

Living Landscapes – Securing Ecological Connectivity of High Conservation Value Area in Bhutan

ENVIRONMENTAL AND SOCIAL SAFEGUARDS FRAMEWORK

(November, 2019)

Executive Summary

I. Introduction

1. The project “Living Landscapes – Securing Ecological Connectivity of High Conservation Value Area in Bhutan” aims to ensure a network of biodiversity hotspots and high conservation value landscapes covering in areas without legal protection through parks and protected area systems in Bhutan. These landscapes included in the project comprise of 9 Territorial Forest Divisions (TFDs) and 9 Dzongkhags located in the south, west, and central parts of Bhutan. Through sustainable management of these landscapes, the project aims to secure human well-being, biodiversity conservation and increase climate resilience of communities living within these landscapes.

2. The project is financed by the International Climate Initiatives (IKI) of the Federal Ministry for the Environmental, Nature Conservation and Nuclear Safety, Germany which requires compliance to IFC’s performance standards on terms of environmental and social safeguards.

3. This, project is classified as a “Category B” project under the IFC’s Performance Standards (PS). Hence, the project has prepared an Environmental and Social Management Framework (ESMF) which will apply to all project activities that are funded through IKI. The overall Executing Entity for project is WWF Bhutan. For some project activities, the Tarayana Foundation, will be the Executing Entity. Two executing entities will implement the project in collaboration with Royal Government of Bhutan through Department of Forests and Park Services (DoFPS) of Ministry of Agriculture and Forests (MoAF) and National Land Commission Secretariat (NLCS), supported relevant government agency like Gross National Happiness Commission Secretariat (GNHCS).

4. The ESMF identifies the environmental and social risks and impacts of the project in accordance with the laws and regulations of RGoB and with IFC’s PS. It sets out procedures for addressing potential adverse social and environmental impacts that may occur during project activities and will provide guidance for development of site-specific ESMPs when site-specific social and environmental impacts are not clearly known during project implementation. The project will not support any activity that will require acquisition of private land, property or restrict legal or customary rights of individuals or communities. Accordingly, the project activities will have limited restrictions or unsustainable and illegal activities and will have no direct negative impacts on local community livelihoods. Therefore, a Process Framework is deemed not necessary and is not covered by this ESMF. However, the framework enables inclusion of such elements in the ESMP of the project activities if, during the project implementation, there emerges activities that do bear significant social or environmental impacts.

5. The ESMF was prepared based on the following information: a) desk review of the RGoB’s environmental and social assessment policies and of the IFC’s performance standards; b) consultation and discussions with stakeholders, particularly with those of the project landscape areas and the Tarayana Foundation. The ESMF draws on consultation results, and on the relevant laws and regulations of RGoB and IFC’s PS.

II. Project Description

6. The IKI project includes three outputs, which are divided into work packages. The outputs are as follows:

Output I: Key institutional actors at the national level in Bhutan engage in an integrated planning approach, incorporating data on High Conservation Values (HCV) in planning processes across all sectors.

Major work packages under this output are:

- Establish an HCV national interpretation for Bhutan and integrate into national planning
- Establish sound national monitoring system for HCV
- Strengthen the existing institutional inter-sectoral coordination process

Output II: The technical and institutional management effectiveness of 9 Division Forest Offices (DFOs) as key actors in the landscape is enhanced.

Major work packages under this output are:

- Identify HCV sites in DFOs of the programme landscape
- Establish holistic and climate-smart management plans including HCV sites in all DFOs of the programme landscape
- Build staff capacities of DFOs for implementing the holistic and climate-smart management plan
- Implement practical measures for biodiversity conservation and ecosystem services together with DFOs

Output III: Local communities in the landscape benefit from reduced Human Wildlife Conflict, environmentally friendly livelihood strategies and pilots for alternative income schemes.

Major work packages under this output are:

- Promote human wildlife coexistence (HWCE)
- Secure water resources for local communities
- Develop and implement sustainable livelihood strategies in selected communities
- Create environmentally friendly community-based business cases for alternative incomes

Output 0: Project Management, Operations, Safeguards and Contingencies:

This output focuses on project management activities that are necessary for the effective implementation of the project.

III. Project Area Profile

7. The project area includes 9 dzongkhags (districts) of the 20 dzongkhags of Bhutan (comprising of areas that lie outside Parks, Wildlife Sanctuaries and Nature Reserves and Biological Corridors). Out of the 205 Gewogs, the project covers 96 Gewogs, representing 47 percent of the total number of Gewogs in Bhutan. The dzongkhags included in the project area has a population 441,371. This represents 61 percent of the Bhutanese population which stands at 727,145 as of 2017. The dzongkhags within the project landscape face higher level of pressure on the land resources from growing population than other dzongkhags in Bhutan.

8. The project landscapes cover the most populated Dzongkhags such as Thimphu, Samtse, Chukha, Paro and Samtse and almost 73 percent of the urban population in Bhutan live within the project landscape and about 80 percent of over 340,000 economically active population of Bhutan reside within the project landscape areas.

9. Majority of the rural population living in the project landscapes areas practice subsistence mixed farming supplemented by the collection of Non-Wood Forest Produces (NWFP) and other natural resources from the forest. Establishment of farmer groups for livestock, agriculture, Community Forests (CFs) and NWFPs within the past decade have contributed significantly to enabling participation of communities in forest conservation and sustainable management of natural resources.

10. The project landscape boasts of 52 percent of Bhutan's total livestock population comprising of horses, local cattle, sheep, improved cattle and goats. The project areas produce 38 percent of cereals, 24 percent of potatoes, 66 percent of spices, 41 percent of vegetable, 45 percent of oilseed and almost 70% of fruits and nuts in the country.

11. The project landscape areas do harbour significant national flagship species including the presence of tigers indicating the high conservation value of the landscape. Further about 41 % of CFs in Bhutan are located within the project landscape.

IV. Environment and Social Policy, Regulations and Guidelines

12. The project is subject to the laws and regulations of Royal Government of Bhutan (RGoB) and the IFC's Performance Standards that are applicable to the project. For the purposes of the project implementation, the principles and procedures of the IFC shall prevail in all cases of discrepancies.

13. Applicable RGoB laws and policies include the Constitution of the Kingdom of Bhutan, 2008; Land Act of Bhutan 2007; Land Rules, 2007; The Moveable Cultural Property act of Bhutan, 2005; National Environment Protection Act, 2007; Forest and Nature Conservation Act of Bhutan, 1995; Forest and Nature Conservation Rules and Regulations of Bhutan, 2017; National Forest Policy, 2011; Business Infrastructure Policy, 2014; The Water Act of Bhutan, 2011; Waste Prevention and Management Act, 2009; Environmental Assessment Act, 2000; Regulations on the Environmental Clearance of Projects, 2000; Livestock Act of Bhutan, 2001; The Biodiversity Act of Bhutan, 2003; The Pesticides Act of Bhutan, 2000; The Penal Code of Bhutan, 2004; National Access and Benefit Sharing (ABS) Policy, 2015 and the Regulation on Occupational Health, Safety & Welfare (OHS) in Construction, Manufacturing, Mining & Service Industries, 2006.

14. IFC's performance standards that are relevant to this project include PS 1: Social and Environmental Assessment and Management System; PS 2: Labour and Working Conditions; PS 3: Pollution Prevention and Abatement; PS 4: Community Health, Safety and Security; PS 6: Biodiversity Conservation and Sustainable Natural Resource Management and PS 8: Cultural Heritage.

15. In general, RGoB's laws, policies, and guidelines are in line with the IFC's environmental and social safeguards requirements. All project activities should fully comply with both the RGoB's Regulations on the Environmental Clearance of Projects, and with the procedures and mitigation measures prescribed in this ESMF. In case that the requirements of IFC's performance standards are more extensive, strict, or detailed than the RGoB legislations and policies, the former will apply to all project activities.

V. Anticipated Environmental and Social Impacts and Mitigation Measures

16. The project seeks to strengthen the environmental conservation practices of Bhutan, and it is thus expected to result in major positive environmental outcomes. Minor and site-specific negative environmental impacts may include the following:

Output (O)/Work package (WP)	Activities	Potential Impacts	Recommended Mitigation Measures
OI/WP 1: Establish HCV framework on HCV for Bhutan and integrate into national planning	Development of HCV National Interpretation	Land use conflicts due to implementation of HCV National Interpretation	Comprehensive stakeholders and community consultations; Review of related legal and policy provision prior to consultations; Private registered areas to be avoided from inclusion within HCVs
OI/WP3; Improve institutional capacities and inter-sectoral coordination	Integrating HCV framework and identification into the national NLUZ process & mapping of HCV sites through the national NLUZ parameterization process	Institutional conflicts due to lack of clarity accepted in roles and responsibilities	Compliance with National Land Use Zoning Guidelines, 2018. HCV National Interpretation to be part of NLUZ parameters with defined roles of all relevant stakeholders at all levels
OII/WP 2: Establish holistic and climate-smart management plans	Drafting holistic management plans for all of the project landscape, taking into consideration the HCV framework, all assessments, existing and newly collected data, as well as other relevant national and regional strategies and concepts	Lack of ownership of management plan by stakeholders	Comprehensive stakeholders and community consultations in the planning phase; Public hearing of the management with relevant stakeholders upon completion of the plan before publication Establish grievance redress mechanism for each holistic management plans for all of the project landscape
	Implementation of holistic management plans with HCV framework	Boundary conflicts over HCV identified areas and non HCV areas Disruption in access to NWFPs and other natural resources by local communities	Engage local government representatives and administrations in the demarcation or re-alignment of HCV boundaries Any change or new demarcation of boundaries be based on free and prior informed consent of the affected communities and relevant authorities prior to finalizing any boundary change. Prepare management plan in collaboration with the relevant Department/agency (as per FNCRR, 2017). If disturbance of access to natural resources cannot be avoided, full and timely compensation for reduced access to natural resources shall be provided to all users, irrespective of their formal land ownership status or title. Compensation to be calculated based on the economic market value of access to resources and the costs of fully replacing these economic activities. The replacement value shall be calculated in consultation with affected households and community representatives.
	Resource assessments, surveys and inventory activities	Occupational safety issues	Supply appropriate personnel protection gears and field gears such as boots, rain coats, sleeping bags, mats and camping gears for field survey teams
OII/WP 4;	Establishment of nurseries	Water pollution	Use pulse watering - reduce the duration but

Output (O)/Work package (WP)	Activities	Potential Impacts	Recommended Mitigation Measures
Implement practical measures for biodiversity conservation and ecosystem services together	in Community Forest and NWFPs areas to improve nursery standards	<p>Invasion of local diversity</p> <p>Injury to moving wildlife</p>	<p>increase the frequency of irrigation</p> <p>Use Integrated Pest Management where possible or biodegradable pesticides and natural fertilizers or only use fertilizers listed by the NPPC and based on their technical recommendation and apply the national system for integrated pest management (See Annex 2)</p> <p>Project will not support the procurement or use of any pesticides categorized IA, IB, or II by the World Health Organization or other agricultural chemicals, or lead to the increased use of such chemicals</p> <p>Handle chemical and oils in covered, contained areas. Clean up spills immediately</p> <p>Store pesticides safely in a locked shed, well ventilated and dry area and separately from fertilizers</p> <p>Non-recyclable wastes to be collected for disposal</p> <p>All wastes to be reduced, reused or recycled where possible - Bio-degradable wastes to be management in compost for manuring</p> <p>To be located away from water courses</p> <p>To be on gentle sloping ground where gradients - excessive run-off and erosion will occur on steep slopes and ponding and boggy areas will occur on sites with a slope less</p> <p>Where introduction of improved or new species are considered for nursery production, such species should be certified by BAFRA and NPPC prior to their introduction. Recommendations from the NPPC and BAFRA during their certification should be implemented as part of ESMF plan.</p> <p>Fence with wire mesh instead of barbed wire</p>
	Development culture/ecotourism – camp sites	<p>Increased waste and sewerage</p> <p>Forest Fires</p> <p>Water pollution</p> <p>Degradation of areas of critical conservation themes</p> <p>Damage to the site conditions - destabilization of landscape</p> <p>Possible loss of vegetation</p>	<p>Waste management strategy and plan to be developed in accordance with Waste Management Act and its Regulations and as per FNCR, 2017, rule no. 49 (2)</p> <p>Ensure that there are appropriate and separate areas for toilets, washing areas, grazing areas for transport animals. Make arrangements for environment friendly toilet and washing facilities in each camp site</p> <p>Identify designated camp fire area and for same disposal of ash in each camp site</p> <p>Ensure that camps sites are located away from existing stream, river, water source and no discharge from such establishments should follow their path into nearby water bodies.</p> <p>Make arrangements for solid waste be carried out of the area.</p> <p>Avoiding sensitive sites, such as those which include steep hillsides, and areas erosive in nature</p> <p>Avoid sites that are in close proximity to protected areas or those identified by the as conservation areas</p> <p>Plantation of trees in slide prone areas</p> <p>Erect local retention walls</p> <p>Avoid removal of trees</p>

Output (O)/Work package (WP)	Activities	Potential Impacts	Recommended Mitigation Measures
	Development culture/ecotourism – trails	Damage to environment due to new trail development	Carry out plantation works to replace removed trees as soon as possible. Integrate with traditional trails and maintain them as eco-trails so that new routes are not constructed
	Pilot activities on reduced impact of logging in FMUs- Capacity Building on FMU management and Monitoring	Habitat alteration and loss of biodiversity Reduced water quality and quantity of streams, water bodies, and ground water resulting in seasonal hydrologic changes and potential negative impacts on downstream river biota, communities, and fisheries Soil erosion Pollution water from hazardous materials Visual impairment of landscape Risk of forest fire	Replacement of the existing vegetation cover with native species or upon approval from BAFRA, NPPC and NCD in the case of introducing new species. FMU to be managed as per management plan approved by DoFPS. Follow IFC's Environmental, Health, and Safety Guidelines for forest harvesting operations (see www.ifc.org/ehsguidelines) Establish and manage riparian management zones Prevent or limit disturbance to water resources during the planning phase Minimize vehicular movement over perennial and intermittent streams, and wetland areas Avoid using roads and use cable cranes where possible. Where roads are not avoidable, convex shaped roads should be designed and road drainage should be constructed at appropriate intervals to drain water away from the road surface. Prohibit washing of logging equipment and replacement of oil/hydraulic fluids near streams or sensitive areas to prevent entry of hazardous materials into water bodies Identify potential visual impacts at the pre-harvest stage and incorporate strategies to prevent and/or mitigate into the forest management plan Prepare a formal fire management and response plan supported by the necessary resources and training, including training for workers in the use fire suppression equipment and evacuation Maintain fire suppression equipment such as fire beaters and knapsack sprayers, small portable water pumps and tanks at the site
	Establishment of nurseries in Community Forest and NWFPs areas to improve nursery standards	Water use conflicts for in relation to nursery irrigation Land use conflicts Occupational health and safety hazards	Seek written clearance over water use rights from the Gewog Administration and from the Chairperson of the CF/NWFP Group Nurseries promoted by the project should not permit introduction or raising of any invasive non-local species Equip every person at site with boots/gloves/dust or fume masks. Provide first aid kit at the site

Output (O)/Work package (WP)	Activities	Potential Impacts	Recommended Mitigation Measures
			<p>Ensure that no underage workers, or children are engaged</p> <p>Construct temporary toilets for the workers at the nursery site.</p> <p>Provide safe drinking water facility for workers</p> <p>Regulation on Occupational Health, Safety and Welfare of Bhutan, 2012 and the preventive and protective measures that are specified in the <u>IFC Occupational Health and Safety Guidelines</u></p>
	Development culture/ecotourism – Campsites	<p>Land use conflicts with private/institutional landowners during use of camp sites</p> <p>Disturbance to local culture and heritage sites</p>	<p>Clearances from relevant government authorities for acquiring ‘user rights’ for land</p> <p>Ensure that site identified for camps are beyond 500 meters from a, monastery, Dzong or any cultural monument</p> <p>Apply screening checklist to ensure that the selected site does not affect cultural resources of local significance</p> <p>If cultural resources are identified within 100 meters of the identified site, select another site or seek clearance from the local, communities - concerned Gewog, concerned Dzongkhag and the Department of Culture prior to finalization of the plan and site development</p>
	Development culture/ecotourism – trails	<p>Community conflicts over alignment of trails- Conflict with traditional trails or with local and traditional norms of restrictions</p> <p>Accidents along the alignment due to size of the trail</p>	<p>Hold consultation with concerned communities and local government before, during and after construction of the trails to enable participation in decisions, construction, maintenance and management.</p> <p>Align and integrate ecotourism trails with traditional routes where traditional routes exist</p> <p>Width of the trail should have minimum width of 3 feet for mule tracks</p>
	Pilot activities on reduced impact logging in FMUs- Capacity Building on FMU management and Monitoring	Work hazards and accidents to workers	<p>Train workers in the safe use of equipment, work group coordination and safety measure</p> <p>Maintained equipment with necessary safety devices (e.g. blade guards on saws);</p> <p>Provide workers with all necessary personal protective equipment (e.g. gloves, footwear, protective clothing, helmets, earplugs)</p> <p>Provide on-site first aid equipment and trained personnel should be available, as well as procedures for emergency evacuation.</p>
OIII/WP 1: Promote human wildlife coexistence	Installation of electric fencing, sound and other wild life repelling devices in the farmlands	Community safety	Inform resident communities about the risks from electric shocks and implication pertaining to electric fencing.

Output (O)/Work package (WP)	Activities	Potential Impacts	Recommended Mitigation Measures
(HWC)			
O III/WP 2; Secure water resources for distribution system in 20 communities	Water storage & distribution system in 20 communities – water tanks	Erosion and loss of biodiversity and topsoil	Erect local retention walls such as gabions (rectangular wire baskets of rocks), cribs (interlocking grid of wood or concrete beams, filled with earth or rock), or other types of wooden barricades and grid work, against slopes Land clearing activities should be minimized by removing vegetative cover only from the specific site on which construction is to take place
	Water storage & distribution system in 20 communities – water conveyance structures	Erosion and loss of biodiversity and topsoil	Scraped topsoil should be used immediately for plantation Avoid sensitive alignments, such steep hillsides and ecological sensitive areas Install slope protection; plant trees in slide prone areas
	Protection and management of springs and wetland in 10 sites	Disruption in water balance	Assess appropriateness of species in terms of biodiversity, water efficiency, forest fire, local needs, cultural sensitivity, survival, etc. for plantation in water source points
	Water source protection - fencing	Constrain access to water points by wild life	Built natural material based water holes outside fenced areas to provide access to water for wild animals
		Injury to moving wildlife Disruption in water balance	Fence with wire mesh instead of barbed wire Assess species in terms of biodiversity, water efficiency, forest fire, local needs, cultural sensitivity, survival, etc. for plantation in water source points
	Water storage & distribution system in 20 communities – water tanks	Land use conflicts	Ensure all minor construction related activities are not located on private land Seek community clearance for siting of water tanks
		Impact on cultural resources and artefacts	Avoid areas where there are cultural sites of national importance Apply screening checklist to ensure that the selected site does not affect cultural resources of local significance If cultural resources are identified, select another site for installation If cultural resources are present within 100 meters of the identified site, select another site for installation or seek clearance from the Department of Culture.
	Protection and management of springs and wetland in 10 sites	Disruption in water balance	Assess appropriateness of species in terms of biodiversity, water efficiency, forest fire, local needs, cultural sensitivity, survival, etc. for plantation in water source points Assess hydrological regimes
	PES Initiatives	Conflicts on rights, revenue and management responsibilities	Involve users and beneficiaries of ecosystem services in schemes for payments for those ecosystem services and promote local schemes in addition to policy makers

VI. Institutional Framework

17. The WWF Bhutan shall create a Project Coordination Unit (PCU) within the ambit of its management comprising of a Program Coordinator (PC), a Program M&E Officer (PMEO) and a Safeguards & Gender Expert (SGE). The project will follow financial, procurement and management norms of the WWF. Hence overall implementation of the ESMF and all safeguards-related obligations will rest with the WWF, Bhutan Program while field implementation and compliance will rest with the concerned field implementing partners through the coordination of the PCU.

18. The implementation of specific project activities will be carried out through the respective TFDs for work packages under output one and two and through the Tarayana Foundation Field offices for work packages under output 4. The TFDs and the Tarayana Foundation will be responsible for implementation and compliance to all procedures related to environmental and social screening (eligibility), preparation of ESMPs for specific field activities as and when required, and monitoring compliance with conditions set out in the RGoB's environment clearance and/or the project's ESMF and/or ESMPs. They will also be responsible to obtain all required clearances, permits, approvals, or consent documents from relevant authorities and stakeholders. The TFDs and the Tarayana Field Offices will work in collaboration with local governments and administrations on all matters related to local development. Therefore, the Field implementing partners will work closely and coordinate with these stakeholders for implementation of the ESMP.

19. The PCU at WWF, Bhutan shall maintain safeguard documents for all activities as well as monitor compliance with ESMF and with ESMP where necessary. The reporting on the ESMF implementation will originate from the field implementing partners with quarterly report from the Environmental and Social Safeguards Focal Persons to the SGE at the PCU.

20. The SGE at the PCU will submit semi-annual progress on implementation of the ESMF to PAC through the PC and the PAC shall submit annual report on the progress of ESMF implementation to the WWF, Germany. The submission of ESMF implementation progress to IKI will depend on the arrangement made between the WWF, Germany and the IKI.

21. The implementation of the ESMF will undergo an independent mid-term review (MTR) half way through the project in alignment with the MTR for the overall project and a terminal evaluation during the last year of the project.

22. The SGE will also submit ESMF compliance monitoring reports to the Competent Authorities (CAs) and to the to the NECs as per the terms and conditions mentioned in the environmental clearance for project activities.

The focal persons with assistance from the SGE will be responsible for:

- Seeking clearances and preparation of ESMPs
- Carrying out orientations of the ESMF and ESMPs at various levels
- Information dissemination to stakeholders
- Reporting and monitoring

VII. Procedures for the Identification and Management of Environmental and Social Impacts

23. The following activities will not be financed by the project: (i) Activities that involve procurement or use of any pesticides categorized IA, IB, or II by the World Health Organization; (ii) Introduction of exotic species unless certified by NPPC and BAFRA; (iii) Activities requiring physical displacement of persons from their homes or legal businesses; (iv) Activities that involve permanent acquisition of private land for project activities and (v) Activities that involve clear felling of trees or mining in critical watershed areas.

