



Environmental and Social Management Framework (ESMF)



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Annex 8 Bhutan for Life Funding Proposal

List Acronyms

| | |
|-------|---|
| ABS | Access and Benefit-Sharing |
| BAFRA | Bhutan Agriculture and Food Regulatory Authority |
| BCs | Biological Corridors |
| BFL | Bhutan for Life |
| BWP | Bhutan Water Policy 2003 |
| DoL | Department of Livestock |
| DT | Dzongkhag Tsogdu (Dzongkhag Development Committee) |
| DOA | Department of Agriculture |
| DoFPS | Department of Forests and Parks Services |
| CVCA | Climate Vulnerability and Capacity Assessment |
| EC | Environment Clearance |
| EA | Environment Assessment |
| EAA | Environment Assessment Act |
| EC | Environment Clearance |
| 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 |
| GCF | Green Climate Fund |
| GNH | Gross National Happiness |
| GT | Gewog Tshogde (Gewog Development Committee) |
| LGs | Local Governments |
| MoAF | Ministry of Agriculture and Forests |
| NBC | National Biodiversity Centre. |
| NBSAP | National Biodiversity Strategies and Action Plan |
| NEC | National Environment Commission |
| NEPA | The National Environment Protection Act, 2007 |
| NFI | National forest inventory |
| NLC | National Land Commission |
| NWFP | Non Wood Forest Produce |
| PAs | Protected Areas |
| PES | Payment of Environmental Services |
| PFP | Project Finance for Permanence |
| PPD | Policy and Planning Division |
| PPP | Public Private Partnership |
| RGOB | Royal Government of Bhutan |
| RWSS | Rural Water Supply and Sanitation |
| SLM | Sustainable Land Management |
| SIPP | WWF's Environment and Social Safeguard Integrated Policies and Procedures |
| SOP | State of the Parks |
| WUA | Water User's Association |
| WWF | World Wildlife Fund |

Bhutanese Terms:

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| Barmi: | A mediator accepted and appointed by the affected parties to resolve an issue/controversy/conflict affecting the parties |
| Chiwog: | A unit under a Gewog. |
| Dzongdag: | District Administrator. |
| Dzongkha: | National Language of Bhutan. |
| 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 |
| Tshogpa: | An association or committee. Also referred to the Community Representative to the GT |

Technical Notes on baseline data

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| Population density | Nos. of persons / square kilometer of geographical area |
| Livestock grazing density | Grazing livestock unit (GLU) / square kilometer of geographical area |
| Grazing livestock unit (GLU) | GLU = cattle*1+horses*0.8+sheep*0.2+goats*0.2 (cattle includes yaks and buffaloes. It is assumed that horses contribute 80% and sheep and goats 20% grazing pressure as compared to cattle). |
| Farmer Groups (FGs) | FG is a business venture formed by group of farmers to benefit themselves and provide better services to consumers, restaurants, markets and other retailers. As of December 2016 there are at least 183 FGs operating in areas of agriculture (99), forestry (12), livestock (67) and others (13). |
| Cooperatives (Co-op) | Co-op is a cooperatives where pool their resources (farm productions) in certain areas of activity. As of December 2016, there are 202 cooperatives spread across the country operating in areas of agriculture (98), forestry (33), livestock (70) and others (1). |
| Community Forestry (CF) | CF is an evolving branch of forestry wherein the local communities are accorded forest management and utilization rights over state forest in sustainable manner. Today, the community plays a significant role in forest management and land use decision-making by themselves in the facilitating support of government as well as change agents. |
| Improved cattle | Offspring of local cattle cross-bred with high yielding foreign cattle varieties imported to country to increase farm production. |
| Local cattle | Indigenous cattle bred with lower productivity as compared to improved cattle. |
| Agriculture Areas | Crop cultivable areas which mainly includes wetland (irrigated), dry land (rain fed) and horticulture. |
| Forest Areas | Area under tree cover. |
| Bare Areas | Areas with natural or human induced land cover with less than 4% vegetation cover |
| Degraded Areas | Areas that are permanently or semi-permanently degraded either due to natural processes or human interventions. |
| Marshy Areas | Areas that are either permanently or semi-permanently waterlogged (poorly drained) throughout or some part of the year. It includes swamps and marshy areas. It occurs mostly in depression areas (valley floors) where there is no proper outlet to drain out the excess water. |
| Meadows | Meadows” include any areas dominated by grasses without or with few scattered trees or shrubs on it. It occurs at all elevations, but is relatively more common at higher elevations. |
| Shrubs | Shrubs are woody perennial plants with persistent and woody stems and without any defined main stem. It includes natural scrubland at high elevations consisting of dwarf rhododendron, |
| Snow Cover | Areas covered with both perpetual and seasonal snow cover. In general, it occurs above 3500 meter above sea level. |
| Water Bodies | This class includes both natural and artificially created water bodies. It includes lakes, reservoirs and rivers. |
| Over all source of data for the baseline | Livestock data is based on data from Department of Livestock’s statistics, 2015 |
| | Agriculture data is based on data from Department of Agriculture statistics, 2013 |
| | Forestry data is based on data from Department of Forests and Parks Services, 2016 and National Forest Inventory, 2016 |
| | Data on Farmer Groups is based on information from Department of Agriculture, Marketing and Cooperatives |
| | Population data is based on official projections of the 2005 population and housing census |

Executive Summary

Bhutan For Life, the Project, is designed to provide a 14-year financial bridge that allows for development of Bhutan's internal financing capacity for sustainable management of its protected areas and enable delivery of mitigation, adaptation and biodiversity gains. The project aims to ensure a robust network of protected areas and biological corridors that secures human well-being, biodiversity conservation and increase climate resilience.

The project will be implemented through the existing network of protected areas (Parks) and biological corridors (Territorial Forestry Divisions) managed by the Department of Forests and Parks Services (DoFPS) of the Ministry of Agriculture and Forests (MoAF) in collaborations with relevant entities of the Royal Government of Bhutan (RGoB) and communities that fall within the Protected Areas (PAs) and Biological Corridors (BCs).

This Environmental and Social Management Framework (ESMF) for Bhutan For Life (BFL) describes the principles and procedures for addressing environmental and social impacts associated with the project in accordance with the Royal Government of Bhutan's (RGOB) laws and regulations and of the WWF's Environment and Social Safeguard Integrated Policies and Procedures (SIPP). To develop this ESMF consultations were held with the communities of Protected Areas (PAs) and Biological Corridors (BCs) during which the perspectives and aspirations of the concerned communities were compiled (See Annex 7 summery note on field consultation). This was followed by consultation with relevant civil society group comprising of the Bhutan Ecological Society (ECS), Clean Bhutan, Loden Foundation, the Youth Development Fund (YDF), the Royal Society for the Protection of Nature (RSPN). Their perspectives and concerns have been incorporated in the ESMF.

The Green Climate Fund (GCF), RGoB, and donors from the private and bilateral entities will fund the BFL project. WWF has been the key partner in supporting and facilitating the RGoB in the BFL process and it will be the accredited GCF entity for the project through whom the international funding for BFL will be channeled. Hence the WWF Environment and Social Integrated Policies and Procedures needs, to be followed for this ESMF. Therefore, to ensure a coherent implementation of environmental and social safeguards throughout BFL, in the preparation of this ESMF we assumed that it will apply to all components of the BFL project not just the GCF financed activities of it.

The Project encompasses the following 5 components (reproduced from the BFL project document)

Component A: Increasing forestry and land use climate mitigation focuses on forestry and land use climate mitigation, specifically working to maintain forest cover within the PAS to help Bhutan remain carbon negative. This is a stated priority of the government, and will help to fulfil international commitments to continue to be a net carbon sink. This will involve

(a) Maintaining forest quality and extent in 1.1 million hectares within the PA network, which will help secure the storage of the current stock of 206 million tons of carbon dioxide equivalent, and increase climate resilience through forest ecosystem conservation.

(b) BFL will strengthen monitoring systems to detect forest cover changes, combat the climate change increased risk of forest fires, promote rural alternative energy technologies such as biogas and household solar, and implement climate smart restoration of degraded land areas within the PAs. All these interventions will reduce deforestation risks and hence maintain or increase the current rate of forest growth inside PAs. These activities, over the BFL 14-year life, will increase carbon sequestration in PAS forests by 35.1 million tons of CO₂eq.

Component B: Integrated adaptation in communities and ecosystems to improve natural resource management for livelihoods and climate resilience, concentrates on community and ecosystem based adaptation to build resilience and reduce vulnerability to extreme climate events. This will specifically involve conducting community-based Climate Vulnerability and Capacity Assessments (CVCAs), developing community adaptation plans, and implementing adaptation solutions based on CVCA priorities. BFL will also promote continued use of traditional/indigenous systems related to conservation and climate resilience, and raise awareness and build capacity of local communities to implement climate-resilient sustainable resource management practices.

Component C: Climate-smart conservation to enhance provision of ecosystem services, also focuses on climate change adaptation, with a concentration on Ecosystem Based adaptation activities. This will involve developing climate-smart species conservation plans that leads to management and restoration of key wildlife habitats based on climate information to reduce climate change impacts, strengthening enforcement to avoid illegal timber harvesting, restoring, and building local capacity to implement protection and management mechanisms for ten critical watersheds that will contribute towards building resilience against the variability of flow of freshwater resources important for life and agriculture for local communities. These activities, over the life of the project, will directly benefit 35,000 mostly vulnerable rural inhabitants living within the PA lands, and indirectly a further 110,000 living in adjacent buffer zones. Secondary benefits will also accrue to populations living downstream of the project area within Bhutan and beyond.

Component D: Sustainable Management of PAs focuses on strengthening the organizational, institutional and resource capacity of Bhutan's PAs, and hence is instrumental in delivering on all other mitigation, adaptation and ecosystem services goals. In addition to activities already mentioned under Components A, B and C, Component D will support the development of climate-smart PA and BC management plans, and will significantly bust staffing resources and capacity in Bhutan's of PAs. Component D will also help the Government of Bhutan to explore develop and implement new sources of financing for Bhutan's PAS, changing the unsustainable current practice of small scale, piecemeal, individual PA financing toward a country wide

self-sustaining financing system for the entire biological complex of the country and the suite of ecosystem services – including climate benefits – that it provides.

Component E: Management, monitoring, reporting & evaluation, policy support, contingencies – Comprising of management activities necessary for the effective implementation of the BFL program.

Project Location and baseline information of project area

The BFL project covers all 10 parks and Protected Areas (PAs) and 8 Biological Corridors (BCs) of Bhutan comprising of all agro-ecological and geographical locations in the country. Across the country, the project covers 85 of the 205 Gewogs of Bhutan. Areas wise, BFL project covers almost 51% of Bhutan's territory.

The ten PAs are

- i. Bumdeling Wildlife Sanctuary (BWS),
- ii. Jigme Dorji National Park (JDNP),
- iii. Jigme Khesar Strict Nature Reserve (JKSNR),
- iv. Jigme Singye Wangchuck National Park (JSWNP),
- v. Jomotshangkha Wildlife Sanctuary (JWS),
- vi. Phibsoo Wildlife Sanctuary (PWS),
- vii. Phrumsengla National Park (PNP),
- viii. Royal Manas National Park (RMNP),
- ix. Sakteng Wildlife Sanctuary (SWS),
- x. Wangchuck Centennial National Park (WCNP).

The eight BCs are;

- i. BC1 connecting JKSNR-JDNP.
- ii. BC2 connecting JDNP to JSWNP
- iii. BC3 connecting PWS to RMNP to JKSNR
- iv. BC4 connecting PNP to JSWNP to RMNP
- v. BC5 connecting JWS to RMNP
- vi. BC6 connecting JWS to SWS
- vii. BC7 connecting PNP to BWS
- viii. BC8 connecting JKSNR to JDNP to WCNP

WWF Environmental and Social Safeguards Categorization Memorandum

Following its safeguards policies (SIPP) in late 2016 and early 2017 WWF conducted an environmental and social review of BFL project and concluded that,

- The proposed project [BFL] has been categorized as Category B, as the potential adverse environmental and social impacts on population within the Protected Areas or those living around who depend on the PA for their livelihoods or environmentally important areas are site-specific, reversible and can be readily mitigated. Since the exact location and/or nature of potential investments to be financed by the Transition Fund have not yet been determined and Environment Social Management Framework (and Process Framework) will be prepared to

- conform to WWF's Environment and Social Safeguard Integrated Policies and Procedures (SIPP).
- An Environment and Social Management Framework will be prepared for mainstreaming environmental and social concerns in the project and a Process Framework (PF) will be included in the ESMF (or prepared as a separate document). The PF will be prepared in consultation with the communities that will address impacts related to livelihoods arising from the anticipated very limited restriction of access.
 - Required actions: An Environment Social Management Framework including a Process Framework will be prepared before project concept finalization

A complete version of the WWF Environmental and Social Safeguards Categorization Memorandum can be found in Annex A

Objective of the ESMF and methodology adopted

As mentioned in BFL WWF Environmental and Social Safeguards Categorization Memorandum, currently locations of actions related to field activities are not known at this stage and will be finalized only during the implementation phase. As a result, it is not possible to identify site-specific social and environmental impacts and accordingly draw activity specific safeguards management. Therefore, this ESMF has been prepared to serve as a tool to ensure due consideration of environment and social safeguards in formulation of project activity related plans, designs, implementation and monitoring process once BFL implementation begins and the specific siting of field activities is being considered. It describes the principles and approaches to be followed for selecting sites and the actions to be taken to avoid, minimize and/or mitigate any adverse environmental and social impacts that are likely to arise due to the project.

The methodology followed for the preparation of this ESMF is a combination of a) desk review of the WWF safeguards policies (SIPP) and RGOB's environmental and social assessment policies b) consultation and discussions with stakeholders including relevant civil society organization and as well as PAs and BCs management.

Environment and Social Policy, Regulations and Guidelines

In the process of preparing this ESMF, RGOB's laws, policies and regulations that have provisions pertinent to the project, as well as the broader policy and reform within the context of BFL have been consulted. The pertinent ones include the Constitution of the Kingdom of Bhutan, 2008; the Land Act of Bhutan, 2007; Forest and Nature Conservation Act of Bhutan, 1995; The Biodiversity Act of Bhutan 2003; Livestock Act of Bhutan, 2001; Waste Prevention and Management Act, 2009; National Environment Protection Act, 2007; Environment Assessment Act, 2000; National Forest Policy, 2011; Forest and Nature Conservation Rules and Regulations of Bhutan, 2017; Land Rules, 2007 and the Regulation for the Environmental Clearance of Projects, 2001

The national policy, legal and regulatory environment provides a favorable framework for protection of the natural environment, conservation of the rich biodiversity and

prevention of all forms of ecological degradation including noise, visual and physical pollution.

Likewise, the WWF Safeguards Policies and Procedures applicable to the project are:

- Natural Habitat Policy
- Indigenous Peoples Policy
- Involuntary Resettlement Policy
- Pest Management
- Physical and Cultural Resources

WWF's safeguards policies require that any potentially adverse environmental and social impacts are identified, avoided or minimized. The safeguards policies provide a mechanism for integrating environmental and social consideration into conservation decision-making. As a GCF accredited entity, WWF requirements also include looking at labor issues such as working conditions, resource efficiency, pollution prevention and community health, safety and security aspects. Therefore, the ESMP requires these aspects be included in the screening process of BFL project assessment.

While there shall be no conversion or degradation of natural habitats, the policy on natural habitats has been triggered as a precaution to be more cautious with the EA process when carrying out activities inside sensitive ecosystems. Almost every valley/region in Bhutan has distinct dialects, cultural practices and traditions. No community in Bhutan is isolated in the national development process and on the democratic process. All such communities are represented in their local governments like any other community and social amenities and local institutions are in place in all communities. Hence, there is no community that can be considered vulnerable (neglected) from a development process and governance perspective. For this reason, a separate Indigenous Peoples Planning Framework or Indigenous People Plan has not been prepared. Acquisition of land from form private individuals will be avoided.

In general, the application of RGoB policies and guidelines for environmental clearance and impact assessment covers the requirements of WWF environmental and social safeguards. However, the WWF environmental and social safeguards policy on Physical and Cultural Resources provide for the use of "chance find" procedures that include a preapproved management and conservation approach for materials that may be discovered during project implementation. 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 Change Find in is in place within the RGOB policy and regulatory framework. Hence, a "chance find: procedure is included in the ESMF.

Potential Environmental and Social Impacts and Mitigation Measures

Minor site-specific negative environmental impacts anticipated include impacts arising from excavation, waste and material management at site during minor construction of PA and BCs management offices, improved herders shed, transit camps and water reservoirs for drinking and minor irrigation, maintenance of traditional trails. Disturbance to wildlife movement arising from fencing of open grazing areas and risk of desecration of cultural sites due to increased tourism activities when eco-tourism picks up.

Some of the social risks and impacts associated with the project are expected to include minor forest offences, restriction of access to natural resources due to conservation and impact on cultural resources. These impacts are expected to be minimal, site-specific and those for which mitigation measures can easily be developed through ensuring the application of standard processes and regulations that are already in place. To address these concerns, the project will comply with the framework defined in the ESMF.

Environmental and Social Impact Management for BFL

The BFL management arrangement comprises the BFL Project Coordination Unit (BFL PCU) established within MoAF (Executing Entity), BFL Project Steering Committee (oversight body that approves annual work plans) and BFL Strategic and Technical Committee (that provides technical backstopping to the BFL PCU).

The Coordination Unit shall maintain safeguard documents for all activities, monitor compliance with ESMP and ESMF and maintain files documenting safeguard process.

