, and vulnerable groups). • Number of new employment activities. • Extent of participation in rehabilitation programs. • Degree of satisfaction with support received for livelihood programs/activities. • Percentage of displaced persons who improved their income (women, men, and vulnerable groups) • Percentage of displaced persons who improved their standard of living (women, men, and vulnerable groups) • Number of displaced persons with replacement agriculture land (women, men, and vulnerable groups) • Quantity of land owned/contracted by displaced persons (women, men and vulnerable groups)
Voluntary land Donation ESS5	• Progress on the process of providing official documentation to those who donated land of their landholding.
Contractors and sub-contractors ESS2	• setting a special score board approach based on the activities accomplished during project interval • project parties and laborers as well based on the set criteria.
Implementation of mitigation measures ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS7, ESS8,	• environmental and social monitoring parameters as per approved ESMPs based on subproject screenings and/or ESIAs

9.6.2 Reporting

The PIC with the support of UGC will prepare a monthly report to be submitted to the PSC. These reports will summarize the following:

- Progress in implementing this ESMP and subsequent other safeguard documents, etc.;

- Findings of the monitoring programs, with emphasis on any breaches of the control standards, action levels or standards of general site management;
- Summary of any complaints by external bodies and actions taken / to be taken; and
- Relevant changes or possible changes in legislation, regulations and international practices.

Monitoring of and reporting on the project must be complemented by an effective GRM proposed in ESMF in order to address issues arising from project implementation. GRM will help to detect unanticipated or recurring problems, and to manage them. The project implementing agency sets up and supports the GRM, in a manner satisfactory to the World Bank, to receive, manage and facilitate resolution of stakeholders' concerns and grievances in a timely manner. It is important that the GRM is designed to accommodate all issues raised, including issues related to labor influx. The way to make complaints needs to be simple and well publicized. The GRM is usually scaled to the risks and potential adverse impacts of the project. The following factors will be considered in the project for the effective GRM:
(i) their publicity and accessibility, (ii) the transparency of their operation, (iii) the credibility of their decision-making process and structure, (iv) their confidentiality and hence protection from any potential retaliation, and (v) the effectiveness of the associated business processes to resolve grievances where appropriate.

Table 20: Reporting Requirements

Report/Document	Description	Prepared By	Submitted To	When
Training Records	Register of all Trainings and Capacity Building activities conducted under the project	Universities and UGC with the support of consultants.	PD	Within 3 weeks of any training/capacity building activity
Completed Safeguards Screening Forms	Identifies Potential Environmental and Social Issues	Universities and UGC with the support of PIC	PD	After completing forms
GRM Records	Register of grievances received and actions taken	GRC or Consultants during construction phase and then relevant Implementing Agency officer thereafter	PD	Monthly
Preparation of RAP	Site specific RAP will be prepared	INGO and PIC with the support of NGO/consulting firm	PD	Within 3 months of deployment
Internal Monitoring	Monitoring data as defined in the ESMF	Universities, UGC, PIC and/or Consultants	PD	Monthly
External Monitor	Monitoring data as defined in the ESMF	External monitor	World Bank	Every quarter

9.7 Budget for ESMF implementation

A budget for implementation of this ESMF is proposed below. This may be changed/updated once the ESMF has been prepared. This budget does not include the cost of land acquisition and resettlement.

Table 21: ESMF Implementation budget

Items	Man-month	Total (in USD)
Social Development and Resettlement Specialist (1)	24	60,000
Senior Environmental Specialist	24	100,000
Labor and OHS **specialist**	24	60,000
Gender and GBV **specialist**	24	60,000
Consultation and Communication Specialist	60	180000
Consulting firm for RAP/IPP preparation and implementation	Lump-sum	160,000
External Monitor	24 months over the period of 5 years	100,000
Capacity Building for PSC, PIC, NGO/consulting firm, universities and relevant government agencies	Lump-sum	100,000
Grievance handling cost	Lump-sum	40,000
National workshop	Lump-sum	10,000
Cost of land acquisition and resettlement	Unknown at this stage as land acquisition and resettlement impact is identified yet	

Chapter 10: COVID-19 MANAGEMENT

10.1 COVID-19 Focus of the HEAT Project

One of the main project objectives of this project is to strengthen regionally the COVID-19 response as well as improve connectivity and quality of higher education for women. Under sub-component 1.1, the project aims to help the Government of Bangladesh by:

- development and implementation of a coordinated approach to responding to the crisis
- establishment of a specific COVID-19 response and reopening committee at each university
- development of emergency response plans which will be updated every six months
- deploy rapid self-assessment to determine the level of preparedness of the various universities to transition to digital/online/distance learning approaches
- support the development of institution-wise recovery plans to help public and private institutions emerge from COVID-19 related lockdown
- review IT, quality assurance policies and regulations to facilitate the institutional pivot towards online learning during and beyond the COVID-19 crisis period

It is expected that creating a central warehouse of information on COVID-19 response procedures and mechanisms will be of immense help as the impacts of this pandemic are expected to occur well into the medium term.

This chapter outlines the key framework for managing COVID-19 risks associated with proposed sub-projects under the HEAT Project.

10.2 Identification of COVID-19 Risks in HEAT Project Activities

The table below lists the different risks expected in the different activities proposed under the project.

Table 22: Proposed Project Activities and COVID-19 Risks

Type of Activities	Risks of Infection Spread
Establishing/upgrading laboratories (Fab-Labs, i-Labs, etc.)	To/from workers/suppliers during physical works To/from lab staff and/or visitors
Setting up Offices (TTO, IQACs, BAC, etc.), including UTTA buiding	To/from workers/suppliers during physical works To/from office staff and/or visitors
Upgradation/refurbishment of teaching-learning facilities, including AUW Campus Academic Complex construction	To/from workers/suppliers during physical works To/from teaching and non-teaching staff and/or students as well as visitors
Upgradation/renovation of childcare facilities	To/from workers/suppliers during physical works To/from carers, staff and/or children/parents as well as visitors
Strengthening of digital facilities in Colleges and Universities	To/from workers/suppliers during physical works To/from teaching and non-teaching staff and/or students as well as visitors
Upgrading of dorms and washroom facilities	To/from workers/suppliers during physical works To/from dorm/washroom users

The main sources of COVID-19 risk under this project will emanate:

- During physical works where there will be workers and suppliers coming/leaving the site/facility
- During operation of the facilities, where there will be face to face or close interactions

Each sub-project authority should conduct a COVID-19 risk assessment focusing on the nature of activities to be undertaken. For activities involving physical works (renovations, etc.) the risk assessment should consider the workforce characteristics as a starting point since the work force may have a mix of workers e.g. workers from the local communities; workers from a different part of the country; workers from another country. Workers will be employed under different terms and conditions and be accommodated in different ways. Assessing these different aspects of the sub-project activities, workforce, etc. will help in identifying appropriate mitigation measures. Some of the things to consider in the risk assessment include:

- Consideration must include current advice from local/ national health authorities about the current situation and case numbers for COVID-19 cases in the local community/region.
- Information on the latest number and location of COVID-19 cases in local communities where the project is located.
- What are the current legal requirements (e.g. public health orders, health directions) and how do they apply to the project?
- The Contractors should prepare a detailed profile of the project work force, key work activities, schedule for carrying out such activities, different durations of contract and rotations (e.g. 4 weeks on, 4 weeks off).
- This should include a breakdown of workers who reside at home (i.e. workers from the community), workers who lodge within the local community and workers in on-site accommodation. Where possible, it should also identify workers that may be more at risk from COVID-19, those with underlying health issues or who may be otherwise at risk.

10.3 Standard Mitigation Measures for Managing COVID-19 Risks

10.3.1 Preventive Measures

Standard mitigation measures for preventing/minimizing COVID-19 infections include:

- Training and awareness raising of staff/workers as well as use of appropriate signs/posters, etc.
- Avoid Face to Face meetings whenever possible
- Physical Distancing if Face to Face interactions unavoidable
- Works schedule rotation to minimize number of people in a site/facility
- Minimize use of shared transport

- Checking and recording temperatures and contact details of all staff/students/visitors at entry/exit points of site/facility
- Personal hygiene – ensure adequate hand washing facilities available at the site including entry/exit points
- Personal Protective Equipment – depending on the national/local requirements, wearing of masks and other PPE should be made encouraged/enforced within the site/facility
- Waste management – Any PPE or other items that may be a source of infection must be treated as hazardous medical waste and handled/disposed properly as per national/local requirements.

10.3.2 Management of COVID-19 Outbreak

The implementing sub-project authority must have in place clear protocols for managing any confirmed cases of COVID-19 associated with their site/facility. The key elements of the protocols, amongst others, include:

- Testing and tracing of possible cases
- Access to appropriate COVID-19 medical facilities
- Daily health screening of staff/workers
- Incident management and reporting
- COVID-19 response drills

Where appropriate, standard operating procedures should be developed and maintained.

10.4 Reporting of COIVD-19 Cases

All participation organizations/institutions must report any confirmed cases of COVID-19 to the UGC and World Bank. Furthermore, quarterly reports on implementation of COVID-19 mitigation measures and monitoring results should be submitted to UGC and the World Bank.

Annex 1: Relevant GoB policies, strategies, plans, acts, rules and regulations

Relevant National Environmental Acts and Rules

Constitution of the Government Republic of Bangladesh

In the constitutions of Bangladesh, the environmental issues also highlight the environmental protection and biodiversity conservation issues. In the Article18A: Protection and Improvement of Environment and Biodiversity; of the Constitution of the People's Republic of Bangladesh states that," The state shall endeavor to protect and improve the environment and to preserve and safeguard the natural resources, biodiversity, wetlands, forest and wildlife for the present and future citizens".

Bangladesh Environmental Conservation Act (ECA), 1995

The Environmental Conservation Act (ECA) of 1995 is the main legislative framework relating to environmental protection in Bangladesh. This umbrella Act includes laws for conservation of the environment, improvement of environmental standards, and control and mitigation of environmental pollution. This Act has empowered the Department of Environment (DoE), and its Director General to take measures as he considers necessary which includes conducting inquiries, preventing probable accidents, advising the Government, coordinating with other authorities or agencies, and collecting and publishing information about any environmental issue. According to this act (Section 12), no industrial unit or project shall be established or undertaken without obtaining, in a manner prescribed by the accompanying Rules, an Environmental Clearance Certificate (ECC) from the Director General of DoE.

Bangladesh Environmental Conservation Act (ECA), (Amendments) 2010

The ECA 1995 was amended in 2010, which provided clarification of defining wetlands as well as Ecologically Critical Areas and included many important environmental concerns such as conservation of wetlands, hill cutting, ship breaking, and hazardous waste disposal. This amendment empowered the government to enforce more penalties than before. Moreover, affected persons were given provision for putting objections or taking legal actions against the polluters or any entity creating nuisance to affected person.

Bangladesh Environmental Conservation Rules (ECR), 1997

The Environment Conservation Rules, 1997 were issued by the Government of Bangladesh in exercise of the power conferred under the Environment Conservation Act (Section 20), 1995. Under these Rules, the following aspects, among others, are covered:

- Declaration of ecologically critical areas
- Classification of industries and projects into four categories
- Procedures for issuing the Environmental Clearance Certificate
- Determination of environmental standards

The Rule 3 defines the factors to be considered in declaring an area 'ecologically critical area' (ECA) as per Section 5 of ECA95. It empowers the Government to declare an area 'ECA', if it is satisfied that the ecosystem of the area has reached or is threatened to reach a critical state or condition due to environmental degradation. The Government is also empowered to specify which of the operations or processes shall not be carried out or shall not be initiated in the ecologically critical area.

The Rule 7 classifies industrial units and projects into four categories depending on environmental impact and location for the purpose of issuance of ECC. These categories are: Green, Orange A, Orange B, and Red.

All existing industrial units and projects and proposed industrial units and projects, that are considered to be low polluting are categorized under "Green" and shall be granted Environmental Clearance. For proposed industrial units and projects falling in the Orange-A, Orange-B and Red Categories, firstly a site clearance certificate and thereafter an environmental clearance certificate will be required. A detailed description of these four categories of industries has been given in Schedule-1 of ECR'97. Apart from general requirement, for every Red category proposed industrial unit or project, the application must be accompanied with feasibility report, Initial Environmental Examination (IEE), Environmental Impact Assessment (EIA) based on approved ToR by DoE, Environmental Management Plan (EMP).

The ECR'97 describes the procedures for obtaining Environmental Clearance Certificates (ECC) from the Department of Environment for different types of proposed units or projects. Any person or organization wishing to establish an industrial unit or project should obtain ECC from the Director General. The application for such certificate must be in the prescribed form together with the prescribed fees laid down in Schedule 13, through the deposit of a Treasury Challan in favor of the Director General. The fees for clearance certificates have been revised in 2010. Rule 8 prescribes the duration of validity of such certificate (three years for green category and one year for other categories) and compulsory requirement for renewal of certificate at least 30 days before expiry of its validity.

Bangladesh Environment Court Act, 2010

Bangladesh Environment Court Act, 2010 has been enacted to resolve the disputes and establishing justice over environmental and social damage raised due to any development activities. This act allows government to take necessary legal action against any parties who creates environmental hazards/ damage to environmentally sensitive areas as well as human society. According to this act, government can take legal actions if any environmental problem occurs due to project interventions.

Relevant National Polices, Strategies and Plans in Bangladesh

National Environmental Policy, 1992

The National Environment Policy (NEP) is one of the key policy documents of the Government. The policy addresses 15 sectors in all, in addition to providing directives on the legal framework and institutional arrangements. Aquatic environment is one of the key sectors covered in this policy. Regarding fisheries resource sector, the policy seeks to:

- ensure conservation of fisheries and livestock, mangrove forest and others ecosystems and prevention of activities that diminish the wetlands and natural habitats for fishes are the basic objectives in this sector;
- ensure that Coastal and floodplain eco-systems are identified as potential areas for intervention, where all internal and external polluting activities should be stopped. Fishing in coastal and floodplain environment within regeneration limits is recommended;
- keep the rivers, canals, ponds, lakes, haors, baors and all other water bodies and water resources free from pollution;
- ensure sustainable, long-term, environmentally sound and scientific exploitation and management of the fisheries resources;

- ensure environmentally-sound utilization of all fisheries resources;
- ensure that water development activities and canal networks for aquaculture do not create adverse environmental impact;
- ensure that all steps are taken for construction of embankments, dredging of rivers, digging of canals, etc, be environmentally sound at local, zonal and national levels;
- ensure mitigation measures of adverse environmental impact of completed water resources development projects; and
- conduct environmental impact assessment before undertaking projects for fisheries resources development and management, as appropriate level.

National Environmental Management Action Plan, 1995

The National Environment Management Action Plan (NEMAP, 1995) identifies the main national environmental issues, including those related to the fisheries sector. The main fisheries related national concerns include environmental degradation of water bodies, increased water pollution, shortage of aquaculture water and drainage congestion; various specific regional concerns are also identified.

National Water Policy, 1999

Endorsed by the GoB in 1999, the National Water Policy (NWP) aims to provide guidance to the major players in water sector for ensuring optimal development and management of water. According to the policy, all agencies and departments entrusted with water resource management responsibilities (regulation, planning, construction, operation, and maintenance) are required to enhance environmental amenities and ensure that environmental resources are protected and restored in executing their tasks.

The policy has several clauses related to water resource development projects for ensuring environmental protection. Some of the relevant clauses are:

- Clause 4.5b: Planning and feasibility studies of all projects will follow the Guidelines for Project Assessment, the Guidelines for People's Participation (GPP), the Guidelines for Environmental Impact Assessment, and all other instructions that may be issued from time to time by the Government.
- Clause 4.9b: Measures will be taken to minimize disruption to the natural aquatic environment in streams and water channels.
- Clause 4.9e: Water development plans will not interrupt fish movement and will make adequate provisions in control structures for allowing fish migration and breeding.
- Clause 4.10a: Water development projects should cause minimal disruption to navigation and, where necessary, adequate mitigation measures should be taken.
- Clause 4.12a: Give full consideration to environmental protection, restoration and enhancement measures consistent with National Environmental Management Action Plan (NEMAP) and the National Water Management Plan (NWMP).
- Clause 4.12b: Adhere to a formal environment impact assessment (ESIA) process, as set out in ESIA guidelines and manuals for water sector projects, in each water resources development project or rehabilitation program of size and scope specified by the Government from time to time.
- Clause 4.13b: Only those water related projects will be taken up for execution that will not interfere with aquatic characteristics of those water bodies.

National Water Management Plan, 2001 (Approved in 2004)

The National Water Management Plan (NWMP) 2001, approved by the National Water Resources Council in 2004, envisions to establish an integrated development, management and use of water resources in Bangladesh over a period of 25 years. Water Resources Planning Organization (WARPO) has been assigned to monitor the national water management plan. The major programs in the Plan have been organized under eight sub-sectoral clusters: i) Institutional Development, ii) Enabling Environment, iii) Main River, iv) Towns and Rural Areas, v) Major Cities; vi) Disaster Management; vii) Agriculture and Water Management, and viii) Environment and Aquatic Resources. Each cluster comprises of a number of individual programs, and a total of 84 sub-sectoral programs have been identified and presented in the investment portfolio.

National Agriculture Policy, 1999

The overall objective of the National Agriculture Policy is to make the nation self-sufficient in food through increasing production of all crops including cereals and ensure a dependable food security system for all. The policy particularly stresses on research on the development of improved varieties and technologies for cultivation in water-logged and salinity affected areas. The policy also recognizes that adequate measures should be taken to reduce water-logging, salinity and provide irrigation facilities for crop production.

National Land Use Policy, 2001

The National Land Use Policy (NLUP), enacted in 2001, aims at managing land use effectively to support trends in accelerated urbanization, industrialization and diversification of development activities. The NLUP urges that increasing the land area of the country may be not possible through artificial land reclamation process, which is cost effective only in the long run. Therefore, land use planning should be based on the existing and available land resources. The policy suggests establishing land data banks where, among others, information on accreted riverine and coastal chars will be maintained. Among the 28 policy statements of NLUP, the following are relevant to project:

- forests declared by the Ministry of Environment and Forests will remain as forest lands;
- re-classification of forest lands will be prevented.

The project will be designed in accordance with this Strategy and will comply with the above listed requirements.

National Fisheries Policy, 1998

The National Fisheries Policy (NFP), 1998 recognizes that fish production has declined due to environmental imbalances, adverse environmental impact and improper implementation of fish culture and management programs. The policy particularly focuses on aquaculture and open water fisheries development.

The policy suggests following actions:

- Enhancement of the fisheries production
- Poverty alleviation through creating self-employment and improvement of socio-economic conditions of the fishers
- Fulfill the demand for animal protein
- Achieve economic growth through earning foreign currency by exporting fish and fisheries products

- Chemicals harmful to the environment will not be used in fish shrimp farms
- Environment friendly fish shrimp culture technology will be used
- Expand fisheries areas and integrate rice, fish and shrimp cultivation
- Control measures will be taken against activities that have a negative impact on fisheries resources and vice-versa
- Laws will be formulated to ban the disposal of any untreated industrial effluents into the water bodies.

The Protection and Conservation of Fish Act (1950)

This Act provides power to the government to: make and apply rules to protect fisheries; prohibit or regulate erection and use of fixed engines; and construction of temporary or permanent weirs, dams, bunds, embankments and other structures. The Act prohibits: destruction of fish by explosives, guns, and bows in inland or coastal areas; destruction of fish by poisoning, pollution, or effluents. The Act prescribes the seasons during which fishing is allowed, prohibits fishing during spawning periods, and specifies officials having authority to detect breaches of this Act.

East Bengal Protection and Fish Conservation Act (1950) and Amendments

The East-Bengal Protection and Fish Conservation Act (1950), as amended by the Protection and Conservation of Fish (Amendment) Ordinance (1982) and the Protection and Conservation of Fish (Amendment) Act (1995), provides for the protection and conservation of fish in inland waters of Bangladesh. These instruments define a relatively non-specific framework that simply provides a means for Government to introduce rules to protect inland waters not in private ownership. Among other things, they sanction rulemaking regarding destruction of, or any attempt to destroy, fish by poisoning of water or depletion of fisheries by pollution, industrial effluent, or otherwise.

Protection and Conservation of Fish Rules (1985)

These Rules are in line with the overall objectives of the Fisheries Act and its amendments. Section 5 of the Rules states that, “No person shall destroy or make any attempt to destroy any fish by explosives, gun, bow and arrow in inland waters or within coastal waters”. Section 6 states, “No person shall destroy or make any attempt to destroy any fish by poisoning of water or the depletion of fisheries by pollution, by trade effluents or otherwise in inland waters.

National Livestock Development Policy, 2007

The National Livestock Development Policy (NLDP) has been prepared to address the key challenges and opportunity for a comprehensive sustainable development of the livestock sub-sector by creating an enabling policy framework. As livestock is one of the key assets in livelihoods of the program area, and protection of livestock from floods should be emphasized along with security of human life. The proposed project interventions will contribute to the safety of livestock and thus increase livestock productivity in the program area as source of alternative livelihood.

Private Forest Policy, 1994

The policy suggested for extended effort to bring about 20% of the country's land under the afforestation programs of the government and private sector by year 2015 by accelerating the pace of the program through the coordinated efforts of the government and NGOs and active participation of the people in order to achieve self-reliance in forest products and maintenance of ecological balance. The policy viewed equitable distribution of benefits among the people, especially those whose livelihood depend on trees

and forests; and people's participation in afforestation programs and incorporation of people's opinions and suggestions in the planning and decision-making process. The people centered objectives of the policy are: creation of rural employment opportunities and expansion of forest-based rural development sectors; and prevention of illegal occupation of forest lands and other forest offences through people's participation. The policy statements envisage: massive afforestation on marginal public lands through partnerships with local people and NGOs; afforestation of denuded/encroached reserved forests with an agro-forestry model through participation of people and NGOs; giving ownership of a certain amount of land to the tribal people through forest settlement processes; strengthening of the Forest Department; strengthening of educational, training and research facilities; and amendment of laws, rules and regulations relating to the forestry sector and if necessary, promulgation of new laws and rules. Thus, over time the policy has shifted somewhat from total state control to a management regime involving local communities in specific categories of forests. Because of limited amount of forestland, the policy underscores for effective measures for afforestation in rural areas, in the newly accreted chars, and in the denuded Unclassed State Forest areas of Chittagong Hill Tract and northern zone of the country including the Barind tract. The policy also encourages the private sector participation in afforestation.

National Policy for Safe Water Supply and Sanitation, 1998

The National Drinking Water Supply and Sanitation Policy (1998) goal is accessibility to all of water and sanitation services within the shortest possible time at a price that is affordable to all. The Policy will be achieved through strategies formulated at various levels in consultation with the Ministry of Planning. Policy objectives are (i) to improve the standard of public health and (ii) to ensure an improved environment. Policies for rural and urban areas are presented separately as they differ in institutional aspects, content, and magnitude.

National Adaptation Program of Action (NAPA), 2005

In 2005, the Ministry of Environment and Forest (MoEFCC), Government of the People's Republic of Bangladesh has prepared the National Adaptation Program of Action (NAPA) for 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). The basic approach to NAPA preparation was along with the sustainable development goals and objectives of the country where it has recognized the necessity of addressing climate change and environmental issue and natural resource management. The NAPA is the beginning of a long journey to address adverse impacts of climate change including variability and extreme events and to promote sustainable development of the country. There are 15 adaptation strategies suggested to address adverse effects of climate change.

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

The Government of Bangladesh has prepared the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), 2009. The BCCSAP is built on six pillars:

i. **Food security, social protection and health** to ensure that the poorest and most vulnerable in society, including women and children, are protected from climate change and that all programs focus on the needs of this group for food security, safe housing, employment and access to basic services, including health.

ii. **Comprehensive disaster management** to further strengthen the country's already proven disaster management systems to deal with increasingly frequent and severe natural calamities.

iii. **Infrastructure** to ensure that existing assets (e.g., coastal and river embankments) are well maintained and fit for purpose and that urgently needed infrastructures (cyclone shelters and urban drainage) is put in place to deal with the likely impacts of climate change.

iv. **Research and Knowledge management** to predict that the likely scale and timing of climate change impacts on different sectors of economy and socioeconomic groups; to underpin future investment strategies; and to ensure that Bangladesh is networked into the latest global thinking on climate change.

v. **Mitigation and low carbon development** to evolve low carbon development options and implement these as the country's economy grows over the coming decades.

vi. **Capacity building and Institutional strengthening** to enhance the capacity government ministries, civil society and private sector to meet the challenge of climate change.