In advance of the initiation of any project activity, the relevant implementing entities shall fill in detailed information regarding the nature of the activity and its specific location in the ***Project activity eligibility screening*** form (Annex 3). Part 1 of this form comprises of basic information about the project; Part 2 contains location information and is considered as pre-screening or eligibility. If any of the aspects in this part is applicable or is considered "Yes", the activity will be deemed ineligible and the project or the implementing entity should consider changing the site/location of the activity. The eligibility screening process should be repeated till all aspects included in the format are favourable for any activity to be eligible for project funding.

24. If the activity is deemed eligible according to Part 2, an environmental and social screening procedure will be carried out in accordance with Part 3 of *Safeguard Eligibility and Impacts Screening* format. The

relevant implementing entities should respond to the specific questions in Part 3 of the form and then provided general conclusions regarding the main environmental and social impacts of the proposed activity, outline the required permits or clearances, and specify whether any additional assessments or safeguard documents (e.g., ESMP) should be prepared.

VIII. Guidelines for ESMP Development

25. In case that the Environmental and Social screening process identifies any adverse environmental or social impacts as a result of specific project activities, the implementing entities should develop a site- and activity-specific ESMP. The ESMP should be prepared before the initiation of the project activity and closely follow the guidance provided in this ESMF.

26. The ESMP should describe adverse environmental and social impacts that are expected to occur as a result of the specific project activity, outline concrete measures that should be undertaken to avoid or mitigate these impacts, and specify the implementation arrangements for administering these measures (including institutional structures, roles, communication, consultations, and reporting procedures).

IX. Monitoring

27. The compliance of project activities with the ESMF will be thoroughly monitored by various entities at different stages of preparation and implementation.

- (i) *Monitoring at the project level.* The overall responsibility for implementing the ESMF and for monitoring the compliance of the project's environmental safeguard activities lies with the PCU at WWF, Bhutan Program. The SGE at the PCU shall oversee implementation of field activities relating to ESMF and coordinate with the TFDs and the Tarayana Field offices. The ESMF compliance monitoring will also include grievances. The grievances that are reported through the Grievance Redress Mechanism (GRM) should also be monitored to track and resolve them. The IKI will conduct supervision missions annually.
- (ii) *Monitoring at the field activity level:* Self-regulatory monitoring should be adopted by the concerned TFDs and the Tarayana field offices. Self-monitoring reports should be filed to the PCU on a quarterly basis and should be liable for ad-hoc inspection by the PCU, the CA or the NEC. The TFDs and Tarayana field offices shall be responsible for supervision of environmental compliance by the service providers and disbursements of project activity funds by the PCU should be linked to satisfactory compliance to ESMF or ESMP of specific activities.
- (iii) *Monitoring at the Competent Authority (CA) or NECS level:* NECS and/or CA are mandated for annual compliance monitoring, which is announced and pre-informed. They are also empowered for unannounced or spot-checking. Hence, compliance monitoring will be done by the Competent Authority or the NECS. In order to facilitate compliance monitoring, the PCU will submit an annual compliance report to the CA or the NECS or as per the timeline indicated in the terms and conditions indicated in the EC. The same report will also be submitted to the PAC by the PCU and upon acceptance by the PCU it should be submitted to WWF, Germany and IKI by WWF Bhutan.

X. Grievance Redress

28. The project Grievance Redress Mechanism (GRM) will collect and respond to stakeholders' inquiries, suggestions, concerns, and complaints. The GRM shall constitute an integral part of the PCU and implementing entities in identifying and addressing the needs of local communities.

29. Complaints may include, but not be limited to, the following issues: (i) Allegations of fraud, malpractices or corruption by staff or other stakeholders as part of any project or activity financed or implemented by the project; (ii) Environmental and/or social damages/harms caused by activities financed by or implemented by the project; and (iii) Complaints and grievances by permanent or temporary workers engaged in project activities.

30. The project's GRM will be administered by the PCU. The ESS Expert will be in charge of the operation of the GRM at the PCU.

XI. Capacity Building

31. The informed consent of local communities to project objectives and activities is crucial for the effective implementation of the project. Thus, it is important to ensure that community representatives are

sufficiently educated and trained with regards to project activities. Capacity building in the following areas have been identified:

- The Concept of HCVAs and how forest lands outside PAs and BCs will be managed
- Capacity for environmental and social impacts assessment
- Participatory decision-making process and facilitation
- Conflict resolution and management

XII. Disclosure

32. All affected communities and relevant stakeholders shall be informed about the ESMF requirements and commitments. The executive summary of the ESMF will be translated into Dzongkha and made available on the website of the MoAF, DoFPs as well as that of the WWF Bhutan, WWF Germany BMU. Also, the hard copies will be made available at the PCU at WWF, Bhutan office as well as the TFDs and Tarayana field offices who will take responsibility to conduct awareness session in their respective project areas. During the implementation of the project, activity-specific mitigation plans including gender actions plans should be disclosed to all stakeholders, including affected communities and Civil Society Organizations (CSOs). Disclosure should occur in a manner that is meaningful and understandable to the affected people for their consent. For this purpose, executive summary of mitigation plans- either ESMP or terms and conditions that come with environment clearance should be disclosed on DoFPS, Tarayana and the WWF web sites.

XIII. Budget

33. The overall budget that is required for the ESMF implementation is estimated to be **US\$ 269,721**. Detailed budget estimates are available in Section 11 of the ESMF.

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LIST OF ACRONYMS

ABS	Access and Benefit-Sharing
BAFRA	Bhutan Agriculture and Food Regulatory Authority
BCs	Biological Corridors
BWP	Bhutan Water Policy 2003
CA	Competent Authority
CF	Community Forest
DoFPS	Department of Forests and Parks Services
EA	Environment Assessment
EAA	Environment Assessment Act
EC	Environment Clearance
ECOP	Environmental Code of Best Practices
EIA	Environment Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FNCRR	Nature Conservation Rules and Regulations
FPIC	Free and Prior Informed Consent
GNH	Gross National Happiness
GNHC	Gross National Happiness Commission
GRM	Grievance Redressal Mechanism
GT	Gewog Tshogde (Gewog Development Committee)
HCV	High Conservation Value
HWC	Human Wildlife Conflict
IEE	Initial Environmental Examination
IKI	International Climate Initiatives
LGs	Local Governments
MoAF	Ministry of Agriculture and Forests
NBC	National Biodiversity Centre.
NEC	National Environment Commission
NECS	National Environment Commission Secretariat
NEPA	The National Environment Protection Act, 2007
NLC	National Land Commission
NWFP	Non Wood Forest Produce
PAs	Protected Areas
PAVA	Property Assessment & Valuation Agency, Ministry of Finance
PC	Project Coordinator
PMU	Programme Management Unit
PES	Payment of Environmental Services
PHCB	Population and Housing Census of Bhutan
PMEO	Program M&E Officer
PPD	Policy and Planning Division
PPP	Public Private Partnership
RGOB	Royal Government of Bhutan
SGE	Safeguards & Gender Expert
DFO	Territorial Forest Division
WWF	World Wildlife Fund

EXPLANATION OF BHUTANESE TERMS

Barmi:	A mediator accepted and appointed by the affected parties to resolve an issue, controversy or conflict affecting the parties
Chiwog:	A unit under a Gewog
Dzongdag:	District Administrator
Dzongkhag:	District
Dzongkhag Tshogdu:	District Council
Gewog:	County
Gewog Tshogde:	County Committee
Gup:	Head of a Gewog
Ladham:	Also called <i>Ridham</i> , is a seasonal prohibition of entrance for humans and domestic animals into parts of certain mountain and/or forested areas
Mangmi:	An elected representative of the Gewog, who is also a deputy Gup
Nye:	Sacred pilgrimage site
Sokshing	Patches of land used for leaf litter collection.
Tsamdrog	Open meadows and landscapes used for grazing
Tshogpa:	An association or committee. Also referred to the Community Representative to the GT

1. INTRODUCTION

The Kingdom of Bhutan is a small, landlocked, least developed country with a total area of 38,394 km², characterized by rugged mountainous terrain with elevations ranging from 160 meters to more than 7,000 meters above sea level. Electricity from hydropower is the country's largest export, followed by tourism. Fees on electricity exports and foreign assistance (mostly from India) are the public sector's main sources of revenue.

Covering 19,750 square kilometres, Bhutan's protected areas system encompasses over 51% of the country's territory, 41% of its forests, and the upper watersheds of all the country's major rivers. It serves as a carbon sink and a reservoir of biodiversity that includes many endemic species. The integrity of this system, consisting of 10 Protected Areas (PA) connected by 8 biological corridors (BCs), is of crucial importance for the country's climate change mitigation and resilience strategy. It is also key for the provision of food and fodder, habitats for biodiversity, preservation of cultural and spiritual heritage, recreation, and important destinations for ecotourism. As the impacts of global warming increase over the coming decades, it will be even more important to manage these areas effectively to ensure they continue to provide benefits to livelihoods and to the Bhutanese economy.

Despite the nation's relatively intact network of PAs and BCs, major part of forest areas that are outside the PAs and BCs and the people living within these areas are under increasing pressure from economic development, illegal extraction of resources, and climate change induced natural disasters. The threats on biodiversity and ecosystem services are manifold and multi-dimensional in Bhutan's legally non-protected landscapes especially due to different land-use interests. Furthermore, there are valid potentially conflicting interests of economic and social development which play a key role in Bhutan's long-term governmental strategies. To mitigate threats and conflicting interests, the programme will implement concrete management measures protecting and recovering biodiversity in three landscapes. The programme will work with key actors of biodiversity conservation on climate-smart practices and promote dialogue between public and with private actors, improving coordination between sectors.

While these areas form part of major source of natural resources for the communities living within these landscapes and for overall national requirements for timber, NWFPs and other resources, these areas do not have a proper conservation and management regime beyond implementation of the Forest and Nature Conservation Act, 1995 and the Forest and Nature Conservation Rules and Regulations (FNCRR), 2017. The primary constraints faced by the Government in addressing threats in these areas are capacity, funding and an overall coordinated approach towards conservation and sustainable management of these forest areas.

The proposed project will ensure implementation of sustainable natural resource management in areas without legal protection and secure the ecological connectivity of biodiversity hotspots across these landscapes of high conservation value covering South Western Bhutan. It will significantly contribute to maintaining 60 percentage of its land area under forest cover as mandated by the country's constitution.

A financing for the programme is being requested from the Federal Ministry for the Environmental, Nature Conservation and Nuclear Safety, Germany which requires compliance to IFC's performance standards. In general, the anticipated adverse environmental and social impacts on the population that resides within the landscape or in their vicinity and that depends on the landscape for their livelihoods are site-specific, reversible and can be

readily mitigated. Thus, the programme is classified as a **“Category B” project** under the IFC’s Performance Standards (See Environmental and Social Safeguards Categorization Memorandum in Annex 1). Hence, the project requires the preparation of an Environmental and Social Management Framework (ESMF). **The principles and procedures of the ESMF apply both to all programme activities that are funded through IKI.** The implementing partners for the programme are the World Wildlife Fund Bhutan and the Tarayana Foundation. The key executing partners of the programme activities are t Bhutan’s Ministry of Agriculture and Forests, Department of Forest and Park Services, the National Land Commission Secretariat and the Gross National Happiness Commission Secretariat.

1.1. Objective and scope of the ESMF

The preparation of this ESMF was required in accordance with the performance standards of IFC in order to enable identifying and managing the environmental and social risks and impacts of the project activities. The ESMF aims to outline the principles, procedures, and mitigation measures for addressing environmental and social impacts associated with the project in accordance with the laws and regulations of RGoB and with IFC’s Performance Standards (PS).

Since the precise scope of activities that will be implemented as part of the program will only be determined during the implementation phase as site-specific social and environmental impacts cannot be clearly ascertained at this stage. Thus, the development of site-specific Environmental and Social Management Plans (ESMPs) is currently not feasible. However, an ESMF is necessary to set out procedures for addressing potential adverse social and environmental impacts that may occur during project activities. Site-specific ESMPs will be developed pursuant to the guidance provided by this ESMF during programme implementation.

The specific objectives of the ESMF include the following:

- Identify the positive and negative social and environmental impacts and risks associated with the implementation of the programme;
- Outline the legal and regulatory framework that is relevant to programme implementation;
- Specify appropriate roles and responsibilities of actors and parties involved in the ESMF implementation;
- Propose a set of actionable recommendations and measures to mitigate any negative impacts and enhance positive impacts;
- Develop a screening and assessment methodology for potential activities, that will allow an environmental/social risk classification and the identification of appropriate safeguards instruments to be implemented by the programme;
- Set out procedures to establish mechanisms to monitor the implementation and effectiveness of the proposed mitigation measures;
- Outline requirements related to disclosure, grievance redress, capacity building activities, and budget required for the implementation of the ESMF.

The programme activities will have limited restrictions or unsustainable and illegal activities and will not have direct negative impacts on local community livelihoods. The programme will not support any activity that will require acquisition of private land/property or restrict legal and customary rights of individuals or communities. Therefore, a Process Framework

that describe the restrictions of access to natural resources, measures to identify affected communities and measures to ensure that the programme activities do not adversely affect local communities' livelihood or customary rights in a participatory manner, is deemed not necessary. Hence a process framework in its actual sense is not covered by this ESMF. However, the ESMF enables inclusion of such elements in the ESMP of the programme activities if during the project implementation there emerges activities that do bear significant social or environmental impacts.

1.2 ESMF Preparation Methodology

The ESMF was prepared based on the following information: a) desk review of the RGoB's environmental and social assessment policies and of the IFC's performance standards; b) consultation and discussions with stakeholders, particularly with those of the project landscape areas, the Tarayana Foundation and WWF Bhutan. The ESMF draws on consultation results, and on the relevant laws and regulations of the RGoB and IFC's PS.

2. PROGRAMME DESCRIPTION

2.1. Objectives of the Programme

The programme aims to ensure a network of biodiversity hotspots and high conservation value landscapes covering 9 Territorial Forest Divisions (DFOs) and 9 Dzongkhags located in the south-western Bhutan. Through sustainable management of these landscapes, the project aims to secure human well-being, biodiversity conservation and increase climate resilience of communities living within these landscapes.

The project seeks to achieve the following objectives:

- Institutionalize integrated land use planning that adequately considers data on High Conservation Values (HCV) at the national level.
- Institutionalize holistic land use management plans that integrate HCVs at the District Forest Office levels through improved capacities.
- Local communities in the landscape benefit from environmentally friendly livelihood strategies promoted through pilots.

2.2. Programme Outputs and Work Packages

Output I: Institutional land use planning at the national level. The Government uses an integrated planning approach. The different sectors adequately consider data on High Conservation Values (HCV) and thereby integrate HCV data in land use planning.

This output focuses on establishment of an HCV framework for Bhutan and its integration into national planning process. The project support to this output will include establishment of a sound national monitoring system for HCV and improving institutional capacities and inter-sectoral coordination so that HCV framework can be mainstreamed into the national and local level planning process.

This output will seek to achieve two general goals:

- The HCV framework adapted to Bhutan is endorsed by key stakeholders as can be indicated by National Interpretation guidelines for HCV
- HCV framework is mainstreamed into national planning as can be indicated by HCV integrated into the sector 5-year-national plans at national level

Major work packages that will be implemented as part of this output will include the following:

- Establishment of an HCV framework for Bhutan and its integration into national planning by way of adapting the global HCV framework to Bhutan through an expert working group, development of a national interpretation guidelines of HCV, creating awareness on the HCF framework and its interpretation guidelines at national and local levels as well as seeking comments and endorsement of stakeholders followed by capacity building for application of the HCV framework in national planning processes.
- Establish sound national monitoring system for HCV including a monitoring protocol with indicators, thresholds, methodology, roles and responsibilities. Capacity for collecting HCV monitoring data from the regional level and consolidation at the national level will be built at the UWICER through which HCV monitoring in districts outside the programme landscape will be replicated to non-project landscape districts and eventually throughout the country.
- Improving institutional capacities and inter-sectoral coordination for HCV by way of feeding the HVC framework and experiences from the project's HCV sites into the national land use planning strategy and spatial planning process so that HCV is harmonized in the national land use planning process.

Output II: Divisional Forest Offices establish and use holistic management plans. In these plans HCVs are integrated. The management capacities of the Forest Service are improved.

This output focuses on identification of HCV sites in areas that fall within the jurisdiction of the programme landscape. Holistic and climate-smart management plans will be established in the programme landscape including HCV sites. The project support will include building staff capacities for implementing the holistic and climate-smart management plans and practical measures for biodiversity and ecosystem services conservation. Through this output, a number of HCV sites will be identified and appropriate measures adopted to manage the HCV sites upon approval of their holistic and climate smart management plans by DOFPS.

Major work packages under this output will include:

- Identification of HCV sites in the programme landscape according to the national interpretation of the HCV framework inclusive of gap analysis and baseline assessment as well as review of HCV sites after four years. Establishment of holistic and climate-smart management plans including HCV sites in the programme landscape. The project support under this output will include development of common guidelines for developing holistic and climate-smart management plans including climate vulnerability assessments, valuation of ecosystem services and drafting of holistic management plans using data generated from the assessments. The management plans will include activities on reduced impact of logging in FMUs, forest fire management, key biodiversity areas, critical wetlands, culturally relevant ecosystems and ecosystem services as well as activities related to managing pests and disease including invasive

species. All such plans will be subjected to approval by DoFPS upon stakeholder consultations and their endorsement.

- Building staff capacities for implementing the holistic and climate-smart management plan based on a training needs assessment and in accordance with a capacity building action plan designed and developed centrally within UWICER. The areas of trainings could include biodiversity and ecosystem services assessments, community engagement, biodiversity monitoring, ESMF requirements, smart patrolling, HCV identification and management and other relevant trainings as identified by the needs assessment. Institutional partnerships between UWICER and universities research institutes from abroad to ensure trainings continue beyond the programme will also be supported by the programme.
- Implementation of practical measures for biodiversity conservation and ecosystem services together based on the technical needs assessments. Immediate and practical activities could include support to biodiversity protection in the programme landscape comprising of improved nursery standards in community forests, SMART patrolling, culture and eco-tourism development, management of NTFP in community forests, watershed management, forest fire management and other activities of relevance identified by the needs assessment. After endorsement of the holistic management plans, pilot activities will be implemented to facilitate the implementation of the management plans.

Output III: Local communities in the landscape benefit from environmentally friendly livelihood strategies promoted through pilots.

This output focuses on promoting environment friendly livelihood opportunities to local communities including interventions related to human wildlife coexistence, securing water resources for local communities, development and implementation environment friendly livelihood strategies together with communities and on creating environment friendly community-based business cases for alternative incomes. It will bring about a number of community-based PES schemes, community implemented environment friendly livelihood strategies such as SAFE systems, fresh water harvesting schemes, and community-based environment friendly business enterprises within the landscape.

Major work packages under this output will include:

- Promoting human wildlife coexistence and reduced HWC by developing SAFE strategy for human wildlife conflict intervention in at least two Gewogs per district based on identification of HWC hotspots at the district level and rapid assessment of HWC at Gewog levels.
- Securing water resources for local communities by implementing water source protection, spring shed and wetland management activities, water harvesting, storage and distribution facilities as well as formation and strengthening of water user groups in selected communities. These activities will be identified and sited based on rapid assessment on critical water sources and their status at community levels, develop an intervention strategy for water resource management. Where feasible and relevant, opportunities for water related PES schemes will be explored and implemented. Lessons learnt and good practices from these activities will be monitored and documented and for up-scaling and knowledge sharing.

- Development and implementation of environmentally friendly livelihood strategies together with communities which will include identification of communities, assessment of natural resources base of selected communities and assessment of potentials for environmentally friendly livelihood options. The programme will support implementation of identified options within the selected communities. These options, amongst others, will include sustainable land management practices, selection and promotion of appropriate crops that are resilient to climate change and HWC risks, sustainable harvesting of NTFPs, and supporting enterprises based on natural resources based local indigenous knowledge. The programme support will include monitoring, control and abatement of invasive plants species in the project landscape.
- Creation of environment friendly community-based business cases for alternative incomes by business plans together with communities and supporting actual implementation of the business plans. Activities under this will include assessment of potentials for sustainable environment friendly community-based business enterprises based on value chain analysis, business plan development and support to implementation of these business plans. The enterprises that will be supported by the programme will include community or privately initiated NTFP based products (such as daphne, nettle, bamboo, dyes), ecotourism enterprises (such as trekking, home stays, etc.) and other potential community based enterprises. In addition to assessment and supporting actual establishment of potential enterprises, the programme will support capacity building of communities on business development, management and marketing.
- Lessons learnt and good practices from these activities will be monitored and documented for up-scaling and knowledge sharing.

Output 0: Project Management, Operations, Safeguards and Contingencies:

This output focuses on project management activities that are necessary for the effective implementation of the project. Activities under this component include the following:

- Project management: putting in place the Programme Management Unit within WWF Bhutan, staffing it, and administering all its activities;
- Implementation of the EMSF and gender mainstreaming;
- Monitoring and evaluation activities, including the operationalization of information management systems for data collection and standardized reporting;
- Project external audits.
- Administering a contingency budget to address unforeseen programmatic or financial challenges during the project implementation.

3. PROGRAMME AREA PROFILE

This chapter outlines the baseline data regarding the programme area, including an overview of its geographic coverage, demography, farming system, wildlife, and specific environment and social baseline data on the programme landscapes.

3.1. Geographic Coverage

The programme area includes 9 dzongkhags (districts) of the 20 dzongkhags of Bhutan (comprising of areas outside Parks, Wildlife Sanctuaries and Nature Reserves and Biological Corridors). Out of the 205 Gewogs, the project covers 96 Gewogs, representing 45 percent of the total number of Gewogs in Bhutan (See Table 1).

Table 1: Number of Dzongkhags, Gewogs & Chiwogs within the programme landscape

Dzongkhags	No of Chiwogs	No of Gewogs
Chukha	58	11
Dagana	70	14
Haa	30	6
Paro	50	10
Samtse	77	15
Sarpang	61	12
Thimphu	40	8
Tsirang	60	12
Zhemgang	40	8
Total	486	96

The spatial coverage of the total land cover within the programme areas is 1,012,277 Ha constituting 26 percent of national land cover. In terms of forest areas, the programme landscape excluding the areas falling under PAs and BCs cover a total area of 833,025.5 Ha out of the 2,705,290 Ha of national forest area in Bhutan. This pertains to 31 percent of the national forest areas (See Figure 1 and Table 6).