The Park Managers and Territorial DFOs will implement the field activities. They will arrange for environment assessment including process screening (eligibility), IEE and preparation of ESMP for specific field activities when required and ensure compliance to conditions set forth in the environment clearance and/or ESMPs. By default the PAs and BCs will also be responsible to obtain required clearances permits/consents from relevant authorities, stakeholders. An Environmental and Social Safeguards Expert at the BFL Coordination Unit will provide support to all Park Managers and Territorial DFOs in preparation of ESMPs, monitoring of compliance and in reporting on overall safeguards to the BFL Project Steering Committee, Competent Authorities and to the NECs. The MoAF shall also appoint a National Social and Environmental Safeguards Officer as counterpart to the ESS Expert.

Procedure for Managing Environmental Impacts

The environmental and social impacts related to the project will be managed through a process comprising of Screening, Scoping, Generate Baseline generation, Impact Assessment and Researching mitigation of impacts and preparation of Environment and Social Management Plan (ESMP).

Screening, scoping and Initial Environment Examination (IEE) components of the EIA shall be applied at the project concept stage to help selection of project sites, screening and scoping of the magnitude of the EIA in line with the Environment Assessment General Guideline published by NECS. This process 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 land¹
- Identify whether 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.
- Establish the need to carry out any further investigation/survey/ assessment for preparation of safeguard document like IEE, ESMPs or any specific study.

Procedure for Managing Social Impacts

Social assessment will be carried out to assess the impacts on communities who are affected by the project. The process will include identification of community groups or individual affected as a result of land use changes and restriction due to implementation of BFL project activities; specific mitigation measures to enable alternative livelihood options of the affected individuals and groups. It should also include obtaining free and prior informed consent (FPIC) of these affected parties and the responsible agencies to implement such alternatives. The ESMF contains a general list of restrictions, affected communities and recommended mitigation measure and responsibilities. However, these need to be further qualified and quantified as specific details emerge during the course of BFL project implementation.

Development of ESMP

An Environmental and Social Management Plan (ESMP), describes mitigation measures/good practices at activity level when 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.

An ESMP should include environment management and mitigation plans during pre-activity, activity implementation and closing phases (See Annex 15 for outline of ESMP). Hence it should contain description of the detailed actions needed to achieve these objectives, including how they will be achieved, by whom, by when, with what resources, with what monitoring/verification, 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. In order to ensure that the issues of all stakeholders are taken on board in an inclusive manner, the planning process for the BFL activities in general and of ESMP in particular should include a stakeholder engagement plan. The plan should consider identification of stakeholders, level and method of engagement, timing and logistics

¹ BFL does not foresee any land acquisition either for public or private land. This step is mentioned here because it makes part of the NECS standard process

arrangements, responsibility, key messages and risks associated with the engagement of stakeholders.

Application and Approval for Environment Clearance

Upon completion of the recommendations in the screening process and obtaining all clearances and FPIC, the implementing agency shall process for Environmental Clearance by filling up the IEE format for the relevant sector. The NECS or the Competent Authority, after review, will issue the environmental clearances with terms and conditions or recommend further work prior to issuance of the Environmental Clearance. The terms and conditions reflected in the environment clearance will have to be implemented as environmental and social safeguard measures.

Responsibilities

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 implementing agency has the responsibility to coordinate with relevant stakeholders and to seek required clearances. In order to ensure that other safeguard mechanisms taken care beyond the EC process, a tentative list safeguards responsibilities have been prepared and presented in the ESMF.

Compliance Monitoring

The overall responsibility for implementing the ESMF and for monitoring the compliance of the Project's environmental safeguard activities lies with the BFL Coordination unit at the MoAF, which will report to the BFL Steering Committee and inform other BFL major stakeholders as per the final BFL institutional arrangements..

The Environment and Social Safeguards Specialist stationed at the BFL Coordination unit shall provide technical support to PAs and BCs. and coordinate with the PAs and BCs in the preparation of environment assessment comprising of screening (eligibility), IEE and preparation of ESMP for specific field activities when required.

The National Counterpart for Environment and Social Safeguard at the MoAF, should collaborate with the BFL environmental and social expert to provide support to PAs and BCs in terms of environment assessment for field specific activities, preparation of ESMPs, monitoring of compliance and in reporting on overall safeguards to the BFL Board, Competent Authorities and to the NECS.

The grievances that are reported through the Grievance Redress Mechanism (GRM) should be monitored to track and assess the extent to which progress is being made to resolve them. The grievance data should also be analyzed and evaluated to make policy and/or process changes to minimize similar grievances in the future. Record should be

maintained of each grievance and its resolution and BFL periodical reporting of BFL should include a section on grievance filed and grievance resolution.

Monitoring at the field activity level: Self-regulatory monitoring should be adopted by the PA and BC management for the implementation of field activities that have triggered ESMP/IEE so as to check that the terms and conditions included in the environment clearances have been followed. Self-regulatory monitoring reports should be filed by PA and BC management on a monthly basis and should be available for ad-hoc inspection by BFL management, the Dzongkhag Environment Committee or the NECS. Monitoring of compliance with country safeguard regulations will be done by the Competent Authority (CA) or the NECS.

In order to facilitate compliance monitoring, the PA and BC, will submit an annual compliance report or as per time terms indicated in the BFL Coordination Unit which will submit to the CA or the NECS, whoever has issued the environment clearance (and the same report could be used to inform other BFL stakeholders). 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 Environmental and social safeguards. During such monitoring, the CA will issue recommendations or impose penalties as may be appropriate.

Grievance Redress Mechanism (GRM) and Process for BFL

Although BFL has been assessed as a “B” project, having minor and mostly beneficial environmental and social impact potential, it still will affect half of the country territory for a long period of time and therefore it is in need of , appropriate and accessible institutional arrangements for addressing any grievances arising from the implementation of BFL activities. The GRM advanced in this ESMF has been proposed based on principles of fairness, objectiveness, independence, simplicity, accessibility, responsiveness, and efficiency, It comprises an informal as well as a formal process described in detail in chapter 6 below.

The informal process considers negotiation between disputing parties and/or with the involvement of a third party based on established customary norm of the communities.

The formal process involves

- (1) Receipt and Register Grievances by concerned local Tshogpa, Gewog Administration, Park/Divisional Forest Office.
- (2) Sorting and Processing grievances
- (3) Acknowledgment and Follow-up
- (4) Verification, Investigation, and Action

Capacity Building

To provide technical assistance and support the implementation of the ESMF by PAs and BCs managers as well as to support the local communities, a permanent Environmental and Social Safeguards Expert is recommended to be recruited by the Project at the BLF Coordination Unit. The MoAF shall appoint/designate a National Social and Environmental Safeguards Officer who will be the counterpart to the BFL ESS Expert. 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 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.

Disclosure of the ESMF

During the preparation of the ESMF.

To develop this ESMF, consultations were held with the communities of Protected Areas (PAs) and Biological Corridors (BCs) during which the perspectives and aspirations of the concerned communities were compiled (See Annex 7 summary note on field consultation). This was followed by consultation with relevant civil society group comprising of the Bhutan Ecological Society (ECS), Clean Bhutan, Loden Foundation, the Youth Development Fund (YDF), the Royal Society for the Protection of Nature (RSPN). Their perspectives and concerns have been incorporated in the ESMF.

Likewise, the authors of this report consulted with relevant agencies and concerned officials comprising: the Bhutan For Life Coordination, the Policy and Planning Division, MoAF, the Nature Conservation Division, Department of Forests and Parks Services and the management of 8 PAs and 4 BCs. Gewog level consultation workshops were held in these PAs and BC.

Moving into BFL Implementation

The stakeholders and affected communities should 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. At least this executive summary of the ESMF, and preferably the whole ESMF report, will be translated into Dzongkha and made available on the website of the MoAF and DoFPs as well as the websites of WWF US and WWF Bhutan websites. Also hard copies of the full ESMF will be shared will be distributed to PAs and BCs offices for further information and awareness and to share with concerned communities in the 85 gewog of the PAs and BCs. The PA and BC management will take responsibility to conduct awareness session in their respective jurisdiction or project areas.

During the implementation of BFL.

Activity-specific mitigation plans should be disclosed to all stakeholders, including affected communities and Civil Society Organizations (CSOs) prior to project concept finalization. Before plans can be disclosed, they must be review and approved by the BFL

Coordination Unit in consultation with the CA . The BFL Coordination Unit must also disclose to affected parties the final plans prior to implementation and any action plans prepared during project implementation, including gender mainstreaming. 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 MoAF and the WWF web sites.

Cost of ESMF Implementation

Detailed costs of implementation of BFL ESMF are below in section 6.9. The total costs amount USD 857,540.00 and the four main cost components are;

- Cost of environmental and social safeguards personnel, estimated at US\$ 308,000.00
- Cost of trainings, orientations, awareness programs and information dissemination, estimated at US\$ 467,040.00.
- Travels costs for the ESS Expert, National ESS Officer and Independent National Safeguards M&E Consultant for PAs and BCs, estimated at US \$ 70,500.00. and
- Cost of the Socio-economic baseline survey (within first 4 months of project implementation) is estimated at US \$ 12,000.00

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1. Introduction - Background and Rationale of the BFL

Bhutan's protected area network – which consists of 10 Protected Areas (PA) connected by 8 Biological Corridors (BCs) covers more than 51% of the country's total area (NEC, 2016). Together, they form a safe haven for wildlife to move from one PA to another and for the floral biodiversity to flourish undisturbed.

These landscapes of PAs and BCs contain a vast repository of ecosystems, species, and genetic diversity that play a critical role in supporting Bhutan's socioeconomic and environmental health. Bhutan's PAs are also critical to the country's climate resilience, providing the connectivity between habitats and refugia that ecosystems and species will need to adapt to ever-increasing temperatures and climate change impacts. A unique feature of Bhutan's PAs is the presence inside them of a significant population of rural dwellers.

Despite the current high quality of most of Bhutan's PAs, many of them, their natural resources as well as the livelihood of the rural population inside or in the vicinity of PAs, are already threatened by economic pressures, e.g. illegal logging, forest fires and poaching in southern PAs, and by impending climate change impacts, e.g. increased weather and rain variability, accelerated ice melting in northern PAs, and increased risks of landslides and floods downstream.

Unfortunately, Bhutan's current budgetary resources are not enough to properly and effectively manage its PAs, monitor climate change impacts, and undertake ecosystem based adaptation measures so as to deliver on the country's ambitious sustainable development and climate change goals. This assessment is clear in the 2016 Bhutan's review of the state of its PAs, which showed lack of management resources to be the weakest element of Bhutan's protected areas²

² RGoB, Ministry of Agriculture and Forests (2016) "Bhutan State of Parks 2016". Department of Forests and Park Services, MoAF, RGoB.

2. Project Description

2.1 Objective of BFL

The Bhutan for Life (BFL) is designed to provide a 14-year financial bridge that allows for development of Bhutan's internal financing capacity for sustainable management of its protected areas and enable delivery of mitigation, adaptation and biodiversity gains.

BFL will be financed by a transition fund created based on Project Finance for Permanence (PFP) approach. A significant portion of the transition fund is being requested from the Green Climate Fund (GCF) and WWF is the accredited entity negotiating BFL with the GCF. Therefore, the environmental and social safeguards policies of WWF are applied for preparation of the Environmental and Social Safeguards Framework (ESMF) of BFL.

Following its safeguards policies (SIPP), in late 2016 and early 2017 WWF conducted an environmental and social review of BFL project and concluded that,

- The proposed project [BFL] has been categorized as Category B, as the anticipated adverse environmental and social impacts on population within the Protected Areas or those living around who depend on the PA for their livelihoods or environmentally important areas are site-specific, reversible and can be readily mitigated. Since the exact location to be financed by the Transition Fund have not yet been determined and Environment Social Management Framework (and Process Framework) will be prepared to conform to WWF's Environment and Social Safeguard Integrated Policies and Procedures (SIPP).
- An Environment and Social Management Framework will be prepared for mainstreaming environmental and social concerns in the project and a Process Framework (PF) will be included in the ESMF (or prepared as a separate document). The PF will be prepared in consultation with the communities that will address impacts related to livelihoods arising from the anticipated very limited restriction of access.
- Required actions: An Environment Social Management Framework including a Process Framework will be prepared before project concept finalization

A complete version of the WWF Environmental and Social Safeguards Categorization Memorandum can be found in Annex 1.

This ESMF follows on the finding and recommendations of the WWF Environmental and Social Safeguards Categorization. Although only a portion of BFL will be financed by the GCF, this ESMF has been prepared for the whole BFL project to ensure coherence in the application of environmental and social safeguards to the whole BFL project.

2.2 Project Components and description of works

2.2.1 Thematic Coverage of BFL

The BFL project aims to ensure a robust network of protected areas and biological corridors that secures human well-being, biodiversity conservation and increase climate resilience. The network of protected areas and biological corridors management through the BFL will enable them to act as:

- Sanctuary for diversity and persistence of life
- Purveyor of sustainable, resilient and persistence ecosystem goods and services
- Reservoir for carbon and adaptation to climate
- Center of economic opportunity and community well-being
- Center of effective management and efficient services

These comprise the five thematic areas of the BFL's over arching outcomes. The thematic outcomes will be achieved through results of six goals and fifteen milestones. All fifteen milestones are organized and into five project components as follows;

Component A: Increasing forestry and land use climate mitigation (Mitigation)

This component focuses on monitoring systems that detect forest cover change and ecological responses of forests and other systems to impacts of climate change. The findings will be used to develop climate resilient forest management practices and restoration of the degraded lands to conserve and enhance carbon stock. Activities under this will include:

- Maintaining 1.1 million hectares of land within the PA network to secure storage of 240 million tons of carbon dioxide equivalent
- Conduct biodiversity inventory surveys, National Forestry Inventory and land cover mapping
- Updating information management monitoring systems
- Identify priority sites for design, and implement rural alternative energies such as biogas and solar technologies for 10% of the population living within PAs/BCs
- Climate-smart reforestation in degraded lands within the PA network
- Promote sustainable and climate-resilient forest management practices in conjunction with community forest management, rural timber suppliers, NWFPs, grazing areas in PAs/BC management plans including community trainings
- Engage communities living within PAs in conservation initiatives, including waste management and climate change adaptation
- Create employment opportunities to local communities in activities related to park management (informants, local guides, cooks, campsite managers).
- Promote use traditional knowledge, best available science, and technologies to increase their climate and disaster resilience of communities in PAs and BCs
- Community-based Climate Vulnerability and Capacity Assessment (CVCA) and surveys
- Ecosystem-based adaptation and climate-smart, organic agriculture and technologies

- Design and implement storm water management, disaster risk reduction, preparedness, and response measures
- Alternative crops, rainwater harvesting, habitat enrichment, and biological barriers within PAs/BCs
- Nature-based tourism and enterprises, partnerships and business models
- Eco-tourism infrastructure (eco trails, rest resting places, eco-camps and homestays)
- Sustainable harvesting and local processing of selected commercially important NWFPs

Component B: Integrated adaptation in communities and ecosystems to improve natural resource management for livelihoods and climate resilience (Adaptation I):

This component focuses on harnessing climate, hydrological, and natural resources information to design and implement resilience and adaptation measures in Bhutan's protected areas (PAs). This component will work to benefit nature and the livelihood of the population living both inside and in the vicinity of the PAs. Activities under this will include:

- Conduct population estimates for tigers
- Develop climate-smart species conservation plans for tigers
- Zero Poaching Framework and SMART/effective patrolling instituted in all PAs/BCs to prevent, combat and monitor poaching, wildlife trade, and other illegal activities
- Develop Zero Poaching Framework
- Mapping and analysis, and designate high biodiversity habitats, degraded lands, and climate refugia
- Manage salt licks, snags and waterholes, and manage and enhance climate-resilience of wetlands and Ramsar Sites, including enrichment planting
- Manage river banks, riparian areas and floodplains, including limiting encroachment into these critical habitats
- Green and climate-resilient design and construction principles (e.g. those that respond to increasing extreme hazards such as flooding)
- Protection and management mechanisms for the free-flowing river
- Protection and maintenance of drinking water and irrigation in critical watersheds within PAs

Component C: Climate-smart conservation to enhance provision of ecosystem services (Adaptation II):

This component focuses on harnessing climate, natural resource and biological information to design and implement ecosystem based adaptation management of Bhutan's PAs. This component will work to secure wildlife, habitat, and reduce human wildlife conflict in the changing climate while ensuring the sustainable flow of ecosystem services. Activities under this will include:

- Develop climate-smart PA and BC management plans
- Physically demarcate all PAs/BC
- Participatory zoning (including revisions) for each PA/BC

Component D: Protected areas: Effective management of protected areas:

This component focuses on strengthening the organizational, institutional and resource capacity for effective management of PAs. This is a crucial component. The success of the initiative is dependent on fully equipped system with well-trained staff and has full funding available. The system should have all essential infrastructures and a well-organized system for managing the protected areas.

Component E: Management, monitoring, reporting & evaluation, policy support, contingencies (BFL program management):

This component groups all the management activities necessary for the effective implementation of BFL. As such, its purpose is to ensure the efficient implementation of the BFL program. This component does not have activities that could have environmental and social impacts.

2.2.2 Project Location and baseline information of project area

Geographical coverage:

BFL project area includes 10 PAs (comprising of Parks, Wildlife Sanctuaries and Nature Reserves), and 8 BCs spread across 85 of the 205 (or 41%) Gewogs of Bhutan. Of these, 17 Gewogs are associated with the BCs and 75 with the PAs. The project area covers 18 of the 20 Dzongkhagas. The only Dzongkhags that fall outside the BFL areas are Chukha and Pema Gatshel.

Land Cover:

The project covers almost 51% of Bhutan's territory encompassing all agro-ecological regions of Bhutan. The project area comprises of 88% of Bhutan's alpine region, 74% of cool temperate region, 29% dry sub-tropical region, 62% of warm temperate region and 53% of wet subtropical regions of Bhutan (See Annex 2a and 2b for details).