National Strategy for Waste Management

The strategy for solid waste management is essential in order to minimize the environmental, social and economic problems. To minimize these problems, recently the GoB has taken some initiatives and accordingly in December 2010, the DoE under MoEFCC has formulated a national '3R' strategy for waste management in a draft form. It is the latest strategy which will take time to implement globally. For the proposed project, the '3R' strategy shall be followed to minimize the waste impact on environment.

The concept of this strategy is minimizing waste impacts in terms of quantity or ill-effects, by reducing the quantity of waste products with simple treatments and recycling the wastes by using it as resources to produce same or modified products. The principle of '3R' is stated as reducing waste, reusing and recycling resources and products.

- Reducing means choosing to use with items with care to reduce the amount of waste generated.
- Reusing involves the repeated use of items or parts of items which still have usable aspects
- Recycling means the use of waste itself as resources.

The GoB Seventh Five Year Plan 2016-2020

The GoB approved 7th Five Year Plan (2016-20) in October 2015 aiming to empower people by creating employment and skill development opportunities, supplying credit for SME development and many other ways for people to be more productive. Along with growth, the Plan will emphasize social protection, urban transition and a sustainable development pathway resilient to disaster and climate change.

The Seventh five-year plan has also adopted following major policies and policy actions for environment sustainability:

- Increase productive forest coverage to 20 percent;
- Improve air quality in Dhaka and other large cities and enact Clean Air Act;
- Promote Zero discharge of industrial effluents;
- Urban wetlands are restored and protected in line with Wetland Conservation Act;
- At least 15% of the wetland in peak dry season is protected as aquatic sanctuary;
- 500-meter-wide permanent green belt established and protected along the coast;
- Land zoning for sustainable land/water use completed;
- Environmental, Climate Change and disaster risk reduction considerations are integrated into project design, budgetary allocations and implementation process; and
- Canals and natural water flows of Dhaka and other major cities restored.

Bangladesh Delta Plan 2100

Bangladesh Delta Plan 2100 is the most comprehensive and holistic plan ever formulated and undertaken by the Government of Bangladesh. Considering the exceptionally strong development record throughout the last decade, aspirations to reach the Upper Middle Income (UMIC) country status level by 2030 and so many development challenges still persisting including huge population pressure and climate change vulnerability, the government has formulated this plan in order to reap the synergistic benefit from all actions, activities, plans, strategies and programs of all different ministries and wings of the government. This Delta Plan has divided Bangladesh into 8 hydrological regions and corresponding six Hotspots based on the similar vulnerabilities they are exposed to. With the grim effects of climate change and other delta related challenges, the country is facing more other challenges from growing urbanization, declining land availability, infrastructure shortages, energy supply constraints and labor skills, and all these challenges also need an overarching solution or efforts far more than sectoral plans or programs. Delta plan comes up with all these effective efforts with numbers of long- and short-term course of actions and plans. Among many others, following specific issues are considered more holistically in Delta Plan 2100:

- Climate Change, Environment and Ecological Issues,
- National and Trans-boundary water management
- Sustainable land use and Spatial Planning across dynamic delta
- Sustainable agriculture, food security, nutrition and livelihoods
- Dynamizing Inland Water Transport system
- Urban Water Management
- Governance and Institutions
- Delta Knowledge hub and data management, etc.

Other Relevant Acts, Laws and Rules

Bangladesh Wildlife (Protection and Preservation) Act 2012

The Act protects 1,307 species of plants and animals, including 32 species of amphibian, 154 species of reptile, 113 species of mammal, 52 species of fish, 32 species of coral, 137 species of mollusk, 22 species of crustacean, 24 species of insect, six species of rodent, 41 species of plant and 13 species of orchid. Of these, eight amphibian, 58 reptile, 41 bird, and 40 mammal species are listed as endangered in the IUCN Red Data Book (2000). The Act mandates:

- one to three years imprisonment, a fine of BDT 50,000 to 200,000, or both, for wildlife poaching, capturing, trapping, and trading, and for the purchase of wild animals, parts of wild animals, trophies, meat or other products without license.
- The Act mandates two to seven years imprisonment and BDT 100,000 to 1 million fine or both, for killing an elephant or tiger; and 12 years plus BDT 1.5 million for repeat offenders.
- five years imprisonment and BDT 200,000 fine for killing a cheetah, clouded cheetah, gibbon, sambar deer, crocodile, gavial, whale, and dolphin.
- two years imprisonment and BDT 200,000 fine for killing a wild bird or migratory bird.

- empowers the Government to create an eco-park, safari park, botanical garden, or breeding ground on any state-owned forest land, land or water-body.
- two years imprisonment for farming, woodcutting, burning, and construction on such reserves.

Bangladesh Wildlife (Preservation) Order (1973) and Act (1974)

The Bangladesh Wildlife Preservation (Amendment) Act 1974 regulates the hunting, killing, capture, trade and export of wild life and wild life products. It designates a list of protected species and game animals. It empowers the Government to declare areas as game reserves, wildlife sanctuaries, and national parks to protect the country's wildlife and provides the following legal definitions:

- Game reserve is defined as an area declared by Government wherein the capture of wild animals is unlawful, to protect wildlife and increase the population of important species;
- National park is defined as an area declared by Government comprising a comparatively large area of outstanding scenic and natural beauty with the primary objective of protection and preservation of scenery, flora, and fauna in their natural state, to which access for public recreation and education, and for scientific research, may be allowed;
- Wildlife sanctuary is defined as an area declared by Government that is closed to hunting, shooting, or trapping of wild animals as an undisturbed breeding ground, primarily for the purpose of protecting all natural resources, including wildlife vegetation, soil, and water.

The Act allows Government to relax any or all specified prohibitions for scientific purposes, for aesthetic enjoyment, or betterment of scenery.

Biodiversity Act, 2017

Biodiversity Act, 2017 fulfils the obligation of the state as party to the Convention on Biodiversity to provide for conservation of biodiversity, sustainable use of its components and fair and equitable sharing of benefits arising from their use. It provides for the creation of the National Committee and the Biodiversity Management and Surveillance Committees at local levels (i.e. Districts, Upazilas, Municipalities, and Unions). In general, all these committees are mandated to: assist the Government in implementing the National Biodiversity Strategy and Action Plan (NBSAP) and to visit the biodiversity enriched areas in their respective territories; and, monitor the progress of implementation of the NBSAP. They are also mandated to raise awareness among the local people on conservation of biodiversity and to recommend the National Committee for required measure. Under the Biodiversity Act, the Government is empowered to declare, in consultation with local communities and bodies and in coordination with concerned ministries or departments, any place or area significant for its biological heritage as Biodiversity Heritage Sites. The Government may initiate projects or schemes for compensating or rehabilitating any person or institution economically affected by such declaration. The Government may frame directives for the management and conservation of all the Biodiversity Heritage Sites. Interestingly, while the CBD calls for financial assistance to developing countries, the Biodiversity Act provides for a domestic fund called the 'Biodiversity Conservation Fund'. Any grants given by the Government and money obtained from any other sources, subject to the approval of the government, will be credited to the Fund. The Fund will be utilized for the conservation and management of Biodiversity Heritage Sites, compensating or rehabilitating any person or section of the people economically affected by the declaration of Biodiversity Heritage Sites and for any other incidental expenses.

Forestry Acts, 1860s

Systematic management of forests started in the 1860s after the establishment of a Forest Department in the Province of Bengal. To regulate activities within forests, rules and regulations have been formulated, amended, modified and improved upon over the years. These rules and regulations are formulated on the basis of long-existing acts and policies.

Forest legislation in Bangladesh dates back to 1865, when the first Indian Forest Act was enacted. It provided for protection of tree, prevention of fires, prohibition of cultivation, and grazing in forest areas. Until a comprehensive Indian Forest Act was formulated in 1927, several acts and amendments covering forest administration in British India were enacted and were as follows: (a) Government Forest Act, 1865; (b) Forest Act, 1890; (c) Amending Act, 1891; (d) Indian Forest (Amendment) Act, 1901; (e) Indian Forest (Amendment) Act, 1911; (f) Repealing and Amending Act, 1914; (g) Indian Forest Amendment Act, 1918; and (h) Devolution Act, 1920.

The Forest Act of 1927, as amended with its related rules and regulations, is still the basic law governing forests in Bangladesh. The emphasis of the Act is on the protection of reserved forest. Some important features of the Act are: (i) Under the purview of the Forest Act, all rights or claims over forestlands have been settled at the time of the reservation. The Act prohibits the grant of any new rights of any kind to individuals or communities; (ii) Any activity within the forest reserves is prohibited, unless permitted by the Forest Department; (iii) Most of the violations may result in court cases where the minimum fine is Taka 2,000 and/or two month's rigorous imprisonment; and (iv) The Act empowers the Forest Department to regulate the use of water-courses within Reserve Forests.

Forest Act 1927 (Amendment 2000)

The Forest Act of 1927 as amended in 1989 has its roots in Indian Forest Act, 1878. The Forest Act grants the government several basic powers, largely for conservation and protection of government forests, and limited powers for private forests. The 1927 version of the act was amended in 1989 for extending authority over "any [Government-owned] land suitable for afforestation".

Forest department is the main agency to implement the provisions of the Forest Act. The Act, however, does not specify any sort of institutional structure for the forest or other land holding agencies. It also does not set out any specific policy direction for managing the forests.

Most of the forest lands under the management of forest department are areas declared to be reserved and protected forests under this act. The act empowers the government to regulate the felling, extraction, and transport of forest produce in the country.

Private Forest Act (PFA), 1959

The Private Forest Act of 1959 allows the Government to take over management of improperly managed private forest lands, any private lands that can be afforested, and any land lying fallow for more than three years. The Private Forest Ordinance was originally enacted in 1945, as the Bengal Private Forest Act, and was re-enacted by the Bangladesh (then East Pakistan) in 1949 before being issued as an Act in 1959. These government managed lands under this act are called "vested forests". The Forest Department manages approximately 8,500 ha in the country as "vested forests". This area is relatively small, but the area historically affected by this law is much larger.

PFA, 1959 empowers the government to require management plans for private forests and to assume control of private forests as vested forests. Government has broad powers to write rules regarding use and protection of vested forests, and apply rules to "controlled forests," which include all private forests subject to any requirement of the Act.

Embankment and Drainage Act, 1952

The East Bengal Act No. 1, 1953 has been adapted by the People Republic of Bangladesh, by the Bangladesh Order (adaptation of Existing Laws), 1972 (President’s Order No. 48 of 1972). The Act consolidates the laws relating to embankments and drainage providing provision for the construction,

maintenance, management, removal and control of embankments and water courses for the better drainage of lands and for their protection from floods, erosion or other damage by water.

Bangladesh Water Act, 2013

The recently published Water Act 2013 is based on the National Water Policy, and designed for integrated development, management, extraction, distribution, usage, protection and conservation of water resources in Bangladesh. In general, if one takes a critical look at the Act, the new law has provided the right framework for better management of water resources in the country.

As per this Act, all forms of water (e.g., surface water, ground water, sea water, rain water and atmospheric water) within the territory of Bangladesh belong to the government on behalf of the people. The private landowners will be able to use the surface water inside their property for all purposes in accordance with the Act. A worthwhile initiative is the requirement for permits/licenses for large scale water withdrawal by individuals and organizations beyond domestic use. Without prior permission issued by the Executive Committee, no individuals or organizations will be allowed to extract, distribute, use, develop, protect, and conserve water resources, nor they will be allowed to build any structure that impede the natural flow of rivers and creeks. However, the maximum amount of surface water or groundwater that can be withdrawn by individuals or organizations is not mentioned in the Act. Setting up a priority order for water usage in an area where the water resources is in critical condition is also a significant step.

Bangladesh Labour Act, 2006

The Bangladesh Labor Act, 2006 provides the guidance of employer's extent of responsibility and workmen's extent of right to get compensation in case of injury by accident while working. Some of the relevant Sections are:

- Section 150. Employer's Liability for Compensation: (1) If personal injury is caused to a workman by accident arising out of and in the course of his employment, his employer shall be liable to pay compensation in accordance with the provisions of this Act; and (2) Provided that the employer shall not be so liable in respect of any injury which does not result in the total or partial disablement of the workman for a period exceeding three days; (b) in respect of any injury, not resulting in death or permanent total disablement, caused by an accident which is directly attributable to - (i) the workman having been at the time thereof under the influence of drink or drugs, or (ii) the willful disobedience of the workman to an order expressly given, or to a rule expressly framed, for the purpose of securing the safety of workmen, or (iii) the willful removal or disregard by the workman of any safety guard or other device which he knew to have been provided for the purpose of securing the safety of workmen.
- Section 151. (1) Amount of Compensation: Subject to the provisions of this Act, the amount of compensation shall be as follows, namely :- (a) where death results from the injury, an amount equal to fifty cent of the monthly wages of the deceased workman multiplied by the relevant factor; or an amount of fifty thousand taka, whichever is more; (b) where permanent disablement results from the injury an amount equal to sixty per cent of the monthly wages of the injured workman multiplied by the relevant factor.

Bangladesh National Building Code, 2006

The Bangladesh National Building Code (BNBC) clearly sets out the constructional responsibilities according to which the relevant authority of a particular construction site shall adopt some precautionary measures to ensure the safety of the workmen. According to Section 1.2.1 of Chapter 1 of Part 7, "In a construction or demolition work, the terms of contract between the owner and the contractor and

between a consultant and the owner shall be clearly defined and put in writing". These however will not absolve the owner from any of his responsibilities under the various provisions of this Code and other applicable regulations and bye-laws. The terms of contract between the owner and the contractor will determine the responsibilities and liabilities of either party in the concerned matters, within the provisions of the relevant Acts and Codes (e.g.) the Employers' Liability Act, 1938, the Factories Act 1965, the Fatal Accident Act, 1955 and Workmen's Compensation Act 1923". (After the introduction of the Bangladesh Labor Act, 2006, these Acts have been repealed.)

The BNBC also stipulates the general duties of the employer to the public as well as workers. According to this section, "All equipment and safeguards required for the construction work such as temporary stair, ladder, ramp, scaffold, hoist, run way, barricade, chute, lift shall be 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".

The Code also clarifies the issue of safety of workmen during construction and with relation to this, set out the details about the different safety tools of specified standard. In relation with the health hazards of the workers during construction, this chapter describes the nature of the different health hazards that normally occur in the site during construction and at the same time specifies the specific measures to be taken to prevent such health hazards. According to this chapter, exhaust ventilation, use of protective devices, medical checkups etc. are the measures to be taken by the particular employer to ensure a healthy workplace for the workers.

To prevent workers falling from heights, the Code sets out the detailed requirements on the formation and use of scaffolding. According to Section 3.9.2 of the same chapter, "every temporary floor openings shall either have railing of at least 900 mm height or shall be constantly attended". Every floor hole shall be guarded by either a railing with toe board or a hinged cover. Alternatively, the hole may be constantly attended or protected by a removable railing. Every stairway floor opening shall be guarded by railing at least 900 mm high on the exposed sides except at entrance to stairway. Every ladder way floor opening or platform shall be guarded by a guard railing with toe board except at entrance to opening. Every open sided floor or platform 1.2 meters or more above adjacent ground level shall be guarded by a railing on all open sides except where there is entrance to ramp, stairway or fixed ladder, the above precautions shall also be taken near the open edges of the floors and the roofs".

The Noise Pollution Control Rules, 2006

The Noise Pollution Control Rules have been established in order to manage noise generating activities which have the potential to impact the health and wellbeing of workers and the surrounding communities. Under this legislation, control zones are listed as:

- Quiet Area – for example school or hospital;
- Residential Area – an area primarily occupied by dwellings;
- Mixed Area – area with a mix of residential, commercial and industrial land uses;
- Commercial Area – an area primarily occupied by businesses and officers; and
- Industrial Area – and area used for industry or manufacturing.

Day-time and night-time noise level restrictions are provided for these areas. Additionally, limits are provided for noise emissions from motor vehicles and boats.

National Land Transport Policy (NLTP), 2004

The government approved the NLTP in April 2004, which introduced the concept of long-term network planning and integration of transport policy, planning and appraisal across land transport modes. Each sub-sector undertakes physical and institutional improvement in line with its long-term policy provided in the NLTP with each sub-sector master plan. Major issues by sub-sector include (i) maintenance financing, quality, safety and overloading in major roads; (ii) better planning in rural roads; (iii) restructuring Bangladesh Railways into a commercially oriented organization in conjunction

with substantial investment in infrastructure, rolling stocks and wagons, equipment, and technical modernization; (iv) efficient dredging and tariff regulation in inland waterways; and (v) operation efficiency improvements in ports. As indicated in the NLTP, environmental adaptation needs to be taken into account in project assessment, which will help mitigate climate change.

Vehicle Act, 1927, the Motor Vehicle Ordinance 1983

Key features of the vehicle act, 1927, the motor vehicle ordinance 1983 is as follows:

- Exhaust emission;
- Vehicular air and noise pollution;
- Road/traffic safety;
- Vehicle Licensing and Registration;
- Fitness of Motor Vehicles;
- Parking by laws.

Road Transport Act 2018

The new Road Transport Act 2018 has finally come into effect at the start of November. After the long-standing Motor Vehicle Ordinance of 1983, the new act introduces a myriad of updated laws and adds new definitions for what constitutes an offence, with most of the fines and punishments receiving major bumps. Here is a brief analysis and overview of some of the more noticeable changes. Of all the new things in this act, two stand out the most. Firstly, all licenses now carry 12 points. Nine types of traffic violations—such as speeding or excessive honking—will result in a point being awarded to a license. If a license reaches 12 points, it will be revoked. Secondly, the introduction of an academic requirement dictates the applicant has to at least pass class eight before applying for a driving license.

Another change that will surely hurt all car users is the update to the “alteration to motor vehicles” section. The previous Section 42 was left vague and only had a TK 5,000 fine. In the new act, Section 40 replaces Section 42 and brings in 18 different classifications, in which modifications to a car is punishable by a fine of up to TK 3 lakh. These classifications include both front and rear overhangs (the basic dimensions of the car)—meaning technically, the all too common steel bumper additions found in most of the cars is a crime under this law. Along with that, aftermarket exhausts, bigger wheels, modified horns, indicators, brakes and more, all fall under the “illegal modification” classification.

Section 105 of 11th chapter states no matter what, if anybody gets seriously injured or killed in a motor vehicle-related accident, it would be considered as an offence under the relevant sections of the Penal Code, 1860. This ranges from Section 302 to 304B, with the maximum punishment being a death sentence. The offences that fall under section 105 of the act are not eligible for bail.

The Brick Burning (control) Act, 1989

This Act has been promulgated to control the process of brick burning. This requires operators to obtain a license from the appropriate authority (DC) before the commencement of brick burning. The Act restricts brick burning with fuel wood and categorically mentions that no one is permitted to use fuel wood for brick burning. The Act has a provision of punitive measures of imprisonment for six months or a fine of Taka Fifty thousand only or both. The Act also provides for inspection of the brick fields to check the use of fuel wood and the inspecting authority has the right to confiscate all the bricks and fuel wood found on the particular brickfield.

Brick Burning (control) (Amendment) Act 1992

This Act was promulgated in July 1992 and was intended to amend certain elements of the Act of 1989. The two major issues requiring special mention in this regard is the shifting of authority from the UP Chairman to the DC and the re-definition of fuel. In this Act the definition of fuel is any floral based fuel other than the dead (motha) of the bamboo. The Act replaces the definition of fuel wood enunciated in the earlier act with this fuel.

Other Laws

There are a number of other laws and regulations applicable which are relevant for the project. These are presented in the table below.

Table: Other Relevant Laws and Acts

Act/Law/Ordinance	Brief Description	Responsible Agency
Rules for Removal of Wrecks and Obstructions in inland Navigable Water Ways (1973)	Rules for removal of wrecks and obstructions	IBWTA
The Water Supply and Sanitation Act (1996)	Regulates the management and control of water supply and sanitation in urban areas.	MoLG, RD&C
The Ground Water Management Ordinance (1985)	Describes the management of ground water resources and licensing of tube wells	Upazila Parishad
The Private Forests Ordinance (1959)	Deals with the conservation of private forests and afforestation of wastelands.	MoEFCC
The Antiquities Act (1968)	Describes the preservation of cultural heritage, historic monuments and protected sites	DoArch

Review of National Social Regulatory Framework

This section deals with the laws, regulations and policies, of Government of Bangladesh, and the World Bank, related to social issues. Only the laws, regulations and policies relevant to the project are discussed here. This section needs to be updated as when new laws, regulations and policies are made and enforced or the existing ones are revised.

Relevant National Social Policy, Acts, Plans and Rules

Constitutional Provisions

The fundamental rights under the Constitution indicate the general guidelines for a policy on resettlement/rehabilitation of citizens adversely affected (whatever be the mechanism) due to any activity of the State. Article 40 of the constitution states categorically that every citizen has the right to practice any lawful occupation which implies that anything impeding such right (a) should not be done or (b) there should be supplementary measures to make recovery of the losses incurred by the citizen. Resettlement and rehabilitation of adversely affected people due to infrastructure projects very clearly falls within this requirement for supplementary measures. However, as per Article 42, sub-clause 2, no law with provision of compensation for acquisition of land can be challenged in a court on the ground that such compensation has been inadequate.

The Acquisition and Requisition of Immovable Property Act 2017

The Acquisition and Requisition of Immovable Property Act 2017 (ARIPA) is the principal legislation governing eminent domain for land acquisition and requisition in Bangladesh. ARIPA 2017, detailed the land acquisition process from section 4 to section 19 and land requisition process from section 20 to section 28. According to ARIPA 2017, compensation to be paid for affected land, structures, trees, crops and any other damages caused by such acquisition. Under the ARIPA 2017, The Deputy Commissioner (DC) determines the value of the acquired assets as at the date of issuing the notice of acquisition under section 4(1). The DCs there after enhance the assessed value by 200% and another 100% premium for loss of standing crops, structures and income due to compulsory nature of the acquisition. The compensation such determined is called the Cash Compensation under Law (CCL). If the land acquired has standing crops cultivated by a tenant (Bargadar) under a legally constituted written agreement, the law requires that compensation money be paid in cash to the tenants as per the agreement. ARIPA 2017 under section 4 (13) permits the acquisition of the community properties if it is for a public purpose provided that project for which the land is acquired provides for similar types of assets in some other appropriate place or reconstruct the community properties.

Households and assets moved from land already acquired in the past for project purposes and/or government khas land are not included in the acquisition proposal and therefore excluded for considerations for compensation under the law. Lands acquired for a particular public purpose cannot be used for any other purpose. Furthermore, the Act under its section 15 provides for the acquisition of entire houses/buildings if their owners request to acquire the entire house or building against partial acquisition. The government is obliged to pay compensation for the assets acquired.

