

Project Management Unit, Assam  
Project on Forest and Biodiversity  
Conservation, Phase-II

Supported by

Agence Française de Développement  
(AFD)

Environmental and Social Management  
System (ESMS)

and Gender Action Plan (GAP)

For  
Project Management Unit, Assam Project on Forest  
and Biodiversity Conservation Society  
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## List of Acronyms and Abbreviations

AFD	Agence Française de Développement
APFBC	Assam Project on Forest and Biodiversity Conservation
BMC	Biodiversity Management Plan
BTC	Bodoland Territorial Council
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CAT	Command Area Treatment
CATP	Catchment Area Treatment Plan
CEDAW	Convention on Elimination of Discrimination against Women
CHC	Community Health Centre
CPGRAMS	Centralized Public Grievance Redressal and Monitoring System
CPR	Common Property resources
CRMC	Community Reserve Management Committee
DARPG	Administrative Reforms and Public Grievances
DG	Diesel Generator
DPG	Directorate of Public Grievances
EAP	Externally Aided Project
EDC	Eco Development Committees
EHSG	Environmental, Health and Safety Guidelines
ESA	Environmental and Social Assessment
ESMS	Environmental and Social Management Systems
ESS	Environmental and Social Standards
ESSF	Environmental and Social Screening Format
ESZ	Eco Sensitivity Zone
FD	Forest Department
FFC	Fourteenth Finance Commission
FGD	Focus Group Discussion
FIU	Field Implementation Unit
FMIS	Forest Management Information System
FRA	Forest Right Act
FRU	First Referral Unit
FSSAI	Food Safety and Standards Authority of India
GAP	Gender Action Plan
GBV	Gender Based Violence



GDO	Gender Development Index
GII	Gender Inequality Index
GoA	Government of Assam
Gol	Government of India
GP	Gaon Panchayat
GRC	Grievance Redress Committee
GS	Gaon Sabha
ha	Hectare
HDI	Human Development Index
HDR	Human Development Report
HH	Household
ICR	Implementation Completion Report
IEC	Information Education Communication
IMR	Infant Mortality Rate
IPC	Indian Penal Code
IPR	Intellectual Property Rights
ISFR	India State Forest Report
IUCN	International Union for Conservation of Nature
JFM	Joint Forest Management
JFMC	Joint Forest Management Committees
MDF	Moderately Dense Forest
MMR	Maternal Mortality Ratio
NCRB	National Crime Records Bureau
NGO	Non-Governmental Organisation
NHFS	National Family Health Survey
NHM	National Health Mission
NTFP	Non-Timber Forest Produce
O&M	Operation and Maintenance
OF	Open Forest
PA	Protected Areas
PAF	Project Affected Families
PAN	Protected Area Network
PBR	People Biodiversity Register
PESA	Panchayats Extension to Schedule Areas
PHC	Primary Health Centre

PMU	Project Management Unit
PRI	Panchayat Raj Institutes
REWP	Research, Education and Working Plan
RFCLARR Act 2013	The Right to Fair Compensation in Land Acquisition and Resettlement and Rehabilitation Act, 2013
SC	Scheduled Caste
SEA	Sexual Exploitation and Abuse
SHG	Self Help Group
SLL	Special and Local Laws
SRS	Sample Registration System
ST	Scheduled Tribe
TLM	Teaching Learning materials
VAW	Violence Against Women
VDF	Very Dense Forest
VFDS	of Village Forest Development Society
WB	World Bank
WHO	World Health Organisation
WSHG	Women Self Hep Group

# 1. Executive Summary

## Project Background

The Government of Assam (GoA) is implementing the Assam Project on Forest and Biodiversity Conservation-phase II with the support of Agence Française de Développement (AFD) covering the state of Assam. The project aims to further strengthen the 136 existing communities that were supported in Phase I as well as support 125 new communities. This would be done through building capacity for joint forest management activities and augmenting them with alternate livelihood options. This is expected to empower them economically and reduce dependence on forests for basic needs. The overall objective of the project is to contribute to conservation of nature for healthier ecosystem and happier communities. The three specific objectives are a) developing participatory sustainable forest and biodiversity management under changing climatic conditions, b) improving the livelihoods for forest neighbouring communities through inclusive (collective and individual) supports and c) strengthening the Forest Department to better fulfil its missions. The project is divided into three major components; 1) Component 1: conservation of ecosystems which includes sustainable forest management and biodiversity conservation, 2) Component 2: community engagement which aims to strengthen the project communities and 3) Component 3: institutional strengthening which aims at improving various departmental cells to enable better management of the staff and resources. On top of those three technical components, the project includes a cross-sectional component aiming at promoting social inclusion and the empowerment of women, during and beyond the implementation of the project, within the Forest Department, within the communities and in the interactions with the stakeholders of the activities.

## Environmental and Social Assessment

Activities under the project could have social and environmental risks and impacts that need to be assessed and managed. AFD has adopted the environmental and social risks management approach to manage the risks in every financed project and those measures are taken to avoid, mitigate or compensate the negative potential impacts. This project has been classified by AFD as a Moderate Environmental and Social risks project. A detailed Environmental and Social Assessment (ESA) is carried out, duly following the procedures outlined under ESF of the World Bank. The Ten Environmental and Social Standards of the World Bank, which set out the mandatory requirements that apply to the Borrower and projects are applicable to the project. The system should be also consistent with World Bank Group Environmental, Health and Safety - EHS Guidelines (ESHG). The AFD and Forest Department has agreed to put a transversal gender objective for the phase 2 of APFBC. Hence the preparation of Environmental and Social Management Systems (ESMS) and Gender Action Plan (GAP) are mandatory for the project, which would constitute an annexure of the Manual of Procedures of the APFBC.

The approach and methodology used for conducting ESA and preparing the ESMS is through a) on-site initial discussions with client and AFD followed by tele-conversations and video conferences for clarifications, b) literature review for collection of state environmental and social data and for regulatory and legal provisions, c) field visits and consultations with selected communities, d) data and dialogue analysis, e) environmental and social risk assessment, f) preparation of draft ESMS and GAP and finalising the both after AFD's review.

## Legal and Policy Framework

The sub-projects under the project are small, low-cost and include local interventions which would benefit the local population contributing to their livelihoods. In general, all these sub-projects would result in positive environmental and social impacts. If there are any adverse environmental or social impacts; they would be minor, temporary, localized, reversible and mitigable. The key environmental legislation includes a) National Forest Policy 1988, b) Indian Forest Act 1927, c) Forest (Conservation) Act, 1980, d) Biological Diversity Act, 2002, e) Wildlife (Protection) Act, 1972 and

amendment 2002, f) Eco-sensitive Zone Notifications 2015, g) Insecticide Act 1968, h) National Environment Policy 2006, i) Environment (Protection) Act and amendments, 1986, j) Water (Prevention and Control of Pollution) Act (and subsequent amendments) , 1974, k) Air (Prevention and Control of Pollution) Act (and subsequent amendments), 1981, l) Construction and Demolition Waste Management Rules, 2016, m), Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008, National Building Code of India 2005, etc.

The key social regulation includes a) Constitutional Safeguards, b) Panchayat Raj Institutions 73rd Amendment Act, 1992, c) Joint Forest Management Policy 1993 (revised Feb 2000), d) The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Rules, 1995, e) Panchayat (Extension to Scheduled Areas) Act 1996, f) Right to Information Act, 2005, g) Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, h) Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, etc. The labour related regulation includes a) Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996, b) Workmen Compensation Act, 1923, c) Interstate Migrant Workers Act, 1979, d) The Child Labour (Prohibition & Regulation) Amendment Act, 2016, e) Minimum Wages Act, 1948, f), Building and Other Construction Workers Welfare Cess Act, 1996, Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013, etc.

It can be summed up that the while some legal provisions safeguard the forests from over exploitation and advocates strict conservation and protection (FCA-1980, WPA-1972), there are other instruments that recognize the customary rights of the forest dwellers over forest resources, their role in conservation and development (PESA-1996, FRA-2006) while some provisions try to strike a balance between the two by suggesting judicious use of forest resources and brining in community as the co- owners of forest along with the forest department (NFP-1988, JFM-1993, PFM- 2000 and BDA-2002).

#### Environmental and Social Risks and Impacts

The following environmental and social impacts could be predicted based on the field visits to the sampled locations, communities' perceptions, and from the experience of implementing the APFBC Phase 1, other forestry projects implemented in the state and other Externally Aided Projects (EAPs), etc. These potential positive impacts could be as follows:

- ▶ Improved access to services
- ▶ Productive use of time
- ▶ Improvements in income patterns
- ▶ Improved public safety and security
- ▶ Reduced sufferings during monsoons and adverse climatic conditions
- ▶ Health and Environmental improvements
- ▶ Improvements in quality of life and human dignity
- ▶ Opportunities for social interaction
- ▶ Improved community participation and sense of ownership

Potential adverse environmental impacts are;

- ▶ The absence of a proper Environmental and Social Management System that results in adhoc addressing of impacts only when noticed. For example, the case of the multi-storeyed building that later went through an ESA.
- ▶ Temporary Mitigable Impacts relating to civil works; impacts on air, water, soil, noise, drainage and aesthetics. It is expected that physical works would be of small scale and minimal.
- ▶ In nurseries, use of pesticides against pests and diseases could impact human health, air quality, groundwater, surface water and soil.

- Increased grazing pressure in other areas due to displacement of cattle/livestock from pastures `undergoing restoration/ rotation.
- ▶ Increased grazing pressure and loss of access due to fencing of pastures/ conservation areas
- ▶ Loss of forestland by converting them to pastures and vice-versa loss of pastures due to plantations.
- ▶ Livestock population may increase by assuring enhanced fodder availability, which may be a potential threat to natural areas.
- ▶ Shifting of grazing pressure in other areas after closing selected areas for grazing may speed up the degradation of remaining pastures nearby.
- ▶ Risk of forest fires.
- ▶ Thinning of forests, reduction in dense forest, reduced capacity for holding soil water, changes in micro-climatic conditions, impacts on biodiversity
- ▶ Increased soil erosion, reduced land productivity, high runoff, increased silt load in streams
- ▶ Increased incidences of flooding, stream bank erosion, reduced drinking water supply
- ▶ Reduced potential of riverbanks to act as buffers against floods, implications on fisheries, damage to habitat
- ▶ Reduction of water holding capacity of soils at root zone
- ▶ Steep slopes without adequate protection lead to high runoff and associated soil erosion leading to deteriorating water availability
- ▶ Threats to indigenous species, reduced productivity of pastures, loss of grazing areas, fodder, forest cover, reduced production of NTFP
- ▶ Poor quality of pastures, depletion of ground flora, added pressures of grazing rights.
- ▶ Allowing of overgrazing and not following rotational grazing, most pastures are facing depletion of soil phosphorus due to overgrazing, thus legumes are unable to form nodules and are depleting
- ▶ Risk of increased debris and deposition of wastes
- ▶ Thinning of forests, removal of deadwood from forests impacting detritus and other decomposers, reduced habitat quality, carrying of head loads of fuel wood by community members.
- ▶ Reduction in natural regeneration of species, as some areas are harvested beyond carrying capacity
- ▶ Removal of medicinal herbs
- ▶ Habitat degradation, reduced productivity of habitats, low natural regeneration, changes in species, impacts on ecosystem processes

The perceived adverse social impacts/risks could be;

- ▶ Lack of a proper Social strategy and a Gender and Social Inclusion Action Plan resulting in make-shift arrangements to address the key social issues as they arise.
- ▶ Land loss due to land required for project facilities (this is a no-go case under the present project)
- ▶ Land under disputes (FRA, etc.) may be used for project facilities
- ▶ Vulnerable groups, women and tribals may be excluded from project activities, training and capacity building activities.
- ▶ Possibility of exploitation of labour.
- ▶ People from project area may not respond to the project activities and may not participate in the project as they may not understand the social development dimensions.
- ▶ The project stakeholders may not be able to understand their roles related to social issues.

- ▶ FD and participating line departments capacity issues with regard to people management and community mobilization may affect project outcomes.
- ▶ Grievances of project key stakeholders may not be addressed properly.
- ▶ Project information may not reach the key stakeholders, thus making them disinterested in participating.
- ▶ NTFP collectors, livestock grazers, landless and agriculture producers (Especially women and other vulnerable groups) may get excluded owing to lack of exposure and capacities
- ▶ Potential security issues to communities living in the vicinity.
- ▶ Conflict with people when areas are closed for grazing.

The above environmental and social risks and impacts can be mitigated through preparation and implementation of Environmental and Social Management Systems, Environmental and Social Management Plans, etc.

### Environmental Social Management Systems

An Environmental and Social Management Systems (ESMS) is proposed for this project due to following reasons, a) at this point of time, it would not be possible to conduct an environmental and social impact assessment for all the sub-projects under this project, as the sub-projects are under identification, b) the identification and implementation of these sub-projects would take place over a period of time and c) the resulting time lag leads to changes in the environmental and social conditions. The ESMS have the following tools:

#### ESMS Tools

The ESMS prescribes the following tools for managing the environmental and social impacts and risks:

- ▶ Categorization
- ▶ Exclusion List: A No-Go/ Negative List of activities with substantial adverse impacts, which would not be taken up by the project
- ▶ Screening: Screening and review process for identification of sensitive project activities with respect to environmental and social issues would be carried out during the planning phase of the project activity. An Environmental and Social Screening Format (ESSF) is prescribed for this purpose.
- ▶ Categorization: Categorization of sub-projects as categories A, B or C.
- ▶ Conducting ESA for the project activities, as informed by screening and category.
- ▶ Development of specific ESMP (with the generic ESMP as a guidance) for each of the sub-projects/ project activities.
- ▶ Monitoring Protocol for regular monitoring to be followed by APFBC.
- ▶ Independent Environmental and Social Monitoring and Evaluation as prescribed in ESMS.
- ▶ Grievance Redress Mechanism
- ▶ Gender Action Plan

## Gender Action Plan

Women are among the primary stakeholders of the project. They are likely to experience differential socio-economic impacts due to their disadvantaged position within socio-economic structures and processes and suffer inequities. In view of this, a Gender Action Plan is prepared for implementation by the project. This plan includes, gender disaggregated socioeconomic baseline, separate focus group discussions and mobilization for women, inclusion of women in committees, training and capacity building for women, socially inclusive benefit sharing for shared/public goods, convergence with existing state level schemes for empowerment of women, gender disaggregated monitoring indicators, inclusion of women in grievance redressal mechanisms, preference to deployment of SHGs, specific actions on GBV, etc.

## Implementation Arrangements

The primary responsibility for implementation of ESMS and ESMP rests with PMU. The PMU shall apportion and allot the responsibility for implementation of ESMP among the various implementing agencies, contractors, suppliers/ vendors, JFMCs and EDCs. The FIUs need to ensure that the planning and operation and maintenance phase mitigation measures given in the ESMP are to be implemented by FIU, JFMC and EDCs. The concerned contractor would implement the mitigation measures of the ESMP. The contractors need to have environmental and social expertise for implementing the construction phase mitigation measures of the ESMP. The implementation arrangements include one Social and one Environment Specialist in the State level PMU, supported by designated Environmental and Social Experts at FIUs. They would be implementing the environmental and social aspects and monitoring the same. It is proposed that the overall responsibility for the entire project on environmental and social safeguards, gender and social development issues, ESMP Implementation, Community mobilization, engagement and participation, grievances, etc. rests with them.

## Monitoring, Auditing and Reporting

In order to carry out monitoring, evaluation and reporting, project would have specific arrangements, in terms of human resources at PMU and FIUs. They would oversee the implementation of the provisions of ESMS and ESMP. The PMU would oversee implementing the ESMS. All the sub-projects would be visited at regular intervals by environmental and social staff to check if all environmental and social safeguard requirements are met and to identify any issues that need to be addressed. PMU would submit quarterly progress reports to AFD on environmental and social safeguards implementation. The concurrent internal environmental and social monitoring would be done as part of the regular monitoring by the PMU and FIUs with the help of PISA and PMMC and other implementing agencies. However, project would appoint Independent Environmental and Social Monitoring and Evaluation Consultants to do the environmental and social monitoring and evaluation on half-yearly basis during project implementation. The ESMS would be suitably revised as and when required by the PMU with the concurrence of AFD.

## Capacity Building Strategy

The Project would give its staff and the participating communities some exposure to the environmental and social safeguards issues. For seamless adaption of the environmental and social principles and safeguards by all the implementing partners, awareness creation and capacity building become necessary. This capacity building and IEC strategy has been outlined as part of this ESMS. It aims at building environmental and social awareness and management capacity in the project administration structure as well as in the intended target communities. The objectives of the capacity building initiatives are a) to build and strengthen the capability of Project PMU and FIU staff, participating implementing agencies, to integrate sound environmental and social management into sub-projects implementation and b) to orient the project staff, participating implementing agencies and communities to the requirements of the project's ESMS. Systematic capacity building initiatives need to be introduced only after completion of Training Needs Assessment. All the trained staff and

master trainers developed for different training components would in turn conduct onsite or offsite trainings (at district, block or GP levels) depending on training requirement. The training programs consists of Orientation/ Learning Training Programs, Training on the ESMS and ESMP and Training on Environmental and Social Management. The total estimated cost of training on Environmental and Social Management for members of project, Participating Agencies' Staff, NGOs, etc. is Rs. 6,000,000.

#### Means of Disclosure

This Final ESMS and ESMP are disclosed on the project website along with the Assamese translation of the executive summary. The documents along with the executive summary in Assamese, would be kept at the PMU and FIU Offices and District Collector's Office, for interested persons to read and copy. This would be made available at the Gaon Panchayat Offices of the concerned villages.



## 2. Introduction



### 2.1. Project Background

The Government of Assam (GoA) is implementing the Assam Project on Forest and Biodiversity Conservation - Phase II with the support of Agence Française de Développement (AFD) covering the state of Assam. The project aims to further strengthen the 136 existing communities that were supported in Phase I as well as supporting 125 new communities. This would be done through building capacity and augmenting them with alternate livelihood options. This is expected to empower them economically and reduce dependence on forests for basic needs.



The overall objective of the project is conservation of nature for healthier ecosystem and happier communities. The three specific objectives are:

- ▶ Developing participatory sustainable forest and biodiversity management under changing climatic conditions.
- ▶ Improving the livelihoods for forest dwellers and neighbouring communities through inclusive (collective and individual) supports.
- ▶ Strengthening the forest department to better fulfil its missions.

The three major components of this project are:

- ▶ Component 1: Conservation of Ecosystems which includes Sustainable Forest Management and Biodiversity Conservation
- ▶ Component 2: Community Engagement which aims to strengthen the project communities
- ▶ Component 3: Institutional Strengthening which aims at improving various departmental cells to enable better management of the staff and resources.

## 2.2. Objective of Environmental and Social Management system and plan

AFD has adopted the environmental and social management approach to avoid, mitigate or compensate the negative potential impacts arising out of the project activities during pre-construction, construction and operation stage. This project has been classified by AFD as a Moderate Environmental and Social risks project. The Ten Environmental and Social Standards of the World Bank, which set out the mandatory requirements that apply to the borrower and projects are applicable to the project. The system should be also consistent with World Bank Group Environmental, Health and Safety - EHS Guidelines (ESHG).



## 2.3. Legal and Policy Framework

The legal and policy framework encompasses some important legal and policy provisions of Government of India (GoI), Government of Assam (GoA) and guidelines of the World Bank's Environmental and Social Standards that are relevant and applicable to the project.

## 2.4. Gender Action Plan (GAP)

GAP includes gender disaggregated socio-economic baseline, separate focus group discussions and mobilization for women, inclusion of women in committees, training and capacity building for women, socially inclusive benefit sharing for shared/ public goods, convergence with existing state level schemes for empowerment of women, gender disaggregated monitoring indicators, inclusion of women in grievance redressal mechanisms, preference to deployment of SHGs, and specific actions on Gender Based Violence (GBV).



## 2.5. Methodology Adopted for ESMS and GAP

The approach and methodology for preparation of ESMS and GAP are summarized below:

- ▶ On-site initial discussions with client and AFD followed by tele-conversations and video conferences for clarifications
- ▶ Literature Review for collection of state environmental and social data and for regulatory and legal provisions. Desk Analysis of this data for development of Environmental and Social (including Gender) Baseline and Regulatory and Legal Framework
- ▶ Field Visits and Consultations with selected communities: Originally it was intended to conduct a good number of interactions with communities but due to Covid-19 situation it was not possible. Later it was decided to conduct some limited interactions with communities before lockdown due to Covid-19. Two Focus Groups were conducted and the summary findings of the same were used in development of ESMS and GAP. The rest were taken from the experiences of the previous APFBC and similar other projects
- ▶ Data and Dialogue Analysis: The data that collected from secondary sources and community interactions is sorted, processed and made use of for analysis as baseline. The Environmental and Social Assessment is a product of this data
- ▶ Environmental and Social Risk Assessment: Based on the analysis the environmental and social and other risks were identified. Based on this a Draft Report was prepared and shared.
- ▶ Preparation of ESMS and GAP: The ESMS and GAP was prepared taking into consideration the risks and the possible mitigation measures and monitoring arrangements. This draft report was shared with the client for comments. Based on the observations, suggestions and comments, the Draft Report was revised
- ▶ Final ESMS and GAP: the Draft Report was revised as per the observations, suggestions and comments given by client and AFD. The current version is shared as the Final Report.

## 2.6. Monitoring, Auditing and Reporting

In order to carry out monitoring, evaluation and reporting, project would have specific arrangements in terms of human resources at PMU and FIUs. They would oversee the implementation of the provisions of ESMS and ESMP. The PMU would oversee implementing the ESMS. All the sub-projects would be visited at regular intervals by environmental and social staff to check if all environmental and social safeguard requirements are met and to identify any issues that need to be addressed. PMU would submit quarterly progress reports to AFD on environmental and social safeguards implementation. The concurrent internal environmental and social monitoring would be done as part of the regular monitoring by the PMU and FIUs with the help of PISA and PMMC and other implementing agencies. However, project would appoint independent Environmental and Social Monitoring and Evaluation Consultants to do the environmental and social monitoring and evaluation on half-yearly basis during project implementation. The ESMS would be suitably revised as and when required by the PMU with the concurrence of AFD.

## 2.7. Capacity Building Strategy

The objectives of the capacity building initiatives are:

- ▶ To build and strengthen the capability of Project PMU and FIU staff, participating implementing agencies, to integrate sound environmental and social awareness and management into sub-projects implementation
- ▶ To orient the project staff, participating implementing agencies and communities to the requirements of the project's ESMS.

## 3. Project Description



### 3.1. Background

Assam's population is expected to increase to 34 million by 2021<sup>1</sup> and continue to grow. A vast majority (86%) still lives in rural areas<sup>2</sup>. Catering to the demands of a rising population as well as meeting its developmental goals is going to be a major challenge for the state, especially in terms of managing the pressure on its forests and natural resources to meet those needs. It is also important to note that Assam is a primarily rural state, with 53% of its population engaged in agriculture<sup>3</sup>. Production of all crop types has been increasing, and most of the rising population is bound to stay within the sector. This means that the pressure on forest areas to make way for more agricultural land is set to continuously increase. This also sets the stage for increasing instances of man-animal conflicts as people breach natural habitats to meet their needs. Further, the global issue of climate change is a



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<sup>1</sup>[http://censusindia.gov.in/Census\\_Data\\_2001/Projected\\_Population/Projected\\_Population.pdf](http://censusindia.gov.in/Census_Data_2001/Projected_Population/Projected_Population.pdf)

<sup>2</sup>[http://censusindia.gov.in/2011census/censusinfodashboard/stock/profiles/en/IND018\\_Assam.pdf](http://censusindia.gov.in/2011census/censusinfodashboard/stock/profiles/en/IND018_Assam.pdf)

<sup>3</sup><https://asrlms.assam.gov.in/as/node/90627>

major threat to Assam’s rich and complex ecosystems, and forest communities that depend directly on forests would be especially vulnerable.

This interrelated web of challenges being faced by the state needs urgent solutions. The Forest Department, being the custodian of the forests operates at the juncture where people and natural resources interact. The department needs to address these challenges, while also increasing its own capacity to do so. In order to support the Forest Department of Assam in its endeavour to effectively manage its forest and biodiversity, French Development Agency – Agence Française de Développement (AFD) and the State Government of Assam co funded “Assam Project on Forest and Biodiversity Conservation (APFBC)”. The Phase – I of the project was implemented between February 2012 and May 2019. The Phase - II of the project commenced from January 2021.

Half of the population being female, with specific approaches relative to Forest and Biodiversity, with differentiated role in the management of land, income and expenditures, one of the transversal goal of the project is to adopt an adequate and differentiated approach by gender to (i) seek balanced solutions, (ii) find efficient organization, (iii) ensure good results on the economic, social and environmental dimension.

### 3.2. Project Development Objective

The overall vision of the project is that it “conservation of nature for healthier ecosystem and happier communities through Forest Department”. This overarching vision/goal shall be reached through the following three main specific objectives:

- ▶ Developing participatory Sustainable Forest and Biodiversity management under changing climatic conditions.
- ▶ Improving the livelihoods for Forest neighbouring communities through inclusive (collective and individual) supports
- ▶ Strengthening the Forest department to better fulfil its missions

### 3.3. Project Components

The three major components of the project are:

- ▶ Conservation of Ecosystems: The key focus of APFBC Phase II is conservation of forests and wildlife. It is divided into two sub-components:
  - a. Sustainable Forest Management:



This includes a state-wide forest resource mapping to form a comprehensive database of the state’s natural resources and conservation needs. This would be followed by 12,500 ha of plantations<sup>4</sup>, efforts towards setting up Climate Change and REDD+ processes and further improvement of infrastructure (construction/ renovation of staff quarters, and office buildings) needed by frontline staff to execute these work as well as their regular duties.

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<sup>4</sup> APFBC II (2019). Feasibility Report. Department of Environment & Forests Government of Assam.

b. Biodiversity Conservation:

This subcomponent addresses the pressing conservation needs of the rich biodiversity of the state through improvement of protected area management plans, critical habitat management plans, conservation efforts for a few key species, preparation of man-animal conflict management strategy, strengthening of veterinary & rescue support infrastructure (construction/upgradation of veterinary hospitals), infrastructure outreach efforts to spread public awareness and supporting the Assam State Biodiversity Board in making its Biodiversity Management Committees stronger. This component would contain several technological interventions aimed at greatly enhancing the department's conservation efforts and effectiveness.



c. Community Engagement:

It aims to further strengthen the 136 existing communities that were supported in Phase I as well as support 125 new communities through capacitating Joint Forest Management Committees (JFMCs)/Eco Development Committees (EDCs) for joint forest management and linking them with alternate livelihood options. This is expected to empower them economically and reduce dependence on forests for basic needs (such as affording gas cooking instead of firewood) and more emphasis would be on market linkage to ascertain sustainable economic growth.



d. Institutional Strengthening:

It aims at improving various departmental cells to enable better management of the staff and resources. This includes strengthening of the legal cell, updating and implementation of a digitized Human Resource Management mechanism, digitizing the department's work by strengthening the Forest Management Information System (FMIS), supporting the research and education cell, supporting the Forest Schools and addressing few infrastructural requirements. This component also details the project management modalities of Phase II.

### 3.4. Implementation Arrangements

Forest Department in Assam is composed of three primary wings which manage the forest divisions – Territorial (33), Social Forestry (14) and Wildlife (8). The Forest department also has a Research, Education and Working Plan (REWP) wing which is responsible for working plan preparation & forest resources inventory and assessment.

The Assam Project on Forest and Biodiversity Conservation Society a Special Purpose Vehicle created by the Government of Assam and registered under Society Registration Act is mandated with overall execution, management and coordination of the project activities through a Project Management Unit (PMU) established to implement the project. Implementation of the Project at Forest Division level would be facilitated by the Field Implementation Units (FIUs).

## 4. Environmental and Socio-Economic Baseline



*Table 1 Geographical Profile of Assam*

S No	Particulars	Values
1.	Latitude	24 N° - 28 N°
2.	Longitude	90 E° - 96 E°
3.	Geographical Area (Sq. Km.)	78438
4.	Average Rainfall (in mm)	2077.8
5.	Districts (Year 2016)	33
6.	Sub-divisions (Year 2016)	80
7.	Blocks	219
8.	Revenue Circles	184
9.	Zilla Parishads	20
10.	Anchalik Panchayats	189
11.	Gaon Panchayats	2202
12.	Towns	214
13.	Villages	26395

*Table 2 Demographic Profile of Assam*

S No	Particulars	Values
1.	Total Population (Census 2011)	3,12,05,576
2.	Households	64,06,471
3.	Male Population (Census 2011)	1,59,39,443
4.	Female Population (Census 2011)	1,52,66,133
5.	Rural Population (Census 2011)	2,68,07,034
6.	Urban Population (Census 2011)	43,98,542
7.	Decadal population growth (Census 2011)	17.07
8.	Sex Ratio (female per 1000 male) (Census 2011)	958
9.	Sex ratio (Rural)	960
10.	Sex ratio (Urban)	946
11.	HH Size (Census 2011)	4.87
12.	HH Size (Rural)	4.95
13.	HH Size (Urban)	4.46
14.	Child Population (0-6 Years) (Census 2011)	46,38,130
15.	Child Sex Ratio (0-6 Years) (Census 2011)	962
16.	Literacy Rate (%) (Census 2011)	72.19
17.	Literacy Rate (%) (Rural) (Census 2011)	69.34
18.	Literacy Rate (%) (Urban) (Census 2011)	88.47
19.	Male Literacy Rate (%) (Census 2011)	77.85
20.	Male Literacy Rate (Rural) (Census 2011)	75.4
21.	Male Literacy Rate (Urban) (Census 2011)	91.8
22.	Female Literacy Rate (%) (Census 2011)	66.27
23.	Female Literacy Rate (Rural) (Census 2011)	63.0
24.	Female Literacy Rate (Urban) (Census 2011)	84.9
25.	Birth Rate (Per 1000) (2014)	22.4
26.	Death Rate (Per 1000) (2014)	7.2
27.	BPL Population (Tendulkar Methodology - 2011-12)	31.98

*Table 3 Work Force details*

	Male		Female		Total		% of Total Population
	Person	%	Person	%	Person	%	
Rural	72,57,852	70.00	31,10,431	30.0	1,03,68,283	88.62	38.68
Urban	12,83,708	80.16	3,17,699	19.8	16,01,407	11.38	36.41
Total	85,41,560	71.36	34,28,130	28.6	1,19,69,690	100	38.36

Source: Census 2011



*Table 4 Category of workers*

	Category	Persons	%	Percentage of total	% of Total Population
Total workers		1,19,69,690			38.36
Main Workers	Total	86,87,123		72.58	
	Cultivators	31,38,554	36.13		
	Agricultural Labours	9,03,294	10.40		
	HH Industry Workers	2,42,071	2.79		
	Other Workers	44,03,204	50.69		
Marginal Workers		32,82,567		27.42	
Non-workers		1,92,35,886			61.64

Source: Census 2011

#### 4.1. Physiography

The State of Assam comprised of two valleys namely the Brahmaputra and Barak Valley. The main river of the valley, Brahmaputra, is one of the largest rivers in the world and rank fifth with respect to its average discharge (average annual discharge is about 20,000 cumec)<sup>5</sup>. The tributaries namely Subansiri, Ronganadi, Dikrong, Buroi, Borgong, Jiabharali, Dhansiri (North), Puthimari, Manas, Beki, Aie and Sonkosh are the main tributaries on the North while the Noadehing, Buridehing, Desang, Dikhow, Bhogdoi, Dhansiri (South), Kopilli, Kuls, Krishnai, Dhdhnoi, Jinjiran are the main tributaries on the south bank of the river Brahmaputra.