Farming Systems:

A majority of the population living inside Bhutan's PAs practice subsistence mixed farming supplemented through the collection of Non-Wood Forest Produces (NWFP) and other natural resources from the forest. Establishment of farmer groups for livestock, agriculture, Community Forests (CF) 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, 46% of the groups have activities inside PAs. Community forests within the BFL project areas comprise of 2.7% of national forest areas and 4.26% of forests areas within the PAs and BCs (See Annex 3 for details).

There are total of 202 farmer groups in Bhutan and 32% of such groups operate within the project areas of BFL. These farmer groups have an average size of 24 members and out of which 49% comprise of females (see Annex 4 for details). Some farmer groups graduate to form farmer cooperatives and out of the 191 farmer cooperatives in Bhutan,

45% of such cooperatives are within the BFL project areas. The membership of females in the cooperatives is 44.78% at the national level while within the PAc and BCs, females comprise of 53% of members of such cooperatives.

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 49% of Bhutan's total livestock population is within the BFL project areas. These comprise of horses (55%), local cattle (54%), sheep (50%), improved cattle (44%) and goats (32%). Considering one cattle as a livestock grazing unit and converting all other types of livestock into a livestock grazing indicate that the BFL project areas has a grazing density of 5 livestock units per square kilometer compared to 9.9 at the national level. For livestock baseline data refer, Annex 5a and 5b.

The BFL project areas produce 36% of national level cereals, 66% of potatoes, 37% of spices 45% of vegetable 38% of oilseed and almost 50% of fruits and nuts in the country (See Annex 6a and 6b).

Demography:

The BFL prospectus reports that population living inside or in the vicinity (less than 10 Km from the PA borders) comprise approximately 145,000 people or of about 20% of Bhutan's human population. This does not include estimates of population living within and in the vicinity of BCs. If population of all Gewogs that fully or partially fall within the PAs and BCs are considered, the population that depend directly or indirectly on the PAs and BCs for natural resources comprise of about 184,529 which is about 37% of the Bhutan's human population of 504,123 (2016, estimate for total populating). These areas and have an estimated population of density of 4.4 as compared to about 13.1 at the national level (See Annex 7).

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, one horned rhino Rhinoceros, 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 area comprises of the following PAs and BCs.

1. Bumdeling Wildlife Sanctuary (BWS)

Covers Eastern Himalayan ecosystem ranging from warm broadleaved forest to alpine meadows and scree slopes. More than 60 per cent of the area within the PAs is covered by forest while a proportion of more than one third is covered by snow, rock and shrub.

The Ramsar Convention recognizes Bumdeling flood plain as an important wetland area. The Kholongchu River and its three tributaries flow through the wetland. The tributaries provide local communities with a source of water for irrigation and drinking and the main river is the site of a hydropower project 35km south of the wetland.

Sanctuary has about 1,000 households - rice in lower areas; maize and grains in the higher regions and yak herders in the high mountains. The sanctuary is of high significance in terms of the preservation of cultural and traditional practices. ‘Kishuthara’ weaving (Silk textiles) and the production of wooden containers (known locally as ‘Dappa’) are important sources of income.

Table 1: Summary data of BWS

| | |
|---------------------------|---|
| Altitude Range (m) | 1495 to 6400 |
| Area (sq. km) | 1520.61 |
| No. of Mammals spp | 42 |
| No. of Plants spp. | 734 |
| No. of Birds spp (Nos) | 343 |
| No. of households | 1000 |
| Population (inside PA) | 8047 |
| No. of Dzongkhags covered | 3 |
| Name of Dzongkhags | Lhuentse, Mongar, Trashigang |
| No. of Gewogs covered | 5 |
| Name of Gewogs | Minjey, Kurtoed, Khoma, Shermuhoong, Boomdeling |
| Ethnic groups | Sharchop speaking Kurtoes, Sharchop and Tshangla dialects. |
| Farming System | Rice, Maize, Yak Herders, Dapa Makers |
| Highlight Species | Black-necked cranes, Snow Leopard, Tiger, Asiatic wild dog, Himalayan Musk Deer, Bumdeling floodplain is a declared Ramsar site |

2. Jigme Dorji National Park (JDNP)

JDNP is the only park in the country that has all the four national wildlife symbols: Blue Poppy (*Meconopsis grandis*), Takin, Raven and Cypress (*Cupressus corneyana*). It is also the only park where the tiger meets the snow leopard. The park is well known for its medicinal plants, natural hot springs, medicinal waters, and scenery. Mt Jomolhari (which straddles Tibet and Bhutan) is located in the northwestern part of the JDNP, and is sacred to Buddhists as it is the home of the goddesses Jomo.

The park area covers snow capped mountains and glacial lakes, which are an important source of water for four major rivers, which provide income from hydro-electricity generation in the downstream valleys.

Table 2: Summary Data of JDNP:

| | |
|---------------------------|--|
| Altitude Range (m) | 1200 to 7314 |
| Area (sq. km) | 4316 |
| No. of Mammals spp | 50 |
| No. of Plants spp. | 1434 |
| No. of Birds spp (Nos) | 313 |
| No. of households | 1500 |
| Population (inside PA) | 6000 |
| No. of Dzongkhags covered | 5 |
| Name of Dzongkhags | Gasa, Paro, Punakha, Thimphu, Wangdue Phodrang |
| No. of Gewogs covered | 14 |
| Name of Gewogs | Khamaed, Khatoed, Lunana, Doteng, Tsento, Goenshari, Toedwang, Chhubu, Kabisa, Lingzhi, Soe, Naro, Kawang, Kazhi |
| Ethnic groups | All Ngalong (Dzngkha) speaking communities with different tones. People from Laya, Lunana, Lingzhi, Soe and Naro are pre-dominantly migratory yak herders |
| Farming System | Livestock and agriculture |
| Highlight Species | Royal Bengal Tiger, Snow Leopard, Bhutan Takin , Himalayan Musk Deer, Clouded Leopard, Marbled Cat, Asiatic Wild Dog, Red Panda, Asiatic Black Bear, White Bellied Heron, Cordyceps sinensis and medicinal and incense plants |

3. Jigme Khesar Strict Nature Reserve (JKSNR)

Jigme Khesar Strict Nature Reserve (JKSNR) is the only Strict Nature Reserve in Bhutan; and the only protected area without permanent human settlements, except for few migratory yak-herding communities who have traditional grazing rights in the reserve. The Reserve has two major rivers (Haachu and Amochhu) which support mega-hydropower projects downstream (Wangchu) and (Amo Chu in planning stage).

Table 3: Summary Data of JKSNR

| | |
|---------------------------|--------------|
| Altitude Range (m) | 1400 to 4900 |
| Area (sq. km) | 609 |
| No. of Mammals spp | 29 |
| No. of Plants spp. | 427 |
| No. of Birds spp (Nos) | 161 |
| No. of households | 0 |
| Population (inside PA) | 0 |
| No. of Dzongkhags covered | 2 |

| | |
|-----------------------|---|
| Name of Dzongkhags | Haa and Samtse |
| No. of Gewogs covered | 6 |
| Name of Gewogs | Sombaykha, Samar, Bjee, Norgaygang, Tendruk, Norboogang |
| Ethnic groups | Dzongkha speaking Ngalops in the north and Nepali speaking Lhotshampas in the south |
| Farming System | Yak Herding |
| Highlight Species | Musk deer, Red panda, Snow Leopard, Clouded Leopard, Gaur |

4. Jigme Singye Wangchuck National Park (JSWNP),

Centrally located in the protected area system, sharing borders with RMNP and is linked through biological corridors to JDNP and PNP. The ago-ecological conditions of the park extend from sub-tropical to alpine and includes some of the largest and least disturbed areas of the Eastern Himalayas.

Table 4: Summary data of JSWNP

| | |
|---------------------------|--|
| Altitude Range (m) | 250 to 4925 |
| Area (sq. km) | 1723 |
| No. of Mammals spp | 38 |
| No. of Plants spp. | 440 |
| No. of Birds spp (Nos) | 270 |
| No. of households | 588 |
| Population (inside PA) | 5000 |
| No. of Dzongkhags covered | 4 |
| Name of Dzongkhags | Sarpang, Trongsa, Wangdue Phodrang, Zhemgang |
| No. of Gewogs covered | 11 |
| Name of Gewogs | Chhudzom, Jigmechoeling, Dragteng, Korphu, Langthil, Tangsibji, Patsaling Phuentenchhu, Phobji, Athang, Trong |
| Ethnic groups | Nepali speaking communities in the south, Khengkha and Bumthap speaking communities in Trongsa and Ngalong speaking communities in Wangdue. Jangbi community of Langthel and Olep Community of Athang are Monpa who speak monkha language and until recently were isolated communities depending mostly on cane and bamboo as well as livestock. Now they practice agriculture, have schools, health centers, electricity and roads. Most people now speak Dzongkha and wear the national dress. |
| Farming System | Mixed Agriculture and livestock |
| Highlight Species | Black-necked cranes, White-bellied heron, Goldern Langur, Tiger |

5. Jomotshangkha Wildlife Sanctuary (JWS),

The sanctuary protects sub-tropical forest with high biological diversity in the south-

eastern corner of Bhutan. It is the second smallest protected area in the country.

Table 5: Summary Data of JWS

| PA | JWS |
|---------------------------|---|
| Altitude Range (m) | 200 to 2,300 |
| Area (sq. km) | 334.73 |
| No. of Mammals spp | 23 |
| No. of Plants spp. | Not known |
| No. of Birds spp | Not known |
| HH (nos) | 1742 (estimates for all all 5 Gewog) |
| Population (inside PA) | 8333 (estimates for all all 5 Gewog) |
| No. of Dzongkhags covered | 1 |
| Name of Dzongkhags | Samdurp Jongkhar |
| No. of Gewogs covered | 5 |
| Name of Gewogs | Langchenphu, Phuentshogthang, Pemathang, Serthig, Samrang |
| Ethnic groups | Nepali speaking Lhotshampas and Tshangla Speaking communities Sharchop |
| Farming System | Rice, Maize and cattle |
| Highlight | Common Leopard, Himalayan Black Bear, Asiatic Wild Elephant Tigers, Pygmy Hog, Hispid hare |

6. Phibsoo Wildlife Sanctuary (PWS),

Located in the foothills of south central Bhutan and shares the international border with Ripu-Chirang Reserved Forest in India and the sanctuary is connected through biological corridors to JSWNP and RMNP. The sanctuary is a sub-tropical forest ecosystem. It is the only natural habitat of spotted deer (Chital) in the country and has wild sal and agar wood forests.

Table 6: Summary data of PWS

| | |
|----------------------------|---|
| Altitude Range (m) | 200 to 1,600 |
| Area (sq. km) | 269 |
| No. of Mammals spp | 40 |
| No. of Plants spp. | 637 |
| No. of Birds spp | 131 |
| No. of Households HH (nos) | 110 |
| Pop (inside PA) | 5500 |
| No. of Dzongkhags covered | 2 |
| Name of Dzongkhags | Dasgana and Sarpang |
| No. of Gewogs covered | 3 |
| Name of Gewogs | Lhamoidzingkha, Nichula and Senggey |
| Ethnic groups | Mostly Nepali speaking Lhotshampas |
| Farming System | Rice, maize and cattle |
| Highlight | Common Leopard, Himalayan Black Bear, Asiatic Wild Elephant, Tigers, Pygmy Hog, Hispid hare |

7. Phrumsengla National Park (PNP),

The PNP has vegetation ranges from subtropical broadleaf to alpine grassland. Some 100 km of the East–West national highway runs through the park, mostly inside the core zone of the park.

Table 7: Summary data of PNP

| | |
|--------------------|---|
| Altitude Range (m) | 800 to 4500 |
| Area (sq. km) | 905 |
| No. of Mammals spp | 60 |
| No. of Plants spp. | 750 |
| No. of Birds spp | 360 |
| No of Households | 1165 |
| Pop (inside PA) | 5600 |
| No. of Dzongkhags | 4 |
| Name of Dzongkhags | Bumthang, Lhuentse, Mongar, Zhemgang |
| No. of Gewogs | 10 |
| Name of Gewogs | Ura, Chhumig, Tang, Jarey, Maedtsho, Gangzur, Saling, Tsamang, Shingkar, Nangkor |
| Ethnic groups | Bumthaps speaking Bumthangkha, Zhemgang people speaking Khengkha, Mongar and Lhuentse people speaking Kurtope language |
| Farming System | Agro-pastoralist |
| Highlight | Red Panda , Tiger, Rufous-necked Hornbill Highly valuable fungi Matsutake Tricholoma Matsutake, (locally known as Sangay Shamu) mushroom |

8. Royal Manas National Park (RMNP),

Connected by biological corridors to JSWNP, PWS, PNP and JWS and to the Indian Manas National Park in the south, the location of Royal Manas National Park (RMNP) forms the cornerstone of the protected area network in Bhutan.

Habitats range from tropical monsoon forests and subtropical forests to warm broadleaved and cool broadleaved forests. The Manas River is Bhutan’s largest river that drains into the Indian flood plains through the eastern part of the park.

Table 8: Summary data of RMNP

| | |
|--------------------|-------------|
| Altitude Range (m) | 500 to 2714 |
| Area (sq. km) | 1057 |
| No. of Mammals spp | 66 |
| No. of Plants spp. | 900 |
| No. of Birds spp | 426 |

| | |
|---------------------------|--|
| No. of Households | 686 |
| Population (inside PA) | 5331 |
| No. of Dzongkhags covered | 2 |
| Name of Dzongkhags | Sarpang and Zhemgang |
| No. of Gewogs | 8 |
| Name of Gewogs | Norboogang, Umling, Tareythang, Serzhong, Jigmechoeling Phangkhar, Ngangla, Trong |
| Ethnic groups | Khengkha speaking community in Zhemgang and Nepalis speaking community in Sarpang. Sarpang also a communities from all across Bhutan who settled there under the resettlement program of the Government. |
| Farming System | Mixed agriculture and horticulture |
| Highlight Species | Golden Mahseer, Tiger, Elephant, Gau, Asiatic Water Buffalo, Common Leopard, Clouded Leopard, Golden Langur and Sloth Bear |

9. Sakteng Wildlife Sanctuary (SWS),

The alpine meadow and temperate and warm broadleaf forests of SWS include the sources of three major rivers; Manas Chu, Bada Chu and Dhansiri Chu. The Sanctuary is situated in the remotest part of the country where only limited development programs have been implemented. Ninety per cent of the people are herders from a nomadic tribe, the Brokpas, who rear yak and herds of cattle for subsistence.

Table 9: Summary data of SWS

| | |
|---------------------------|--|
| Altitude Range (m) | 1584 to 4500 |
| Area (sq. km) | 740.6 |
| No. of Mammals spp | 30 |
| No. of Plants spp. | 622 |
| No. of Birds spp | 227 |
| No. of Households | |
| Population (inside PA) | 4500 |
| No. of Dzongkhags covered | 2 |
| Name of Dzongkhags | Trashigang and Samdrup Jongkhar |
| No. of Gewogs | 3 |
| Name of Gewogs | Lauri, Merak and Sakteng |
| Ethnic groups | Tshanglakha speaing communities in Lauri and Dakpa speaking communities in Merak and Sakteng. Merak and Sakteng communities wear a unique dress code |
| Farming System | Herders in Merak and Sakteng while Lauri communities practice mixed agriculture |
| Highlight | Red Panda, Monal Pheasant, Blue Poppy flower |

10. Wangchuck Centennial National Park (WCNP).

WCNP was established in 2008 due to its rich biodiversity, role as a water tower, importance in maintaining livelihoods of resident communities and for reasons of international border security. WCNP represents the middle Himalayan ecosystems and contains several ecological biomes ranging from blue pine forest to dry alpine areas. It is the largest protected areas in Bhutan and includes the highest (and unclimbed) peak in Bhutan, Gangar Puensum. The northern parts of the park remain inaccessible for four to five months in winter due to harsh climatic conditions.