Figure 1: Spatial coverage of the programme activities



3.2. Demography

The dzongkhags included in the programme area has a population 441,371 out of total 727,145 across Bhutan which represents almost 61 percent of the Bhutanese population. The programme landscape demography comprises of three major ethnic groups of Bhutan. Majority of the population in Chukha, Dagana, Samtse, Sarpang and Tsirang in the southern part of the country comprise mostly of Lhotsham speaking population while the Dzongkhags of Haa, Paro and Thimphu in the western are dominated by the Dzongkhags speaking groups. The population within Zhemgang dzongkhag in the central part speak Khengkha.

While the average population density at the national level is 19 persons per Sq. Km the programme landscapes cover the most populated Dzongkhags such as Thimphu, Samtse, Chukha, Paro and Samtse within populating densities of 67, 48, 37, 36 and 35 persons per Sq. Km respectively. Almost 73 percent of the urban populating in Bhutan live within the project landscape due the location of Bhutan's most populated urban areas of Thimphu and Phuenstholing within the project landscape. Due to the location of Bhutan's capital in Thimphu, the district of Thimphu is home to 19 percent of the population. The district of Chukha, Samtse and Sarpang along the southern border with India account for 9, 8.5 and 6 percent of the Bhutan's total population. Table 2 presents the distribution of urban and rural population across the landscape

Table 2: Total population their area of residence within the project landscape (PHCB, 2017)

Dzongkhag	Male Pop	% Male	Female Pop	% Female	Total Pop	% Urban	% Rural
Chhukha	36041	52.3	32925	47.7	68966	51.5	48.5
Dagana	12956	51.9	12009	48.1	24965	18.9	81.1
Haa	7435	54.4	6220	45.6	13655	22.7	77.3
Paro	23941	51.7	22375	48.3	46316	25.7	74.3
Samtse	32022	51.2	30568	48.8	62590	15.5	84.5
Sarpang	24018	52.2	21986	47.8	46004	28.3	71.7
Thimphu	72522	52.3	66214	47.7	138736	83.3	16.7
Tsirang	11526	51.5	10850	48.5	22376	15.7	84.3
Zhemgang	9195	51.8	8568	48.2	17763	19.8	80.2
Bhutan	380453	52.3	346692	47.7	727145	37.8	62.2

Overall, 56.26% of the total population within the programme landscape have married once with a divorce rate of 2.29% and widowing rate of 2.41%. In both divorcing and widowing, women are affected more than men within the programme landscape. This is a similar pattern at the national level (See Table 3)

Table 3: Marital status of project landscape population aged 10 years and above (PHCB, 2017)

Dzongkhag	% Married	% Male Divorced	% Female Divorced	Total % Divorced	% Male Widower	% Female Widower	% Total Widower
Chhukha	54.81	0.9	1.4	2.3	0.5	1.5	2.0
Dagana	58.49	0.5	0.9	1.5	0.7	1.8	2.5
Haa	55.14	1.2	1.9	3.0	0.6	1.6	2.2
Paro	52.32	1.2	2.4	3.6	0.5	1.9	2.4
Samtse	59.19	0.7	0.5	1.2	0.8	1.8	2.6
Sarpang	57.22	0.7	1.1	1.8	0.6	1.9	2.5
Thimphu	51.88	1.1	1.9	3.0	0.5	1.6	2.1
Tsirang	59.26	0.7	0.7	1.4	0.8	1.7	2.5
Zhemgang	57.94	0.6	1.1	1.7	0.7	2.1	2.8
Bhutan	55.3	0.9	1.5	2.4	0.7	1.9	2.6
PL	56.3	0.9	1.4	2.3	0.6	1.8	2.4

While the landscape population has good access to social amenities, the communities of Haa, Paro and Zhemgang indicate high level of solid fuel consumption as compared to other Dzongkhags within the landscape and as compared at the national level (See Table 4).

Table 4: Access to social amenities by population within the project landscape (PHCB, 2017)

Dzongkhag	% of population with access to improved Water sources (PHCB, 2017)	% of population with access to Improved Sanitation (PHCB, 2017)	% of population Using Solid Fuel (PHCB, 2017)	% of Households with access to electricity (PHCB, 2017)
Chhukha	99.5	91.4	38.8	99.6
Dagana	100	91.1	22.4	100
Haa	99.5	78.9	89	95.7
Paro	99.6	88.5	64	99.8
Samtse	98.9	97.6	32.3	97.6
Sarpang	99.6	90.5	3.4	98.3
Thimphu	99.5	97	22.2	98.7
Tsirang	99.2	88.4	42.9	99.6
Zhemgang	99.3	96.6	64.7	95.6

At the project landscape level, every economically active person has child dependency of 0.36 and an old age dependency 0.08 with a total dependency of 0.44 per person as compared to 0.36, 0.14 and 0.47 respectively at the national level (See Table 5)

Table 5: Dependency ratio within the Project landscape (PHCB, 2017)

Dzongkhag/ Thromde	Population by Broad Age Groups			Total	Dependency Ratio		
	0-14	15-64	65+		Total	Child	Old Age
Chhukha	17,078	48,963	2,925	68,966	40.9	34.9	6.0
Dagana	7,024	16,277	1,664	24,965	53.4	43.2	10.2
Haa	3,582	9,298	775	13,655	46.9	38.5	8.3
Paro	11,406	32,161	2,749	46,316	44.0	35.5	8.5
Samtse	16,884	41,665	4,041	62,590	50.2	40.5	9.7
Sarpang	11,215	32,177	2,612	46,004	43.0	34.9	8.1
Thimphu	32,861	100,559	5,316	138,736	38.0	32.7	5.3
Tsirang	5,874	14,733	1,769	22,376	51.9	39.9	12.0
Zhemgang	5,138	11,054	1,571	17,763	60.7	46.5	14.2
Bhutan	189,417	494,664	43,064	727,145	47.0	38.3	8.7
Landscape Total	111,062	306,887	23,422	441,371	44	36	8

About 80 percent of over 340,000 economically active population of Bhutan reside within the project landscape areas.

3.3. Farming Systems

A majority of the rural population living in the programme landscapes areas practice subsistence mixed farming supplemented by the collection of Non-Wood Forest Produces (NWFP) and other natural resources from the forest. Establishment of farmer groups for livestock, agriculture, Community Forests (CFs) and NWFPs within the past decade have contributed significantly to enabling participation of communities in forest conservation and sustainable management of natural resources.

Out of the 677 CF Groups in Bhutan, 75 percent of the groups are located within the programme landscapes. Community forests within the programme areas comprise of 0.41 percent of national forest areas and 1.3 percent of forests areas within the programme landscape. Community Forest Groups and other Farmer Groups operate based on their article of incorporation and are recognized as important grass roots level institutions. Hence they play an important role in conservation and management of natural resources as well as in dealing with community issues that relate to the farmer group objectives.

About 52 percent of Bhutan's total livestock population is within the programme landscape dzongkhags. These comprise of horses (33), local cattle (46), sheep (63), improved cattle (45) and goats (92) percent respectively.

The programme landscape produce 38 percent of national level cereals, 24 percent of potatoes, 66 percent of spices 41 percent of vegetable 45 percent of oilseed and almost 70% of fruits and nuts in the country.

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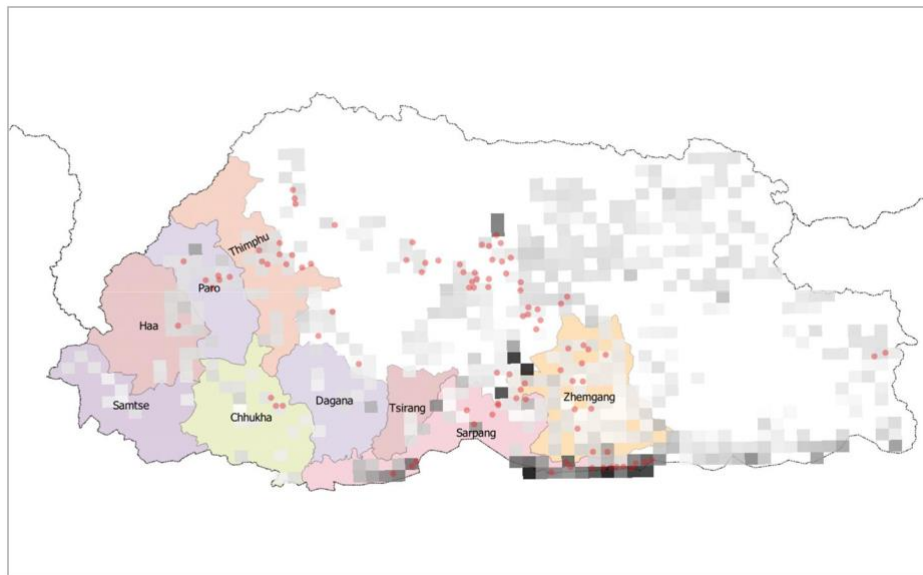
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The project areas produce 38 percent of national level cereals, 24 percent of potatoes, 66 percent of spices 41 percent of vegetable 45 percent of oilseed and almost 70% of fruits and nuts in the country.

3.4. Wildlife

As a result of the extensive areas maintained under the PAs and BC as well as the habitat connectivity through biological corridors, Bhutan has more than 200 mammal species including the red panda, blue sheep, Tibetan wolf, takin – the national animal of Bhutan, Asian elephants, Gaur, Asiatic golden cat, Himalayan serow, musk deer, and clouded leopard. Almost all these species are endangered. Bhutan has an estimated tiger population of 103 and at heights of over 4,000 m tigers share range with snow leopards (DoFPS, 2016). There are over 760 bird species out of which 18 are globally threatened including the critically endangered white-bellied heron. The project landscape areas do harbour significant national flagship species indicating the high conservation value of the landscape. Red circles in the map (Fig. 2) show locations of tigers caught in camera traps. Shaded squares show probability of tiger presence, with lighter shades depicting lower probability and darker shades depicting higher chances of tiger presence (Biodiversity Data & Technical Advice for IKI Project Formulation, 2019).

Figure 2: Tiger distribution within the programme landscape



About 41 % of all CFs in Bhutan are located within the programme landscape which has 299 of 722 CFs in Bhutan (See table 6). This means that 61% of the national population is responsible for management of only 41% of the CFs in Bhutan indicating a lower level of participation in sustainable forest management by the communities within the project landscape.

Table 6: Involvement of local communities in management of community forests within the programme landscape area (DoFPS)

Dzongkhag	No of CFS	Total Forest area (Ha)	CF area (ha)	HH engaged in CF	% of Forest under CF	No of NWFP Groups	% of HH with NWFP Groups
Chhukha	56	151164	3970	1825	2.6	7	2
Dagana	27	141861	2278	1109	1.6	9	11
Haa	18	129500	1697	534	1.3		
Paro	26	72574	4218	1485	5.8	3	1
Samtse	52	77299	4740	2083	6.1		
Sarpang	31	127397	3164	1212	2.5	4	2
Thimphu	21	94256	2750	837	2.9	2	1
Tsirang	42	48857	6454	2458	13.2	2	5
Zhemgang	26	198036	2800	1061	1.4	8	6
Bhutan	722	2,661,817.00	80428	29883	3.0	108	3

Table 7: Population pressure on the environment and natural resources (PHCB, 2017)

Dzongkhag	Area (km ²)	Population		Density (Population per km ²)	
		2005	2017	2005	2017
Chhukha	1,880	74,387	68,966	40	37
Dagana	1,723	18,222	24,965	11	14
Haa	1,905	11,648	13,655	6	7
Paro	1,293	36,433	46,316	28	36
Samtse	1,305	60,100	62,590	46	48
Sarpang	1,946	41,549	46,004	21	24
Thimphu	2,067	98,676	138,736	48	67
Tsirang	639	18,667	22,376	29	35
Zhemgang	2,421	18,636	17,763	8	7
Bhutan	38,394	634,982	727,145	17	19
PL	15,179	378,318	441,371	25	29

The population density in the project landscape has increased by 4 persons per square km within a span of 12 years. However, in some of the landscape Dzongkhags the increase has been as high 6 in the case of Tsirang up to 19 in the case of Thimphu. On an average as well as by individual dzongkhags, the dzongkhags within the programme landscape face higher level of pressure on the land resources from growing population (See table 7 and 8).

Table 8: Forest areas and pressure within forest areas in the project landscape

Dzongkhag	Dzongkhag Forest Cover (%)	PL Area (Outside PAs & BCs) in km2	Forest Cover in PL (km2)	% Forest Cover in PL	Sawmills (2017)	Illegal Activities (2018)	Forest Land Conversion (ha) 2017
Thimphu	51	873	645	74	18	158	42
Paro	47	1028	644	63	24	161	1404
Haa	69	1010	860	85	24	3	0
Chukha	89	1853	1650	89	12	95	114
Samtse	69	1496	1028	69	3	60	125
Sarpang	78	869	735	85	6	62	2126
Dagana	83	1384	1150	83	0	50	439
Tsirang	89	563	484	86	2	19	6
Zhemgang	93	1146	993	87	2	10	23
PL	74	10222	8190	80	91	618	4279

4. ENVIRONMENT AND SOCIAL POLICY, REGULATIONS AND GUIDELINES

This chapter first outlines the laws and regulations of RGoB and the IFC's Performance Standards that are applicable to the programme. An overview of the relevant RGoB policies, laws and regulations of RGoB is provided in the context of programme location within the jurisdiction of Bhutan and of the IFC standards as a matter of choice of the programme funding agency. For the purposes of the programme implementation, the principles and procedures of the IFC shall prevail in all cases of discrepancies.

4.1 RGOB's Policies, laws, Regulations Guidelines

The current review of applicable national policies, legislation and regulations includes those that are pertinent to the programme, as well as the broader context within which the programme will operate. Particular attention has been paid to laws and regulations governing the project's implementation and the access by poor and excluded groups to goods, services, and opportunities provided by the programme.

The Constitution of the Kingdom of Bhutan, 2008 requires every citizen to contribute to the protection of the natural environment, conservation of the rich biodiversity of Bhutan and prevention of all forms of ecological degradation including noise, visual and physical pollution. It assigns the rights over mineral resources, rivers, lakes and forests to the RGoB to be regulated by law. The state is required to preserve, protect and promote the cultural heritage of the country, including monuments, places and objects. It mandates the state to ensure safe and healthy environment and to maintain a minimum of 60 percent of Bhutan's total land under forest cover for all times. The Parliament can, by law is authorized to declare any part of the country to be a National Park, Wildlife Reserve, Nature Reserve, Protected Forest, Biosphere Reserve, Critical Watershed and such other categories meriting protection.

Local Governments in the country are required engage the population in consultative processes in the governance of natural resources. A person shall not be deprived of property by acquisition or requisition, except for public purpose and on payment of fair compensation in accordance with the provisions of the law.

Land Act of Bhutan 2007 defines the legal framework to manage, regulate and administer the ownership and use of land for socio-economic development and environmental well-being. The Act clarifies that trees, either naturally grown or planted, belong to the landowner when grown on registered land. It also enables individuals to lease government-reserved forestland for economic and other purposes. The Act recognizes the right of way established over land through local customs (by uninterrupted use for a period of more than 5 years) and requires landowners to respect it.

Land Rules, 2007 specify requirements for land acquisition and lease and stipulates that private registered lands shall only be expropriated for public use in case of unavoidable circumstances and only if appropriate compensation is provided based on valuation by the PAVA. Private land can only be taken over after a substitute land plot is registered under the name of the landowner or upon the provision of the full cash compensation to the landowner.

The Rules allow to lease land from the SRF, but such land should only be used in accordance to an approved management plan. This requirement applies to land leased for commercial agriculture, grazing and sokhshing. Lease of SRF for commercial farms and sokshing should not be for a period beyond 30 years while that of grazing should be renewed every 10 years. Lease of SRF for grazing is based on livestock ownership and herd size, while lease for

agriculture purposes is based on ownership and size of agriculture land. However, highlanders are eligible for Tsamdro on lease, irrespective of possession of livestock and herd size. They are also eligible to sub-lease the leased Tsamdro.

The Moveable Cultural Property act of Bhutan, 2005 requires that the title of all cultural properties shall be registered in the name of the Dratshang, Government, Community or private individuals. Cultural Property registered in a Thram shall not be sold, used for personal means, exchanged, gifted, or damaged. If any items that are considered to be Valuable Cultural Property are found by chance during the construction of roads or buildings or any other related works, the “chance find” shall be immediately reported to the Department of Culture through the concerned Dzongkhag.

National Environment Protection Act, 2007 outlines principles and a legal framework for forest governance and management. It sets out requirements for the sustainable use and management of the country’s resources and ecosystems.

Forest and Nature Conservation Act of Bhutan, 1995 ensures the protection and sustainable utilization of forests, fauna, and other natural resources of Bhutan for the benefit of present and future generations. The Department of Forests and Parks Services is fully responsible for the sustainable management, protection, and regulation of all natural resources within Government Reserved Forests as well as in other parts of the country. The Forest and Nature Conservation Rules of Bhutan 2017 have been issued to support the implementation of this Act.

Forest and Nature Conservation Rules and Regulations of Bhutan, 2017 restrict livestock grazing in areas that are fenced for natural regeneration for a specified period and in plantation areas, whether fenced or not and until the seedlings are well established. It allows goat grazing only within a confined area and not freely in SRF. However, the regulations secure rights of way to existing “tsalam” and “chulam”, traditionally used during migration, provided that such routes are not lawfully closed by the Government. Activities, such as felling trees, waste disposal, building structures, are strictly controlled within the forests. Land clearance is not permitted (a) within 100 feet on either side of the banks or edge of rivers, streams or watercourses, which are kept as riparian reserve for conservation, and (b) land with greater than 45-degree slope.

National Forest Policy, 2011 encourages the engagement of rural communities to manage forests sustainably for socio-economic benefits, poverty reduction and to contribute to overall sustainable forest management. It calls for an integrated approach to the conservation of cultural heritage, traditions, local water supply sources and riparian reserves, soil protection, specific wild floral/faunal habitat and species protection in PA management. The policy provides an enabling environment for the promotion of nature-based tourism to bring benefits to local communities and enhance conservation in PAs and BCs. It also sets out guidelines for the development of public recreational areas. The policy allows regulated grazing in national forests and requires the development and implementation of measures to protect natural ecosystems against invasive alien plant species.

Business Infrastructure Policy, 2014 promotes, as far as possible, land for development of Business areas to be in the form of lease of State Reserved Forests or State Land under the terms and conditions of a Development Lease. Therefore, private land acquisition is not encouraged. In cases where it is absolutely necessary to acquire private land, the Business Infrastructure Development Authority should procure private land by providing fair

compensation including ownership options such as equity participation or lease of land from owners. It requires the businesses established in the business areas to provide work environment and conditions that are in accordance with Labour Laws of the Kingdom of Bhutan. By, policy developers of business areas are required to allocate locations/floor space dedicated to CSIs to promote the development of the CSIs and to ensure their participation. Further, it also requires allocation of space for women entrepreneurs in a specific Business area to provide business opportunities for women in the rural areas/small towns/villages with the need to include facilities like crèches and day-care services within the Business areas. All business area development initiatives are also required to take concrete and appropriate steps to ensure full compliance, by the Developers and entities, with environmental standards and laws.

The Water Act of Bhutan, 2011 sets out principles for water allocation for drinking, agriculture, energy, and industrial use, tourism and recreation and for other uses. It establishes the principle that water is a public resource managed by the State, and that every citizen has equal right of access to this resource. The Act stipulates that no individual or community should be deprived of access to water, including downstream and upstream needs. It also forbids the discharge of any effluent directly or indirectly to any water resource, unless the discharge is done in accordance with the Effluent Discharge Standards. At the Dzongkhag level, the Act assigns the Dzongkhag Environment Committee to function as the Dzongkhag Water Management Committee for the purpose of proper and effective protection and management of water resources.

The Water Act clarifies that Local Governments, religious bodies, and the Ministry of Home and Cultural Affairs bear responsibility for protecting therapeutical waters such as Menchhu, Drupchhu, Tshachhu, and Neychhu. Blocking or otherwise altering an irrigation channel flowing through one's property shall not be allowed without the consent of the users of that channel, even when the channel is not required by the property owner. This Act is relevant in enabling safeguard measures in use of water for the project activities, as well as for management of drinking and irrigation water within communities that are part of the project areas.

Waste Prevention and Management Act, 2009: The Act requires that every person shall take all precautionary measures in maintaining a clean and healthy environment and that individuals that pollute the environment or cause ecological harm shall be responsible for the costs of avoidance, contamination, abatement, medical compensation, mitigation, remediation, and restoration of the environmental damage. The lead implementing agencies shall make arrangements for dealing with waste in various areas.

Environmental Assessment Act, 2000: This Act requires the government to ensure that environmental concerns are considered when formulating, renewing, modifying and implementing any policy, plan, or program. Issuance of an environmental clearance is a prerequisite to the issuance of development consent and those that do not require a development consent can commence only after receiving an environmental clearance, which contains environmental terms and conditions to be complied with. When a decision on the environmental clearance is taken, the NECs or the CA are required to make a public announcement of the decision informing about the project/activity, as well as measures that should be taken to avoid or mitigate potential adverse impacts. The act and ensuing notifications from the NECs identify sectors that do not require environment clearances and delegates identified competent authorities to issue environment clearances for specified sectors. The act requires the Secretariat and other competent authorities to monitor and

control compliance with the terms of environmental clearances. The relevant authorities shall report annually to the Secretariat on implementation, monitoring and enforcement and the Secretariat shall report annually to the Commission. The EA Act also sets out specific procedures on compensation if land acquisition and property displacement are required.

Regulations on the Environmental Clearance of Projects, 2001: The regulations require that environmental clearance is only issued after the screening and assessment of the environmental impacts of development projects. Applicants should submit the following documentation as part of the environmental screening process:

- Assessment of the potential adverse effects of the project on the environment including direct, indirect, and cumulative effects;
- Proof of compliance with relevant sectoral guidelines or codes of best practices, if any, issued by the Secretariat or competent authorities;
- Action plan the details how adverse project impacts will be avoided, mitigated or reduced; and
- Description of the environmental benefits of the project, including how the project will benefit affected people and use clean and sustainable technologies.

The Secretariat or relevant Competent Authority shall examine the application in accordance to sectoral guidelines, and may issue an environmental clearance, require a separate environmental assessment, or provide a blanket denial. If an environmental clearance is issued, the NECs or the CA shall issue a public notification accordingly.