The Barak River is one of the major rivers of South Assam and is a part of the Surma-Meghna River System. In Assam, the Barak has a total length of 225 km and it drains the southern part of the state which includes the districts of Cachar, Karimganj, Hailakandi and the southern part of the North Cachar Hills.

#### 4.2. Climate

From the climatic point of view, Assam experiences two seasons- the cold season and the rainy season. However, there are two other short seasons namely spring and autumn representing the transition between cold and rainy seasons and that between rainy and cold seasons respectively.

#### 4.3. Rainfall

The average amount of annual rainfall is 21346 mm<sup>6</sup>. The state receives highest rainfall (28.7%) of southwest monsoon rainfall in July followed by 28.6% in June. August and September receive 23.8% and 18.9% of south west monsoon rainfall. Also, more than 66% of annual rainfall receives during the southwest monsoon season only. The variability of monsoon or annual rainfall is also very less (12%).

<sup>5</sup> Government of Assam. Water Resources. As retrieved from <https://waterresources.assam.gov.in/portlet-innerpage/brahmaputra-river-system> on 16 March 2021

<sup>6</sup> [https://imd pune.gov.in/hydrology/rainfall%20variability%20page/assam\\_final.pdf](https://imd pune.gov.in/hydrology/rainfall%20variability%20page/assam_final.pdf)

#### 4.4. Soil Resources

The soil of Assam is rich in nitrogen and organic matter. The alluvial soils of the Brahmaputra and the Barak valley is suitable for raising of varieties of crops round the year such as cereals, pulses, oilseeds, plantation crops, etc. The well drained, deep, acidic alluvial soils of upper Assam with good proportion of phosphoric content are mostly suitable for the plantations.

#### 4.5. Agro Climatic Zones

Based on the rainfall pattern, terrain and soil characteristics, Assam has been delineated into six agro-climatic zones viz.:

Agro-Climatic Zones	No of District	Net Cropped area(ha)	Area sown more than once	Cropping Intensity
Lower Brahmaputra Valley Zone	10	9,29,757	4,69,422	150
North Bank Plain Zone	5	5,36,598	3,36,323	163
Central Barak Valley Zone	2	3,27,637	85,615	126
Upper Brahmaputra Valley Zone	5	6,20,320	1,94,629	131
Barak Valley Zones	3	2,41,715	1,01,989	142
Hill Zones	2	1,54,570	1,00,824	165
Assam	27	28,10,597	12,88,865	146

#### 4.6. Land Use Pattern

*Table 5 Land Use Pattern*

Land Use Types	Area (in 000' ha)	Percentage
Geographical Area	7,844	
Reporting area for land utilization	7,844	100
Forests	1,853	23.62
Land not available for cultivation	2,460	31.37
Permanent pastures and other grazing lands	167	2.13
Land under misc. tree crops and groves	220	2.80
Cultivable wasteland	142	1.81
Fallow land other than current fallows	87	1.11
Current fallows	87	1.11
Net area sown	2,827	36.05

Source: Land Use Statistics, Ministry of Agriculture, GOI, (2014-15)

## 4.7. Forests

*Table 6 Forest cover in the State (Area in Sq. Km)*

States	Geographical Area	Forest Cover 2019				Per Cent of GA	Change W.R.T ISFR 2017	Scrub
		VDF	MDF	OF	Total			
1	2							
Assam	78,438	2,795	10,279	15,253	28,327	36.11	222	173

Source: ISFR 2019

*Table 7 District wise Forest Cover in Assam (Area in Sq. Km)*

District	Geographical Area (GA)	2019 Assessment				% of GA	Change wrt 2017 assessment	Scrub
		Very Dense Forest	Mod. Dense Forest	Open Forest	Total			
Baksa <sup>T</sup>	2,457	156.00	130.01	273.66	559.67	22.78	3.67	6.00
Barpeta <sup>T</sup>	2,282	0.00	33.21	81.97	115.18	5.05	10.18	1.00
Bongaigaon	1,093	0.00	62.18	187.95	250.13	22.88	14.13	0.00
Cachar <sup>T</sup>	3,786	93.00	1,077.58	1,051.76	2,222.34	58.70	-0.66	17.45
Chirang	1,923	402.00	110.45	187.39	699.84	36.39	5.84	3.00
Darrang <sup>T</sup>	1,585	0.00	13.89	75.54	89.43	5.64	3.43	1.00
Dhemaji <sup>T</sup>	3,237	68.00	124.66	152.14	344.80	10.65	6.80	4.00
Dhubri <sup>T</sup>	2,176	1.00	22.44	75.02	98.46	4.52	8.46	4.00
Dibrugarh <sup>T</sup>	3,381	105.86	68.10	581.27	755.23	22.34	-1.77	1.00
Dima Hasao <sup>H</sup>	4,888	209.00	1,519.73	2,478.20	4,206.93	86.07	-3.07	4.00
Goalpara <sup>T</sup>	1,824	14.00	137.66	244.08	395.74	21.70	97.74	1.72
Golaghat	3,502	21.00	119.30	529.61	669.91	19.12	18.91	4.00
Hailakandi	1,327	13.00	366.04	395.30	774.34	58.35	1.34	1.48
Jorhat <sup>T</sup>	2,851	12.00	103.00	445.10	560.10	19.65	6.10	4.00
Kamrup <sup>T</sup>	3,105	50.00	455.95	457.52	963.47	31.03	44.47	3.00
Kamrup Metropolitan <sup>T</sup>	955	0.00	225.00	235.05	460.05	48.17	0.05	1.00
Karbi-Anglong <sup>H</sup>	10,434	583.93	3,766.62	3,538.63	7,889.18	75.61	-93.82	84.38
Karimganj	1,809	3.00	300.23	548.20	851.43	47.07	35.43	0.76
Kokrajhar <sup>T</sup>	3,296	438.00	270.19	458.38	1,166.57	35.39	8.57	1.00
Lakhimpur <sup>T</sup>	2,277	29.00	85.88	191.69	306.57	13.46	11.57	0.96
Morigaon <sup>T</sup>	1,551	10.00	42.00	122.11	174.11	11.23	0.11	4.00
Naogaon <sup>H</sup>	3,973	50.00	363.00	498.26	911.26	22.94	1.26	9.00
Nalbari <sup>T</sup>	1,052	0.00	30.84	76.27	107.11	10.18	13.11	0.00
Sibsagar <sup>T</sup>	2,668	9.00	152.83	528.13	689.96	25.86	1.96	2.40
Sonitpur <sup>T</sup>	5,204	108.97	257.53	703.11	1,069.61	20.55	14.61	3.38
Tinsukia <sup>T</sup>	3,790	410.10	353.92	818.55	1,582.57	41.76	3.57	9.90
Udalguri <sup>T</sup>	2,012	8.00	86.67	317.85	412.52	20.50	9.52	1.00
<b>Grand Total</b>	<b>78,438</b>	<b>2,794.86</b>	<b>10,278.91</b>	<b>15,252.74</b>	<b>28,326.51</b>	<b>36.11</b>	<b>221.51</b>	<b>173.43</b>

Source: India State of Forest Report, 2019

## 4.8. Forest Types in Assam

*Table 8 Percentage area under different forest types of Assam*

S.No.	Forest Type	% of Forest cover
1.	1B/C1 Assam Valley Tropical Wet Evergreen Forest (Dipterocarpus)	3.56
2.	1B/C3 Cachar Tropical Evergreen Forest	3.11
3.	1B/C2a Kayea Forest	0.76
4.	1B/C2b Mesua Forest	0.02
5.	2B/C2 Cachar Semi-Evergreen Forest	37.75
6.	2/2S1 Secondary Moist Bamboo Brakes	3.01
7.	2B/C1a Assam Alluvial Plains Semi-Evergreen Forest	1.60
8.	2B/1S1 Sub-Himalayan Light Alluvial Semi-Evergreen Forest	1.25
9.	2B/2S2 Eastern Alluvial Secondary Semi-Evergreen Forest	1.23
10.	2B/2S1 (Pioneer Euphorbiaceous Scrub)	0.28
11.	2B/1S2 Syzygium Parkland	0.07
12.	3C/C3b East Himalayan Moist Mixed Deciduous Forest	17.92
13.	3C/C2d(iv) App. Kamrup Sal	2.71
14.	3C/C1b(I) East Himalayan Upper Bhabar Sal	2.37
15.	3C/2S1 Northern Secondary Moist Mixed Deciduous Forest	1.93
16.	3C/1S1 Low Alluvial Savannah Woodland (Salmalia albizzia)	0.05
17.	3C/C1a(ii) Khasi Hill Sal	0.12
18.	3/1S2a Terminalia-Lagerstroemia	0.01
19.	4D/SS1 Eastern Seasonal Swamp Forest	0.01
20.	4C/FS3 Creeper Swamp Forest	0.00
21.	4D/2S1 (Syzygium Parkland)	0.00
22.	4D/2S2 Eastern Wet Alluvial Grassland	0.53
23.	5/1S2 Khair-Sissu Forest	0.08
24.	8B/DS1 (Assam Subtropical Hill Savannah Woodland)	0.04
25.	9/C2 Assam Sub-Tropical Pine Forest	0.41
26.	Plantation/TOF	21.18
	Total	100.00

Source: India State of Forest Report, 2019

## 4.9. Protected Areas Network in Assam

The Protected Area Network in Assam occupies 3925 sq. km. area and constitutes about 5% of the State's geographical area and they play very important role in in-situ conservation of biodiversity.

The Protected Areas Network (PAN) includes<sup>7</sup>:

- ▶ 5 National Parks
- ▶ 17 Wildlife sanctuaries
- ▶ 3 Proposed Wildlife Sanctuaries
- ▶ 3 Tiger Reserves (Manas, Nameri, Kaziranga)
- ▶ 5 Elephant Reserves
- ▶ 2 Biosphere Reserves
- ▶ 2 World Natural Heritage Sites

#### 4.10. Biodiversity

India is one of the 17 Mega bio-diverse countries in the world and accounts for 7-8 % of the recorded species. The State of Assam is a constituent unit of the Eastern Himalayan Biodiversity Region; one of the two biodiversity “Hot Spots” in the country. Assam is part of one of the 25 mega diverse region on planet earth. Assam is known for its ecological diversity, for the range of floral and faunal species.

*Table 9 General Statistical analysis of Flora of Assam<sup>8</sup>*

Name of the plant group	No. families of	No. Genera of	No. Taxa Of	Remarks
Fern Allies	4	6	40	Fern and Fern Allies with 315 and 40 species respectively in Assam represent 25.45% and 35.84% of Indian Pteridophytes.
Ferns	28	91	315	
Angiosperms				
Gymnosperms	7	14	22	This represents about 22.68% of the Indian flora
Dicotyledons	189	1012	2752	
Monocolyledons	40	368	1080	
Total	236	1394	3854	

##### 4.10.1. Rare and Endangered Species:

Categories of threatened plants recognized by the IUCN have been reported from Assam. Besides the above; 284 species of plants are observed to be critically endangered, 149 species as endangered, 58 species as vulnerable, 13 species as near threatened.

*Table 10 Status of Fauna<sup>9</sup>*

Fauna	No. of Species
Mammal	193

<sup>7</sup> <https://asbb.assam.gov.in/portlets/protected-areas-network>

<sup>8</sup> MoEFCC. 2021. As retrieved from [http://asmenvs.nic.in/Database/PlantDiversity\\_833.aspx?format=Print](http://asmenvs.nic.in/Database/PlantDiversity_833.aspx?format=Print) on 16 March 2021

<sup>9</sup> <https://asbb.assam.gov.in/information-services/biodiversity-of-assam>

Fauna	No. of Species
Primate	9 (Out of 15 Indian primate species 9 are found in Assam)
Birds	950 (State is home to 53.5% of the bird species found in the Indian Sub-Continent, 17 species of birds are endemic to Assam) 45 species of birds from Assam find mention in the Indian Red Data Book.
Migratory birds	280
Amphibia	Assam and other parts of the N.E. region have 70 species of Amphibians reported from the region which 60+ species are found in Assam. <i>Gangenophis fulleri</i> and <i>Ichthyphis garoensis</i> are endemic to Assam.
Reptile	116 (19 species of tortoises and 77 species of snakes and lizards are found in the state)
Butterfly	Around 1500 species of butterflies are reported from India of which nearly half are reported from Assam and N.E. India.
Moth	About 387 species of moths are reported in the state.
Mollusca	39 species of freshwater snails have been reported from Assam of which 10 species are used as food.
Fish	185 (25 species are identified as Threatened)

#### 4.11. Natural Calamities

The floods of the Brahmaputra and Barak river systems in Assam have been variably inundating the plains of Assam in different periods of a year. The nature of floods in terms of frequency of occurrence during a year and the quantum of damages caused has been changing frequently. Moreover, in terms of earthquake, Assam falls in seismic zone V, making the entire State prone to earthquake of moderate to very high intensity.<sup>10</sup>

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<sup>10</sup> Assam State Disaster Management Authority. As retrieved from <http://asdma.gov.in/hazardous.html> on 16 March 2021

## 5. Legal and Policy Framework



### 5.1. Introduction

This section presents the environmental and social legislation that is applicable to the project. In case, if AFD considers the prevailing legislation as insufficient, then AFD reserves the right to propose a higher standard. An example is construction of the Rohabary building during Phase 1 of Assam project on Forest and Biodiversity Conservation, which did not require conducting any Environmental and Social Assessment (ESA) and preparation of an Environmental and Social Management Plan (ESMP), as per the prevailing legislation. As per the AFD policies this building would require conducting an ESA, preparing ESMP including Health and Safety measures and monitoring and evaluation of ESMP implementation.

### 5.2. Some Important Legal Provisions Related to Project Activities

The sub-components under the Project comprises of interventions which would benefit the local communities contributing to their livelihoods. In general, all these sub-projects would result in positive environmental and social impacts. If there are any adverse environmental or social impacts; they would be minor, temporary, localized, reversible and mitigable. The table given below include important legal and policy provisions of the Government of India (GoI) and the Government of Assam (GoA) and its applicability to the project along with the key issues affecting compliance.

*Table 11 Some Important Legal Provision related Project Activities – Environmental and Social*

Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
<b>ENVIRONMENTAL REGULATION</b>		
National Forest Policy, 1988	It articulates the twin objectives of ecological stability and social justice; recognizes people's dependence and their symbiotic relation with forest, emphasizes protection of people's rights over forest resource and offers space for participation of forest dependent communities in the conservation, protection and management of state-owned forests.	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ Lack of empowerment, low awareness about roles/ responsibilities among community institutions (JFMCs) to engage in forest governance.</li> <li>▶ Poor capacities to support preparation of forest working plans.</li> <li>▶ Elite capture of community institutions and lack of representativeness.</li> <li>▶ Limited community participation, especially of vulnerable communities, women head-loaders, pastoralists, nomadic communities in site or species selection, pasture development, zonation of grazing and in bio-diversity conservation.</li> <li>▶ Poor linkage of JFMCs with Panchayats (PRIs) for stronger community stake.</li> <li>▶ Recognizes subsistence needs of women but doesn't ensure their quality representation in Executive Committees/ decision making positions in JFMCs.</li> <li>▶ Restrictive interpretation of rights and concessions granted by the Policy (e.g. relative to carrying capacity of forest).</li> <li>▶ Lack of transparency in development of benefit-sharing mechanisms and absence of co-management/ actual ownership, impacting institutional sustainability.</li> <li>▶ Absence of recognition of seasonal needs of pastoralist, nomadic communities.</li> <li>▶ Absence of participatory monitoring or social audit systems to oversee implementation of Forest Working Plans or JFMC micro-plans.</li> </ul>



Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
		<ul style="list-style-type: none"> <li>▶ Absence of efforts to align customary laws, practices and traditional knowledge in the overall forest governance.</li> </ul>
Indian Forest Act, 1927	<p>This Act enables the state to acquire ownership over forests and their produce and regulate access, use and extraction of forest resources for consumptive use. Section 26 restricts grazing to only identified grazing units or in adjoining forest ranges.</p>	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ Creates barriers to benefit sharing, especially with regards to NTFPs and access to pastures</li> <li>▶ Creates sanctions and punitive action that discourages access to and use of forest resources in Reserve Forests, unless specifically permitted</li> <li>▶ In Protected Areas (PAs) it prevents/ regulates right of community/ individual to access any portion of protected forest for extracting forest produce, cut grass and pasture cattle.</li> <li>▶ Takes ownership away from community, erodes customary rights &amp; traditional practices, by shifting from community to scientific management of forests</li> <li>▶ Poor community ownership and involvement can lead to resource degradation and perpetuate poverty in the long term</li> <li>▶ Access and benefit sharing to be determined by concerned authority, reducing incentives for community conservation.</li> </ul>
Forest (Conservation) Act, 1980	<p>This Act aims at curbing deforestation and to conserve forests. The Act, among other things, strictly restricts use of forest for non-forest purpose, de-reservation of reserve forests and clear felling of naturally grown trees and use of forests for non-forestry purposes. Compensatory Afforestation Fund Management and Planning Authority (CAMPA) is a scheme under this Act.</p>	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ Further restricts fair and equitable access to forest bio-resources, even for forests conserved and protected by community (non-reserve forests)</li> <li>▶ Reduces incentives for community conservation, restriction on following traditional management practices and imposes forest working plan on any community initiated silvi-cultural operations.</li> <li>▶ Seeks to protect forest dwellers against habitat loss, alienation and diversion of grazing lands and other common property resources (CPRs)</li> </ul>

Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
		<ul style="list-style-type: none"> <li>▶ Limited role of local community in planning compensatory afforestation, developing Catchment Area Treatment Plan (CATP), linking them to micro-plans.</li> <li>▶ Poor implementation and consequent resource depletion can reduce community resilience and their adaptive capacity.</li> </ul>
Assam Forest Regulation, 1891	The law regulates the collection, sale and transit of forest produce and prohibits or regulate use of forest/waste land except for public purposes.	Applicable <ul style="list-style-type: none"> <li>▶ The sub-projects may not involve any acquisition or diversion in forest, but construction/ up gradation/ development of office buildings, staff quarters and vet hospitals may be taken by project.</li> </ul>
Assam Forest Policy, 2004	This policy is to ensure progressive sustainable development of the forests of Assam, to meet the twin objectives of environmental stability and ecological balance together with improved livelihood support system for her people	
Biological Diversity Act, 2002	The Act provides a comprehensive legal framework for conservation and sustainable use of bio-resources, reflects a strict regime for access, control and benefit sharing. It restricts access and use of biological resources by outsiders and creates decentralized institutional structures (State Biodiversity Boards -SBB and GP level Biodiversity Management Committees) for conservation of biological diversity.	Applicable <ul style="list-style-type: none"> <li>▶ Restrictive provisions of the Act hamper access and use by community, though it excludes local communities, growers /cultivators &amp; practitioners of indigenous medicine.</li> <li>▶ Absence of functional BMCs to oversee conservation of bio-resources.</li> <li>▶ Lack of capacities among BMCs (where present) to understand their roles and meaningfully perform them.</li> <li>▶ Lack of effective powers with BMCs to regulate bio-resource harvest or charge fee, despite the mandate provided by the Act.</li> <li>▶ Absence of clear and transparent benefit sharing mechanism that reduce incentive for local community/BMCs to undertake in-situ conservation.</li> <li>▶ Poor implementation of provisions related to granting joint ownership of IPR to the BMC or local community.</li> </ul>
Assam Biodiversity Rules, 2010	To promote biodiversity conservation in the State of Assam, sustainable use of its components and equitable sharing of benefits arising out of the use of biological resources of the state and traditional knowledge associated with these resources and matters incidental thereto or connected therewith:	

Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
		<ul style="list-style-type: none"> <li>▶ No clarity on the status of Bio-heritage Sites created by the Act or role of community in their management.</li> <li>▶ Issue of displacement of people affected by notification of bio-heritage sites.</li> <li>▶ Poor documentation of PBR, leading to loss of ecological knowledge about Medicinal and Aromatic Plants present in the region.</li> <li>▶ No institutionalized role for women in BMCs or in resource conservation, even though they play a key role in use/ collection and selection/ conservation of local biodiversity in kitchen garden for meeting the household level nutritional needs.</li> </ul>
Wildlife (Protection) Act, 1972 and Amendment Act 2003	An Act to promote conservation and development of wildlife habitats, prescribes prohibitive and permissive provisions for use of forest resources in different categories of PAs. The amended Act provides for a licensing system to regulate cultivation and trade of specified plants and for creating Community Reserves (outside PA) to be conserved and protected by a Community Reserve Management Committee (CRMCs). Integrated Development of Wildlife Habitats is scheme under this act.	<ul style="list-style-type: none"> <li>▶ Applicable</li> <li>▶ Creates strict barriers for community access and use, by considering rights of community subservient to wildlife protection in the PAs.</li> <li>▶ Only allows certain communities to pick, collect or possess forest resource for 'bona fide' personal use, not for commercial purpose.</li> <li>▶ Lack of transparency in defining bona fide use, hence scope for exploitation</li> <li>▶ Limited awareness &amp; low capacity of community institutions to understand Act.</li> <li>▶ Restricts diversion, limiting or enhanced flow of water into or outside the sanctuary and damage/ destruction of habitats, which covers activities related to Command Area Treatment (CAT)</li> <li>▶ Does not allow construction of tourism infrastructure - tourist lodges, hotels inside a sanctuary, without prior approval, imposing barriers for community managed eco-tourism initiatives</li> <li>▶ CRMCs not linked to the PRIs and hence low legal validity</li> </ul>

Relevant Acts and Policies of GoI and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
		<ul style="list-style-type: none"> <li>▶ Improved forest density and quality through community conservation efforts may lead to better wildlife base, potential man-animal conflicts and notification of new PAs (in the long term) leading to further restrictions on access and use.</li> </ul>
Eco-sensitive Zone Notifications 2015	The activities in areas around Wildlife Sanctuaries and National Parks are regulated from the perspective of conservation of wildlife	Applicable. Monitoring Committee for ESZ in the State
Compensatory Afforestation Fund Act, 2016	The Act seeks to establish the National Compensatory Afforestation Fund under the Public Account of India, and a State Compensatory Afforestation Fund under the Public Account of each state. The collected funds would be utilized for afforestation, regeneration of forest ecosystem, wildlife protection and infrastructure development.	<ul style="list-style-type: none"> <li>▶ Applicable to the project, as it can leverage CAMPA funds for afforestation activities.</li> </ul>
The Assam Compensatory Afforestation Fund Rules, 1994	To constitute a Fund for the purpose of Compensatory Afforestation to be raised against the Forest Area diverted for non-forest use under the provisions of Section 4(1) of the Forest (Conservation) Act, 1980	
Insecticide Act 1968; Insecticide Rules 1971; Insecticide (Control) Order 1985	The GOI has notified various Acts for the control and prevention of pollution due to pesticides and fertilizers. The Act to regulate the import, manufacture, sale, transport, distribution and use of insecticides with a view to prevent risk to human beings or animal	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ The project investments are likely to involve use of pesticides (in nurseries and plantation activities). These activities would comply with the requirements of the Insecticide Act – especially with regard to non-use of banned pesticides, safe use of pesticides, etc. Central Insecticides Board, GoI</li> </ul>
Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 and subsequent amendment	The Food Safety and Standards Authority of India (FSSAI) has been established under the Food Safety and Standards Act, 2006 as a statutory body for laying down science-based standards for articles of food and regulating manufacturing, processing,	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ FSSAI standards would apply if NTFPs supported under the project are processed for consumption.</li> </ul>

Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
	distribution, sale and import of food to ensure it is safe to consume.	
National Environment Policy, 2006	It brings related legislations under an overarching frame and advocates decentralized governance by seeking transfer of power to State/ local authorities; participation of local bodies in management of sensitive zones.	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ Absence of conducive policies and unilaterally imposed regulatory practices reduce people's incentives for afforestation.</li> <li>▶ Threat of loss of natural heritage sites, biodiversity hotspots, sacred groves and landscapes that are repositories of significant genetic and species diversity in an ecosystem as a result of low community ownership.</li> </ul>
Environment (Protection) Act and amendments, 1986	The Environment Protection Act, 1986 (the "Environment Act") provides for the protection and improvement of environment. The term "environment" is understood in a very wide term under s 2(a) of the Environment Act. It includes water, air and land as well as the interrelationship which exists between water, air and land, and human beings, other living creatures, plants, microorganisms and property. Under the Environment Act, the Central Government issues notifications under the Environment Act for the protection of ecologically- sensitive areas or issues guidelines for matters under the Environment Act	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ The various environmental quality standards notified under this act are applicable to the project. These include: General standards for discharge of environmental pollutants</li> <li>▶ Ambient air quality standards in respect of noise</li> <li>▶ Vehicular exhaust norms</li> <li>▶ Noise limits for vehicles</li> <li>▶ Emission and noise limits for gensets</li> </ul>
Water (Prevention and Control of Pollution) Act (and subsequent amendments), 1974	To provide for the prevention and control of water pollution and the maintaining or restoring of wholesomeness of water.	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ The Project may have few investments on supply chain that may increase wastewater flow. Proper measures as per the requirement of the Act would be incorporated accordingly.</li> </ul>
Air (Prevention and Control of Pollution) Act (and subsequent amendments), 1981	To provide for the prevention, control and abatement of air pollution, and for the establishment of Boards to carry out these purposes.	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ The project would involve construction of infrastructure and their clearance may be required by the Project.</li> <li>▶ The project activities (especially construction and NTFP processing) would have to comply with the</li> </ul>

Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
		National Ambient Air Quality Standards.
The National Green Tribunal Act, 2010	An act established for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto	Applicable Respected to area where development activities may cause any damage to environment and property
Disaster Management Act, 2005	The purpose is to have an effective management of disasters and for matters connected therewith or incidental thereto	Applicable The subproject areas fall under the seismic (earthquake prone) zone V and hence any construction activities/ interventions would be under purview of this act
Energy Conservation Act, 2001	The objective is for efficient use of energy and its conservation and for matters connected therewith or incidental thereto	Applicable Project intervention involves investment in energy efficient equipment, energy conservation building etc.
The Solid Waste Management Rules, 2016	The provisions of the act prevent littering and mandate proper segregation, collection, storage and disposal of municipal solid waste.	Applicable ▶ As project investments would involve construction/up gradation of office buildings/staff quarters, veterinary hospitals, generation and disposal of solid waste under different components would need to be managed in line with the rules.
The Noise Pollution (Regulation and Control) Rules, and amendments 2000	Workplace noise is covered under Indian factories Act, 1948 but this rule provides safety against noise in ambient condition with generation of noise by certain point and area source.	Applicable ▶ Project activities may lead to generation of noise due to construction activity, and operation of DG sets for power backup.
Central Motor Vehicle Act 1988 Central Motor Vehicle Rules, 1989	To control vehicular air and noise pollution. To regulate development of the transport sector, check and control vehicular air and noise pollution.	Applicable ▶ Operation of vehicles in carriage and construction activities in the project. Also, applicable to vehicles used under forest fire control / patrol and management.

Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
		<ul style="list-style-type: none"> <li>▶ All vehicles would comply with relevant emission control norms.</li> </ul>
Model Building Byelaws, 2016	All public open spaces in urban areas above the size of 500 sq.m. shall have arrangements for complete utilization and capture of storm water with scientific rainwater harvesting arrangements	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ Building infrastructure of this scale is likely to be supported under the project.</li> </ul>
Construction and Demolition Waste Management Rules, 2016	Every waste generator shall prima-facie be responsible for collection, segregation of concrete, soil, storage of construction/ demolition waste generated and deposition to collection centre or handover to authorized processing facilities	<ul style="list-style-type: none"> <li>▶ Applicable as construction waste would be generated during the construction phase.</li> <li>▶ Some of the projects involve dismantling / demolition of existing infrastructure. (office, quarters, vet hospitals)</li> </ul>
National Building Code of India, 2016	The National Building Code of India (NBC), a comprehensive building Code, is a national instrument providing guidelines for regulating the building construction activities across the country. It is widely referred and used by state/local bodies regulating development and building construction activities, Government construction departments and agencies, private construction agencies/ builders/ developers, building professionals and consultants, academic and research institutions, and building material and technology suppliers throughout the country. The Code mainly contains administrative regulations, development control rules and general building requirements; fire safety requirements; stipulations regarding materials, structural design and construction (including safety); building and plumbing services; landscape development, signs and outdoor display structures; guidelines for sustainability, asset and facility management, etc.	<ul style="list-style-type: none"> <li>▶ This is code is applicable to all buildings and for all construction projects. The present project would have building and construction activities which triggers the use and compliance with this code.</li> </ul>
<b>SOCIAL REGULATION</b>		

Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
Constitutional Safeguards	<p>The constitutional safeguards related to tribal are : (i) Article 14, related to Equal rights and opportunities; (ii) Article 15, prohibits discrimination on grounds of sex, religion, race, caste etc.; (iii) Article 15 (4), enjoins upon state to make special provisions for the Scheduled Tribes; (iv) Article 16 (3), empowers state to make special provisions for reservation in appointments or posts in favor of Scheduled Tribes; (v) Article 46, enjoins upon State to promote with special care educational and economic interests of Scheduled Tribes, protection from social injustice and exploitation; (vi) Article 275 (1), Grant-in-aid for promoting the welfare of Scheduled Tribes; (vii) Article 330, 332, 335, related to the reservation of seats for Scheduled Tribes in Lok Sabha and State Assemblies; and (viii) Article 339, 340, related to Control of the Union over the Welfare of Scheduled Tribes and powers to investigations thereof.</p> <p>Article 366 (25) refers to Scheduled Tribes as those communities, who are scheduled in accordance with Article 342 of the Constitution, wherein communities shall be declared as such by the President through an initial public notification or through a subsequent amending Act of Parliament. The Fifth Schedule under Article 244(1) of Constitution defines “Scheduled Areas” as such areas as the President may by order declare to be Scheduled Areas after consultation with the Governor of that State. Defines following essential characteristics, for a community to be identified as Scheduled Tribes are; 1) Indications of primitive traits, 2) Distinctive culture, 3) Shyness of contact with the community at large, 4) Geographical isolation and 5) Backwardness.</p>	<p>Applicable</p> <p>These constitutional safeguards provide the following for the Scheduled Tribes:</p> <ul style="list-style-type: none"> <li>▶ Equal rights and opportunities</li> <li>▶ Prohibits discrimination</li> <li>▶ Provides special provisions</li> <li>▶ Provides for reservation</li> <li>▶ Promotes educational and economic interests</li> <li>▶ Protection from social injustice</li> <li>▶ Protection against exploitation</li> <li>▶ Promotes welfare</li> </ul>



Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
Panchayati Raj Institutions 73 <sup>rd</sup> Amendment Act, 1992	<p>The Act aims to provide a 3-tier system of Panchayat Raj for all States having a population of over 2 million, to hold Panchayat elections regularly every 5 years, to provide seats reservations for scheduled castes, scheduled tribes and women; to appoint a State Finance Commission to make recommendations regarding the financial powers of the Panchayats and to constitute a District Planning Committee, to prepare a development plan for the district. The 3- tier system of Panchayat Raj consists of: Village-level Panchayats; Block-level Panchayats and District-level Panchayats. Besides, it indicates the powers and responsibilities and also sources of funds.</p> <p>The Act provides for establishment of self-governance in rural areas, with primary mandate to work for economic development &amp; social justice. Among 29 subjects devolved to PRIs most relevant are fuel and fodder, NTFP, social and farm forestry, small scale, khadi, cottage and village industries, watershed development.</p> <p>14<sup>th</sup> Finance Commission Grants is a scheme under this Act.</p>	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ Ineffective devolution of subjects and lack of systems to support PRIs.</li> <li>▶ Absence of clarity among elected representatives regarding their mandate in the area of forest governance.</li> <li>▶ Poor linkage between PRIs and local community institutions created by different forest legislations.</li> <li>▶ Resulting inability of PRIs in ensuring equitable benefit sharing, inclusion, improved access or resource planning around forest resources.</li> <li>▶ Lack of flexibility to PRIs to work on forest management using Fourteenth Finance Commission (FFC) grants received (based on conservation value of their forests and forest cover)</li> </ul>
Joint Forest Management	<p>The program seeks involvement of village communities in the regeneration of degraded forests and conservation of well-stocked forests. Subsequent guidelines shifted focus from timber to NTFP, encouraged people's participation in forest management, spelt mechanisms for sharing ecological as well as economic benefits with the community.</p>	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ Despite the mandate, poor delegation of powers and hence low involvement of users in planning restoration/ management of forests and pastures.</li> <li>▶ Lack of integration of JFM micro-plans with departmental working plans.</li> <li>▶ Low effective representation of vulnerable communities, especially women, in decision making roles in VFCs/FPCs /EDCs, despite existence of such provisions.</li> <li>▶ Low capacities among user groups, Women SHGs, JFMCs to understand NTFP value chains, get better prices or improve incomes.</li> </ul>

Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
		<ul style="list-style-type: none"> <li>▶ Loss of traditional practices that assured sustainable NTFP harvest for optimized and long-term returns.</li> </ul>
The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Rules, 1995	The act provides for specific provisions to prevent atrocities on the Scheduled Castes and the Scheduled Tribes and suggests State Government to frame rules for the same. These include identification of areas where atrocity may take place or there is an apprehension of reoccurrence of an offence under the Act. The State Government is required to set up a Scheduled Castes and the Scheduled Tribes Protection Cell at the State headquarters under the charge of Director of Police, Inspector-General of Police. This Cell is responsible for, conducting survey of the identified area; maintaining public order and tranquillity in the identified area; recommending to the State Government for deployment of special police force or establishment of special police post in the identified area; and restoring the feeling of security amongst the members of the Scheduled Castes and the Scheduled Tribes	Applicable <ul style="list-style-type: none"> <li>▶ Provides protection to Scheduled Castes and Tribes</li> <li>▶ Prevents atrocities on Scheduled Castes and Tribes</li> </ul>
Panchayat (Extension to Scheduled Areas) Act 1996	The Act empowers the Gaon Sabha (GS) to safeguard and preserve traditions and customs of the people, their cultural identity, community resources (including ownership of forest resources) and the customary mode of dispute resolution, in the notified Scheduled Areas by upholding the rights of tribal to self-governance. It grants powers for decision-making to the habitation ( <i>Gaon Sabha</i> ) and entitles them to ownership of NTFPs. Key provisions include: <ul style="list-style-type: none"> <li>▶ State legislation on Panchayats in the scheduled area should take care of the customs, religious practices and traditional management practices of community resources</li> </ul>	Applicable <ul style="list-style-type: none"> <li>▶ National and state forest legislations have not been suitably modified to bring them in line with PESA, for decentralized governance and effective enforcement.</li> <li>▶ Lack of complete ownership of NTFPs with the GS, and hence absence of power to independently plan determine prices and sell.</li> <li>▶ Issue of conflict between community institutions and forest department over right of ownership, access to collect, use and dispose NTFPs.</li> <li>▶ Poor capacity of the GS to plan its development priorities and lack of recognition of GS' local</li> </ul>

Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
	<ul style="list-style-type: none"> <li>▶ Every village shall contain a Gaon Sabha whose members are included in the electoral list for the panchayats at village level</li> <li>▶ Planning and management of minor water bodies are entrusted to the Panchayats</li> </ul>	<p>development plans by the forest department.</p> <ul style="list-style-type: none"> <li>▶ Neglect of mandatory mechanisms for seeking GS concurrence while planning interventions/ activities in the Scheduled Areas.</li> </ul>
Assam Joint (People's Participation) Forestry Management Rules, 1998	The rules provide for creation of Village Forest Development Society (VFDS), as a registered society to manage any government forest or common land brought under Participatory Forest Management. Provides usufruct and revenue sharing benefits to the society.	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ Lack of community consultations for arriving at benefit sharing mechanisms.</li> <li>▶ Issues of conflicts between different societies, and with transhumant communities/grazers, related to overlapping forest resources and pastures.</li> <li>▶ Lack of integration of micro-plans prepared by the VFDS with the working plans for holistic forest development.</li> </ul>
National Agricultural Policy, 2000	The National Policy on Agriculture seeks to actualise the vast untapped growth potential of Indian agriculture, strengthen rural infrastructure to support faster agricultural development, promote value addition, accelerate the growth of agro business, create employment in rural areas, secure a fair standard of living for the farmers and agricultural workers and their families, discourage migration to urban areas and face the challenges arising out of economic liberalization and globalization Provides approach for sustainable agriculture, food and nutritional security, generation and transfer of technology; inputs management and incentives for agriculture, Generation and Transfer of Technology, management reforms, institutional structure	<ul style="list-style-type: none"> <li>▶ Project comprises many of the features enunciated in the policy</li> </ul>
Right to Information Act, 2005	Provides a practical regime of right to information for citizens to secure access to information under the control of Public Authorities. The act sets out obligations of public	<p>Applicable</p> <ul style="list-style-type: none"> <li>▶ All documents pertaining to the project would be disclosed to public.</li> </ul>

Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
	authorities with respect to provision of information; <ul style="list-style-type: none"> <li>▶ Requires designating of a Public Information Officer;</li> <li>▶ Process for any citizen to obtain information/disposal of request, etc.</li> <li>▶ Provides for institutions such as Central Information Commission/State Information Commission</li> </ul>	
Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006	This is an act to recognize and vest the forest rights and occupation in forest land in forest dwelling scheduled tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded; to provide for a framework for recording the forest rights so vested and the nature of evidence required for such recognition and vesting in respect of forest land. The Act provides for use, access and ownership to forest resources, biodiversity and provision for benefit sharing for ST and other forest dwelling communities. It provides individual & community rights of ownership, access to collect, use, and dispose of NTFPs; to protect, conserve and develop any forest resource which the community has traditionally/ seasonally protected/ used; to protect and access their cultural and natural heritage sites and habitats, water bodies, pastures. It also provides for occupation of forest land for cultivation and/ or habitation, including in the PAs.	Applicable <ul style="list-style-type: none"> <li>▶ Poor enforcement of provisions like the need for complete ownership, participation and concurrence of local communities (Gaon Sabha) in forest management, species selection for NTFP/ pasture development and bio-diversity conservation.</li> <li>▶ Need to document all customary rights, dependent forest resources for upholding the existing arrangements while preparing plans.</li> <li>▶ Conflicts between community and state related to collection and disposal of NTFPs (Section 3(1) (c)).</li> <li>▶ Operational challenges for GS in using provisions of the Act to work on NTFP value addition and processing (transit rules).</li> <li>▶ Risk of displacement of right-holders from lands notified as (inviolable) critical wildlife/ tiger habitats within Parks and Sanctuaries, leading to loss of livelihoods for affected families/ communities.</li> <li>▶ Conflicts among different communities due to diffused boundaries where customary rights are accessed.</li> </ul>
National Policy for farmers, 2007	Sets goals such as to: (i) improve economic viability of farming by substantially increasing the net income of farmers and to ensure that agricultural progress is measured by advances made in this income. (ii) To	<ul style="list-style-type: none"> <li>▶ Project comprises many of the features enunciated in the policy</li> </ul>

Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
	protect and improve land, water, biodiversity and genetic resources essential for sustained increase in the productivity, profitability and stability of major farming systems by creating an economic stake in conservation. (iii) To develop support services including provision for seeds, irrigation, power, machinery and implements, fertilizers and credit at affordable prices in adequate quantity for farmers, etc.(iv) defines farmers that include tribal families / persons engaged in shifting cultivation and in the collection, use and sale of minor and non-timber forest produce prescribes assets reforms required to empower farmers such as land, water, livestock, provides for support services including credit, climate change, agricultural practices, etc.	
Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013	It makes prior consent of landowners a pre-requisite & calls for detailed Social Impact Assessment; restricts acquisition in Scheduled Areas without prior Gaon Sabha consent. Alternate fuel, fodder to be developed to meet the needs of resettled communities.	Not applicable, as no private land is used for project purposes. ► Absence of formalized mechanism for holding consultations with affected families, regarding the nature and scale of resettlement (and the region to be notified) for creating Critical Wildlife Habitats. ► Resettlement of affected families deprives them of forest and other natural resources on which they traditionally depended for livelihoods and food security.
<b>LABOUR REGULATION</b>		
Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996	It regulates the employment and conditions of service of building and other construction workers and provides for their safety, health and welfare.	Applicable ► This would be applicable for all building or other constructions works under the project that employ 10 or more workers.
Employee Compensation Act, 1923	It provides for payment of compensation by employers to their employees for injury by accident i.e. personal injury or occupational disease.	Applicable ► Construction workers would be involved in the sub-projects

Relevant Acts and Policies of Gol and GoA	Mandate of the Act/ Policy	Applicability and Issues affecting compliance
Inter-state Migrant Workers Act, 1979	It protects workers whose services are requisitioned outside their native states in India. A contractor who employs or who employed five or more Inter-State migrant workmen need to obtain registration under this act	Applicable ▶ Construction workers would be involved in the sub-projects
The Child Labour (Prohibition & Regulation) Amendment Act, 2016	It prohibits employment of children in specified hazardous occupations and processes and regulates the working conditions in others.	Applicable ▶ There should not be any child labor (less than 14 years) in any project activity and adolescents (above 14 and less than 18 years) in any hazardous activity.
Minimum Wages Act, 1948	Payment of minimum rate of wages as fixed and periodically revised by the State Government	Applicable ▶ Construction/daily wage workers would be involved in the sub-projects
Building and Other Construction Workers Welfare Cess Act, 1996	An Act to provide for the levy and collection of a Cess on the cost of construction incurred by employers.	Applicable ▶ Sub-projects would involve construction workers

*Table 12 Process for Permissions and Approvals Required*

No.	Activity	Relevant Act/Rules	Requirement	Competent Authority	Responsible Agency
1	Tree cutting from Private land classified as 'Forests'	Forest Conservation Act 1980	Permission for tree cutting shall be processed under Forest Conservation Act 1980. Felling under this category would be granted by DFO after processing the case under FC Act and getting approval	DFO	Forest Department
2	Tree cutting from Government Land classified as forests	Forest Conservation Act 1980	Felling of trees from diverted forests land where final approval has been granted by Gol u/s 2 of FCA, 1980	DFO, of the concerned circle Felling to be done through FDC	Forest Department
3	Extraction of ground water	Ground Water Rules of 2002	Permission for extraction of ground water for use in road/other construction activities	State Ground Water Authority	Forest Department
4	Engagement of labour	Labour Acts	Labour license for employing labour	Labour Commissioner, Labour Department	Forest Contractor

No.	Activity	Relevant Act/Rules	Requirement	Competent Authority	Responsible Agency
5	Labour Compensation	Employee Compensation Act, 1923	Labour compensation in case of any loss of sight, limb or life.	Compensation Commissioner, Labour Department	Forest Contractor
6	Purchase of Vehicles	Environment (Protection) Act and amendments, 1986	Registration and Pollution Under Control Certification	State Pollution Control Board	Forest Department
7	Establishment of processing units for NTFP	Environment (Protection) Act and amendments, 1986	Consent for Establishment and Consent for Operation are to be obtained from the State Pollution Control Board prior to establishment and commencement of operations, respectively.	State Pollution Control Board	Forest Department
8	Disposal of vehicles/ Equipment	Environment (Protection) Act and amendments, 1986	To be sold to dealers approved by state Pollution Control Board	State Pollution Control Board	Forest Department

It can be summed up that the while some legal provisions safeguard the forests from over exploitation and advocates strict conservation and protection (FCA-1980, WPA-1972), there are other instruments that recognize the customary rights of over forest resources meet, their role in conservation and development (PESA-1996, FRA-2006) while some provisions try to strike a balance between the two by suggesting judicious use of forest resources and brining in community as the co-owners of forest along with the forest department (NFP-1988, JFM-1993, PFM- 2000 and BDA-2002).

In the absence of a clear alignment/harmonization of forest polices at the national level to establish the exact role of communities in conservation, protection as well as development of forest resources, the legal environment with respect to communities' rights and entitlement over forests remains nebulous.

### 5.3. International Conventions and Agreements

Some of the important and relevant international conventions and agreements ratified by the India are as follows:

- ▶ Convention on International Trade in Endangered Species of wild fauna and flora (CITES), 1973: CITES was signed in March 1973 for the regulation of international trade in endangered species of wild flora and fauna.
- ▶ Montreal Protocol on Substances that deplete the Ozone Layer (to the Vienna Convention for the Protection of the Ozone Layer), 1987: Also known popularly as the Montreal Protocol, the protocol set targets aimed at a reduction in the production and consumption of ozone depleting substances (ODS) and came into force in 1989.
- ▶ Basel Convention on Transboundary Movement of Hazardous Wastes, 1989: Known popularly as the Basel Convention, the convention aims for a reduction in the transboundary movement of hazardous wastes.

- ▶ UN Framework Convention on Climate Change (UNFCCC), 1992: The UNFCCC aims to regulate greenhouse gas emissions through international co-operation and agreement to bring emissions to a level that that can offset the effects of global warming and climate change.
- ▶ Convention on Biological Diversity, 1992: The Convention on Biological Diversity (CBD) provides a legally binding framework for the conservation of biodiversity, sustainability in use of biological resources and the equitable sharing of benefits and knowledge that arise in the case of the usage of biological resources.
- ▶ Agenda 21: Agenda 21 is a product of the Earth Summit organized by the United Nations (UN) that took place in Rio de Janeiro, Brazil in 1992 to include stakeholders in a non-binding action plan for achieving sustainable development.
- ▶ UN Convention on Desertification, 1994: The UN Convention on desertification was formulated in 1994 and seeks a bottom-up approach to build international co-operation in combating desertification or addressing policy in regions prone to droughts.
- ▶ Cartagena Protocol on Biosafety: The Cartagena Protocol on Biosafety is a supplement to the Convention on Biological Diversity and provides an international regulatory framework for the safe use, transfer and handling of Living Modified Organisms (LMOs) i.e. genetically modified organisms resulting from biotechnology.
- ▶ International Tropical Timber Agreement and The International Tropical Timber Organisation (ITTO), 1983
- ▶ Convention concerning the Protection of the World Cultural and Natural Heritage (Paris, 1972)
- ▶ Convention on Wetlands of International Importance, especially as Waterfowl Habitat (Ramsar, 1971)
- ▶ Convention Relative to the Preservation of Fauna and Flora in their Natural State (1933)
- ▶ International Plant Protection Convention (1951)
- ▶ Convention on the Conservation of Migratory Species of Wild Animals (Bonn, 1979)
- ▶ Paris Agreement (2015)
- ▶ The 2030 Agenda for Sustainable Development (2015)
- ▶ International Convention on the Elimination of All Forms of Racial Discrimination (ICERD), 1965 India ratified the Convention on 3 December 1968 with certain reservations
- ▶ International Covenant on Civil and Political Rights (ICCPR), 1966 India acceded to the Convention on 10 April 1979
- ▶ International Covenant on Economic, Social and Cultural Rights (ICESCR), 1966 India acceded to the Convention on 10 April 1979
- ▶ Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), 1979 India signed the Convention on 30 July 1980 and ratified it on 9 July 1993 with certain reservations
- ▶ Convention on the Rights of the Child (CRC), 1989 India acceded to the Convention on 11 December 1992
- ▶ Convention on the Rights of Persons with Disabilities (CRPD), 2006 India ratified the Convention on 1 October 2007
- ▶ Optional Protocol to the Convention on the Rights of the Child (CRC) on the Involvement of Children in Armed Conflict, 2000 India ratified the Optional Protocol on 30 November 2005
- ▶ Optional Protocol to the Convention on the Rights of the Child (CRC) on the Sale of Children, Child Prostitution and Child Pornography, 2000 India ratified the Optional Protocol on 16 August 2005
- ▶ Forced Labour Convention, 1930 (No. 29) India ratified Convention No. 29 on 30 November 1954



## 5.4. AFD Environmental and Social Policy

This project has been classified by AFD as a Moderate Environmental and Social Risks project. According to the experience of the previous phase, there risks are three main types: a) Low risk activities, b) Middle risk activities and c) Important/ high Environmental and Social risks. In case of a sub-project that would present important/ high risks, the World Bank Environmental and Social standards (Environmental and Social Standards – ESS) would be applied, specifically for this project. The system should be also consistent with World Bank Group Environmental, Health and Safety - EHS Guidelines (ESHG).

## 5.5. The World Bank Environmental and Social Framework

The ten (10) Environmental and Social Standards establish the standards that the Borrower and the project would meet through the project life cycle, as follows:

1. Environmental and Social Standard 1: Assessment and Management of Environmental and Social Risks and Impacts;
2. Environmental and Social Standard 2: Labour 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 9: Financial Intermediaries; and
10. Stakeholder Engagement and Information Disclosure.

## 6. Project Environmental and Social Impacts



### 6.1. Background

The overall vision of the Project is that it “contributes through the Forest Department to the conservation of nature for healthier ecosystem and happier communities”. This overarching vision/goal shall be reached through the following three main specific objectives:

- ▶ Developing participatory Sustainable Forest and Biodiversity management under changing climatic conditions.
- ▶ Improving the livelihoods for Forest neighbouring communities through inclusive (collective and individual) supports
- ▶ Strengthening the Forest department to better fulfil its missions

### 6.2. Project Components – Key Activities with Environmental and Social Impacts

The project has planned for several soft and physical interventions in order to achieve its objectives and realize its vision. The following are the key activities under several components that would have environmental and social impact

1. Conservation of Ecosystems
  - 1.1. Product Rehabilitation and Productivity Enhancement
    - 1.1.1. Forest Rehabilitation
    - 1.1.2. Plantations
    - 1.1.3. Plantations through JFMC
  - 1.2. Infrastructure and Equipment
    - 1.2.1. Buildings
    - 1.2.2. Vehicles
    - 1.2.3. Equipment
  - 1.3. Biodiversity Conservation
    - 1.3.1. Implementation of Management Plans and Actions
  - 1.4. Human Wildlife Coexistence
    - 1.4.1. Veterinary and Rescue Support
  - 1.5. Awareness and Outreach
    - 1.5.1. Establishment of information dissemination and interpretation centres
2. Community Engagement
  - 2.1. Strengthening of Existing JFMCs/ EDCs
    - 2.1.1. Strengthening of Production Facilities
    - 2.1.2. Formation of new JFMC/ EDC
    - 2.1.3. Development of Micro Plans
    - 2.1.4. Entry Point Activities
  - 2.2. Establishment of Production Facilities
    - 2.2.1. Production Facilities
  - 2.3. Establishment of Eco-development Facilities and Services
    - 2.3.1. Eco-development Facilities and Services
3. Institutional Strengthening of Forest Department
  - 3.1. Infrastructure and Buildings
    - 3.1.1. Buildings
4. Contingencies

The following environmental and social impacts are predicted for the sampled locations and communities. These potential positive impacts are:

- ▶ Improved access to services
- ▶ Productive use of time
- ▶ Improvements in income patterns
- ▶ Improved public safety and security
- ▶ Reduced sufferings during monsoons and adverse climatic conditions
- ▶ Health and Environmental improvements
- ▶ Improvements in quality of life and human dignity

- ▶ Opportunities for social interaction
- ▶ Improved community participation and sense of ownership

The potential negative environmental and social impacts for each component are summarized in the table below:

*Table 13: Potential Negative Environmental and Social Impacts Matrix*

Project Activity↓ / Impact →	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	Provisional Category
Forest Rehabilitation	N	M	N	L	M	L	L	L	L	M	M	L	L	M	L	L	L	L	L	S	B
Plantations (AR and JFMC)	N	M	N	L	L	L	L	L	L	M	M	L	L	M	L	L	L	L	L	S	B
Construction of Buildings	N	L	N	L	L	L	L	L	L	L	N	L	L	L	M	L	L	L	M	L	A
Procurement of Vehicles	N	N	N	N	N	N	N	N	N	N	N	N	L	N	L	L	L	N	L	N	C
Procurement of Equipment	N	N	N	N	N	N	N	N	N	N	N	N	L	N	L	L	L	N	L	N	C
Biodiversity Conservation	N	L	N	L	L	L	L	L	L	L	M	L	L	M	L	L	L	L	L	S	B
Veterinary Rescue Support	N	N	N	N	N	N	N	N	N	N	N	N	L	N	L	L	L	N	L	N	C
Anti-Poaching Camps	N	M	N	L	L	L	L	L	M	L	N	L	S	M	L	L	L	L	L	M	A
Establishment of information dissemination and interpretation centres	N	N	N	N	N	N	N	N	N	N	N	N	N	N	L	L	L	N	L	L	C
Micro-Planning Activities	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C
Strengthening and Establishment of Production Facilities	N	N	N	N	N	N	N	N	N	N	N	N	N	N	L	L	L	N	L	N	C
Farming Related Activities	N	N	N	N	N	N	L	N	N	M	M	L	N	L	N	L	N	N	N	N	B
Veterinary Related Activities	N	N	N	N	N	N	L	N	N	M	N	L	N	N	N	L	N	N	N	N	B
Skill Based Activities	N	N	N	N	N	N	N	N	N	N	N	M	N	N	N	N	N	N	N	N	B
Professional Trades Activities	N	N	N	N	N	N	N	N	N	N	N	N	M	N	N	N	N	N	N	N	C
Business/ Services Activities	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C
Technology/ IT Related Activities	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	C
Eco-development Facilities and Services	N	N	N	L	N	N	N	N	N	N	N	N	N	N	L	L	L	N	L	L	C

*Table 14: Impact Codes Matrix*

Code	Impact	Code	Impact	Code	Impact
A	Land acquisition	H	Ground Water Quality	O	Noise
B	Transfer of Government Land under Different Tenures	I	Destruction of Habitat/Flora Fauna	P	Smell
C	Involuntary Resettlement	J	Insect and Pest Menace	Q	Smoke
D	Land Use Change	K	Increased chemical pesticides/ fertilizers use	R	Disturbance to Other Services
E	Hydrology and drainage Pattern	L	Public Health	S	Air Quality
F	Water logging	M	Safety	T	Loss of Access/ Restricted Access
G	Surface Water Quality	N	Biodiversity		

Level of Impacts:	N – Nil	L – Low	M – Moderate	S – Substantial
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The impacts presented above are indicative. The actual impacts would only be known, once the sub-projects are identified; in terms of location, size and scope. Agence Française de Développement (AFD) has categorized APFBCS project as Moderate Risk. However, each of these sub-projects would be categorized as A or B or C as indicated below:

*Table 15: Category and nature of impacts*

Category	Determinants – Nature of Impacts
Category A	Large magnitude Major consequences Beyond immediate surroundings/ Gaon Panchayat Frequent/ Likely occurrence Long-term
Category B	Medium magnitude Moderate consequences Immediate surroundings/ Village level Occasional /Possible occurrence Medium-term
Category C	Small magnitude Minor consequences Localized/ Habitation level Infrequent/ unlikely occurrence Short-term

For all Category A sub-projects, an Environmental Social Assessment (ESA) would be carried out, followed by preparation of ESMP, RAP and TDP wherever required as per the guidelines given in this ESMS.

For all Category B sub-projects, the screening would be conducted to ensure it is Category B, and the generic ESMP would be used.

For all Category C sub-projects, the generic ESMP would be used.

The potential adverse environmental and social impacts most likely to occur due to project related activities are described in detail below.

### 6.3. Summary of Environmental and Social Issues

The following key environment & social issues are identified from the experience of implementing the APFBC Phase 1 and previous forestry projects implemented in the State and other Externally Aided Projects (EAPs), etc.

#### Potential Environmental Impacts

- ▶ The absence of a proper Environmental and Social Management System that results in adhoc addressing of impacts only when noticed. For example, the case of the multi-storeyed building that later went through an ESA.
- ▶ Temporary manageable impacts relating to civil works; impacts on air, water, soil, noise, drainage and aesthetics. It is expected that physical works would be of small scale and minimal.
- ▶ In nurseries, use of pesticides against pests and diseases could impact human health, air quality, groundwater, surface water and soil.
- ▶ Increased grazing pressure in other areas due to displacement of cattle/livestock from pastures undergoing restoration/ rotation.
- ▶ Increased grazing pressure and loss of access due to fencing of pastures/ conservation areas
- ▶ Loss of forestland by converting them to pastures and vice-versa loss of pastures due to plantations.
- ▶ Livestock population may increase by assuring enhanced fodder availability, which may be a potential threat to natural areas.
- ▶ Shifting of grazing pressure in other areas after closing selected areas for grazing may speed up the degradation of remaining pastures nearby.
- ▶ Risk of forest fires.
- ▶ Thinning of forests, reduction in dense forest, reduced capacity for holding soil water, changes in micro-climatic conditions, impacts on biodiversity
- ▶ Increased soil erosion, reduced land productivity, high runoff, increased silt load in streams
- ▶ Increased incidences of flooding, stream bank erosion, reduced drinking water supply
- ▶ Reduced potential of riverbanks to act as buffers against floods, implications on fisheries, damage to habitat
- ▶ Reduction of water holding capacity of soils at root zone
- ▶ Steep slopes without adequate protection lead to high runoff and associated soil erosion leading to deteriorating water availability
- ▶ Threats to indigenous species, reduced productivity of pastures, loss of grazing areas, fodder, forest cover, reduced production of NTFP
- ▶ Poor quality of pastures, depletion of ground flora, added pressures of grazing rights.
- ▶ Allowing of overgrazing and not following rotational grazing, most pastures are facing depletion of soil phosphorus due to overgrazing, thus legumes are unable to form nodules and are depleting
- ▶ Risk of increased debris and deposition of wastes
- ▶ Thinning of forests, removal of deadwood from forests impacting detritus and other decomposers, reduced habitat quality, carrying of head loads of fuel wood by community members.

- ▶ Reduction in natural regeneration of species, as some areas are harvested beyond carrying capacity
- ▶ Loss / Removal of traditional foods, medicinal herbs
- ▶ Loss/ Removal of Sacred Groves
- ▶ Habitat degradation, reduced productivity of habitats, low natural regeneration, changes in species, impacts on ecosystem processes

#### Potential Social Impacts/risks

- ▶ Lack of a proper Social strategy and a Gender and Social Inclusion Action Plan results in make-shift arrangements to address the key social issues as they arise.
- ▶ Land loss due to land required for project facilities (this is a no-go case under the present project)
- ▶ Land under disputes (FRA, etc.) may be used for project facilities
- ▶ Vulnerable groups, women and tribals may be excluded from project activities, training and capacity building activities.
- ▶ Possibility of exploitation of labour.
- ▶ People from project area may not respond to the project activities and may not participate in the project as they may not understand the social development dimensions.
- ▶ The project stakeholders may not be able to understand their roles related to social issues.
- ▶ FD and participating line departments capacity issues with regard to people management and community mobilization may affect project outcomes.
- ▶ Grievances of project key stakeholders may not be addressed properly.
- ▶ Project information may not reach the key stakeholders, thus making them disinterested in participating.
- ▶ NTFP collectors, livestock grazers, landless and agriculture producers (especially women and other vulnerable groups) may get excluded owing to lack of exposure and capacities
- ▶ Potential security issues to communities living in the vicinity.
- ▶ Conflict with people when areas are closed for grazing.

The above environmental and social risks and impacts can be mitigated through preparation and implementation of Environmental and Social Management Systems, Environmental and Social Management Plans, etc. Implementing an appropriate Environment Management Plan, Resettlement Policy Framework and Gender Action Plan along with proper implementation of the Environmental Social Management Systems could mitigate the above mentioned negative environmental and social impacts.

## 7. Environmental and Social Management Systems



### 7.1. Introduction

The Environmental and Social Management Systems (ESMS) is based on the outputs of the Social and Environmental Assessment carried out through field assessment and stakeholder discussions during the project preparation. The assessment included secondary information research, primary visits to project communities, community consultations through focus group discussions to determine the key social and environmental issues. All the information, analyses and feedback have been suitably incorporated in the ESMS.





## 7.2. ESMS Tools

### a. Categorization:

The sub projects are categorised as A, B or C. For all Category A sub-projects, an Environmental Social Assessment (ESA) would be carried out, followed by preparation of ESMP, RAP and TDP, where required as per the guidelines given in this ESMS. For all Category B sub-projects, the screening would be conducted, to ensure it is Category B, and the generic ESMP would be used. For all Category C sub-projects, the generic ESMP would be used.

### b. Exclusion List:

The Project does not propose to undertake sub-projects those a) are in contravention of Forest Department Working Plans/ CAT Plans, b) contradicts WHO notifications with regards to pesticides, c) cause habitat destruction, d) undermine labour laws, e) affect the local culture and f) undermine the project objectives. Activities which require private land acquisition using The Right to Fair Compensation in Land Acquisition and Resettlement and Rehabilitation Act 2013 would not be taken up. Where required, land donation as per the ESMS guidelines would be accepted for project activities from eligible donors. An Eligibility Check list (Annexure 10.1) for these along with the Exclusion List is given in the annexures as Annexure 10.2. All categories of sub-projects, i.e., A, B and C would go through this eligibility check list and exclusion list.

### c. Screening:

Screening and review process for identification of sensitive project activities with respect to environmental and social issues would be carried out during the planning phase of the project activity. An Environmental and Social Screening Format (ESSF)<sup>11</sup> is prescribed for this purpose. The FIUs would fill up these ESSF with the participation of JFMCs/EDCs duly identifying the environmental and social issues of concern if any. Supplementary notes on environmental and social concerns would also be added to those ESSF. Initially the FIUs would do the screening with the participation of JFMCs/EDCs, through collection of necessary field data and after a year, the JFMCs/EDCs would take up this responsibility. These fully filled in ESSF need to be attached to the Sub-Project proposal/ concept note.

Along with ESSF, a Socio-Economic Survey Format is also given in the Annexure 11.3. This would be used to collect the baseline data of vulnerable groups and sub-project impacted families; all the adversely impacted families and a sample of positively impacted project families. These surveys would be conducted by Project Implementation Support Agency (PISA) consultants. The sample size would be decided by the concerned FIU; but, generally for all micro-plans the whole community, i.e., all the households would be surveyed. The data on the gender would be used for fine-tuning the implementation of GAP. All the adversely impacted families would be first priority in selecting beneficiaries for the livelihood activities. This data would set the baseline for these families for implementing the ESMP.