Table: Land Acquisition Process under ARIPA, 2017

Relevant Section under ARIPA, 2017	Steps in the process	Responsibility
Section 4(1)	Publication of preliminary notice of acquisition of property for a public purpose	Deputy Commissioner
Section 4 (3) (1) (i)	Prior to the publication of section 4(1) notice; Identify the present status of the land, structures and trees through videography, still pictures or appropriate technology.	Deputy Commissioner
Section 4 (3) (1) (ii)	After the publication of the section 4(1) notice a joint verification should be conducted with potentially affected households and relevant organizations.	Deputy Commissioner
Section 4 (7)	After publication of preliminary notice under the section 4(1), if any household has changed the status of the land for beneficial purposes, changed status will not be added to the joint verification notice.	Deputy Commissioner
Section 4 (8)	If the affected person is not happy with the joint verification assessment, he/she can complain to Deputy Commissioner within 7 days of issuing sec 4(1) notice.	Affected Person
Section 4 (9)	Hearing by Deputy Commissioner within 15 working days after receiving the complaints. In case of government priority projects, hearing will be within 10 working days.	Deputy Commissioner
Section 5 (1)	Objections to acquisition by interested parties, within 15 days of the issue of section 4 (1) Notice	Affected Person
Section 5 (2)	Deputy Commissioner submits hearing report within 30 working days after the date of the sec 5(1) notice. In the case of government priority projects, it will be within 15 working days.	Deputy Commissioner
Section 5 (3)	DC submits his report to the (i) Government (for properties that exceed 16.50 acres; (ii) Divisional Commissioner for properties that do not exceed 50 standard bighas. Deputy Commissioner makes the final decision If no objections were raised within 30 days of inquiry. In case of government priority project, it will be 15 days	Deputy Commissioner
Section 6 (1) (1)	Government makes the final decision on acquisition within 60 working days after receiving report from the Deputy Commissioner under sec 5(3) notice.	Government
Section 6 (1) (2)	Divisional Commissioner makes the decision within 15 days or with reasons within 30 days since the submission of the report by Deputy Commissioner under sec 5(3) notice.	Divisional Commissioner
Section 7 (1)	Publication of the Notice of final decision to acquire the property and notifying the interested parties to submit their claims for compensation	Deputy Commissioner
Section 7 (2)	Interested parties submit their interests in the property and claims for compensation within 15 working days (in case of priority project 7 days).	Affected Person
Section 7 (3)	Individual notices have to be served to all interested persons including the shareholders within 15 days of issuing Section 7(1) notice	Deputy Commissioner
Section 8 (1)	Deputy Commissioner makes a valuation of the property to be acquired as at the date of issuing Section 4 Notice; determine the compensation; and apportionment of compensation among parties interested.	Deputy Commissioner

Relevant Section under ARIPA, 2017	Steps in the process	Responsibility
Section 8 (3)	DC informs the award of compensation to the interested parties and sends the estimate of compensation to the requiring agency/person within 7 days of making the compensation decision	Deputy Commissioner
Section 8 (4)	The requiring agency/person deposits the estimated award of compensation with the Deputy Commissioner within 120 days of receiving the estimate.	Deputy Commissioner
Section 9 (1)	During valuation of assets, Deputy Commissioner will consider the following: (i) Average market price of land of the same category in the last 12 months; (ii) Impact on existing crops and trees; (iii) Impact on other remaining adjacent properties; (iv) Impact on properties and income; and (v) Relocation cost for businesses, residential dwellings etc.	Deputy Commissioner
Section 9 (2)	Additional 200% compensation on current mouza rate is added to the estimated value. If private organizations acquire, added compensation will be 300%.	Deputy Commissioner
Section 9 (3)	Additional 100% compensation on top of the current market price for impacts mentioned under sec 9(1) and (2)	Deputy Commissioner
Section 9 (4)	Appropriate action should be taken for relocation on top of the above-mentioned sub-sections.	
Section 10 (2)	If an entitled person does not consent to receive compensation, or if there is no competent person to receive compensation, or in the case of any dispute with the title to receive compensation, Deputy Commissioner deposits the compensation amount in a deposit account in the Public Account of the Republic and Deputy Commissioner acquires the land. But if any person complains about the ownership of the land, with appeal, he/she will be able to collect the amount from Deputy Commissioner. There is no fixed time for this.	Deputy Commissioner
Section 11 (1)	Deputy Commissioner awards the compensation to entitled parties within 60 days of receiving the deposit from the requiring agency/person.	Deputy Commissioner
Section 12	When the property acquired contains standing crops cultivated by bargadar (shareholders), such portion of the compensation will be determined by the Deputy Commissioner and will be paid to the bargadar in cash.	Deputy Commissioner

For requisition of land for temporary purposes, the Acquisition and Requisition of Immovable Property Act 2017 (ARIPA) is the principal legislation governing eminent domain land acquisition and requisition in Bangladesh. The Act requires compensation to be paid for: (i) vacating the requisitioned property (ii) reoccupying the property upon released from the requisition (iii) damaged the cost to the property during period of requisition including the expenses that may have to be incurred for restoring to the original condition

Under the ARIPA 2017, The Deputy Commissioner (DC) determines the value of the requisitioned assets under section 22(1) and 22(2) with due consultation with the land owners. According to section 22(6), requisition is allowed only for 2 years. If land is required more than 2 years, a new contract is required with the land owners with an agreed compensation rate. Under section 23, DC will pay the compensation

to the land owners. If the land requisitioned has standing crops cultivated by a tenant (Bargadar) under a legally constituted written agreement, the law requires that compensation money be paid in cash to the tenants as per the agreement. Under no circumstances, land requisition is not allowed due affecting residential and community properties. However, under section 20, requisition is only allowed for emergency road repairing. Any losses for structures, trees, and business will follow the provisions of ARIPA 2017.

Voluntary land Donation (VLD)

It is normal practies in Bangladesh that individuals or community donate lands to the university or projects for the development purposes of education. In case of small sections of land required for micro level subproject activities, the project may seek support from the community to donate lands. However, the community members have the right to make a contribution of their land or other assets without seeking or being given compensation at full replacement value. Voluntary contribution is an act of informed consent. Local Authorities must assure that voluntary contributions are made with the affected person's full and prior knowledge of the availability of other options (including compensation at replacement cost) and are obtained without coercion or duress. Also, voluntary donations are allowed only if the affected people are direct beneficiaries of the investments that cause such impact. Proposals including voluntary contributions will not be submitted for approval where they would significantly harm incomes or living standards of individual owners or users (the size of land contributed on a voluntary basis should not exceed 10% of that individual's total land holding).

Framework for leasing of Government (Khas) agricultural land

The rules for managing and leasing Government-owned (Khas) land are notified through two Bangladesh Gazette notifications i.e.: (1) Notification: Bhumo/Sha-8/Kha-jo-bo/46/84/261, Bangladesh Gazette Extra Edition dated May 12, 1997, pp 1527-1536; and (2) Notification: Shuno/Sha-4/Kri-kha-jo--bo-1/98-264, Bangladesh Gazette, September 15, 1998. Under these regulations, the Government leases cultivable agricultural land in the rural areas to landless farming households. The allotments cannot be more than one acre, except in the southern districts where up to 1.5 acres of char land can be allotted. The regulation further defines structure and responsibilities for management and leasing of Khas Lands at the National, District, and Thana levels.

Constitutional Rights of the Small Ethnic Communities

The Constitution of Bangladesh does not mention the existence of the cultural and ethnic minorities in Bangladesh. The only protective provision for the ethnic minorities that the policy makers often refer to is Article 28(4) which states that: Nothing shall prevent the state from making special provision in favour of women and children or for the advancement of any backward citizens. The above provision is an ambiguous one and it does not define who or what constitutes "backward". However, the Government recognizes existence of "Small Ethnic Communities" (SECs) and the need for special attention and in general SECs are essentially viewed as backward, poor and socio-economically and culturally inferior. Towards this end a special program was initiated in 1996-97 by the Prime Minister's Secretariat aimed at improving the socio-economic situation of the SECs of Bangladesh, resident outside the Chittagong Hill Tracts (CHT).

The Chittagong Hill Tracts Regulation 1900

The CHT Regulation, 1900 (Regulation I of 1900) is the regulatory framework for State sovereignty over the traditional rights of the SECs living in the CHTs region. They are governed through Revenue Circle Chiefs who are local revenue collectors vide an amalnama (authorization by the Government). The Deputy Commissioner and the Commissioner from the Central Government reserve the authority to settle land to the hill-men or non-hill residents or lease out land (non-transferable) for rubber plantation or establishing industries in the CHTs. The regulation provides the right to possessing cultivable land upto 5 acres by hill men or non-hill residents. The headman is responsible for the conservation of the resources of his mouza through exercising his authority to (i) prohibit the removal of forest produces by residents of respective mouzas other than for their domestic purposes or by non-residents for any purpose, (ii) exclude any area or areas in his mouzas from the jhuming (shifting cultivation), (iii) prevent new comers from cutting jhums in his mouza, and (iv) prevent a person from grazing cattle in his mouza.

The Chittagong Hill–Tracts (Land Acquisition) Regulation, 1958

Most of the land in CHT belongs to the Government either as reserve forest or as unclassified state forest. The CHT Regulation I of 1900 was the sole legal instrument for the governance and administration of the Hill Tracts. Under the regulation, the DC could resume land even though settlement of the same might have been given earlier. The rule prescribed payment of compensation for various interests as in the case of land acquisition. In order to expedite the acquisition of land in CHT, the Government made the CHTs (Land Acquisition) Regulation, 1958. This regulation has provision for payment of compensation for requisitioned property. The compensation may be fixed by agreement or by rules framed on this behalf.

The CHT Regional Council Act, 1998

The National Parliament of Bangladesh in 24 May1998 passed the Peace Accord 1997 as the "CHTs Regional Council Act, 1998 (Act 12 of 1998). In addition to re-establishing peace, the Accord recognized the ethnic people's right to land, culture, language, and religion. The Accord set out detailed provisions for strengthening the system of self-governance in the CHT, and redressing the most urgent land-related problems including resolution of land disputes by a commission on land, the transfer of authority for land administration to the hill district councils (HDCs), the cancellation of lease granted to non-residents during the conflict period, the distribution of land to ethnic or "SECs" villages, and the strengthening of customary land rights. Under this Act, no lands, hills and forests within the control and jurisdiction of the HDCs shall be acquired or transferred by the government without consultation and consent of the Regional Council. No law will be executed in the region which is not developed and enacted in consultation and agreement with the SECs peoples in CHT. A ministry on CHT Affairs was established by appointing a Minister from among the SECs (communities of hill districts). An Advisory Council from the CHT region assists this ministry.

The Labor Act, 2006

Compensation for death and injury. Section 99 of the Labor Act, 2006, read with the Compensation Act 2005, makes it compulsory for there to Group Insurance for establishments where there are more than 200 permanent workers. A worker is defined as:

"any person, including an apprentice, employed in any establishment or industry, either directly or through a contractor, to do any skilled, unskilled, manual, technical, trade, promotional or clerical work

for hire or reward, whether the terms of his employment are expressed or implied, but does not include a person employed mainly in a managerial or administrative capacity."

The Labor Act allows workers to claim Tk. 1,00,000 and Tk. 1,25,000 for death and permanently total disablement at work respectively, or in other words, the same compensatory sums as set out in the Labor Act.

For compensating a worker who suffered injury or lost life, the project follows 2006 Labor Law. However, Project has taken initiative for enacting a new policy/law in this regard which is under process (2017).

Annex 2: WB Environmental and Social standards (ESSs)

ESS 1: Assessment and Management of Environmental and Social Risks and Impacts

ESS1 sets out the MoE/SHED responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing, in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs).

Objectives of the ESS1

- To identify, evaluate and manage the environment and social risks and impacts of the project in a manner consistent with the ESSs.
- To adopt a mitigation hierarchy approach to:
    - Anticipate and avoid risks and impacts;
    - Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels;
    - Once risks and impacts have been minimized or reduced, mitigate; and
    - Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.
- To adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable, and they are not disadvantaged in sharing development benefits and opportunities resulting from the project.
- To utilize national environmental and social institutions, systems, laws, regulations and procedures in the assessment, development and implementation of projects, whenever appropriate.
- To promote improved environmental and social performance, in ways which recognize and enhance MoE/SHED capacity.

ESS 1 Requirements

The MoE/SHED will:

(a) Conduct an environmental and social assessment of the proposed project, including stakeholder engagement;
(b) Undertake stakeholder engagement and disclose appropriate information in accordance with ESS10; (c) Develop an Environmental and Social Commitment Plan (ESCP), and implement all measures and actions set out in the legal agreement including the ESCP; and
(c) Conduct monitoring and reporting on the environmental and social performance of the project against the ESSs.

ESS 2: Labor and working Conditions

ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. MoE/SHED can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.

ESS2 Objectives

- To promote safety and health at work.
- To promote the fair treatment, nondiscrimination and equal opportunity of project workers.
- To protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate.
- To prevent the use of all forms of forced labor and child labor.
- To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law.
- To provide project workers with accessible means to raise workplace concerns.

Requirements

- Working conditions and management of worker relationships,
    - Terms and conditions of employment
    - Worker's organizations
    - Nondiscrimination and equal opportunity
- Protecting the work force
    - Child labor and minimum age
    - Forced labor
- Grievance mechanism
- Occupational Health and Safety (OHS)
- Contracted workers
- Community workers
- Primary supply workers

ESS 3: Resource efficiency and pollution prevention and management

ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations. At the same time, more efficient and effective resource use, pollution prevention and GHG emission avoidance, and mitigation technologies and practices have become more accessible and achievable.

This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life cycle consistent with GIIP.

Objectives

- To promote the sustainable use of resources, including energy, water and raw materials.
- To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities.
- To avoid or minimize project-related emissions of short and long-lived climate pollutants.
- To avoid or minimize generation of hazardous and non-hazardous waste.
- To minimize and manage the risks and impacts associated with pesticide use.

Requirements

The MoE/SHED will consider ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention measures in accordance with the mitigation hierarchy. The measures will be proportionate to the risks and impacts associated with the project and consistent with GIIP, in the first instance the EHSGs.

- Resource efficiency
    - Energy use
    - Water use
    - Raw material use
- Pollution prevention and management
    - Management of air pollution
    - Management of hazardous and nonhazardous wastes
    - Management of chemicals and hazardous materials
    - Management of pesticides

ESS 4: Community health and safety

ESS4 recognizes that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. In addition, communities that are already subjected to impacts from climate change may also experience an acceleration or intensification of impacts due to project activities.

ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of MoE/SHED to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.

Objectives

- To anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life cycle from both routine and non-routine circumstances.
- To promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams.
- To avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials.
- To have in place effective measures to address emergency events.
- To ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.

Requirements

- Community health and safety
    - Infrastructure and equipment design and safety
    - Safety of services
    - Traffic and road safety
    - Ecosystem services
    - Community exposure to health issues
    - Management and safety of hazardous materials

    - Emergency preparedness and response
- Security personnel
- Annex 1. Safety of dams
    - New dams
    - Existing dams and dams under construction (DUC)
    - Dam safety reports

ESS 5: Land Acquisition, restrictions on land Use and involuntary resettlement

ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons. Project-related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both. The term "involuntary resettlement" refers to these impacts. Resettlement is considered involuntary when affected persons or communities do not have the right to refuse land acquisition or restrictions on land use that result in displacement.

Objectives

- To avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives.
- To avoid forced eviction.
- To mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use by: (a) providing timely compensation for loss of assets at replacement cost and (b) assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.
- To improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure.
- To conceive and execute resettlement activities as sustainable development programs, providing sufficient investment resources to enable displaced persons to benefit directly from the project, as the nature of the project may warrant.
- To ensure that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and the informed participation of those affected.

Requirements

- General
    - Eligibility classification
    - Project design
    - Compensation and benefits for affected persons
    - Community engagement
    - Grievance mechanism
    - Planning and implementation
- Displacement
    - Physical displacement
    - Economic displacement

- Collaboration with other responsible agencies or subnational jurisdictions
- Technical and financial assistance
- Annex1: Resettlement Plan

ESS 6: Biodiversity Conservation and sustainable management of living natural resources

ESS6 recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development.

Objectives

- To protect and conserve biodiversity and habitats.
- To apply the mitigation hierarchy4 and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity.
- To promote the sustainable management of living natural resources.
- To support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities.

Requirements

- General
    - Assessment of risks and impacts
    - Conservation of biodiversity and habitats
    - Modified habitat
    - Natural habitat
    - Critical Habitat
    - Legally protected and internationally recognized areas of high biodiversity value
    - Invasive alien species
    - Sustainable management of living natural resources
- Primary suppliers

ESS 7: Indigenous peoples/sub-Saharan African historically Underserved traditional local Communities

This ESS7 applies to a distinct social and cultural group identified in accordance with paragraphs 8 and 9 of this ESS. The terminology used for such groups varies from country to country, and often reflects national considerations. ESS7 uses the term "Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities,"1 recognizing that groups identified under paragraphs 8 and 9 may be referred to in different countries by different terms. Such terms include "Sub-Saharan African historically underserved traditional local communities," "indigenous ethnic minorities," "aboriginals," "hill tribes," "vulnerable and marginalized groups," "minority nationalities," "scheduled tribes," "first nations" or "tribal groups." For the purposes of this ESS, the term "Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities" includes all such alternative terminology.

Objectives

- To ensure that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities.
- To avoid adverse impacts of projects on Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, or when avoidance is not possible, to minimize, mitigate and/or compensate for such impacts.
- To promote sustainable development benefits and opportunities for Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities in a manner that is accessible, culturally appropriate and inclusive.
- To improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation with the Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities affected by a project throughout the project's life cycle.
- To obtain the Free, Prior, and Informed Consent (FPIC) of affected Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities in the three circumstances described in this ESS.
- To recognize, respect and preserve the culture, knowledge, and practices of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to provide them with an opportunity to adapt to changing conditions in a manner and in a timeframe acceptable to them.

Requirements

- General
    - Projects designed solely to benefit indigenous peoples/Sub-Saharan African historically underserved traditional local communities
    - Projects where indigenous peoples/Sub-Saharan African historically underserved traditional local communities are not the sole beneficiaries
    - Avoidance of adverse impacts
    - Mitigation and development benefits
    - Meaningful consultation tailored to indigenous peoples/Sub-Saharan African historically underserved traditional local communities
- Circumstances requiring free, prior and informed consent (FPIC)
    - Impacts on lands and natural resources subject to traditional ownership or under customary use or occupation
    - Relocation of indigenous peoples/ Sub-Saharan African historically underserved traditional local communities from lands and natural resources subject to traditional ownership or under customary use or occupation
    - Cultural heritage
- Grievance mechanism
- Indigenous peoples/Sub-Saharan African historically underserved traditional local communities and broader development planning

ESS 8: Cultural heritage

ESS8 recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present and future. This ESS sets out general provisions on risks and impacts to cultural heritage from project activities. ESS7 sets out additional requirements for cultural heritage in the context of Indigenous Peoples. ESS6 recognizes the social and cultural values of biodiversity. Provisions on Stakeholder Engagement and Information Disclosure are set out in ESS10.

Objectives

- To protect cultural heritage from the adverse impacts of project activities and support its preservation.
- To address cultural heritage as an integral aspect of sustainable development.
- To promote meaningful consultation with stakeholders regarding cultural heritage.
- To promote the equitable sharing of benefits from the use of cultural heritage.

Requirements

- General
- Stakeholder consultation and identification of cultural heritage
    - Confidentiality
    - Stakeholders' access
- Legally protected cultural heritage areas
- Provisions for specific types of cultural heritage
    - Archaeological sites and material
    - Built heritage
    - Natural features with cultural significance
    - Movable cultural heritage
- Commercial use of cultural heritage

ESS 9: Financial Intermediaries –

ESS9-FI doesn't required and applicable to the HEAT project.

ESS 10: Stakeholder engagement and Information Disclosure

This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.

Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks. Stakeholder engagement is most effective when initiated at an early stage of the project development process, and is an integral part of early project decisions and the assessment, management and monitoring of the project's environmental and social risks and impacts. This ESS must be read in conjunction with ESS1. Requirements regarding engagement with workers are found in ESS2. Special provisions on emergency preparedness and response are covered in ESS2 and ESS4. In the case of projects

involving involuntary resettlement, Indigenous Peoples or cultural heritage, the Borrower will also apply the special disclosure and consultation requirements set out in ESS5, ESS7 and ESS8.

Objectives

- To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, in particular project-affected parties.
- To assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in project design and environmental and social performance.
- To promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle on issues that could potentially affect them.
- To ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format.
- To provide project-affected parties with accessible and inclusive means to raise issues and grievances, and allow Borrowers to respond to and manage such grievances.

Requirements

- Engagement during project preparation
  - ✓ Stakeholder identification and analysis
  - ✓ Stakeholder Engagement Plan
  - ✓ Information disclosure
  - ✓ Meaningful consultation
- Engagement during project implementation and external reporting
- Grievance mechanism
- Organizational capacity and commitment
- Annex 1. Grievance mechanism

Projects on International Waterways (OP 7.50)

This Policy is not triggered since the program will not cover geographical regions where trans-boundary waterways/rivers are existing.

Project Disputed Areas (OP 7.60)

This OP is not triggered since no part of the program area is located in any disputed territory.

Annex 3: Environmental Screening Form

Higher Education Acceleration and Transformation (HEAT) Project

Instructions

The purpose of this checklist is to identify potential environment and safety issues related to the sub-project proposal. This is a generalized checklist format for all categories of funding. However, it is anticipated the research proposals under 'Arts, Humanities and Social Sciences' and 'Business and Law' will not have any environment impacts and thus the proposals under these disciplines will not be required to submit this checklist unless the UGC specifically requests it.

The screening form covers aspects of: ESS1, ESS3, ESS4 and ESS6.

Institution: _____

Funding Type (please tick): [] Research [] New Construction [] Renovation/Refurbishment

[] CERC [] Other: _____

Tentative Start Date: _____

Proposed Duration of Sub-Project: _____ Months

Brief Description of Sub-Project Activity (Within 200 words)

Checklist

Sl #	Screening Questions		Yes	No	Remarks
1	Will the sub-project work be laboratory based? [If answer is No, then go to question 6.]				
2	Does the laboratory have				
	i	Environment, health and safety SOPs, protocol or guidelines? (attach to form)			
	ii	Adequate fire safety provision?			
	iii	Safety provision for gas cylinder handling?			
	iv	Proper waste disposal facilities? (attach supporting documents, including e-wastes management information)			
	v	Adequate liquid waste management facilities?			
	vi	Proper storage facilities for hazardous chemicals, pesticides, acids etc.?			
	vii	Adequate ventilation system?			
	viii	First-aid facilities?			
	ix	Emergency exit facilities?			
	x	Trained professional to guide the researchers/students about safety procedures?			
3	Will the laboratory-based research work				
	i	Require procurement of hazardous products (WHO Hazard Class I & II)?			Approx. Amount: _____ kg
	ii	Produce hazardous waste materials?			Approx. Amount: _____ kg
	iii	Generate infectious waste?			Approx. Amount: _____ kg
	iv	Cause significant emissions of gas harmful to health?			Approx. Amount: _____ m^3
	v	Generate liquid waste?			Approx. Amount: _____ L
	vi	Cause any major noise?			Approx. Amount: _____ dB
4	Has the applicant received formal training on laboratory operation (e.g. SOPs) and safety rules?				
5	Does the applicant have previous work experience in laboratories for similar works?				

Sl #	Screening Questions		Yes	No	Remarks
6	Will the sub-project work require interventions at field level? (If no proceed to question 8)				
7	Will the field have based sub-project work				
	i	Be located at or near an environmentally sensitive area?			
	ii	Require procurement of hazardous products (WHO Hazard Class I & II)?			Approx. Amount: _____ kg
	iii	Discharge any liquid waste in the environment?			Approx. Amount: _____ L
	iv	Discharge large quantities of waste/used water?			Approx. Amount: _____ L
	v	Generate hazardous waste?			Approx. Amount: _____ kg
	vi	Impair downstream water quality?			
	vii	Have any possible degradation in land and ecosystem?			
	viii	Cause local air pollution from any plant/system operation?			
	ix	Generate excessive noise and/or dust?			Approx. Amount: _____ dB
8	Will medical, biophysical or clinical research be conducted using human subjects?				
9	Will the project have any indirect impact on environment and ecosystem?				
10	Will the research work involve permission or clearance of any government department or agency?				
11	Will future expansion or implementation of research finding cause any major environment problem?				

Has an ESMP been attached? [] YES [] NO

Have SOPs been attached? [] YES [] NO

Have waste management related information been attached? [] YES [] NO

The above answers are true and complete. I understand that the University Grants Commission will depend on them to make its decision.

Name of Head of Proposal Submitting Entity and Signature with Date:

Name: _____

Signature with Date _____

Contact Telephone Number and E-mail: _____

Please sign below to verify that the information in this document is accurate and complete to the best of your knowledge.