Table 10: Summary data of WCNP

| | |
|---------------------------|--|
| Altitude Range (m) | |
| Area (sq. km) | 4914 |
| No. of Mammals spp | 43 |
| No. of Plants spp. | 700 |
| No. of Birds spp | 250 |
| No. of Households | 1,600 |
| Population (inside PA) | 10588 |
| No. of Dzongkhags covered | 5 |
| Name of Dzongkhags | Bumthang, Gasa, Lhuentse, Trongsa and Wangdue Phodrang |
| No. of Gewogs | 10 |
| Name of Gewogs | Chhoekhor, Tang, Lunana, Kurtoed, Khoma, Gangzur, Nubi, Kazhi, Saephu, Dangchhu |
| Ethnic groups | <u>Bumthap speaking communities of Bumthang and Trongsa, Kurtoep speaking communities of Lhuentse and Ngalong speaking communities of Wangdue and Gasa.</u> |
| Farming System | Settled agricultural and as well as nomadic pastoralists |
| Highlight | Red Panda, Monal Pheasants, Tragopan, Black Necked Crane, Blue poppy flower, Musk Deer, Bhutan Takin, Common Leopard, Himalayan Black Bear, Wild Dog, Common Raven, Himalayan Monal Over-lapping tiger and snow leopard habitat |

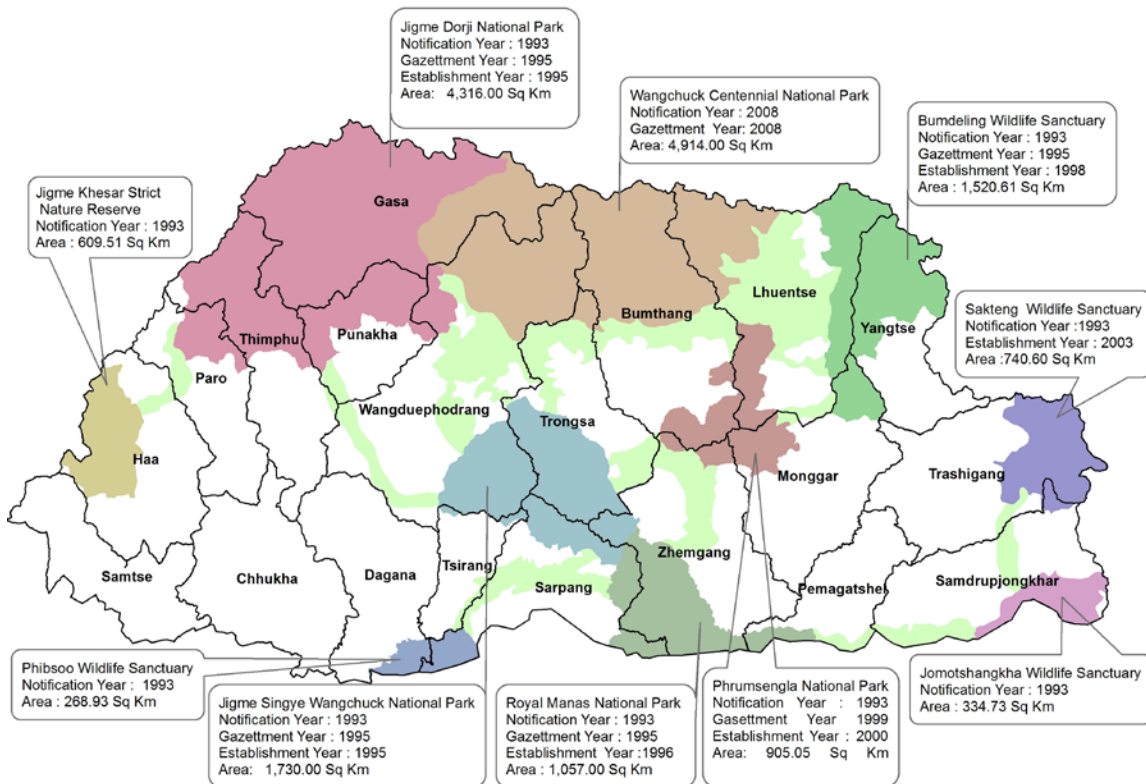
The eight BCs are;

1. BC1 connects JKSNR-JDNP. It has 2 Gewogs, Bjee in Haa and Tshento in Paro.
2. BC2 connects JDNP to JSWNP) and covers 6 Gewogs within 2 Dzongkhags of Thimphu and Wangdue Dzongkhags. The gewogs are Toedpaisa, Kabisa, Chang, Nahi, Gase Tshowom and Darkar,
3. BC3 connects PWS to RMNP to JKSNR) and covers 10 Gewogs of Sarpang Dzongkhag. The gewogs are Chhuzangang, Gakiling, Dekiling, Samtenling, Chhudzom, Senggey, Serzhong, Jigmechoeling, Doonglagang and Sergithang
4. BC4 connects PNP to JSWNP to RMNP and covers 5 Gewogs of Zhemgang, Trongsa and Bumthang Dzongkhags. The Gewogs are Chhumig, Langthil, Shingkar, Nangkor and Trong.

5. BC5 connects JWS to RMNP and covers 3 Gewogs of Samdrupjongkhar and Pema Gatshel Dzongkhags. The Gewogs are Orong, Pemathang and Norboogang.
6. BC6 connects JWS to SWS and covers 5 Gewogs of Samdrupjongkhar and Trashigang Dzongkhags. The Gewogs are Martshala, Serthig, Samrang, Lauri and Kangpar.
7. BC7 connects PNP to BWS and covers 5 Gewogs of Lhuentse and Trashiyangtse Dzongkhags. The gewogs are Tsaenkar, Jarey, Shermuhoong, Tsamang and Samrang
8. BC8 connects JKSNR to JDNP to WCNP covers 17 Gewogs within 4 Dzongkhags of Lhuentse, Bumthang, Trongsa and Wangduephodrang. The Gewogs are Chhoekhor, and Tang, in Bumthang; Maenbi, Minjey, Maedtsho, Khoma and Gangzur in Lhuentse; Tangsibji, and Nubi, in Trongsa; Nyishog, Gangteng, Bjednag, Kazhi, Phobji, Athang, Saephu and Dangchhu in Wangdue Phodrang.

The spatial coverage of the project comprises agro-ecological and geographical locations in Bhutan as indicated in the following map;

Figure 1: Spatial Coverage of BFL Activities



3. Environment and Social Management Framework

3.1 Objective of the ESMF

The BFL project is classified as a “Category B” project under the WWF Environmental and Social Safeguards Categorization Memorandum as the anticipated adverse environmental and social impacts on population within the Protected Areas or those living around who depend on the PA for their livelihoods or environmentally important areas are site-specific, reversible and can be readily mitigated.

Each of the 15 milestones of the project will be supported by several activities. Details and locations of actions related to these activities are not known at this stage and will be finalized only during the implementation phase. As a result, it is not possible to identify site-specific social and environmental impacts and accordingly draw activity specific safeguards management. In such a context, an Environment and Social Management Framework is considered most appropriate to enable safeguards as and when site-specific social and environmental impacts can be identified in qualitative and quantitative terms.

Therefore, this ESMF for the BFL has been prepared to serve as a tool to ensure due consideration of environment and social safeguards during planning, implementation and monitoring process of BFL project activities. It describes the principles and approaches to be followed for selecting sites, avoiding, minimizing and/or mitigating any adverse environmental and social impacts that are likely to arise due to the project.

Although, this ESMF is a requirement of GCF for their financing of about 60% of the BFL project costs, it applies to whole of the project across all milestones.

The framework is based on the relevant laws and regulations of the Kingdom of Bhutan and that of WWF’s Environment and Social Safeguard Integrated Policies and Procedures (SIPP). The relevant RGOB laws and regulations related safeguards are applied since the project implementation has to take place within the PAs and BCs of Bhutan. The relevant WWF SIPP policies are applied since WWF is an accredited entity of GCF.

Specifically, the objectives of the ESMF are to:

- Assess the potential adverse environmental and social impacts based on the potential impacts/issues/concerns identified during screening
- Suggest measures to avoid/ minimize/mitigate adverse potential impacts including potential alternatives (e.g. technology, locations, designs, etc).
- Provide overall procedure and process to obtain environmental and other clearances from relevant agencies as well as to ensure that safeguards mechanisms are implemented.
- Provide guidance for developing site and activity specific Environmental and Social Management Plan (ESMP), if required, during the design and implementation phase.

- Describe the institutional arrangements, monitoring plan, capacity development requirements, and budget required for compliance with the ESMF and effective implementation of environmental and social safeguard issues related to the project

The ESMF, therefore, provides a framework to provide environmental and social safeguards for the BFL activities in line with the applicable national policy and legal framework as well as the WWF's Environment and Social Safeguard Integrated Policies and Procedures (SIPP). This framework details the principles and processes for assisting communities to identify and manage any potential negative impacts of the project activities. It provides for transparency and equity in the planning and implementation of activities by the project so that any desired changes brought about by the project emerge from a consultative process and are not imposed.

3.2 ESMF Preparation Methodology

The methodology followed for the preparation of this ESMF is a combination of a) desk review of the WWF safeguards policies (SIPP) and RGOB's environmental and social assessment policies b) consultation and discussions with stakeholders including relevant civil society organization and as well as PAs and BCs management (See Annex 8).

Consultation were held in 8 out of the 10 PAs, 4 out of the 8 BCs covering east, west, north and southern part of the country. Community consultations were held in 11 Gewogs involving 239 community members (171 men and 68 women). The process involved 51 officials of the concerned PAs and BCs.

Major focus during the consultations were placed on achieving insights into Tenure and Rights over resources, Activities and Potential Impacts of BFL, FPIC process preferred by the communities, grievance mechanism, capacity needs and gender issues related to natural resources management. The field consultations were held in each location with participants divided into four group of men, women, elderly and youth. Each such group consultations were preceded by introduction of the BFL objectives, time frame, BFL partners and major activities (See Annex 8 for field consultations notes and for list of people met).

4. Environment and Social Policy, Regulations and Guidelines.

4.1 RGOB's Policies, laws, Regulations Guidelines

Review of applicable national policies, legislation and regulations includes those that are pertinent to the project, as well as the broader policy and reform context within which the project takes place. Particular attention has been paid to laws and regulations governing the project's implementation and the access of poor and excluded groups to goods, services, and opportunities provided by the project (See Annex 9 for details).

The Constitution of the Kingdom of Bhutan, 2008: That Constitution of Bhutan charges every citizen to contribute in 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 accords the rights over mineral resources, rivers, lakes and forests to the state to be regulated by law. It requires the state to preserve, protect and promote the cultural heritage of the country, including monuments, places and objects. The state is assigned to ensure safe and healthy environment, maintaining a minimum of sixty percent of Bhutan's total land under forest cover for all time, secure ecologically balanced sustainable development and sovereign rights of the state over its own biological resources including legislation to ensure sustainable use of natural resources and intergenerational equity. By the constitution, the Parliament can, by law, 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.

The Local Governments are assigned to ensure consideration of local interests in the governance through forums for public consideration on issues affecting the local territory. 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 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 enables leasing of government reserved forestland for economic and various other activities.

The act defines removal of Tsamdro (grazing land registered in individual names – with usufruct rights only) from the individual ownership. Such grazing land will be reverted and maintained as Government land in towns and Government Reserved Forests land in rural areas. However, the Tsamdro can be leased to individual households or communities owning livestock based on herd size. Preference shall be given to the previous rights holders and communities. Highlanders who are directly dependent on Tsamdro may retain their Tsamdro rights under lease irrespective of possession of livestock and their herd size. Grazing and pasture development on Tsamdro shall be permitted based on a Tsamdro management plan. The Department of Forests, Department of Livestock, and the lessee shall be responsible to prepare Tsamdro management plan. A right of way established over a land through local customs by uninterrupted use for a period of more than 5 years shall be respected and the landowner shall not object to its use.

Forest and Nature Conservation Act of Bhutan, 1995: This Act ensures the protection and sustainable utilization of forests, fauna, and other natural resources of Bhutan to benefit present and the future generations. The Department of Forests and Parks Services is fully responsible for sustainably managing, protecting, producing, and regulating all natural resources within Government Reserved Forests as well as outside. Wild animals and plants listed in the Schedule I are declared as totally protected. The Forest and Nature Conservation Rules of Bhutan 2017 has been formulated to support the implementation of this Act.

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.

National Access and Benefit Sharing (ABS) Policy (Draft), 2014: The National Access and Benefit Sharing (ABS) Policy ensure 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.

The Water Act of Bhutan, 2011: The act accords priorities for allocation of water for drinking, agriculture, energy, and industrial use, tourism and recreation and for other uses. It requires location of water to be based on the principle that water is a resource owned by the State and that every citizen has equal right to these resources. The Act stipulates that use of water should not result in denial of water to any individual or community, including downstream and upstream needs or discharge of any effluent directly or indirectly to any water resource unless the discharge is in compliance with the Effluent Discharge Standard. At the Dzongkhag level, the Act accords 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 the relevant local Governments in collaboration with religious bodies and Ministry of Home and Cultural Affairs have the responsibility for protection of 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 where 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.

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 only quality and appropriate breeds of livestock, poultry and fish to be introduced. It requires that introduction and spread of diseases, particularly the notifiable and zoonotic diseases are prevented;

Waste Prevention and Management Act, 2009: Precautionary Principle of the Act, under section 8 defines that every person shall take all precautionary measures in maintaining a clean and healthy environment and further in its section 10, the Act prescribes that a person polluting the environment or causing ecological harm shall be responsible for the costs of avoidance, contamination, abatement, medical compensation, mitigation, remediation and restoration in application of the Polluter Pays Principle. The lead implementing agencies shall make arrangements (sections 22) for dealing with waste.

This clause is applicable in management of waste in the protected areas in general and at locations of eco-tourism enterprises in the project areas.

National Environment Protection Act, 2007: This Act outlines principles and a legal framework that have implications for forest governance and management. It requires that a person taking natural resources from the environment, or deriving economic benefits from it, should ensure sustainable use and management of the resources and ecosystems.

Environment 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 to be a prerequisite to the issuance of a 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. When a decision on the environmental clearance has been taken, the NECs or the CA are required to make a public announcement of the decision informing about the project/activity, measures to avoid or mitigate potential adverse impacts.

The act and ensuing notifications from the NECs identifies sectors that do not require environment clearances and delegates identified competent authorities to issue environment clearances for specified sectors. The act accords the secretariat or competent authority shall monitor and control compliance with the terms of environmental clearances. The competent authorities shall report annually to the Secretariat on implementation, monitoring and enforcement and the Secretariat shall report annually to the Commission. The EA Act is also specific on conforming compensations and replacement of the properties if land acquisition and property displacement is involved.

The Penal Code of Bhutan, 2004: A principle under the Penal Code of Bhutan define that one (victim) is considered capable of consent when the consent is not obtained by fraud, duress, compulsion, or coercion; or one (victim) giving consent has authority to do so. This aspect is relevant as a principle in obtaining free and prior informed consent from local communities and stakeholders for BFL project activities affect or associate with community use.

National Forest Policy, 2011; The policy encourages engagement of rural communities to manage forests sustainably for socio-economic benefits, poverty reduction and to contribute to overall sustainable forest management. The policy envisions the network of PAs and BCs to maintain species persistence and ensure long-term sustainability of Bhutan's biodiversity, ecosystem services, natural habitats and cultural heritage for positive environmental outcomes. It calls for integrated approach to 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 promotion of nature-based tourism to bring benefits to local communities and enhance conservation in the PAs and BCs. It also include enabling creation of public recreational areas and/or facilities that should managed based on code of best practices. It allows regulated grazing in multiple-use and

buffer zones although not in the core zone and requires development and implementation of measures to protect natural ecosystems against invasive alien plant species.

Forest and Nature Conservation Rules and Regulations of Bhutan, 2017: It restricts allotment of land within the PAs except to the local residents and for public service facility. Land allotment in such cases can happen only when nearby the existing inhabited area; gradient is less than 45 degrees of 100%; land is located beyond 30 meters of the bank or edge of any river and 15 meters of stream or water source; when not within 180 meters uphill or 90 meters downhill of national highway. Such lands should be located beyond 500 meters of existing monastery or dzong. The regulations restricts livestock grazing shall in the area fenced for natural regeneration for a specified period and in the plantation area whether fenced or not till the seedlings are well established. It allows goat grazing only within a confined area and not freely in SRF. However, the regulations provides right of ways to existing “tsalam” and ‘chulam”, traditionally used during the migration, provided, such routes are not lawfully closed by the Government.

The regulations requires that that PAs must prepare Management Plans in consultation with local community, local authority and other member of the public who are affected by the Protected Area as well as other relevant stakeholder or recognized Civil Society Organization (CSO).

Land Rules, 2007: The land rule specifies details on land acquisition and lease. It requires private registered lands shall be acquired only under unavoidable circumstances and not without providing appropriate compensation based on valuation by the PAVA. Land under acquisition shall be taken over only after registering the substitute land in the name of the affected landowner or cash compensation has been made to the landowner.

It allows the lease of land from the SRF. However such land should be used based on an approved management plan. This requirement covers land leased for commercial agriculture, grazing and sokhshing. Lease of SRF for commercial farms and sokhshing 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 that for agriculture is based on ownership and size of agriculture land. However, highlanders shall be eligible for Tsamdro on lease, irrespective of possession of livestock and herd size. They are also eligible to sub-leased the leased Tsamdro.

The Moveable Cultural Property act of Bhutan, 2005: Requires that all cultural properties shall be registered in the name of the Dratshang, the Government, Community or private individuals based on their ownership. Cultural Property registered in a Thram shall not be sold, used for personal means, exchanged, gifted or damaged. Considering that foreign visitors are often not familiar with the Cultural Property Act of Bhutan, it is the legal responsibility of the concerned agency/host/guide to brief the visitor on the Act where applicable.

If 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.

Regulation for the Environmental Clearance of Projects, 2001; The regulations require that environmental clearance shall be issued only after screening and assessing the environmental impacts of such projects. For the environmental screening process should include, the applicant should submit complete environmental information comprising of

- The potential adverse effects of the project on the environment including the direct, indirect and cumulative effects;
- Compliance with relevant sectoral guidelines or code of best practices, if any, issued by the Secretariat or Competent Authorities;
- How impacts of the project will be avoided, minimized or reduced; and
- The environmental benefits of the project, including how the project will benefit concerned people and use clean and sustainable technologies.

The Secretariat or Competent Authority shall screen the application for environmental clearance as per sectoral guidelines. The Secretariat or Competent Authority may issue an environmental clearance for the project on the basis of the environmental application with terms and conditions or may ask the applicant to carry out environmental assessment or issue a blanket denial to the project. If an EC is issued, the NECs or the CA shall issue a public notification.

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

1. The applicant is shall draw up terms of reference for the environmental assessment report which has to be approved by the NECs or CA
2. Applicant shall prepare an environmental assessment report consistent with the terms of reference approved by the Secretariat or Competent Authority (See Annex 16 for outline of the EA Report)
3. In the process of the EA report preparation, a public consultation must be held

Upon receipt of 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.

4.2 WWF Safeguards Policies and Procedures Applicable to the Project.

WWF's safeguards policies requires that any potentially adverse environmental and social impacts are identified, avoided or minimized. The safeguards policies provide a mechanism for integrating environmental and social consideration into conservation decision-making.

Safeguards policies that are relevant to this project pertain to:

Environment and Social Risk Management Policy: This policy is applicable because BFL intends to support physical activities that will have environment and social impacts. However, it is not anticipated that the BFL will result in any significant adverse and irreversible environmental and social impacts and BFL has been categorized as Category B based on initial analysis. Since, BFL is a conservation project, its outcomes are positive environmentally and socially. The environmental and social impacts that may occur are expected to be site-specific, negligible and on which mitigation measures can be addressed easily.