### d. Environmental and Social Assessment (ESA):

For all sub-project activities categorized as A and as informed by screening, an Environmental and Social Assessment would be conducted by the consultants appointed by PMU. Based on the ESA, an activity specific ESMP would be prepared and attached to the project activity report and

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<sup>11</sup> Along with ESSF, a Socio-Economic Survey Format is also given in the Annexure 10.4. This will be used to collect the baseline data of vulnerable groups and sub-project impacted families; all the adversely impacted families and a sample of positively impacted project families. This survey will be conducted by PISA consultants. This sample size will be decided by the concerned FIU; but, generally for all micro-plans the whole community, i.e., all the households will be surveyed. The data on the gender will be used for fine-tuning the implementation of GAP. All the adversely impacted families will be first priority in selecting beneficiaries for the livelihood activities. This data will set the baseline for these families for implementing the ESMP.

enclosed to bidding and contract documents.

e. Sub-Project Specific Environmental and Social Management Plan:

For Category A sub-projects, a sub-project specific ESMP would be prepared, after the ESA, identifying the impacts through review of secondary information, field visits and consultations; and the mitigation measures are determined. This would be based on the generic ESMP provided in the ESMS. The generic ESMP has generic mitigation measures as guidance. This guidance table also includes information on whether these mitigation measures must be undertaken in the planning/design, construction and operation phases. However, each Sub-Project needs to incorporate specific mitigation measures in the proposal. These should be added to the generic ESMP by the consultants conducting ESA. For all sub-Projects, the implementing agencies need to ensure that the ESMP, whether generic or specific, is provided as a part of the contract documents to the contractor facilitating its integration into the main works. If the executing agency is JFMCs/EDCs, then capacity building of JFMCs/EDCs is of paramount importance in order to implement ESMP.

f. Environmental and Social Management-Sub-project Cycle

A generic ESMP would be followed as a guidance for each of the sub-projects/ project activities. The table below presents the Environmental and Social actions to be taken up during various stages of sub-projects from Pre-planning till Operation and Maintenance.

*Table 13 Environmental and Social Activities and Responsibilities to be Fulfilled during the Sub-Project Cycle*

Phase	ESMS Activity	Objectives	Process	Responsibility	Result
Preplanning for Project Activities	Identification of interventions Filling eligibility checklists and screening formats Conducting Socio-Economic Survey	To collect basic information on environmental and social aspects of the project activities.	The ESMS requires that basic environmental and social data pertaining to the proposed Project Activities, irrespective of category A or B or C, be compiled at the field data collection stage. A Socio-Economic Survey of the project beneficiaries/ affected families would be conducted by the FIU with the help of JFMCs/EDCs. For this purpose, a simple Eligibility Checklist, Environmental and Social Screening Format (ESSF) and a simple Socio-Economic Survey (SES) Format were formulated for all Project Activities. The Eligibility Checklist, ESSF and SES Format are furnished as annexures to the ESMS. The	Implementing Agencies and FIU	Eligibility Checklist, ESSF and SES Formats filled in and attached with the Project Activity Report/ Proposal/ Concept Note for all category sub-projects/project activities (A, B and C)

Phase	ESMS Activity	Objectives	Process	Responsibility	Result
			Implementing Agencies fill up these with the facilitation support of the FIU Staff duly identifying the environmental and issues of concern. Supplementary notes on environmental and social concerns to be added to these formats.		
Planning for Project Activity	Conducting Environmental and Social Assessment and Preparation of Environmental and Social Management Plans for Project Activity	To conduct ESA and to consult the generic ESMP and compile the relevant Management Measures for integration into Project Activity Report.	Use of generic ESMP is recommended or project activities which are categorized as B and C. For project activities classified as Category B the Environment and Social Expert of PMU would conduct a site inspection and incorporates specific environmental and social mitigation actions in the generic ESMP. For all project activities that are contracted out to contractors the generic ESMP is attached as a part of	Implementing Agencies and FIU PMU	ESMP is customized for B category activities  ESA Conducted and specific ESMP prepared for A category activities

Phase	ESMS Activity	Objectives	Process	Responsibility	Result
			bidding and contract documents for implementation of recommended actions by the contractor. ESA is conducted for the project activities, where it is recommended after screening and classified as category A. Based on the ESA, an activity specific ESMP would be prepared and attached to the project activity report and enclosed to bidding and contract documents. The ESA would be conducted and the specific ESMP prepared by the Consultants appointed by PMU.		
Planning for Project Activities	Appraisal Environmental and Social appraisal of the Project Activity	To ensure that relevant environmental and social issues have been identified and appropriate mitigation measures have been incorporated into the Project Activity	There shall be no separate Environmental/ Social appraisal, but environmental/ social aspects shall be included in the normal appraisal and evaluation process for	Environmental and Social Expert of PMU	Environmental and social appraisal of the project is made and approval of proposed Project Activity, with decision to (i) accept Project Activity as submitted, or (ii) accept Project Activity with

Phase	ESMS Activity	Objectives	Process	Responsibility	Result
			the proposed Activity, based on the screening and socio-economic survey included in the Activity Plan. All these activity plans need to follow the mitigation measures detailed in the ESMS and the ESMP.		modification suggested in the environmental/ social appraisal.
Procurement for Project Activity	Bidding and Contract Documents Incorporation of Environmental and Social mitigation measures given in Project Activity Report in the Bidding and Contract Documents	To ensure that the environmental and social mitigation measures as given in ESMP to be implemented by contractor that are in the contract documents.	The prescribed ESMP with environmental and social mitigation measures as given in Project Activity Report (construction stage measures and all those to be implemented by contractor) as identified would be included in the bidding and contract documents. The bidding documents to specify that the contractor should bring in Environmental and Social expertise and demonstrate this while bidding through inclusion of curriculum vitae of the concerned persons in the bidding	Implementing Agencies and FIU Procurement Expert	Contract documents include ESMP with environmental and social mitigation measures to be implemented by contractor/ JFMC/ EDC/ FIU.

Phase	ESMS Activity	Objectives	Process	Responsibility	Result
			documents. The contractors are encouraged to appoint female experts for these positions.		
Implementation of Project Activity	Implementation Environmental and social mitigation measures implementation prescribed in JFMC/ EDC Plan	To ensure that the prescribed environmental and social mitigation measures given in JFMC/ EDC Plan (including construction stage) are implemented.	The prescribed environmental and social mitigation measures as adopted from ESMP and prescribed in JFMC/ EDC Plan (including construction stage measures) as identified through the environmental and social appraisal process are adequately implemented by the contractor/ JFMC/ EDC and other responsible agencies.	Contractor Contractor's E&S Expert Implementing Agencies JFMC/ EDC	Environmental and Social mitigation measures are implemented as per ESMP. ESMS is complied with.
Implementation of Project Activity	Supervision, Monitoring and Evaluation Environmental supervision, monitoring and evaluation IEC and capacity building on environmental and social issues.	To ensure that environmental and social mitigation measures are implemented as intended.	Monitoring of indicators as given in table 27 of ESMS would be conducted as per project monitoring protocol given in ESMS. Supervision would be conducted by the designated environmental and	PMU Implementing Agencies and FIU JFMC IESME Agency	The Implementing Agencies/ FIU would submit quarterly monitoring reports and periodic environmental and social supervision reports and Training and IEC activity reports to AFD through PMU.

Phase	ESMS Activity	Objectives	Process	Responsibility	Result
			social expert of the PMU for all the FIU, JFMC/ EDC with the active participation of JFMCs and FIU Staff. All Project Activities would be monitored. Independent Environmental and Social Monitoring and Evaluation (IESME) by external consultants appointed by PMU Capacity building and IEC activities are undertaken to enable effective implementation of the ESMS including assessment procedures, supervision, monitoring, etc. for FIU staff, JFMCs and Community members for community awareness and sensitization.		Environmental and Social Monitoring and Evaluation Report
Implementation of Project Activity	Implementation Completion Preparation of Implementation Completion Report for	To ensure that the implementation of environmental and social mitigation measures and	Implementation Completion Report (ICR) for Project Activity would need to include an	Implementing Agencies and JFMC FIU	ICR with environmental and social compliance information.



Phase	ESMS Activity	Objectives	Process	Responsibility	Result
	environmental and social mitigation measures under the Project Activity	management is completed as per Project Activity and ESMP.	Environmental and Social Compliance Certificate given by the JFMC/ EDC indicating that the mitigation measures identified in the appraisal and incorporated in the Project Activity Report and ESMP (including construction stage) have been implemented. A format for this certificate is given under Annexure 10.5.		
Operation and Maintenance of Project Activity	Operation and Maintenance Environmental and Social mitigation and management measures	To ensure that environmental and social aspects are integrated in the O&M phase.	The Implementing Agencies/ JFMC/ FIU and the PMU takes up all the environmental and social mitigation and management measures as given in the ESMS	Implementing Agencies and JFMC FIU	O&M phase environmental and social mitigation and management measures implemented.

### 7.3. Implementation

The primary responsibility for implementation of ESMP rests with PMU. The PMU shall apportion and allot the responsibility for implementation of ESMP among the various implementing agencies, contractors, suppliers/ vendors, JFMCs and EDCs. The FIUs need to ensure that the planning and operation and maintenance phase mitigations measures given in the ESMP are to be implemented by FIU, JFMC and EDCs. The concerned contractor would implement the mitigation measures of the ESMP. The contractors need to have environmental and social expertise for implementing the construction phase mitigation measures of the ESMP. The following include key responsibilities of the contractor's Environmental and Social Expert.

- ▶ Orientation and training of the contractor's staff on environmental and social management
- ▶ Leading the implementation of ESMP
- ▶ Be regularly on sub-project sites to implement the ESMP during sub-project implementation
- ▶ Providing guidance and inputs to the contractor's working teams on environment and social management aspects
- ▶ Reporting to FIU on environmental and social aspects as specified in the ESMS
- ▶ Coordinating with FIU, PMU and other consultants on Environmental and Social matters

These Experts would also deal with matters pertaining reporting and documentation of environment and social aspects and would ensure overall coordination with the Implementing Agencies, FIU, PMU, and the respective implementing agencies in carrying out the responsibilities listed above. These Experts would be available for the entire contract period and would manage and monitor the environmental and social risks of all (A, B and C categories) sub-projects.

### 7.4. Monitoring Plan

The ESMS requires detailed supervision, monitoring and evaluation of the impact of the project on environmental and social aspects. In order to carry out this, Project would have specific arrangements made at PMU and FIU level as mentioned above. This includes appointment of Environmental and Social Specialists for the project period at PMU level and designating appropriate staff as Environmental and Social Experts at FIU level. Presently the PMU has one Environmental Specialist (Mr. C. Muthukumaravel) and a Social and Gender Specialist (Mr. Ranjan Kumar Das) on board. The Project Management and Monitoring Consultants (PMMC) too have an Environmental Expert (Ms. Ellora Kalita) and Social and Gender Expert (Mr. Gyan Prasad Sharma) on board. The designated Environmental and Social Experts at FIU level would be trained in implementing the ESMP in compliance with ESMS. This training would be an on-going regular process involving retraining and refresher training with additional training inputs as and when required. The Environmental and Social Specialists at the PMU would guide the project staff and FIU staff on environmental and social matters related to project components and on how to implement the ESMS and ESMP. At the FIU level, the Environmental and Social Experts would oversee the implementation of the provisions of ESMS and ESMP. In addition, several orientations and trainings are proposed as a part of this ESMS to build their capacity.

#### Functions of Environment Specialist and Social and Gender Specialist of PMU

Environment Specialist and Social and Gender Specialist would be deployed to handle all matters pertaining to environment and social management under the project, including implementing and monitoring the ESMS. The Environment Specialist and Social Specialist would be available for the entire project duration. The key responsibilities of the Environment and Social Specialist include:

- ▶ Orientation and training of FIU teams and the contractors on environmental and social management
- ▶ Leading/ providing oversight on the EMSP implementation process and its outputs

- ▶ Review of monitoring reports submitted by the FIUs and PMMC and PISA on ESMS/ ESMP implementation,
- ▶ Conducting regular visits to project sites to review ESMS compliance during sub-project planning, design and execution
- ▶ Providing guidance and inputs to the FIU teams on environment and social management aspects
- ▶ Orient, train, guide and support the Environmental and Social and Gender Experts of the FIUs and JFMC/ EDC members
- ▶ Matters pertaining to integration of ESMS into the sub-project design and contract documents
- ▶ Supervising the preparation of ESA and ESMP for each sub-project
- ▶ Reporting, documentation, monitoring and evaluation on environment and social aspects

The PMU would be overall in charge of implementing the ESMS. The Environmental and Social Specialists at PMU would guide and oversee ESMS implementation and would be supported at field level by the staff of FIUs. Further the Project would incorporate the provisions of this ESMS as action points in the Project’s Manual of Procedures prepared for the project. The Environmental and Social Specialists would oversee the application of these provisions and guide the process, while at the same time building the capacity of the FIUs and their staff.

## 7.5. Monitoring Protocol

All the sub-projects would be visited at regular intervals (at the minimum on fortnightly basis) by Environmental and Social Specialists of PMU to check if all environmental and social safeguard requirements are met and to identify any issues that need to be addressed. PMU would submit Half-Yearly (every 15th July and 15th January) progress reports to the AFD on environmental and social safeguards implementation. On Half-Yearly basis, the PMU would prepare a report of the environmental and social safeguards status in the project area including data and analysis of relevant parameters as given in the table below. This Environmental and Social Monitoring report would be a part of the overall Project Monitoring Report as a distinct chapter. Given in the table below are indicators for project interventions, for which monitoring need to be taken up by PMU and the FIU in a regular manner.

The table below are indicators for project interventions, for which monitoring need to be taken up by PMU and the FIU in a regular manner.

*Table 14 Monitoring Indicators*

Monitoring Indicators	Frequency	Agency
Institutional	Quarterly	
<ul style="list-style-type: none"> <li>▶ Fatalities</li> <li>▶ Strikes</li> <li>▶ Conflict with nearby communities</li> <li>▶ Pollutions (spills, explosions, uncontrolled discharges, etc.)</li> <li>▶ Negative media attention</li> <li>▶ Lawsuits/ Court Cases</li> <li>▶ Grievances</li> </ul>	<ul style="list-style-type: none"> <li>▶ Concurrent Monitoring by PMU and FIU offices</li> <li>▶ Environmental and Social Monitoring and Evaluation of sampled Project Activities by Independent Consultants.</li> <li>▶ Half Yearly Reports by PMU</li> <li>▶ For all these indicators, the PMU would send comprehensive reports to AFD, immediately after incident occurrence.</li> </ul>	<ul style="list-style-type: none"> <li>▶ PMU guiding the collection of information on indicators</li> <li>▶ FIU collecting information at field level</li> <li>▶ Implementing Agencies/ Departments for department specific information</li> </ul>

Monitoring Indicators	Frequency	Agency
Environmental		
<ul style="list-style-type: none"> <li>▶ Changes in Groundwater Table</li> <li>▶ Surface Water Quality</li> <li>▶ Soil Quality</li> <li>▶ Survival of plantations (%)</li> <li>▶ Instances of archaeological chance finds</li> <li>▶ Instances of Pest and Disease attacks</li> <li>▶ Reduction in pest and disease attacks</li> <li>▶ Number of Farmers using bio-pesticides</li> <li>▶ Reduction in water usage for Agriculture and Horticulture</li> <li>▶ Produce per unit of water used</li> <li>▶ Number of climate resilient crop varieties used</li> <li>▶ Number of communities taking up conservation and source sustainability activities</li> <li>▶ Any induced impacts/activities arising from undertaking the project financed investments such as demand for (a) building, (b) change in agriculture crops, due to increase availability of water and support services</li> </ul>	<ul style="list-style-type: none"> <li>▶ Concurrent Monitoring by PMU and FIU offices</li> <li>▶ Environmental and Social Monitoring and Evaluation of sampled Project Activities by Independent Consultants.</li> <li>▶ Half Yearly Reports by PMU</li> <li>▶</li> </ul>	<ul style="list-style-type: none"> <li>▶ PMU guiding the collection of information on indicators</li> <li>▶ FIU collecting information at field level</li> <li>▶ Implementing Agencies/ Departments for department specific information</li> </ul>
Social		
<ul style="list-style-type: none"> <li>▶ Number of grievances registered and resolved</li> <li>▶ Number of court cases and judgments pronounced</li> <li>▶ Number of women members in JFMC/ EDC</li> <li>▶ Number of women trained</li> <li>▶ Income restoration measures taken up with communities</li> <li>▶ Livelihood Enhancement Activities undertaken</li> <li>▶ Change in Incomes and their patterns</li> <li>▶ Change in Land holding status</li> <li>▶ Change in Income from Forests</li> </ul>	<ul style="list-style-type: none"> <li>▶ Concurrent Monitoring by PMU and FIU offices</li> <li>▶ Environmental and Social Monitoring and Evaluation of sampled Project Activities by Independent Consultants.</li> <li>▶ Half-Yearly Reports by PMU</li> </ul>	<ul style="list-style-type: none"> <li>▶ PMU guiding the collection of information on indicators</li> <li>▶ FIU collecting information at field level</li> <li>▶ Implementing Agencies/ Departments for department specific information</li> </ul>

Monitoring Indicators	Frequency	Agency
<ul style="list-style-type: none"> <li>▶ Changes in occupations</li> <li>▶ Housing status</li> <li>▶ Ownership of household assets</li> <li>▶ Introduction of new species</li> <li>▶ Introduction of new breeds of livestock</li> <li>▶ Yield of crops</li> <li>▶ Incomes from project activities</li> </ul>		
Other		
<ul style="list-style-type: none"> <li>▶ No. of Awareness Program conducted</li> <li>▶ No. of Sensitization Programs conducted</li> <li>▶ No. of training programs conducted</li> <li>▶ No. of personnel trained</li> <li>▶ Achievement of learning objectives</li> <li>▶ Extent of application of methods, tools and techniques learnt during training</li> </ul>	<ul style="list-style-type: none"> <li>▶ Concurrent Monitoring by PMU and FIU offices</li> <li>▶ Environmental and Social Monitoring and Evaluation of sampled Project Activities by Independent Consultants</li> <li>▶ Half-Yearly Reports by PMU</li> </ul>	<ul style="list-style-type: none"> <li>▶ PMU guiding the collection of information on indicators</li> <li>▶ FIU collecting information at field level</li> <li>▶ Implementing Agencies/ Departments for department specific information</li> <li>▶ State Forest Training Institute and other institutes</li> </ul>

## 7.6. Environmental and Social Monitoring and Evaluation

The concurrent internal environmental and social monitoring would be done as part of the regular monitoring by the PMU and FIUs. However, the PMU would appoint Independent Environmental and Social Monitoring and Evaluation Consultants to do the environmental and social monitoring and evaluate on half-yearly basis from the start of project implementation. This is required for the following reasons:

- ▶ As the ESMS and ESMP are introduced newly,
- ▶ The client has no prior experience of preparing such ESMS compliance reports,
- ▶ The project field staff did not conducted such ESMS monitoring before,
- ▶ An independent monitoring provides and objective view of the ESMS compliance and
- ▶ Such specialist agency would provide on-site sensitization to environmental and social issues to the field staff during the monitoring period.

The core objective of Monitoring and Evaluation by Independent Consultants is to review the ESMS compliance in project implementation and for corrective actions. This would be conducted on a sample of sub-projects (most category A and B) as agreed with PMU. The other objectives are:

- ▶ To review and verify compliance with ESMS during project planning and implementation.
- ▶ To assess the individual and cumulative impacts of the project activities and how the project area is sensitive to the project activities.
- ▶ To assess the effectiveness of implementation of ESMS in the project activities and reporting any gaps.

- ▶ To review and verify how well the environmental and social management systems are performing and how well the environmental and social management plans are being implemented.
- ▶ To identify and document best practices in environmental and social management systems compliance.
- ▶ To assess institutional and administrative effectiveness and make recommendations on improving ESMS compliance performance.
- ▶ To sensitize the field staff to the environmental and social issues during field visits.
- ▶ To make recommendations to improve ESMS implementation.

## 7.7. Environmental and Social Management Plan

### 7.7.1. Introduction

The present report is the draft Generic Environmental and Social Management Plan for the bid documents to be issued by the FIU/ PMU, to the Contractors during bidding. This draft final report is submitted fulfilling the requirements of the ESMS consultancy contract.

This generic ESMP is to be issued to the Contract bidders and this would form a part of the contract documents. The successful Contractor would follow this generic ESMP and develops a Contractor's Environmental and Social Management Plan (CESMP) after duly assessing the design, construction methods, machinery, plant, etc. Once the CESMP is prepared the same would be submitted to FIU/PMU for approval. PMU would submit this CESMP to AFD for review and approval before according its approval to the Contract

## 7.7.2. Generic Environmental and Social Management Plan

*Table 15 Impacts Mitigation Measures and Responsibilities – All Construction Activities*

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
1	Consent/ Permit/ Approval/ Compliance	Non-compliance to various Environmental/ social/ regulatory requirements pertaining to construction activities could lead to legal implications to APFBC	<ul style="list-style-type: none"> <li>▶ All the Contractors need to obtain permissions for all construction activities such as for establishing and operating batching/ Hot-Mix plants/ Workers Camps, PUCs, Labour licenses, surface water/ groundwater withdrawal permits, tree cutting permissions, etc</li> </ul>	Contractor with FIU	PMU
2	Land Procurement	Loss of Land/ Livelihoods	<ul style="list-style-type: none"> <li>▶ No private land acquisition involved.</li> <li>▶ The project would establish a Grievance Redress Mechanism to ensure any complaints regarding project related components are promptly and adequately investigated and resolved</li> <li>▶ Where required, provide some alternate way/ approaches. so that project should not obstruct community access to common property resources.</li> <li>▶ Explore possibilities of employment of locals during construction phase of the project.</li> <li>▶ Ensure inclusion of community members/PAPs, especially those suffering economic displacement or loss of livelihoods, in the Skill Development Program that would be taken up by FIU as part of community development activities.</li> </ul>	FIU	PMU
3	Impact on Indigenous people and archeologically important sites	<ul style="list-style-type: none"> <li>▶ Unrest among the community due to dislocation of any structure or thing of cultural belief</li> </ul>	<ul style="list-style-type: none"> <li>▶ No loss of land for ST communities or any restrictions on exercising customary rights and accessing resources, as this plant is built on the proponent's land</li> </ul>	FIU	PMU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
		<ul style="list-style-type: none"> <li>▶ Impact on indigenous people due to land intake from ST people and use of village resources</li> </ul>	<ul style="list-style-type: none"> <li>▶ No archaeological site or historically/ culturally important sites within the project area. If any such site is near the construction, then the FIU needs to get required permissions from the archeological department or change site</li> <li>▶ A separate GRM would be provided for the ST community to take any grievances related to the project construction activities</li> <li>▶ A Tribal Development Plan would be prepared and implemented by the FIU for the benefit of ST Community in the project area</li> </ul>		
4	Gender Issues	Gender related data, benefits to female community members, awareness on gender, reduction in GBV, etc.	<ul style="list-style-type: none"> <li>▶ Each of the sub-project reports would have gender disaggregated data</li> <li>▶ The PMU and FIUs would ensure that at least 30% of project beneficiaries are women</li> <li>▶ The FIUs would ensure that all contractors employ women and at least 30% of the total worker-days of each contract to be female worker-days. All contractors maintain labour registers to record worker data</li> <li>▶ All committees formed under the project would have 30% women in decision making positions</li> <li>▶ The GAP would be implemented by FIUs</li> </ul>	FIU and Contractors	PMU
5	Contractor's ESMP (CESMP) Preparation and Implementation	Inadequate preparation and implementation of CESMP by Contractor can leave environmental and social issues unattended	<ul style="list-style-type: none"> <li>▶ Contract specific CESMP should be prepared before civil/ construction work commences and approved by APFBC and AFD</li> <li>▶ The CESMP should take into account all the aspects given in this ESMP and include any site-specific, design-specific and construction-specific issues as well</li> </ul>	Contractor	PMU with FIU



S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			<ul style="list-style-type: none"> <li>▶ The contractor should deploy required number of Environmental, Social, Health and Safety (ESHS) staff on the site before the work starts</li> <li>▶ The CESMP should have proper procedures for training of contractor's personnel, CESMP monitoring and reporting (externally &amp; internally)</li> <li>▶ CESMP shall be part of the contract document, once it is approved by APFBC and AFD</li> <li>▶ It is understood that the cost of implementing the CESMP are included in the contract</li> </ul>		
6	Procurement of Plant and Equipment (such as Diesel Generators, Batching Plant, Concrete Mixing Plant, etc.)	Inadequate implementation of CESMP by Contractor	<ul style="list-style-type: none"> <li>▶ The Contractor should follow all stipulated regulation for pollution control as suggested in ESIA/ ESMP and as per any other legal requirements</li> <li>▶ No installation by the Contractor would be allowed to establish/ operate till all the required legal clearances are obtained from the competent authorities</li> <li>▶ All plant and equipment should conform to the latest noise and emission standards</li> <li>▶ PUC certificates for all vehicles and machinery shall be made available for verification whenever required</li> </ul>	Contractor	FIU
7	Biodiversity and Ecosystem Services	<ul style="list-style-type: none"> <li>▶ Impacts arising from land-clearance, land levelling/ grading, installation of fencing and laying of internal access roads</li> <li>▶ Degradation and fragmentation of existing natural scrub area</li> </ul>	<ul style="list-style-type: none"> <li>▶ Enable or facilitate the conservation of the leftover scrub land, to the extent possible</li> <li>▶ Conservation of the natural topography and drainage in and around the Project Site</li> <li>▶ Minimization of number, length and width of internal access roads</li> <li>▶ Plantation of diverse native vegetation to compensate for that lost to unavoidable land-clearance at the Project Site</li> <li>▶ Encourage staff feeding of domestic livestock through community awareness programs</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
		<ul style="list-style-type: none"> <li>▶ Loss of or loss of access to fodder services for the local community</li> </ul>	<ul style="list-style-type: none"> <li>▶ Conservation of traditional land-use in and around the corridor</li> <li>▶ Conservation of comparable alternative habitats away from the corridor</li> </ul>		
8	Livestock Grazing	Owing to loss or loss of access to areas traditionally used for grazing of livestock, the grazing pressure on the designated grazing land is likely to increase leading to degradation of fodder quality.	Efforts should be made by FIUs to collaborate with the local Gram Panchayats to improve the existing vegetation in the designated grazing land and around the sub-projects. This would help in maintaining availability and quality of fodder for the livestock	FIU	PMU
9	Site clearance	Impacts on biodiversity, loss of topsoil, etc.	Site clearance would be done only in the area required for the sub-project	Contractor	FIU
10	Tree Cutting	Impacts on biodiversity, loss of topsoil, etc.	<ul style="list-style-type: none"> <li>▶ Trees would generally not be removed unless they are a safety hazard</li> <li>▶ Removal of trees shall be done only after the permissions / approvals are obtained</li> <li>▶ Disposal of cut trees is to be done immediately to ensure that the cut trees do not obstruct movement and become safety hazard</li> </ul>	Contractor	FIU
11	Debris disposal site identification	Impacts on land use change, drainage pattern, leaching of disposed waste, contamination of water and soil, etc.	<ul style="list-style-type: none"> <li>▶ Site for temporary storage and disposal of debris refuse to be identified These disposal sites shall be finalized such that they are not located within any designated forest or other eco-sensitive areas, does not impact natural drainage courses and no endangered / rare flora is impacted by such disposal.</li> <li>▶ Pre-designated sites for disposal by contractors could be used with prior permission from FIU, after an assessment of site by FIU</li> </ul>	Contractor with FIU	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
12	Joint Field Verification	All impacts related to the sub-project	The FIU and the Contractor would carry out joint field verification of the CESMP. The efficacy of the mitigation measures suggested in the CESMP would be checked	FIU with contractor	PMU
13	Crushers, Hot-mix plants & Batching Plants	Impacts on water, soil, air and noise.	<ul style="list-style-type: none"> <li>▶ Specifications of hot mix plants and batching plants (existing or new) would comply with the requirements of the relevant national and APCB requirements</li> <li>▶ Hot mix plants and batching plants would be sited sufficiently away from habitations, agricultural operations or industrial establishments. Such plants would be located at least 1000m away from the nearest habitation, preferably in the downwind direction</li> </ul>	Contractor	FIU
14	Other Construction Vehicles, Equipment and Machinery	Impacts on water, soil, air and noise	<ul style="list-style-type: none"> <li>▶ The discharge standards promulgated under the Environment Protection Act, 1986 would be strictly adhered to.</li> <li>▶ All vehicles, equipment and machinery to be procured for construction would conform to the relevant Bureau of Indian Standard (BIS) norms. Noise limits for construction equipment to be procured such as compactors, rollers, front loaders, concrete mixers, cranes (moveable), vibrators and saws would not exceed 75 dB (A), measured at one meter from the edge of the equipment in free field, as specified in the Environment (Protection) Rules, 1986</li> </ul>	Contractor	FIU
15	Material sourcing (sand, borrow material and stone material)	Impacts on water, soil, air and noise	<ul style="list-style-type: none"> <li>▶ Procurement of construction material are permitted only from permitted sites and licensed/authorized quarries. Farmland and forest belts shall not be used for material sourcing or borrow sites</li> <li>▶ Arable land shall not be selected as borrow sites as much as possible. If excavation has to be done in arable land, topsoil layer (30 cm) shall be saved and</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			returned after construction work is completed, so as to minimize impacts		
16	Quarries	Impacts on water, soil, air and noise.	<ul style="list-style-type: none"> <li>▶ The Contractor would identify materials from existing licensed quarries with the suitable materials for construction.</li> <li>▶ Apart from approval of the quality of the quarry materials, the Client's representative would verify the legal status of the quarry operation.</li> <li>▶ The quarry operations would be undertaken within the rules and regulations in force.</li> </ul>	Contractor	FIU
17	Water	Impacts on water, soil, air and noise.	<ul style="list-style-type: none"> <li>▶ The Contractor would be responsible for arranging adequate supply of water for the entire construction period. The contractor shall consult the local people before finalizing the locations</li> <li>▶ The contractor would preferentially source all water requirements from surface water bodies</li> <li>▶ The contractor would be allowed to pump only from the surface water bodies. Boring of any tube wells would be prohibited. Any groundwater to be extracted requires permission from Department of Mines and Geology</li> <li>▶ The contractor would minimize wastage of water during construction</li> </ul>	Contractor	FIU
18	Sand	Impacts on water, soil, air and noise.	The contractor would identify sand quarries with requisite approvals for the extraction of sand.	Contractor	FIU
19	Labor Requirements	Impacts due to influx of labour, child labour, grievances, GBV, contagious diseases, Covid-19, etc.	<ul style="list-style-type: none"> <li>▶ The contractor would use unskilled labor drawn from local communities to avoid any additional stress on the existing facilities (medical services, power, water supply, etc.)</li> <li>▶ Planning of labor camps, if required, needs to be done ensuring adequate water supply, sanitation and</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			drainage etc., in conformity with the Indian Labour Laws. No firewood to be used for cooking in labour camps		
20	Generation of Debris	Management of debris and waste from construction activities	<ul style="list-style-type: none"> <li>▶ Debris generated due to the dismantling of the existing structures shall be suitably reused in the proposed construction, subject to the suitability of the material and the approval of the Client</li> <li>▶ The contractor shall suitably dispose unutilized debris material; either through filling up of borrows areas created for the project or at pre-designated dump locations, subject to the approval of the client</li> <li>▶ Debris generated from pile driving or other construction activities shall be disposed such that it does not flow into the surface water bodies or form mud puddles in the area</li> <li>▶ Dumping sites shall be identified by the contractor as per regulations in force. The identified locations would be reported to the client</li> </ul>	Contractor	FIU
21	Bituminous wastes disposal	Impacts on water, soil, air and noise.	The disposal of residual bituminous wastes would be done by the contractor at secure landfill sites, with the requisite approvals for the same from the concerned government agencies.	Contractor	FIU
22	Non-bituminous construction wastes disposal	Impacts on water, soil, air and noise.	<ul style="list-style-type: none"> <li>▶ Location of disposal sites would be finalized prior to completion of the earthworks on any particular sub-project</li> <li>▶ The Client shall approve these disposal sites conforming to the following (a) These are not located within designated forest areas. (b) The dumping does not impact natural drainage courses (c) No endangered/rare flora is impacted by such dumping. (d) Settlements are located at least 1.0km away from</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			the site. (e) Not located 1 Km within any mangrove vegetation/ecologically sensitive areas		
23	Stripping, stocking and preservation of top soil	Impacts on water, soil, air and noise.	<ul style="list-style-type: none"> <li>▶ The topsoil from borrow areas, areas of cutting and areas to be permanently covered would be stripped to a specified depth of 150mm and stored in stockpiles. At least 10% of the temporarily acquired area would be earmarked for storing topsoil</li> <li>▶ The stockpile would be designed such that the slope does not exceed 1:2 (vertical to horizontal), and the height of the pile is to be restricted to 2m. Stockpiles would not be surcharged or otherwise loaded and multiple handling would be kept to a minimum to ensure that no compaction would occur</li> <li>▶ The stockpiles would be covered with gunny bags or tarpaulin. It would be ensured by the contractor that the topsoil would not be unnecessarily trafficked either before stripping or when in stockpiles. Such stockpiled topsoil would be returned to cover the disturbed area and cut slopes</li> <li>▶ The management of topsoil shall be reported regularly to the Client</li> </ul>	Contractor	FIU
24	Blasting	Impacts on water, soil, air and noise.	<ul style="list-style-type: none"> <li>▶ Except as may be provided in the contract or ordered or authorized by the Client, the Contractor would not use explosives. Where the use of explosives is so provided or ordered or authorized, the Contractor would comply with the requirements of the regulations in force besides the law of the land as applicable</li> <li>▶ The Contractor would at all times take every possible precaution and would comply with appropriate laws and regulations relating to the importation, handling,</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			transportation, storage and use of explosives and would , at all times when engaged in blasting operations, post sufficient warning flagmen, to the full satisfaction of the Client ► The Contractor would at all times make full liaison with and inform well in advance and obtain such permission as is required from all Government Authorities, public bodies and private parties whomsoever concerned or affected or likely to be concerned or affected by blasting operations. Blasting would be carried out only with permission of the Client ► All the statutory laws, regulations, rules etc., pertaining to acquisition, transport, storage, handling and use of explosives would be strictly followed. Blasting would be carried out during fixed hours (preferably during mid-day), as permitted by the Client. The timing should be made known to all the people within 1000m (200m for pre-splitting) from the blasting site in all directions		
25	Transporting Construction Materials	Impacts of dust, air and noise.	► All vehicles delivering materials to the site would be covered to avoid spillage of materials ► All existing highways and roads used by vehicles of the contractor, or any of his sub-contractor or suppliers of materials or plant and similarly roads which are part of the works would be kept clean and clear of all dust/mud or other extraneous materials dropped by such vehicles ► The unloading of materials at construction sites close to settlements would be restricted to daytime only	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
26	Infrastructure provisions at construction camps	Impact related to improper and unhygienic labour camps and management of wastes	<ul style="list-style-type: none"> <li>▶ The Contractor during the progress of work would provide, erect and maintain necessary (temporary) living accommodation and ancillary facilities for labor to standards and scales approved by the Client</li> <li>▶ These facilities shall be provided within the precincts of every workplace, water flush latrines and urinals in an accessible place, and the accommodation, separately for each for the gender, as per standards set by the Building and other Construction Workers (regulation of Employment and Conditions of Service) Act, 1996. If women are employed, separate latrines and urinals, screened from those for men (and marked in the vernacular) shall be provided. There shall be adequate supply of water, close to latrines and urinals</li> <li>▶ All temporary accommodation must be constructed and maintained in such a fashion that uncontaminated water is available for drinking, cooking and washing. The sewage system for the camp must be designed, built and operated so that no health hazard occurs and no pollution to the air, ground or adjacent watercourses takes place. Compliance with the relevant legislation must be strictly adhered to. Garbage bins must be provided in the camp, shall be regularly emptied and the garbage disposed off in a hygienic manner. Construction camps are to be sited at least 1000m away, or as permitted by Client, from the nearest habitation and adequate health care is to be provided for the work force</li> </ul>	Contractor	FIU
27	Operation of construction	Impacts on water, soil, air and noise.	<ul style="list-style-type: none"> <li>▶ All vehicles and equipment used for construction would be fitted with exhaust silencers. During routine servicing operations, the effectiveness of exhaust</li> </ul>	Contractor	FIU