Environment Professional's Signature & Date:

Name: _____

Signature with Date: _____

Contact Telephone Number and E-mail: _____

Annex 4: Social Screening Form

This form will be filled up by the PIC along with the community members at Union and Upazila Level and must be submitted to PD and PSC. Before final selection World Bank approval is required. The screening form covers aspects of: ESS1, ESS2, ESS4, ESS5, ESS7 and ESS8.

General Information

Title of the subproject: …… ……..
Complete address of screening locations including coordinates……
Screening Date: ……

Funding Type (please tick): [] Research [] New Construction [] Renovation/Refurbishment

[] CERC [] Other: _____

Probable Involuntary Resettlement Effects -	**Yes**	**No**	**Not Known**	**Remarks**
Involuntary Acquisition of Land/ Land Donation/ Land Taking				
Will the project require land for the proposed intervention				.
1. If yes, will there be any land acquisition?				
2. Is the site for land acquisition known?				
3. Is the ownership status and current usage of land known? If yes, please provide detail information at remarks column.				
4. Is there any possibility of voluntary land donation for the rural roads and market construction? If yes, please provide detail information at remarks column.				
5. Will there be loss of residential and commercial structures due to land acquisition? If yes, please provide detail information at remarks column.				
Is there any presence of squatters within the project ROW? If yes, please provide detail information at remarks column.				
6. Will there be loss of agricultural and other productive assets due to land acquisition? If yes, please provide detail information at remarks column.				
7. Will there be losses of trees, and fixed assets due to land acquisition? If yes, please provide detail information at remarks column.				

Probable Involuntary Resettlement Effects -	Yes	No	Not Known	Remarks
8. Will there be loss of businesses or enterprises due to land acquisition? If yes, please provide detail information at remarks column.				
9. Will there be loss of income sources and means of livelihoods due to land acquisition? If yes, please provide detail information at remarks column.				
Involuntary restrictions on land use or on access to legally designated parks and protected areas				
10. Will people lose access to natural resources, communal facilities and services due to project interventions? If yes, please provide detail information at remarks column.				
11. If land use is changed, will it have an adverse impact on social and economic activities? If yes, please provide detail information at remarks column.				
12. Will access to land and resources owned communally or by the state be restricted? If yes, please provide detail information at remarks column.				
Information on Displaced Persons:				
Any estimate of the likely number of persons that will be displaced by the Project? [ ] No [] Yes If yes, approximately how many?				
Are any of them poor, female-heads of households, or vulnerable to poverty risks? [] No [ ] Yes				
Are any displaced persons from indigenous or ethnic minority groups? [ ] No [ ] Yes				
During Screening, project authority will conduct consultation with the primary and secondary stakeholders and provide their observations in the following sections (13 to 18)				
13: Who are the stakeholders of the project?				
Answer:				

Probable Involuntary Resettlement Effects -	Yes	No	Not Known	Remarks
14: What social and cultural factors affect the ability of stakeholders to participate or benefit from the proposed policy or project?				
Answer:				
15: Are project objectives consistent with their needs, interests and capacity?				
Answer:				
16: What will be the impact of the project or sub-project on the various stakeholders, especially women and vulnerable groups?				
Answer:				
17: What social risks might affect project or sub-project success?				
Answer:				
18: Has the project authority or any other organizations conducted any consultations with the affected community or people? If yes. Please provide a summary.				
Answer:				

1. Prepared by (Name): …… **Signature:** …….. **Date:** ……..
2. Project Implementation Unit District: …… Upazila: …….. Name of the PIC head: …….. 01. Names of Members participated in Screening 02.
3. name of the Participants from local Government 01…… 02…….

Annex 5: Environmental and Social Mitigation and Monitoring Plan

If the environmental screening form identifies non-minor impacts, then this ESMP form is required. The Consultant/Subproject Proponent is required to develop an Environmental and Social Management Plan (ESMP) consisting of a set of feasible and cost-effective mitigation measures and monitoring and institutional plan to prevent or reduce significant negative impacts to acceptable levels. This will include measures for emergency response to accidental events (e.g., fires, explosions), as appropriate. The Consultant/Subproject Proponent will provide an estimation of the impacts and costs of the mitigation measures, and of the institutional and training requirements to implement them. In particular, this would include:

- **Environmental and Social Mitigation & Enhancement Measures:** Recommend feasible and cost-effective measures to prevent or reduce significant negative impacts to acceptable levels. Apart from mitigation of the potential adverse impacts on the environmental components, the ESMP shall identify opportunities that exist for the enhancement of the environmental quality along the surrounding area. Residual impacts from the environmental measures shall also be clearly identified. The ESMP shall include detailed specification, bill of quantities, execution drawings and contracting procedures for execution of the environmental mitigation and enhancement measures suggested, separate for pre-construction, construction and operation periods. In addition, the ESMP shall include good practice guides related to construction and upkeep of plant and machinery. Responsibilities for execution and supervision of each of the mitigation and enhancement measures shall be specified in the ESMP. A plan for continued consultation to be conducted during implementation stage of the project shall also be appended.
- **Institutional Arrangements, Capacity Building and Trainings:** The ESMPs shall describe the implementation arrangement needed for the project, implementation of ESMP, especially the capacity building proposals including the staffing of the environment unit (as and when recommended) adequate to implement the environmental mitigation and enhancement measures. For each staff position recommended to be created, detailed job responsibilities shall be defined. Equipment and resources required for the environment unit shall be specified, and bill of quantities prepared. A training plan and schedule shall be prepared specifying the target groups for individual training programs, the content and mode of training. Training plans shall normally be made for the client agency (including the environmental unit), the supervision consultants and the contractors.
- **Supervision and Monitoring:** Environmental monitoring plan will be an integral part of the ESMP, which outlines the specific information to be collected for ensuring the environmental quality at different stages of project implementation. The parameters and their frequency of monitoring should be provided along with cost of the monitoring plan and institutional arrangements for conducting monitoring. Reporting formats should be provided along with a clear arrangement for reporting and talk corrective action. The ESMP shall list all mandatory government clearance conditions, and the status of procuring clearances.
- **Reporting:** The ESMP will specify the documentation and reporting requirements, specifically, complete record will be maintained for compliance monitoring, effects monitoring, trainings, grievances, accidents, incidents, resource usage, and waste disposal quantities.
- **Grievance Redress Mechanism:** The ESMP will describe the grievance redress mechanism (GRM) to address the project-related grievances and complaints particularly from the local communities.
- **ESMP implementation cost:** The ESMP will also include the cost of its implementation including personnel costs, costs on trainings, effects monitoring, additional studies, and others.

Higher Education Acceleration and Transformation (HEAT) Project

SUBPROJECT ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

Instructions

If the environmental screening form identifies non-minor impacts, then this ESMP form is required. The purpose of this form is to propose feasible mitigation measures for potential non-minor environment and safety issues related to the sub-project proposal. This is a generalized ESMP template for all categories of funding. This form should be attached to the proposal (with the environmental screening form).

Title of the Sub-project: _____

Institution: _____

Table 1: Environmental and Social Mitigation Plan

Activity/Issue	Potential Impacts	Proposed Mitigation	Responsible Parties	Estimated Cost

Table 2: Environmental and Social Monitoring Plan

Impact/Mitigation Measure	Monitoring Parameters	Monitoring Frequency	Monitoring Location	Responsible Parties

Name of Head of Proposal Submitting Entity and Signature with Date:

Name: _____

Signature with Date _____

Contact Telephone Number and E-mail: _____

Please sign below to verify that the information in this document is accurate and complete to the best of your knowledge.

Environment/Social Professional's Signature & Date:

Name: _____

Signature with Date: _____

Contact Telephone Number and E-mail: _____

Annex 6: ToR and contents for ESIA

Background of the Project

The University Grants Commission (UGC) plans to construct a University Teachers' Training Academy (UTTA) under the World Bank financed *Higher Education Acceleration and Transformation Project*. The proposed building is expected to have teaching/training facilities as well as provision for residential amenities. The construction works will follow National Buildings Act and regulations to ensure climate resilient features that can withstand the impacts of climate change-induced disasters and impacts[23].

The ESIA has to comply with Bangladesh environmental laws and regulations. The report needs to be approved by the Dept. of Environment and receive Environmental Clearance Certificate. The ESIA also has to conform to World Bank's Environmental and Social Framework (ESF) and corresponding Environmental and Social Standards (ESS).

Objective of ESIA

The main objectives are:

a) To carry out comprehensive environmental and social assessment study
b) To prepare environmental social management and monitoring plan
c) To prepare the cost estimate for implementation of the project mitigation and monitoring plans.
d) Develop labour management procedures and labor influx plan (taking into consideration COVID-19 related issues).

Location of Proposed Building

The building is proposed to be located at a suitable site in Dhaka. The location will be finalized by UGC.

Duration of the assignment

Duration of the assignment will be approximately *06 (Six) months.*

Main Scope of Services

In line with national and World Bank's ESF requirements, UGC wishes to engage Consultant(s) for environmental and social assessment and preparation of management tools to address the project's E&S risks and impacts. The scope of works shall include, but not limited to, the following:

a) Conduct detailed Environmental and Social Impact Assessment (ESIA) for construction, operation and decommissioning of the UTTA in accordance with Bank's ESF. While conducting ESIA, the consultant will coordinate with UGC's design and supervision consultant to ensure integration of ESIA findings in engineering feasibility studies. Specifically, the consultant shall:
    a. Define the 'study area' considering different environmental settings around the project site, project activities and associated facilities. Specify the boundaries of the study area for the assessment: watersheds, enhanced access to sensitive/remote areas such as Ecologically Critical Areas, in-migration and settlement, natural resource exploitation and commercial development. Consider the area of transporting the construction materials too.
    b. Review of Environmental Legal Requirements, and all relevant policies on land, indigenous people, vulnerable people/ethnic minorities, etc. commensurate with the WB

[23] The facility will have: (i) architectural or building features that enable reduction of energy consumption, (ii) Solar power (concentrated solar power, photovoltaic power) usage, and (iii) Energy efficiency improvement in lighting, appliances, and equipment.

ESSs - Taking cognizance of existing environmental acts, rules and regulations. Also requirements of the WB's 10 ESS's need to be evaluated for the proposed project.

c. Collect information on the existing environment and social condition from authentic secondary sources, and identify gaps to be filled, relevant to the environmental screening needs from primary surveys. Primary surveys shall include baseline monitoring of air, water (surface and underground), soil, noise and ecological parameters at representative and sensitive locations, and identification of all macro-level environmental issues within the project's study area. On the social side, primary survey will focus on land issues mentioned above, presence of tribal /ethnic minorities/ vulnerable people; socio-economic baseline in the project area and area of influence, identification of social risks against the relevant ESSs.
d. Based on E&S risks and impacts identified from the screening exercise the consultant shall prepare appropriate management tools and its preparation, which will be proportionate to project's risk and impacts and could include, but not limited to, Environmental and Social Impact Assessment (ESIA) including Environmental and Social Management Plan (ESMP) and Labor Management (as per **ESS2** requirements). Assessment of cumulative impacts is also required.
e. Gap analysis between ESS2 and Bangladesh Labor Law 2006.
f. Gender analysis and impact identification, mitigation planning
g. Analysis of Alternatives - The consultant while doing analysis of alternatives shall compare feasible alternatives to the proposed project site, material collection and transportation route, technology, design, and operation-including environmental and social risks and impacts "with project" and "without project" scenarios.
h. Mitigation Measures – Identify and evaluate feasible mitigation measures for potentially significant environmental and social impacts as per mitigation hierarchy of the ESF. Resource efficiency and pollution prevention and management measures also need to be incorporated in order to meet **ESS3** and **ESS6** requirements. Community health and safety aspects, especially during construction phase of the proposed project, need to be carefully considered and managed as per **ESS4** requirements.
i. Identify the environmental enhancements to be incorporated in the design of the building and associated facilities.
j. Estimate the costs of mitigation and monitoring measures and outline the institutional and training requirements to implement them.
k. Resettlement and/or rehabilitation – **ESS5** requirements need to be considered in the ESIA. Gap analysis between ARIPA 2017 and ESS5 should be done.
l. Identification of potential impacts on tribal /ethnic minorities and appropriate mitigation measures as per **ESS7** requirements.
m. A chance find guideline will be included in the project ESIA which will guide the management and protection of any such items/sites if found as per the **ESS8**.
n. ESMP - Based on the environmental and social impacts assessed, an ESMP shall be prepared consisting of mitigation, monitoring, and institutional measures required eliminating adverse environmental and social risks and impacts. The ESMP shall be prepared as per the requirements of WB's ESSs and should identify responses to potentially adverse impacts; determine requirements for ensuring responses are made effectively and in a timely manner; and describe the means for meeting those requirements.
o. Stakeholder Engagement and Information Disclosure - Consultant will prepare a stakeholders engagement plan according to **ESS10** to access the level of stakeholder

interest and support for the project and to enable stakeholder's views to be taken into account in project design and environment and social performance. Consultant will ensure that project information on social and environmental risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format. Consultant will translate the key documents, such as the executive summary of Environmental and Social Impact Assessment, Environmental and Social Management Plan or any other documents in local language.

b) The consultant will maintain close coordination with UGC design consultant at time of Environmental and Social Impact Assessment (ESIA) and will prepare specific Environmental and Social Management Plan (ESMP). The ESMP shall be incorporated as part of the contract between the UGC and the contractor, together with appropriate monitoring and enforcement provisions.

c) Analysis of UGC E&S Frameworks and support the client in complying with requirements such as preparation of application and supplementary reports (survey and preparation) required for obtaining project's clearances like DoE clearances, if applicable.

d) The consultant shall ensure UGC design consultant integrates recommendations on environmental and social mitigation measures in design, working drawings, developing specifications, estimates of quantity and ESMP budget; and linking quantity and management measures in bid documents.

Key Qualifications, Experience and Indicative Duties and Responsibilities of the professional staff of the Consultancy Service

SL No.	Position	Educational Qualification	Year of Experience & Area of Expertise	Responsibilities
01	Team Leader/ Environmental Specialist	Masters of Env. Science & Engg B.Sc. Engg (Civil),	10 years' experience in environmental study. Minimum 5 years of experience in relevant type of work.	• Overall management and preparation EIA study report • Liaison and communication with the client • Finalization of the study design, methodology and distribute responsibilities among the team members • Provide training of field supervisor and data collectors • Monitoring the works of all team members • Field visit • Impact identification, evaluation, mitigation and preparation EMP • Any other tasks that may deem necessary in connection with proper implementation of the study.

SL No.	Position	Educational Qualification	Year of Experience & Area of Expertise	Responsibilities
02	Ecologist	B.Sc. in Ecology, Environmental Science or similar field	At least 5 years' experience in Environment analysis. Previous experience in similar project will be preferred.	• Coordinate with the team members • Collection secondary data from various organizations. • Collection climate data like temperature, rainfall, humidity, wind speed and direction from BMD • Participate in the finalization of the study design • Review of related documents • Assist team leader • Attending meetings • Identify the environmental feature (structure, drain, shop, culvert, trees, pond, streams, etc.) of project area • Ecological survey • Focus group discussion and public consultation with various stakeholders • Assists to ensuring quality of field work • Assists in all types of reporting • Any other task as requested by the TL

SL No.	Position	Educational Qualification	Year of Experience & Area of Expertise	Responsibilities
03	Social Safeguard Specialist	Master degree in Social Sciences	At least 10 years' experience in social assessment. Minimum 5 years of experience in relevant type of work. Candidate should have knowledge about the new ESF and the ESSs	• Provide technical guidance to the total team • Develop/ finalize the study instruments and share with the client • Review available documents and secondary records • Training the field staff • Attending meetings with the client • Field visit. Collect qualitative data with the help of the Research Assistants • Socio-economic survey • Ensure quality of the collected data compilation of the draft report, respond to comments and finalization • Any other tasks that may deem necessary in connection with proper implementation of the study. • Prepare Resettlement Action Plan if require
04	Gender and consultation Specialist	Masters of Social. Science	At least 08 years' experience in gender assessment. Minimum 4 years of experience in relevant type of work.	• Coordinate with the team members • Collection secondary data from various organizations. • Participate in the finalization of the study design • Review of related documents • Attending meetings • Assists to ensuring quality of field work

SL No.	Position	Educational Qualification	Year of Experience & Area of Expertise	Responsibilities
05	Field Coordinator cum Data Analyst	B.B.S/ Graduate of any discipline	At least 5 years' experience in data analysis. Previous experience in similar project will be preferred.	• Responsible for monitoring field enumerators during the census, SES and IOL survey. • Participate in the development and training of field data collectors • Data entry, cleaning and processing of data • Tabulation and calculation of required parameters • Assist in public consultation • Any other tasks assigned by the TL
06	Data Analyst	B.B.S/ Graduate of any discipline	At least 5 years' experience in data analysis. Previous experience in similar project will be preferred.	• Conduct field survey and collect data. • Data entry, cleaning and processing of data. • Tabulation and calculation of required parameters • Assist in public consultation • Any other tasks assigned by the TL

Support Staff: Consultant will engage necessary support staffs under the contract.

Duties and Responsibilities of the client

UGC shall provide the following data, services & facilities:

- Administrative assistance in obtaining required information and data by the consultants in performing their duties;
- Assign **(UGC)** officials to liaise with Consultants

Liaison with UGC

The Project Director of **UGC** will provide liaison with the firm. The Project Director will also be available to the firm to discuss and review all findings and recommendations of the firm before presentation in report form.

Ownership of the documents and equipment

- **UGC** shall be owner of all the software, designs, drawings, reports, documents, etc. prepared by the consultants and equipment procured under the project.
- After completion of the project the documents, results and reports and all necessary software shall be handed over to before final payment.
- The equipment shall be handed over to **UGC** in good condition. In case of computer with latest version of software.

Reporting Requirements/ Deliverables

This assignment is expected to be completed **within 24 weeks**. The draft ESIA report should be submitted including comments/suggestion from stakeholders and the World Bank. The consultants will be required to document and present detailed proceedings of all the stakeholders' consultations including the list of participants and photographs as evidence. An Executive Summary should be included summarizing the key elements of the ESIA. A summary of the final ESIA should be prepared in Bangla language. A Power Point Presentation of the report to be made to the client and the Bank upon delivery of the draft report and also at the delivery of the final report.

SN	Milestones	Timeline (cumulative no. of weeks)
1	Draft ESIA	18
2	Final ESIA	22
3	Translated ESIA	24

Tentative Table of Content of the ESIA is as follows (Consultant to obtain approved EIA Terms of Reference from DoE):

Executive Summary

Chapter 1. Introduction

1.1 Background
1.2 The Proposed Project
1.3 Objectives of the Study
1.4 Scope of ESIA
1.5 Study Area of ESIA
1.6 Approach and Methodology

Chapter 2. Legal and Regulatory Compliance

2.1 Introduction
2.2 Applicable Regulations of GOB
2.3 World Bank ESF Policy, Directives and Standards
2.4 Procedure for obtaining ECC from DoE, Bangladesh 25

Chapter 3. Project Description

3.1 Main Project Features and Activities
3.1.1 Pre-Construction Phase
3.1.2 Construction Phase
3.1.3 Operation and Maintenance Phase
3.1.4 Decommissioning Phase
3.2 Implementation Schedule
3.3 Resource Requirements

Chapter 4. Environmental and Social Baseline

4.1 Introduction
4.2 Baseline Data Collection
4.2.1 Ambient climate and air quality

Annex 7: ToR for Senior Environmental Specialist

Project Description and components:

The intent of the HEAT project is to enhance graduate employability for a more competitive and rapidly changing job market within and outside the country and improve governance of higher education nationally. The project also aims at improving quality and relevance of higher education for women regionally through exchange program. The exchange program among different international universities will contribute to removing socio-cultural and economic barriers to women's access to higher education, increase the access to quality jobs and promote women's voice and leadership. The Project has four components that embody 05 sub-components and will be implemented over a five-year period from2021 to 2025/26. Component 1 is the regional component supporting collaboration in higher education across the South Asia region[24] ,Component 2 supports the Bangladesh higher education sector through a nationally focused component and Component 3 support the day to day management of the proposed operation and component 4 is the 'zero budget' contingent emergency response component. Given the ongoing COVID 19 crisis, the project components have been prioritized to identify short-term, medium term and long-term activities under the proposed project.

Project Objectives:

The main project objectives are (i) to strengthen the COVID-19 response in higher education nationally, (ii) to enhance graduate employability and improve governance of higher education nationally; and (iii) to improve access and quality of higher education for women regionally.

Major Responsibilities:

Reporting to the Project Director, HEAT and among others, perform the following roles and responsibilities;

- ✓ Lead the environmental safeguards and occupational health and safety related activities of the project.
- ✓ Develop, organize and deliver trainings and orientation of environmental safeguards pertinent to the project with the stakeholders which will include, but not limited to; MoE/SHED/Project staff, Partner Organizations, and relevant stakeholders.
- ✓ Carry out environmental screening and assessment of relevant sub-projects to identify the potential impacts (especially waste management related issues) in the project areas
- ✓ Based on the data/information of the above screening/assessment, prepare site specific ESMPs for the project.
- ✓ Carry out regular field visits to assess the quality and adequacy of screening and also supervision of environmental safeguards related activities
- ✓ Prepare and submit regular environmental safeguards monitoring and implementation progress reports
- ✓ Any other responsibility/activity asked by the project management

[24] Including the possibility of countries beyond the strict boundaries of South Asia.

Qualifications:

The Specialist will possess the following qualifications;

- ✓ Minimum 10 years' prior experience in the areas of environmental safeguards with any reputed national/international organizations
- ✓ Previous experience of working in the education sector related development project will be considered an advantage
- ✓ Demonstrated capacity in delivering training/orientation and report writing both in English and Bengali
- ✓ Master's degree in any subject of environmental science
- ✓ Previous experience on environmental safeguard with World Bank/Bank/another donor funded project is highly desirable.

Annex 8: ToR for Social Safeguard Specialist

Project Background:

In recent years, the World Bank has supported capacity building in higher education in South Asian countries, which creates a good platform to launch regional collaboration in this aspect. The Higher Education Acceleration and Transformation (HEAT) Project focuses on improving employability of university graduates and improving governance of higher education. The Project also aims to establish a regional network of higher education institutions in South Asia. The Project takes an approach which builds on and utilizes the synergies of national and regional support to higher education. First, the project will leverage digital connectivity, established through different World Bank national projects, among the participating countries (Bangladesh and Afghanistan). Second, the project would focus on employability and leadership, particularly for women, which is one of the major development concerns in the region. Third, the project would look into promoting collaborative research among academics across different institutions in the region. Fourth, the region faces some common issues of governance and management of the higher education sector and would benefit exchange of knowledge on quality assurance, performance-based financing and teacher management systems. Finally, South Asia lags in internationalization of higher education, providing potential scope for the project to initiate efforts in this aspect.

Bangladesh has a growing higher education system with two main providers of higher education in the country: (i) 153 public and private universities[25], directly under the supervision of the University Grants Commission (UGC) and (ii) around 2,000 government and non-government tertiary colleges affiliated with the National University (NU). In addition, there are two regional universities (Asian University for Women and Islamic University of Technology), which operate as fully independent institutions. Together, the sector caters to around 2.7 million students[26] in 2017 which is a significant increase compared to the 1.5 million students in 2010. UGC, an attached body of Ministry of Education (MoE), is the oversight apex body for all public and private universities and the intermediary between the Government and the universities for regulating the affairs of the universities. Female students account for around 44 percent of higher education enrollment. The Government of Bangladesh (GoB) has prepared a Higher Education Strategic Plan 2018-30 that signals a strong commitment by the Government to enhance investments in higher education, comprehensively identifies issues and challenges and recommends solutions. The Bank has supported the higher education sector in Bangladesh through the HEQEP Project since 2008, providing a strong basis for future reforms.