If the NECs or CA requires the applicant to conduct an environmental assessment, the following procedure applies:

1. The applicant shall prepare terms of reference for the environmental assessment report, which have to be approved by the NECs or CA;
2. The applicant shall be responsible for the preparation of an environmental assessment report, according to the terms of reference approved by the Secretariat or Competent Authority (See Annex 15 for outline of the EA Report);
3. In the process of the EA report preparation, a public consultation must be held.

Upon receipt of the complete environmental assessment report and completion of the public notice procedures, the NECs or the CA may issue an environmental clearance with binding mitigation and compliance measures as well as appropriate monitoring, recording and reporting requirements.

Livestock Act of Bhutan, 2001: The act regulates livestock breeding, health and production aimed at enhancing their productivity and preventing diseases so as to enhance rural income and livelihood. The Act facilitates sets out requirements for the introduction and reproduction of high-quality and appropriate breeds of livestock, poultry and fish in the country. It also outlines requirements to prevent the spread of infectious diseases among the livestock population.

The Biodiversity Act of Bhutan, 2003: This Act recognizes and protects Traditional Knowledge, innovation, and practices of local communities associated with biodiversity. It supports the prevention of illegal access to genetic and biochemical resources and associated Traditional Knowledge.

The Pesticides Act of Bhutan, 2000: Bhutan encourages the practices of organic agriculture. Hence chemical pesticides procurement/import, distribution and use are well controlled through a centralized system and are legally governed by Act. The Act has been enacted with

the purpose of, among other things, ensuring that integrated pest management is pursued, limiting the use of pesticides as the last resort. Integrated Pest Management guidelines are in place and are under implementation as a part of the National Plant Protection Center's regular program. PAB (Articles 4 to 6) stipulates strict requirements for import, sale and use of pesticides.

The Penal Code of Bhutan, 2004: The Penal Code of Bhutan defines that individual consent cannot be obtained under fraud, duress, compulsion, or coercion. This aspect is relevant as a principle in obtaining free and prior informed consent from local communities and stakeholders for the project activities.

National Access and Benefit Sharing (ABS) Policy, 2015: The National Access and Benefit Sharing (ABS) Policy ensures fair and equitable sharing of benefits arising from research and commercial utilization of Bhutan's genetic resources and associated traditional knowledge. The policy provides for long term mutually supportive relationships between the providers and users of Bhutan's genetic resources and associated traditional knowledge.

Regulation on Occupational Health, Safety & Welfare (OHS) in Construction, Manufacturing, Mining & Service Industries, 2006: This rule of the Ministry of Labour and Human Resources mandates the employer to be responsible for health and safety of the employees. This includes provision for health and safety of employees in standards prescribed in Annex II of the rules and regulations. It includes standards on personal protective gears, fire protection, hand and power tools, signs/signals and barricades and standards for material handling/use/storage/disposals, scaffolds, excavations, electrical works, sanitation and hygiene.

4.2 IFC Safeguards Policies and Procedures Applicable to the Project

(i) PS 1: Social and Environmental Assessment and Management System

The PS 1 of IFC requires that environmental and social impact of a project are identified, and that such risks avoided, minimized, compensated or offset. It requires that standards are improved through an environmental and social management system that engages affected communities or other stakeholders throughout a project cycle.

In this respect, the RGOB's environmental policies, laws and regulations described in section 4.2 provides adequate system and arrangements that enable meeting the requirement of the environmental that Social and Environmental Assessment and Management System required by IFC's performance standards. Hence this PS is not triggered for the project's safeguards categorization since it is not a case of concern due to absence of a system.

While the programme's safeguards categorization does not require this PS to be assessed, it is still relevant for the project activities as the project safeguards must be aligned with the national system for social and environment assessment and management.

(ii) PS 2: Labour and Working Conditions

The IFC's performance standard on Labour and Working Conditions seeks fair treatment, non-discrimination, equal opportunity, good worker-management relationship, compliance with national employment and labour laws, protection of workers with particular emphasis on

vulnerable categories, promoting safety and health as well as avoiding use of forced labour or child labour. In this respect the Regulation on Occupational Health, Safety & Welfare (OHS) in Construction, Manufacturing, Mining & Service Industries, 2006 of Bhutan provides the regulatory environment for labour and working conditions required by this PS. However, there could be activities and site-specific situations that this regulation may not cover adequately. Hence this Performance Standard has been triggered for categorization of the project.

(iii) PS 3: Pollution Prevention and Abatement

The polluting prevention and abatement standard requires that the programme avoid, minimize or reduce project-related pollution and supports more sustainable use of resources, including energy and water as well as to reduce project-related greenhouse gas emissions. The RGoB's environment protection laws and regulations includes stringent measures to ensure that pollution of the environment is avoided or that individuals causing pollution are responsible for the costs of avoidance, contamination, abatement, medical compensation, mitigation, remediation, and restoration of the environmental damage. Depending on the nature of the project activities, activity and site-specific impacts will arise from the project activities although they may be minor. Hence this standard has been triggered.

(iv) PS 4: Community Health, Safety and Security

This standard requires the programme to anticipate and avoid adverse impacts on the health and safety of the affected community and to safeguard personnel and property in accordance with relevant human rights principles. The project activities involve field application of plant nutrients, use of machineries and equipment due to which minor activity and site-specific risks will arise from the project activities to community health, safety and security of local communities. Hence this standard has been triggered.

(v) PS 5: Land Acquisition and Involuntary Resettlement

The policy seeks to ensure that adverse social or economic impacts on resource-dependent local communities as a result from conservation-related restrictions on resource access and/or use are avoided or minimized. Resolution of conflicts between conservation objectives and local livelihoods is sought primarily through voluntary agreements, including benefits commensurate with any losses incurred. Involuntary resettlement is avoided or minimized, including through assessment of all viable alternative project designs and, in limited circumstances where this is not possible, displaced persons are assisted in improving or at least restoring their livelihoods and standards of living relative to pre-displacement or pre-programme levels (whichever is higher).

The adverse resettlement impacts of the programme are not foreseen. For this programme activities, land acquisition or physical displacement will be avoided. Other forms of economic resettlement (e.g., restrictions of access to natural resources and livelihoods, loss of community property resources, land use conflicts, etc.) will be discouraged under the project. The need for physical spaces under the programme are limited to physical spaces for conservation and enterprises related to nurseries and NWFP development which are foreseen to occur within state land or community lands. The programme activities do not involve major infrastructure development that requires physical spaces which may infringe on land with private ownerships. Hence this PS is not triggered for the purpose of this programme.

(vi) PS 6: Biodiversity Conservation and Sustainable Natural Resource Management

This standard requires a programme to protect and conserve biodiversity, enable maintenance of benefits from ecosystem services, promote of sustainable management of living natural resources and to integrate conservation needs and development priorities. The programme activities involve high conservation areas delineation and management. The programme will enhance biodiversity conservation and also support activities to ensure sustainable management of natural resource. This will result in significant level of changes in the approach of conservation within state lands that are outside the protected area management system of Bhutan. Hence this PS is triggered for the project purpose.

(vii) PS 7: Indigenous Peoples

This standard requires a project to ensure full respect for indigenous peoples' rights, dignity and aspirations including their livelihoods, culture, knowledge and practices. The project must avoid/minimize adverse impacts and ensure sustainable and culturally appropriate development.

Indigenous people can be defined as a distinct social and cultural group characterized by;

- Self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
- Collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories;
- Customary cultural, economic, social, or political institutions that are separate from those of the dominant society or culture;
- An indigenous language, often different from the official language of the country or region.

The policy mandates that projects respect indigenous peoples' rights, including their rights to FPIC processes and to tenure over traditional territories. It also requires that culturally appropriate and equitable benefits (including from traditional ecological knowledge) are negotiated and agreed upon with the indigenous peoples' communities in question; and that potential adverse impacts are avoided or adequately addressed through a participatory and consultative approach.

Almost every valley, district or region in Bhutan has distinct dialects. Local population is broadly identified as Sharecrop (eastern), Ngalop (western) and Lhotsham (southern). Within these broad regional categories of people, there are pockets of settlements with distinct cultural practices and traditions. For example, the Doyas in Samtse have distinct cultural practices and traditions. However, their social and cultural identity although distinct from dominant society, does not make them vulnerable or disadvantaged and they do not have socio economic and political institutions that are separate from those of the dominant society.

Thus, a separate documentation does not need to be prepared, but guidelines on IP engagement are included in the ESMF. In order to ensure that all project affected peoples take an active part in the design and implementation of project activities, the implementation of the ESMF will be done in a participatory and inclusive manner and based on FPIC principles.

(viii) PS 8: Cultural Heritage

This performance standard requires a project to protect and preserve cultural heritage and to promote equitable sharing of benefits from cultural heritage. As the programme activities will

interface with cultural as well as natural heritage sites in terms of delineation as well as management of high conservation areas, this PS is triggered.

5. ANTICIPATED IMPACTS AND MITIGATION MEASURES

The project seeks to strengthen the environmental conservation practices of Bhutan by focusing on sustainable management of landscapes that lie outside the PAs and BCs and is thus expected to result in major positive environmental outcomes. A detailed overview of the anticipated minor and site-specific negative environmental and social impacts as well as their mitigation measures includes the following:

Table 9: Anticipated Environmental Impacts and Mitigation Measures under output one

Activities	Potential Impacts	Causes of impact	Recommended Mitigation Measures	Responsible Agency
Output I, WP I: Establish framework on HCV for Bhutan and integrate into national planning				
<i>NEGATIVE ENVIRONMENTAL IMPACTS – not foreseen</i>				
<i>NEGATIVE SOCIAL IMPACTS</i>				
Development of HCV National Interpretation	Land use conflicts due to implementation of HVC National Interpretation	Criteria selection of HVC areas may conflict with traditional rights	Comprehensive stakeholders and community consultations to avoid land use conflicts; Review of related legal and policy provision to ensure that the HCV framework doesn't conflict with prevailing legal and policy provisions prior to consultations; Private registered areas to be avoided from inclusion within HCVs	DoFPS
Output I, WP 3 Improve institutional capacities and inter-sectoral coordination				
<i>NEGATIVE ENVIRONMENTAL IMPACTS – not foreseen</i>				
<i>NEGATIVE SOCIAL IMPACTS</i>				
Integrating HCV framework and identification into the national NLUZ process and mapping of HCV sites through the national NLUZ parameterization process in the project landscape	Institutional conflicts due to lack of clarity accepted in roles and responsibilities	Possible lack of alignment with different sector's policies, plans and delegation of responsibilities	Compliance with National Land Use Zoning Guidelines, 2018. HCV National Interpretation to be part of NLUZ parameters with defined roles of all relevant stakeholders at all levels	DoFPS/ NLCS

Table 10: Anticipated Environmental Impacts and Mitigation Measures under output two

Activities	Potential Environmental Impacts	Causes of impact	Recommended Mitigation Measures	Responsible Agency
Output II, WP 2: Establish	holistic and climate-smart management plans			
NEGATIVE ENVIRONMENTAL IMPACTS – not foreseen				
NEGATIVE SOCIAL IMPACTS				
Drafting holistic management plans for all s of the project landscape, taking into consideration the HCV framework, all assessments, existing and newly collected data, as well as other relevant national and regional strategies and concepts	Lack of ownership of management plan by stakeholders	Conflicting claims in land use rights and uses	Comprehensive stakeholders and community consultations in the planning phase; Public hearing of the management with relevant stakeholders upon completion of the plan before publication Establish grievance redress mechanism for each holistic management plans for all s of the project landscape	DoFPS/DFOs
Implementation of holistic management plans with HVC framework	Boundary conflicts over HVC identified areas and non HVC areas	Lack of awareness on actual boundary on-ground	Engage local government representatives and administrations in the demarcation or re-alignment of HVC boundaries Any change or new demarcation of boundaries should be based on free and prior informed consent of the affected communities and relevant authorities, which should be obtained prior to finalizing any border change.	Dzongkhag Gewog
	Disruption in access to NWFPs and other natural resources by local communities	Restrictions that may be applied in the plan for HVC framework implementation	Prepare management plana in collaboration with the relevant Department/agency (as per FNCRR, 2017). If disturbance of access to natural resources cannot be avoided, full and timely compensation for reduced access to natural resources shall be provided to all users, irrespective of their	Local Government

Activities	Potential Environmental Impacts	Causes of impact	Recommended Mitigation Measures	Responsible Agency
			<p>formal land ownership status or title.</p> <p>The compensation shall be calculated based on the economic market value of access to resources and the costs of fully replacing these economic activities. The replacement value shall be calculated by s in consultation with affected households and community representatives.</p>	
Resource assessments, surveys and inventory activities	Occupational safety issues	Inadequately equipped personal protection equipment and inappropriate field gears	Supply appropriate personnel protection gears and field gears such as boots, rain coats, sleeping bags, mats and camping gears for field survey teams	WWF
<p>Output II, WP 4; Implement practical measures for biodiversity conservation and ecosystem services together with s</p> <p>NEGATIVE ENVIRONMENTAL IMPACTS</p>				
Establishment of nurseries in Community Forest and NWFs areas to improve nursery standards	Water pollution	Nutrient and pesticide run-off from nursery and contamination to groundwater and nearby stream/river by drainage water, pesticides and oil from equipment and machineries.	Use pulse watering - reduce the duration but increase the frequency of irrigation	Nursery In charge
			<p>Use Integrated Pest Management where possible or biodegradable pesticides and natural fertilizers or only use fertilizers listed by the NPPC and based on their technical recommendation and apply the national system for integrated pest management (See Annex 3)</p> <p>Project will not support the procurement or use of any pesticides categorized IA, IB, or II by the World Health Organization or other agricultural chemicals, or</p>	Local Range Officer to oversee

Activities	Potential Environmental Impacts	Causes of impact	Recommended Mitigation Measures	Responsible Agency
			<p>lead to the increased use of such chemicals</p> <p>Mix and store chemicals and handle oils in covered, contained areas in order to prevent spills which may be washed away. Clean up spills immediately</p> <p>Store pesticides safely in a locked shed, well ventilated and dry area and separately from fertilizers</p>	
		Leachate from waste	<p>Non-recyclable wastes to be collected for disposal</p> <p>All wastes to be reduced, reused or recycled where possible - Bio-degradable wastes to be management in compost for manuring</p>	<p>Nursery In charge</p> <p>Local Range Officer to oversee</p>
		Wrong Siting of the Nursery	<p>To be located away from water courses</p> <p>To be on gentle sloping ground where gradients - excessive run-off and erosion will occur on steep slopes and ponding and boggy areas will occur on sites with a slope less</p>	Local Ranger
	Invasion of local diversity	Introduction of invasive exotic species	<p>Where introduction of improved or new species are considered for nursery production, such species should be certified by BAFRA and NPPC prior to their introduction. Recommendations from the NPPC and BAFRA during their certification should be implemented as part of ESMF plan.</p>	BAFRA NPPC
	Injury to moving wildlife	Fencing of nursery areas with barbed wires	Fence with wire mesh instead of barbed wire	Nursery in-charge

Activities	Potential Environmental Impacts	Causes of impact	Recommended Mitigation Measures	Responsible Agency
Development culture/ecotourism – camp sites	Increased waste and sewerage	Increased visitors and tourists	<p>Waste management strategy and plan to be developed in accordance with Waste Management Act and its Regulations and as per FNCR, 2017, rule no. 49 (2)</p> <p>Ensure that there are appropriate and separate areas for toilets, washing areas, grazing areas for transport animals. Make arrangements for environment friendly toilet and washing facilities in each camp site</p>	WWF, in collaboration with Dzongkhag Environment Officers
	Forest Fires	From camp fires in camp sites	Identify designated camp fire area and for same disposal of ash in each camp site	DFO, Tarayana
	Water pollution	Discharge of waste into nearby water bodies	<p>Ensure that camps sites are located away from existing stream, river, water source and no discharge from such establishments should follow their path into nearby water bodies.</p> <p>Make arrangements for solid waste be carried out of the area.</p> <p>Avoiding sensitive sites, such as those which include steep hillsides, and areas erosive in nature</p>	DFO, Tarayana
	Degradation of areas of critical conservation themes	Siting of ecotourism facilities	Avoid sites that are in close proximity to protected areas or those identified by the as conservation areas	DFO, Tarayana
	Damage to the site conditions - destabilization of landscape	Due to excavation causing soil erosion/landslides during site development	<p>Plantation of trees in slide prone areas</p> <p>Erect local retention walls</p>	DFO, Tarayana

Activities	Potential Environmental Impacts	Causes of impact	Recommended Mitigation Measures	Responsible Agency
	Possible loss of vegetation	Removal of trees/ vegetation during construction	Avoid removal of trees Carry out plantation works to replace removed trees as soon as possible.	DFO, Tarayana
Development culture/ecotourism – trails	Damage to environment due to new trail development	Due to new development in undisturbed trail alignment	Integrate with traditional trails and maintain them as eco-trails so that new routes are not constructed	DFO, Tarayana
Pilot activities on reduced impact of logging in FMUs- Capacity Building on FMU management and Monitoring	Habitat alteration and loss of biodiversity	Replacement of the existing vegetation cover with non-native species habitat modifications caused by forest harvesting practices	Replacement of the existing vegetation cover with native species or upon approval from BAFRA, NPPC and NCD in the case of introducing new species. FMU to be managed as per management plan approved by DoFPS. Follow IFC's Environmental, Health, and Safety Guidelines for forest harvesting operations (see www.ifc.org/ehsguidelines)	DFO, Tarayana
	Reduced water quality and quantity of streams, water bodies, and ground water resulting in seasonal hydrologic changes and potential negative impacts on downstream river biota, communities, and fisheries	Unregulated vehicular movement over perennial and intermittent streams and wetland	Establish and manage riparian management zones Prevent or limit disturbance to water resources during the planning phase Minimize vehicular movement over perennial and intermittent streams, and wetland areas	DFO, Tarayana
	Soil erosion	Harvesting activities and access road	Avoid using roads and use cable cranes where possible. Where roads are not avoidable, convex shaped roads should be designed and road drainage should	DFO, Tarayana

Activities	Potential Environmental Impacts	Causes of impact	Recommended Mitigation Measures	Responsible Agency
			be constructed at appropriate intervals to drain water away from the road surface and.	
	Pollution water from hazardous materials	From use of machinery, vehicles, and related fuels, lubricants, and other materials	Prohibit washing of logging equipment and replacement of oil/hydraulic fluids near streams or sensitive areas to prevent entry of hazardous materials into water bodies	DFO, Tarayana
	Visual impairment of landscape	Harvesting and logging operations	Identify potential visual impacts at the pre-harvest stage and incorporate strategies to prevent and/or mitigate into the forest management plan	DFO, Tarayana
	Risk of forest fire	From logging operations and use of fire by workers in the forest	<p>Prepare a formal fire management and response plan supported by the necessary resources and training, including training for workers in the use fire suppression equipment and evacuation</p> <p>Maintain fire suppression equipment such as fire beaters and knapsack sprayers, small portable water pumps and tanks at the site</p>	DFO, Tarayana
NEGATIVE SOCIAL IMPACTS				
Establishment of nurseries in Community Forest and NWFPs areas to improve nursery standards	Water use conflicts for in relation to nursery irrigation	Conflicting and competing claims over water source and water usage	Seek written clearance over water use rights from the Gewog Administration and from the Chairperson of the CF/NWFP Group	DFO, Tarayana
	Land use conflicts	Wrong Siting of the Nursery	Nurseries promoted by the project should not permit introduction or raising of any invasive non-local species	DFO, Tarayana
	Occupational health and safety hazards	Engagement of labour for nursery activities work	<p>Equip every person at site with boots/gloves/dust or fume masks.</p> <p>Provide first aid kit at the site</p>	DFO, Tarayana

Activities	Potential Environmental Impacts	Causes of impact	Recommended Mitigation Measures	Responsible Agency
			<p>Ensure that no underage workers, or children are engaged</p> <p>Construct temporary toilets for the workers at the nursery site.</p> <p>Provide safe drinking water facility for workers</p> <p>Regulation on Occupational Health, Safety and Welfare of Bhutan, 2012 and the preventive and protective measures that are specified in the IFC Occupational Health and Safety Guidelines (see: www.ifc.org/ehsguidelines)</p>	
Development culture/ecotourism – Campsites	Land use conflicts with private/institutional landowners during use of camp sites	Siting of ecotourism facilities in private or institutional entities land	Clearances from relevant government authorities for acquiring ‘user rights’ for land	DFO
	Disturbance to local culture and heritage sites	Due to wrong siting of camp sites	<p>Ensure that site identified for camps are beyond 500 meters from a, monastery, Dzong or any cultural monument</p> <p>Apply screening checklist to ensure that the selected site does not affect cultural resources of local significance</p> <p>If cultural resources are identified within 100 meters of the identified site, select another site or seek clearance from the local, communities - concerned Gewog, concerned Dzongkhag and the Department of Culture prior to finalization of the plan</p>	WWF,

Activities	Potential Environmental Impacts	Causes of impact	Recommended Mitigation Measures	Responsible Agency
			and site development	
Development culture/ecotourism – trails	Community conflicts over alignment of trails- Conflict with traditional trails or with local and traditional norms of restrictions	Alignment of the trails without recognition and acceptance by the local communities	Hold consultation with concerned communities and local government before, during and after construction of the trails to enable participation in decisions, construction, maintenance and management. Align and integrate ecotourism trails with traditional routes where traditional routes exist	DFO
	Accidents along the alignment due to size of the trail	Due to narrow size of trails	Width of the trail should have minimum width of 3 feet for mule tracks	DFO
Pilot activities on reduced impact logging in FMUs- Capacity Building on FMU management and Monitoring	Work hazards and accidents to workers	Exposure of workers to injury from falling trees, loose branches, use of equipment/machineries Exposure to excessive levels from machineries	Train workers in the safe use of equipment, work group coordination and safety measure Maintained equipment with necessary safety devices (e.g. blade guards on saws); Provide workers with all necessary personal protective equipment (e.g. gloves, footwear, protective clothing, helmets, earplugs) Provide on-site first aid equipment and trained personnel should be available, as well as procedures for emergency evacuation.	DFO, Tarayana

Table 11: Anticipated Environmental Impacts and Mitigation Measures under output three