At the time of preparing this safeguards document, the exact location and impact of each specific activities cannot not be determined. These specific items will emerge only during implementation of the project as exact location of these activities become clear. Therefore, an ESMF is prepared so that implementation process is enabled to address environmental and social impact mitigation when specific activity locations and impacts are known. It sets out principles, rules, guidelines, and procedures to assess the environmental and social risks and impacts.

Natural Habitat Policy; Overall, activities of the project will produce significant conservation benefits and any potential adverse environmental impacts on human populations or environmentally important areas including forests, grasslands and other natural habitats are expected to be very limited. While there shall be no conversion or degradation of natural habitats, this policy has been triggered as a precaution to encourage the executing agency to be more cautious with the EA process when carrying out activities inside sensitive ecosystems such as construction work proposed for Park headquarters, park roads staff quarters, outpost/guard post, and visitor information canters.

WWF's mission is to protect natural habitats, and it does not undertake any projects that would result in conversion or degradation of critical natural habitats, especially those that are legally protected, officially proposed for protection, or identified as having high conservation value.

The project area comprises of all PAs and BCs in Bhutan, which provide ecosystem services and livelihood to communities of 85 out of the 205 Gewogs in Bhutan. The mainstay of these communities is agriculture and livestock, which are directly dependent on natural resources.

The WWF applies the precautionary approach for its projects and programs. Hence, where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. It mandates a comprehensive assessment of all potential impacts, including those from smaller-scale infrastructural development.

Indigenous Peoples Policy; WWF policy requires to ensure that indigenous rights are respected and that indigenous peoples do not suffer adverse impacts from projects, and that they receive culturally appropriate benefits from conservation by way of respecting peoples' rights, tenure over traditional territories and by avoiding potential adverse impact from the project.

In Bhutan, ethnic minority is not an issue or present in any of the developmental project assessments. Population is broadly identified as Sharchop (eastern), Ngalop (western) and Lhotsham (southern). Within these broad regional categories of people, there are pockets of settlements with distinct cultural practices and traditions. However, no community in Bhutan is isolated in the national development process and on the democratic process. All such communities are represented in their local governments like any other community and social amenities and local institutions are in place in all communities. Hence, there is no community that can be considered vulnerable (neglected) from a development process and governance perspective.

Pest Management: Agriculture activities of communities residing within the PAs and BCs will involve minimal use of pesticides within these areas. Therefore, this policy is triggered. Except for inputs related to organic farming and those that align with the integrated pest management practice of the National Plant Protection Centre. The Project, however, 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.

Physical and Cultural Resources: This policy requires that Physical Cultural Resources (PCR), which includes archaeological, paleontological, historical, architectural, and sacred sites including graveyards, burial sites, of unique natural values, are appropriately preserved and their destruction or damage is appropriately avoided. BFL activities will not have significant excavations and earth moving actions. However, most communities do have monasteries and cultural sites in the vicinity of communities. Moreover, reverence to mountains and rivers are part of Bhutanese culture. The BFL activity, if at all, will contribute to strengthening the sanctity of such cultural resources through integrated conservation actions.

The siting of small infrastructure under BFL will avoid relocation of any known existing physical cultural resources. The location of such activities should ensure that there is no disturbance to physical cultural resources through the Initial Environment Examination (IEE).

Occupational Health and Safety of IFC: This IFC policy, which applies to the GCF projects, requires employers and supervisors to implement all reasonable precautions to protect the health and safety of workers through preventive and protective measures should be introduced

Community Health and Safety policy of IFC: Project activities should prevent adverse impact involving quality and supply of water; ensure safety of project infrastructure, life

and properties; have mechanisms for hazard materials, disease preventions and emergency responses.

Resource Efficiency and Pollution Prevention of ICS: Requires that during the project life-cycle, ambient conditions to be considered so that technically and financially feasible resource efficiency and pollution prevention principles and techniques that applied to avoid or minimize adverse impacts on human health and the environment.

4.3 Adequacy of National Environmental and Social Clearances of RGOB

In general, the application of RGoB policies and guidelines for environmental clearance and impact assessment, covers the requirements of WWF environmental and social safeguards. However, there are few gaps in the application details of the two. These are as follows:

The composite RGOB environmental clearance processes, in principle, are consistent with WWF SIPP requirements. However, all activities with an impact on the environment and people under the proposed project will be subjected to some form of an environmental and social analysis, prior to disbursement of funds. The extent of the analyses will depend on the nature of a given activity and its location will be decided in consultation with the BFL PCU. The RGOB's environmental clearance procedures fairly suffice for environmental and social safeguards as per the WWF SIPP in the context of the BFL project.

However, WWF will review safeguards documentation, as appropriately used, prepared under the project. Any activity defined in this framework, which does not fall within the RGOB's safeguards requirements will need to undergo appropriate environmental and social safeguards assessment, which will be reviewed by WWF. The project affected people whose properties or livelihood options are affected directly or indirectly should be compensated by the project upon social assessment.

The WWF environmental and social safeguards policy on Physical and Cultural Resources provide for the use of "chance find" procedures that include a preapproved management and conservation approach for materials that may be discovered during project implementation. 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 Change Find in is in place within the RGOB policy and regulatory framework. Hence, a "chance find procedure" is suggested to be applied (Annex 10).

5. Potential Environmental and Social Impacts and Mitigation Measures

5.1 Possible Major Environmental Impacts

The BFL project is designed and expected to bring about major positive environmental outcomes. However, minor negative environmental impacts anticipated are likely to be site-specific and potentially include:

- Impacts arising from excavation, waste and material management at site during minor construction of PA and BCs management offices, improved herders shed, transit camps and water reservoirs for drinking and minor irrigation, maintenance of traditional trails
- Disturbance to wildlife movement arising from fencing of open grazing areas
- Risk of desecration of cultural sites due to increased tourism activities

5.2 Possible Major Social Risks/Impacts

The project is expected to lead to primarily positive benefits in terms of enhancing rural livelihoods, enhancing resilience of communities to climate change and empowering the communities in the governance of natural resources.

Some of the social risks and impacts associated with the project are expected to include:

- Conflicts related to land use boundaries (grazing areas, NWFP collection areas, water catchment areas, right of ways (traditional trails, water ways),
- Forest offence such as wildlife poaching, unsustainable and excessive harvesting of natural resources (NWFPs, fuel wood, timber)
- Impact on cultural resources and artifacts;

However, given the nature of BFL project, these risks are expected to be minimal, site-specific and those for which mitigation measures can easily be developed through ensuring application of standard processes and regulations that are in place. To address these concerns, the project needs to comply with the relevant Acts and Rules and Regulations of the Kingdom of Bhutan and relevant WWF environmental and social safeguards policies and procedures. Specific Environment and Social Management Plan (ESMP) should be prepared as per requirement based on this ESMF to ensure adequate mitigation measures wherever required.

5.3 Description of Likely Risks and Possible Mitigation Measures

This section includes description of the various facets of natural resource, which the local communities associate with. These are issues that have emerged from the community consultations conducted in the process of developing this ESMF.

Table 11: Component A - Impacts and Mitigation Measures

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|---|--|---|---|---|
| <i>ENVIRONMENTAL IMPACTS</i> | | | | |
| Design and implement rural alternative energies such as biogas and solar technologies | Design and implementation of Biogas initiatives | Reduction in cattle as biogas requires sedentary cattle, which are mostly improved breed. Improved breed cattle are expensive and difficult to manage | Explore cold temperature and portable biogas technologies or arrange incentives or subsidies for purchase of improved cattle | PA/BC (coordination) Department of Livestock (Technical Support) |
| | | Risk of an increased methane emission (foul smell and risk fire when methane comes in contact with oxygen) | Biogas plant to be properly covered and internal gas connections to be made secure | PA/BC (coordination) Department of Livestock (Technical Support) |
| | Use of unsuitable for tree species for plantations | low water-use efficiency and reduced growth, high mortality or further degradation through disruption of water balance | Assess appropriateness of species in terms of biodiversity, water efficiency, forest fire, local needs, cultural sensitivity, survival, etc. Use appropriate species and local species | PA/BC |
| | | Waste generation from temporary worker camps | Install waste bins around construction sites and worker camps Integrate site waste management with Thromde or local community facility or local waste collection system | PA/BC (monitoring) Contractor (Compliance) |
| | | Sewage generation from workers camps | Ensure that there is appropriate and separate areas, toilet and washing areas. Make arrangements for environment friendly toilet and washing facilities | PA/BC (monitoring) Contractor (Compliance) |
| | Use of fuel wood in NWFP processing | Pressure on forest | Promote use of drying and grinding equipment to reduce fuel wood consumption and reduce waste | PA/BC (monitoring) |
| | Fencing of individual | Disruption to movement of wildlife | Promote fencing with wire mesh instead of barbed wire | PA and BC management |

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|---|---|--|---|---|
| | grazing units | | and adopt patched fencing to provide wildlife corridor | DOL |
| | Wildlife protection | Depredation of livestock by wildlife | Develop appropriate compensation mechanism for livestock and crop depredation | PA and BC management/ DOL |
| <i>SOCIAL IMPACTS</i> | | | | |
| Climate-smart restoration in the mapped land areas | Reforestation activities on degraded land that fall in traditional trails, sacred sites or community use land | Land use conflict | <p>Only upon consultation with local community, local authority and other member of the public who are affected or have a stake as per the principle of Rule 44 of FNCA, 2017 (for management of protected areas)</p> <p>Identify approaches that provide benefit to the local community (Agroforestry that provide fodder to communities; trail maintenance integrated with restoration work; sacred site maintenance with plantation of culturally appropriate species)</p> <p>Where possible apply indigenous practice</p> | PA/BC |
| | Engagement of labour for restoration and plantation work | Working conditions, Occupational health and safety | <p>Equip every person at site with helmet/ boots/gloves and first aid kit at the site.</p> <p>Ensure that no underage workers, or children are engaged</p> <p>Construct temporary toilets for the workers</p> <p>Provide safe drinking water facility for workers</p> | PA/BC (monitoring) Contractor (Compliance) |
| Sustainable and climate-resilient Community forest management | Membership to CFM groups | Exclusion in access to CF resources for community members who cannot afford to contribute labour and | Enable inclusiveness in the CF membership - no households are excluded on the grounds of their inability to contribute labour | PA and BC Management |

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|--|---|--|---|-------------------------|
| | | become members | | |
| | | Poor representation of women in CF executive bodies | Fair representation of the poor and women Pro-poor measures to be integrated in the CF bylaws | PA and BC Management |
| | CF focus on conservation and limited economic benefits arising from the CFs | Sustainability of community based management could be undermined | CF management plans to integrate small scale sustainable enterprises that provide revenue to the community | PA and BC Management |
| Sustainable and climate-resilient NWFPs management | Un-regulated and illegal harvesting of NWFPs | Community conflicts Risk of resource depletion due to ad-hoc and unsustainable illegal harvesting | Develop list of NWFPs that need sustainable management and harvesting strategy Develop sustainable management and harvesting guidelines for each identified NWFP Establish NWFP groups and include sustainable harvesting methods and guidelines and monitoring responsibilities and within the Group bylaws Training on management of NWFPs (eg <i>Paris polyphylla</i> or locally called Thok Sumpa) Prepare NWFP Management Plan for each NWFP group | PA and BC management |
| Sustainable and climate-resilient grazing management | Lack of awareness on grazing regulations and rights | Herd trespassing and conflict amongst individual herders by protecting respective grazing areas | Awareness and clarification on pasture and grazing management rights and regulations | PA and BC Management |
| | | | Design and promote eco-friendly makeshift house for herders, homestays to sell cattle herding experience to tourist, | Contractor (Compliance) |

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|-------------------|------------------------------------|--|---|---------------------------|
| | Ad-hoc and free grazing management | Unsustainable grazing | Formulate a tsamdro (grazing area) management plan in line with the Land Act and Land Rules (Rotational grazing practices, Herd size management, etc) | DoL |

Table 12: Impacts and Mitigations - Component B

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|--|--|---|---|--|
| <i>ENVIRONMENTAL IMPACTS</i> | | | | |
| Effective waste management programs | Increased visitors and tourists | Increased waste | 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) | Dzongkhag Environment Officer (Technical Support) |
| Based on CVCA results, implement ecosystem-based adaptation and climate-smart, organic agriculture approaches and technologies, in priority demonstration sites in critical watersheds | Conventional agriculture practices and drive for increased agriculture production through use of mechanization and chemical inputs | Soil erosions, soil nutrient depletion, loss of soil fertility in the long run and eventually causing environmental degradation | Avoid use of heavy farm machinery for tilling, use of inorganic inputs for soil fertility management. BFL resources will not be made available for such purposes. Organic agriculture, conservation tillage practices, cover cropping, green manuring, field nutrient management approaches to be promoted through input supplies from the project | PA and BC Management Department of Agriculture Department of Agriculture Marketing and Cooperatives |
| Implement cost-effective and innovative human wildlife conflict mitigation mechanisms such as alternative crops, rainwater harvesting, habitat enrichment, and | Introduction of alternative crops | Risk of invasion by new crop of new crop disease | New crops should be certified by BAFRA and NPPC prior to introduction of new crops | PA/BC; BFL Coordination |

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|---|--|--|---|--|
| biological barriers | | | | |
| Install appropriate physical barriers in human wildlife conflict hotspots within PAs/BCs and buffer zones | Lack of natural barriers between wildlife protection areas and human settlements | Human-wild life conflicts | CFs, being effectively protected and management by local communities can be an effective physical barrier to protect crops and livestock from damage by wild life and of wild life by illegal poaching in the wildlife protected areas | PAs/ BCs and Social Forestry Division |
| | Extreme weather related exposure | Storms, floods damaging settlements | Strategically site CFs areas, to function as effective physical barrier to protect crops and livestock from damage by wild life as well as human settlements from severe weather related impacts (windstorms, flooding) | PAs/ BCs and Social Forestry Division |
| | | Accidents along the alignment due to size of the trail | Width of the trail should have minimum width of 3 feet for mule tracks | PA/BC (monitoring and design) Contractor (Compliance) |
| | | Damage to environment due to new route construction | Integrate with traditional trails and maintain them as eco-trails so that new routes are not constructed | PA/BC/Gewo g Adm |
| | | Soil erosion | Minimizing the area of ground clearance. Avoiding sensitive alignments, such as those, which include steep hillsides, ecological sensitive areas. Balance filling and cutting requirements through route choice Maintain trail surface and alignment with vegetation and where possible install slope protection | PA/BC (monitoring) Contractor (Compliance) |
| | Camp fires | Forest Fire | Identify designated camp | PA/BC |

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|------------|---|---|---|---|
| | | | fire area and for same disposal of ash | |
| | Site Development | Damage to the site conditions due to excavation causing destabilization of the site and surrounding areas causing soil erosion/landslides | Plantation of trees in slide prone areas Erect local retention walls | PA/BC Contractor |
| | Removal of trees/vegetation during construction | Possible loss of vegetation | Avoid removal of trees Carry out plantation works to replace removed trees as soon as possible. | PA/BC |
| | Waste from Visitors | Sewage generation | Ensure that there is appropriate and separate areas for campsites, toilet and washing areas, grazing areas for horses or yaks (transport). Make arrangements for environment friendly toilet and washing facilities | PA/BC (monitoring) Contractor (Compliance) |
| | | Discharge of waste into nearby water bodies | Ensure that camps are located away from existing stream, river, water source no discharge from such establishments should follow their path into nearby water bodies. Make arrangements for solid waste be carried out of the area, Avoiding sensitive sites, such as those which include steep hillsides, and areas erosive in nature | PA/BC (monitoring) Contractor (Compliance) |
| | | Waste generation from temporary worker camps | Install waste bins around construction sites and worker camps Integrate site waste arrangement with Thromde or local community facility or local waste collection system | PA/BC (monitoring) Contractor (Compliance) |

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|--|---|---|---|--|
| | | Sewage generation from workers camps | Ensure that there is appropriate and separate areas, toilet and washing areas. Make arrangements for environment friendly toilet and washing facilities | PA/BC (monitoring) Contractor (Compliance) |
| | Allotment of government land for construction of ecotourism facilities if the site falls in SRF | Could impact critical conservation themes or may fall in critical heritage sites | Avoid sites that are in close proximity to dzongs, monasteries or other sacred sites. Clearances from relevant government authorities for acquiring 'user rights' for land (See Annex 11, Procedural guidance for land acquisition) which also includes requirement for forestry clearance | PA/BC |
| <i>SOCIAL IMPACTS</i> | | | | |
| | Extreme weather events | Increased flood and storm frequencies and intensities | Establish early-warning systems Maintain natural vegetation in riparian zones | PA and BC Directorate of MoAF |
| Implement community-based climate adaptation plans and green recovery and reconstruction | Green approaches and Technologies | Green approaches and technologies are usually expensive with longer gestation for returns. Hence social acceptability and affordability may be low Could also create disparity between rich and poor | Incentives and subsidies on green approaches and technologies in terms of inputs and technical support to be provided from the project | PA/BC; BFL Coordination; Transition Fund |
| Design and develop ecotourism infrastructure (treks and trails) in six PAs, and expand such infrastructure in the other four PAs | Development Ecotourism Trails | Community conflicts over alignment of trails- Conflict with traditional trails or with local and traditional norms of restrictions | Hold consultation with concerned communities and local government before, during and after construction of the route to enable participation in decisions, construction, maintenance and management. Align and integrate eco trails | PA/BC/Gewog |