The Asian University for Women (AUW) provides an exceptional example of effectively promoting female higher education and employability, especially for those from underserved community, serving as a model of Center of Excellence for the region. AUW was established in 2008 to educate the next generation of female leaders in the region. This university mostly enrolls underprivileged women (e.g. from the garment sector, and minorities) and prepares them through high quality and rigorous undergraduate programs as high skilled professionals for the job market. In addition to subject specific specialization, AUW emphasizes on confidence-building and higher order cognitive and soft skills development, including problem-solving, teamwork, communication and negotiation skills. It manages to provide internships to all its students,

[25] 49 public and 104 private – however, only 140 universities are academically functional (45 public and 95 private).
[26] There were 0.9 million students in universities and 1.7 million students in tertiary colleges in 2016.

leading to high graduate employment in top employers, while many graduates continue to pursue postgraduate degrees in top ranked global universities. AUW has also managed to maintain academic continuity during the COVID quarantine period through online programming. The institute has identified a need to strengthen their crisis response mechanisms to ensure their ability to support academic continuity during future emergencies. Through this Project, the World Bank (WB) would support improved research, teaching and learning environment in the universities for better student learning outcomes and skills development with the intent of graduating employable students for a more competitive and rapidly changing local and regional job market. The proposed project also aligns with the government policies which guide development priorities and strategies at the higher education sector in Bangladesh, as specified in the Strategic Plan for Higher Education (SPHE) 2018-2030; and in Afghanistan as specified in National Higher Education Strategic Plan II (NHESP II, 2016-2020). In Bangladesh, the Strategic Plan for Higher Education (SPHE) 2018-2030 keeps the objectives and targets of National Education Policy 2010, Vision 2021 and 2041, the draft 7th Five Year Plan and other future looking plans such as Draft 8th Five-year plan, SDG action plan and Delta plan 2100.

Project Description and components:

The intent of the project is to enhance graduate employability for a more competitive and rapidly changing job market within and outside the country and improve governance of higher education nationally. The project also aims at improving quality and relevance of higher education for women regionally through exchange program. The exchange program among different international universities will contribute to removing socio-cultural and economic barriers to women's access to higher education, increase the access to quality jobs and promote women's voice and leadership. Component 1 is the regional component supporting collaboration in higher education across the South Asia region[27] ,Component 2 supports the Bangladesh higher education sector through a nationally focused component and Component 3 support the day to day management of the proposed operation and component 4 is the 'zero budget' contingent emergency response component. Given the ongoing COVID 19 crisis, the project components have been prioritized to identify short-term, medium term and long-term activities under the proposed project.

Project Objectives:

The main project objectives are (i) to enhance graduate employability and improve governance of higher education nationally; and (ii) to improve access and quality of higher education for women regionally. As the main beneficiaries of the project are women, a concrete Gender Action Plan is crucial to the success of the project.

Scopes and Objectives of the ESMF:

The RPF provides policies and procedures to determine requirements of the World Bank's ESS 5 on Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement, to assess potential risks and impacts, to identify detailed steps to develop appropriate mitigation measures, including mitigation and compensation for the impact caused under the project. Specifically, the RPF covers the following:

[27] Including the possibility of countries beyond the strict boundaries of South Asia.

- Reviews the existing national legal and regulatory framework of Bangladesh and compares it with World Bank's ESS 5 on Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement for identifying gaps and providing gap filling measures.
- Describes and defines the process for preparing RAP/s, cut-off dates for tittle and non-title holders, valuation process of impacted assets/ properties etc.
- Provides the principles and methods to be used in valuation of loses, and a description of eligibility and entitlements.
- Identifies the consultation mechanism and approaches to be adopted while preparing and implementing RAPs including public disclosure.
- Describes and defines monitoring and evaluation arrangement and roles and responsibilities of different stakeholders.
- Outlines the legal framework, eligibility criteria of displaced population, valuation methodology, compensation provision, and entitlement matrix and implementation process.
- Outlines implementation arrangement including schedule and grievance redress mechanism
- Outlines principles and objectives governing resettlement preparation and implementation

Major Responsibilities:

Reporting to the Project Director, HEAT, and the Social Safeguards Specialist will assume, among others, the following roles and responsibilities;

- ✓ Lead the social safeguards related activities of the project.
- ✓ Develop, organize and deliver trainings and orientation of social safeguards pertinent to the project with the stakeholders which will include, but not limited to; MoE/SHED/Project staff, Partner Organizations, and relevant stakeholders.
- ✓ Carry out social screening and assessment of relevant sub-projects to identify the presence of project stakeholders in the project areas
- ✓ Based on the data/information of the above screening/assessment, prepare site specific RPF for the project.
- ✓ Carry out regular field visit to assess the quality and adequacy of screening and also supervision of social safeguards related activities
- ✓ Prepare and submit regular social safeguards monitoring and implementation progress reports
- ✓ Any other responsibility/activity asked by the project management

Qualifications:

The Social Safeguards Specialist will possess the following qualifications;

- ✓ Minimum 8-10 years prior experience in the areas of social safeguards with any reputed national/international organizations
- ✓ Previous experience of working in the education relevant project will be considered an advantage
- ✓ Demonstrated capacity in delivering training/orientation and report writing both in English and Bengali
- ✓ Master degree in any subject of social science
- ✓ Previous experience on social safeguard with World Bank/other donor funded project is highly desirable.

Annex 9: ToR for SEP Specialist

For World Bank funded Higher Education Acceleration and Transformation (HEAT) Project

Background and Context

In recent years, the World Bank has supported capacity building in higher education in South Asian countries, which creates a good platform to launch regional collaboration in this aspect. The Higher Education Acceleration and Transformation (HEAT) Project focuses on improving employability of university graduates and improving governance of higher education. The Project also aims to establish a regional network of higher education institutions in South Asia. The Project takes an approach which builds on and utilizes the synergies of national and regional support to higher education. First, the project will leverage digital connectivity, established through different World Bank national projects, among the participating countries (Bangladesh and Afghanistan). Second, the project would focus on employability and leadership, particularly for women, which is one of the major development concerns in the region. Third, the project would look into promoting collaborative research among academics across different institutions in the region. Fourth, the region faces some common issues of governance and management of the higher education sector and would benefit exchange of knowledge on quality assurance, performance-based financing and teacher management systems. Finally, South Asia lags in internationalization of higher education, providing potential scope for the project to initiate efforts in this aspect.

Bangladesh has a growing higher education system with two main providers of higher education in the country: (i) 153 public and private universities, directly under the supervision of the University Grants Commission (UGC) and (ii) around 2,000 government and non-government tertiary colleges affiliated with the National University (NU). In addition, there is are two regional universities (Asian University for Women and Islamic University of Technology), which operate as fully independent institutions. Together, the sector caters to around 2.7 million students in 2017 which is a significant increase compared to the 1.5 million students in 2010. UGC, an attached body of Ministry of Education (MoE), is the oversight apex body for all public and private universities and the intermediary between the Government and the universities for regulating the affairs of the universities. Female students account for around 44 percent of higher education enrollment. The Government of Bangladesh (GoB) has prepared a Higher Education Strategic Plan 2018-30 that signals a strong commitment by the Government to enhance investments in higher education, comprehensively identifies issues and challenges and recommends solutions. The Bank has supported the higher education sector in Bangladesh through the HEQEP Project since 2008, providing a strong basis for future reforms.

The Asian University for Women (AUW) provides an exceptional example of effectively promoting female higher education and employability, especially for those from underserved community, serving as a model of Center of Excellence for the region. AUW was established in 2008 to educate the next generation of female leaders in the region. This university mostly enrolls underprivileged women (e.g. from the garment sector, and minorities) and prepares them through high quality and rigorous undergraduate programs as high skilled professionals for the job market. In addition to subject specific specialization, AUW emphasizes on confidence-building and higher order cognitive and soft skills development, including problem-solving, teamwork, communication and negotiation skills. It manages to provide internships to all its students, leading to high graduate employment in top employers, while many graduates continue to pursue postgraduate degrees in top ranked global universities. AUW has also managed to maintain academic continuity during the COVID quarantine period through online programming. The institute has identified a need to strengthen their crisis response mechanisms to ensure their ability to support academic continuity during future emergencies.

Through this Project, the World Bank (WB) would support improved research, teaching and learning environment in the universities for better student learning outcomes and skills development with the intent of graduating employable students for a more competitive and rapidly changing local and regional job market.

The proposed project also aligns with the government policies which guide development priorities and strategies at the higher education sector in Bangladesh, as specified in the Strategic Plan for Higher Education (SPHE) 2018-2030; and in Afghanistan as specified in National Higher Education Strategic Plan II (NHESP II, 2016-2020). In Bangladesh, the Strategic Plan for Higher Education (SPHE) 2018-2030 keeps the objectives and targets of National Education Policy 2010, Vision 2021 and 2041, the draft 7th Five Year Plan and other future looking plans such as Draft 8th Five-year plan, SDG action plan and Delta plan 2100.

Project Development Objective (PDO) of the proposed HEAT Project

The PDOs are (i) to improve COVID-19 responses and recovery support in higher education, (ii) to enhance graduate employability and improve governance of higher education, and (iii) to improve connectivity and quality of higher education for women regionally.

Components of the proposed HEAT Project

Component/Subcomponent	Key Activities
COMPONENT 1: SOUTH-ASIAN HARMONIOUS AREA FOR RESEARCH AND EDUCATION	
Sub-component 1.1: Pandemic Emergency Preparedness	The sub- activities will be (i) development and implementation of a coordinated approach to responding to the crisis; (ii) support the development of institution-wise (public and private) recovery plans;(iii)establishment of a COVID response and reopening committee at each university;(iv)develop emergency response plans which will be updated every six months(v)deploy a rapid self-assessment to determine the level of preparedness to digital/online/distance learning approaches; (vi)review of IT, quality assurance policies and regulations to facilitate the institutional pivot towards online learning ;(vii) establish a '24/7 Helpdesk' for faculty and students to provide online and telephone-based IT support to academic staff and students who are using LMS;(viii)academic support for online teaching
Sub-component 1.2: Regional Integration in Higher Education	This subcomponent will support a regional policy dialogue on integration in higher education with the overall goal of promoting internationalization of higher education in South Asia. This will cover (1) The necessary steps to promote physical and virtual student mobility, including harmonization and recognition of credits and degree;(2) Joint approaches to quality assurance and accreditation and joint degrees (3) Steps that

	governments can take to promote joint research.
Sub-component 1.3: Building System Resilience Through Digitalization of Higher Education	This sub-component will (1)Support the policies necessary to insulate the higher education system from events similar to this pandemic, (2)Finance regulatory authorities to formulate policies and strategies that help develop resilience in the higher education system organization through digitalization(3) Support face-to-face interactions between administrators, faculties, researchers and students through network events(4)Support participating universities and colleges to collaborate with the NRENs and regulatory authorities to ensure access to dedicated low-cost broadband connectivity for their students and staff (5) Together with an international partner, AfgREN and BdREN will jointly develop content to target faculty that are moving towards online learning systems, which will be translated in local languages (6) Support disadvantaged female students who can be supported through low-cost broadband support and suitable devices for accessing the digital recourses[28].
Sub-component 1.4 Developing a Regional Network of Women's Colleges, Institutions and Universities	This sub-component will support the following set of activities: **(i)AUW Academic Complex:** This section will support the infrastructure development of a climate resilient academic complex/campus at Asian University for Women (AUW) which will become a hub for the regional network. The academic complex development would include the building of the main seminar rooms, lecture halls, theaters, and faculty offices. This campus will increase the enrollment capacity of AUW from 700 to 3000 students. (ii) **Strengthening Women's Colleges, Institutions and Universities in Bangladesh Segment of the Regional Network.** This section will improve collaboration in online learning, while also improving access and quality of higher education for women in a regional network of universities in Bangladesh which will contribute to policy development, grants for teaching and learning upgradation, curricular upgrading, network events, digital facilities development etc. This subcomponent will also finance for minor infrastructure upgrading and improvements to teaching and learning facilities of women's institutions, childcare facilities, dormitories, WASH facilities, etc. that have been identified as particularly important for female enrolment

[28] Efforts will also be made to rope in Research and Educational Networks across other countries in the region.

	(iii)Promote Excellence in Women's Education in Afghanistan: This section will facilitate collaboration of women's universities in Afghanistan to the regional network through (i)scholarship for undergraduate female students, (ii)postgraduate scholarships for female academics, (iii) faculty development and exchange, (iv)creation of institutional Gender Development Units and (v)Development of Joint Masters' Programs .
COMPONENT 2: TRANSFORMING HIGHER EDUCATION IN BANGLADESH	
Sub-Component 2.1: SUPPORTING BUSINESS CONTINUITY UNDER COVID-19	Activities under this sub-component are strengthening Online Learning Capabilities through developing National Learning Management Infrastructure (LMI), subsidized connectivity and devices to students and staff, upgrading the Bangladesh Research and Education Network (BdREN).
Sub-Component 2.2: Strengthening the Market Relevance of Higher Education Programs in Bangladesh	This sub-component is to enhance the quality of higher education programs through the following: (i) enhancing employability skills of university students (ii) strengthening faculty professional development, and (iii) Competitive grant scheme. Under this sub-component an University Teachers' Training Academy (UTTA) with provision of residential amenities will be constructed. As part of faculty professional development 5,000 teachers from public and private universities will be trained. Under competitive grant scheme main activities will be (i)COVID-19 related research and development(a) upgrading teaching-learning facilities with modern communication technology; (b) upgradation of science and technology labs for STEM disciplines; (c) updating/modernizing curricula and teaching-learning material; and, (d) upgradation/renovation of childcare facilities and ensuring campus safety for women.(e) competitive research grants for STEM and Humanities/Social Sciences/Liberal Arts. (a) establishing 7 new fab-labs; (b) transforming all existing fab labs into Centers of Excellence in digital manufacturing and facilitating link-up with private sector; (c) set-up 5 "i-labs" in 5 universities; and (d) set-up business incubators tagged with successful fab-labs/i-labs to convert innovative ideas into commercially useful products (xx) IP management cells and Technology Transfer Offices (TTO) will be established at least in 20 universities
Sub-Component 2.3: Improving the Governance and Quality of the Higher Education Sector	This sub-component will support activities to enhance the overall management capacity of the higher education sector in Bangladesh. Technical assistance will be provided to support implementation of (i) Improving Higher Education Management, (ii) Enhanced Quality Assurance Mechanisms to all the 153 universities in Bangladesh and (iii) Strengthening of Institutional and Program Accreditation and at least 30

	programs will be accredited in universities under Bangladesh Accreditation Council (BAC).
COMPONENT 3: ENHANCING PROJECT MANAGEMENT INCLUDING CERC, RESULTS MONITORING AND COMMUNICATION	This component is to support project management capacity of Bangladesh: Ministry of Education (MoE) of Bangladesh and UGC; and Ministry of Higher Education of Afghanistan (MoHE) and beneficiary higher education institutions, and build results monitoring and evaluation capability of these institutions. The activities under this component include: (i) project management; (ii) monitoring and evaluation; (iii) communication; and (iv) Technical Assistance (TA). Under this component, the project will create a grievance redress mechanism (GRM), which covers all aspects of the project during implementation.
Component 4: Contingent Emergency Response Component (CERC)	A zero budget is kept for this component

Stakeholder Engagement and Objectives of the Stakeholder Engagement Plan

Under the World Bank-financed project, **stakeholder engagement plan, consultations, and associated monitoring and reporting activities will need to be conducted in line with the World Bank's Environmental and Social Framework (ESF).** The preparation of the HEAT project will need to be screened against the ten Environmental and Social Standards (ESS) that are well defined in the ESF.
The objectives of the Stakeholder Engagement Plan (SEP) is to establish a systematic approach to stakeholder engagement that will help the implementing entity identify key stakeholders – project affected parties and other interested parties – and build and maintain constructive relationships with them. The SEP will assess the level of stakeholder interest and support for the project; enable stakeholder views to be taken into account in project design and in environmental and social performance; promote and provide means for inclusive engagement throughout the project life-cycle; ensure that appropriate project information is disclosed to stakeholders in a timely, and appropriate manner and format; provide citizens with accessible and inclusive means to raise issues and grievances; and enable the project implementing entity to respond to and manage such grievances.

Scope of Work

The scope of these TORs is to ensure a systemic approach to stakeholder engagement by developing a Stakeholder Engagement Plan (SEP) for the HEAT project. The Specialist will prepare a SEP proportional to the scale and complexity of the project and its associated risks and impacts in close coordination with PIC and MoE/SHED following a four-step approach:

(i) **Stakeholder mapping and initial consultations:** identify key stakeholders, classified into project-affected and other interested parties; and hold initial consultations.

(ii) **Preparation of a preliminary SEP based on initial consultations:** Based on stakeholder feedback from the initial consultations, develop a draft SEP with detailed description of activities, roles and responsibilities, timeframe, and budget.

(iii) **Consultations on the preliminary SEP and feedback documentation** for key stakeholders and stakeholder groups;

(iv) **Preparation of the appraisal-stage SEP:** revise and further develop the draft SEP based on stakeholder feedback.

The Stakeholder Engagement Plan will need to comply with the World Bank's ESS10 on Stakeholder Engagement and Information Disclosure, and will include the following key elements (see detailed outline in Annex I):

- Introduction / Project Description
- Brief Summary of Previous Stakeholder Engagement Activities
- Stakeholder Identification and Analysis
- Stakeholder Engagement Program
- Grievance Redress Mechanism
- Gender-Based Violence (GBV) at the Project sites and Addressing Them
- Roles, Responsibilities, and Resources for Stakeholder Engagement (including budget)
- Monitoring and Reporting
- Annexes

Annexes of the SEP may include: Sample minutes form/s from interviews and consultations conducted; Grievance Submission Form; Stakeholder Mapping or Diagram; documentation from correspondence or minutes of other consultations conducted, e.g., workshops, roundtables, regional events, etc.

Specific Tasks for the Specialist

The Specialist will be required to undertake the following tasks:

- Stakeholder mapping and analysis and initial consultations: identify key stakeholders, classified into project affected and other interested parties, and support initial consultations
- Initial stakeholder mapping and analysis based on desk review and initial consultations. The stakeholder identification should cover wider area than the project will affect if a location has not yet been identified.
- Identify key stakeholders and classify them into affected parties and other interested parties.
- Identify those project-affected parties (individuals or groups) who, because of their circumstances, may be disadvantaged or vulnerable, and due to their characteristics, may be more likely to be adversely affected by the project impacts or more limited than others in their ability to take advantage of the project's benefits. Ensure that the stakeholder mapping is both gender- and age-sensitive. Further, the consultant should keep the four corporate gender pillars in mind (Improving Gaps in Human Endowments (Health/Education); Removing Constraints for More and Better Jobs; Removing Barriers to Women's Ownership and Control of Assets; Enhancing Women's Voice & Agency and Engaging Men and Boys) while engaging with particularly female stakeholders so that any issues with gender parity and women participation are addressed and GBV analysis can be made following the GPN.

Development of a Stakeholder Engagement Plan (SEP)

Develop the preliminary SEP based on the stakeholder mapping and the SEP template (***Annex 8***) and following the draft SEP outline (***Annex 7***), and in close collaboration with team members who are leading the development of the Environmental and Social Impact Assessment (ESIA) and other ESF instruments. The SEP should:

- Identify what issues and decisions are under consideration on which stakeholder and public input is sought

- Describe the timing and methods of engagement with stakeholders throughout the life cycle of the project as agreed between Bank and Borrower, distinguishing between project-affected parties and other interested parties.
- Describe the range and timing of information to be communicated to project-affected parties and other interested parties, as well as the type of information to be sought from them.
- Be designed to take into account the main characteristics and interests of the stakeholders, and the different levels of engagement and consultation that will be appropriate for different stakeholders.
- Describe the measures that will be used to remove obstacles to participation, and how the views of differently affected groups will be captured.
- Describe how the disadvantaged and vulnerable people in the context of the project will be engaged in consultation process throughout the project life, including differentiated measures to allow the effective participation of those identified as disadvantaged or vulnerable.
- Include a stakeholder engagement program that summarizes the main goals of the stakeholder engagement planned and the envisaged schedule for the various stakeholder engagement activities: at what stages throughout the project's life they will take place, how frequently and at what interval.
- Define roles and responsibilities for the implementation of the SEP; include a budget estimate for the lifetime of the project; and define reporting and monitoring measures to ensure the effectiveness of the SEP and periodical reviews of the SEP based on findings.
- Describe a culturally appropriate Grievance Mechanism (GM) proportionate to the potential risks and impacts of the project. This GM needs to be described in detail in the SEP, including: Grievance process (intake, recording, processing and referral, resolution and response, monitoring and reporting, awareness raising and communication with stakeholders, appeals process); and GRM contact information.

Consultation and feedback documentation for key stakeholders and stakeholder groups;

- Ensure that the draft SEP is disclosed as early as possible before the consultations, and ensure that the stakeholders are informed about the draft SEP and the upcoming consultations.
- Take part in the stakeholder consultations and engagement during the project preparation as per planned in the draft SEP; and seek the views of stakeholders on the draft SEP, including on the identification of stakeholders and the proposals for future engagement.
- Ensure that the views of differently affected groups, with a focus on vulnerable and disadvantaged groups and individuals, will be captured through the consultations. Where applicable, include differentiated measures to allow the effective participation of those identified as disadvantaged or vulnerable.
- Record and analyze the stakeholder feedback from consultations and other engagement to inform the project preparation on the views and concerns of different stakeholders.

Preparation and disclosure of the appraisal-stage SEP:

- Revise and further develop the draft SEP based on consultations, other stakeholder feedback, and guidance from the PIU, BEZA and the World Bank.
- Ensure that all required sections are covered (see Annex I & II) and that stakeholder feedback is reflected in the stakeholder engagement program and plan.
- Ensure that the appraisal-stage SEP is disclosed after it has received the necessary clearances and before the appraisal of the project.

While developing the SEP, the consultant or consultancy should follow the guidelines provided on ESS10 in ESF document, and in Guidance Note on ESS10 for Borrowers. A draft outline for the SEP is included in Annex I. World Bank recommended template for the Stakeholder Engagement Plan is attached as Annex II. Annex III includes a GRM check list.

Deliverables

The Project Preparation stage of this assignment is expected to be completed in about ***12 weeks*.**

a) Prepare an inception report which includes information on stakeholders and groups that need to be consulted and engaged. – ***2 weeks***
b) Prepare and disclose a preliminary SEP ahead of the consultations. – ***6 weeks***
c) Prepare a revised version of SEP based on consultations, other stakeholder engagement, and PIU/World Bank feedback. – ***2 weeks***
d) Submit and disclose the appraisal-stage SEP. – ***2 weeks***

Required Skills and Qualification

The Specialist must meet the following requirements:

- Masters' degree in Social Sciences, Development Studies, or a similar discipline.
- At least **5** years of experience in the field of social development, including extensive experience in stakeholder consultation, communication, mobilization, engagement, policy and advocacy work etc.
- Experience in conducting focus group discussions and participatory approaches of engagement such as PRA and in working with groups with low literacy levels.
- Sound knowledge of safeguard requirements of international banks; knowledge of World Bank procedures will be a plus
- Ability to work independently and undertake the field assignments.
- Proven ability to work in a collaborative, team environment.
- Written and oral fluency in English required.

Demonstrated computer user skills (e.g., desktop application MS Office such as Word, Excel, and Power Point).

Annex 10: ToR for Gender Specialist

For World Bank funded Higher Education Acceleration and Transformation (HEAT) Project

The Higher Education Acceleration and Transformation (HEAT) project, funded by World Bank and implemented by Secondary and Higher Education Division, Ministry of Education, Bangladesh, focuses on improving employability of university graduates and improving governance of higher education. The Project Development Objectives (PDOs) are (i) to improve COVID-19 responses and recovery support in higher education, (ii) to enhance graduate employability and improve governance of higher education nationally; and (iii) to improve access and quality of higher education for women regionally. This project has 3 components (with 09 subcomponents Component 1 is the regional component supporting collaboration in higher education across the South Asia region[29] ,Component 2 supports the Bangladesh higher education sector through a nationally focused component and Component 3 support the day to day management of the proposed operation and component 4 is the 'zero budget' contingent emergency response component.
The proposed project activities will involve civil works in Bangladesh for all eligible public and private universities, including women colleges and universities for (i) upgradation of teaching-learning facilities, (ii) upgradation of science and technology labs (iv) upgradation/renovation of women friendly facilities like dormitories, washrooms, childcare and those that ensure campus safety for women(v) Construction of Asian University for Women campus and (vi)construction of the University Teachers' Training Academy (UTTA). The project with a large influx of workers may impact the social fabric of the area and increase the risks of GBV gender-based violence in the communities adjacent to project sites. The influx of workers may potentially increase the demand for sex work, sexual abuse, workplace harassment and even the risk for trafficking of women. In this regard, a key concern is the potential exposure to sexual exploitation and abuse (SEA), sexual harassment (SH) and GBV both for the community, student population, various staff, in particular the female staff members, and female residents living in and around the project sites.