Activities	Potential Environmental Impacts	Causes of impact	Recommended Mitigation Measures	Responsible Agency
Output III, WP 1 Promote human wildlife coexistence (HWC)				
<i>NEGATIVE ENVIRONMENTAL IMPACTS – not foreseen</i>				
<i>NEGATIVE SOCIAL IMPACTS</i>				
Installation of electric fencing, sound and other wild life repelling devices in the farmlands	Community safety	Accidents from electric shocks	Inform resident communities about the risks from electric shocks and implication pertaining to electric fencing.	DFO
Output III, WP 2; Secure water resources for communities				
<i>NEGATIVE ENVIRONMENTAL IMPACTS</i>				
Water storage & distribution system in 20 communities – water tanks	Erosion and loss of biodiversity and topsoil	Site disturbances from construction of ferro cement tanks	Erect local retention walls such as gabions (rectangular wire baskets of rocks), cribs (interlocking grid of wood or concrete beams, filled with earth or rock), or other types of wooden barricades and gridwork, against slopes Land clearing activities should be minimized by removing vegetative cover only from the specific site on which construction is to take place Scraped topsoil should be used immediately for plantation	DFO
Water storage & distribution system in 20 communities – water conveyance structures	Erosion and loss of biodiversity and topsoil	Site disturbances from construction of minor support structures for water conveyance	Avoid sensitive alignments, such steep hillsides and ecological sensitive areas Install slope protection; plant trees in slide prone areas	DFO, Tarayana
Protection and management of springs and wetland in 10 sites	Disruption in water balance	Use of unsuitable tree species for plantations in the catchment	Assess appropriateness of species in terms of biodiversity, water efficiency, forest fire, local needs, cultural sensitivity, survival, etc. for plantation in water source points	DFO, Tarayana

Activities	Potential Environmental Impacts	Causes of impact	Recommended Mitigation Measures	Responsible Agency
			Assess hydrological regimes	
Water source protection - fencing	Constrain access to water points by wild life	Fencing of water points	Built natural material based water holes outside fenced areas to provide access to water for wild animals	DFO, Tarayana
	Injury to moving wildlife	Fencing of water source areas with barbed wires	Fence with wire mesh instead of barbed wire	Nursery in-charge
	Disruption in water balance	Use of unsuitable tree species for plantations in the catchment	Assess species in terms of biodiversity, water efficiency, forest fire, local needs, cultural sensitivity, survival, etc. for plantation in water source points	DFO, Tarayana
NEGATIVE SOCIAL IMPACTS				
Water storage & distribution system in 20 communities – water tanks	Land use conflicts	Siting of structures	Ensure all minor construction related activities are not located on private land Seek community clearance for siting of water tanks	DFO, Tarayana
	Impact on cultural resources and artefacts	Site selected for installation might affect cultural sites of local importance	Avoid areas where there are cultural sites of national importance Apply screening checklist to ensure that the selected site does not affect cultural resources of local significance If cultural resources are identified, select another site for installation If cultural resources are present within 100 meters of the identified site, select another site for installation or seek clearance from the Department of Culture.	DFO, Tarayana
Protection and management of springs and wetland in 10 sites	Disruption in water balance	Use of unsuitable tree species for plantations in the catchment	Assess appropriateness of species in terms of biodiversity, water efficiency, forest fire, local needs, cultural sensitivity,	DFO, Tarayana

Activities	Potential Environmental Impacts	Causes of impact	Recommended Mitigation Measures	Responsible Agency
			survival, etc. for plantation in water source points Assess hydrological regimes	
PES Initiatives	Conflicts on rights, revenue and management responsibilities	Lack of stakeholders; understanding of the scheme management	Involve users and beneficiaries of ecosystem services in schemes for payments for those ecosystem services and promote local schemes in addition to policy makers	PES beneficiaries Local community Local Government

To address and implement these mitigation measures concerns, the project will comply with the relevant laws, policies, and regulations of RGoB and IFC's performance standards. The anticipated negative impacts of the project activities and its mitigation measures will be updated by the field implementing partners with support from the SGE upon finalization of the project activities and locations. The update will also include positive impact of each activity and measures on how to upscale such measures in the long term.

Land needed for this project would primarily be for the construction of ecotourism facilities, drinking water reservoirs, and development of nursery enterprises. These locations will normally be far from settlement and therefore, would not likely involve private registered land. Such locations should be sited on available Government land as per the procedures described in the Land Act, 2007 and the Land Rules and Regulations, 2007 and in accordance with "use rights" for such land issued by the National Land Commission. All agreements or clearances involved in the process for acquiring the land needs to be documented and recorded. The project will not finance such facilities sited on private lands to ensure that there is no incidence of land acquisition of resettlement arising due to the project activities. Further, the intention of the project is to enable implementation of sustainable natural resource management in areas without legal protection and secure the ecological connectivity of biodiversity hotspots across these landscapes of high conservation value which pertain to state land that lie beyond the PA system not the individually registered private land. In the Bhutanese legal context, state land and forest land are synonymous since any state land or land not registered in any individual rights is considered state forest land.

6. ENVIRONMENTAL AND SOCIAL IMPACT MANAGEMENT

6.1 Procedure for Managing Environmental and Social Impacts

The procedure for managing environmental and social impacts related to the project activities will include the following steps that will also include seeking Free and Prior Informed Consent (FPIC) from affected communities or parties and preparation of activity specific ‘Environment and Social Management Plan’ (ESMP), where necessary.

- Step 1: Project activity eligibility screening
- Step 2: Project activity screening for potential environmental and social impacts and determination of safeguards required according to RGOB regulations and IFC Standards;
- Step 3: Development of ESMP that includes mitigation measures/good practices at project activity level if required as per the screening exercise
- Step 4: Application and seeking approval for Environment Clearance (EC)
- Step 5: Consultation, Disclosure, Awareness Raising and Dissemination
- Step 6: Implementation and Monitoring

These steps will entail the following;

Step 1: Project activity Eligibility Screening: Basic information about the project-specific activity, its specifications and exact activity sites will be compiled and screened for eligibility by using the formats presented in part one and two of the screening tool presented in Annex 4. Part 1 of this form comprises of basic information about the project; Part 2 contains location information and is considered as pre-screening or eligibility. If any of the aspects in this part is applicable or is considered “Yes”, the activity will be deemed ineligible and the project or the implementing entity should consider changing the site/location of the activity. The eligibility screening process should be repeated till all aspects included in the format are favourable to be eligible.

Project activities that relate to the following negative list will not be considered for financing under the IKI project.

1. Activities that involve procurement or use of any pesticides categorized IA, IB, or II by the World Health Organization.
2. Introduction of exotic species unless certified by NPPC and BAFRA
3. Activities requiring physical displacement of persons from their homes or legal businesses
4. Activities that involve permanent acquisition of private land for project activities
5. Activities that involve clear felling of trees or mining in critical watershed areas

Step 2: Project screening to determine need for an Environmental Clearance: Upon assessing that an activity is deemed eligible for support under the project, an environmental screening procedure will be carried out in accordance to the screening procedures and guidelines annexed to the Regulation for Issuance of EC, 2002 (available at NECS website www.NECS.gov.bt). During this phase, the project implementing entities will identify details

of project activities and sites based on which screening of specific sub-component sites will be carried out to determine the applicability of RGOB laws and regulations, World Bank safeguard policies and the corresponding safeguard requirements as well as opportunities for sustainability enhancement. The screening will use the screening format provided in Annex 7, Part 3.

Specifically, the screening exercise will:

- Identify potential (physical, biological, social, cultural) issues specific to the area (in and around the site) and sub-component.
- Identify the need for additional land, and possible impacts on livelihoods due to land acquisition either from public or private land
- Identify whether or not there are vulnerable groups in the area requiring special attention
- Identify the need to obtain any regulatory clearances such as from local communities, local government or other institutions for specific purposes. A tentative list of possible clearance required is presented in Table 4.
- Establish the need to carry out any further investigation/survey/ assessment for preparation of safeguard document like IEE, ESMPs or any specific study.

The screening format should be completed by the implementing agency and reviewed by the NECS or the Competent Authority. Environmental clearances will be issued based on the screening application. The terms and conditions reflected in the environment clearance will have to be implemented as safeguard measures.

Step 3: Preparation of Environment and Social Management Plans (ESMP): The potential project impacts and proposed mitigation measures described in the ESMF are indicative. Therefore, during the preparation of the detailed design of each activity, an impact assessment using the IEE form (IEE form attached in Annex 5) will be used, and if required, a more comprehensive Environment and Social Impact Assessment (ESIA) will also be carried out. Based on the conclusion from the screening, the project activity will be considered eligible. An eligible activity will then be subjected to either an IEE or an EIA. As a project categorized as *safeguards category B*, it is not foreseen that the project activities will have to undertake an EIA. Hence an IEE must be carried out for each project activity and an ESMP must be prepared if required based on the IEE (Format for IEE is presented in Annex 5). Submission of the IEE form and the ESMP (if required) to the competent authority or the NECS, whichever is relevant, will result in issuance of the Environmental Clearance for the project activity.

The preparation of the ESMP will be done by the implementing agency of the project from the RGOB financing in the case of DFOs and through the project support in the case of the Tarayana Foundation. In case the need arises to hire an external consultant for the preparation of the ESMP and its implementation, the Terms of Reference for the consultant will be approved by the NECS/CA.

The Environmental and Social Management Plan (ESMP) describes mitigation measures/good practices at activity level if required as per the screening protocol. Prior to submission IEE for Environmental Clearance, and after availing the necessary clearances, an ESMP should be prepared hand in hand with preparing the IEE.

The ESMP will include:

- The environmental and social management objective to be realized prior, during and after the implementation of the project activity to enhance benefits and minimize adverse environmental impacts.
- Description of the detailed actions needed to achieve these objectives (how, by whom, by when, with what resources, with what monitoring/verification mechanism they will be achieved and target or performance level). Mechanisms will also be provided to address changes in the project implementation, emergencies or unexpected events, and the associated approval processes.
- Clarification of institutional structures, roles, communication and reporting processes required.
- Description of the link between the ESMP and associated legal requirements.
- Description of requirements for record keeping, reporting, review, auditing and updating of the ESMP.

Therefore, an ESMP should include environment management and mitigation measures during pre, implementation and closing phases of each activity that require an ESMP. Hence it should contain description of the detailed actions needed to achieve safeguards, including how they will be achieved, by whom, by when, resources and monitoring/verification requirements, and to what target or performance level. Mechanisms must also be provided to address changes in the project implementation, emergencies or unexpected events, and the associated approval processes. It should include institutional structures, roles, communication and reporting processes required as part of the implementation. It should also include link between the ESMP and associated policy and legal requirements as well as record keeping, reporting, review, auditing and updating of the ESMP. The ESMP structure should comprise of the following elements;

- a. Introduction:** Describing linkage with overall planning process of the project; project activity related environmental studies; the ESMF and objectives of the ESMP.
- b. Project description:** Objective and description of activities, nature and scope of the project (location with map, construction and/or operation processes, equipment to be used, site facilities and workers and their camps; bill of quantities if civil works are involved, activity schedule)
- c. Baseline data:** Key environmental information or measurements such as topography, land use and water use, soil types, flow of water, and water quality/pollution.
- d. Potential impacts and mitigation measures:** Description of specific activity impacts and corresponding mitigation measures referring to existing Environmental Code of Practices (ECOP), if available.
- e. Monitoring:** Environmental and social compliance monitoring with responsibilities
- f. ESMP Implementation arrangements:** Responsibilities for design, bidding and contracts where relevant, monitoring, reporting, recording and auditing.
- g. Capacity Need and Budget:** Capacity needed for the implementation of the ESMP and cost estimates for implementation of the ESMP

h. Consultation and Disclosure Mechanisms: Timeline and format of disclosure

i. A stakeholder engagement plan

In order to ensure that the issues of all stakeholders are taken on board in an inclusive manner, the planning process for the project activities in general and of ESMP in particular should include a stakeholder engagement plan that defines the following;

Table 12: Stakeholder engagement plan template

Stakeholders Identification	Who are the Stakeholders - Create a list of relevant stakeholders of the particular activity
Level of Engagement	Identify the level of engagement (e.g. inform, consult, collaborate, empower – Note that an inclusive engagement process be adopted to enable engagement of men, women, youth, elderly, vulnerable groups)
Proposed method of engagement	Method of engagement to be used (workshops, forums, meetings)
Timing and Logistics	Timing issues or requirements (At what stage of activity planning and implementation will such engagements be made. Winter season is considered as best time for community consultations due to lean farming activities in winter)
Identify Resources needed	Resources needed to conduct the engagement process
Responsibility	Who is responsible for engagement
Identify Key messages to communicate	What are the key messages to be conveyed to during the stakeholder consultations
Managing Risk	What are the risks associated with the engagement and how should such risks be mitigated or managed

Step 4: Application for Environment Clearance to NECS/ CA and Review:

As indicated in Chapter 5, the project is unlikely to have adverse impacts that are sensitive, diverse, or unprecedented. Mitigations for the likely adverse impacts can be designed readily. However, as per the Environment Assessment Act (EAA) 2000, it is mandatory for all activities to seek EC except for those mentioned in the list of activities exempted from requiring EC (List B of Annex 3 of EAA 2000). Respective implementing agency will be responsible for the preparation of the sub-component level screening and ESMP/ IEE as required. Upon availing of all clearances related to the sites and specifications, the implementing agency will seek Environmental Clearance from the NECS or CA. The procedures for applying for environmental clearances and development consent are different for the different sub-components. This can be accessed at www.nec.gov.bt from the List of Activities that the Competent Authorities shall Screen and Issue Environmental Clearance and List of activities not requiring Environmental Clearance 2016.

The NECS is the highest decision-making and coordinating body on all matters relating to the protection, conservation and improvement of the natural environment. Respective ministries of the Government are the final authority for social issues that pertain to their mandate. The

NECS has also delegated authority to issue EC for selected activities to technical authorities of the Dzongkhag Environment Committee. However, prior to the issuance of EC by CA or the NECS, clearances from other concerned agencies or communities will need to be sought and attached along with the application for EC. The field implementing entities have the responsibility to coordinate with relevant stakeholders and to seek required clearances.

Step 5: Consultation and Disclosure: Prior to the initiation of project activities the relevant stakeholders and affected communities will be informed about the ESMF requirements and the need for internalizing the environmental and social issues in the design and implementation of the project activities. Activity specific ESMPs should be developed in accordance with this ESMF and upon conduct of local consultations. These consultations will adopt the principle of “Free, prior and Informed Consent”. Details on consultations and information disclosure are included in Section 7.3.3 and section 11 respectively.

Step 6: Implementation and Monitoring: The DoFPS DHMS the Tarayana Foundation (depending on the ownership of field implementation of project activities) have the overall responsibility for ensuring that environmental and social issues are adequately addressed within the concerned project activity.

The ESMF implementation requires detailed supervision, monitoring and reporting. All the field implementing agencies (DFOs and the Tarayana Foundation) will have a focal person for Environmental and Social Safeguards for their component. This person will be responsible for the management of environment and social safeguards for preparation, implementation, monitoring and reporting on safeguards management plans and compliance with technical support from the Safeguards & Gender Expert at the Programme Management Unit, WWF Bhutan.

Preparation: Preparation of the IEE or the ESMP will be the responsibility of the field implementing agency and the Focal Person will ensure that the preparation takes place on time and provide coordination with relevant stakeholders as may be required.

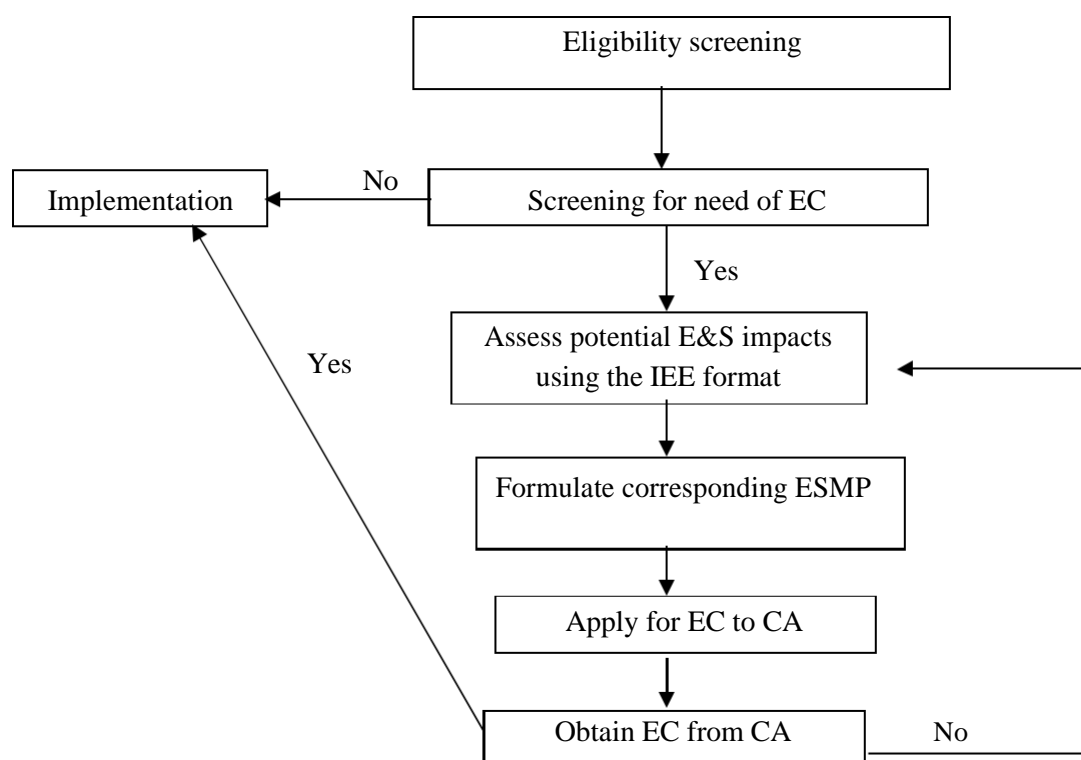
Implementation and Supervision: The implementation of the safeguards will be the responsibility of the hired contractor or consultant in the case of minor construction works; that of the component management (procurement officer of the concerned organization) in the case of procurement of equipment; that of the engineers and architects in the case of structural design. The implementing agency’s Focal Persons are responsible for the supervision of the activities detailed in the project activities as well as the ESMF, and ensure that safeguards measures identified in the ESMF, EC or IEE are implemented. The SGE at the Programme Management Unit, WWF Bhutan will support the agency focal persons for this purpose.

Reporting: The agency focal persons with support from the SGE at the Programme Management Unit, will provide semi-annual progress report on the progress of safeguards implementation to the Project Coordinator for submission to the PAC. A half yearly report will be submitted to the PAC and an annual report will be submitted to the CA or NECS by the Project Coordinator.

Monitoring: Monitoring of the safeguards compliance will be done by the Competent Authority or the NECS periodically. The monitoring reports by the authority will be provided to the implementing agencies for follow up actions. Based on the quarterly reporting by the

implementing agencies and feedback from the monitoring reports (applicable after receiving feedback from CA), the Project Coordinator with support from the implementing agency focal persons and the Safeguards & Gender Expert will prepare the reports required to be submitted to the PAC, CA/NECS and the WWF, Germany highlighting any major social and/or environmental issues. The WWF may visit project sites during mission visits of the project and provide technical advice on way forward on highlighted issues. Details of Implementation and Monitoring arrangements are presented in section.

Figure 3: Steps for Managing Social and Environmental Issues



6.2 Chance Find Procedure

The Moveable Cultural Property act of Bhutan, 2005 requires that any items considered to be Valuable Cultural Property and are discovered during the construction of roads or buildings or any other related works, discovery shall be immediately reported to the Department of Culture through the concerned Dzongkhag. However, no accepted procedure for Chance Find in is in place within the RGOB policy and regulatory framework. Hence, a “chance find procedure” is suggested.

Table 13: Chance Find Procedure for the project

Mitigation/Monitoring Action	Responsibility	Schedule
i) If operating machinery or equipment: stop work ii) Identify the site with flag tape iii) Determine GPS position if possible iv) Report findings to the site in charge	Person who comes across archaeological or heritage material	As and when observed
v) Report findings, site location and actions taken to the DFO Management vi) Hold any works in immediate vicinity	Site In-charge	As and when reported by the person who has observed archaeological or heritage material
vii) Site and determine whether work can proceed without damage to findings viii) Determine and mark exclusion boundary ix) Site location on the map and add other of the place for field confirmation by archaeologist or cultural experts from the Dzongkhag	CFO of concerned DFO	As soon as the report by the Site In-charge
x) Inspect the site with Dzongdag, Concerned Gup and Dzongkhag Cultural Office; xi) Confirm additional information and location on the map xii) Advise the Dzongkhag Culture Officer and request written permission	Archaeologist, Dzongdag, Gup/Dzongkhag Culture Officer, CFO	As soon as the confirmation by archaeologist
xiii) Report to the Department of Culture	Dzongdag	

6.2 Community Consultations and Free and Prior Informed Consent

During the consultation held with the DFOs in the process for preparation of the ESMF, it emerged that the project activities are not likely to result in any adverse environmental or social impacts. Due to the inclusion of a negative list under step 1 of section 7.2 the project activities will also not bear any impact on individual or community livelihoods. However, it was felt that the project activities may result in minor restrictions to access or use of natural resources when High Conservation Areas (HCV) are delineated, and integrated conservation activities are implemented. These restrictions could arise in the form for limitations to accessing natural resources such as grazing, timber and non-timber resources. Depending on the nature of rights that may be subjected to restrictions, the concerned entities should be consulted, and Free and Prior Informed Consent must be solicited by the project implementing partners before implementation of the project activities. These right-holders or their representatives should be included in participatory processes of the project activities and in seeking consent in the use of such resources for project activities.

The RGoB policies as well as the IFC PS standards require Free and Prior Informed Consent (FPIC) prior to design and implementation of activities at a particular location, there is no fixed format of pursuing the FPIC. Hence the ESMF also suggest a format for seeking FPIC. The assessment of impacts and mitigation measures for actual site-specific activities must be done through a participatory manner including the right-holders of natural resources or their representatives in the project activity location through which the project;

- Receives input/feedback of local beneficiaries to design of project activities, including their concerns and recommendations;
- Ensures free expression of views of the disadvantaged group prior to general public consultations and provide them with culturally appropriate benefits,
- Addresses issues of concern by other stakeholders, and
- Identifies specific actions to mitigate negative impacts in addition to those identified in the anticipated environmental and social impacts in tables 1,2 and 3.