S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
	equipment and vehicles		<p>silencers would be checked and if found to be defective would be replaced</p> <ul style="list-style-type: none"> <li>▶ Noise limits for construction equipment used in this project (measured at one meter from the edge of the equipment in free field) such as compactors, rollers, front loaders, concrete mixers, cranes (moveable), vibrators and saws would not exceed 75 dB(A), as specified in the Environment (Protection) Rules, 1986</li> <li>▶ Notwithstanding any other conditions of contract, noise level from any item of plant(s) must comply with the relevant legislation for levels of noise emission</li> <li>▶ The contractor would ensure that the AAQ concentrations at these construction sites are within the acceptable limits of industrial uses in case of hot mix plants and crushers and residential uses around construction camps</li> <li>▶ Dust screening vegetation would be planted where required. Monitoring of the exhaust gases and noise levels would be carried out by the agency identified for Environmental Monitoring for the project</li> </ul>		
28	Material Handling at Site	Impacts on water, soil, air and noise.	<ul style="list-style-type: none"> <li>▶ All workers employed on mixing asphaltic material, cement, lime mortars, concrete etc., would be provided with protective footwear and protective goggles. Workers, who are engaged in welding works, would be provided with welder's protective eye-shields</li> <li>▶ Workers, engaged in stone breaking activities would be provided with protective goggles and clothing and would be seated at sufficiently safe intervals</li> <li>▶ The use of any herbicide or other toxic chemical would be strictly in accordance with the</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			<p>manufacturer's instructions. The Client would be given at least 6 working days-notice of the proposed use of any herbicide or toxic chemical. A register of all herbicides and other toxic chemicals delivered to the site would be kept and maintained up to date by the Contractor. The register would include the trade name, physical properties and characteristics, chemical ingredients, health and safety hazard information, safe handling and storage procedures, and emergency and first aid procedures for the product</p> <ul style="list-style-type: none"> <li>▶ No man below the age of 14 years and no woman would be employed on the work of painting with products containing lead in any form</li> <li>▶ No paint containing lead or lead products would be used except in the form of paste or readymade paint</li> <li>▶ Face masks would be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped</li> </ul>		
29	Precautionary/Safety Measures During Construction	Impacts due to unsafe working conditions	<ul style="list-style-type: none"> <li>▶ All relevant provisions of the Factories Act, 1948 and the Building and other Construction Workers (regulation of Employment and Conditions of Service) Act, 1996 would be adhered to. Adequate safety measures for workers during handling of materials at site would be taken up</li> <li>▶ The contractor has to comply with all regulations regarding safe scaffolding, ladders, working platforms, gangway, stairwells, excavations, trenches and safe means of entry and egress</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
30	Protection of Religious Structures and Shrines	Impacts due damage to religious and cultural assets	<ul style="list-style-type: none"> <li>▶ All necessary and adequate care shall be taken to minimize impact on cultural properties (which includes cultural sites and remains, places of worship including temples, mosques, churches and shrines, etc., graveyards, monuments and any other important structures as identified during design and all properties/sites/remains notified under the Ancient Sites and Remains Act). No work shall spillover to these properties, premises and precincts.</li> <li>▶ Access to such properties from the road shall be maintained clear and clean.</li> </ul>	Contractor	FIU
-	Dust contamination at construction sites and along the roads	Impacts due to dust	<ul style="list-style-type: none"> <li>▶ Unpaved haul roads near/passing through residential and commercial areas to be watered thrice a day.</li> <li>▶ Trucks carrying construction material to be adequately covered.</li> <li>▶ All earthwork would be protected in a manner acceptable to the Client to minimise generation of dust.</li> <li>▶ The contractor would take every precaution to reduce the level of dust along construction sites involving earthworks, by frequent application of water.</li> </ul>	Contractor	FIU
32	Earth work Excavations	Impacts on water, soil, air and noise.	<ul style="list-style-type: none"> <li>▶ Ensure unobstructed natural drainage through proper drainage channels/structures</li> <li>▶ Dispose surplus excavated earth at identified sites</li> <li>▶ Ensure minimum hindrance to normal local activities and business</li> <li>▶ Avoid damage to permanent structures</li> <li>▶ All excavations would be done in such a manner that the suitable materials available from excavation are satisfactorily utilized as decided upon beforehand</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			<ul style="list-style-type: none"> <li>▶ The excavations shall conform to the lines, grades, side slopes and levels shown in the drawings or as directed by the Client</li> <li>▶ While planning or executing excavation the contractor shall take all adequate precautions against soil erosion, water pollution etc. and take appropriate drainage measures to keep the site free of water, through use of mulches, grasses, slope drains and other devices</li> <li>▶ The contractor shall take adequate protective measures to see that excavation operations do not affect or damage adjoining structures and water bodies. For safety precautions guidance may be taken from IS:3764</li> </ul>		
33	Earth filling	Impacts on water, soil, air and noise.	Embankment and other fill areas, unless otherwise permitted by the Client, be constructed evenly over their full width and the contractor would control and direct movement of construction vehicles and machinery over them	Contractor	FIU
34	Slope protection and control of erosion	Impacts on water, soil and drainage	<ul style="list-style-type: none"> <li>▶ Embankments and other areas of unsupported fill would not be constructed with steeper side slopes, or to greater widths than those shown in design drawings</li> <li>▶ While planning or executing excavations the Contractor would take all adequate precautions against soil erosion as per regulations</li> <li>▶ Turfing on critical road embankment slopes with grass sods, in accordance with the recommended practice for treatment of embankment slopes for erosion control</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			<ul style="list-style-type: none"> <li>▶ The work would be taken up as soon as possible provided the season is favorable for the establishment of sods. Other measures of slope stabilization would include mulching, netting and seeding of batters and drains immediately on completion of earthworks</li> <li>▶ Dry stone pitching for apron and revetment would be provided for bridges and cross drainage structures</li> </ul>		
35	Drainage requirements at construction sites	Impacts on water, soil, and drainage.	<ul style="list-style-type: none"> <li>▶ In addition to the design requirements, the contractor would take all desired measures as directed by the Client such measures to prevent temporary or permanent flooding of the site or any adjacent area.</li> </ul>	Contractor	FIU
36	Contamination of soil	Impacts on water, soil, air and drainage.	<ul style="list-style-type: none"> <li>▶ Vehicle/machinery and equipment operation, maintenance and refuelling would be carried out in such a fashion that spillage of fuels and lubricants does not contaminate the ground. Oil interceptors would be provided for vehicle parking, wash down and refueling areas within the construction camps. Fuel storage would be in proper bunded areas. All spills and collected petroleum products would be disposed off in accordance with MoEF and APCB guidelines</li> <li>▶ Fuel storage and refilling areas would be located at least 1000m from rivers and irrigation ponds or as directed by the Client. In all fuel storage and refueling areas, if located on agricultural land or areas supporting vegetation, the topsoil would be stripped, stockpiled and returned after cessation of such storage and refueling activities</li> </ul>	Contractor	FIU
37	Compaction of soil	Impacts on water, soil, air and drainage.	To minimize soil compaction construction vehicle, machinery and equipment would move or be stationed in designated area as applicable. The haul roads for	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			construction materials should be routed to avoid agricultural areas.		
38	Silting, Contamination of Water bodies	Impacts on water, soil, air and drainage.	<ul style="list-style-type: none"> <li>▶ Silt fencing would be provided around stockpiles at the construction sites close to water bodies</li> <li>▶ The fencing needs to be provided prior to commencement of earthworks and continue till the stabilization of the embankment slopes, on the particular sub-section of the sub-project</li> <li>▶ Construction materials containing fine particles would be stored in an enclosure such that sediment-laden water does not drain into nearby watercourses</li> <li>▶ All discharge standards promulgated under Environmental Protection Act, 1986, would be adhered to.</li> <li>▶ All liquid wastes generated from the site would be disposed as acceptable to the Client</li> </ul>	Contractor	FIU
39	Cutting/Filling of Surface water bodies	Impacts on water, soil, air, noise and drainage.	<ul style="list-style-type: none"> <li>▶ Earth works shall be undertaken such that the existing embankments of water bodies are not disturbed. In case of cutting of embankments, the same shall be reconstructed with appropriate slope protection measures and adequate erosion control measures. Filling of surface water bodies would be compensated by digging an equal volume of soil for water storage. Such dug-up soil would be used for spreading as topsoil. Wherever digging is undertaken, the banks would be protected as designed or as approved by the Client. The excavation would be carried out in a manner so that the side slopes are no steeper than 1 vertical to 4 horizontal, otherwise slope protection work, as approved by the Client would be provided. As far as practicable, and as</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			approved by the Client, excavation for replacement of water bodies would be at the closest possible place/location, with respect to the original water body or part thereof consumed by filling.		
40	Precautionary measures and remedial measures	Impacts on unsafe acts, use of untrained workers and improper emergency procedures.	<ul style="list-style-type: none"> <li>▶ The contractor would take all necessary measures/ precautions to ensure that the execution of works and all associated operations are carried out in conformity with statutory and regulatory environmental requirements</li> <li>▶ The contractor would plan and provide for remedial measures to be implemented in event of occurrence of emergencies such as spillage of oil or bitumen or chemicals</li> <li>▶ The contractor would provide the Client with a statement of measures that he intends to implement in event of such an emergency, which would include a statement of how he intends to adequately train personnel to implement such measures</li> <li>▶ Adequate safety measures for workers during handling of materials at site would be taken up. The contractor would take every precaution to reduce the level of dust along construction sites by frequent application of water as per regulations. Noise levels from all vehicles and equipment used for construction would conform to standards as specified</li> <li>▶ Construction activities involving equipment with high noise levels would be restricted to the daytime</li> <li>▶ Transport of materials for construction would be as specified</li> <li>▶ The contractor would provide for all safety measures during construction as per regulations in force.</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
41	Confirming to statutory regulations	Impacts on unsafe acts, use of untrained workers and improper emergency procedures.	<ul style="list-style-type: none"> <li>▶ The contractor would take all necessary means to ensure that all works' and all associated operations are carried out in conformity with regulations</li> <li>▶ All workers employed would be provided with protective footwear and other PPE as specified</li> <li>▶ Noise levels from all vehicles and equipment used for surfacing would conform to standards as specified</li> <li>▶ Construction activities involving equipment with high noise levels would be restricted to the daytime</li> <li>▶ Transport of materials for construction would be as specified. The contractor would provide for all safety measures during construction as per regulations in force.</li> </ul>	Contractor	FIU
42	Mitigation Measures for Noise Sensitive Receptors	Noise related impacts at sensitive receptors	<ul style="list-style-type: none"> <li>▶ Noisy construction operations in residential and sensitive areas (hospitals, schools and religious places) should be restricted between 7.30 a.m. to 6.00 p.m.</li> <li>▶ Preventive maintenance of construction equipment and vehicles would be done to meet emission standards and to keep them with low noise</li> <li>▶ Provision of ear plugs to operators of heavy machinery and workers in near vicinity</li> <li>▶ During night, material transport should be uniformly distributed to minimize noise impacts.</li> </ul>	Contractor	FIU
43	Adjoining water bodies	Impacts on water and soil	Provide slope protection works of water bodies, if any, abutting the sub-projects.	Contractor	FIU
44	Sub-Projects across/ near rivers/ water bodies	Impacts on water and soil	<ul style="list-style-type: none"> <li>▶ While working across or close to the rivers, avoid obstructing the flow of water. If an obstruction is required, to serve notice on the downstream users of water sufficiently in advance</li> </ul>	Contractor	FIU



S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			<ul style="list-style-type: none"> <li>▶ Construction over and close to the non-perennial streams would be undertaken in the dry session. Construction work expected to disrupt users and impacting community water bodies would be taken up after serving notice on the local community</li> <li>▶ Dry stone pitching for apron and revetment would be provided for bridges and cross drainage structures, if necessary.</li> </ul>		
45	Safety practices during construction	Impacts of unsafe practices and untrained workers	<ul style="list-style-type: none"> <li>▶ The Contractor is required to comply with all the precautions as required for the safety of the workers as per the International Labour Organisation (ILO) Convention No. 62 as far as those are applicable to each contract</li> <li>▶ The contractor would supply all necessary safety appliances such as safety goggles, helmets, masks, shoes, gloves, jackets, etc., to the workers and staff. The contractor has to comply with all regulation regarding, working platforms, excavations, trenches and safe means of access and egress.</li> </ul>	Contractor	FIU
46	Social disruptions	Impacts due to inconvenience, nuisance, grievances, etc.	Minimise interruptions to utility services through proper planning and scheduling of activities and inter-departmental co-ordination. Construction of temporary road/access and diversion of traffic.	Contractor	FIU
47	Aesthetic impairment	Impacts of visually unpleasant working conditions	<ul style="list-style-type: none"> <li>▶ Aesthetic enhancement through proper housekeeping of construction sites. Disposal of construction wastes at the approved disposal sites</li> <li>▶ Immediate closure of the trenches after pipe laying/ completion of work</li> <li>▶ Complete construction activity by removing all temporary structures, restoring the sub-project and</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			surrounding areas as near as possible to the pre-construction condition		
48	Tree plantation	Impacts on biodiversity	<ul style="list-style-type: none"> <li>▶ Trees felled would be replaced as per the compensatory afforestation criteria in accordance with the Forest (Conservation) Act, 1980</li> <li>▶ Two trees would be planted for every tree lost in locations to be identified with support from the Client</li> </ul>	Contractor	FIU
49	Risk of accidents	Impacts on safety and health	In order to guarantee construction safety, efficient lighting and safety signs shall be installed during construction and adequate regulations shall be adopted and implemented.	Contractor	FIU
50	Cultural relics / Chance finds	Impacts on cultural and religious sites	<ul style="list-style-type: none"> <li>▶ If fossils, coins, articles of value or antiquity, structures, and their remains of geologic or archaeological interest are found, local government shall be immediately informed of such discovery and excavation shall be stopped until identification of cultural relics by the authorized institution and clearance is given for proceeding with work</li> <li>▶ All the above discovered on site shall be the property of the Government, and shall be dealt with as per provisions of the relevant legislation</li> <li>▶ The contractor shall take reasonable precaution to prevent his workmen or any other persons from removing and damaging any such article or thing. He shall, immediately upon discovery thereof and before removal acquaint the Client of such discovery and carry out the Client's instructions for dealing with the same, awaiting which all work shall be stopped</li> <li>▶ The Client shall seek direction from the Archaeological Society of India (ASI) before</li> </ul>	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			instructing the Contractor to recommence work on the site		
51	Monitoring Environmental Conditions	Impacts due to poor implementation and monitoring	<ul style="list-style-type: none"> <li>▶ The contractor would undertake seasonal monitoring of air, water, noise and soil quality through an approved monitoring agency</li> <li>▶ The parameters to be monitored, frequency and duration of monitoring as well as the locations to be monitored would be as per the Monitoring Plan prepared</li> </ul>	Contractor	FIU
52	Clearing of Construction of Camps & Restoration	Impacts on Air, Water, Soil and Noise, and debris and waste management.	<ul style="list-style-type: none"> <li>▶ Contractor to prepare site restoration plans for approval by the Client</li> <li>▶ The plan is to be implemented by the contractor prior to demobilization. On completion of the works, all temporary structures would be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the site left clean and tidy, at the Contractor's expense, to the entire satisfaction of the Client</li> <li>▶ Residual topsoil would be distributed on adjoining/proximate barren/rocky areas as identified by the Client in a layer of thickness of 75mm - 150mm.</li> </ul>	Contractor	FIU
53	Orientation of implementing agency and contractors	Impacts due untrained/ ill trained workers.	The client shall organize orientation sessions during all stages of the project. The orientation session shall involve all staff of client and field level implementation staff of Contractor and all consultants.	PMU	PMU
54	Handling of Natural Habitats, Biodiversity Issues and flora/fauna found in project sites	Impacts on flora and fauna	The Contractor shall train the workers to handle any accidental finds of important species of flora and/or fauna and on the procedures to be followed to intimate the Forest Department, and client.	Contractor	FIU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
55	Forestry Operations (Plantations, Nurseries, Vegetative barriers, Contour trenches, Grass planting, Eradication of invasive species, Fire Protection, etc.)	Impacts on flora and fauna, vector born diseases, forest fire, habitat and grazing resources loss, etc.	<ul style="list-style-type: none"> <li>▶ When there are any community-imposed use restrictions that may restrict traditional usage, and adversely affect the most vulnerable households; such investment should be screened for adverse impacts on traditional use and customary rights, and when needed suitable mitigation action plans needs to be prepared and implemented by the FIU</li> <li>▶ Tree planting should be done along the contours in either continuous or discontinuous trenches depending on local vegetation, terrain, soil type, land tenure and local requirements. The productivity of government, village common/ private land, forest land and waste lands should be increased through afforestation/ reforestation</li> <li>▶ Sufficient area should be allowed within the plantation for growing intermediate products like shrubs and grasses. The Absolute tree density shall be followed as per MoEF norms</li> <li>▶ Lower tree densities with a corresponding increase in the proportion of shrub and grass species should be planted to meet the fodder requirements</li> <li>▶ The selection of vegetative barriers species should be based on local conditions, soils moisture, etc. The barriers should be developed across the slope and along the field boundaries to intercept surface runoff and allow soil to accumulate behind the barriers. The barriers should be placed precisely along the contour through proper alignment without loss of land available for cultivation. The barriers should not be damaged while the intermediate products are harvested</li> </ul>	Contractor FIU	PMU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			<ul style="list-style-type: none"> <li>▶ Bulk planting of fodder should be carried out mainly on common lands. Grass planting should be carried out in shallow trenches and ridges. Planting areas for fodder should also be developed close to homesteads to reduce time for collection</li> </ul>		
56	Soil and Water Conservation Works and Erosion control	Impacts on water availability, pesticides & insecticides pollution, soil erosion & siltation, mosquito breeding, water born diseases, algal growth and eutrophication, water logging, etc.	<ul style="list-style-type: none"> <li>▶ FIU to ensure water quality and availability to the community</li> <li>▶ FIU to take up measures for prevention of vector borne diseases and other communicable diseases</li> <li>▶ Vegetative measures may be combined with possible cut off drains to prevent rapid overland flow into roadsides</li> <li>▶ For side erosions stabilization of side slopes with vegetative cover coupled with retaining walls shall be provided</li> <li>▶ Design of gully control structures are to be prepared specific to each work site</li> <li>▶ The site for check dams shall be site specific, gully checks for low slope whereas silting basins shall be used for steep slopes</li> <li>▶ Stone rip-rap or pitching, wooden piles shall be provided under conditions of high soil erosion</li> <li>▶ Provision should be made to trap transported debris and bed load. Sediment traps should be located at the inlet and easily accessible for cleaning</li> <li>▶ Scour protection should be provided at the base of the overflow spillway and a stone pitched channel should be provided to lead the excess water away from the structure</li> </ul>	Contractor FIU	PMU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			<ul style="list-style-type: none"> <li>▶ Fencing of water impounding structures and other construction areas, especially those closer to habitation</li> <li>▶ Deep wells may not be dug to reduce drawing underground water</li> <li>▶ Surface run-off should be intercepted at field boundaries and soil accumulation should be behind the barriers</li> <li>▶ Grass clumps should be planted all along the boundaries</li> <li>▶ Disposal of wastewater away from the ponds and proper drainage</li> <li>▶ Fish rearing to consume the mosquito eggs</li> </ul>		
57	Agriculture, allied activities and conservation and production measures	Impacts of chemical fertilizer, pesticide and insecticides, agriculture run-off, increased use of water, soil fertility depletion, drainage congestion, etc.	<ul style="list-style-type: none"> <li>▶ Use of bio-compost, organic mulch/ Green Manure and vermin compost and Suitable organic / biotic control of insects and pests would result in lesser use of permissible chemical fertilizers and pesticides</li> <li>▶ Selection of low water demanding crops and rainwater harvesting, storage of surface water (of streams, nallah, etc.) through water storage ponds would help harvest more water for use in HYV cropping</li> <li>▶ High water consumption crops should be discouraged. Selection of crops should be based on local water budget and traditional practices</li> <li>▶ High nutritional value traditional crops should not be totally replaced by high yielding varieties.</li> <li>▶ Leveling of crop field and maintenance of terraces/ bund to check water runoff and soil loss</li> <li>▶ Genetically manipulated varieties should be avoided</li> <li>▶ Integrated management of key pests</li> </ul>	JFMC PIU Contractor	PMU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
			<ul style="list-style-type: none"> <li>▶ Organic manure/fertilizer and bio-pesticide application to enhance yield</li> </ul>		
58	Horticulture related activities	Impacts due to competing crops, reduced horticulture diversity, mono-cropping causing disease and pest problems, disappearance of species, etc.	<ul style="list-style-type: none"> <li>▶ Lesser use of permissible chemical fertilizers/ pesticides reduce chances of soil contamination and water pollution</li> <li>▶ Selection of crops with high efficiency in water utilization and high yield would reduce pressure on water use</li> <li>▶ Through water storage ponds supplement water needs of HYV crops</li> <li>▶ Development of dry land orchards with suitable local fruit crops</li> <li>▶ Benefits should be maximized by using crop cultivation, between fruit trees for 2-3 years</li> <li>▶ Monoculture should be avoided by using other species along with the main species</li> <li>▶ Awareness generation among farmers on the ill effects of using the pesticides, fertilizers, etc</li> <li>▶ Skill training for farmers in proper use of pesticides, fertilizers, etc.</li> <li>▶ Awareness generation for farmers on using bio/ organic pesticides/ fertilizers</li> <li>▶ Skill training to farmers in preparation and use of bio/ organic pesticides/ fertilizers.</li> </ul>	JFMC PIU Contractor	PMU
59	Animal Husbandry related activities	Impacts due to introduction of exotic/ alien species of grasses and fodder, hybrid animals prone to diseases, limited breeding facilities, increase in livestock population, lack of	<ul style="list-style-type: none"> <li>▶ Review the existing breeding techniques and identify the successful breeds best suited for improvement. The populations of inferior breeds should be controlled/ eradicated</li> <li>▶ Timely assistance from the Animal Husbandry Department (AHD) for health care provisions</li> </ul>	FIU JFMC Contractor	PMU

S.No	Environmental/ Social Regulatory Aspects	Impacts	Enhancement/ Mitigation/ Management Measures	Responsibility	
				Implementation	Monitoring
		nutritious forage, stress on health care, bacterial and parasitic diseases, etc.	<ul style="list-style-type: none"> <li>▶ Increase stall feeding and reduce grazing on forest covers</li> <li>▶ Control feeding of urea-molasses bricks would not result in poisoning</li> <li>▶ Proper packing and storage of treated fodder would not result in poisoning</li> <li>▶ Limited area should be brought under exotic species of grass plantation</li> <li>▶ Animal health practices like storage of vaccines &amp; drugs, insemination centre sets, etc. through veterinary departments shall be adopted</li> </ul>		
60	Harvesting, storage and processing of agriculture and horticulture produce	Impacts of storage of agricultural and horticultural products, waste disposal, use of pesticide on stored material, damaged agriculture/ horticulture products due to pest attack, etc.	<ul style="list-style-type: none"> <li>▶ Crops, fruits, vegetables, flowers and other agriculture/ horticulture plant wastes residue shall not be dried and burnt in the field. These wastes may be mixed with fodder and given to animals as fodder</li> <li>▶ Crops, fruits and vegetables residue shall be collected and decomposed in pits for bio-manure development</li> <li>▶ Storage facilities shall be built on waste/ non-cultivable land to avoid any acquisition of agriculture land</li> <li>▶ No overuse of pesticides on stored material</li> <li>▶ Bio-pesticides or low harmful chemical base pesticides shall be promoted if possible</li> <li>▶ Cold storage and other storage facilities shall be developed as per standard criteria for vegetables and other horticulture produce respectively to minimize damage</li> </ul>	FIU JFMC Contractor	PMU



## 7.8. Environmental Monitoring Plan

*Table 16 Environmental Monitoring Plan*

S. No.	Environmental Attributes	Monitoring Parameters	Frequency of Monitoring	Sampling Locations	Implementation Responsibility	Monitoring Responsibility
1	Ambient Air Quality	Measurement of PM10, PM2.5, SOx, NOx, CO	Every Month	Within the site (1 sample at every work location)	Contractor	FIU
2	Ambient Noise Quality	Measurement of Noise Pressure Level in dB(A)	Every Month	Within the site (1 sample at every work location) Near receptor villages (1 sample from each receptor village)	Contractor	FIU
3	Soil Quality	Physico-chemical parameters monitored for baseline data collection viz. pH, SAR, Water holding capacity, Conductivity, Organic Carbon, NPK, etc.	Every Six Months	Within the site (1 sample at every work location) Near receptor villages (1 sample from each receptor village)	Contractor	FIU
4	Water Resources	Physio-chemical parameters monitored for Surface and Groundwaters baseline data collection (IS 10500 parameters) Water meter readings to be maintained on daily basis	Every Six Months	<ul style="list-style-type: none"> <li>▶ Groundwater</li> <li>▶ Within the site (1 sample at every work location)</li> <li>▶ Near receptor villages (1 sample from each receptor village)</li> <li>▶ Surface Water</li> <li>▶ At the existing surface water sources</li> </ul>	Contractor	FIU
5	Waste	<ul style="list-style-type: none"> <li>▶ Waste inventory for both hazardous and non-hazardous waste, Waste Labelling, storage and disposal records</li> <li>▶ Visual inspection for spilling/ leakages in the waste storage area</li> </ul>	Weekly	Workers Camps Storage Areas/ Yards	Contractor	FIU

6	Ecological	<ul style="list-style-type: none"> <li>▶ Visual inspection of the site area for death or injury of any higher faunal species due to electrocution, habitat disturbances due to project activities</li> <li>▶ Inspection of site area for any spillage of waste materials and possibility of their mixing into natural water resources</li> </ul>	Weekly	Within the site In the project influence area	Contractor	FIU
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The attributes to be tested only when the screening/ assessment identifies them as being impacted.