In an effort to reduce the potential risks associated with World Bank financed activities and to identify key interventions that may support effective GBV mitigation, prevention and response, the Secondary and Higher Education Division is seeking a Specialist to provide support regarding GBV, in particular SEA/SH for HEAT project. This assignment will include an assessment of key risk factors that may contribute to SEA/SH, identification and support to the implementation of key measures to be integrated into project design to mitigate the risk of SEA/SH or, should incident occur, to enable ethical, confidential and survivor-centered responses and provide a baseline of information and recommendations for future investments. In particular, recommendations should build on existing evidence regarding what works to mitigate, prevent and respond to GBV in Bangladesh, as well as on existing World Bank international good practices.

II – SCOPE OF WORK AND KEY ACTIVITIES

- **Review and assess existing project documents** including those regulating the work of the Contractor(s) (e.g. Operations Manual, environmental and social commitment plans - ESCP, environmental and social management frameworks/plans - ESMF/P, stakeholder commitment plans,labor management plans, codes of conduct, grievances redress mechanisms - GRM, bidding documents, etc.) and determine their effectiveness to address risks linked to sexual harassment and sexual exploitation and abuse, as well as the current measures being used to prevent and respond to any incidents. Meet with key staff in (locations) in order to review prevention and response processes, staff sensitization/training and effectiveness of existing GRM/ complaints mechanisms.

[29] Including the possibility of countries beyond the strict boundaries of South Asia.

  - Assess quality, confidentiality and comprehensiveness of existing protocols being used if grievances related to of SEA/SH are reported (linking survivors to services and avoiding re-victimization).
  - Assess quality, confidentiality and comprehensiveness of clear and confidential protocols for preventing SEA/SH.
- Make practical recommendations through the **development a work plan with concrete measures to implement key recommendations** to strengthen systems for SEA prevention and response in coordination with the Task Team), based on World Bank Good Practice Note for Addressing Gender Based Violence in Investment Project Financing Involving Major Civil Works and an assessment of the existing GBV risk management systems in place as part of the project implementation.
- **Organize/facilitate initial training of project related staff on GBV drivers**, risks and mitigation measures. Provide support for organizing trainings of PIU and project-related staff on SEA/SH risk mitigation, including codes of conduct and GRM.
- **Support the task team/contractor with the implementation of the GBV Action Plan (and any further mitigation measures)** in line with local labor legislation and a survivor-centred approach, including i) an awareness raising strategy, describing how workers and local communities will be sensitized to GBV risks, and the worker's responsibilities under the CoC; ii) a response protocol, including GBV service providers to which GBV survivors will be referred, and the services which will be available; iii) a GRM and allegation procedures, including how the project will provide information to employees and the community on how to report cases of GBV CoC breaches to the GRM and; iv)an Accountability framework to hold accountable alleged perpetrators associated to the project.
- **Assess the need and support implementation of community consultations with women to take place during upcoming implementation support missions**, in order to understand potential risks and the best ways to make project benefits accessible to women.
- **Support the development or adaptation of Codes of Conduct (CoC)** for workers (and GBV clauses in contracts promoting the inclusion of women and girls in the project, if applicable) based on best practice. Support the task team and contractors in rolling out the CoC, including training and documentation the process of implementation (challenges and lessons learned).
- **Develop or adapt a Standard Operating Procedures for a Gender Based Violence Grievance Redress Mechanism (GRM)** based on best practices in order to effectively collect information on instances of SEA/SH in coordination with the project task team and implementation unit. Support rolling out the GBV GRM, including training project related staff, labor, community members, students or others as needed, and document the process of implementation including challenges and lessons learned.
- **Support the development and costing of a survivor-centered protocol to respond to cases of GBV** reported through the GRM as part of the overall project framework. This should include adding to or creating GBV service providers mapping of priority project areas.
- Provid**e recommendations and costing for the implementation of community awareness raising activities** that include the risk of SEA related to the project, the code of conduct for workers, the GRM and the ways in which the community members can safely report concerns.
- Provide **recommendations on integrating a gender lens** into any ongoing impact evaluations or project-related research (if relevant), and to gather lessons learned in cases where project activities are already finished and can no longer be retrofitted

III - Scope of work and methodology

- *Desk review and analysis of relevant documents:*
  - **Project documents prepared by SHED/ contractor and integrating gender and GBV implications where appropriate**
  - **Systems put in place by the relevant operations -** This will include Incident Reporting Procedures; Terms of Reference or existing Codes of Conduct for Contractors; safeguard instruments, including ESMF/P, stakeholder engagement plans, labor management plans, etc.; monitoring reports by contractors, GRM manual and reports as well as fact finding reports on most any previous allegations of SEA, etc. This could include examining processes for implementing and monitoring COCs, collecting and analyzing information on actual/potential risk factors for vulnerability to sexual exploitation and abuse and elaborating measures to address them.
  - **Best practices for accountability measures,** including CoCs, GRMs and SEA/SH risk mitigation and prevention measures relevant to the project.

- *Key informant interviews*
  - Semi-structured interviews with Government Counterparts/implementing agencies, NGO staff, relevant WB Program Leaders, Task Teams and Social Safeguards specialists, other staff providing oversight in terms of SEA/SH prevention/response. The primary purpose of these interviews is to fully understand the set of measures put in place to address SEA in key sectors and the extent to which they meet global best practice requirements, as well as to understand the feasibility of initially proposed retrofitting recommendations.
  - Meet with the task team in order to review prevention and response processes, including staff training and monitoring, existence of complaints mechanisms, including community awareness raising re: making a complaint, and availability/provision of survivor-centered services for an alleged survivor.
  - Assess comprehensiveness of clear and confidential protocols to be followed if cases of SEA/SH are reported (linking survivors to services and avoiding re-victimization). If gaps are identified make recommendation to, i) strengthen the reporting response framework outlining procedures and guidelines targeting government partners and contracting firms associated with the project; ii) develop recommendations to strengthen the referral pathway for survivors that should be implemented as soon as a case is reported, verified or not.
  - Engage with counterparts directly involved in the project implementation regarding their intervention in any cases of SEA/SH, as well as to assess the extent of internal knowledge on this issue. The Specialist should meet in particular with the social and/or GRM focal points or the Operational Safety and Health team within the project to assess knowledge of appropriate and ethical measures to report and respond to cases of SEA/GBV. When meeting with those managing the GRM the Specialist should verify whether and how the grievance redress mechanism collects SEA/SH related complaints in a safe manner, without increasing risk to survivors and keeping anonymity if at all possible.
  - Engage with secondary sources of information on the potential risks of GBV linked to the project and on the appropriate entry points for the development of a GBV-sensitive GRM. This will include women's organizations, GBV service providers active in the zone of implementation of the project, community leaders, and other community members with key information on the experiences of women and girls in communities affected by the project.

Rolling out appropriate systems

- Help Task Team set up GBV GRM, facilitate it running smoothly and monitor and record complaints received
- Help in rolling out appropriate COCs, ensuring requirements in CoCs are clearly understood by those signing and signed by all workers present in project site.
- Clearly define the GBV requirements and expectations in the bidding documents for contractor
- Help Task team implement appropriate project related civil works for labor to reduce GBV risks. This can include separate, safe and easily accessible facilities for women and men working on the site like well-lit locker rooms and/or latrines located in separate areas, with the ability to be locked from the inside.
- Help in setting up IEC campaigns. Ensure that display signs are visible around the project site that signal to workers and the community that the project site is an area where GBV is prohibited.
- Monitoring all GBV related activities

The assignment will include office-based work and travel to project sites in Bangladesh as identified by and coordinated with the Task Team. Key activities during field work may include:

- Meeting with the project teams in order to review prevention and response processes linked to SEA/SH (staff training and monitoring, existence of complaints mechanisms, community awareness, and availability/provision of survivor-centered services for an alleged survivor);
- Consultations with communities surrounding the project.

IV - Deliverables

The Specialist will prepare the following outputs:

1. Assessment report and work plan with measures to strengthen SEA/SH prevention and response mechanisms under project,
2. Carry out tasks set in Gender and GBV Action Plan, and further enhance/strengthen risk prevention and mitigation methods
3. Rolling out appropriate systems as outlined.
4. Relevant trainings to sensitize community and project related staff about GBV issues, methods of reporting grievances
5. Revised safeguard instruments to integrate GBV risk mitigation measures in line with risks identified and good practices, in the country and in other WB funded projects.
6. Completed monitoring tool with up to date progress for each sub- project

V - Reporting, Remuneration, Timing and language of outputs

The initial duration of this assignment will be for XXX days until XXX. The work will be supervised by SHED and contractor. The outputs outlined above will be produced in English and in Bangla (when required).

VI - Key skills, technical back ground and experience required

- Minimum of 5 years relevant professional work experience at national and international levels in development or humanitarian field, with a focus on the prevention and response to gender-based violence;
- Operational experience on the ground in low- and/or middle-income countries in the implementation of programs related to violence against women and girls, sexual exploitation and abuse, gender, and child protection;

- Proven research skills and demonstrated expertise in analysis and development of technical papers and reports as well as programmatic guidance related to violence against women and children;
- Familiar and able to operationalize international standards, procedures for prevention and response to GBV, safe and ethical GBV data collection, and of key standards and resources on GBV in emergencies.
- Experience of collaborating with Government entities in GBV program implementation considered an asset;
- Direct experience in collecting, analyzing and comparing data related to GBV;
- Knowledge and experience of World Bank policies and operations considered an asset;
- Excellent analytical, communication, writing, presentation/facilitation and editorial skills in English and Bangla.
- Willingness to travel regularly to engage with Task Teams on operational issues and advisory activities related to GBV;
- Commitment to a survivor-centered approach.

Annex 11: World Bank GRM Checklist

June 2018

Checklist to accompany the Guidance Note for ESS10: Stakeholder Engagement and Information Disclosure

This Checklist provides guidance for the Borrower on the application of the Environmental and Social Standards (ESSs), which form part of the World Bank's 2016 Environmental and Social Framework. Checklists help to illustrate the requirements of the ESSs and propose sample approaches to implement some of the requirements of the ESSs; they are not Bank policy, nor are they mandatory. Checklists do not substitute for the need to exercise sound judgment in making project decisions. In case of any inconsistency or conflict between the Checklists and the ESSs, the provisions of the ESSs prevail.

Grievance Redress Mechanism Checklist

The appropriate level of complexity of a project's Grievance Redress Mechanism (GRM) depends on the risks and impacts of the project and the project context. The following checklist describes a complex GRM that adheres to good international practice, which may not be necessary for all projects. Nevertheless, this checklist helps to determine whether a grievance mechanism conforms to good international practice.

A. System issues

1. Does the project invite feedback/grievances? Yes___ No___
2. Does the organization have a policy on grievance redress? Yes___ No___
   a) Is the policy available to all staff, beneficiaries, and potential users? Yes___ No___
   b) Is the policy written in the local language(s)? Yes___ No___
3. Does the grievance mechanism have the following features?
   a) A clearly understood procedure for people to provide feedback and/or submit grievances. Yes___ No___
   b) A statement of who is responsible for dealing with feedback/ grievances. Yes___ No___
   Procedures for resolving or mediating and investigating grievances depending on their seriousness and complexity. Yes___ No___
   c) A system for keeping complainants informed of status updates. Yes___ No___
   d) A system for recording feedback/grievances and outcomes. Yes___ No___
   e) Procedures for protecting confidentiality of complainants Yes___ No___

B. Staff management

1. Is there a grievance manual for staff? Yes___ No___
2. Do the grievance policy and/or procedures provide guidance on:
   a) What is a grievance/feedback? Yes___ No___
   b) What information to collect from complainants? Yes___ No___
   c) What remedies can or should be used to resolve grievances? Yes___ No___
3. 3. Are the grievance policy and procedures communicated to all staff? Yes___ No___
4. Are adequate resources allocated for the GM to function effectively? Yes___ No___
5. Does the organization provide training on grievance management to staff? Yes___ No___

C. Communication to grievance mechanism users

1. Are users told how to submit grievances/feedback? Yes___ No___
   a) Is an information brochure on the grievance mechanism available to users? Yes___ No___
   b) Are feedback/grievance forms available to users? Yes___ No___
   c) Are grievance forms or signs displayed prominently and readily accessible? Yes___ No___
   d) Are contact details of staff receiving feedback/grievance published and displayed in public areas? Yes___ No___
   e) Is information on grievance management available in local languages? Yes___ No___

2. Are users able to submit grievances/feedback:
   a) In writing Yes___ No___
   b) By email Yes___ No___
   c) By fax Yes___ No___
   d) By telephone Yes___ No___
   e) In person Yes___ No___

3. Are users provided with assistance to submit feedback/grievances where needed? Yes__ No___
4. Can the grievance mechanism be accessed free of charge? Yes___ No___
5. Are users promised confidentiality? Yes___ No___
6. Are users informed about the appeals process? Yes___ No___

D. Feedback/grievance recording

1. Are all feedback/grievances recorded? Yes___ No___
   a) Are grievances/feedback logged and documented? Yes___ No___
   b) Are inquiries/suggestions and recommendations recorded? Yes___ No___
   c) Are the outcomes and responses to all grievances/feedback recorded? Yes___ No___

E. Business standards

1. Are there business standards in place for the process and timing with which grievances/feedback are dealt with? Yes___ No___
   a) Is receipt acknowledged within a stipulated time frame? Yes___ No___
   b) Are the grievances supposed to be resolved within a stipulated time frame? Yes___ No___
2. Is there a quality control system in place to:
   a) Check if all grievances have been dealt with or acted upon. Yes___ No___
   b) Check if all aspects of a grievance have been addressed. Yes___ No___
   c) Check if all necessary follow-up action has been taken. Yes___ No___

F. Analysis and feedback

1. Are regular internal reports on grievances/feedback produced for senior management? Yes___ No___
2. Grievances/feedback reports include data on:
   a) Numbers of grievances/feedback received. Yes___ No___
   b) Compliance with business standards. Yes___ No___
   c) Issues raised in grievances/feedback. Yes___ No___
   d) Trends in grievances/feedback over time. Yes___ No___
   e) The causes of grievances/feedback. Yes___ No___
   f) Whether remedial action was warranted. Yes___ No___

g) What redress was actually provided? Yes___ No___
h) Recommendations/strategies to prevent or limit future recurrences. Yes___ No___

3. Are reports about grievances/feedback made public, periodically? Yes___ No___

Annex 12: ToR for External Monitor

PROJECT BACKGROUND

In recent years, the World Bank has supported capacity building in higher education in South Asian countries, which creates a good platform to launch regional collaboration in this aspect. The Higher Education Acceleration and Transformation (HEAT) Project focuses on improving employability of university graduates and improving governance of higher education. The Project also aims to establish a regional network of higher education institutions in South Asia. The Project takes an approach which builds on and utilizes the synergies of national and regional support to higher education. First, the project will leverage digital connectivity, established through different World Bank national projects, among the participating countries (Bangladesh and Afghanistan). Second, the project would focus on employability and leadership, particularly for women, which is one of the major development concerns in the region. Third, the project would look into promoting collaborative research among academics across different institutions in the region. Fourth, the region faces some common issues of governance and management of the higher education sector and would benefit exchange of knowledge on quality assurance, performance-based financing and teacher management systems. Finally, South Asia lags in internationalization of higher education, providing potential scope for the project to initiate efforts in this aspect.

Bangladesh has a growing higher education system with two main providers of higher education in the country: (i) 153 public and private universities[30], directly under the supervision of the University Grants Commission (UGC) and (ii) around 2,000 government and non-government tertiary colleges affiliated with the National University (NU). In addition, there is are two regional universities (Asian University for Women and Islamic University of Technology), which operate as fully independent institutions. Together, the sector caters to around 2.7 million students[31] in 2017 which is a significant increase compared to the 1.5 million students in 2010. UGC, an attached body of Ministry of Education (MoE), is the oversight apex body for all public and private universities and the intermediary between the Government and the universities for regulating the affairs of the universities. Female students account for around 44 percent of higher education enrollment. The Government of Bangladesh (GoB) has prepared a Higher Education Strategic Plan 2018-30 that signals a strong commitment by the Government to enhance investments in higher education, comprehensively identifies issues and challenges and recommends solutions. The Bank has supported the higher education sector in Bangladesh through the HEQEP Project since 2008, providing a strong basis for future reforms.

The Asian University for Women (AUW) provides an exceptional example of effectively promoting female higher education and employability, especially for those from underserved community, serving as a model of Center of Excellence for the region. AUW was established in 2008 to educate the next generation of female leaders in the region. This university mostly enrolls underprivileged women (e.g. from the garment sector, and minorities) and prepares them through high quality and rigorous undergraduate programs as high skilled professionals for the job market. In addition to subject specific specialization, AUW emphasizes on confidence-building and higher order cognitive and soft skills development, including problem-solving,

[30] 49 public and 104 private – however, only 140 universities are academically functional (45 public and 95 private).
[31] There were 0.9 million students in universities and 1.7 million students in tertiary colleges in 2016.

teamwork, communication and negotiation skills. It manages to provide internships to all its students, leading to high graduate employment in top employers, while many graduates continue to pursue postgraduate degrees in top ranked global universities. AUW has also managed to maintain academic continuity during the COVID quarantine period through online programming. The institute has identified a need to strengthen their crisis response mechanisms to ensure their ability to support academic continuity during future emergencies. Through this Project, the World Bank (WB) would support improved research, teaching and learning environment in the universities for better student learning outcomes and skills development with the intent of graduating employable students for a more competitive and rapidly changing local and regional job market. The proposed project also aligns with the government policies which guide development priorities and strategies at the higher education sector in Bangladesh, as specified in the Strategic Plan for Higher Education (SPHE) 2018-2030; and in Afghanistan as specified in National Higher Education Strategic Plan II (NHESP II, 2016-2020). In Bangladesh, the Strategic Plan for Higher Education (SPHE) 2018-2030 keeps the objectives and targets of National Education Policy 2010, Vision 2021 and 2041, the draft 7th Five Year Plan and other future looking plans such as Draft 8th Five-year plan, SDG action plan and Delta plan 2100.

The project development objective (PDO) is to enhance graduate employability, improve governance of higher education and improve access and quality of higher education for women regionally.

KEY OBJECTIVE OF EXTERNAL MONITORING

Monitoring is an integral part of the resettlement process. As part of this Project, a three-tier monitoring system has been designed to monitor and evaluate the progress of the Social Action Plan. These 3-levels comprise of: a) Internal monitoring at EA level involving the INGO and UGC and AUW offices; b) monitoring by project construction supervision consultant (CSC) and c) independent external monitoring. The primary objective for engaging an independent external monitor is to review the efficacy of internal monitoring, design and conduct periodic third-party monitoring and feedback UGC and GoB on policy improvement and enhancement of implementation process. The External Monitoring Agency (EMA) will review implementation process as per set policies in the RAP and assess the achievement of resettlement objectives, the changes in living standards and livelihoods, restoration of the economic and social base of the affected people, the effectiveness, impact and sustainability of entitlements, the need for further mitigation measures if any, and to learn strategic lessons for future policy formulation and planning.

SCOPE OF WORK

The scope of work of the External Monitoring Agency (EMA) will include the following tasks:

i. To develop specific monitoring indicators for undertaking monitoring of all aspects of Resettlement Action Plan
ii. To review and verify the progress in land acquisition/resettlement implementation of the Project.
iii. Identify the strengths and weaknesses of the land acquisition/resettlement objectives and approaches, implementation strategies.
iv. Evaluate and assess the adequacy of compensation given to the APs and the livelihood opportunities and incomes as well as the quality of life of PAPs of project-induced changes.

v. Identification of the categories of impacts and evaluation of the quality and timeliness of delivering entitlements (compensation and rehabilitation measures) for each category and how the entitlements were used and their impact and adequacy to meet the specified objectives of the Plans. The quality and timeliness of delivering entitlements, and the sufficiency of entitlements as per approved policy.
vi. To analyze the pre-and post-project socio-economic conditions of the affected people. In the absence of baseline socio-economic data on income and living standards, and given the difficulty of APs having accurate recollection of their pre-project income and living standards, develop some quality checks on the information to be obtained from the APs. Such quality checks could include verification by neighbors and local village leaders. The methodology for assessment should be very explicit, noting any qualifications.
vii. Review results of internal monitoring and verify claims through sampling check at the field level to assess whether land acquisition/resettlement objectives have been generally met. Involve the affected people and community groups in assessing the impact of land acquisition for monitoring and evaluation purposes.
viii. To monitor and assess the adequacy and effectiveness of the consultative process with affected APs, particularly those vulnerable, including the adequacy and effectiveness of grievance procedures and legal redress available to the affected parties, and dissemination of information about these.
ix. Identify, quantify, and qualify the types of conflicts and grievances reported and resolved and the consultation and participation procedures.
x. Provide a summary of whether involuntary resettlement was implemented (a) in accordance with the RAP, and (b) in accordance with the stated policy.
xi. To review the quality and suitability of the relocation sites from the perspective of the both affected and host communities.
xii. Verify expenditure & adequacy of budget for resettlement activities.
xiii. Describe any outstanding actions that are required to bring the resettlement activities in line with the policy and the RAP. Describe further mitigation measures needed to meet the needs of any affected person or families judged and/or perceiving themselves to be worse off as a result of the Project. Provide a timetable and define budget requirements for these supplementary mitigation measures.
xiv. Describe any lessons learned that might be useful in developing the new national resettlement policy and legal/institutional framework for involuntary resettlement.

METHODOLOGY AND APPROACH

The general approach to be used is to monitor activities and evaluate impacts ensuring participation of all stakeholders especially women and vulnerable groups. Monitoring tools should include both quantitative and qualitative methods. The external monitor should reach out to cover:

- 100% APs who had property, assets, incomes and activities severely affected by Project works and had to relocate either to resettlement sites or who chose to self-relocate, or whose source of income was severely affected.
- 10% of persons who had property, assets, incomes and activities marginally affected by Project works and did not have to relocate;

- 10% of those affected by off-site project activities by contractors and sub-contractors, including employment, use of land for contractor's camps, pollution, public health etc.;

The monitoring should be supplement by focus group discussions (FGD) which would allow the monitors to consult a range of stakeholders (local government, resettlement field staff, NGOs, community leaders, and, most importantly, APs) and community public meetings which are open public meetings at the resettlement sites to elicit information about performance of various resettlement activities.

OTHER STAKEHOLDERS AND THEIR RESPONSIBILITY

1. Responsibility of UGC

UGC through its Project Management Office (PMO) at headquarters and in the RU-field offices will ensure timely supply of background references, data and project options to the independent monitor. It will ensure uninterrupted access to work sites, relevant offices of the GOB and UGC in particular. The independent external monitor will sit in quarterly coordination meetings with the UGC in presence of the supervision consultant and the UGC should organize that at PMO or Field level as appropriate.

Recommendation based on the result of the monitoring should be offered to UGC to cover up the deficiencies identified by the external monitor. UGC will accept the recommendations of the external monitor if it is within the scope of work and there is nothing incorrect in the report.

2. Responsibility of Supervision Consultant

The supervision consultant will provide appropriate protocol at site or at its Project Office for the mission of the EMA. It will on behalf of UGC ensure free access to work sites, impact areas and the database on resettlement and civil works. The supervision consultant will ensure timely intimation of its civil works planning as and when made or updated during the construction period and keep the external monitoring and evaluation consultant informed.

3. Responsibility of the Implementing NGO

The RAP implementing NGO will assist and cooperate the external monitor through providing free access to its database and the automated management information system (MIS). It will provide copies of the progress reports and other reports as requested by the external monitor. The INGO may have to carry out surveys as well for fulfilment of the requirements of the external monitoring.