When faced with decisions on location and type of activities pertaining to the project activities, communities have rights that must be respected by government and by stakeholders related to the project activities. The Free and Prior Informed Consent (FPIC) process framework includes participation by communities in setting the terms and conditions that address the economic, social and environmental impacts of the project. It enables people to determine the outcome of decision-making that affects them. Hence, this FPIC process is expected to help the affected communities to protect their rights to property, culture, religion, livelihood, health and physical wellbeing. For implementation of project activities that affect the community resources directly or indirectly, FPIC process has to be initiated. The FPIC can be initiated based on the traditional rights, right holders and representation of rights presented in the table in earlier section.

No Objection certificate from various departments and others relevant stakeholders, a practice within the Bhutanese environment clearance process, constitute the consent of clearance from affected stakeholders or agencies. In order to enable this consent to be free and prior informed, the full content of the screening format should be explained to the affected communities and stakeholders. While the affected departmental agencies may provide written consent based from their authorized agencies, the community consent should be routed through the following process.

Table 14: Process of Free & Prior Informed Consent

Resource Types	Initial contact	Mechanism used	Final Consent Provider
Community Forests	Gup of the Gewog who intimates to the Chair of the CF Group	Formal Consultation within the CF Executive or the full membership based on impacts described in the Screening Format. Decision of the CF group intimated to the Gup.	Gup issues the Free and Prior Informed Consent of the affected community
NWFP areas	Gup of the Gewog who intimates to the Chair of the NWFP Group	Formal Consultation within the NWFP Executive or the full membership based on impacts described in the Screening Format. Decision of the NWFP group intimated to the Gup.	Gup issues the Free and Prior Informed Consent of the affected community
Community Land	Gup of the Gewog who intimates to the Tshogpa of the concerned community	Tshogpa initiates formal consultation with the community members based on impacts described in the Screening Format. Decision of the community intimated to the Gup by the Tshogpa	Gup issues the Free and Prior Informed Consent of the affected community
Rights of ways (traditional routes and water ways)	Gup of the Gewog who intimates to the Tshogpa of the concerned community	Tshogpa initiates formal consultation with the community members based on impacts described in the Screening Format. Decision of the community intimated to the Gup by the Tshogpa	Gup issues the Free and Prior Informed Consent of the affected community upon validation from neighbouring Gups whose communities may have a stake in the right of ways
Sacred Sites or cultural heritages	Gup of the Gewog who intimates to the Tshogpa of the concerned community	Tshogpa initiates formal consultation with the community members based on impacts described in the Screening Format. Decision of the community intimated to the Gup by the Tshogpa	Gup issues the Free and Prior Informed Consent of the affected community upon validation from neighbouring Gups whose communities may have a stake in the sacred sites. The implementing agency submits screening format and community FPIC to the Dzongkhag Cultural Officer and seeks clearance from the Department of Culture

7. INSTITUTIONAL ARRANGEMENT FOR ESMF IMPLEMENTATION

7.1 Institutional Arrangement

The project will be managed by the WWF, Bhutan Program with the assistance from and directions provided by a Project Advisory Committee (PAC) comprising of representatives from the GNHC, MoAF, the Tarayana Foundation, WWF Bhutan and WWF Germany.

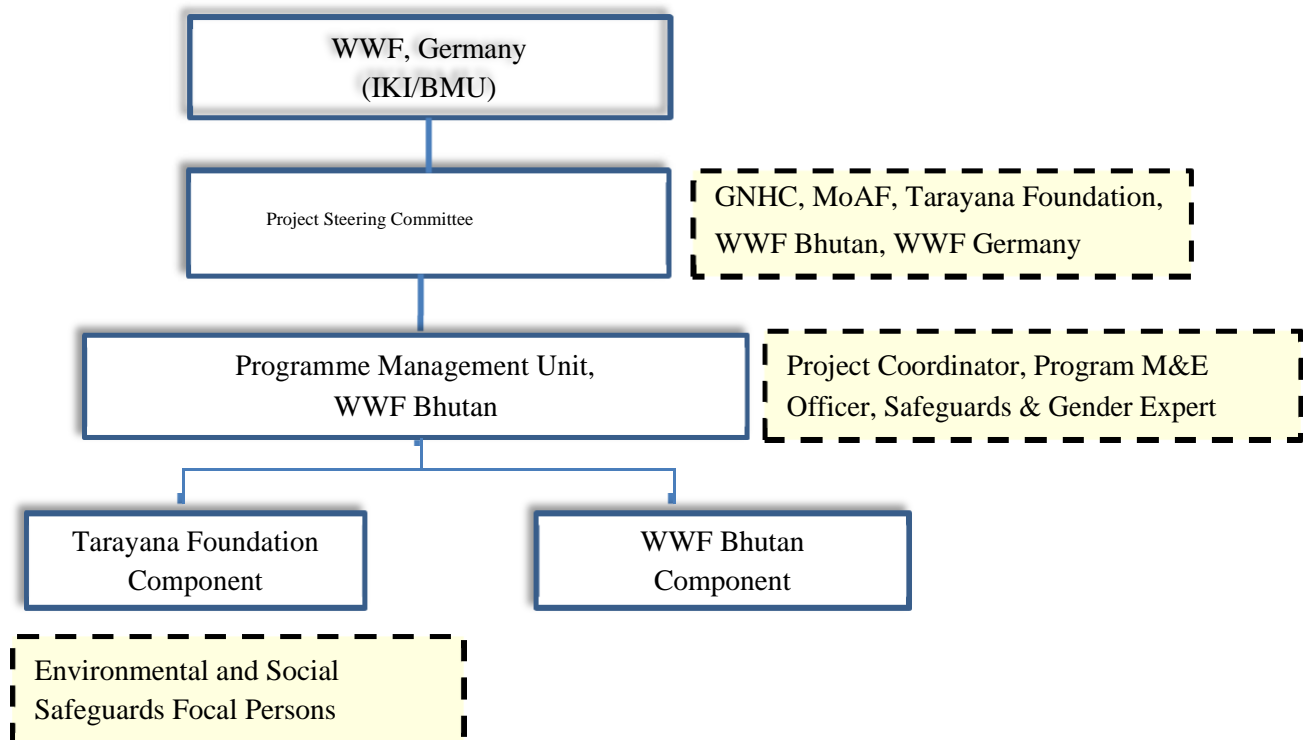
The WWF Bhutan shall create a Programme Management Unit (PMU) within the ambit of its management comprising of a Project Coordinator (PC), a Program M&E Officer (PMEO) and a Safeguards & Gender Expert (SGE). For other administrative and financial service functions, the PMU shall draw on the overall administrative and financial service of the WWF Bhutan office. Therefore, the project will follow financial, procurement and management norms of the WWF. Due to this arrangement, overall implementation of the ESMF and all safeguards-related obligations will rest with the WWF, Bhutan Program while field implementation and compliance will rest with the concerned field implementing partners through the coordination of the PMU.

The implementation of specific project activities will be carried out through the respective DFOs for work packages under output one and two and through the Tarayana Foundation Field offices for work packages under output 4. The DFOs and the Tarayana Foundation will be responsible for implementation and compliance to all procedures related to environmental and social screening (eligibility), preparation of ESMPs for specific field activities as and when required, and monitoring compliance with conditions set out in the RGoB's environment clearance and/or the project's ESMF and/or ESMPs. They will also be responsible to obtain all required clearances, permits, approvals, or consent documents from relevant authorities and stakeholders. The DFOs and the Tarayana Field Offices will work in collaboration with local governments and administrations on all matters related to local development. These include relevant Dzongkhag Administrations and the elected representatives of the Gewog Administrations. The Gewog Administrations' Gup, Mangmi and Tshogpa or the Chairperson of the CFs and NWFP groups are the direct link with local communities. The Tshogpas represent each community, Mangmi represent several communities and the Gup represent the whole Gewog population while the chairpersons of farmer groups represent the registered community members of the concerned farmer group. Therefore, the field implementing partners will work closely and coordinate with these stakeholders for implementation of the ESMP.

The PMU at WWF, Bhutan shall maintain safeguard documents for all activities as well as monitor compliance with ESMF and with ESMP where necessary. It is recommended that compliance to this ESMF and ESMPs is linked to disbursement of funds from the PMU to the implementing partners. The DFOs and the Tarayana Field Offices will arrange for environment assessment including process screening (eligibility), Initial Environmental Examination (IEE) and preparation of Environment and Social Management Plan (ESMP) for specific field activities when required and ensure compliance to conditions set forth in the environment clearance and/or ESMPs. They will also be responsible for obtaining required clearances permits/consents from relevant authorities, stakeholders and CAs.

Therefore, reporting on the ESMF implementation will originate from the field implementing partners with quarterly report from the Environmental and Social Safeguards Focal Persons to the SGE at the PMU (See Figure 3).

Figure 4: ESMF reporting linkage of IKI Project



The SGE at the PMU will submit semi-annual progress on implementation of the ESMF to PAC through the PC and the PAC shall submit annual report on the progress of ESMF implementation to the WWF, Germany. The submission of ESMF implementation progress to IKI will depend on the arrangement made between the WWF, Germany and the IKI.

The implementation of the ESMF will undergo an independent mid-term review (MTR) half way through the project in alignment with the MTR for the overall project and a terminal evaluation during the last year of the project.

The SGE will also submit ESMF compliance monitoring reports to the Competent Authorities (CAs) and to the NECs as per the terms and conditions mentioned in the environmental clearance for project activities.

To provide technical assistance and support the DFOs and its field offices, the SGE will support in environment assessment for all field specific activities, in preparation of ESMPs, in compliance monitoring and in reporting on overall safeguards to the PMU, CAs and to the NECs.

The DFOs and the Tarayana field offices will have to work in coordination with the concerned sectors of relevant Dzongkhag Administration and the elected representatives of the Gewog Administrations on all matters that relate to local development. The focal persons with assistance from the SGE will be responsible for:

- Seeking clearances and preparation of ESMPs
- Carrying out orientations of the ESMF and ESMPs at various levels
- Information dissemination to stakeholders
- Reporting and monitoring

7.2 ESMF Compliance Monitoring of Project Activities

The compliance of project activities with the ESMF will be monitored by various entities at different stages of preparation and implementation as follows.

Monitoring at the project level.

The overall responsibility for implementing the ESMF and for monitoring the compliance of the project's environmental safeguard activities lies with the PMU at WWF, Bhutan Program. The SGE at the PMU shall oversee implementation of field activities relating to ESMF and coordinate with the DFOs and the Tarayana Field offices on implementation of environment assessment comprising of screening (eligibility), IEE and preparation of ESMP for specific field activities when required. He/she will be responsible for overall monitoring of compliance and in reporting on overall safeguards to the Project Coordinator who will report to Competent Authorities, the NECs and to the PAC. The ESMF compliance monitoring will also include grievances that are reported through the Grievance Redress Mechanism (GRM) should also be monitored to track and resolve them. The grievance data should be analysed and evaluated to make policy and/or process changes to minimize similar grievances in the future. Record of each grievance that has been reported and its resolution must be recorded and reported in the progress reporting of project activities. The IKI will conduct supervision missions annually.

Monitoring at the field activity level:

Self-regulatory monitoring should be adopted by the concerned DFOs and the Tarayana field offices. Impacts and mitigation measures included in the ESMP/IEE and the terms and conditions included in the environment clearances must be taken care of during the implementation of individual field activities. Self-monitoring reports should be filed to the PMU on a quarterly basis and should be liable for ad-hoc inspection by the PMU, the CA or the NEC.

The DFOs and Tarayana field offices shall be responsible for supervision of environmental compliance by the service providers for the project activities, as and when they are involved or by the concerned communities as the case may be. Environmental and social mitigation measures carried out by these parties should be verified by the DFOs and the Tarayana field offices on a monthly basis and documented. Disbursements of project activity funds by the PMU should be linked to satisfactory compliance to ESMF or ESMP of specific activities. Hence disbursement of project funds should be signed off by the SGE.

Monitoring at the Competent Authority (CA) or NECS level:

NECS and/or CA are mandated for annual compliance monitoring, which is announced and pre-informed. They are also empowered for unannounced or spot-checking.

Compliance monitoring pertains to monitoring of compliance to the terms and policy and legal compliance requirements. The activity and location specific compliance are normally specified in the EC by the clearance issuing authority as terms and conditions of the EC. Hence, compliance monitoring will be done by the Competent Authority or the NECS.

In order to facilitate compliance monitoring, the PMU will submit an annual compliance report to the CA or the NECS or as per the timeline indicated in the terms and conditions indicated in the EC. The same report will also be submitted to the PAC by the PMU and upon acceptance by the PMU it should be submitted to WWF, Germany and IKI by WWF Bhutan. This compliance report will contain the number and name of the project activity for which EC has been issued; the terms and conditions mentioned in the EC and the status of implementation of these terms and conditions.

The CA or the NECS may conduct ad-hoc compliance monitoring visits to project sites to monitor compliance of the conditions specified in the EC and whether the implementation is as per existing environmental regulations and the provisions included in the ESMF. During such monitoring, the CA will issue recommendations or impose penalties as may be appropriate. The compliance monitoring format is presented in Annex 6. This will however be modified depending on the terms and conditions mentioned in the ECs.

8. GRIEVANCE REDRESS

8.1 Grievance Redress Mechanism (GRM) and Process for the project

Due to the large number of stakeholders, especially the communities living within the project landscape, a Grievance Redress Mechanism (GRM) that effectively collects and responds to stakeholders' inquiries, suggestions, concerns, and complaints is necessary. The GRM shall constitute an integral part of the project. It will deal with the project implementation issues and complaints of the concerned stakeholders and ensure accountability and responsiveness to such issues. It takes into account the availability of judicial recourse and customary dispute settlement mechanisms among the communities.

The GRM aims to provide people who suffer adverse impacts from the project activities an opportunity to be heard and assisted. Any affected party may file a complaint directly or through a representative with concrete evidence of authority to represent them. While anonymous complaints will not be considered, complainants can request confidentiality.

The Forest and Nature Conservation Act of Bhutan, 1995 and its Rules and Regulations, 2017 regulates the activities in the forests but it does not provide for any GRM processes other than statutory sanctions for violations with forest officers empowered to compound the forestry offences. The Constitution of Bhutan provides a Bhutanese citizen with duty to preserve, protect and respect the environment, culture and heritage of the nation. It is the principle of natural justice that a person has a right to fair hearing, which provides for the complaints of

the individual or communities affected by the project activities or have issues with it that warrants to be addressed through appropriate GRM process.

The objective of establishing GRM is to provide an effective and efficient mechanism for settlement of conflicts or grievances and to adopt measures to ensure an expeditious settlement of grievances relating to the project activities leading to effective implementation of the project. The GRM has been proposed based the following seven core principles to be adhered while dealing with grievances for its resolution.

1. ***Fairness:*** Grievances are assessed impartially and handled transparently.
2. ***Objectiveness and independence:*** The GRM operate independently of all interested parties in order to guarantee fair, objective, and impartial treatment to each case.
3. ***Simplicity and accessibility:*** Procedures to file grievances and seek action are simple enough that project beneficiaries can easily understand them.
4. ***Responsiveness and efficiency:*** The GRM is designed to be responsive to the needs of all complainants. Accordingly, officials handling grievances must be trained to take effective action upon, and respond quickly to, grievances and suggestions.
5. ***Speed and proportionality:*** All grievances, simple or complex, are addressed and resolved as quickly as possible. The action taken on the grievance or suggestion is swift, decisive, and constructive.
6. ***Participatory and social inclusion:*** A wide range of affected people- communities, vulnerable groups and project implementers- are encouraged to bring grievances and comments to the attention of authorities. Special attention is given to ensure that poor people and marginalized groups, including those with special needs, are able to access the GRM.
7. ***Accountability:*** Each grievance reported are, resolved or escalated to the next higher level till its resolution and proper records are maintained at each level. Progress reporting of project activities should include a reporting on grievance resolution.

It is in the interest of the project as well as the stakeholders involved for the smooth implementation of its activities. Hence, any issues, conflicts, or grievances arising out of project activities must be adequately addressed.

As per the Civil and Criminal Procedure Code of Bhutan, in the interest of the public, the parties on their discretion, are open to take help of local authorities such as *Gup*, *Chipon*, *Mangmi*, *Barmi* and others as mediators for settlement of a civil case at any stage of the proceedings and the Court will allow to such preference.

The Alternative Dispute Resolution Act of Bhutan, 2013 also recognizes the need to encourage alternative resolution of disputes through arbitration and negotiated settlement. The Act however, does not affect any provisions of the Local Government Act of Bhutan, 2009 and its rules and regulations recognizing the importance of local government's role in management and resolution of the disputes, grievances and issues of the local communities for protecting their health, safety and well-being.

Despite the efforts of the local authorities and the officials responsible for implementation of the project activities in addressing the grievances, if the affected parties are not satisfied with their decision, such grievances can be submitted to the PAC. In the event that the parties are not satisfied with the decision PAC, such grievances can then be forwarded to the Court of

Law for further adjudication. The GRM for the project, therefore, will comprise of the following process;

The formal GRM will be implemented through the following chain of process.



(1) Receipt and Register Grievances

Any grievances related to the project activities can be reported through the concerned Tshogpa, Gewog Administration, or other authorities for its resolution to the concerned DFO office or the Tarayana local office, as the case may be. The channel for grievances submission can be either personal submission or through mail, e-mail, telephone, project staff or text messaging/SMS. However, the Safeguards Focal Person of the DFO or Tarayana in the field or the GSE at PMU should record in writing after briefly reviewing the complaint.

Alternatively, any member of the staff of the DFOs areas or the Tarayana field offices associated with the project, its vendors/suppliers, other stakeholders and the public at large could also lodge complaints on the website of the WWF Bhutan. These complaints could relate to:

- a. Allegations of Fraud, Malpractices or Corruption by staff or other stakeholders in:
 - Day to day operations of the project
 - Projects/activities financed or implemented (including those in progress)
- b. Environmental and/or Social damages/harms caused by project activities financed or implemented (including those in progress) by IKI. These damages/harms could relate to:
 - Pollution prevention and resource efficiency
 - Significant negative impacts on public health, environment or culture
 - Destruction of natural habitats
 - Disproportionate impact on marginalized and vulnerable groups
 - Violation of applicable laws and regulations
 - Destruction of physical and cultural heritage
 - Or any other issues which result in non-compliance with applicable domestic and international law or practices.

While it would be preferable that the complainant, provide some contact details so that concerned authorities can contact the person for additional information, if required during investigation, complainants may choose not to provide such details.

(2) Sorting and Processing

It is anticipated that various types of grievances will be reported wherein different follow-up actions will be required. The grievances can be categorized into four types: (a) comments, suggestions, or queries; (b) complaints relating to non-performance of the project; (c) complaints referring to violations of law and/or corruption while implementing the project activities; (d) complaints against authorities, officials or community members involved in the project management; and (e) any complaints/issues not falling in the above categories. The

DFO and the Tarayana field offices as well as the SGE at PMU will maintain a record of complaints by the above categories as and when such grievances are received.

(3) Acknowledgment and Follow-up

When a complaint is made or the grievance is reported, the concerned DFO office or the Tarayana local office or the SGE at PMU receiving the complaint or grievances should acknowledge its receipt and should brief the complainant, informer or aggrieved/affected person about the grievance resolution process, provide contact details and, if possible, the name of the contact person who is responsible for handling the grievance.

(4) Verification, Investigation, and Action

All grievances should be reported to the DFO or the Tarayan Field Offices in the field or to the SGE at PMU, WWF, Bhutan Program. The concerned DFO office or the Tarayaana Office receiving the grievance should gather adequate information about the grievance reported to determine its validity and resolving the grievance. Grievances that are straightforward (such as queries and suggestions) can be resolved quickly by contacting the complainant. Grievances that cannot be resolved by grievance receiving authorities/office at their level should be referred to a higher level for verification and further investigation. The concerned authorities/offices dealing with investigation should ensure that the investigators are neutral and do not have any stake in the outcome of the investigation. The grievance redressal will be as follows:

- (a) If the DFO Office or the Tarayana field office receives the grievance from the aggrieved/affected individuals or communities, such office shall try to resolve grievances within 7 working days by negotiating and mediating between the affected parties if the grievance is of such nature that such office can resolve it. The field offices should also engage the local institutions of Tshogpa and Gup for such resolution if it is deemed appropriate. However, any grievances warranting sanctions for violation of statutes shall not be negotiated by the Tshogpa but rather inform the concerned authorities/offices empowered to impose such sanctions and such report should be copied to the PMU. In the event, the parties are not satisfied with the decision from such arrangements, the parties shall submit appeal to the PMU directly with copies to the Dzongdag of the concerned Dzongkhag and concerned DFO and Tarayana Office.
- (b) Upon receipt of grievance appeal the PMU shall refer the grievances to the Chairperson of the PAC shall verify and investigate, if necessary, and render its decision within 15 working days. In the event, the parties are not satisfied with the decision of the PAC, the parties shall submit appeal to the Ministry of Agriculture and Forests within 10 days from the date of decision.
- (c) Upon receipt of grievance appeal from the Dzongkhag, the Ministry of Agriculture and Forests shall refer the grievances to MoAF GRC consisting of: (1) Secretary MoAF as Chairperson; (2) Head, DoFPS; (3) Head, DoA; (3) Head, DoL; (4) Legal Officer; and (5) One DoFPS official as Member Secretary. The MoAF GRC shall verify and investigate, if necessary, the grievance and render its decision within 15 working days. The GRM of MoAF shall convey its resolution to the PMU. In the event, the parties are not satisfied with the decision of the Dzongkhag GRC, the parties can submit their grievances to the Court of Law for further adjudication as per Court procedure.

8.2 Monitoring and Evaluation

The grievances should be monitored to track and assess the extent to which progress is being made to resolve them. The grievance data can be analysed and evaluated to make policy and/or process changes to minimize similar grievances in the future. Record of each grievance submitted and its resolution should be considered as part of the progress reporting of the project activities.

9. CAPACITY BUILDING FOR ENVIRONMENTAL AND SOCIAL SAFEGUARDS

The DFOs would need technical support and capacity enhancement on the social safeguards while the Tarayana field offices would need such capacity for both environmental and social safeguards. To provide technical assistance and support the DFOs and the Tarayana field offices, a permanent but neutral Safeguards and Gender Expert is recommended to be recruited by the Project at the PMU. The expert will provide support to all DFOs and the Tarayana field office in terms of environment assessment for all field specific activities, preparation of ESMPs, monitoring of compliance and in reporting on overall safeguards to the PMU, Competent Authorities and to the NECs (See Annex 8 for ToR of the SGE).