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|------------|--|---|--|--------------------|
| | Development of Ecotourism infrastructure – Camps Sites | Disturbance to local culture and sanctity due to location | <p>with traditional routes</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, select another site within 100 meters of the identified site, select another site for 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> | PA/BC/Gewog |
| | Development of Ecotourism infrastructure – Rest Houses | Disturbance to local culture and sanctity due to location | <p>Ensure that site identified for rest houses 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, select another site within 100 meters of the identified site, select another site for 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> | PA/BC/Gewog |
| | Design of | Architectural, structural | Prepare the drawings as per | PA/BC/Gewog |

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|--|--|--|--|---------------------|
| | infrastructure | drawings may not fit with natural and cultural of the locality | BBR 2002 and other relevant building codes and by certified architects | g |
| | | Possible disasters if the construction site happens on unstable sites. | Conduct basic soil profile and preliminary geo-physical assessment before preparation of architectural & structural design | PA/BC Contractor |
| | Engagement of labour for construction work | Working conditions, Occupational health and safety | Equip every person at site with helmet/boots/gloves/belts Provide first aid kit at the site. Ensure that no underage workers, or children are engaged Construct temporary toilets for the workers Provide safe drinking water facility for workers | PA/BC Contractor |
| Implement 30 nature-based local enterprises in PAs/BCs (focusing on unique selling points of individual PAs/BCs) | Nature based enterprises | Conflicts between commercial enterprises and non-commercial local users | Social and environmental impact assessment should be done for such enterprise prior to establishment. Prior informed consent of affected local communities must be obtained | PA/NC Gewog |
| Conduct commercial viability, climate-resilience, and sustainability assessment of NWFPs inside PAs/BCs | Commercialization of NWFPs | Conflicts between commercial enterprises (for raw material) and non-commercial local users (for traditional use) | Social and environmental impact assessment should be done for such enterprise prior to establishment. Prior informed consent of affected communities must be obtained | PA/NC Gewog |

Table 13: Impacts and Mitigation - Component C

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|---|--|--|--|---------------------------|
| <i>ENVIRONMENTAL IMPACTS</i> | | | | |
| Conduct inventory of invasive species in PAs/BCs, and control their spread | Invasive species | Invasion of local diversity | Put measures in place to detect and control invasive species | PA/BC DoFPS NPPC |
| Manage salt licks, snags and waterholes, and manage and enhance climate-resilience of wetlands and Ramsar Sites, including enrichment planting | Enrichment planting areas | Could conflict with traditional community rights and community managed areas for livestock herding and grazing Could also become poaching hotspots | Identification and management of salt licks, snags and waterholes to be based community consultations and participatory managed | PA/BC Gewogs |
| Implement protection and management mechanisms for the free-flowing river (including stakeholder consultations) to reduce climate change impacts and increase ecological and downstream community resilience. | Limitation to use of water in free flowing river | Water scarcity for irrigation | Select water-efficient and drought- resistant species and varieties for afforestation and reforestation | PA/BC NPPC |
| <i>SOCIAL IMPACTS</i> | | | | |
| Develop climate-smart species conservation plans (including the human responses to climate change that impact these species) for tigers and snow leopards | Increase in population of tiger and snow leopard | Tiger and leopards attacking humans and livestock could - local communities bearing the burden of conservation through loss of life and assets among communities | Develop a sustainable compensation scheme that provides prompt compensation for loss faced by communities Incorporate HWC strategy in the PA and BC management plan | PA/BC |
| Implement | SMART | Poaching in locations | Engage local community | PA/BC |

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|--|-----------------------------------|---|--|---|
| SMART patrolling in all PAs/BCs | patrolling | unreached by patrolling teams can happen | patrolling by enhancing perks and benefits to local patrolling personnel and informants | Gewog |
| Conduct nationwide mapping and analysis, and designate high biodiversity habitats, degraded lands, and climate refugia | Designation of degraded lands | Social conflict related to restoration activities when degraded land for restoration happens to be in community use areas such as traditional trails, sacred sites or community use land | Rehabilitation of degraded land impacted so may be initiated upon consultation with local community, local authority and other member of the public who are affected or have a stake as per the principle of Rule 44 of FNCA, 2017 (for management of protected areas) | PA/BC Dzongkhag Gewog DoFPS |
| Develop green and climate-resilient design and construction principles (e.g. those that respond to increasing extreme hazards such as floods and extreme storms), and apply them to all infrastructure in and around PAs | Green approaches and Technologies | Green approached and technologies are usually expensive with longer gestation for returns. Hence social acceptability and affordability may be low Could also create disparity between rich and poor | Incentives and subsidies on green approaches and technologies in terms of inputs and technical support to be provided from the project | PA/BC; BFL Coordination; Transition Fund |
| Establish foundation for payment for ecosystem services (PES) schemes (e.g. park entry fees, water) in the protected areas | PES | 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 | PA/BC; BFL Coordination Stakeholders |
| Review and propose amendments on relevant existing policies based on findings of key ecosystem services valuation | Amendments on existing policies | Policy coherence with other associated policy could be lost | Comply with the RGOB's Poverty and Environment Mainstreaming Guidelines | MoAF BFL Coordination PAs/BCs |

Table 14: Impacts and Mitigation - Component D

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|--|------------------------------------|---|---|---------------------|
| <i>ENVIRONMENTAL IMPACTS</i> | | | | |
| Implement infrastructure plan (including maintenance) in all PAs/BCs | PA and BC infrastructure location | Disturbance to local culture and sanctity due to location | <p>Ensure that sites identified 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, select another site within 100 meters of the identified site, select another site for 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> | PA/BC/Gewog |
| | Design of infrastructure | Architectural, structural drawings may not fit with natural and cultural of the locality or are vulnerable to disasters | Prepare the drawings as per BBR 2002 and other relevant building codes and by certified architects | PA/BC/Gewog |
| | | Possible disasters if the construction site happens on unstable sites. | Conduct basic soil profile and preliminary geophysical assessment before preparation of architectural & structural design | PA/BC Contractor |
| | Site Development | Damage to the site conditions due to excavation causing destabilization of the site and surrounding areas causing soil erosion/landslides | <p>Plantation of trees in slide prone areas</p> <p>Erect local retention walls</p> | PA/BC Contractor |
| | Removal of trees/vegetation during | Possible loss of vegetation | <p>Avoid removal of trees</p> <p>Carry out plantation works to replace removed trees as</p> | PA/BC |

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|------------|---|--|--|---|
| | construction | | soon as possible. | |
| | Waste from Visitors | Sewage generation | Ensure that there is appropriate and separate areas for campsites, toilet and washing areas, grazing areas for horses or yaks (transport). Make arrangements for environment friendly toilet and washing facilities | PA/BC (monitoring) Contractor (Compliance) |
| | | Discharge of waste into nearby water bodies | Ensure that camps are located away from existing stream, river, water source no discharge from such establishments should follow their path into nearby water bodies. Make arrangements for solid waste be carried out of the area, Avoiding sensitive sites, such as those which include steep hillsides, and areas erosive in nature | PA/BC (monitoring) Contractor (Compliance) |
| | | Waste generation from temporary worker camps | Install waste bins around construction sites and worker camps Integrate site waste management with Thromde or local community facilityt or local waste collection system | PA/BC (monitoring) Contractor (Compliance) |
| | | Sewage generation from workers camps | Ensure that there is appropriate and separate areas, toilet and washing areas. Make arrangements for environment friendly toilet and washing facilities | PA/BC (monitoring) Contractor (Compliance) |
| | Allotment of government land for construction of ecotourism | Could impact critical conservation themes or may fall in critical heritage sites | Avoid sites that are in close proximity to dzongs, monasteries or other sacred sites. | PA/BC |

| Activities | Cause of impact | Potential Environmental Impacts | Recommended Mitigation Measures | Responsible Agency |
|---|--|---|--|--|
| | facilities if the site falls in SRF | | Clearances from relevant government authorities for acquiring 'user rights' for land (See Annex 11, Procedural guidance for land acquisition) which also includes requirement for forestry clearance | |
| <i>SOCIAL IMPACTS</i> | | | | |
| Physically demarcate all PAs/BCs, and provide ongoing maintenance | Multiple PA and BC jurisdictions overlap in a single Gewog or multiple Gewogs within a single PA or BC | Multiple PA and BC jurisdictions overlap in a single Gewog causing local administrative confusion Lack of awareness on actual boundary on-ground | Rationalize of PA and BC boundary in line with the local governance boundaries, participatory zoning and demarcation of PA and BC boundaries Rationalize the functional mandate of PAs and BC management in line with the local governance boundaries. Eg. PA management may be responsible for conservation activities and BC management in the same Gewog may be responsible for forestry services. | PA/BC Dzongkhag Gewog DoFPS |
| | Engagement of labour for construction work | Working conditions, Occupational health and safety | Equip every person at site with helmet/ boots/gloves/belts Provide first aid kit at the site. Ensure that no underage workers, or children are engaged Construct temporary toilets for the workers Provide safe drinking water facility for workers | PA/BC Contractor |

Land needed for this project would primarily be for the construction of ecotourism facilities, water drinking and irrigation water reservoirs, and development of small scale nature based enterprise related facilities. These locations will normally be far from settlement and therefore, private registered land. Such should be made available from the

Government land as per the procedures described in the Land Act, 2007 and the Land Rules and Regulations, 2007. The National Land Commission will issue the “use rights” for such land. All agreements or clearances involved in the process for acquiring the land needs to be documented and recorded.

6. Environmental and Social Impact Management for BFL

6.1 Institutions for Environmental and Social Management Capacity

The BFL management arrangement comprises of BFL secretariat, BFL Project Coordination Unit (BFL PCU) established within MoAF (Executing Entity), under consideration include a policy level BFL Project Steering Committee (oversight body that approves annual work plans) and BFL Strategic and Technical Committee (that provides technical backstopping to the BFL PCU). The project activities implementation will happen through the respective park management for the PAs and the concerned Territorial Forestry Divisions for the BCs.

BFL Coordination Unit shall maintain safeguard documents for all activities, monitor compliance with ESMP and ESMF and maintain files documenting safeguard process. It is recommended that compliance to this ESMF and ESMPs is considered as part of annual disbursement conditions.

The Park Managers and Territorial DFOs will implement the field activities. They will arrange for environment assessment including process screening (eligibility), IEE and preparation of ESMP for specific field activities when required and ensure compliance to conditions set forth in the environment clearance and/or ESMPs. By, default the PAs and BCs will also be responsible to obtain required clearances permits/consents from relevant authorities, stakeholders. To provide technical assistance and support the PA management and the TFDs, an Environmental and Social Safeguards Expert is recommended to be appointed at the BFL Coordination Unit. The expert will provide support to all Park Managers and Territorial DFOs in terms of environment assessment for all field specific activities, preparation of ESMPs, monitoring of compliance and in reporting on overall safeguards to the BFL Project Steering Committee, Competent Authorities and to the NECs. The MoAF shall appoint a National Social and Environmental Safeguards Officer who will be the counterpart to the ESS Expert.

The connection between the Transition Fund, the PCU and the field implementing entities (PAs and BCs) is represented as follows;

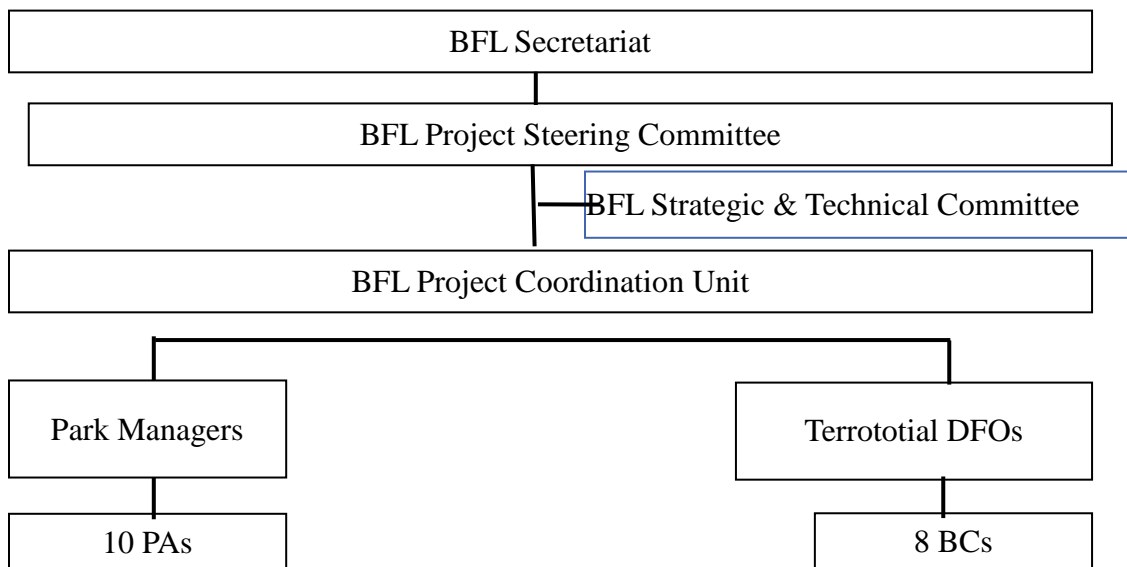


Figure 2: Linkage of BFL Secretariat, Coordination Unit and PAs/BCs

The PAs and BC management (Territorial DFOs) will have to work in consultation with the local Government and administrations on all matters that relate to local development. These are the concerned sectors of relevant Dzongkhag Administration and the elected representatives of the Gewog Administrations. The Gewog Administrations' Gup, Mangmi and Tshogpa are the direct link with local communities, the Tshogpas representing each community, Mangmi representing several communities and the Gup representing the whole Gewog population.

6.2 Procedure for Managing Environmental Impacts

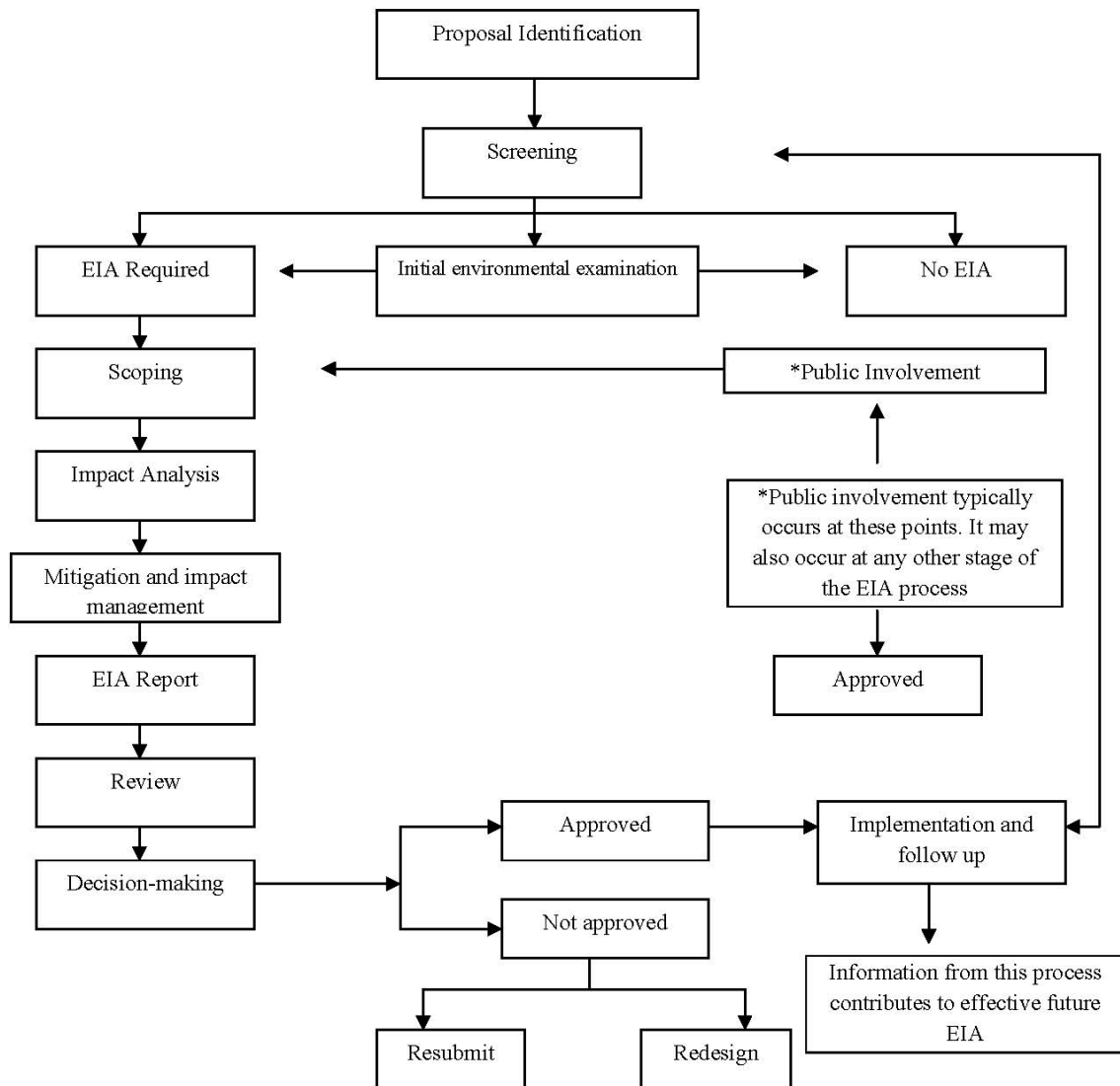
The following procedure will be adopted for managing environmental and social impacts related to the project, including screening, assessment of social and environmental impacts, development of mitigation measures, seeking Free and Prior Informed consent from affected communities or parties and preparation of the sub-project specific 'Environment and Social Management Plan' (ESMP), implementation arrangements, and monitoring.