## 7.9. Social, Health and Safety Monitoring Plan

*Table 17 Social Health and Safety Monitoring Plan*

S. No.	Social Attributes	Monitoring Parameters/ Source of Information	Frequency of Monitoring	Sampling Locations (as applicable)	Implementation Responsibility	Monitoring Responsibility
1	Health and Safety Risks	<ul style="list-style-type: none"> <li>▶ Sanitation status of Onsite, Workers Camps and Office buildings</li> <li>▶ Potability water as per BIS drinking water standards 10500:2012</li> <li>▶ Usage of adequate PPEs</li> <li>▶ Adequate Health and Safety Training to workers</li> <li>▶ Fire Safety measures on site</li> <li>▶ Incident/ Accident Records</li> <li>▶ Permit to Work Records</li> <li>▶ Labour Records</li> <li>▶ Vehicle Log Books</li> <li>▶ Covid-19 SoP</li> </ul>	Weekly	Onsite work locations Workers Camps Office Buildings	Contractor	FIU

## 7.10. Compliance with Generic ESMP

The Project has prepared Environmental and Social Management Systems (ESMS) and this Generic Environmental and Social Management Plan. The Contractor needs to follow and comply with the provisions of this ESMS and Generic ESMP, which are developed to mitigate the risks and impacts identified during impact assessment, and prepare a Contractor's Environmental and Social Management Plan (CESMP) for each contract awarded. Penalty clauses for not complying with ESMP requirements proposed in the project are presented below:

The Contractor shall implement all mitigation/ management measures. Any lapse in implementing the same would attract the penalty as detailed below:

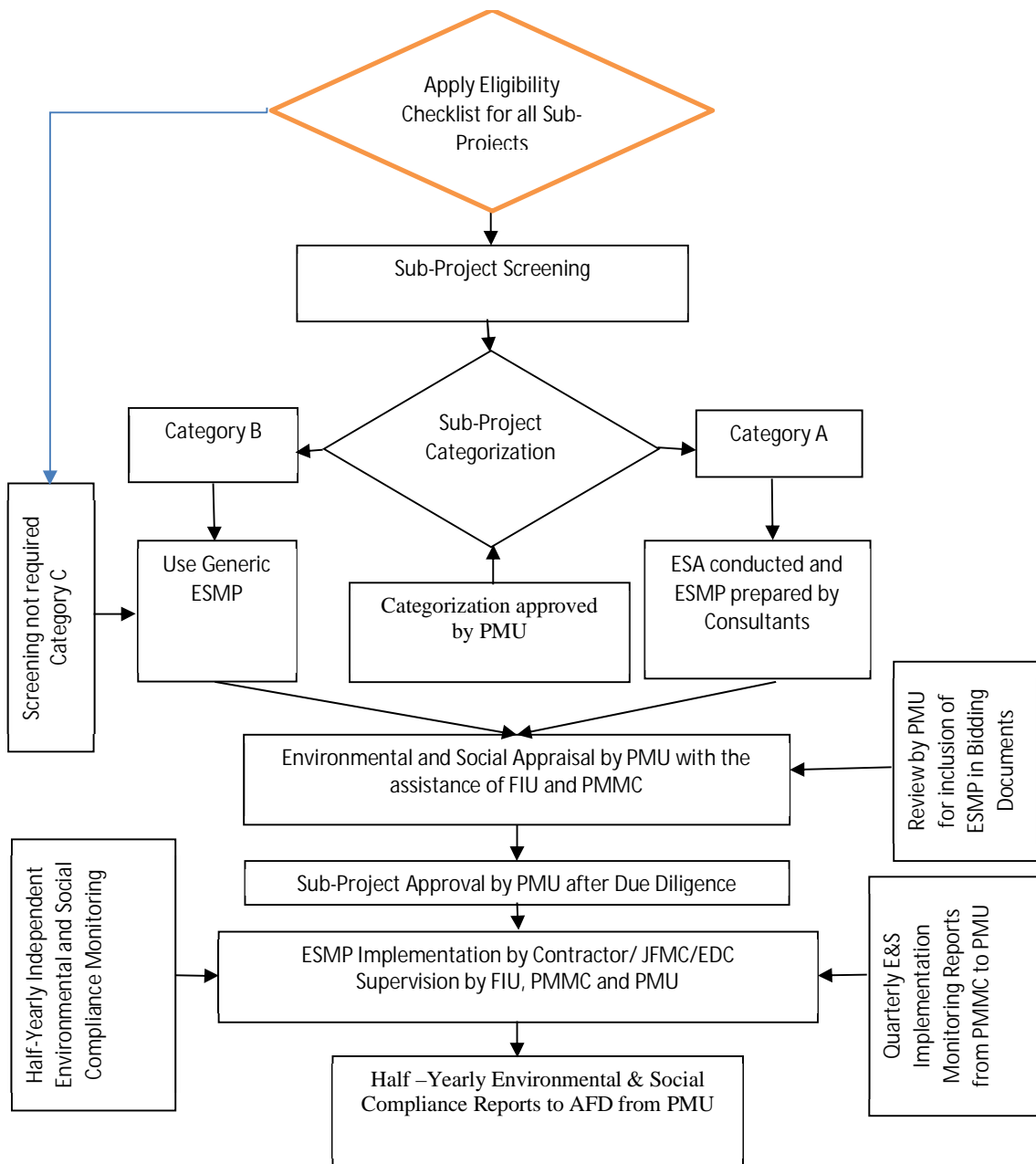
- ▶ All Non-Compliances in obtaining clearances/ permissions under statutory requirements and violations of any regulations with regard to eco-sensitive areas shall be treated as a major lapse
- ▶ Any complaints of public, within the scope of the Contractor, formally registered with the FIU/ PMU communicated to the Contractor, which are not properly addressed within the time period intimated by the FIU/ PMU shall be treated as a major lapse
- ▶ Non-conformity to any of the mitigation/ management measures stipulated in the ESMP (other than stated above) shall be considered as a minor lapse
- ▶ On observing any such lapses, FIU/ PMU shall issue a notice to the Contractor, to rectify the same
- ▶ Any minor lapse for which notice was issued and not rectified, first and second reminders shall be given after ten days from the original notice date and first reminder date respectively. Any minor lapse, which is not rectified, shall be treated as a major lapse from the date of issuing the second reminder.
- ▶ If a major lapse is not rectified upon receiving the notice, FIU/PMU shall invoke deduction in the subsequent interim payment.
- ▶ For any non-compliance with regard to major lapses, 10% of the interim payment would be withheld, subject to a maximum amount 5% of the contract value.
- ▶ If the lapses are not rectified within one month or as specified by the FIU/PMU, the amount withheld would be forfeited subject to maximum of 1% of contract value.

## 7.11. Social Audit

In addition to the use of above monitoring tools, social audits would be used to assess community perceptions about the effectiveness and benefits of project activities and to seek their feedback. It is suggested that the social audit be conducted every year. The PISA consultants conduct this annual social audit using participatory approaches and thoroughly involving the communities. The PISA consultants train the communities in social audit prior to conducting the same.

The ESMS implementation is shown in the flow chart below:

Figure 1 Flow Chart of ESMS Implementation



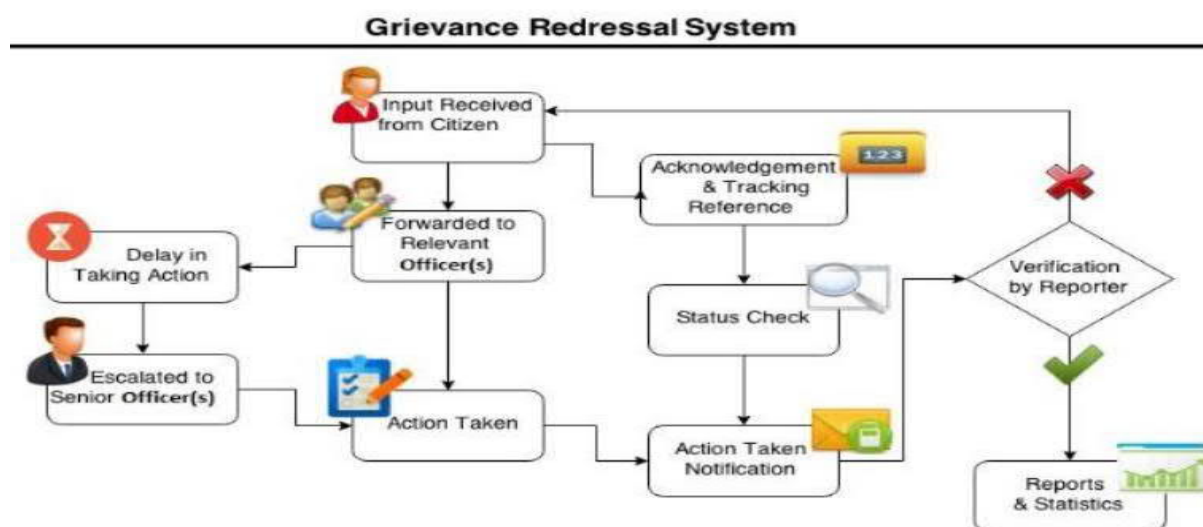
## 7.12. Grievance Redress Mechanism:

The Project would establish a Grievance Redress Mechanism (GRM) which would be implemented with the aim to respond to queries or clarifications about the project, resolve problems with implementation and addressing complaints and grievances. The GRM would focus on corrective actions that can be implemented quickly and at a relatively low cost to resolve identified implementation concerns, before they escalate to the point of harm or conflict. GRM would serve as a channel for early warning, helping to target supervision to where it is most needed and identify systemic issues.

The GRM would directly focus on and seek to resolve complaints (and requests for information or clarification) that pertain to outputs, activities and processes undertaken by the Project, i.e., those which (i) are described in the Manual of Procedures; (ii) are funded through the Project (including counterpart funds); and (iii) are carried out by staff or consultants of the organization, or by their partners and sub-contractors, directly or indirectly supporting the project. It is envisaged that such cases would fall under (but are not limited to) the following categories:

- ▶ Request for information, comment or suggestion, e.g., request for clarification as to the delay in reimbursing expenses of participants in each training event;
- ▶ Violation of rights or non-performance of obligations, e.g., complaint by consultant or firm whose contract is suspended as a result of presumed poor performance or non-delivery of agreed-upon outputs;
- ▶ Grievances or offenses involving a violation of law, e.g., allegations of corruption;
- ▶ Complaints on negative environmental and social impacts which are not mitigated properly;
- ▶ Complaints from adversely affected people by way of land issues, discrimination, exclusion, etc.;
- ▶ Complaints about biodiversity being affected adversely and
- ▶ Complaints against project staff, members of project committees, consultants, and sub-contractors involved in project implementation

Government of Assam has developed one Centralized Public Grievance Redressal and Monitoring System (CPGRAMS) which enables submission of grievances by the aggrieved citizens from anywhere and at any time (24x7) to the concerned Ministries/Departments/Organisations who scrutinize and take action to redress these grievances.



Organization of Grievance Redressal Committee (GRC):

Figure 2 Grievance Redress System

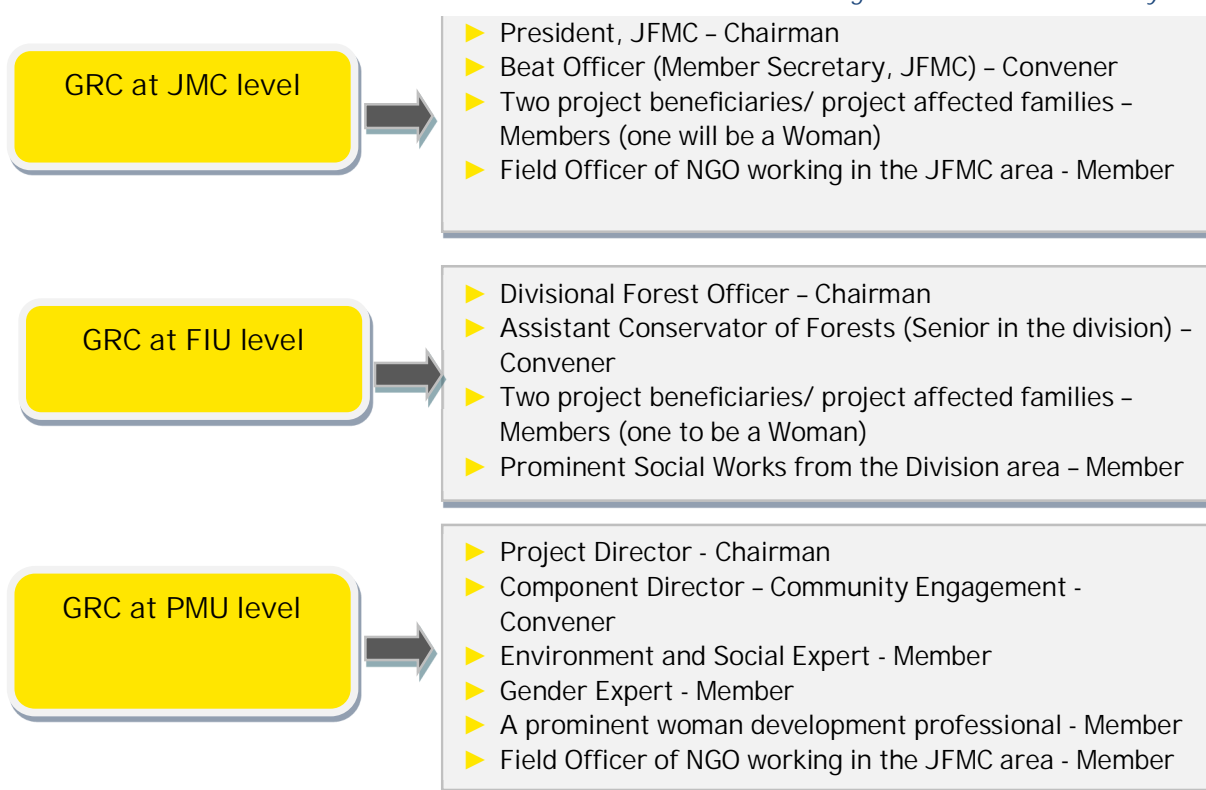


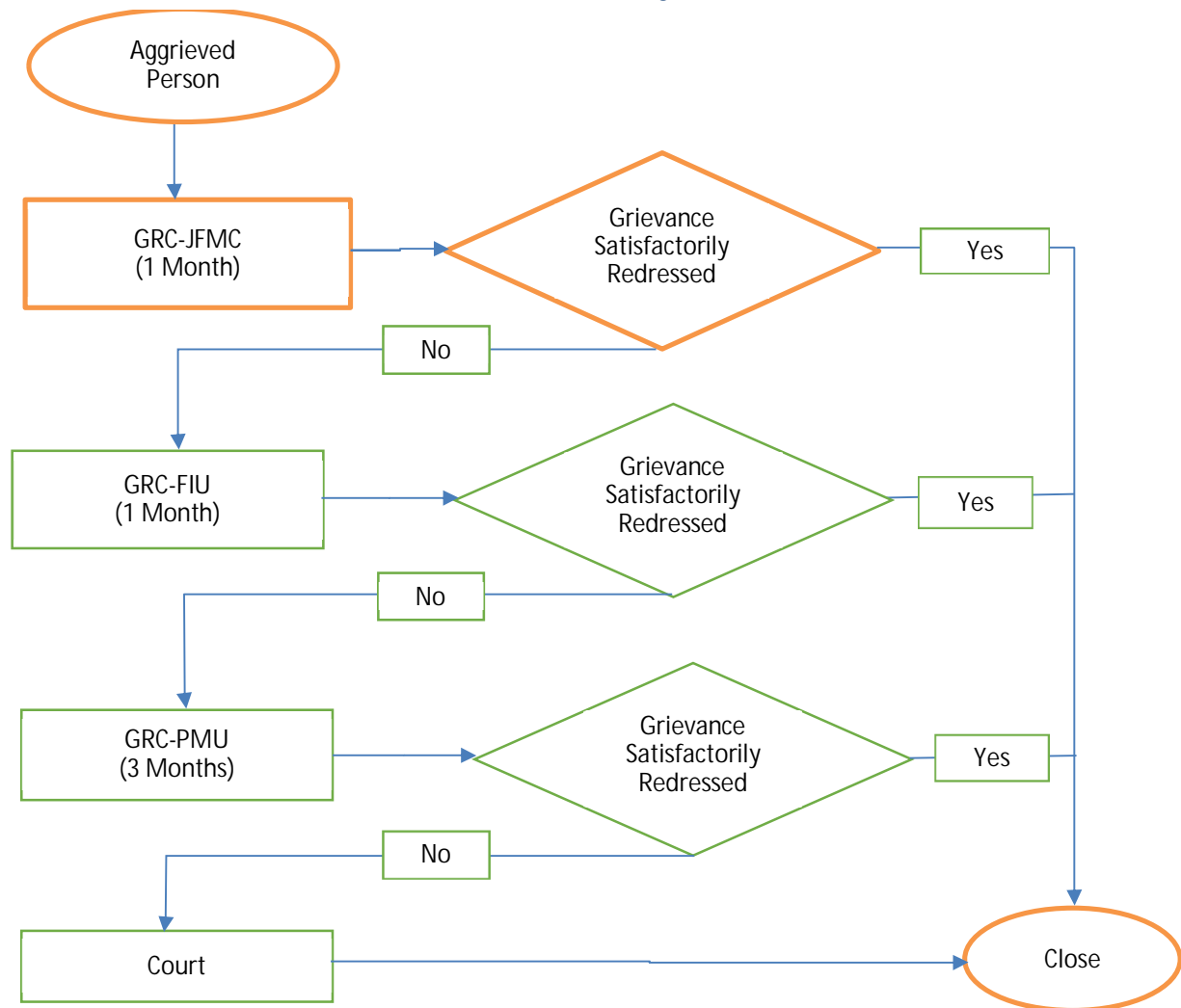
Table 18 Grievance Redressal Mechanism

Level	Agency	Time period for redress of grievances	Issues likely to emerge	Functions/ Responsibility
JFMC	Grievance Redress Committee- JFMC	Maximum of one month	<ul style="list-style-type: none"> <li>Participation</li> <li>Benefit sharing</li> <li>Encroachment</li> <li>Land acquisition</li> <li>Livelihood Assistance</li> <li>Compensation</li> <li>Inclusion of households in project activities</li> </ul>	<ul style="list-style-type: none"> <li>President, JFMC – Chairman</li> <li>Beat Officer (Member Secretary, JFMC) – Convener</li> <li>Two project beneficiaries/ project affected families – Members (one would be a Woman)</li> <li>Field Officer of NGO working in the JFMC area - Member</li> </ul>
Field Implementation Unit	Grievance Redress Committee- FIU	Maximum of one month		<ul style="list-style-type: none"> <li>Divisional Forest Officer – Chairman</li> <li>Assistant Conservator of Forests (Senior in the division) – Convener</li> <li>Two project beneficiaries/ project affected families –</li> </ul>

Level	Agency	Time period for redress of grievances	Issues likely to emerge	Functions/ Responsibility
				Members (one to be a Woman) ▶ Prominent Social Works from the Division area - Member
PMU	Grievance Redress Committee- PMU	Maximum of three months		▶ Project Director - Chairman ▶ Component Director - Community Engagement - Convener ▶ Environment and Social Expert - Member ▶ Gender Expert - Member ▶ A prominent woman development professional

The Grievance Redressal Mechanism is depicted in the flow chart below:

Figure 3 Process of Grievance Redressal Mechanism



### 7.13. Grievance Redress Service of the AFD

In addition to seeking to resolve their grievances through the GRM established at the project/ government level, any persons or group of persons affected by the environmental or social impacts of an AFD funded project can submit a complaint to AFD. The complaint may be made when the aggrieved has exhausted all the possibilities for redress without success with the client. The AFD mechanism ensures that environment and social complaints are handled impartially by a panel of independent experts. Complaints may be sent by Email [reclamation@afd.fr](mailto:reclamation@afd.fr) or by post to "Agence Française de Développement - Secrétariat du Dispositif de gestion des réclamations environnementales et sociales, 5, Rue Roland Barthes - 75598 Paris Sedex 12 - FRANCE" or delivered by hand at AFD's headquarters or in its network of agencies. A sample complaints form may be downloaded from the AFD website or complaints can also be made using the online form on AFD's website.



## 8. Gender Strategy and Action Plan



### 8.1. Introduction

Women are among the primary stakeholders of the project. The project would be implemented in 261 communities. The key stakeholder beneficiaries of the project include JFMCs, Gaon Panchayats, farmers, and groups cooperatives including women groups. Women, the poor and scheduled population comprises the vulnerable/ disadvantaged section of the local communities. The stakeholders mostly belong to backward communities and are primarily engaged in agriculture and horticulture with supplementation from livestock-based activities. Some of them are dependent on forest for rearing their livestock. Like in other projects, as per available experience, in these sub-projects as well, women are likely to experience differential socio-economic impacts due to their disadvantaged position within socio-economic structures and processes. Among the inequities they suffer, some of the key ones are:

- ▶ Education and Illiteracy
- ▶ Domestic and Invisible Work
- ▶ Female Work Participation and Wage disparity
- ▶ Poor Economic Opportunities
- ▶ Exploitative Work Conditions
- ▶ Sex Selection, Neglect of Girl Child
- ▶ Nutritional Status of Women, Anaemia

- ▶ Forced Weddings/ Early Pregnancies/ Early widowhood
- ▶ Women Trafficking
- ▶ GBV, SEA, VAW, Domestic Violence, Other Crimes
- ▶ Women Headed Households – Triple/ Quadruple Disadvantaged
- ▶ Limited and Bracketed Political Participation
- ▶ Poor Access to Justice
- ▶ Customary law / taboo and local beliefs
- ▶ Multiple vulnerabilities of Women to health and sanitation

## 8.2. Relevant Metrics

### 8.2.1. Female Population and Sex Ratio

The female population has recorded a growth rate of 19.7% during the last decade compared to 18.2% males against the previous decade's 18.5% and 15.7%. There was an increase of 2,162,406 males and 2,387,642 females in the ten-year period. The percentage share of female population in total population is 48.92% which is nearly same as the national percentage (48.53).

*Table 19 Percentage share of female population in total population and sex ratio-2011*

	% Share of Women			Sex Ratio		
	Rural	Urban	Total	Rural	Urban	Total
Assam	48.97	48.61	48.92	960	946	958
India	48.69	48.16	48.53	949	929	943

*Source: Census of India 2011*

The sex ratio (females per 1000 males) in Assam in rural area is 960 and in urban area is 946 which is slightly above national sex ratio for rural and urban areas. There is about 2.43% improvement in Assam Sex Ratio over the last 10 years, which is higher than over India ratio.

*Table 20 Year-wise Sex Ratio in post Independent India*

Year	1951	1961	1971	1981	1991	2001	2011	% Improvement over last 10 years
Assam	868	869	896	910	923	935	958	2.43
India	946	941	930	934	927	933	943	1.07

*Source: Census of India 2011*

### 8.2.2. Literacy Rates

Educational status is very important in the assessment of human development in a country or in a region. The literacy rate in Assam is 72.2% (male 77.8, female 66.3) and for India 73.0% (male 80.9, female 64.6). The literacy rate gap of males and females in last two decades has declined by 30.5% in Assam which is below the all-India average. Higher levels of education are not as easily assessable to girls; while they remain literate, employment or gainful economic engagement are not always achievable aims (MHRD Report 2013- 14).

Table 21 Literacy rate Male and Female

	2001			2011		
	Female	Male	Total	Female	Male	Total
Assam	54.6	71.3	63.3	66.3	77.8	72.2
India	53.7	75.3	64.8	64.6	80.9	73.0

Table 22 Gap in the Literacy rates of Males and Females in last two decades

	Gender Gap in literacy rate*		Declined by (%)
	2001	2011	2001-2011
Assam	16.7	11.6	30.5
India	21.6	16.3	24.7

Source: Office of Registrar General, India

\* Gender Gap=Literacy rate for males - Literacy rate for female

### 8.2.3. Employment

The total workforce participation rate in Assam is 38.36%, with a female participation rate of 22.46%. The rural and urban female work participation is 23.7% and 14.9% respectively. The Assam female work participation (total, rural and urban) is much closer to national figures (presented in table below). The women are employed in Tea Industry which is one of the largest organised sectors in Assam, either as permanent/ temporary/ casual labour.

Table 23 Workforce Participation Rate 2011

	Rural			Urban			Combined		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Assam	23.7	53.1	38.7	14.9	56.79	36.41	22.46	53.59	38.36
India	30.0	53.0	41.8	15.4	53.76	35.31	25.51	53.26	39.79

Source: Census 2011, Office of the Registrar General, India

The table below presents the percentage of workers based on employment status for Assam and India. In rural areas of Assam out of total female work force, 63.9% are self-employed, 17.2% are regular wage employees and 18.0% are casual labour. Likewise, in urban areas of Assam 46.7% are self-employed, 44.4% are salaried employee and 7.8% are casual labours.

Table 24 Percentage Distribution of Workers According to Broad Employment Status 2011- 12

	Rural (in %)					
	Self-employed		Regular wage/ Salaried Employee		Casual Labour	
	Female	Male	Female	Male	Female	Male
Assam	63.9	71.1	17.2	10.4	18.0	18.5
India	59.3	54.5	5.6	10.0	35.1	35.5

	Urban (in %)					
	Self-employed		Regular wage/ Salaried Employee		Casual Labour	
	Female	Male	Female	Male	Female	Male
Assam	46.7	55.0	44.4	35.2	7.8	9.8
India	42.8	41.7	42.8	43.4	14.3	14.9

Source: National Sample Survey Office, 68th Round, July 2011- June 2012.

Notes: 1. Figures relate to usual status principal and subsidiary (all) workers.  
2. The figures represent size of workforce as percentage of population

The female worker population ratio (size of workforce as percentage of population) in rural areas of Assam is 12.2 percent which is half of India female worker percentage (24.8 percent). Similarly, the Urban female worker population ratio is 9.0 percent which less than nation figure (14.7 percent).

Table 25 Worker Population Ratio for year 2011-12

	Rural		Urban	
	Female	Male	Female	Male
Assam	12.2	54.0	9.0	54.2
India	24.8	54.3	14.7	54.6

Source: National Sample Survey Office, 68th Round, July 2011 - June 2012.

Notes: 1. Figures are based on usual status approach and includes principal status and subsidiary status workers of all age  
2. The figures represent size of workforce as percentage of population.

#### 8.2.4. Unemployment

According to Fifth Annual Employment –Unemployment Survey 2015-16, Labour Bureau, Ministry of Labour & Employment (2015-16), the female unemployment rate for person aged 15 year & above is 8.4% whereas male unemployment rate is 2.6%. Similarly, the rural and urban female unemployment rate for 15 years & above persons is 7.2% and 18% compared to 2.1% and 5.9% for males respectively.

#### 8.2.5. Wages

In rural areas the female average Wage/ Salary received per day by Regular Wage/ Salaried Employees of Age 15-59 Years during 2011-12 is Rs 179.71 which is much lower than national average (Rs 201.56). Whereas in urban area is the female average salary is Rs 561.63 which is higher than national average (Rs 366.15).

Table 26 Average Wage/Salary (in Rs.) received per day by Regular Wage/Salaried Employees of Age 15-59  
Years: 2011-12

	Rural (in Rs)		Urban (in Rs)	
	Female	Male	Female	Male
Assam	179.71	343.97	561.63	615.23
India	201.56	322.28	366.15	469.87

Source: National Sample Survey Office, 68th Round, July 2011- June 2012.

#### 8.2.6. Enterprise Ownership

36% of rural proprietary establishments and 26% urban proprietary establishments in Assam are owned by female population as per sixth economic census 2014.

Table 27 Distribution of proprietary establishments by sex of owner: 2014

	Rural			Urban			Total		
	Male	Female	% Female	Male	Female	% Female	Male	Female	% Female
Assam	44142	24414	36%	15292	5427	26%	59434	29841	33%
India	823609	258633	24%	583264	137485	19%	1406873	396118	22%

Source: Sixth Economic Census (2014), Ministry of Statistics & Programme Implementation

The similar economic census also shared various finance source for these establishments. The table below details number of Establishments under women entrepreneur by Major source of Finance as per Sixth Economic Census 2014.

Table 28 No. of Women entrepreneur establishments by Major Source of Finance: 2014

	Self-finance	Financial Assistance from Govt.	Borrowing from financial institutions	Borrowing from Non-institutions/ Money Lenders	Loan from Self Help Group	Donations/ Transfers from other agencies	Total
Assam	139193	3438	1887	1250	1146	7244	154158
India	6365447	270978	86789	67525	80660	1179420	8050819

Source: Sixth Economic Census (2014), Ministry of Statistics & Programme Implementation

## 8.2.7. Women Participation

As per 2016 general elections, 8.55% women has contested in state general elections. Only 0.8% women were represented in Legislative Assembly of Assam in 1978, this has increased to 10.31% in 2011. This figure has further reduced to 6.34% in 2016 state assembly elections (Source: Election commission of India).

Table 29 Participation of Women in Legislative Assemblies

	Year of Last general elections	%of women contestants	Seats won By women(in%)	Registered women Electors (In%)	Women votes Polled (in%)	Women votes polled as% of registered women elector
Assam	2016	8.55	6.34	9649238 (48.26%)	8169835 (51.15%)	90.38

The status of representation of women in Panchayat Raj Institutions (PRIs) is presented in table below. 50% of elected representative at all levels in PRIs are women.

Table 30 Status of representation of women in Panchayat Raj Institutions (PRIs)

	No of Panchayats*			Elected Representatives#		
	District Level	Intermediate Level	Village Level	Total	Total Women	Women (%)
Assam	21	191	2199	26,844	13,422	50
Total	621	6,626	2,48,891	29,11,961	13,45,990	46

Source: Ministry of Panchayat Raj

\* as on December 2017

# as on November 2016

## 8.2.8. Differently abled

About 1.5% of total female population are disabled in Assam which is less than national disability percentage (2.0) (Census 2011, O/o Registrar General of India).

Table 31 Percentage of females by type of disability among disabled females-Census 2011

	Vision	Hearing	Speech	Movement	Mental Retardation	Mental Illness	Any Other	Multiple Disability
Assam	17.7	22.4	8.0	13.9	5.2	3.7	18.4	10.8
India	22.6	16.8	7.4	13.3	6.8	3.5	19.6	10.1

Source: Census2011, O/o Registrar General of India

## 8.2.9. Human Development Index (HDI)/ Gender Development Index (GDI)/ Gender Inequality Index (GII)

The HDI (2011) places Assam in the 16th position, out of the 23 states considered; and 26th among the 35 states and UT compared for GDI. For GII, Assam falls in 28th position out of 35 states and UT much lower than its neighbouring states of Manipur, Meghalaya, Mizoram and Nagaland.

## 8.3. Health

As per NHFS 4, the Infant Mortality Rate is 48 to 1000 live births, while the national figure is 37 (NHFS 4, Sample Registration System). Assam has the highest rate of maternal mortality ratio (215), followed by Uttar Pradesh. 12 The 2014, Assam Human Development Report (HDR) survey indicates that nearly half of pregnant women in the state (43% overall, and 46 % in rural areas) continue to deliver their babies at home.<sup>13</sup> Despite various preventive, protective and promotive measures taken after the recommendation of the Bhole Committee in 1942-43 on Public Health System and subsequent launching of various schemes, Infant Mortality Rate, Maternal Mortality Rate, Birth and Death Rate in the state remains significantly high.