One of the elements that contribute to environmental clearances and hence environmental and social safeguards is the community clearance. For informed consent to be achieved the issuance of community clearances should be based on a sound understanding of the impacts to the local environment and the communities (informed consent) before activities actually are implemented (prior consent). For this prior informed consent to happen, the representatives of the right holders should be fairly educated and trained in delivering prior informed consent. The representatives of the rights holders are mostly the Chair of CF or NWFP groups, Tshogpa and the Gup at the grassroots level. Therefore, the following areas of capacity have been recommended for the representatives of the rights holders at the grass roots level in the project areas;

- The Concept of HVCAs and how forest lands outside PAs and BCs will be managed
- Capacity for environmental and social impacts assessment
- Participatory decision-making process and facilitation
- Conflict resolution and management

10. DISCLOSURE

The stakeholders of the project and affected communities will be informed about the ESMF requirements and the need for internalizing the environmental and social requirements in the design and implementation of the project activities. The executive summary of the ESMF will be translated into Dzongkha and made available on the website of the MoAF, DoFPs as well as that of the WWF Bhutan, WWF Germany BMU. Also, the hard copies will be made available at the PMU at WWF, Bhutan office as well as the DFOs and Tarayana field offices who will take responsibility to conduct awareness session in their respective project areas.

During the implementation of the project, activity-specific mitigation plans including gender actions plans should be disclosed to all stakeholders, including affected communities and Civil Society Organizations (CSOs). Disclosure should occur in a manner that is meaningful

and understandable to the affected people for their consent. For this purpose, executive summary of mitigation plans- either ESMP or terms and conditions that come with environment clearance should be disclosed on DoFPS, Tarayana and the WWF web sites.

Table 15: Disclosure framework for ESMF related documents

Documents to be disclosed	Frequency	Where
Environment and Social Management Framework document	Once in the entire project cycle. Must remain on the website and other disclosure locations throughout the project period.	On the website of DoFPS, Tarayana and the WWF, Bhutan Program. Copies at the DFO offices and the Tarayana field offices and at the PMU
Environmental Assessment Reports/IEE	Once in the entire project cycle for every activity that requires and EA or an IEE. Must remain on the website and other disclosure locations throughout the project period.	On the website of DoFPS, Tarayana and the WWF, Bhutan Program. Copies at the DFO offices and the Tarayana field offices and at the PMU
Environmental Management Plan/s	Once in the entire project cycle for every activity that requires EMP. Must remain on the website and other disclosure locations throughout the project period.	On the website of DoFPS, Tarayana and the WWF, Bhutan Program. Copies at the DFO offices and the Tarayana field offices and at the PMU
ESMF – Quarterly Progress Report	Quarterly	PMU
Minutes of Formal Public Consultation Meetings	Within two weeks of meeting	On the web site of the DoFPS, Tarayana and the WWF, Bhutan Program
Grievance redressal process	Throughout the project cycle	On the website of DoFPS, Tarayana and the WWF, Bhutan Program. Copies at the DFO offices and the Tarayana field offices and at the PMU

11. BUDGET FOR ESMF IMPLEMENTATION

The ESMF implementation costs, including all costs related to personnel, capacity building, awareness and advocacy, compliance monitoring and impact evaluation is estimated at **EUR 269,721.00** (See Table 16 for details).

Table 16: Cost details for ESMF Implementation (EUR)

ACTIVITIES	TIMELINE	RESPONSIBILITIES	BUDGET (in EUR)
Activity 1: Recruit Safeguards and Gender Expert as part of the DFO (the SGE will operate based on the final ToR)	2020 - 2028	WWF Bhutan	163,584.00
Activity 2: Training on ESS categorization, process and management	By 2021	WWF Bhutan	18,767.00
Activity 3: Training on Environment and Social Safeguard standards and procedures	By 2022	WWF Bhutan	8,413.00
Activity 4: Awareness workshop on program ESMF	By 2022	WWF Bhutan	10,792.00
Activity 4: ESS compliance monitoring (annual)	2021 - 2028	WWF Bhutan and Tarayana Foundation	10,080.00
Activity 5: Development of site specific ESMPs	2022 - 2025	Divisional Forest Offices, Tarayana Foundation and WWF Bhutan	44,000.00
Activity 6: Evaluation of ESMF implementation (by an independent expert)	2028	WWF Bhutan	14,085.00
Total Budget			269,721.00

Annex 1: Environmental and Social Safeguards Categorization Memorandum

Project Title:	Date:
Project Location and salient physical characteristics relevant to the safeguard analysis: Project activities will be spread across 8 territorial s and the corresponding 8 Dzongkhags of Haa, Paro, Samtse, Chukha, Tsirang, Dagana and Zhemgang. The activities are spread across HCV landscapes and communities within these landscapes where the Tarayana Foundation has active presence (indicating that these communities are marginalized).	Project Categorization (A,B,C): B
Project Description: Output I: National level land use planning - Key institutional actors at the national level in Bhutan engage in an integrated planning approach, incorporating data on High Conservation Values (HCV) in planning processes across all sectors This output will seek to achieve two general goals: <ul style="list-style-type: none"> • The HCV framework adapted to Bhutan is endorsed by key stakeholders as can be indicated by National Interpretation guidelines for HCV • HCV framework is mainstreamed into national planning as can be indicated by HCV integrated into the sector 5-year-national plans at national level Major work packages that will be implemented as part of these output will include the following: <ul style="list-style-type: none"> • Establishment of an HCV framework for Bhutan and its integration into national planning by way of adapting the global HCV framework to Bhutan through an expert working group, development of a national interpretation guidelines of HCV, creating awareness on the HCF framework and its interpretation guidelines at national and local levels as well as seeking comments and endorsement of stakeholders followed by capacity building for application of the HCV framework in national planning processes. • Establish sound national monitoring system for HCV including a monitoring protocol with indicators, thresholds, methodology, roles and responsibilities. Capacity for collecting HCV monitoring data from the regional level and consolidation at the national level will be built at the UWICER through which HCV monitoring in districts outside the programme landscape will be replicated to non-project landscape districts and eventually throughout the country. • Improving institutional capacities and inter-sectoral coordination for HCV by way of feeding the HVC framework and experiences from the project's HCV sites into the national land use planning strategy and spatial planning process so that HCV is harmonized in the national land use planning process. Output II: Division Forest Offices (s) in the programme landscape have established holistic and climate smart management plans and have the technical and management capacity to implement these plans. This output focuses on identification of HCV sites in areas that fall within the jurisdiction of s of the programme landscape. Holistic and climate-smart management plans will be established in all s of the programme landscape including HCV sites. The project support will include building staff capacities of 's for implementing the holistic and climate-smart management plans and practical measures for biodiversity and ecosystem services	

conservation. Through this output, -----number of HCV sites will be identified and appropriate measures adopted to manage the HCV sites----within -----s upon approval of their holistic and climate smart pilot management plans by DOFPS.

Major work packages under this output will include:

- Identification of HCV sites in s of the programme landscape according to the national interpretation of the HCV framework inclusive of gap analysis and baseline assessment as well as review of HCV sites after four years.
Establishment of holistic and climate-smart management plans including HCV sites in all s of the programme landscape. The project support under this output will include development of common guidelines for developing holistic and climate-smart management plans at level including, climate vulnerability assessments, valuation of ecosystem services at the level of and drafting of holistic management plans for all s using data generated from the assessments and based on the guidelines. The management plans will include activities on reduced impact of logging in FMUs, forest fire management, key biodiversity areas, critical wetlands, culturally relevant ecosystems and ecosystem services as well as activities related to managing pests and disease including invasive species. All such plans will be subjected to approval by DoFPS upon stakeholder consultations and their endorsement.
- Building staff capacities of 's for implementing the holistic and climate-smart management plan based on a training needs assessment and in accordance with a capacity building action plan designed and developed centrally within UWICER. The areas of trainings could include biodiversity and ecosystem services assessments, community engagement, monitoring, ESMF requirements, smart patrolling, HCV identification and management and other relevant trainings as identified by the needs assessment. Institutional partnerships between UWICER and universities research institutes from abroad to ensure trainings continue beyond the programme will also be supported by the project.
- Implementation of practical measures for biodiversity conservation and ecosystem services together with s based on the technical needs assessments of s. Immediate and practical activities that the s will implement upon needs assessment could include support to biodiversity protection across all s in the programme landscape and will comprising of improved nursery standards in community forests, SMART patrolling, culture and ecotourism development, management of NTFP in community forests, watershed management, forest fire management and other activities of relevance identified by the needs assessment. After endorsement of the holistic management plans, pilot activities will be implemented to facilitate the implementation of the management plans.

Output III: Local communities in the landscape benefit from reduced Human Wildlife Conflict, environmentally friendly livelihood strategies and pilots for alternative income schemes

This output focuses on promoting environment friendly livelihood opportunities to local communities including interventions related to human wildlife coexistence, securing water resources for local communities, development and implementation environment friendly livelihood strategies together with communities and on creating environment friendly community-based business cases for alternative incomes. It will bring about a number of

community-based PES schemes, community implemented environment friendly livelihood strategies such as SAFE systems, fresh water harvesting schemes, and community-based environment friendly business enterprises within the landscape.

Major work packages under this output will include:

- Promoting human wildlife coexistence and reduced HWC by developing SAFE strategy for human wildlife conflict intervention in at least two Gewogs per district based on identification of HWC hotspots at the district level and rapid assessment of HWC at Gewog levels.
- Securing water resources for local communities by implementing water source protection, spring shed and wetland management activities, water harvesting, storage and distribution facilities as well as formation and strengthening of water user groups in selected communities. These activities will be identified and sited based on rapid assessment on critical water sources and their status at community levels, develop an intervention strategy for water resource management. Where feasible and relevant opportunities for water related PES schemes will be explored and implemented. Lessons learnt and good practices from these activities will be monitored and documented and for upscaling and knowledge sharing.
- Development and implementation of environmentally friendly livelihood strategies together with communities which will include identification of communities, assessment of natural resources base of selected communities and assessment of potentials for environmentally friendly livelihood options. The project will support implementation of identified options within the selected communities. These options, amongst others, will include sustainable land management practices, selection and promotion of appropriate crops that are resilient to climate change and HWC risks, sustainable harvesting of NTFPs, sustainable pasture development and supporting enterprises based on natural resources based local indigenous knowledge. The project support will include monitoring, control and abatement of invasive plants species in the project landscape.
- Creation of environment friendly community-based business cases for alternative incomes by business plans together with communities and supporting actual implementation of the business plans. Activities under this will include assessment of potentials for sustainable environment friendly community-based business enterprises based on value chain analysis of sustainable management guidelines for community-based enterprise development, business plan development and support to implementation of the business plans. The enterprises that will be supported by the project will include community or privately initiated NTFP based products (such as daphne, nettle, bamboo, dyes), ecotourism enterprises (such as trekking, fly fishing, home stays, etc.) and new enterprises which have potentials. In addition to assessment and supporting actual establishment of potential enterprises, the project will support capacity of development of communities on business development and management as well as on accessing markets.
- Lessons learnt and good practices from these activities will be monitored and documented and for upscaling and knowledge sharing.

IFC Performance Standards Triggered	Yes	No
PS 1: Social and Environmental Assessment and Management System		X
PS 2: Labour and Working Conditions	X	
PS 3: Pollution Prevention and Abatement	X	
PS 4: Community Health, Safety and Security	X	
PS 5: Land Acquisition and Involuntary Resettlement		X
PS 6: Biodiversity Conservation and Sustainable Natural Resource Management	X	
PS 7: Indigenous Peoples		X
PS 8: Cultural Heritage	X	
Summary of Key Safeguard Issues: The project risks are expected to be predictable, low in magnitude, site specific and temporary and/or reversible in nature with low probability of serious adverse effects to environment and on the social conditions of the project areas or project stakeholders.		
Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area: The project expects to achieve ecological connectivity of living landscapes of high conservation value and climate resilience of forest and freshwater ecosystems as its long-term impact of project interventions in the project areas, which will be both environmentally and socially positive.		
Required actions: An Environment Social Management Framework will be prepared before project concept finalization.	<hr/> Nidup Peljor Independent Safeguards Expert	
	<hr/> Tashi Jamstho, Director, WWF	

Annex 2: ESS categorization by respective IFC standards

<p>A) PS 2 – Labor and Working Conditions</p>	<p>Potential risky activities (including contributing factors such as location, associated activities)</p> <ul style="list-style-type: none"> Resource assessments, surveys could expose workers to occupational safety issues to harsh field conditions. This can be resolved through supply of appropriate personnel protection gears and field gears. Establishment of nurseries in Community Forest and NWFPs areas to improve nursery standards could expose workers to occupational health and safety hazards. This can be resolved by supplying personnel protection gears and by following Regulation on Occupational Health, Safety and Welfare of Bhutan, 2012 and the preventive and protective measures that are specified in the IFC Occupational Health and Safety Guidelines (see www.ifc.org/ehsguidelines) Pilot activities on reduced impact logging in FMUs could expose staff and workers to work hazards and mechanical accidents. This can be mitigated or intervened through training of workers on safety measures, maintenance of equipment with necessary safety devices (e.g. blade guards on saws), personal protective equipment (e.g. gloves, footwear, protective clothing, helmets, earplugs), on-site first aid equipment and implementation of procedures for emergency evacuation <p>Significance of Risk The risks foreseen are temporary, site specific and manageable categorized as B</p>
<p>B) PS 3 – Resource Efficiency and Pollution Prevention</p>	<p>Potential risky activities (including contributing factors such as location, associated activities)</p> <ul style="list-style-type: none"> Establishment of nurseries in Community Forest and NWFPs areas to improve nursery standards would involve minor risk of Water pollution through nutrient and pesticide run-off from nursery and contamination to groundwater and nearby stream/river by drainage water, pesticides and oil from equipment and machineries. This can be mitigated through use of Integrated Pest Management or biodegradable pesticides and natural fertilizers in combination with pulse watering for irrigation proposed to minimize or avoid such risks. In addition proper storage and safety of chemicals recommended. Siting of the nursery is recommended to be on gentle sloping ground where so that

	<p>excessive run-off and erosion will not occur.</p> <ul style="list-style-type: none"> Leachate from waste This can be mitigated through collection and proper disposal of non-recyclable wastes; recycling recyclable wastes and use of bio-degradable wastes to be management in compost for manuring planned to avoid leachate from wastes. Development culture/ecotourism – camp sites may trigger water pollution by way of waste into nearby water bodies This can be mitigated through location of camps sites away from existing stream, river, water source and arrangements for solid waste management facilities in the camp sites in combination with prohibition discharging waste into nearby water bodies. Waste management strategy and plan to be developed for each site. Pilot activities on reduced impact logging in FMUs- Capacity Building on FMU management and Monitoring could trigger reduced water quality and quantity of streams, water bodies, and ground water resulting in seasonal hydrologic changes and potential negative impacts on downstream river biota. This can be mitigated through establishment of and management of riparian management zones, minimizing vehicular movement over perennial and intermittent streams, and wetland areas through planning can avert such risks Pollution water from hazardous materials from use of machinery, vehicles, and related fuels, lubricants, and other materials This can be mitigated through prohibition of cleaning of logging equipment and replacement of oil/hydraulic fluids near streams or sensitive areas to prevent entry of hazardous materials into water bodies to avoid such risks. <p>Significance of Risk The risks foreseen are temporary, site specific and manageable - categorized as B</p>
C)PS4– Community Health, Safety, and Security	<p>Potential risky activities (including contributing factors such as location, associated activities)</p> <ul style="list-style-type: none"> Development culture/ecotourism – camp sites could trigger issues of community health and safety in the form of Increased waste and sewerage due to increased number of visitors This can be averted by requiring waste management strategy and plan for each site in accordance with Waste Management Act and its Regulations and as per FNCR, 2017, rule no. 49 (2) and ensuring appropriate and separate areas for toilets, washing areas,

	<p>grazing areas for transport animals including arrangements for environment friendly toilet and washing facilities in each camp site</p> <p>Significance of Risk The risks foreseen are temporary, site specific and manageable - categorized as B</p>
D) PS 5 – Land Acquisition and Involuntary Resettlement	<p>Potential risky activities (including contributing factors such as location, associated activities)</p> <ul style="list-style-type: none"> Land acquisition is not foreseen. The programme will not fund and activity involving acquisition of private or institutional land. Community clearance will be sought prior to implementation of any project activity in a particular location. <p>Significance of Risk No risks foreseen - categorized as C</p>
E)PS6– Biodiversity Conservation and Sustainable Management of Living Natural Resources	<p>Potential risky activities (including contributing factors such as location, associated activities)</p> <ul style="list-style-type: none"> Development of HCV National Interpretation could trigger land use conflicts due during its implementation This can be mitigated through comprehensive stakeholders and community consultations to avoid land use conflicts and review of related legal and policy provision to ensure that the HCV framework doesn't conflict with prevailing legal and policy provisions prior to consultations. Additionally, private registered areas to be avoided from inclusion within HCVs. Integrating HCV framework and identification into the national NLUZ process in the programme landscape could trigger conflicts and possible lack of alignment with different sector's policies, plans and delegation of responsibilities. This can be mitigated through compliance with National Land Use Zoning Guidelines, 2018 and integration of HCV National Interpretation with NLUZ parameters with defined roles of all relevant stakeholders at all levels to avert such conflicts Drafting holistic management plans for the programme landscape, taking into consideration the HCV framework may face Conflicting claims in land use rights and uses and lack of ownership of management plan by stakeholders This can be mitigated through comprehensive stakeholders and community consultations in the planning phase; Public hearing of the management with relevant stakeholders upon completion of the plan before publication and establishment of grievance redress

	<p>mechanism for each holistic management plans for all s of the programme landscape included in the safeguards to mitigate this risk.</p> <ul style="list-style-type: none"> Boundary conflicts over HVC identified areas and non HVC areas due to lack of awareness on HCV boundaries. This can be mitigated through engaging local government representatives and administrations in the demarcation or re-alignment of HVC boundaries and any change or new demarcation of boundaries should be based on free and prior informed consent of the affected communities and relevant authorities, which should be obtained prior to finalizing any border change. If the demarcation of land boundaries negatively impacts sources of economic income or other types of livelihoods of affected communities, full and timely compensation shall be provided to all affected individuals, irrespective of their formal land title. Invasion of local diversity due to introduction of invasive exotic species in establishment of nurseries in Community Forest and NWFPs areas Mitigation: New species should be certified by BAFRA and NPPC prior to their introduction Development culture/ecotourism – camp sites could trigger forest fires from camp fires Mitigation: Designated areas for camp fire and for disposal of ash in each camp site Degradation of areas of critical conservation themes due to wrong siting of ecotourism facilities This can be mitigated through avoiding sites that are in close proximity to protected areas or those identified as conservation areas Damage to the site conditions - destabilization of landscape due to excavation causing soil erosion/landslides during site development Mitigation: Erection of local retention walls and plantation of trees in slide prone areas Possible loss of vegetation due to Removal of trees/ vegetation during construction Mitigation: Avoid removal of trees and carry out plantation works to replace removed trees as soon as possible Damage to environment due to new trail development in undisturbed trail alignment Mitigation: New trails to be integrate with traditional trails and maintain them as eco-trails so that new routes are not constructed
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	<ul style="list-style-type: none"> · Pilot activities on reduced impact logging in FMUs- Capacity Building on FMU management and Monitoring could trigger habitat alteration and loss of biodiversity due to habitat modifications caused by forest harvesting practices and through possible replacement of the existing vegetation cover with non-native species <p>Mitigation: Replacement of the existing vegetation cover with native species or upon approval from BAFRA, NPPC and NCD in the case of introducing new species; FMU to be managed as per management plan approved by DoFPS and compliance to IFC's Environmental, Health, and Safety Guidelines for forest harvesting operations (see www.ifc.org/ehsguidelines)</p> <p>Significance of Risk The risks foreseen are temporary, site specific and manageable - categorized as B</p>
F)PS7– Indigenous Peoples	<p>Potential risky activities (including contributing factors such as location, associated activities)</p> <ul style="list-style-type: none"> · None of the programme activities trigger standard for indigenous peoples <p>Significance of Risk No risks foreseen - categorized as C</p>
G) PS 8 – Cultural Heritage	<p>Potential risky activities (including contributing factors such as location, associated activities)</p> <ul style="list-style-type: none"> · Development culture/ecotourism – Campsites could trigger disturbance to local culture and heritage sites by way of setting of ecotourism camp sites; <p>Mitigation: Site identified for camps to be should be beyond 500 meters from monasteries, Dzongs or any cultural monument. Additionally, screening checklist will be applied to ensure that the selected site does not affect cultural resources of local significance. If cultural resources are identified within 500 meters of the identified site, another site will be required to be identified or clearance from the local, communities - concerned Gewog, concerned Dzongkhag and the Department of Culture should be obtained prior to finalization of the plan and site development</p> <p>Significance of Risk The risks foreseen are temporary, site specific and manageable - categorized as B</p>

Risk avoidance and mitigation strategy	Risk mitigation strategies are built in the safeguards document and briefly stated against identified risks (above).
Overall risk category:	<input type="checkbox"/> A – Activities with potential significant adverse environmental or social risks and/or impacts that are diverse, irreversible, or unprecedented. <input checked="" type="checkbox"/> B – Activities with potential limited adverse environmental or social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures. <input type="checkbox"/> C – Activities with minimal or no adverse environmental or social risks and/or impacts.

Annex 3: Procedures for Pest Management

Pest Management under the IKI project will follow the national system and preference for integrated pest management approach. The popular pest and likely integrated pest management options is presented on the following table. The pest management process will include the following process:

- Adopt the integrated pest management options presented in the table of recommendations that does not include use of chemicals. This is based on recommendations from the NPPC.
- Adopt chemical applications recommended in the list of recommendations, if the non-chemical methods fail. This should be done in consultation with the local agriculture extension officer.
- Refer to the National Plant Protection Centre through the local agriculture extension officer.

Note: The Project will not support the procurement or use of any pesticides categorized IA, IB, or II by the World Health Organization or other agricultural chemicals or lead to the increased use of such chemicals.