1. *Screening:* To help deciding whether an EIA is required or not.
2. *Scoping:* To establish the environmental and social priorities, set the boundaries for the study and define the Terms of Reference (ToR),
3. *Generate Baseline:* To provide a detailed description of the existing status of various environmental and social components of the project area. Data can be both primary and secondary.
4. *Impact assessment:* To identify, evaluate and predict the characteristics of potential impacts due to the project using the baseline on one hand and the

- features of the project on the other hand, normally applying a standard methodology and models,
5. *Researching mitigation of impacts:* To determine and recommend possible preventive, remedial and compensatory measures for each adverse impact, and
 6. *Environment and Social Management Plan (ESMP):* To translate recommended mitigation and monitoring measures into specific actions that have to be carried out by the project applicant/proponent.

Most developmental projects attempt to integrate ESIA in the project cycle. The developmental projects normally follow a six stages/phases to formulate and accomplish a full project design; Conceptual stage, pre-feasibility, feasibility, design and engineering, implementation, monitoring and evaluation. ESIA plays an important role in every stage of the project cycle. ESIA is normally undertaken during the pre-feasibility and feasibility stages. Screening, scoping and Initial Environment Examination (IEE) components of the ESIA is usually applied at the project concept stage to help selection of project sites, screening and scoping of the magnitude of the EIA. A best practice EIA process given in the Environment Assessment General Guideline published by NECS is reproduced below.

Figure 3: EIA Process Flow Diagram



Irrespective the EC process and the terms and conditions in the ECs, the project activities that relate to the following negative list will not be considered for financing under the BFL project.

1. Activities that involve procurement or use of any pesticides categorized IA, IB, or II by the World Health Organization (See Annex 12).
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 acquiring of private land for project activities
5. Activities that involve felling of trees in core zone of protected area and critical watershed area
6. Activities that involve quarrying and mining in protected area

7. Activities that involve commercial logging

For any project activities under BFL, the field implementing entities, specifically, PAs and BC management should fill in basic information about project-specific activities, exact activity location and the nature of the activity in detail in a form called the *Safeguard Eligibility and Impacts Screening* (Annex 13). 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 proponent or the implementing entity should consider changing the site/location of the activity. This should be repeated till the activity becomes eligible.

Once the activity is deemed eligible, an environmental screening procedure will be carried out in accordance with Part 3 of *Safeguard Eligibility and Impacts Screening* format, which is based on applicable RGOB laws and regulations for project screening.

This process will:

- a. Identify potential (physical, biological, social, cultural) issues specific to the area (in and around the site) and sub-component.
- b. Identify the need for additional land, and possible impacts on livelihoods due to land acquisition either from public or private land
- c. Identify whether or not there are vulnerable groups in the area requiring special attention
- d. Identify the need to obtain any regulatory clearances such as from local communities, local government or other institutions for specific purposes.
- e. 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. Upon completion of the screening process, the implementing agency should facilitate and furnish the recommended studies and prepare for recommendation for initiating Initial Environmental Examination (IEE). This preparation should include:

- Layout plan of the project
- Summary of the project proposal
- No objection certificate from various departments and others relevant stakeholders (applicable if EA is not required). This part is equivalent to FPIC from affected communities and parties.

The IEE form is presented in Annex 14. The format for Safeguard Eligibility and Impacts Screening is produced in Annex 13.

6.3 Procedure for Managing Social Impacts

During project implementation, where there is a presence of disadvantaged family/households, social assessment will be carried out to assess the impacts on these vulnerable groups. Basic steps to be conducted include:

1. Receive input/feedback of local beneficiaries to design of investment activities, including their concerns and recommendations;
2. Ensure free expression of views of the disadvantaged group prior to general public consultations and provide them with culturally appropriate benefits,
3. Address issues of concern by other stakeholders, and
4. Identify specific actions to mitigate negative impacts.

The presence of disadvantaged or vulnerable groups can arise either due to restrictions to access of resources, tenure or rights of such groups in the process of implementing project activities.

6.3.1 Restrictions of access to Natural Resources and Outline of Process Framework

The process of social impact management will ensure anticipated negative impacts from project investments will be mitigated through a participatory process involving the affected stakeholders. The ESMF examines the anticipated risks and impacts and proposes measures and plans to reduce, mitigate, and/ or offset adverse risks and impacts as well as responsibilities. It also estimates capacity needs and costs of such mechanisms.

The types of restrictions that affect certain categories of stakeholders and how they should be mitigated is presented as follows.

1. Overall restriction on development of infrastructure in the PAs and BCs

Concern: The restriction on overall development infrastructure in the PAs and BCs arises from Management Prescriptions/ Restrictions for Nature conservation functions as described in the Forest Management Code of Bhutan. The code strictly prohibits commercial logging within wildlife refuge areas and corridors. It permits only permits local forest use if the habitat quality and structure is not significantly changed (i.e. single tree felling for shinglep production) and disturbance to the protected animals is not long lasting and kept to a minimum. It requires that road construction within wildlife refuge areas and corridors. should be avoided as much as possible.

The following restrictions apply in the conservation areas by the Forest Management Code of Bhutan.

Table 15: Types of restrictions to access in PAs and BCs

| Function | Restriction on Commercial Use | Restriction on Local Use |
|-----------------------------|-------------------------------|---|
| Biodiversity Protection | no commercial use | no local use |
| Soil Protection | no commercial use | no tree felling; no tsamdrog no sokshing |
| Riparian Reserve Protection | no commercial use | only collection of NWFP; no tsamdrog; no sokshing |
| Road Buffer | no commercial use | no tree felling |

| | | |
|--|---|---|
| Wildlife Protection | no commercial use | restriction to activities that do not change habitat quality and disturb wildlife |
| Local Water Supply Protection | no commercial use | low impact use only; no cattle grazing |
| Religious Site Protection | no commercial use | only uses which do not disturb sanctity of place |
| Social (Local Use Only) | no commercial use | no restriction |
| Soil Conservation | no clear cutting; no conversion into plantation; extension of rejuvenation periods | low impact local use; no intensive cattle grazing |
| Special Management Area around Water Courses | no clear cutting; no conversion into plantation; minimize disturbance to understory vegetation | low impact local use; no intensive cattle grazing |
| Watershed Conservation | no clear cutting; no conversion into plantation; minimize disturbance to understorey vegetation | no intensive cattle grazing |
| Wildlife Conservation | no clear cutting; no conversion into plantation; leave snags; leave some undisturbed patches; minimize disturbance to understorey vegetation (bamboo) | local use should minimize disturbance to wildlife |

A host of restrictions and requirement apply that limit the communities within PAs and BCs to access development infrastructure such as roads and access to income opportunities as compared to those outside the PAs and BCs.

Mitigation measures: PA and BC management plans should include livelihood improvement programs such as nature based and environment friendly enterprises to enhance the income generating opportunities for communities living in the PAs and BCs.

2. Restriction on fishing

Concern; Communities having customary/formal rights to harvest fish from the designated river/stream/water body would be affected since fishing in protected areas will be based on permits only and not license, according the FNCR, 2017. The duration of fishing permits range from a day to one week while that of a license range from one month to a year. The communities in the PAs and BCs who depend on fish would need to keep obtaining on a daily basis.

Mitigation measures; The Management plan such designated river/stream/waterbody should include community fishing and community based monitoring without having to issues permits every week.

3. Prohibition on felling of tree/pole in core zone of protected area and critical watershed area, religious and cultural site as declared by the Government or Felling of tree, poles within river buffer zone, religious, cultural site, right of way of road and transmission line.

Concern; Local communities who need forest resources and do not know about the PA management boundary may be penalized for unintentional breach of restrictions.

Mitigation measures; Awareness on PA management boundaries (core zone, multiple use zone and buffer zone) as well as on the restrictions should be created so that the concerned local communities are aware of such restrictions, the purpose and physical boundaries within which such restrictions apply. One way creating awareness and also ownership over the designated boundaries should be conduct PA management zoning through participation by local communities.

4. Restriction on documentary commercial filming or sound recording in PA.

Concern; Tourists who have permits to visit the PAs and BCs may be penalized for unintentional breach of restrictions if they are not aware of exact locations and landscapes where such restrictions apply.

Mitigation measures; Tourism in Bhutan is conducted only with engagement of Bhutanese guides. The issuance of guiding license and training on guides should include such requirements. Therefore the BFL management should mainstream such requirements in the guides training course contents in coordination with the Tourism Council of Bhutan. Alternatively, engagement of local community guides can be arrangement for international and local tourism initiatives within the PAs and BCs.

5. Restriction of livestock grazing in the area fenced for natural regeneration for a specified period and in the plantation area whether fenced or not till the seedlings are well established.

Concern; Livestock herders will loose access to grazing for the period of restriction and could impact their livestock productivity for the period of restriction.

Mitigation measures; To provide for livestock grazing, the implementation of plantation and fencing, wherever, they fall within the community grazing areas, should be preceded by implementation of fodder development in private land or identification of alternative grazing areas so the plantation areas are not affected and community access to grazing is ensured.

6. Physical demarcation and/or re-alignment of PAs and BCs boundaries

Concern; Farmers who cultivate outside the PAs and BCs but are included within PAs and BCs under re-aligned boundary will be subjected to restrictions that were not being faced prior to re-alignment of PA and BC boundaries. It will also include other forest users and private sectors such as resort/lodges operators.

Local governments (Dzongkhga and Gewog Administrations) whose delimitation boundaries overlap across more thane one PA or BC and have to deal with multiple

systems and approaches. This can cause confusion to the local communities and institutions in accessing forestry related services.

Mitigation measures; Such farmers and affected individuals should be included in the livelihoods program of BFL so that nature based enterprises provide income to compensate for the loss of income by way of restrictions in accessing natural resources within PAs and BCs.

Participation of local government representatives and administrations in demarcation or re-alignment of PA and BC boundaries should be ensure and PAs and BCs boundaries should be rationalized in the context of local governance.

Any change or new demarcation of boundaries should be based on free and prior informed consent of the communities and relevant authorities, which should be obtained prior to finalizing any change or in new demarcation of boundaries

7. Entry to PAs tourist and foreigners only upon permit

Concern; Tour operators and tourist do not abide by official working hours for their travels. Access to timely permits could disrupt tourism in PAs and BCs and constrain tour operators.

Mitigation measures; Issue permit for entry into PAs and BCs by tourists should be made only 7 days a week or such permits should be issued the entry points on all days.

8. Construction of any infrastructure and irrigation channel in PA

Concern: Lack of irrigation water will decrease agriculture production of communities living in the PAs and BCs.

Mitigation measures: Alternative forms of irrigation that bear minimal environmental impact should be made available through piped irrigation systems. However such alternatives are expensive. Hence the project should subsidize such systems to ensure that agriculture productivity is maintained without impacting environment.

9. Clearing corridor for transmission line for electricity, telephone line in PA

Concern: The communities within the PAs and BCs will have constrained access to energy from grid electricity.

Mitigation measures: Subsidy on alternatives to grid electrical supplies such as solar power and bio-gas should be arranged from the project.

10. Local forest use is only permitted if the habitat quality and structure is not significantly changed (i.e. single tree felling for shinglep production) and disturbance to the protected animals is not long lasting and kept to a

minimum.

Concern: Supply of timber and forest resources for community need will be constrained.

Mitigation measures: Arrangements for supply of timber needs from Community Forests should be promoted. The Capacity for the CFMGs to provided for local community needs in an environment friendly manner should be promoted through green timber harvesting and processing technologies, free supply of seedlings and capacity building programs.

11. Harvesting of NWFPs such as *Paris polyphylla*, Shilajit from rocks and other NWFPs which do not have sustainable harvesting framework

Concern: Communities living the PAs collect these NWFPs within their locality. There are also communities from other localities that collect such NWFPs. However, due to lack of established management framework formal community management regimes do not exist threatening the sustainability of such resources.

Mitigation measures: An assessment of area specific and traditional NWFPs, their collectors and their income and livelihood opportunities from these resources should be conducted. To ensure sustainability of these resources, sustainable management framework for these identified NWFPs should be developed and local management plans should be developed and implemented so that the relevant NWFP stakeholders are able to derive sustainable incomes and livelihood opportunities from these NWFP resources.

Table 16: Anticipated restrictions of access to natural resources in BFL areas

| Restrictions of PAs and BCs | Who will be impacted | Recommended Mitigation Measures | Responsible |
|--|--|--|---|
| Overall restriction on development of infrastructure, townships and other facilities | Communities residing in the PA and BC areas | PA and BC management plans to include livelihood improvement programs such as nature based enterprise development opportunities and support; protection and promotion of indigenous knowledge and practices; Protection and facilitation of traditional rights and practices | PA and BC management Concerned local Governments BFL PCU |
| Restriction on fishing | The communities having customary/formal rights to harvest fish from the designated river/stream/water body | Prepare management plan in collaboration with the relevant Department/agency (as per FNCRR, 2017) | PA and BC management Concerned Dzongkhag Administration Concerned Communities |

| Restrictions of PAs and BCs | Who will be impacted | Recommended Mitigation Measures | Responsible |
|---|---|--|---|
| Prohibition of felling of tree/pole in core zone of protected area and critical watershed area, religious and cultural site as declared by the Government. | Local communities who need forest resources and do not know about the PA management boundary | Awareness on PA management boundaries (core zone, multiple use zone and buffer zone) to local communities Participatory zoning of PAs | PA and BC Management Community representatives and concerned communities |
| Felling of tree, poles within river buffer zone, religious, cultural site, right of way of road and transmission line. | Local communities who need forest resources and do not know about the PA management boundary | Awareness on PA management boundaries (core zone, multiple use zone and buffer zone) to local communities Participatory zoning of PAs | PA and BC Management Community representatives and concerned communities |
| Restriction on documentary, commercial filming or sound recording in PA. | Local and international tourist | Awareness on and training of tour guides | DoFPS and TCB on filming regulations |
| Restriction of livestock grazing in the area fenced for natural regeneration for a specified period and in the plantation area whether fenced or not till the seedlings are well established. | Local livestock farming communities | Promote fodder development on private land with incentives | PA and BC management |
| Any other restrictions that may emerge in the PA and BCs | Local communities or other stakeholders | Report to the Grievance | |
| Demarcation, re-alignment of PAs and BC boundaries | Farmers who cultivate within the re-aligned PA or BC areas Forest resource users Private sector (resort/lodges) | Farmers to participate in the livelihoods program of BFL | PAs and BC management |
| Physical demarcation of PA and BC boundaries | Local governments (Dzongkhga and Gewog Administrations) whose delimitation boundaries | Participation of local government representatives and administrations in demarcation or re-alignment | DoFPS, PAs and BCs Concerned |

| Restrictions of PAs and BCs | Who will be impacted | Recommended Mitigation Measures | Responsible |
|--|--|---|---|
| | overlap with more than one PA or BC and having to deal with multiple systems and approaches | of PA and BC boundaries or in rationalization of PA and BC boundaries Free and Prior informed consent of the communities and relevant authorities to be obtained prior to finalizing any change or in new demarcation of boundaries | Local government representatives and Administrators |
| Entry to PAs tourist and foreigners only upon permit | Tour operators | Ensure online access to permit 7 days a week or at the entry point permit application facility | BFL PCU PA BC |
| Construction of any infrastructure and irrigation channel in PA | Agriculture and Livestock Farmers | Subsidy on alternatives to infrastructure based irrigation such as piped irrigation using drip and sprinkler based irrigation | BFL PCU PAs and BCs Dzongkhag Agriculture sector |
| Clearing corridor for transmission line for electricity, telephone line in PA | Communities within PAs and BC boundaries | Subsidy on alternatives to grid electrical supplies such as solar power and bio gas | BFL PCU PAs and BCs Dzongkhag Livestock sector |
| Local forest use is only permitted if the habitat quality and structure is not significantly changed (i.e. single tree felling for shingle production) and disturbance to the protected animals is not long lasting and kept to a minimum. | Communities within PAs and BC boundaries | Arrangements for supply of timber needs from Community Forests by way of environment friendly timber harvesting and processing technologies to the CFMGs and free supply of seedlings | BFL PCU PAs and BCs |
| Harvesting of NWFPs such as <i>Paris polyphylla</i> ; Shilajit from rocks, and other NWFPs which do not have sustainable harvesting and management framework | NWFP collectors who are from the local area or from other Gewogs and have been dependent on the resource for additional income | Development and implementation of sustainable forest management plans. Assessment of area specific and traditional NWFP collectors; loss of their income and livelihood opportunities and developing appropriate income and livelihood programs. | BFL PCU PAs and BCs |

| Restrictions of PAs and BCs | Who will be impacted | Recommended Mitigation Measures | Responsible |
|--|--|--|------------------------|
| Road construction within wildlife refuge areas and corridors should be avoided as much as possible | Communities within PAs and BC boundaries | Environment friendly maintenance of traditional routes Benefits from tourism and PES mechanisms to benefit the communities | BFL PCU PAs and BCs |
| Other restrictions | Traditional users of resources could experience changes in livelihood strategies due to improved management of the landscape, which may affect their traditional use of resources within some of the project's protected area. | Ensure that traditional users of resources whose livelihoods are affected will benefit from a livelihood restoration plan, consisting of technical assistance and funds to develop a sustainable livelihood program. In the case that indigenous users of forest resources are affected, free, prior and informed consultation with the affected communities will be required | |

6.3.2 Resources, Rights and Tenure

In terms of community rights and their representation of rights, the following table presents what most communities consider as being the legitimate structure. This is a common feature across all PAs and BCs. These right-holders representatives should be included in participatory processes of the BFL pertaining to the relevant types of resources.