## 8.4. Gender Based Violence (GBV)

There are increasing instances of domestic violence, sexual assault/ harassment and even robbery in the state. As per National Crime Records Bureau (NCRB) 2016, Assam has reported the highest crime rate under Section 498A, "Cruelty by Husband or His Relatives" (58.7%)<sup>14</sup>. As per the study conducted by the Centre for Urban Equity, women in Guwahati listed general harassment by co-passengers, driver or conductor (47%), eve-teasing (10%), and stalking (7%), as major constraints to use of public transportation. Assam (1,494 cases) accounted for 21.7% of all cases relating to human trafficking recorded across the country. Of the 3,087 cases under procurement of minor girls (Sec. 366A IPC), Assam accounted for 1,303 cases, with highest crime rate (11.0) in the country (increased by 52.8% as compared to the previous year).

<sup>12</sup> Registrar General of India, 2020. As retrieved from

[https://censusindia.gov.in/vital\\_statistics/SRS\\_Bulletins/MMR%20Bulletin%202016-18.pdf](https://censusindia.gov.in/vital_statistics/SRS_Bulletins/MMR%20Bulletin%202016-18.pdf) on 16 March 2021

<sup>13</sup> Assam HDR. 2014. As retrieved from [https://www.in.undp.org/content/india/en/home/library/hdr/human-development-reports/State\\_Human\\_Development\\_Reports/Assam.html](https://www.in.undp.org/content/india/en/home/library/hdr/human-development-reports/State_Human_Development_Reports/Assam.html) on 16 March 2021

<sup>14</sup> <https://ncrb.gov.in/sites/default/files/Crime%20in%20India%202018%20-%20Volume%201.pdf>

## 8.5. National Laws, Policies and Conventions on Gender

The National Policy for the Empowerment of Women<sup>15</sup> adopted in 2001 states that all forms of violence against women, physical and mental, whether at domestic or societal levels, including those arising from customs, traditions or accepted practices shall be dealt with effectively with a view to eliminate its incidence. Institutions and mechanisms/schemes for assistance would be created and strengthened for prevention of such violence, including sexual harassment at workplace and customs like dowry; for the rehabilitation of the victims of violence and for taking effective action against the perpetrators of such violence. The Draft National Policy for Women in 2016<sup>16</sup> was an attempt to further the mission of equal rights and opportunities for women in family, community, workplace and governance.

- ▶ India has signed and ratified Convention on Elimination of Discrimination against Women (CEDAW)<sup>17</sup>. Since then, the National policy for Women and other policies and amendments on acts has been reflecting the principles highlighted in the related international conventions.
- ▶ The Convention on the Rights of the Children<sup>18</sup> lays out a universal definition of 'child'. It articulates how children should be treated in a non-discriminatory manner and calls for action that considers the best interests of the child.
- ▶ In India, legislations deal with crimes against women can be grouped into two categories: laws related to crime in Indian Penal Code (IPC) and those related to crimes under the Special and Local Laws (SLL).

## 8.6. Gender Specific Laws:

- ▶ The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, is introduced to prevent and provide redressal of complaints of sexual harassment. One of the main provisions in this act is that it calls for constituting an Internal Complaints Committee at each office or branch with 10 or more employees/workers.
- ▶ The Protection of Women from Domestic Violence Act, 2005<sup>19</sup> defines domestic violence, describes the powers and duties of protection officers, service providers and lists the procedures for obtain reliefs.
- ▶ The Dowry Prohibition Act, 1961 makes giving and demanding dowry as a punishable offence. Section 8B identifies Dowry Prohibition Officers who are appointed not only to prevent the offence but also to collect evidence and perform additional functions that are deemed to serve the purpose of the act.
- ▶ The Protection of Children from Sexual Offences Act, 2012<sup>20</sup> has been framed to strengthen the legal measures for protecting children from any kind of sexual offences. Despite having sexual offences covered under different sections of Indian Penal Code, those existing sections do not entirely cover similar offences against children. Recognizing the children as a person of 18 years or below, the various offences have been clearly defined under this Act. The Act also defines the gravity of certain offences carried out against children and suggests stringent punishments accordingly.

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<sup>15</sup> <https://wcd.nic.in/sites/default/files/National%20Policy%20for%20Empowerment%20of%20Women%202001.pdf>

<sup>16</sup> [https://wcd.nic.in/sites/default/files/draft%20national%20policy%20for%20women%202016\\_0.pdf](https://wcd.nic.in/sites/default/files/draft%20national%20policy%20for%20women%202016_0.pdf)

<sup>17</sup> <http://treaties.un.org/>

<sup>18</sup> [http://www.unicef.org/crc/files/Rights\\_overview.pdf](http://www.unicef.org/crc/files/Rights_overview.pdf)

<sup>19</sup> "TheProtectionofWomenDomesticViolenceAct2005.pdf" on <http://ncw.nic.in/acts>

<sup>20</sup> "childprotection31072012.pdf" on <http://wcd.nic.in/sites/default/files>

- ▶ India ratified the Convention for the Suppression of the Traffic in Persons and of the Exploitation of the Prostitution of Others<sup>21</sup> and following that, the country enacted The Immoral Traffic (Prevention) Act in 1956 and punishes trafficking in relation to prostitution.
- ▶ The Dowry Prohibition Act, 1961 (28 of 1961) (Amended in 1986)
- ▶ Immoral Traffic (Prevention) Act, 1956, Dowry Prohibition Act- 1961,
- ▶ Indecent Representation of Women (Prohibition) Act-1986,
- ▶ The Commission of Sati (Prevention) Act, 1987 (3 of 1988)
- ▶ Protection of Women from Domestic Violence Act, 2005
- ▶ The Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013
- ▶ The Criminal Law (Amendment) Act, 2013
- ▶ The Immoral Traffic (Prevention) Act, 1956

## 8.7. Gender Strategy and Actions

As a part of Gender Strategy, the following actions are proposed:

- ▶ Gender disaggregated socio-economic baseline: This include gender disaggregated information on women as part of the Baseline data collection for subsequent usage during mid-term and end-term evaluation.
- ▶ Separate Focus Group Discussions and mobilization: In order to ensure their differential needs are well articulated and recorded, FGDs would be conducted using experienced community mobilizers/facilitators. These FGDs or meetings would be scheduled in terms of time and location to maximize their participation. Such meetings would continue across all stages of every project intervention.
- ▶ Inclusion of women in committees: Even though women contribute significantly to the project related activities, their poor representation, due to traditional male dominance, in community institutions like the JFMCs denies them the opportunity to express their needs and priorities related to management of project activities. This lack of recognition impedes their access to project interventions. The project would work to ensure that all these community institutions have women in key decision-making roles, by reserving a minimum of one third of such positions for women. The project would also work to provide gender sensitization/training to policymakers, planners and analysts in the economic and social development sectors so as to strengthen the linkages between economic growth, poverty reduction, and climate change impacts, to better respond to the specific needs of women.
- ▶ Training and capacity building: Women groups would be provided with requisite technical training on plantations management, control of forest fires, etc. and other demand driven income generation programs, including those supported under the project. The training programs/modules would be customized to meet women groups' expectations and requirements. Trainings on-site, village-level demonstration and exposure visits in proximity of habitation would be ensured so that constraints in staying out of households for long duration is overcome. In case of women in tribal areas, such trainings would be conducted using culturally appropriate IEC materials and in culturally appropriate manner.
- ▶ Socially inclusive Benefit Sharing for shared/public goods: Suitable criteria/benefit sharing norms in selection of such clusters to cover women would be ensured.

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<sup>21</sup> <http://www.ohchr.org/en/professionalinterest/pages/traffickingpersons.aspx>



- ▶ Convergence with existing state level schemes for empowerment of women: This would include interventions for dovetailing project interventions with existing schemes by supporting women entrepreneurs and collectives to link with schemes on concessional credit, skill upgradation, enterprise development, etc. being provided by other institutions.
- ▶ External resource persons/consultants to support detailed design and implementation of gender program and conduct special women focused thematic studies
- ▶ Gender disaggregated monitoring indicators: Such monitoring indicators would be developed to monitor and evaluate the project and would be used in the proposed monitoring.
- ▶ Inclusion in Grievance redressal mechanisms: Representation of women in grievance mechanisms would be mandatory at all levels.
- ▶ Preference to deployment of SHGs: These SHGs would be deployed to the extent possible under the project to enhance mobilization of women stakeholders and would be provided trainings to:
  1. facilitate effective outreach of project information to such women groups;
  2. ensure adherence to selection criteria preferring women as individual beneficiaries;
  3. engage them for the full project duration and thereby ensure that rapport established with such social groups continues during project implementation and beyond.
- ▶ Information on Women: In order to mitigate such impacts, during verification and socio-economic survey shall collect information on
  - a. Number of women headed households and tribal households and other vulnerable persons,
  - b. Socio-demographic characteristics of women and tribal and other vulnerable persons,
  - c. Health status, including number of children per woman,
  - d. Women's role in household economy by collecting information on usual activity; occupation; their current level of dependence on forest resources, etc.
  - e. Time Disposition and
  - f. Decision making power among women and their representation in forestry related community institutions.

## 8.8. Participation - Actions to be taken

Poor representation and participation of women as well as vulnerable groups are due to existence of patriarchal society and male domination. Social pressure and gender-based violence also hamper their participation and representation. Often bracketed representation of this group is also seen in public forums and meetings. Also, poor self-view restricts them from participating in decision making forum.

Project has to a) Ensure participation of vulnerable in project activities and b) Carry out other responsibilities towards vulnerable groups. Participation and engagement of women and other vulnerable can be ensured specifically in the following ways:

- ▶ Encourage women to take part in the consultation process.
- ▶ Ensure that the women are consulted and invited to participate in individual as well as group-based activities, to gain access and control over resources and due benefit share. Compensation for land and assets lost, being same for all the affected or displaced families, special care needs to be taken by the Project for women groups, while implementing the process of acquisition and compensation as well.
- ▶ Provide separate trainings to women groups for upgrading their skill and assist them in putting them to use.

- ▶ Encourage women to evaluate the project outputs from their point of view during the community monitoring process, encourage use of such social accountability tools separately with women groups to get their free and fair feedback
- ▶ Implement Vishakha Guidelines in all workplaces.
- ▶ All these done in a participatory manner might bring sustainable results in terms of livelihood assistance and income restoration of women as a vulnerable group.

## 8.9. Inclusion of Women and other Vulnerable

The project would ensure inclusion of all vulnerable groups including, women and tribal within the implementation structures, community institutions in the proposed project interventions by undertaking the following:

## 8.10. Consultation

The Project would ensure the participation of forest dependent communities, Project Affected Persons (PAPs) and other stakeholders through periodic consultations for planning and monitoring at all important stages of the project activities. Consultations would be held at regular intervals with JFMC/ EDC members, GP members, Women, members of tribal households, NTFP collectors, transhumant communities, PAPs, etc. In order to keep the momentum of consultation, activity specific consultations and a quarterly consultation would be held with all stakeholder groups.

## 8.11. Stakeholder Participation

The Project recognizes the fact that forest dependent communities and farmers are important stakeholders of the project. Hence, the project would ensure that these stakeholders are duly consulted on issues and they participate in all the sub-project activities including planning and implementation. The FIUs with guidance from the PMU would address the legitimate community concerns and provide opportunities and avenues for consultation and their participation. In order to provide a sense of ownership and ensure sustainability, the demand side stakeholders would be a part of the decision-making process, wherever appropriate. The project has a commitment for community participation in each of the sub-projects taken up. Within the project design, participation of affected community would be ensured through strengthening of community institutions and creating awareness among them regarding rights, entitlements and concessions available to them with respect to forests, simplification of procedures for accessing to forest resources and supporting participation of local communities.

## 8.12. Selection of Individual Beneficiaries

The project would ensure the criteria developed for selection of beneficiaries would commensurate with weightage to all social groups and ensure that all vulnerable groups, including women, have equal access to project interventions proposed under the project and avoids elite capture.

## 8.13. Information and knowledge Sharing

Information and experience sharing through workshops, training and exposure visits would be taken up, in which preference would be given to women representatives of JFMCs/ EDCs and members of other vulnerable groups and forest dependent communities. Project would ensure that participation in all such events would be with fair representation of vulnerable groups. Number of participants by social group/category would be recorded along with suggestions/comments received.

## 8.14. Special Attention to Women and Other Vulnerable Groups

The vulnerable groups include Scheduled Tribes and Castes, Women Headed Households, Destitute, Below Poverty Line families, Old Aged, Chronically Ill and Orphans.

## 8.15. Participatory planning, implementation and monitoring

Some of the project interventions such as plantations, nurseries, buildings, anti-poaching camps and micro-planning; their design, planning and implementation would involve all stakeholders. In such exercises, inclusion and involvement of all social groups at all stages of planning, implementation and monitoring would be made mandatory. For this purpose, meetings would be conducted to ensure representation of all such groups besides recording their attendance by category/group. Continuous process monitoring would lay emphasis on quality of interactions during such meetings.

In addition, use of different community monitoring tools, social audits would be used to assess community perception about the effectiveness and benefits of project activities and seek their feedback. The project strategy also includes involving local communities in natural resource monitoring to assess the status of natural resources as well as the degree of access to and benefits from Project made available to communities for livelihoods improvement.

## 8.16. Feedback - ICT

Feedback from beneficiaries, complaints or grievances would be recorded through innovative use of ICT systems, including providing online feedback and suggestions on the APFBC website. Such information would be collated for use in improving planning and implementation. This could be combined with the GRM. The Project should develop a simple and easy to maintain system for this.

## 8.17. Support to grievance redressal

Project information dissemination, awareness creation among the direct and indirect stakeholders would also include creating awareness about available grievance redressal system that can be used for providing feedback. Regular interaction with the communities for their feedback on project interventions and impact mitigation/ management measures would be taken up.

## 8.18. Other Actions

- ▶ The project should set up action centres with help lines for missing children, migrants, women in distress, etc. the Nodal Officer in charge of Grievance Redress should be made in charge of this.
- ▶ Cases of compensation to vulnerable should be handled with care and concern considering their inhibited nature of interaction.
- ▶ All compensations and assistances would be paid in a joint account in the name of both the spouses; except in the case of women headed households and women wage earners.
- ▶ FIUs shall prepare a list of able bodied and would ing women PAPs for constructional activities and hand over the same to contractors.
- ▶ Half (subject to a minimum of one third) of the project staff and all other involved agencies (including consulting agencies) staff should be woman. When qualified/ skilled women are not available, women with lesser qualifications/ skills may be employed and trained. They may be encouraged and facilitated to obtain the necessary qualifications and/or skills during the employment. The proposed women personnel shall be available to work at site for at least 50% of the duration of the contract. Women may be replaced during the period of contract, only with women persons of equivalent qualifications and experience.
- ▶ Same wage rate for men and women must be ensured.
- ▶ Scheduled tribe and castes population be identified, and they should be given first preference in selection for any project benefits, viz., plantations, micro-planning, livelihoods, etc.
- ▶ The petty contracts arising out of the sub-project should considered entrusting to SHGs on community contracting basis.
- ▶ While selecting community members for training at least half of them should be women and vulnerable.

- ▶ In multistore residential buildings, leave some floors open for housing disaster victims during transit.

## 8.19. Gender Action Plan

The Gender Action plan is mentioned below:

*Table 32 Gender Action Plan*

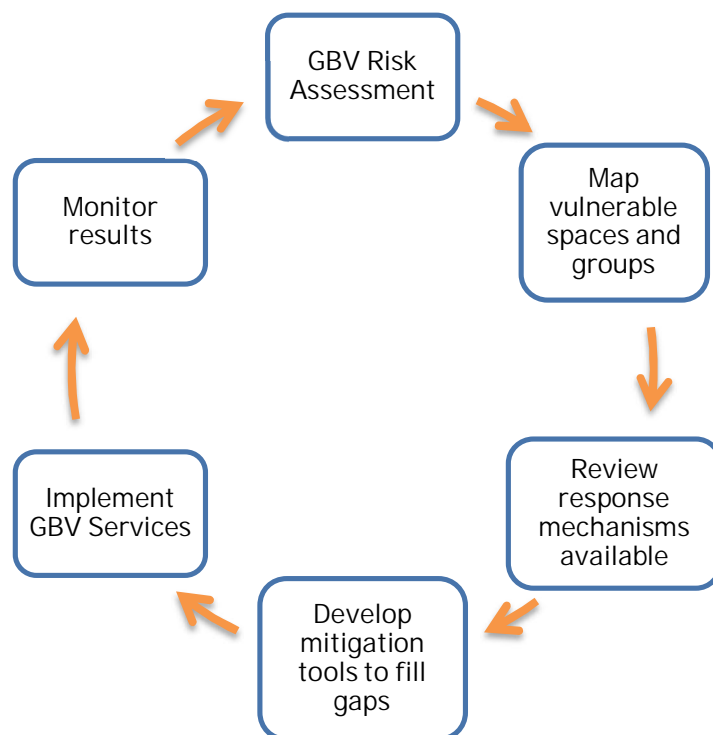
Purpose	Action	Timelines and Responsibility	Deliverable
Stakeholder Mapping (Baseline)	Community wise data to be compiled on Women residents, both affected and beneficiaries in the community, Women elected leaders in GP/ JFMC/ EDC, Women Staff in the project, Women workers in the project	First year of the project FIU	Database (update annually)
Profiling the impacted women	<ol style="list-style-type: none"> <li>1. Socio-economic and knowledge attitude &amp; practice profiling of women impacted</li> <li>2. Role, Position, type of contract, tenure, social protection and opportunity for vertical or horizontal movement.</li> <li>3. Map the affiliation of women with SHGs/ NGOs/ JFMC/ EDC / CBOs/ other</li> <li>4. Document challenges and aspirations of women</li> </ol>	First quarter of the project (FIU and PMU)	Quantitative and Qualitative Baseline on women
Mapping schemes, trainings opportunities and resources for skill enhancement of women	<ol style="list-style-type: none"> <li>1. Map existing Skill building schemes from which women can benefit</li> <li>2. Mapping local organisations and agencies that can provide counselling, support, training, and skill building</li> </ol>	Year 1 (PMU, and PMMC)	Report on available resources for women workers and recommendations for leveraging
Aligning interventions with Women Component Plans	<ol style="list-style-type: none"> <li>1. Review existing Micro Plans/ Activities and resources for women</li> <li>2. Support to FIU in gender responsive planning and budgeting (workshops, training, handholding)</li> <li>3. Leveraging WCP for improved outcomes for women</li> <li>4. Allot on preferential basis, the entry point activities to women and vulnerable.</li> </ol>	Year 1 (PMU and FIU)  Ongoing (FIU)	Review of the Women Component Plans (before and after): addressing gaps, leveraging resources for women (increase in budgetary allocation for women)
Upgrade skills, increase income benefitting through other verticals in livelihoods chain including access	<ol style="list-style-type: none"> <li>1. Create and deliver a tailor-made skill upgradation capacity building program and supporting opportunities for entrepreneurial development. This may include making value added products or Budgeting,</li> </ol>	Year 1 and 2 (FIU and PMU)  Year 3 and 4 (FIU)	Results framework of Project to report on: Number of women received skill upgradation training; Number of women linked to

Purpose	Action	Timelines and Responsibility	Deliverable
to entrepreneurial opportunities	Book-keeping, business management or other activities/ services under the project. 2. Link women to other verticals, other roles in ongoing schemes or projects or opportunities identified. 3. Create new entrepreneurship and other opportunities 4. Provide continued support, handholding for new ventures and income generation activities		higher value chain activities and entrepreneurial activities; % increase in income of women. Continuous documentation of trainings and support provided Compilation of Success stories
Equity and Equality for women as workers	Based on the Code of Conduct and Terms and Conditions under Labour Management Plan, ensure no discrimination against women workers in terms of selection for work, wages, benefits, and opportunities.	Annual Review (PMU)	Review of information form Labour MIS on number of women hired, wages of women and men under the project for same jobs, benefits accruing to women, benefits accessed by women.
Sensitivity towards women	1. Communication Strategy as a component on role of women in the project 2. Participation of women in Community meetings to express their challenges 3. Minimum one-third Leadership and Decision-making positions for women in project committees	First year (PMU and FIU) Ongoing (FIU)	Attendance and Minutes of meetings held at Village/ GP level/ JFMC/ EDC
Increase participation of women leaders and citizens	1. Communication Strategy targeted to mobilise women citizens. Special focus on aged women, women with disabilities, SC/ST women and single women 2. Outreach and engagement with women on their concerns and needs 3. Orientation and training of elected women leaders on the project 4. Identification of active committees, citizens, collectives, unions to build a support group 5. Ensure meetings are regular, citizens are timely informed particularly women (Separate meetings to be held with women to ensure representation)	First year (Communication Agency, SO) Ongoing (FIU)	Data on number and percentage of women participating in meetings. Concerns of the vulnerable groups of women in the micro plans. Qualitative assessments with a focus on increased role of women in project planning and decision making

## GBV Action Plan

This Action Plan gives the Risk Management Cycle and key tasks to be undertaken at each step to ensure risk mitigation and response for GBV.

Figure 4 GBV Risk Management Cycle



The table above gives GBV Action plan

Table 33 GBV Action plan

Action	Tasks	Timeline	Responsibility	Deliverables/ Indicators
Internal Complaints Committee for Implementation Agency	<ol style="list-style-type: none"> <li>1. Finalise TOR</li> <li>2. Nominate Member</li> <li>3. Set up Committee</li> <li>4. Organise Orientation and Meetings</li> <li>5. Inform staff</li> </ol>	First Quarter of Project Implementation	PMU	<ul style="list-style-type: none"> <li>- Finalized ToR</li> <li>- List of Members</li> <li>- Orientation Session</li> <li>- First Meeting</li> </ul>
Map Hotspots and vulnerable groups and GBV issues	<ol style="list-style-type: none"> <li>1. Conduct secondary and primary research</li> <li>2. Collate data<sup>22</sup> on the local GBV issues in the</li> </ol>	First six months of the project	FIU with PMMC	GBV Assessment Report for each division covering risks, vulnerable groups, services,

<sup>22</sup> Demographic health surveys (DHS); Quantitative and qualitative surveys; Qualitative data from NGOs; Perception surveys; Local women's organizations and key informants

Action	Tasks	Timeline	Responsibility	Deliverables/ Indicators
	project sites and affected areas/groups 3. Report on GBV risks in project sites			gaps, recommendations
Map GBV service providers and quality assessment of services	1. List Government, Non-Government and Private Agencies providing GBV support 2. Map local informal grassroots organization 3. Review the quality of services in terms of prevention, protection, rescue, rehabilitation, restoration, reintegration, research and documentation	First six months of the project implementation (continue to update annually)	FIU with PMMC	GBV Service provider repository for Division: <ul style="list-style-type: none"> <li>- Directory of organizations<sup>23</sup></li> <li>- Mapping and benchmarking services<sup>24</sup></li> <li>- Identification of key partners, roles, modalities</li> </ul>
Facilitate GBV awareness and sensitization programs	1. Organize sensitization activities with identified vulnerable communities 2. Organize sensitization sessions with different groups of project staff, workers 3. Visibly display signs around the project site.	On going	PMU and FIU with PMMC	Six monthly report on: Dissemination material produces, workshops organized, personnel trained. community members sensitized
Create a GBV response and support mechanism	1. Seek partnership for GBV support 2. Create an SOP for prevention,	Year 1	PMU supported by PMMC	Response matrix Response services Division wise GBV reporting on cases

<sup>23</sup> Basic information to be collated: Service Provider Name; type of service, location, helpline number (if any); Website; Organisation Contact no.; Email of organization; Contact person Name; Contact person Designation; Contact person No.; Contact Person Email Address.

<sup>24</sup> Benchmark indicators: Relevance; Success Rate; Time taken; Confidentiality; SOP Quality; Cost Effectiveness; Follow-up

Action	Tasks	Timeline	Responsibility	Deliverables/ Indicators
	protection, rescue, rehabilitation, restoration 3. Prepare Division wise plans for awareness generation, training and documentation. 4. Link the project GRM to manage GBV complaints			(received, resolved, gaps, etc.)
Reporting, Monitoring and Review	1. Create GBV data fields for MIS 2. Ensure quarterly reporting 3. Conduct review of support provided and audit of services available	Every six months	PMU with PMMC	Reporting on ICC, Sensitization and Capacity Building activities, GBV response process, data on complaints received, resolved. Challenges and success stories

*Note: Any Reports produced (internal or external) must consider issues of confidentiality.*

## 8.20. Gender Budget

For every sub-project, during the preparation phase, gender budget needs to be prepared and approved by the FIU and PMU. This budget differs from sub-project to sub-project. A sample format for preparation of gender budget is given below:

*Table 34 Sample Gender Budget for 100 Households*

S.No.	Particulars	Cost Details	Amount INR
1	Disaggregated data collection on gender	@ INR 500 per household	50,000
2	Gender based beneficiary selection for livelihoods	Entitlements per beneficiary (@ INR 50,000 per beneficiary)	50,00,000
3	Livelihoods training to selected beneficiaries	Cost per beneficiary (say @ INR 10,000 per day per trainee)	10,00,000
3	Training on gender equality aspect to sub-project beneficiaries	Cost per beneficiary (say @ INR 1000 per day per trainee)	1,00,000
4	Contingencies	@ 10% of the above	6,15,000
5	TOTAL		67,65,000

*Note: The above is for 100 selected Households*



## 9. Stakeholder Engagement and Disclosure



### 9.1. Stakeholder Engagement Program (SEP)

#### 9.1.1. Purpose and Objectives

The main objective of the SEP is to establish a systematic approach for stakeholder engagement. The stakeholders' views need to be considered so as to have inclusive engagement with project-affected parties throughout the project life cycle and ensure that appropriate project information is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner. The SEP also aims to facilitate stakeholder feedback and engagement on project design and implementation, including identification and mitigation of environmental and social risks and impacts. Other objectives of the SEP are: i) to ensure that stakeholders understand how the project is likely to affect them; maintain continuous engagement and manage stakeholders' expectations; (ii) ensure prior disclosure and dissemination of relevant, transparent, objective, meaningful and easily accessible information in a timeframe that enables meaningful consultations with stakeholders in a culturally appropriate format, in relevant local language(s) and is understandable to stakeholders; Consider and responds to feedback; Support active and inclusive engagement with project-affected parties; Ensure that consultation(s) is/ are free of external manipulation, interference, coercion, discrimination, and intimidation; and Ensure consultation (s) is/are documented and disclosed by the APFBC-Phase II.



The scope and details of the SEP have been customized to the moderate risk profile of the project which would not cause any physical relocation or land acquisition.

## 9.1.2. Citizen Engagement Framework

To mainstream citizen engagement in the project, there is focus on two-way communication and engagement throughout the operational cycle, ensure social inclusion and completing the feedback loop. The Citizen Engagement framework below provides broad contours of how the project and communities interact with one another for different social processes and outcomes.

*Table 35 Citizen Engagement Framework*

Principles	Roles and Expectations	
	FIU, PMU and PMMC	Communities
Information Dissemination	<ul style="list-style-type: none"> <li>- Develop a Communication Strategy</li> <li>- Implement Communication Plan: Launch IEC Campaigns, Facilitate Attitudinal Behaviour Change Campaigns, Review receptivity, impact and response</li> </ul>	<ul style="list-style-type: none"> <li>- Get informed</li> <li>- Become aware regarding project and opportunities under project</li> <li>- Develop interest</li> <li>- Participate in activities</li> </ul>
Collaboration	<ul style="list-style-type: none"> <li>- Map All Stakeholders</li> <li>- Map the vulnerable in each category, identify<sup>25</sup> them in the specific sites/location</li> <li>- Engage with stakeholders (planning, site specific, sub projects, implementation)</li> <li>- Ensure the vulnerable are represented</li> <li>- Transparency and Accountability of project activities</li> <li>- Role allocation and capacity development</li> <li>- Facilitate village level activities as per project</li> </ul>	<ul style="list-style-type: none"> <li>- Voice in the micro plan</li> <li>- Preference for type of activity</li> <li>- Role clarity as beneficiaries</li> <li>- Role clarity in JFMC/ EDC</li> <li>- Express concerns and give suggestions as beneficiaries</li> <li>- Play a key role in sub-project planning and implementation</li> <li>- Participate in scheme implementation</li> <li>- Demand regular information and effective implementation</li> <li>- Consultation, agreement participate in project activities</li> </ul>
Engagement	<ul style="list-style-type: none"> <li>- Administration of baseline surveys</li> <li>- Institutionalise Social Audit: Adapt Social Audit, Conduct Pilots, Train facilitators, Roll Out, Analyse the Social Audit responses and implications on project, Complete the feedback loop by making systemic changes</li> <li>- Strengthen GRM: Design a robust and accessible GRM, disseminate information on GRM links, Ensure Effective Response and Redressal,</li> </ul>	<ul style="list-style-type: none"> <li>- Respond to survey</li> <li>- Express opinions</li> <li>- Offer voluntary support</li> <li>- Provide feedback</li> <li>- Participate in monitoring</li> <li>- Participate in Social Audit</li> <li>- Use GRM services</li> <li>- Enhanced service and satisfaction impacting the willingness to participate in project activities</li> </ul>

<sup>25</sup>women (citizens, leaders, staff, workers), vulnerable women (aged, single, ST, SC, disabled), Project Last Mile workers, SC, ST, host communities in case of labor influx, people living next to project facilities, people affected by project, etc.

Principles	Roles and Expectations	
	FIU, PMU and PMMC	Communities
	Analyse the GRM data and implications on project, Completing the feedback loop by making systemic changes	
Empowerment	<ul style="list-style-type: none"> <li>- Issues of the last mile project workers and community members represented and addressed and addressed</li> <li>- Opportunities for project beneficiaries so they can improve skills, fight stigma, augment income, etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Sensitivity towards women and vulnerable groups</li> <li>- Engagement and Feedback processes streamlined and citizens' ownership towards the project</li> </ul>

### 9.1.3. Information Disclosure and Engagement Methods

Ensuring the participation of vulnerable individuals and groups in project consultations would require the implementation of tailored techniques. The vulnerable groups identified by the project include the rural population, people living with disabilities, women, and disadvantaged youth. This would be done by focus group discussions, monitoring participation rates, undertaking beneficiary assessments and ensuring that at least one-third of participant trainees are females. The table below summarizes the variety of methods and approaches that would be used for information disclosure to reach all the key stakeholders.