Type	Recommended Action (based on NPPC technical recommendation)
Entomology	
Army worm	Flooding seedbed, cut grass weeds
	Plough or dig a deep ditch
	Prevent the caterpillars and chemical spray
Chinese Citrus Fruitfly	Fruit drop collection and burying
	Bait splashing with malathion and a bait of protein
Potato Tuber Moth	Use of healthy tubers as seeds and plant deep
	Harvest when tubers are ripe
	Use pheromone traps
	Clean stores and use closed stores
Chili Pod Borer	Deep ploughing
	Flooding the field
	Collecting and destroying the infested chilli pods
Cabbage White Butterfly	Grow cabbage as an early crop
	Hand-picked the eggs and destroy
	Spray Cypermethrin in case of serious problem
Lichens in Apple	Mechanical control: Use a gunny bag or a cloth to scrub the lichens right after rainfall
	Control using Lime + Water
Super Grain bag	Do not over fill the super bag
	Do not puncture or damage the bag
	Always use the outer bag for carrying
	Seal properly
	Do not use Hooks to hang the bags
Diamondback Moth	Weed control and tillage
	Consider insecticide application when larvae are visible
Red spotted long horn beetle	Check the lower two feet of citrus trees regularly for tiny

Type	Recommended Action (based on NPPC technical recommendation)
	wet or swollen spots. Scrape the bark open with a small knife and kill the small larvae. Remove weeds around the trunk to make checking easier
Red Palm Weevil	Avoid injuries on stems of arecanut
	The entire heavily affected tree should be destroyed immediately
	Mass trapping by using pheromone traps has been used to reduce red palm weevil densities.
	Trunk injection and prophylactic spray of dimethoate
Woolly Aphid	Removed colonies from the tree with the jet power sprayer filled with plain water
	Application of tree spray oil
	Spray Chlorpyrifos or Cypermethrin if seriously infested
Insect Pheromones	Use Pheromones traps
Gals	Hand collection and destroying
	Monitor movement of vehicles, agricultural, forestry and livestock goods, construction materials, and furniture at Checkpoints
San Jose Scale in Apple	Badly affected twigs or branches should be pruned and burnt
	Use Tree Spray Oil in winter
Shield Bug	Spot or selective spraying early in the morning
	Protect Red Tree Ants and even increase the number of tree ants by placing ant nests from forest trees in the mandarin trees
Pathology	
TLB and GLS	Cultural: plough stubbles right after harvesting for decomposition
	Avoid planting in the same areas if possible
	Chemical: Spray fungicide
Powdery Mildew	Follow the recommended spacing between the plants for each crop
	Plant in sunny area as much as possible
	Use nitrogen rich fertilizer only sparingly and when absolutely necessary
	Separate or isolate infested plants from healthy ones
	Prune infected shoots and destroy fallen and infected leaves
	Chemical: Apply sulphur or copper-based fungicides
Late Blight in Potato	Good site selection, crop rotation and proper irrigation
	Spray mancozeb or zineb
	Cultivate recommended varieties
Citrus Huanglongbing	Regulation and quarantine
	Reduction of inoculum by removing infected trees
	Vector monitoring and control Citrus HLB is a vector borne disease.
Chilli Blight	Use healthy seedlings, transplant seedlings on raised beds,

Type	Recommended Action (based on NPPC technical recommendation)
	do not leave any depression around plant base
	Use furrow irrigation
Apple Rust	First spray of Hexazconazole during the pink bud stage
	Second spray of Hexazconazole after petal fall
	Third spray of Hexazconazole 14 days after second spray
Downy Mildew in Cabbage	Practice crop rotation with non-brasslike species
	After harvest, collect and burn debris, or plough the remains into the soil
	Use seed treated with hot water or seedlings raised from such treatment
Anthrachnose in Beans	Use disease-free seeds, intercrop with maize and plant in widely spaced rows
White blister in Broccoli	Destroy brassica crops soon after harvest to remove the host plants, apply adequate phosphorus and potassium nutrition
Weeds & Vertebrate Pests	
Alternanthera sessilis	Cultural control: Flooding, hand weeding or tillage at the early stage.
Cyperus diformis	Early continuous flooding in rice field to a depth of 20 cm strongly suppress the growth. Hand weeding, proper tillage and trampling in puddled fields
Cyperus rotundus	Stale seed bed; suppressive crop with narrow rows; high plant density and flooding
Ischaemum rugosum	Early continuous flooding and early removal by hand weeding or hoeing
Parthenium hysterophorus	Uprooting or hoeing the plants out, collecting and burning the weeds before flowering
Paspalum disticum	Early continuous flooding and deep burial and tillage during dry season
Potamogeton-distinctus	Dry ploughing some time ahead of transplanting, the flooding and wet-ploughing immediately before transplanting and hand weeding
Scirpus-juncoides	Wet or dry cultivation, early flooding; dry field to stop re-growth after rice harvest
Trifolium-repens	Dry tillage after harvest to desiccate rhizomes
Scurrula-elata	Pruning the branches of the fruit tree on which it occurs and also destroying infestation so far as possible in neighbouring wild trees to reduce the risk of spread into the crop

Annex 4: Format for Safeguard Eligibility and Impacts Screening for Project Activities

PART 1: BASIC INFORMATION

1	PROJECT Activity Name	
2	Type of Activity:	New activity <input type="checkbox"/> Rehabilitate <input type="checkbox"/>
3	Project location:	
	Chiwog/Village:	
	Gewog:	
	Dzongkhag:	
4	Design Parameters (area/length)	
5	Preparation period	
6	Construction	
7	Project completion and operation	
8	Is construction carried out in rainy season?	
9	Acquired land area (acres)	
10	Total investment capital	

(Move to Part 2 after filling in all information in the table above)

PART 2: ELIGIBILITY SCREENING

No.	Screening Questions	Yes	No	Comments/ Explanation
	<i>Would the project activity be?</i>			
1.	Located or disturb a land area located within 5 kilometres from any primary forest, core zone of any protected areas, specialized forest, areas biologically importance?			
2	Located or disturb areas of critical natural habitats, breeding ground of known rare/endangered species?			
3	Disturb areas having landscape or historical values?			
4	Require relocation of any known physical cultural resources such as			
	a <i>Lhakhangs, Chortens, Mani Dungkors</i>			
	b <i>Duthrues (Cremation grounds)</i>			
	c Statues, monuments, historical sites,			
	d Community cultural centre			
	e Buildings, sacred trees or objects having spiritual values to local communities			

Notes:

- If all answers are “No”, project activity is eligible and move to Part 3
- If at least one question answered as “yes”, the project activity is ineligible and the proponent can reselect the site of project activity and do screening again.

PART 3: IMPACTS SCREENING

Answer the questions below and follow the guidance to describe the potential impacts

No.	Yes	No	Description of the potential impacts
1. PRE-CONSTRUCTION PHASE			
	<i>Will the project activity</i>		<i>(the texts below are guidance)</i>
1.1	Require <i>Land acquisition</i> for construction and or worker's camp, construction materials loading and storage, etc.?		(Guidance: provide the information below) Total land area to be acquired: i. Permanently: Temporarily: In which: ii. Public land: Private land:
1.2	<i>Loss or damages to trees and existing vegetation cover due to site clearance, machinery operation or disposal of excavated materials?</i>		iii. Number of trees to be cut down: iv. Total land area of vegetation cover removed:
2. CONSTRUCTION PHASE			
2.1	<i>Disturb vegetation cover or damage trees at construction sites, or other areas disturbed during construction phase</i>		Observe the area and describe where existing vegetation cover, trees will be affected during construction phase:
2.2	<i>Cause increased level of dust and noise?</i>		Identify source of dust and noise: loose construction materials, soil, and sand blown by wind. Assess Level of impacts depends on weather (wet/dry), number and distance of houses from sites.
2.3	<i>Generate smoke and smell (cause pollution, health impacts)</i>		Identify possible sources: fuel burning, vehicle exhausts, toilets, domestic wastes from camp kitchen Assess level of impact: consider duration, intensity of smoke/smell taking into account wind directions
2.4	<i>Cause ground vibration (Cause nuisance to community, damages to weak existing objects and infrastructure)</i>		Identify sources: ground compaction (roadwork's, storage, drilling) Level of impacts: intensity of compaction, and strength of existing infrastructure

No.		Yes	No	Description of the potential impacts
2.5	<i>Pollution of soil and water sources (From waste and wastewater generation, excavated soil, acid sulphate soil, construction, packaging materials, domestic and sewerage wastes generated by the workers)</i>			<p>Identify sources of waste and wastewater generation, such as construction site, worker camps and quantify the waste/wastewater for assessing the level of impact, taking into account the distance from source to receptor (e.g. water bodies).</p> <p>Leakage of oil stored at the site may also cause soil and water pollution</p>
2.6	<i>Localized flooding related to disturbance to existing drains, changes in ground elevation etc.</i>			<p>Localized flooding may occur if existing/natural drainage path is blocked or disrupted.</p> <p>Consider the issues at construction sites, camps, borrow pits, quarries and disposal sites.</p> <p>If materials are bought from existing licensed borrow pits and quarries, the issues would not be considered in the project</p>
2.7	<i>Sedimentation in areas next to construction site as surface runoff wash away loose materials from construction sites?</i>			<p>Loose construction materials and excavated soil may be blown by wind or washed away by surface water runoff and cause sedimentation in existing drains</p>
2.8	<i>Damage or interrupt operations of existing infrastructure (drain, power line, roads, etc.)</i>			<p>If not avoided, some project activities (road rehabilitation, construction of large storage facility) sited in areas where power line, irrigation canals, drains, roads, etc. exist, they may be affected or cause blockage</p>
2.9	<i>Cause loss or damage to physical cultural resources, such as cremation sites, historical objects/structures, temples, religious sites (Ney), sacred trees, objects of spiritual important to communities, etc.</i>			<p>If not avoided, some activities (road rehabilitation, construction of large storage facility, etc.) may cause loss or damages to physical cultural resources such as temples, chortens, mani dungkors, Neys, sacred trees, etc.</p> <p>Construction activities may also cause dust, noise, and visual impacts to these sites.</p>

No.		Yes	No	Description of the potential impacts
2.10	<i>Disturb farming activities due to the presence of workers and machineries at the site, damages to crops:</i>			If construction takes place agriculture area, construction materials, waste, wastewater and surface runoff from construction sites, camps may enter rice or plantation nearby disturbed areas and cause loss or harm to plants, trees The presence and movement of machinery, construction materials, workers may disrupt access to or affect farming activities
2.11	<i>Social disturbance due to construction activities and the presence of workers in the project area</i>			Dust, noise, vibration from construction or interactions between workers with local people may cause nuisance and conflict between the workers and local community. In some cases, workers may also involve in “social evils” in the project areas such as gambling, drinking, drugging, etc. to have bad impacts on local people, particularly where ethnic minority groups present.
2.12	<i>Safety and health risks for workers (loading and unloading of construction materials, excavated areas, fuel storage and usage, electrical use, machinery operations etc, adequacy of accommodation etc.)</i>			There are some safety risks for workers related to transportation and loading of construction materials, working high above the ground or in canals where slopes are unstable, machinery operations, electrical uses for office, camp and construction
2.13	<i>Safety risks for community (related to loading and unloading of construction materials, excavated areas, fuel storage and usage, electrical use, machinery operations etc, adequacy of accommodation etc.)</i>			If local people presence at or near construction site, they would be exposed to safety risks related to construction
2.14	<i>Disturb traffic and/or cause traffic safety risks</i>			Rehabilitation of access road to farms may disrupt traffic. Transportation of construction materials and wastes, temporary loading of materials in other sub-components may also disrupt traffic and/or cause traffic safety risks
2.15	<i>Others (specify)</i>			<i>Identify and describe site-specific and type-specific issues, concerns, risks, potential impacts</i>

No.		Yes	No	Description of the potential impacts
3. OPERATION PHASE				
3.1	Cause dust, noise during operation phase (e.g. from pumps)			Dust and noise along access roads
3.2	Safety risks for community			(Considers those related to electrical poles, falling into canals, traffic safety etc)
3.3	Water pollution?			
	Others impacts (specify)			

Screening Conclusions.

- i. Main environmental issues are:.....
- ii. Permits/ clearance needed are:.
- iii. Main social issues are.
- iv. Land acquisition and involuntary resettlement (permanent or temporary) if any;
- v. Further assessment/ investigation needed and next step.
 - a. Need for any special study:.....
 - b. Preparation ESMP (main issue to be addressed by the ESMP):.....
 - c. Need for IEE or EIA:.....
 - d. Any other requirements/ need/ issue etc:

Screening Tool Completed by:

Screening Tool Reviewed by:

Signed:

Signed:

Name:

Name:

Title and Date:

Title and Date:

Annex 5: Initial Environmental Examination (IEE) Form for Forestry Projects -2017

Note 1:	In accordance with section 47 of the Regulation for Environmental Clearance of Projects 2016, consent must be obtained from individual or juristic person if activity has direct impact on a property.
Note 2:	The completed IEE form shall be submitted to the relevant Competent Authority.
Note 3:	The completed IEE form shall be the basis to determine the requirement of Environmental Impact Assessment (EIA). If EIA is required, applicant will be notified to submit Terms of Reference for the project.
Note 4:	The application shall be subjected to Fee Schedules to cover the cost of administering the Environmental Assessment Act, 2000.

1. General Information:

- a) Name of the project, tick as appropriate:..... I. ☐ FMU
 II. ☐ Sand-dredging III.
☐ Surface Collection IV. ☐
 Ropeways
 V. ☐ Others
- b) Project Type (Tick as appropriate): ☐ New ☐ Expansion/modification
- c) Applicant Details:
- VI. Name of the applicant:.....
- VII. Address:.....
- VIII. Post Box No.:.....
- IX. Contact No.:.....
- X. Fax No.:.....
- XI. Email:.....
- XII. Name and contact details of Environmental Focal Person:.....

2. Project Location:

- I. Dzongkhag/Thromde:
- II. Gewog:.....
- III. Village:.....
- IV. Name of the project site:.....

3. Project Cost (Nu.):.....

4. Project area, tick as appropriate:

- a) ☐ State Reserve Forest.....acres
- b) ☐ Private.....acres
- c) ☐ Others.....acres
- d) Total area required.....acres
- 5. Terrain characteristic at the project site:
 - a) Elevation (meter):.....
 - b) Aspect (direction):.....
 - c) Slope (degree/%):.....
- 6. Presence of any of the following within and 50 meters buffer of the project area. If yes tick and mention name, wherever applicable:
 - a) ☐ River/spring/stream.....
 - b) ☐ Protected Area.....
 - c) ☐ Catchment area.....
 - d) ☐ Wetland.....
 - e) ☐ Community forest.....
 - f) ☐ Private forest.....
 - g) ☐ Tsamdro.....
 - h) ☐ Sokshing.....
 - i) ☐ Agriculture land.....
 - j) ☐ Heritage site.....
 - k) ☐ Hospital.....
 - l) ☐ School/institution.....
 - m) ☐ Roads.....
 - n) ☐ Industries.....
 - o) ☐ Settlements.....
 - p) ☐ Presence of religious site.....
 - q) ☐ Archaeological site.....
 - r) ☐ Others
- 7. Project Details (attached in a separate sheet):
 - a) Project objective:.....
 - b) Project output:.....
 - c) Methods of storing materials:.....
 - d) Source of water and total requirement -m³/day:.....
 - e) Source of energy, tick as appropriate:

- ☐ Electricity, if yes, Tapping point:.....
- ☐ Coal
- ☐ Fossil fuel
- ☐ Solar
- ☐ Wood
- ☐ Others

8. Ancillary activities, tick as appropriate:

- a) ☐ Power line
- b) ☐ Approach road
- c) ☐ Others

Note: For ancillary activities, fill up relevant IEE forms and submit along with these IEE forms.

9. List type of wastes under each category and its quantity per annum, tick as appropriate:

- a) ☐ Solid:.....
- b) ☐ Liquid/effluent:.....
- c) ☐ Air/Gaseous:.....

10. Provide maximum noise level at the project boundary during operation, if applicable:

11. Environmental Management Plan (attached in a separate sheet):

Briefly describe mitigation measures to address impacts including sections 9 and 10

12. List of documents to be attached with this IEE form:

1	Sectoral Clearance (DOPFS/DoR/BPC etc.), if applicable
2	Dzongkhag/Thromde Administrative approval
3	Public consultation records verified by the concerned local authority
4	Layout plan and KMZ file depicting entire layout plan
5	Forest Management Plan for Forest Management Unit and Working Schemes

Name and signature of the project proponent:

Address:

Date:

Annex 6: Format for Environmental Compliance Monitoring

Project Activity:

Monitoring Officer:

Name: Mobile phone number email

Date of reporting:

	Environmental issues	Description of Mitigation Measures implemented	Evaluation 1=good; 0 = acceptable; -1 = bad
1	Dust, smoke		
2	Noise, vibration		
3	Disturb vegetation cover, cut trees		
4	Waste generation		
5	Water pollution		
6	Localized flooding		
7	Traffic disturbance		
8	Public health and safety		
9	Damages or disrupt operations of existing infrastructure		
10	Disturb Socio economic activities		
11	Social impacts related to mobilization of workers to the site		
12	Impacts on physical cultural objects		
	Others (specify)		

Signature

Name and Designation

Name of the CA

Annex 7: Outline of ESMP and its Contents

A) Introduction: This should provide brief but concise information on:

- ESMP context: describe how the ESMP fits into the overall planning process of the project, listing project activity environmental studies.
- ESMP's connection with the ESMF (if relevant) and the project.
- Project specific objectives of the ESMP: describe what the ESMP is trying to achieve. The activity-specific ESMP shall form part of the project contract specifications.

B) Project description

The project/activity objective and description should be provided in sufficient detail to define the nature and scope of the project. These should include:

- Project location: site and activity location should be described including location maps
- Construction/operation activities: the description of construction and operation processes; employment numbers and type; the plant and equipment to be used; the location and site facilities and worker camps; bill of quantities for civil works.
- Timing and scheduling: anticipated commencement and completion dates should be indicated. If the project is to be completed in stages then separate dates for each stage should be provided.

C) Baseline data

This should provide key information on the environmental background of the project activities. Focus should be given to provide clear data on topography, major land use and water uses, soil types, flow of water, and water quality/pollution, noise levels. Brief description on socioeconomic condition and environment (if relevant) should also be provided. Photos showing existing conditions of project sites should be included.

D) Potential impacts and mitigation measures

An ESMP identifying specific activity potential impacts and corresponding mitigation measures referring to ECOP, if available, should be developed for this Section.

E) Monitoring

Monitoring of ESMP implementation would encompass environmental compliance monitoring and environmental monitoring during project implementation as described in details below:

Environmental and Social compliance monitoring: this should be the responsibilities of Site supervisors, DDM/DHMS/DOA and benefited Dzognkhags.

F) ESMP Implementation arrangements: Institutional Arrangements should be in line with the ESMF. Discussions should cover the following aspects:

- Responsibility for ESMP implementation.
- Incorporation of ESMP into detailed technical design and bidding and contractual documents.
- Environmental and social compliance framework.
- Reporting procedures.

G) Institutional Strengthening Plan:

The institutional strengthening plan (capacity building along with the proposed budget) is elaborated in subsequent section)

H) Estimated Budget for ESMP Implementation:

Conventionally the costs of implementing ESMP are estimated individually to each sub-component activity on determining need of the ESIA and environment clearance and also the complexity nature of the activity. When a mitigation measure is incorporated into engineering design, it becomes easier to estimate the cost of the ESMP.

I) Consultation, Disclosure of the ESMP:

Described the consultation and disclosure activities carried out during sub-component implementation as guided in the ESMF.

Annex 8: Terms of Reference for Safeguards and Gender Expert

POST TITLE: Safeguards and Gender Expert
PROJECT NAME: Living Landscapes – Securing Ecological Connectivity of High Conservation Value Area in Bhutan
PLACE OF POSTING: Programme Management Unit, WWF, Bhutan

Requirement for the Safeguards and Gender Expert:

The WWF Bhutan is supporting the Royal Government of Bhutan and the Tarayana Foundation to ensure a network of biodiversity hotspots and high conservation value landscapes covering 9 Territorial Forest Divisions (DFOs) and 9 Dzongkhags located in the south, west, and central parts of Bhutan. Through sustainable management of these landscapes, the project aims to secure human well-being, biodiversity conservation and increase climate resilience of communities living within these landscapes. The project seeks to achieve the following objectives:

- Institutionalize integrated land use planning that adequately considers data on High Conservation Values (HCV) at the national level.
- Institutionalize holistic land use management plans that integrate HCVs at the District Forest Office levels through Improved capacities.
- Local communities in the landscape benefit from environmentally friendly livelihood strategies promoted through pilots

The project has the following outputs:

Output I: Institutional land use planning at the national level. The Government uses an integrated planning approach. The different sectors adequately consider data on High Conservation Values (HCV) = Integrate HCV data in land use planning.

Output II: Divisional Forest Offices establish and use holistic management plans. In these plans HCVs are integrated. The management capacities of the Forest Service are improved.

Output III: Local communities in the landscape benefit from environmentally friendly livelihood strategies promoted through pilots.

The Environmental and Social Management Framework (ESMF) for the project describes the principles and procedures for addressing environmental and social impacts associated with the project in accordance with RGoB's laws and regulations and IFC's Performance Standards.

The WWF, Bhutan seeks the services of an environment and social safeguards who will support the implementation of the project's environmental and social safeguards framework.

The job responsibilities will include but not limited to:

- Providing support in internalizing the environmental and social issues in the project's activity planning & design and to address the potential impacts as well as to promote good practices.
- Developing a set of planning and implementation tools and guidelines for training of the officials on environmental and social safeguard. These will be used for training and as reference materials for the field staff during implementation. The training could include providing basic knowledge and information on the key environmental and social issues associated with the project activities.
- Supporting the Safeguard Focal Persons of the project in preparing the quarterly ESMF reports as required by the ESMF implementation and monitoring framework.
- Assist in preparing the Environmental Screening document and Initial Environmental Examination report of for project activities, where necessary.
- Sign off for disbursement of funds to project partners based on assessment of compliance to ESMF by the field implementing partners
- Prepare semi-annual report on ESMF on implementation to the PAC and annual report to the PAC
- Any other related tasks that are proactive in nature to minimize risks arising out of environmental social issues arising from the implementation of project activities.

Qualifications and Experience:

- A minimum of Bachelor's degree in Environmental/Planning/Social Science or relevant fields.

Experience:

- The candidate should have at least 5 years of experience with adequate professional experience in preparation of Environmental Impact Assessments (EIA) and Environmental Management Plan (EMP) and well versed with national and local environmental regulations and compliance requirements including work experience in gender mainstreaming.
- Candidates having experience in projects assisted or funded by the WWF shall be given preference
- Ability to interact with and motivate/guide stakeholder to carry out due diligence for environmental, social and gender activities.
- Candidates are expected to possess good written and verbal communication and analytical skills, with ability to work with interdisciplinary team.