4. Panel of Experts (POE)

The POE will keep closer look into the activities of the external monitor in light of the social safeguard strategy and the involuntary resettlement guideline. It will ensure timely response from the EA on queries and recommendations from the independent monitor.

TEAM COMPOSITION OF THE EXTERNAL MONITORING AGENCY

The EMA should focus on field-based research on institutional arrangement, implementation strategy, policy objectives and the targets. In addition, data collection, processing and analysis should be performed to pin point problem areas and weaknesses and to highlight corrective measures, if needed, to achieve

the objectives on schedule. Thus, there is a need for a dedicated monitoring team with adequate gender representation. Further, it is essential that the central team or field level coordinators responsible for monitoring, are skilled and trained in data base management, interview technique as well as social and economic/finance. Keeping in mind these criteria, the team should ideally include:

Position/expertise	Qualification and experience
1. Team Leader/ Implementation Specialist	Masters in social science/science with 15 years working background in planning, implementation and monitoring of involuntary resettlement for infrastructure projects. Experience in institutional capacity analysis and implementation arrangement for preparation and implementation of resettlement plans, and knowledge in latest social safeguard policies of the international development financing institutions in Bangladesh are preferred.
2. Social Impact Specialist	Masters in social science/science with 15 years working experience in social impact assessment including census and socioeconomic surveys, stakeholders' consultation, and analyzing social impacts to identify mitigation measures in compliance with social safeguard policies of the international development financing institutions and national legislations. Experience of preparing resettlement framework and action plans and implementation of plans for externally financed projects is essential.
3. Gender Specialist	Masters in social science with 15 years working experience in relevant field; Thorough knowledge of gender issues and their implications in development projects; research and work experience relating to gender issues; and knowledge of techniques and their applications in mobilizing community participation in development programs.
4. Data Analyst	Graduate with working experience and knowledge of software, those are most commonly used in Bangladesh; demonstrated ability to design and implement automated MIS(s) for monitoring progress, comparing targets with achieved progress and the procedural steps.

TIME FRAME AND REPORTING

The EMA will be employed over a period of 5 years with intermittent inputs from the professional team to continue one year after completion of the RAP implementation.

Quarterly and annual monitoring reports should be submitted to the UGC with copies to the World Bank. An evaluation report at the end of the Project should be submitted to the UGC with critical analysis of the achievement of the projects and the performance of UGC, INGO

The external monitors will provide monitoring and evaluation report covering the following aspects:

- Whether the resettlement activities have been completed as planned and budgeted
- The extent to which the specific objectives and the expected outcomes/results have been achieved and the factors affecting their achievement or non-achievement

- The extent to which the overall objective of the Resettlement Plan, pre project or improved social and economic status, livelihood status, have been achieved and the reasons for achievement / non achievement
- Major areas of improvement and key risk factors
- Major lessons learnt and
- Recommendations.

Formats for collection and presentation of monitoring data will be designed in consultation with UGC, consultants and panel of experts.

QUALIFICATION OF THE EXTERNAL MONITORING AGENCY

The EMA will have at least 10 years of experience in resettlement policy analysis and implementation of resettlement plans. Further, work experience and familiarity with all aspects of resettlement operations would be desirable. NGOs, Consulting Firms or University Departments (consultant organization) having requisite capacity and experience as follows can qualify for services of and external monitor for the Project.

xv. NGOs registered with the Social Welfare Department of the GOB, Consulting Firms registered with the Joint Stock Company or Departments of any recognized university.
xvi. The applicant should have prior experience in social surveys in land-based infrastructure projects and preparation of resettlement plans (RAP) as per guidelines on involuntary resettlement of World Bank.
xvii. The applicant should have extensive experience in implementation and monitoring of resettlement plans, preparation of implementation tools, and development and operation of automated MIS for monitoring.
xviii. The applicant should be able to produce evidences of monitoring using structured instruments and computerized MIS with set criteria for measuring achievement.
xix. The applicant should have adequate manpower with capacity and expertise in the field of planning, implementation and monitoring of involuntary resettlement projects as per donor's guidelines.

Interested agencies should submit proposal for the work with a brief statement of the approach, methodology, and relevant information concerning previous experience on monitoring of resettlement implementation and preparation of reports.

The profile of consultant agency, along with full CVs of the team to be engaged, must be submitted along with the proposal.

BUDGET AND LOGISTICS

The budget should include all expenses such as staff salary, office accommodation, training, computer / software, transport, field expenses and other logistics necessary for field activities, data collection, processing and analysis for monitoring and evaluation work. Additional expense claims whatsoever outside the proposed and negotiated budget will not be entertained. VAT, Income Tax and other charges admissible will be deducted at source as per GOB laws.

Annex 13: Guideline to prepare a Resettlement Action Plan

1. Description of the project. General description of the project and identification of the project area.

2. Potential impacts. Identification of:(a)the project components or activities that give rise to displacement, explaining why the selected land must be acquired for use within the timeframe of the project;(b)the zone of impact of such components or activities;(c)the scope and scale of land acquisition and impacts on structures and other fixed assets;(d)any project-imposed restrictions on use of, or access to, land or natural resources;(e)alternatives considered to avoid or minimize displacement and why those were rejected; and(f)the mechanisms established to minimize displacement, to the extent possible, during project implementation

3. Objectives: The main objectives of the resettlement program.

4. Census survey and baseline socioeconomic studies. The findings of a household-level census identifying and enumerating affected persons, and, with the involvement of affected persons, surveying land, structures and other fixed assets to be affected by the project .The census survey also serves other essential functions: (a)identifying characteristics of displaced house-holds, including a description of production systems, labor, and household organization; and baseline information on livelihoods (including, as relevant, production levels and income derived from both formal and informal economic activities) and standards of living (including health status) of the displaced population;(b)information on vulnerable groups or persons for whom special provisions may have to be made; (c)identifying public or community infrastructure, property or services that may be affected; (d)providing a basis for the design of, and budgeting for, the resettlement program;(e)in conjunction with establishment of a cutoff date, providing a basis for excluding ineligible people from compensation and resettlement assistance; and (f)establishing baseline conditions for monitoring and evaluation purposes .As the Bank may deem relevant, additional studies on the following subjects may be required to supplement or inform the census survey:(g)land tenure and transfer systems, including an inventory of common property natural resources from which people derive their livelihoods and sustenance, non-title-based usufruct systems (including fishing, grazing, or use of forest areas) governed by local recognized land allocation mechanisms, and any issues raised by different tenure systems in the project area;(h)the patterns of social interaction in the affected communities, including social net-works and social support systems, and how they will be affected by the project; and(i)social and cultural characteristics of displaced communities, including a description of for-mal and informal institutions (e .g ., community organizations, ritual groups, nongovernmental organizations (NGOs)) that may be relevant to the consultation strategy and to designing and implementing the resettlement activities

5. Legal framework. The findings of an analysis of the legal framework, covering:(a)the scope of the power of compulsory acquisition and imposition of land use restriction and the nature of compensation associated with it, in terms of both the valuation methodology and the timing of payment;(b)the applicable legal and administrative procedures, including a description of the remedies available to displaced persons in the judicial process and the normal timeframe for such procedures, and any available grievance redress mechanisms that may be relevant to the project;(c)laws and regulations relating to the agencies responsible for implementing resettlement

activities; and(d)gaps, if any, between local laws and practices covering compulsory acquisition, imposition of land use restrictions and provision of resettlement measures and ESS5, and the mechanisms to bridge such gaps .

6. Institutional framework. The findings of an analysis of the institutional framework covering:(a)the identification of agencies responsible for resettlement activities and NGOs/CSOs that may have a role in project implementation, including providing support for displaced persons;(b)an assessment of the institutional capacity of such agencies and NGOs/CSOs; and(c)any steps that are proposed to enhance the institutional capacity of agencies and NGOs/CSOs responsible for resettlement implementation

7. Eligibility. Definition of displaced persons and criteria for determining their eligibility for compensation and other resettlement assistance, including relevant cutoff dates.

8. Valuation of and compensation for losses. The methodology to be used in valuing losses to deter-mine their replacement cost; and a description of the proposed types and levels of compensation for land, natural resources and other assets under local law and such supplementary measures as are necessary to achieve replacement cost for them.

9. Community participation. Involvement of dis-placed persons (including host communities, where relevant):(a)a description of the strategy for consultation with, and participation of, displaced persons in the design and implementation of the resettlement activities;(b)a summary of the views expressed and how these views were taken into account in preparing the resettlement plan;(c)a review of the resettlement alternatives presented and the choices made by displaced per-sons regarding options available to them; and(d)institutionalized arrangements by which dis-placed people can communicate their concerns to project authorities throughout planning and implementation, and measures to ensure that such vulnerable groups as indigenous people, ethnic minorities, the landless, and women are adequately represented .

10. Implementation schedule. An implementation schedule providing anticipated dates for displacement, and estimated initiation and completion dates for all resettlement plan activities. The schedule should indicate how the resettlement activities are linked to the implementation of the overall project.

11. Costs and budget. Tables showing categorized cost estimates for all resettlement activities, including allowances for inflation, population growth, and other contingencies; timetables for expenditures; sources of funds; and arrangements for timely flow of funds, and funding for resettlement, if any, in areas outside the jurisdiction of the implementing agencies.

12. Grievance redress mechanism. The plan describes affordable and accessible procedures for third-party settlement of disputes arising from dis-placement or resettlement; such grievance mechanisms should take into account the availability of judicial recourse and community and traditional dispute settlement mechanisms.

13. Monitoring and evaluation. Arrangements for monitoring of displacement and resettlement activities

by the implementing agency, supplemented by third-party monitors as considered appropriate by the Bank, to ensure complete and objective information; performance monitoring indicators to mea-sure inputs, outputs, and outcomes for resettlement activities; involvement of the displaced persons in the monitoring process; evaluation of results for a reasonable period after all resettlement activities have been completed; using the results of resettlement monitoring to guide subsequent implementation .

14. Arrangements for adaptive management. The plan should include provisions for adapting resettlement implementation in response to unanticipated changes in project conditions, or unanticipated obstacles to achieving satisfactory resettlement outcomes

Annex 14: Voluntary Land Donation

Province/Region	
District	
Village	
Sub-Project ID	

Name of land owner	ID number	Beneficiary of the Project Y/N		
Sex	Age	Occupation		
Address				
Description of land that will be taken for the project	Area affect	Total land Holding area	Ration of land affected to total land held	Map code, if available
Description of annual crops growing on the land now and project impact				
Details		Number		
Trees that will be destroyed				
Fruit trees				
Trees used for other economic or household purposes				
Mature forest trees				
Other				
Describe any other assets that will be lost or must be moved to implement the project				
Value of Donate assets				

By signing or providing thumb-print on this form, the land user or owner agrees to contribute assets to the sub-project. The contribution is voluntary. If the land user or owner does not want to contribute his/ her assets to the project, he or she should refuse to sign or provide thumb print, and ask for compensation instead.

Date:……	Date:…….
District PMO representatives' signature	Affected person's signature (both husband and wife)

Annex 15: Guidelines for E-Waste Management

The project will use and procure equipment needed for computerization (office electronics, desktop, laptop, servers, medical equipment, monitoring instruments, etc.) These items can become sources of electronic wastes (E-waste). E-waste applies to consumer and business electronic equipment that is near or at the end of its useful life. These products can contain heavy metals like cadmium, lead, copper, and chromium that can contaminate the environment. Environmentally sound E-waste treatment technology can be considered at three levels:

1) Decontamination, dismantling and segregation
2) Shredding and special treatment processes like electromagnetic separation, eddy current separation, CRT breaking and treatment and density separation using water.
3) Recovery of metals and disposal of hazardous E-waste fractions including plastics with flame retardants, CFCs, capacitors, Mercury, lead and other items.

The establishment of E-waste Recycling & Treatment Facility shall be in line with the Guidelines in for establishing and operating "Recycling and Treatment and Disposal Facilities" for hazardous wastes. The procedures for setting up & management of e-waste facility shall include licenses from all appropriate governing authorities such as environmental clearance, recycler registration from Department of Environment under Electrical and Electronic Waste (Management and Handling) Rules, obtaining of consents under relevant act and authorization from the government authority.
The following table provides common examples of different types of e-wastes.

Table: Types of E-wastes

Type of E-wastes	Examples
ICT and Telecommunications equipment	Mainframes, Printers, Personal computers (CPU, mouse, screen and keyboard), Laptop computer, Networking equipment, Scanners, Mobile phones, CD / DVDs, UPSs, Radio sets, Television sets, Video cameras, Video recorders, Hi-fi recorders, Audio amplifiers and electronic Musical instruments
Office electronics	Photocopying equipment, Electrical and electronic typewriters, Pocket and desk calculators, Facsimile and Telephones
Lighting	Fluorescent tubes, Compact fluorescent lamps, High intensity discharge lamps, including pressure sodium lamps and metal halide lamps; Low pressure sodium lamps, solar panels, Other lighting or equipment for the purpose of spreading or controlling light with the exception of filament bulbs.
Medical equipment	Scanners, Operating equipment, Stethoscopes, Radiotherapy equipment, Cardiology, Dialysis, Pulmonary ventilators, Nuclear medicine equipment, Laboratory equipment for in-vitro diagnosis, Analysers, Freezers, Fertilization tests. Other appliances for detecting, preventing, monitoring, treating, alleviating illness, injury or disability.
Monitoring and control instruments	Smoke detectors, Heating regulators, Thermostats, Measuring, weighing or adjusting appliances for household or as laboratory equipment and other monitoring and control instruments used in industrial installations (e.g. in control panels).
Batteries	Lead Batteries, Lithium batteries, Nickel and Cadmium batteries, etc.

Educational institutions are recipients of new or second hand electrical and electronic goods. Most of the second-hand products are not inspected before they are donated. Coupled with poor handling and use, their lifespan becomes shorter resulting in large amounts of e-waste in most learning institutions. In order to manage e-waste, learning institutions need to:

- Create awareness and conduct sensitization campaigns on responsible e-waste management
- Develop Memorandum of Understandings (MoUs) with e-waste handlers/recyclers for collection, recycling and refurbishing of e-waste at life-end
- Develop mechanisms to ensure that inspection certificates of electronic items clearly specify end-of-life date and who bears responsibility thereafter
- Develop and mainstream e-waste education in curricula

Best practice for e-waste management is shown in the figure below.

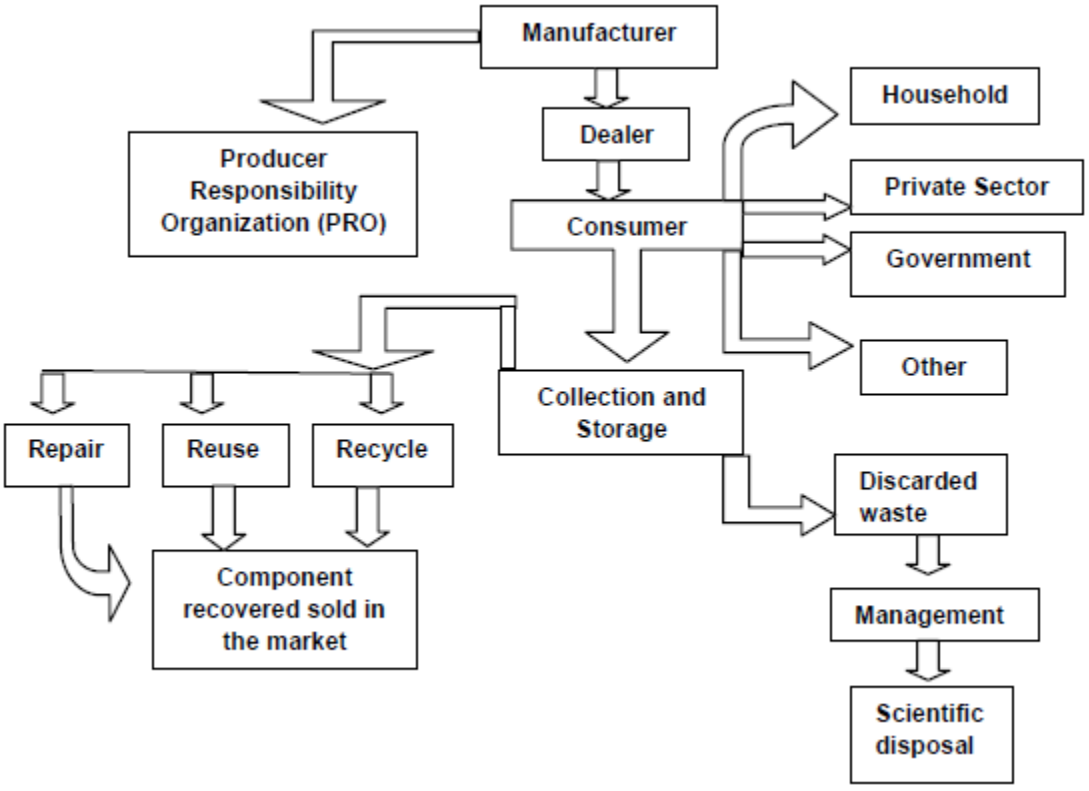


Figure: E-waste management (best practice management) flow chart

General guidelines for handling and disposing e-wastes under this project are as follows:

(i) *E-Waste cannot be disposed in the trash or recycling bins*.

(ii) The e-waste cannot be sold directly to informal scrap collectors. The vendors will provide an e-waste Management Plan which details arrangements for the collection, transport, storage and disposal of the wastes which needs to be endorsed by the World Bank.

(iii) Lifting and moving equipment needs to be undertaken with care so as to avoid personal and environmental harm. Key principles include:

- Use proper lifting techniques to avoid back injuries
- equipment casings can be brittle and break easily; they should be handled carefully to avoid an acid or metal contact
- Make sure that the equipment is properly secured and upright in the vehicle
- If an equipment shows signs of damage to the terminals, case or cover, replace it with a new one before handling or transferring for disposal.

(iv) If reuse of equipment is not chosen or possible, proper Personal Protection Equipment (PPE) will be used for dismantling and recycling. Open burning will be avoided. Safe incinerator will be used for burning.

(v) Acid treatment for recycling will be carried out in a controlled environment.

(vi) Some empty equipment cases like for battery cases must be disposed of carefully because they can still contain significant amounts of lead. The empty cases should then be wrapped in heavy duty plastic or encapsulated with concrete before disposal and can be disposed in the sanitary landfills with the permission from DoE. Without DoE's permission those will not be disposed in the sanitary landfills. The concrete and plastic serves the purpose of ensuring that lead will not leach out and become mobile in landfill leachate, thus reducing the environmental risk.

Annex 16: Exclusions List

The following types of activities as ineligible for CERC financing under the Project:

- Activities with high risk of environmental and social impact;
- Activities without any Bio-Safety measures;
- Concerning significant conversion or degradation of critical natural habitats. Including, but not limited to, any activity within wildlife and forest reserves, national parks, conservation forests and sanctuaries.
- Damages cultural property, including but not limited to, any activities that affect the properties inscribed in the World Heritage List, other archaeological and historical sites; and religious monuments, structures and cemeteries.
- Requires involuntary acquisition of land, or the resettlement or compensation of more than 200 people
- Requiring pesticides that fall in WHO classes IA, IB, or II.
- Affecting waters of riparian neighbors.
- New primary roads and Highways, new irrigation and drainage schemes, construction of any dams
- New power generating capacity of more than 10 MW. New exploration, production or distribution of electricity. Rehabilitation of production or distribution electricity systems
- Activities involving the use of wood for fuel or as raw material from natural habitats. Activities involving the use of hazardous substances.

Annex 17: Chance Find Guidelines

Subproject activities could impact sites of social, sacred, religious, or heritage value. "Chance find" procedures would apply when those sites are identified during the design phase or during the actual construction/research period and the related activity will not be eligible for financing under the project.

(1) Cultural property includes monuments, structures, works of art, or sites of significant points of view, and are defined as sites and structures having archaeological, historical, architectural, or religious significance, and natural sites with cultural values. This includes cemeteries, graveyards and graves.

(2) The list of negative attributes which would make a subproject ineligible for support includes any activity that would adversely impact cultural property.

(3) In the event of finding of properties of cultural value during construction/research, the following procedures for identification, protection from theft, and treatment of discovered artifacts should be followed and included in standard bidding document.

(a) Stop the construction/research activities in the area of the chance find;

(b) Delineate the discovered site or area;

(c) Secure the site to prevent any damage or loss of removable objects.

(d) Notify the supervisory Engineer who in turn will notify the responsible local authorities;

(e) Responsible local authorities and the relevant Ministry would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures.

(f) Decisions on how to handle the finding shall be taken by the responsible authorities and the relevant Ministry. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance), conservation, restoration and salvage.

(g) Implementation of the authority decision concerning the management of the finding shall be communicated in writing by the relevant Ministry.

(h) Construction/research work could resume only after permission is given from the responsible local authorities and the relevant Ministry concerning safeguard of the heritage.

(4) These procedures must be referred to as standard provisions in construction/research contracts. During project supervision, the Environmental/Social Consultant shall monitor the above regulations relating to the treatment of any chance find encountered.

(5) Relevant findings will be recorded in World Bank Supervision Reports and Implementation Completion Reports will assess the overall effectiveness of the project's cultural property mitigation, management, and activities, as appropriate.

Annex 18: Environmental Code of Practice

The following ECOPs are provided in this annex:

ECoP 1: Waste Management

ECoP 2: Fuels and Hazardous Substances Management

ECoP 3: Water Resources Management

ECoP 4: Drainage Management

ECoP 5: Soil Quality Management

ECoP 6: Erosion and Sediment Control

ECoP 7: Top Soil Management

ECoP 8: Topography and Landscaping

ECoP 9: Borrow Areas Management

ECoP 10: Air Quality Management

ECoP 11: Noise and Vibration Management

ECoP 12: Protection of Flora

ECoP 13: Protection of Fauna

ECoP 14: Protection of Fisheries

ECoP 15: Road Transport and Road Traffic Management

ECoP 16: Construction Camp Management

ECoP 17: Workers Health and Safety.

ECoP - 1: Waste Management

General

This code of practice describes procedures for handling, reuse and disposal of waste materials during construction. The waste materials generated can be classified into

i. Construction Waste and
ii. Domestic waste.

Pre-construction Stage

- The contractor shall identify the activities during construction that have the potential to generate waste and work out measures for the same in the construction schedule.
- The Contractor shall educate his workforce on issues related to disposal of waste, the location of disposal site as well as the specific requirement for the management of these sites.

Construction Stage

- The contractor shall either re-use or dispose the waste generated during construction depending upon the nature of waste.
- Wastes that could not be re-used shall be disposed safely by the contractor.
- The waste management practices adopted by the Contractor shall be reviewed by the ENGINEER IN CHARGE during the progress of construction.

Post Construction Stage

- After decommissioning of construction sites, the Contractor shall hand over the site after clearing the site of all debris/wastes to the ENGINEER IN CHARGE.
- In case of disposal of wastes on private land, certificate of Completion of Reclamation is to be obtained by the Contractor from the landowner that "the land is restored to his satisfaction".

ECoP - 2: Fuels and Hazardous Substances Management

General

Activities related to fuel and hazardous substances that are considered to potentially have negative environmental effects include:

- Storage, handling, and transfer of petroleum, oil, and lubricant (POL) products; and
- Storage and handling of hazardous materials other than POL products;

Some materials used during implementation of projects may have potentially hazardous effects on the environment if not properly stored and handled. Concerns are related to accidental releases into the environment, such as spills, refueling losses, and leakage from equipment that could result in contamination of soil, groundwater, or surface waters. Groundwater may transport the contaminants off-site to down-gradient aquifers or water supplies, or discharge them into surface waters. Therefore, release of potential contaminants on the ground surface could have significant environmental impacts that could ruin groundwater (well supplies).

Activities by the ENGINEER IN CHARGE

- Informing the community about the likely schedule of works
- After obtaining the consent of the community the ENGINEER IN CHARGE shall be responsible to supervise the works including monitoring of storage areas and materials handling practices of contractors.