*Table 36 Methods/Tools for Information Provision, Feedback, Consultation and Participation*

Method/ Tool	Description and Use	Contents	Dissemination Method
Participatory Baseline Surveys and Assessments during micro planning	These surveys would be used to identify stakeholder priorities, concerns and feedback, including vulnerable households	Identification of concerns, priorities of village communities	Implemented in All project villages
Printed Material including newsletters, leaflets, brochures, fact sheets	Used to convey information on the Project and regular updates on its progress	Information on the Project, GRM, SEP and project components and interventions	Distribution through post, distribution, and hand-outs as part of consultation meetings, awareness campaigns, discussions and meetings with stakeholders.
Project Website	Easily accessible information on Project status.	Project achievements, announcements of planned activities, changes, and overall progress.	Information shared with project offices and target communities/ GPs through printed leaflets
Periodic Consultation Meetings at Gaon Sabha, Block and District Office	These meetings would be utilised to review project implementation progress in target villages, and hear stakeholder feedback	Stakeholder Feedback, Grievances, Implementation Progress Issues	Advance Notification for Meetings

Method/ Tool	Description and Use	Contents	Dissemination Method
Dedicated telephone line	Designated telephone line used by the public to obtain information, make enquiries, or provide feedback on the Project.	Any issues that are of interest or concern to the direct project beneficiaries and other stakeholders.	Telephone number disseminated through websites and printed materials
Surveys, Interviews and Questionnaires	The use of public opinion surveys, interviews and questionnaires to obtain stakeholder views	Questions targeting stakeholder perception of the Project, associated impacts and benefits, concerns and suggestions.	Soliciting participation in surveys/interviews with specific stakeholder groups. Administering questionnaires as part of the household visits.
Feedback & Suggestion Box	A suggestion box can be used to encourage project affected persons to leave written feedback and comments about the Project.	Any questions, queries or concerns, especially for stakeholders that may have a difficulty expressing their views and issues during public meetings.	Appropriate location for a suggestion box should be selected in a safe public place to make it readily accessible for the stakeholders. Information about the availability of the suggestion box should be communicated as part of Project's regular interaction with local stakeholders.

#### 9.1.4. Strategy and differentiated measures for Vulnerable Groups

The project would be implementing measures to include the feedback of vulnerable and disadvantaged groups received during the stakeholder engagement process. These disadvantaged and vulnerable people are the landless and marginal farmers, scheduled castes households, scheduled tribes' households, women headed households, people with disability, as well as households designated below the poverty line.

The main measures are presented below:

- a. Identification of these disadvantaged and vulnerable households, as part of the participatory assessment exercise that would be undertaken in the micro plan planning process;
- b. Dedicated consultations with vulnerable households during micro plan planning, as well as during periodic review with the micro plan;
- c. Inclusion amongst beneficiaries of individual benefits as well as common assets and demonstrations,
- d. Inclusion in user groups and suitable local work/labour opportunities.
- e. Participatory planning and Implementation of focused livelihoods interventions, especially targeting the project affected and vulnerable groups;
- f. Differential and lower cost sharing requirements for vulnerable households in accessing individual benefits related to agriculture, horticulture, animal husbandry, trades, etc.;
- g. Screening and mitigation planning to ensure vulnerable and disadvantaged groups are not adversely impacted by project interventions.

## 9.2. Stakeholder Engagement Strategy during Implementation

The following table provides the stakeholder engagement plan during project implementation.

*Table 37 Stakeholder Engagement during Project Implementation*

Target stakeholders	Information to be disclosed	Tools of engagement & mode of disclosure	Frequency	Responsibilities
Project staff and relevant community organizations such as sub-groups (user groups) of the GP/JFMC/EDC Partnerships with other agencies Communities including women, women, youth, and disadvantaged groups.	The Micro Plans would be available in local language at the Gram Panchayat office.  The Forest Department officials and project extension workers would disseminate information related to vulnerable households and selection of beneficiaries for activities, beneficiary contribution, etc. prominently for the villages covered across targeted GPs.	The FIU would develop Micro Plans through a participatory process led jointly by the Forest Department, Gaon Panchayats and community user groups and which would ensure the active inclusion of women and disadvantaged groups.	Every year	FIU and PMU, PMMC
Small and marginal farmers Vulnerable households qualified support entities officials from relevant line departments (e.g., agriculture, horticulture, and animal husbandry	Information regarding Micro Plans, Sub-Projects under the Project and Entry Point Activities to be taken up with beneficiaries, etc.  Pertinent information about beneficiaries and activities chosen.	Through the FIU offices and through Project workers. Information would be disclosed in local language.  Door-to-door visits, audio-visual tools, leaflets, etc.	Every quarter	FIU and PMU, PMMC
GP/ JFMC/ EDC Members	Trainings and capacity building exercises	Circulars and government orders	Every six months	FIU, PMU PMMC Consultants

The final draft of the Stakeholder Engagement Plan (SEP) along with ESMS would be disclosed on the project website and shared with all the District and Block Development Offices as well as the targeted Gaon Panchayats. SEP would be publicly accessible throughout project implementation period with regular updated versions being re-posted on the project portal. The methods of engagement with stakeholder would be constantly reviewed for their appropriateness, outreach and impact, as well as inclusivity by the project.

## 9.3. Roles, Responsibilities and Resources for Stakeholder Engagement

The Project Management Unit (PMU) with the support of the FIUs would be responsible for implementing the SEP through the Environment and Social Experts at the State Level and would be directly engaging with the key stakeholders. FIUs would be supported to effectively engage with primary stakeholders throughout project implementation. Project implementing agencies would arrange necessary training associated with the implementation of this SEP. The training would be provided to the members of staff and other stakeholders.

## 10. Capacity Building Strategy



### 10.1. Introduction

The Project would provide its staff and the participating communities some exposure to the Environmental and Social Safeguards issues. But the preliminary interactions with them reveal that, this mere exposure is not enough for conducting screening, preparing and implementing environmental and social management plans, and monitoring. They need to imbibe with awareness, sensitivity, skills and hands-on experience regarding the environmental and social aspects of sub-projects planning and implementation.

For seamless adaption of the environmental and social principles and ESMS by all the implementing partners, awareness creation and capacity building are a necessity. The capacity building activities may be taken up by PMU with the assistance of other specialist institutions, consultants, etc. to deliver trainings to project stakeholders on environmental and social safeguards and their management. The specialized agencies would be provided flexibility to bring in expert resources from the market to augment their own capacities. The project would provide additional support to boost the existing capacities of these institutions and deliver trainings on environmental and social safeguards, participatory approaches and gender inclusion.

### 10.2. Objectives

The objectives of the capacity building initiatives are:

- ▶ To build and strengthen the capability of Project's PMU, FIUs and other staff, participating implementing agencies, to integrate sound environmental and social management into sub-project implementation.
- ▶ To orient the project staff, participating implementing agencies and communities to the requirements of the project's ESM

### 10.3. Approach

Systematic capacity building initiatives need to be introduced only after completion of Training Needs Assessment. All the trained staff and master trainers developed for different training components will in turn conduct onsite or offsite trainings (at district, block or GP levels) depending on training requirement. However, since capacity building goes beyond mere imparting training, institutionalization of best practices becomes a prerequisite for improved sub-project environment and social management. The training outcomes like trainees’ understanding of the training content, achievement of learning objectives, application of methods, tools and techniques learnt during training, etc. would need to be monitored periodically.

### 10.4. Training Providers

In view of the specialized training and capacity building envisaged under the ESMS of the project, it is necessary to identify nodal training institutes that would work closely with PMU for conceptualizing, designing and conducting training programs on the ESMS. The State forest training institute (COSFOS, Burnihat) may conduct these trainings in partnership with other autonomous institutions, etc. for conducting these specialized trainings. The project can also send the trainees for custom-made trainings on Environmental and Social Management at autonomous institutions like Engineering Staff College of India, Hyderabad, which conducts such programs on regular basis. However, it would be good if the ESMS Consultant can be engaged on a long-term basis to provide these trainings.

*Table 38 Details of Training Programs*

List of Training Programs	Number of Trainings	Purpose of the training	Participants
T1. Orientation/ Sensitization Training Programs	5	<ul style="list-style-type: none"> <li>▶ To orient/ sensitize the project staff at the project launch towards the environmental and social issues of the project</li> <li>▶ To orient the project staff about the ESMS and its importance, provisions and implications. There after annual orientation cum experience sharing and learning training programs would be conducted.</li> <li>▶ To re-orient the project staff on the ESMS and to share their experiences in implementing the ESMS</li> <li>▶ To draw lessons learnt during the implementing the ESMS and to incorporate them into the ESMS revision.</li> </ul>	<ul style="list-style-type: none"> <li>▶ All Key officials of the project including PMU</li> <li>▶ FIUs</li> <li>▶ participating implementing agencies</li> <li>▶ JFMC/ EDC</li> <li>▶ members of community institutions</li> </ul>
T2. Training on the ESMS, ESA and ESMP	5	<ul style="list-style-type: none"> <li>▶ To equip with knowledge and skills necessary for undertaking environmental and social screening and appraisal as per the requirements of the ESMS, conduct ESA and preparation of management/ mitigation plans</li> <li>▶ To prepare for undertaking periodic supervision of implementation of</li> </ul>	<ul style="list-style-type: none"> <li>▶ Key officials of the project including PMU and FIUs</li> <li>▶ participating implementing agencies</li> <li>▶ JFMC/EDC</li> <li>▶ members of community institutions.</li> </ul>

List of Training Programs	Number of Trainings	Purpose of the training	Participants
		environmental and social management/ mitigation plans and performance of sub-projects ▶ To apply community led system for Environmental and Social Monitoring	
T3. Training on Environmental and Social Management	10	▶ To equip with knowledge and skills necessary for meaningful participation in the social appraisal as per the requirements of the ESMS and ESMP ▶ To prepare for planning and monitoring implementation of environmental and social mitigation/ management measures identified through the appraisal process ▶ To equip with skills necessary for Community Based Environmental and Social Monitoring	▶ FIUs ▶ JFMC/ EDC ▶ Participating Agencies Staff ▶ GP Representatives (The FIU offices would be responsible for selection of suitable candidates for the training, and the expense would be borne by the overall project capacity building budget. )

### 10.5. Training Budget

The total estimated cost of training on Environmental and Social Management for members of APFBC-Phase II, Participating Agencies' Staff, JFMC/ EDC members, community members, etc. under the Projections presented in the table below:

*Table 39 Training Budget*

S. No.	Training	No. of Programs	Estimated Unit Cost in Rs.	Total Cost in Rs.
1	T1	5	200,000	1,000,000
2	T2	5	200,000	1,000,000
3	T3	10	200,000	2,000,000
4	Workshops (State)	5	200,000	1,000,000
5	Provision for contingences and unforeseen expenses, etc.			1,000,000
6	Total			INR 6,000,000



## 11. Annexures

### 11.1. Eligibility Screening (No Go List Screening)

S No	Activities listed below would NOT be eligible for support under the proposed project	Confirmation that the activity is NOT an ineligible activity (please tick)
1.	Activities that are not consistent with the Forest Working plans/ CAT plans of the area	
2.	Activity that involves construction of check dam > 6 m height	
3.	Activities that promote or involve procurement of pesticides that falls in WHO classes IA, IB, or II.	
4.	Activities that involve large-scale clearing of land, dredging of water bodies, undercutting of slopes, replacement of natural vegetation, habitat destruction, etc., that may cause permanent, irreversible impacts.	
5.	Any activity that has a significant potential of causing forest fires.	
6.	Any activity that involves child labour (persons under 14 years of age in any activity and persons above 14 years and under 18 years of age in hazardous activities).	
7.	Activities that would adversely affect places of cultural significance and protected historical/ archeological assets (both natural and human-made).	
8.	Activities that involve felling of trees without a permit.	
9.	Activities that involve NTFP/MAP harvesting without approvals/permits	
10.	Any activity that is not consistent with the project description at time of project negotiations, unless subsequently agreed to with the AFD along with the appropriate level of environmental safeguards management.	
11.	Activities which require land acquisition.	
12.	Activities which require eviction of informal settlers/ users of land.	
13.	Activities which put permanent restrictions on access/ usage of resources.	
14.	Activities listed under Annex 10.2 (Exclusion list for AFD Group in foreign countries)	

#### Exclusion list for AFD Group in foreign countries

1. Production or sale of any illegal product or unlawful activity under the laws of the host country and France or under international regulations, conventions and/or agreements.
2. Products or activities that use forced labour<sup>26</sup> or child labour<sup>27</sup>.
3. Trade in animals, plants or any natural products not complying with the provisions of the CITES convention<sup>28</sup>.
4. Fishing activity using a drift net of more than 2.5 km in length.
5. Any operation leading to or requiring the destruction<sup>29</sup> of a critical habitat<sup>30</sup>, or any forestry project which does not implement a plan for improvement and sustainable management.
6. Production use or sale of any dangerous materials such as asbestos or products containing PCBs<sup>31</sup>.
7. Production use or sale of pharmaceutical products, pesticides/herbicides, ozone layer depleting substances<sup>32</sup> or any other dangerous substances that are banned or are being progressively phased out internationally.
8. Transboundary trade in wastes, except for those accepted by the Basel Convention *and its underlying regulations*.
9. Production or sale<sup>33</sup> of a) arms and/or munitions, b) tobacco, c) strong alcohol intended for human consumption, etc.
10. Gaming establishments, casinos or any equivalent undertaking<sup>34+35</sup>.
11. Any trade related to *pornography or prostitution*.
12. Any activity leading to an irreversible modification or significant displacement of an element of

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<sup>26</sup> "Forced labour" refers to any work or service performed involuntarily and exacted from an individual by threat of force or punishment as defined in the conventions of the ILO.

<sup>27</sup> Employees must be at least 14 years of age as defined in the ILO's Declaration on the Fundamental Principles and Rights at Work (C138 - Minimum Age Convention, Article 2), unless local laws require compulsory school attendance or a minimum working age. In such circumstances, the highest age requirement must be used.

<sup>28</sup> CITES: Convention on International Trade in Endangered Species of wild fauna and flora threatened with extinction (Washington, 1993).

<sup>29</sup> Destruction means (1) the elimination or severe reduction in the integrity of a habitat caused by a major and long-term change in land-use or water resources or (2) the modification of a habitat such that this habitat's ability to fulfil its role is lost.

<sup>30</sup> The term critical habitat encompasses natural and modified habitats that deserve particular attention. This term includes (i) spaces with high biodiversity value as defined in the IUCN's classification criteria, including, in particular, habitats required for the survival of endangered species as defined by the IUCN's red list of threatened species or by any national legislation; (ii) spaces with a particular importance for endemic species or whose geographical range is limited; (iii) critical sites for the survival of migratory species; (iv) spaces welcoming a significant number of individuals from congregatory species; (v) spaces presenting unique assemblages of species or containing species which are associated according to key evolution processes or which fulfil key ecosystem services; (vi) and territories with socially, economically or culturally significant biodiversity for local communities. Primary forests or high conservation value forests must also be considered as critical habitats.

<sup>31</sup> PCBs (polychlorinated biphenyls) are a group of highly toxic chemical products that may be found in oil-filled electrical transformers, capacitors and switchgear dating from 1950 to 1985.

<sup>32</sup> Any chemical component which reacts with, and destroys, the stratospheric ozone layer leading to the formation of holes in this layer. The Montreal Protocol lists Ozone Depleting Substances (ODS), their reduction targets and deadlines for phasing them out.

<sup>33</sup> To be excluded, these activities must represent more than 10% of the balance or amount being financed. In the event of a financial intermediary, these activities must not exceed 10% of the outstandings in their business portfolio.

<sup>34</sup> Any direct financing of these projects or activities involving them (for example, a hotel including a casino). Urban improvement plans which could subsequently incorporate such projects are not affected.

<sup>35</sup> "Critical cultural heritage" is considered to be any heritage element recognised internationally or nationally as being of historical, social and/or cultural interest.

culturally critical heritage<sup>36</sup>.

13. Production and distribution, or investment in, media that are racist, antidemocratic or that advocate discrimination against a part of the population.
14. Exploitation of diamond mines and marketing of diamonds where the host country has not adhered to the Kimberley Process.
15. Any sector or any service subject to an embargo by the United Nations, European Union and/or France in a particular country and with no absolute or relative restriction regarding the amount.

## 11.2. Environmental and Social Screening Formats

### Part 1: Environmental Data Sheet

SL#	Date of Screening:	
	Name of Gram Panchayat	
1.	List of activities to be supported under the plan:	
2.	Area of GP (ha)	
3.	Forest Area	_____ Ha
	Status	<input type="checkbox"/> Degraded <input type="checkbox"/> VDF <input type="checkbox"/> MDF <input type="checkbox"/> Open Forest
	Key Tree Species selected for afforestation	_____:
	Current use of forest for any livelihood activity	_____
	Area infested by exotic/noxious weeds	_____ Ha
4.	Pastureland	_____ Ha
	Season when fodder is available	_____ No #
	Livestock numbers	_____ No #
5.	Forest Fire Vulnerability	_____
	Forest fire incidences	_____ No #/ year
6.	Availability of NTFPs, MAPs and minor forest produce	
	Key NTFP species:	
	Quantity harvested each season (species-wise):	
7.	Presence of Forest nursery, or nearest nursery site	_____ No # and area (ha)
		Annual production capacity (saplings/year):
8.	Existing Forest management plan for the selected forest area in the GP	_____ (name of working plans/ management plans etc.)
9.	Are any civil works proposed as part of the project in this plan?	
10.	Are there any religious sites, culturally important sites in the project activity area? If yes, please give details (name, distance from project site).	

<sup>36</sup>"Critical cultural heritage" is considered to be any heritage element recognised internationally or nationally as being of historical, social and/or cultural interest.

Part 2: Legal and Regulatory Requirements Checklist

Legal and Regulatory Requirement	Applicability to the project	Compliance (in case it is applicable)
Consent for Establishment and Consent for Operation from the State Pollution Control Board in case of NTFP/MAP processing activities	<input type="checkbox"/> Applicable to activities under the project <input type="checkbox"/> Not Applicable to activities under the project	If Applicable, <input type="checkbox"/> Consent Taken <input type="checkbox"/> Consent not taken  Consent will be taken by _____date
Permit for transit of NTFP/MAP in case of NTFP/MAP marketing and processing activities	<input type="checkbox"/> Applicable to activities under the project <input type="checkbox"/> Not Applicable to activities under the project	If Applicable, <input type="checkbox"/> Consent Taken <input type="checkbox"/> Consent not taken  Consent will be taken by _____date
Permit for tree felling from the Forest Department in case any activity involves felling of trees	<input type="checkbox"/> Applicable to activities under the project <input type="checkbox"/> Not Applicable to activities under the project	If Applicable, <input type="checkbox"/> Consent Taken <input type="checkbox"/> Consent not taken  Consent will be taken by _____date
Permit for ground water extraction from the Ground Water Authority in case any activity requires groundwater extraction (if required)	<input type="checkbox"/> Applicable to activities under the project <input type="checkbox"/> Not Applicable to activities under the project	If Applicable, <input type="checkbox"/> Consent Taken <input type="checkbox"/> Consent not taken  Consent will be taken by _____date
Permit for building construction from the Gram Panchayat/ Local Body/ Buildings Department (if required)	<input type="checkbox"/> Applicable to activities under the project <input type="checkbox"/> Not Applicable to activities under the project	If Applicable, <input type="checkbox"/> Consent Taken <input type="checkbox"/> Consent not taken  Consent will be taken by _____date

### 11.3. Social Screening

#### 11.3.1. Land Requirement

Details	Unit	Quantity	Classification/Category/Details	Present Uses and Users
Government Land				
Private Land (Donated)				
Forest Land				
Title Holder				
Non-titleholders (Encroacher)				
Non-titleholders (Squatter)				
People losing livelihoods/ access due to loss of Govt. Lands to Project				

### 11.3.2. Common Property Resources Affected: (Please give each type by number)

Type	Unit	Quantity
	Number	
	Number	
	Number	
	Number	
	Number	

### 11.4. Other

Question	Yes	No	Details
<b>Legal/ Disputes</b>			
Does this land come under FRA in terms of unsettled claims?			If YES, please choose any other piece of land
Does this land come under High Court Order for Eviction of Encroachments?			If YES, please choose any other piece of land
Is this land been encroached?			If YES, please choose any other piece of land
Does this land come under any kind of dispute from forest dwellers?			If YES, please choose any other piece of land
<b>Access/ Use Restrictions on Land</b>			
Does this land fall in or restricts access of communities to their conserved areas, sacred groves, with no other accessible routes available?			If YES, please choose any other piece of land
Does this land impact anyone adversely?			If YES, please choose any other piece of land
Does this land impacts anyone's access to resources?			If YES, please choose any other piece of land
Does the proposed activities use land that is under Customary Ownership?			If YES, please choose any other piece of land
<b>Tribal Related</b>			
Is there any tribe in the Gaon Panchayat where the Micro Plan is proposed?			Please collect the details of the tribe using the Socio-Economic Survey format and include in ESMP for any impact mitigation.
Were those tribes consulted during the preparation of Micro Plan			If NO, please give reasons
Are those tribe part of the beneficiaries?			If NO, please give reasons
<b>Labour</b>			
Is labour required for implementing this Micro Plan?			If YES, please give a) approximate number of labour and b) duration of their requirement.
Can the labour requirement be met with local labour?			If No, please give details from where the labour will be sourced.
<b>Cultural Heritage</b>			
Please give details of the cultural heritage of the area?			Give full details
Will the proposed activities disturb/ adversely impact the cultural heritage of the area?			If YES, please give the details.

Question	Yes	No	Details
Have they been consulted in preparation of Micro Plan?			If No, please give reasons as to why they are not consulted.
Will they be part of the beneficiaries under the Micro Plan?			If No, please give reasons
<b>Community Health and Safety</b>			
Will the proposed activities affect the community health and safety?			If YES, please give details.
<b>Other</b>			
Please list the vulnerable/ disadvantaged groups in the GP <sup>37</sup> .			Please give full details

Screening checklists filled by:

Name: \_\_\_\_\_  
 Designation: \_\_\_\_\_  
 Date: \_\_\_\_\_

Screening checklists verified by:

Name: \_\_\_\_\_  
 Designation: \_\_\_\_\_  
 Date: \_\_\_\_\_

#### 11.4.1. Socio-Economic Survey Format

1	Name of the Head of the Household	
2	Social Category	1. SC 2. ST 3. OBC 4. General 5. Others (specify).....
4	Family Pattern	1. Joint      2. Nuclear      3. Single      4. Extended
5	Size of Family	1. Small (2-4)      2. Medium (5-7)      3. Large (Above 7)
6	Mother Tongue	Specify
7	Native Place	
8	Ration Card Status	APL/ BPL/ Other

#### 11.4.2. Household Assets (Please Record Numbers)

TV	Heater	Cycle	Two-wheeler	Four-Wheeler	Mob. Phone	Refrigerator	Other

#### 11.4.3. Livestock Assets (Please Record Numbers)

Classification	Cows	Buffaloes	Sheep	Goats	Poultry	Others
Give Number						

\_\_\_\_\_

<sup>37</sup> Culture is one of the fundamental aspects of society that influences both the person and the environment. Culture is a complex system that encompasses norms, beliefs, values, and prescriptions for behavior that are transmitted and passed from one generation to the next and shared among members of a group. This refers not just to such issues as manners, or language, but also to the many tacit and unconscious social and mental constructs that individuals learn through experiential and environmental cues.

#### 11.4.4. Access to Utility (1-Yes/ 2-No)

Electricity	water supply Source	Own water sources, well, tube well	Separate Bath, Toilet	Kitchen

#### 11.4.5. Type of fuel used for cooking: (1-Yes/ 2-No)

Firewood in village	Firewood in forest	Biogas	Kerosene	Gas (LPG)	Charcoal	Others

#### 11.4.6. Kindly indicate the consumption/expenditure on different items

S.No	Particulars	Monthly Expenditure in Rs.	Rank them from highest to lowest
1.	Food		
2.	Agriculture		
3.	Housing		
4.	Cooking Fuel		
5.	Clothing		
6.	Health		
7.	Education		
8.	Local transport		
9.	Communication		
10.	Social functions		
11.	Leisure		
12.	vehicle maintenance		
13.	out station travel		
14.	Loan Repayment		
15.	Others		

#### 11.5. Health and Sanitation

1	Do you have a latrine in your house?	1 - Yes; 2 - No; 3 - Using community toilet; 4- Outside (open place)	
2	Do you and your family members use it?	1. Yes (All of us always regularly) 2. Yes (Some of us, but irregular); 3. No.	
3	Do you wash your hands with soap after defecation?	1. Yes (All of us always regularly) 2. Yes (Some of us, but irregular); 3. No.	
4	Which is the nearest formal medical facility available?	PHC - 1; CHC- 2; District Hospital - 3; Private clinic - 4; Private Hospital - 5; Others - 6	
5	Have you heard about HIV/AIDS?	Yes 1; No - 2	
6	If yes, what is the source?	Newspaper - 1; TV- 2; radio- 3; NGO camp- 4; Govt. camp - 5;	

## 11.6. Gender Related

	Questions
What is the context?	1. Demographic and socioeconomic data, disaggregated by sex and income
	2. % of households that are headed by women/men
	3. Main sources of income for households in the project areas (disaggregated by sex)?
	4. Uses/needs of women and men when it comes to project-relevant sectors?
	5. How do the identified risks/vulnerabilities affect men and women?
	6. Are there any legal barriers to women in the project relevant sectors and sub activities
	7. Community beliefs about the specific roles of women and men.
Who has what? Ownership and access	1. Who owns the land and other product assets?
	2. Describe household energy access and sources.
	3. How much do households spend on utilities?
	4. Do men and women have bank accounts and can they access finance to scale up their farming / business / entrepreneur activities as a part of the project?
	5. Do men and women benefit from extension services or project-relevant services?
	6. How do men and women access information? Do they have access to different technologies?
	7. What are the levels of training / education?
Who does what? Roles and responsibilities	1. How are men and women connected to markets / how do they participate in the economy?
	2. What would be the implications of the proposed intervention, given primary tasks and responsibilities by gender?
	3. Who is responsible for child/elderly care and household tasks?
	4. What would be the best times to hold trainings for women and men on the new systems/technologies or skills to be delivered through the project?
Who decides? Participation in decision-making	1. Who are the community leaders? Are there any women leaders?
	2. Are there women's organizations that are active in the targeted area that the target project can partner with?
	3. Do women and men participate (equally) in community institutions, management relevant to the project sector, and any other producer/user groups? Which ones?
	4. Who manages / makes decisions in the household, notably around how money and time are spent?
	5. Would both women and men be able to equally participate in using and learning about the new interventions in the proposed project?
Who benefits? Impacts	1. Would the services from the project interventions be freely available to men and women? Are there any risks/restrictions on movement (security or cultural)? Are there any discriminations/risks to certain community members in terms of accessing the project benefits?
	2. How would men and women benefit from the project interventions?
	3. What would be the impact of the project interventions on women's workload and income?
	4. Are there specific project impacts or benefits for women?
	5. Would the project help create a better balance between women's productive and household tasks (e.g. childcare, domestic work)?
	6. gthe project contribute to strengthening women's participation in decision-making? How?



1.	Is there any member of your family also a member of SHG?	1) YES    2) NO (If 'NO', GOTO Q No 23)	
2.	If YES, how many family members are SHG members?	Specify nos. _____	
3.	Do they hold any position in the group?	Specify _____	
4.	What are the activities taken up in the group?	Specify	
5.	Is there any female in your family, a member of any women organisation?	1) Yes    2) No	
6.	If YES, name the organisation?	Name	
7.	Do they hold any position in the organisation?	Specify	
8.	What are the activities taken up in the organisation?	Specify	
9.	Do women have ownership over assets?	Yes/No	
10.	If Yes, ownership in	Household assets/ Livestock/ Other (specify) _____	
11.	Do you have JFMC / VFDS / SHGs/ UGs Other Societies in your village?		
12.	What are the names of those societies?		
13.	How many of you are members of these societies?		
14.	Are the meetings of these societies conducted regularly?	YES / NO	
15.	Are these societies relevant to your community?	YES / NO	
16.	Is there any Micro-plan/ VDP prepared in the village?		
17.	Did the community participate in the preparation of the Plans / Micro-plans?	- YES / NO	
18.	What are the Plans / Micro-Plans prepared in which community has participated?		
19.	What are activities delegated to women by community?		
20.	Does the community allow women to participate in community meetings?	YES / NO	
21.	Does the community consult women in making decisions for the community?	YES / NO	
22.	Are there any societies/ groups exclusively for women in the community?	YES /NO	
23.	If YES, specify the name.		
24.	Does the community consult these societies/ groups in matters related to community?	YES / NO	



Marital Status: 1-Married; 2-Unmarried; 3-Divorcee; 4-Separate; 5-Widowed

Educational Qualification: 1 – illiterate; 2 – Informal education; 3 – Class1–3; 4 – Class4–6; 5 – Class7–9; 6 – Class10; 7 – Class11–12; 8 – Graduate and above; 9 – Professional; 99 – not applicable [not of school going age]

Employment Status: Yes1; No 2

Reason for not working: No work available-1; Seasonal inactivity-2; Household family duties-3; Old/Young-4; Handicapped-5; Others-6 (Specify)\_\_\_\_\_

Occupation : 1 – Housewife; 2 – Retired/Old age; 3 – Farmer;/Tiller; 4 – Agriculture labour; 5 – Skilled labour /e.g. Carpenter, Plumber, Driver, Mason, etc.; 6 – Unskilled labour/e.g. Construction labourer, Loader, House help/ House maid, Caretaker; Watchman, etc.; 7 – Traditional Artisan; 8 – Services e.g. Barber; Milkman, Dhobi; Cobbler; etc.; 9 – Petty shop; 10 – Vendor; 11 – Business;(e.g., Shop-owner); 12 – Collection of NTFP and MFP; 13 – Government service; 14 – Private service; 15 – Others\_\_\_\_\_ ; 99 – Not Applicable;

Professional Skills: Computer-1, typing-2, construction-3, mechanics-4, carpentry-5, driving-6, others (specify) .....7

Vulnerable: 1 – Visual; 2 – Hearing/and/ or speech; 3 – Orthopaedic; 4 – Mentally ill; 5 – Mentally retarded; 6 – Cerebral Palsy; 7 – HIV; AIDS; 8 – Widowed; 9 – Separated; 10 – Old age; 11 – Destitute; 12 – Orphaned; 13 – Trans-sexual; 14 – Chronically ill; 15 – Any other [specify]

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## 11.8. List of Field Visits/ Meetings

S.No.	Date	Location	Meeting Details	Participants
1	01 Feb 2020	APFBC Office Guwahati	Discussion on APFBC, ESMS requirements, MoP Requirements, etc.	APFBC, AFD (Delhi and Paris), ESMS Consultants
2	02 Feb 2020	APFBC Office Guwahati	Discussion on APFBC, ESMS requirements, MoP Requirements, etc.	APFBC, AFD (Delhi and Paris), ESMS Consultants
3	03 Feb 202	APFBC Office Guwahati	Discussion on APFBC, ESMS requirements, MoP Requirements, etc.	APFBC, AFD (Delhi and Paris), ESMS Consultants
4	05 Mar 2020	Virtual	Discussion on APFBC, ESMS, ESMP, GAP Requirements, etc.	APFBC, AFD (Delhi and Paris), ESMS Consultants
5	27 Aug 2020	Virtual	Discussion on APFBC, ESMS, ESMP, GAP Requirements, etc.	APFBC, AFD (Delhi and Paris), ESMS Consultants
6	25 Nov 2020	Virtual	Discussion on APFBC, ESMS, ESMP, GAP Requirements, etc.	APFBC, AFD (Delhi and Paris), ESMS Consultants
7	20 Feb 2021	Panbari EDC	Focus Group Discussion on APFBC, ESMS, ESMP, GAP Requirements, etc.	28 Villagers, ESMS Field Enumerator
8	23 Feb 2021	Tamulipathar EDC	Focus Group Discussion on APFBC, ESMS, ESMP, GAP Requirements, etc.	16 Villagers, ESMS Field Enumerator
9	08 Apr 2021	Virtual	Discussion on APFBC, ESMS, ESMP, GAP Requirements, etc.	APFBC, AFD (Delhi and Paris), ESMS Consultants





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