Activities by the Contractor

- The contractor shall submit the schedules and methods of operations for various items during the construction operations to the ENGINEER IN CHARGE for approval.
- Care must be taken with the storage, transfer, handling of POL products and hazardous subtances to prevent potential environmental damage.
- All empty containers and drums shall be returned to the designated storage area. It shall be ensured that all drums and containers are closed and not tipped over and all waste oil, lubricants, and solvents shall be stored in closed containers.
- Any container, drum, or tank that is dented, cracked, or rusted will probably eventually leak. Make sure all containers, drums, and tanks that are used for storage are in good condition. Check for leakage regularly to identify potential problems before they occur.
- The proper storage of materials will greatly reduce the risk of accidental spills or discharges into the environment.
- For temporary outdoor storage, put containers and drums in clearly marked areas, where they will not be run over by vehicles or heavy machinery. The area should preferably slope or drain to a safe collection area in the event of a spill. Tanks should have appropriate secondary containment (i.e. double-walled or surrounded by a bund) that will collect spilled material in case of a leak. Permanent storage areas for containers or drums should be on an impermeable floor that slopes to a safe collection area in the event of a spill or leak.
- At all times when products are being handled or transported, care must be taken to prevent any product from being spilled, misplaced, or lost and possibly entering and contaminating the soil or a natural waterway. When equipment and vehicle maintenance or repair is required in the field, it should be undertaken at least 30 m away from any watercourse. Minimize the potential for entry of hydraulic fluids or oil into a watercourse by using sorbent materials to collect spilled petroleum products. Return all used sorbent materials to the appropriate storage yards for safe disposal.
- Return all diesel or fuel used to wash asphalt emulsion pumps to the maintenance depot for safe storage or disposal. Also return all solvents used to wash spray-painting or other equipment to the appropriate storage yards for safe disposal.
- Wash equipment in maintenance areas equipped with oil/water separators so that any petroleum products can be removed prior to discharge of the wastewater. Oil/water separators are only effective if they are properly maintained. At sites without oil/water separators, minimize the amount of wash water used and wash in areas where the potential for entry of wash water into a waterway is minimized by proper grading or curbing.
- Tankers should not be washed near watercourses. Wash out should be done in places where proper grading or curbing minimizes the potential for entry of wash water into a waterway. Re-fuelling or servicing of equipment and vehicles to be done at least 30 m away from any watercourse. Re-fuelling over liner material with an absorbent pad (e.g. sand bed) will help to contain potential spills. If re-fuelling is done from a bulk tanker, the hose/nozzle assembly should be replaced to its proper position upon completion.

- Quick action in the event of a spill of hazardous materials is important in order to prevent environmental damage. Things to do when a spill occurs:
  1. Identify the material Involved and make a quick assessment:
     - How extensive is the spill?
     - Are there any watercourses nearby?
     - Are the watercourses down gradient from the spill?
     - Are there drainage systems down gradient from the spill, which lead toa nearby watercourse?
  2. Stop the flow of product, if it can be done safely.
  3. Notify the Engineer and Authorities immediately.
  4. Control and contain spilled product until expert help arrives, if it can be done safely.
- When a limited oil spill occurs on level land, scoop up the affected soil and dispose at a site approved by the Engineer and the Department of Environment. When an extensive oil spill occurs on level land, dig sump hole and pump excess oil into a temporary container. The remaining contaminated soil must be scooped up and disposed of at a site approved by the Engineer and the Department of Environment.
- When an extensive spill occurs on a slope or hillside, a trench can be dug downhill from the spill to intercept the spilt material.
- Should petroleum products reach a watercourse, several temporary spill containment measures can be sued to help stop the spreading of products.
- Workers may be at risk from exposure to dust particles or toxic fumes from chemicals used in road works and materials testing.
- Specific measures to reduce risks include limiting time of exposure to dust particles, chemicals and noise; enhancing safety and inspection procedures; and improving materials safe handling.

ECoP - 3: Water Resources Management

General

Water resources may be impacted when the subproject activities are adjacent to it or the runoff to the water body is affected by change of drainage pattern due to construction of embankment. The following activities are likely to have an adverse impact on the ecology of the area:

i. Earth moving
ii. Removal of vegetation
iii. Waste disposal from construction works
iv. Water abstractions

Pre-Construction Stage

When there is interruption to regular activities of community near water body due to construction or rehabilitation work, following are the Contractor's responsibilities:

i. Restriction on community use of water during construction, if any, should be intimated to the community in advance.
ii. Alternate access to the water body is to be provided in case there is interruption to use of existing access.

iii. If the water body affected is a drinking water source for a habitation, alternate sources of water are to be provided to the users during the period for which its use is affected.

Construction Stage

- It should be ensured by the contractor that the runoff from construction site entering the water body is generally free from sediments.
- Silt/sediment should be collected and stockpiled for possible reuse as surfacing of slopes where they have to be re-vegetated.
- Cutting of embankment reduces the water retention capacity and also weakens it, hence:
  i. The contractor should ensure that the decrease in water retention should not lead to flooding of the construction site and surroundings causing submergence and interruption to construction activities.
  ii. Any perceived risks of embankment failure and consequent loss/damage to the property shall be assessed and the contractor should undertake necessary precautions as provision of toe protection, erosion protection, sealing of cracks in embankments. Failure to do so and consequences arising out of embankment failure shall be the responsibility of the contractor. The ENGINEER IN CHARGE shall monitor regularly whether safe construction practices near water bodies are being followed.
- Alternate drain inlets and outlets shall be provided in the event of closure of existing drainage channels of the water body.
- Movement of workforce shall be restricted around the water body, and no waste from construction sites shall be disposed into it.

Post Construction Stage

- The precincts of the water body have to be left clean and tidy with the completion of construction.
- ENGINEER IN CHARGE will check if drainage channels of adequate capacity have been provided for the impacted water body.

ECoP - 4: Drainage

General

- Drainage is designed for and installed on roads to direct surface or subsurface flow away to a safe outfall without damage to the structure, adjoining property or agricultural fields.
- A road with good drainage is a good road. Inadequate and faulty drainage arrangements result in obstruction to natural drainage pattern. Provision of cross-drainage and longitudinal drainage increases the life of the road and consequently reduces water logging and related environmental impacts.
- The present code seeks to address the environmental concerns related to drainage aspects during different stages of the project execution.

Pre-Construction Stage

- Following measures are to be undertaken by the contractor prior to the commencement of construction:

i. The downstream as well as upstream user shall be informed one month in advance
ii. The contractor shall schedule the activities based on the nature of flow in the stream.
iii. The contractor should inform the concerned departments about the scheduling of work. This shall form part of the overall scheduling of the civil works to be approved by ENGINEER IN CHARGE.
iv. Erosion and sediment control devises if site condition so warrant, are to be installed prior to the start of the civil works.
v. All the safety/warning signs are to be installed by the contractor before start of construction

- In case of utilization of water from the stream, for the construction, the contractor has to take the consent from the concerned department.

Construction Phase

- Drainage structures at construction site shall be provided at the earliest to ensure proper compaction
- In hill areas sub-surface drains, if required, shall be provided immediately after cutting the slopes and forming the roadbed (sub grade).
- Safety devises and flood warning signs to be erected while working over streams and canals.

Post Construction

- Inspection and cleaning of drain shall be done regularly to remove any debris or vegetative growth that may interrupt the flow.
- Temporary structures constructed during construction shall be removed before handing over to ensure free flow through the channels.

ECoP - 5: Soil Quality Management

General

Loss of soil quality will be a long-term impact and can occur due to:

i. Site clearance and excavation activities
ii. Pollution from wastes
iii. Temporary construction activities as material storage locations, etc.

Pre-construction Stage

- The arrangements for protecting soil quality need to be made by the Contractor with the land owner and shall include the conservation/preservation of topsoil.
- Site clearance and excavation activities should be conducted after ensuring that soil quality is not permanently affected.

Construction Stage

- Potential pollution from stock piles and other sources need to be monitored regular and corrective actions taken in the case of spoils or other hazardous incidents.
- Material storage areas should be carefully located and maintained to ensure that these do not become pollution sources and cause soil quality to deteriorate.

ECoP - 6: Erosion and Sediment Control

General

- Stability of slopes is a major concern in hill areas and locations of high embankment.
- Soil erosion is consequent to high runoff on hill slopes, high wind velocities cause erosion of embankments made up of cohesion-less sandy soils.
- Embankments made up of silty and sandy soils are eroded, in the absence of vegetative cover, when the slopes are steep, say more than 20 degrees.
- Erosion control is provided to prevent soil damage done by moving water.
- The scope of this ECoP includes measures to minimize the adverse environmental impacts on slope stability and soil erosion due to the construction of embankments. The adverse environmental impact can be:
    i. damage to adjacent land,
    ii. silting of ponds and lakes disturbing the aquatic habitat
    iii. erosion of rich and top fertile top layer of soil
    iv. contamination of surface water bodies and
    v. reduction in road formation width due to erosion of shoulders/berms.

Pre-construction Stage

- Interceptor ditches are constructed in hill areas to protect the road bench and hillside slope from erosion due to heavy rainfall and runoff.
- Interceptor ditches are very effective in the areas of high intensity rainfall and where the slopes are exposed.

Construction Stage

- The vegetative cover should be planted in the region where the soil has the capacity to support the plantation and at locations where meteorological conditions favours vegetative growth.
- On side slopes in hills, immediately after cutting is completed and debris is removed, vegetative growth has to be initiated by planting fast growing species of grass.
- In regions of intensive rainfall, locations of steep slopes, regions of high soil erosion potential and regions of short growing seasons, erosion control matting should be provided.
- Adequacy of drainage for erosion control

Post Construction Stage

All the exposed slopes shall preferably be covered with vegetation using grasses, brushes etc. Locally available species possessing the properties of (i) good growth (ii) dense ground cover and (iii) deep root shall be used for stabilization.

ECoP - 7: Top-soil Salvage, Storage and Replacement

General

Loss of topsoil is a long term impact along SNSP subprojects due to

i. Site clearance and excavation for road, markets, embankment and other infrastructures
ii. Development of borrow areas
iii. Temporary construction activities as material storage locations, diversion routes etc.

Scope of this ECoP includes removal, conservation and replacement of topsoil.

Pre-construction Stage

The arrangements for temporary usage of land, borrowing of earth and materials by the Contractor with the land owner shall include the conservation/preservation of topsoil.

Construction Stage

- The stockpiles for storing the topsoil shall be designed such that the slope does not exceed 1:2 (vertical to horizontal), and the height of the pile is restricted to 2m.
- In cases where the topsoil has to be preserved for more than a month, the stockpile is to be stabilized within 7 days. The stabilization shall be carried out through temporary seeding. It consists of planting rapid-growing annual grasses or small grains, to provide initial, temporary cover for erosion control.
- After spreading the topsoil on disturbed areas, it must be ensured that topsoil is seeded, and mulched within 30 days of final grading.
- During construction, if erosion occurs from stockpiles due to their location in small drainage paths, the sediment-laden runoff should be prevented from entering nearby watercourses.
- The Contractor shall preserve the stockpile material for later use on slopes or shoulders

Post Construction Stage

- The topsoil shall be re-laid on the area after taking the borrow earth to maintain fertility of the agricultural field, finishing it to the required levels and satisfaction of the farmer.
- All temporary arrangements made for stockpile preservation and erosion control are to be removed after reusing the stockpile material.

ECoP - 8: Topography and Landscaping

General

Topography and landscaping works of a site involves:

i. Mobilizing of earthworks and landscaping equipment;
ii. These works are usually done by the contractor prior to commencement of construction. Scope of this ECoP includes only the measures to address environmental concerns expected during topography and landscaping works.

Activities by the ENGINEER IN CHARGE

- Informing the community about the likely schedule of works
- After obtaining the consent of the community the ENGINEER IN CHARGE shall be responsible to supervise the works.

Activities by the Contractor

- The contractor shall submit the schedules and methods of operations for various items during the construction operations to the ENGINEER IN CHARGE for approval.
- The clearance of site shall involve the removal of all materials such as trees, bushes, shrubs, stumps, roots, grass, weeds, part of topsoil and rubbish. Towards this end, the Contractor shall adopt the following measures:
    i. Limiting the surface area of erodable earth material exposed by clearing and grubbing
    ii. Conservation of top soil and stock piling as per the provisions of specifications or ECoP-7, "Topsoil Management" and
    iii. Carry out necessary backfilling of pits resulting from uprooting of trees and stumps with excavated or approved materials to the required compaction conforming to the surrounding area.
- To minimize the adverse impact on flora and vegetation, only ground cover/shrubs that impinge directly on the permanent works shall be removed.
- In locations where erosion or sedimentation is likely to be a problem, clearing and grubbing operations should be so scheduled and performed that grading operations and permanent erosion and sedimentation control features can follow immediately, if the project conditions permit.
- The disposal of wastes shall be in accordance with the provisions of ECoP-1, "Waste management". The following precautions shall be adopted:
    i. The waste generated shall not be disposed off in watercourses, to avoid hindrance to the flow, and
    ii. All necessary measures shall be taken while working close to cross drainage channels
- All regulatory clearances shall be obtained before actual start of work

ECoP - 9: Borrow Areas

General

Embankment or filling material is to be procured from burrow areas designated for the purpose. The scope of this ECoP extends to measures that need to be incorporated during burrow area identification, material extraction and rehabilitation with regard to environment management.

Pre-construction Stage

The contractor shall identify the borrow area locations in consultation with the owners, after assessing the suitability of the material. The suitable sites shall be selected and finalized in consultation with the ENGINEER IN CHARGE.

Construction Stage

The contractor should adopt the following precautionary measures to minimise any adverse impacts on the environment:

i. Borrow pits situated less than 0.8 km (if unavoidable) from villages and settlements should not be dug for more than 30 cm after removing 15cm of topsoil and should be drained.

ii. The Contractor shall maintain erosion and drainage control in the vicinity of all borrow pits and make sure that surface drains do not affect the adjacent land or future reclamation.
iii. In case the borrow pit is on agricultural land, the depth of borrow pits shall not exceed 45 cm and may be dug out to a depth of not more than 30 cm after stripping the 15 cm top soil aside.
iv. In case of riverside, borrow pit should be located not less than 15m from the toe of the bank, distance depending on the magnitude and duration of flood to be withstood.

Post Construction Stage

It needs to be ensured that all reclamation has been carried out in accordance with the redevelopment plan. Certificate of Completion of Reclamation is to be obtained by the Contractor from the landowner that "the land is restored to his satisfaction". The final payment shall be made after the verification by ENGINEER IN CHARGE.

ECoP - 10: Dust and Air Quality Management

General

Air quality can be adversely affected by vehicle movement on unpaved roads, windblown dust and emissions from vehicle exhausts or generators.

Pre-Construction Stage

Any stock piles should be covered or sprayed with water to prevent dust impacts on air quality. Any machinery (that uses fuel) brought to site should be well-maintained.

Construction Stage

- Water will be sprayed on bare soils, unpaved roads and stock piles to prevent dust impacts on air quality.
- Covering of stored materials (especially gravel and sand) at all times.
- Increase watering frequency during periods of high risk (e.g. high winds).
- Machinery causing excess pollution (e.g. visible smoke) will be banned from construction sites
- Restore disturbed areas as soon as practicable by vegetation/grass-turfing

Post-Construction Stage

Work areas should be cleared to ensure that there are no chances of dust being generated. Bare soils should be vegetated as much as possible.

ECoP - 11: Noise and Vibration Management

General

Noise and vibration impacts can be a nuisance to surrounding people and animals (wildlife, livestock, etc.). Noise and vibration can be caused by machinery and vehicles movement.

Pre-Construction Stage

Organize the loading and unloading of materials so that noise and vibration in and around the work site is minimized. Arrange for the use of quietest available equipment. Restrict use of horns in/around site.

Construction Stage

- Appropriately plan and site all noise and vibration generating activities to avoid impacts on local residents
- Maintain all equipment in order to keep it in good working order to avoid unnecessary noise and vibration
- Restrict use of horns in/around site.
- Notify affected people if major noisy and vibration activities will be undertaken
- Avoid undertaking the noisiest activities, where possible, when working at night near the residential areas
- Monitor any complaints and implement corrective actions where practical.

Post-Construction Stage

Ensure all equipment removed from site with minimal noise and vibration impacts.

ECoP - 12: Protection of Flora

General

Besides improving aesthetics and ecology of the area, flora provides habitats, act as noise barriers, provide visual screen for sensitive areas and can also be source of livelihood for local communities. This code of practice elaborates on the approach towards protection of flora. Emphasis has been laid on a greater involvement of communities in planting and maintenance of flora.

Project Planning and Design Stage

- Flora removal (incl. tree felling), if unavoidable, shall be done only after compensatory plantation, e.g. at least three saplings for every tree cut should be done.
- The compensatory plantation species shall be identified in consultation with officials of Forest Department/local community, giving due importance to local flora. It is recommended to plant mixed species in case of both avenue or cluster plantation.
- The plantation strategy shall suggest the planting of fruit bearing trees and other suitable trees.

Post-construction Stage

- The project proponents would take up the planting of fruit bearing and other suitable trees, at subprojects location from their own funds.
- Watering of trees during the initial period of two to three years shall be the responsibility of the implementing agency or its designated representative.

ECoP - 13: Protection of Fauna

General

This code of practice envisages measures to be undertaken during implementation of HEAT subprojects near natural habitats. These measures shall be undertaken in addition to the measures laid down in the other ECoPs.

As per the World Bank ESS6, the conservation of natural habitats, like other measures that protect and enhance the environment, is essential for long-term sustainable development. A precautionary approach to natural resource management to ensure opportunities for environmentally sustainable development has been adopted for the project.

Pre-construction Stage

Contractor in consultation with forest ranger or any other concerned authority shall prepare a schedule of construction within the natural habitat. Due consideration shall be given to the time of migration, time of crossing, breeding habits and any other special phenomena taking place in the area for the concerned fauna.

Construction Stage

- Collection of any kind of construction material from within the natural habitat shall be strictly prohibited.
- Disposal of construction waste within the natural habitat shall be strictly prohibited.

Post Construction Stage

- The subprojects near the natural habitat shall be declared as a silence zone.
- Compensatory tree plantation within the project area shall be done.

ECoP – 14: Protection of Fisheries

General

Sub-projects construction and/or operation may affect the fish in the aquatic environment by:

- lowering or raising water levels, and decreasing water quality.
- deterioration of water quality

Pre-Construction Stage

Following measures are to be undertaken by the contractor prior to the commencement of construction:

- Base line data of the fisheries and water quality is necessary.
- In addition, the availability of enough water during the lean season needs to be assessed as part of the baseline data collection.

Construction Phase

- Improper disposal of solid and liquid waste including excreta generated from sites will pollute the water quality and proper prevention measure should be taken.
- Waste water disposal, sanitation/latrines may have positive cumulative effects on human health, but if not improperly implemented may affect surface water quality; the contractor should give proper attention on it during construction stage.
- Protect water bodies from sediment loads by locally made silt screens e.g. with jute netting/matting or other barriers.

Post Construction

- Inspection of water quality and fisheries health shall be done regularly.

ECoP - 15: Road Transport and Traffic Management

General

Road transport and traffic management involves:

i. Movement of construction or subproject related vehicles;
ii. Movement of vehicles during subproject operation phase.

Activities by the ENGINEER IN CHARGE

- Informing the community about the likely schedule of project related vehicular movement
- After obtaining the consent of the community the ENGINEER IN CHARGE shall be responsible to monitor the movements of project vehicles on a regular basis.
- The Engineer shall approve contractor's Traffic Management Plan
- The Engineer shall approve the site for the storage of all aggregates.
- The Engineer shall approve the methods of handling aggregates and the equipment used.

Activities by the Contractor

- The contractor shall submit the Traffic Management Plan (with schedules and methods of vehicular movements during the construction operations as well as planned safety measures) to the ENGINEER IN CHARGE for approval.
- All regulatory clearances shall be obtained before actual start of work
- The Contractor shall be responsible for ensuring that all trucks and carriers are clean and dry prior to loading them with materials. All trucks and carriers for transporting cement/aggregates shall be equipped with weather proof closures on all openings.
- Proper traffic signs and signaling staff should be maintained for temporary diversions
- Any accidents should be reported to ENGINEER IN CHARGE.

ECoP - 16: Construction Camp Management

General

A development plan of the construction camp shall be prepared describing the following:

- Perimeter fence and lockable gates
- Workshop
- Accommodation
- Ablutions
- Water supply
- Wastewater disposal system
- Bounded fuel/chemical storage area
- Proposed power supply
- Proposed all weather-surfaced areas.

Pre-construction Stage

- During planning of the works consideration shall be given to the location of construction camps for the field implementation of the project. Construction camps and areas identified that may be suitable for the development of such camps shall be selected in consultation with the Engineer of the REB/PGCB. Areas which are not suitable for reasons such as environmental, cultural or social sensitivity shall also be identified. Wherever possible, construction camps shall be planned in areas that will have minimal adverse environmental effects. In identifying such areas particular care shall be taken to evaluate the adverse affects on water, noise and air pollution, which, although transient, will preclude the use of some areas as construction camp sites.
- Construction camp sites shall be located such that permanent adverse environmental effects can be avoided or mitigated against and transient adverse environmental effects are minimized. Camp sites shall not be located in areas identified during the planning stage as unsuitable for such use. The site or sites shall be selected such that mitigation measures stipulated in this ECoP can be implemented with reasonable facility.

Construction Stage

- The construction camp shall be provided with the following minimum facilities:
  - A perimeter security fence at least 1.5m in height constructed from appropriate materials.
  - Ablution block with a minimum of two water closet toilet or Porta-cabin, one urinal and one shower for personnel engaged either permanently or temporarily on the project. Porta-cabins or separate toilet and wash facilities shall be provided for male and female employees.
  - A sickbay and first aid station.
  - Areas for the storage of fuel or lubricants and for a maintenance workshop. Such an area shall be bounded and have a compacted/impervious floor to prevent the escape of accidental spillage of fuel and or lubricants from the site. Surface water drainage from bounded areas shall be discharged through purpose designed and constructed oil traps. Empty fuel or oil drums may not be stored on site.
  - Storm water drainage system to discharge all surface run off from the camp site to a silt retention pond which shall be sized to provide a minimum of 20 minutes retention for storm water flow from the whole site that will be generated by a 20 year return period rainfall having a duration of at least 15 minutes. The run-off coefficient to be used in the calculation of the silt pond volume shall be 0.9. Silt ponds shall be maintained in an efficient condition for use throughout the construction period with trapped silt and soil particles being regularly removed and transported and placed in waste material disposal areas as per ECoP1.
  - All discharge from the silt retention pond shall be channeled to discharge to natural water via a grassed swale at least 10 meters in length with suitable longitudinal gradient.

- All camp facilities shall be maintained in a safe clean and or appropriate condition throughout the construction period.

Post-construction Stage

- At the completion of the construction work, all construction camp facilities shall be dismantled and removed from the site and the whole site restored to a similar condition to that prior to the commencement of the works or to a condition agreed to with the owner of the land. All oil or fuel contaminated soil shall be removed from the site and transported and buried in waste soil disposal areas.

ECoP - 17: Worker's Health and Safety (H&S)

General

The safety and health of the workers and the public is impacted due to the hazards created during the construction period. This code of practice describes the measures that need to be taken to mitigate the impacts.

Pre-construction Stage

- In order to incorporate public health and safety concerns, the ENGINEER IN CHARGE and the Contractor shall disseminate the following information to the community:
  i. Location of subproject activities,
  ii. Borrow areas,
  iii. Extent of work
  iv. Time of construction
  v. Involvement of local labours in the road construction
  vi. Health issues - exposure to dust, communicable diseases, etc.
- The Contractor must raise awareness to the workers to undertake health and safety precautions. Through regular meetings, as may be necessary, contractor shall generate awareness amongst the workers.

Construction Stage

- The Contractor shall schedule the construction activities taking into consideration factors such as:
  i. Sowing of crops by local farmers
  ii. Harvesting
  iii. Local hindrances such as festivals etc.
  iv. Availability of labour during particular periods
- The ENGINEER IN CHARGE shall carry out periodic inspections in order to ensure that all the measures are being undertaken as per this ECoP.

Post-construction Stage

- The construction site shall be cleaned of all debris, scrap materials and machinery on completion of construction for the safety of public and users.