Table 17: Natural Resources, rights holders and representation of respective rights

| Resource type | Right Holders | Type of Rights | Who represents the right holders |
|--|-----------------------|----------------------------------|--|
| Agriculture Areas | Individual Households | Permanent Legal rights | Household head |
| Arable government land resources | Park and Dzongkhag | Lease (Potential) | Park Manager |
| Cardamom Areas | Individual Households | Permanent Legal rights | Household head |
| Community Forests | CF Group | Management rights | CF Chairperson, DoFPS |
| Community owned Cultural & Religious Sites | Communities | Traditional and Customary rights | Tsgogpa, Gup Dept. of Culture/Dzongkhag Admin./Community |

| Resource type | Right Holders | Type of Rights | Who represents the right holders |
|---|-------------------------------------|--|---|
| State owned Cultural & Religious Sites | Dept. of Culture/Communities | Legal | Dept. of Culture/Dzongkhag Admin/Community |
| Individual owned cultural & Religious Sites | Individual Households | Traditional and Customary rights | Household Head |
| Dratshang owned cultural & Religious Sites | Dratsang | Traditional and Customary rights | Dratshang, Dept. of Culture/Dzongkhag Admin./Community Tshogpa |
| Ecotourism Resources | Eco-tourism Groups | Permit based | Ecotourism Management Committees-Farmhouse Groups/Tshogpas/Gup |
| | Community based Ecotourism Group | Permit based | Ecotourism Management Committees |
| | Individual Household homestays | Permanent Legal rights | Individual, households |
| | Ecotourism Management Group | Free use right | Park or BC Management/ Ecotourism Management Groups |
| | User/Management Groups/ Individuals | Permit based | Weaving groups/ Homestay owners |
| Farm Roads | Communities | Management rights | Farm Road User Group Chair |
| Fodder Areas | Individual Households | permanent | Household head |
| Fuelwood & Timber resources from CF Areas | CF Group | Legal | CF Chairperson |
| Fuelwood & Timber resources Park Areas | Park | Legal | Park Manager |
| Fuelwood & Timber from BCs Areas | TFD | Legal | CFO, TFD |
| Grazing Resources | Communities | Customary | DoFPS, Gewog Adm |
| | Dratshang | Customary and term lease | Dratshang |
| | Individual Pasture users | Customary and term lease | Term lease holding HH |
| Hot spring Resources | Community/ Dzongkhag admin. | Customary and Management right/ Management right | 1.Community for general public use 2.Dzongkhag for govt. use |
| NWFP resources | CF Group | Management rights | CF Chairperson |

| Resource type | Right Holders | Type of Rights | Who represents the right holders |
|--|-----------------------|--------------------------|---|
| | NWFP Group | Management rights | NWFP Chairperson |
| | Park | Legal | Park Manager |
| | TFD | Legal | CFO TFD |
| Orange Orchards | Individual Households | Legal right (thram) | Household Head |
| Right of Ways - electrical lines | BPC | Legal | BPC |
| Right of Ways- traditional routes, waterways | Communities | Customary & Traditional | Tshogpa and Gup and relevant stakeholders |
| Sand, Stones and Boulders | Park | Legal | Park Manager |
| Sokshing Areas | Individual Households | Customary and term lease | Household Head |
| SRF | Park | Legal | Park Manager |
| Water Sources | Communities | Traditional | Tshogpa and Gup |
| Wildlife | Park | Legal | Park Manager |

The social assessment should include identification of site specific affected communities, agreement (FPIC based) on alternative livelihood alternatives, eligibility criteria for alternative livelihood options and budget for such a program.

Upon completion of social assessment to assess the impacts on these stakeholders and vulnerable groups, mitigation measures should be included to safeguard their concerns and mitigate social impacts. In order to ensure that these concerns are addressed and such groups are not impacted, free and prior informed consent of the affected stakeholders should be obtained.

6.3.3 Free and Prior Informed Consent

People must be front and center of natural resource management decision-making that affects them. When faced with decisions on location and type of activities pertaining to the BFL, communities have rights that must be respected by government and by stakeholders related to the BFL activities.

The 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 and that it is not merely considered as a right to be consulted about projects that others will ultimately make decisions on. 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 as part of a requirement of the WWF. 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 18: Process of Free & Prior Informed Consent

| Resource Types | Initial contact | Mechanism used | Final Consent Provider |
|--|--|--|--|
| Private land | Land owner | Consultation within Family and discussion of impacts described on the Screening Format | Written Consent form Head of Household |
| 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 neighboring Gups whose communities may have a stake in the right of ways |

| Resource Types | Initial contact | Mechanism used | Final Consent Provider |
|------------------------------------|--|--|--|
| 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 neighboring 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 |

6.4. Development of ESMP

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.

An ESMP should include environment management and mitigation plans during pre-activity, activity implementation and closing phases. Hence it should contain description of the detailed actions needed to achieve these objectives, including how they will be achieved, by whom, by when, with what resources, with what monitoring/verification, 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 include

a. A concise introduction: Describing linkage with overall planning process of the project; project activity related environmental studies; the ESMF (if relevant) 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 uses, soil types, flow of water, and water quality/pollution. Socioeconomic conditions
- d. Potential impacts and mitigation measures:** Description of specific activity impacts and corresponding mitigation measures referring to 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 BFL activities in general and of ESMP in particular should include a stakeholder engagement plan that defines the following;

Table 19: Stakeholder engagement plan

| | |
|---|---|
| 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. Most of the communities have identified winter season as best time for community consultations during the consultations for the preparation of ESMF.) |
| 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 |
|--|---|

6.4.1 Application and Approval for Environment Clearance

Upon completion of the recommendations in the screening process and obtaining all clearances and FPIC, the implementing agency shall process for Environmental Clearance by filling up the IEE format for the relevant sector as indicated in the guidelines annexed to the Regulation for Issuance of EC, 2002 (available at NECS website www.NECS.gov.bt). The type of IEE to be filled up will depend on the sector that the activity is relevant for. The submission of the IEE must be accompanied by ESMP.

The NECS or the Competent Authority, after review, will issue the environmental clearances with terms and conditions or recommend further work prior to issuance of the Environmental Clearance. The terms and conditions reflected in the environment clearance will have to be implemented as environmental and social safeguard measures.

6.4.2 Responsibilities

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 implementing agency has the responsibility to coordinate with relevant stakeholders and to seek required clearances.

In order to ensure that safeguard mechanisms are taken care in additional the EC process, a tentative list safeguards responsibilities has been prepared and presented as below.

Table 20: General Responsibilities for Environmental and Social Safegaurds

| Activities | General Responsibilities | ESMF Responsibilities | |
|---|---|---|---------------------------------|
| | | Activities | Responsible Agency |
| Design and implementation of Biogas initiatives | Identification of technology specific to general location | Select cold temperature and portable technology for high altitude and local cattle based livestock system | PA/BC DoL Extension |
| | | Select Sedentary technology for improved cattle and stall fed system | Community Representative |
| | Specific farmer and site identification and installation | Agree on the site for installation selected farmer | PA/BC Livestock Extension |

| Activities | General Responsibilities | ESMF Responsibilities | |
|--|---|---|--|
| | | Activities | Responsible Agency |
| | | Avoid areas where there are cultural sites or monasteries in the vicinity | Selected farmer |
| Reforestation of degraded land | Site identification for rehabilitation | Community consultation | PA/BC Community Tshogpa |
| Ecotourism product development | Waste management | Community consultation, awareness and prepare waste management plan, implement and monitor | PA/BC Tshogpa Concerned community member |
| Constructions of Ecotourism infrastructure such as eco trails, transit camps | Site Selection | Avoid areas where there are cultural sites of national importance | PA/BC |
| | Site Selection in the vicinity of sacred sites | Apply screening checklist to ensure that the selected site does not affect cultural resources of local significance | PA/BC |
| | | If permissible, seek clearance from the the local, communities, concerned Gewog, concerned Dzongkhag and the Department of Culture prior to finalization of the plan and site development | PA/BC Tsgogpa Gup Dzongkhag Dept. of culture |
| | Process Environment Clearance (Screening/IEE/ESM P) | Assess the potential impacts of operating the ecotourism facility Inform community about the benefits and impacts of such facilities Agree on t grievance redress mechanism to address any complaints/grievances arising during implementation and operation phase Fill up Project Screening and seek Environment Clearance (EC) from NECS or CA | PA/BC |
| | Environment Clearance | Evaluation of screening and if required IEE Issue of EC with terms and conditions Compliance monitoring | NECS or CA |
| | | | |
| | Design of structure | Prepare the drawings as per BBR 2002 and other relevant building codes and by certified architects | PA/BC Registered Architect |
| | Construction | Avoid removal of trees Carry out plantation works to replace | PA/BC |

| Activities | General Responsibilities | ESMF Responsibilities | |
|---|--|--|---|
| | | Activities | Responsible Agency |
| | | removed trees | |
| Introduction of alternative crops | Avert Risk of invasion and disease carrying variety disease | Selection of right variety | PA/BC DAO NPPC BAFRA |
| Promotion of NWFP and nature based enterprises | Prevent risk of over harvesting | Establish NWFP groups and include sustainable harvesting methods and guidelines and monitoring responsibilities and within the Group bylaws Ensure inclusive process | PA/BC/Tshogpa/ Community members |
| Climate-smart species conservation plans for tigers | HWC mitigation in the plan | Consultation with communities and incorporate HWC strategy in the conservation plan | PA/BC/Tshogpa/ Community members |
| Develop Zero Poaching & SMART/effective patrolling | Prevent Poaching in locations unreachable in locations unreachable by patrolling teams | Engage local community patrolling by enhancing perks and benefits to local patrolling personnel and informants | PA/BC/Tshogpa/ Community members |
| Mapping and analysis, and designate high biodiversity habitats, degraded lands, and climate refugia | Avoid socially sensitive when degraded land fall in traditional trails, sacred sites or community use land | Rehabilitation of degraded land may be initiated upon consultation with local community, local authority and other member of the public who are affected or have a stake as per the principle of Rule 44 of FNCA, 2017 (for management of protected areas) | PA/BC/Tshogpa/ Community members |
| Manage salt licks, snags and waterholes | Avoid conflict with traditional community rights and managed areas for livestock herding and grazing Avoid development of poaching hotspots | Identification and management of salt licks, snags and waterholes to be based community consultations and participatory managed. | PA/BC/Gup/Tshogpa/ Community members |
| Physical demarcation and mapping of PA and BC boundaries on-ground | Avoid confusion and Gewog lack of clarity at Gewog level | Rationalization of PA and BC boundary in line with the local governance boundaries and participatory zoning and demarcation of PA and BC boundaries | PA/BC/Gup/Tshogpa/ Community members DoFPS/MoAF Parliament |

6.5. Compliance Monitoring

The overall responsibility for implementing the ESMF and for monitoring the compliance of the Project's environmental safeguard activities lies with the BFL PCU at the MoAF. The Environment and Social Safeguards Expert stationed at the BFL PCU shall provide technical support to the coordination unit as well as the PAs and BCs. The National Counterpart at the BFL Coordination will support the unit in overseeing the implementation of field activities relating to ESMF and coordinate with the PAs and BCs including environment assessment comprising of screening (eligibility), IEE and preparation of ESMP for specific field activities when required. He/She will provide support to all PAs and BCs in terms of environment assessment for all field specific activities, preparation of ESMPs, monitoring of compliance and in reporting on overall safeguards to the BFL PCU, the BFL Project Steering Committee, Competent Authorities and to the NECs. The grievances that are reported through the Grievance Redress Mechanism (GRM) should also be monitored to track and assess the extent to which progress is being made to resolve them. The grievance data can be analyzed and evaluated to make policy and/or process changes to minimize similar grievances in the future. Record of each grievance reported and its resolution is recorded. Progress reporting of BFL activities should include a reporting on grievance resolution

New physical interventions will require EIA. Environmental impacts from small-scale construction, upgrading or refurbishing activities outside of PAs/BCs can be managed through screening, application of construction guidelines and the development and application of an ESMP when required. Once the project is approved and implemented, monitoring of implementation progress of each activity will be carried out periodically by the BFL Coordination Unit and WWF. BFL PCU will monitor the project and submit monitoring reports to the BFL Project Steering Committee and to BFL secretariat. WWF safeguards specialist will conduct supervision missions annually.

Monitoring at the field activity level: Self-regulatory monitoring should be adopted by the concerned the PA and BC management for field activities. 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-regulatory monitoring reports should be filed to the PA and BC management on a monthly basis and should be liable for ad-hoc inspection by the PA and BC management or the Dzongkhag Environment Committee or the NECs.

The PA and BC management shall be responsible for supervision of environmental compliance by the contractors and service providers or by the concerned communities. Environmental and social mitigation measures carried out by these parties should be verified by the PA and BC management on a monthly basis and documented. Disbursements of project activity funds should be linked to satisfactory compliance as verified by the PA and BC management.

Monitoring at the 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, BFL 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 BFL secretariat through the BFL Project Steering Committee. 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 Environmental and social safeguards. During such monitoring, the CA will issue recommendations or impose penalties as may be appropriate.

The compliance monitoring format is presented in Annex 15. This will however be modified depending on the terms and conditions mentioned in the ECs.

6.6 Grievance Redress Mechanism (GRM) and Process for BFL

The protected area management system in Bhutan, which includes human settlements within the park and biological corridor boundaries, recognizes the rights of local residents. Due to the large number of stakeholders, especially the communities living within the protected areas, there is need for an efficient and effective Grievance Redress Mechanism (GRM) that effectively collect and respond to stakeholders' inquiries, suggestions, concerns, and complaints. The GRM shall constitute an integral part of BFL in dealing with its implementation issues and complaints of the concerned stakeholders for its accountability and responsiveness. It takes into account the availability of judicial recourse and customary dispute settlement mechanisms among the indigenous peoples.

Because the BFL project spans over 14 years, there is need for a permanent, appropriate and accessible institutional arrangement for addressing any grievances arising from the implementation of BFL activities. The GRM aims to provide people fearing, or suffering adverse impacts, with the opportunity to be heard and assisted. Any affected party may file a complaint directly or through a representative. However, the party must provide concrete evidence of authority to represent them. While anonymous complaints will not be considered, complainants can request confidentiality.

Although the Forest and Nature Conservation Act of Bhutan, 1995 and its Rules and Regulations, 2017 regulates the activities in the protected areas and the forests, it does not provide for any GRM processes other than facing statutory sanctions for its violations

with forest officers empowered to compound the forestry offences. However, it provides for payment for environmental services wherever possible for various conservation activities. 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 activities of BFL 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 BFL activities leading to effective implementation of the BFL 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 operates 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 grievances reported are, resolved or escalated to the next higher level till its resolution and proper records are maintained at each level. Progress reporting of BFL activities should include a reporting on grievance resolution.

It is in the interest of BFL as well as the stakeholders involved for the smooth implementation of its activities that any issues, conflicts, or grievances arising out of BFL activities are adequately addressed. The local communities prefer resolving cases and issues locally rather than resorting to the court processes, which are lengthy, stressful and time consuming unless it cannot be resolved locally.

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.

In the context of BFL, the MoAF is the Executing Agency. Hence, the BFL PCU within the MoAF is the final authority for grievance resolution. The relevant officials/offices of the Ministry shall be required to actively involve and participate in resolving the grievances along with the local authorities.

Despite the efforts of the local authorities and the officials responsible for implementation of BFL activities in addressing the grievances, if the affected parties are not satisfied with their decision, such grievances can be submitted to the Grievance Redressal Committee (GRC) proposed to be formed by the Ministry of Agriculture and Forests with clear terms of reference. In the event that the parties are not satisfied with the decision GRC, such grievances can then be forwarded to the Court of Law for further adjudication.

A. Informal Process

The Environmental and Social Management Framework will recognize the informal dispute resolution mechanisms and practices, primarily based on negotiation between disputing parties and/or with the involvement of a third party, are common in most of the communities living in Bhutan. It is an established customary norm of the communities that any cases/grievances are first discussed either with community Tshogpa or individuals of the community possessing negotiation and resolution skills. Solutions are usually sought to foster relationships between disputant and ensure that disputants, as much as possible, keep their face within the community.

Local people prefer settling cases locally because of the reasons that solutions are locally available, procedures are easier than formal mechanisms, the system is familiar to most peoples, ease of handling oral complaints, and delivery of immediate and effective justice. However, if the grievances are not able to resolve through informal process, then it shall resort to formal grievance procedures.

B. Formal Process

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



(5) Receipt and Register Grievances

Any grievances related to BFL activities can be reported to the concerned Tshogpa, Gewog Administration, Park/Divisional Forest Office or other authorities, as the case

may be, for its resolution. The channel through which the grievances can be logged can be either manually or through mail, e-mail, telephone, project staff or text messaging/SMS. However, the concerned authorities receiving such inquiries, concerns and complaints should record in writing after briefly reviewing the complaint.

Alternatively, any member of the staff of the Parks and Protected areas or the Territorial Divisions related to Biological Corridors or any other organizations associated with BFL, its vendors/suppliers, other stakeholders and the public at large could also lodge complaints on the website of the MoAF as well as of the DoFPs. These complaints could relate to:

a. Allegations of Fraud, Malpractices or Corruption by staff or other stakeholders in:

- Day to day operations of BFL
- Projects/activities financed or implemented (including those in progress) by BFL

b. Environmental and/or Social damages/harms caused by projects financed or implemented (including those in progress) by BFL. 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.

(6) 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 nonperformance of BFL obligations; (c) complaints referring to violations of law and/or corruption while implementing BFL activities; (d) complaints against authorities, officials or community members involved BFL project management; and (e) any complaints/issues not falling in the above categories.

(7) Acknowledgment and Follow-up

When a complaint is made or the grievance is reported, the concerned Tshogpa, Gewog Administration, Park/Divisional Forest Office or other authorities, receiving the complaint or grievances should acknowledge its receipt. The concerned authorities 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.

(8) Verification, Investigation, and Action

The grievance receiving authorities/office 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 grievance is reported to the Tshogpa, he shall try to resolve such grievances by negotiating and mediating between the affected parties. In the event of non-resolution, the Tshogpa shall refer the grievance to the Gewog for further action. 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.
- (b) If the Gewog receives grievance directly from the aggrieved/affected individuals or communities, or by way of reference by Tshogpa, the Gup shall try to resolve such grievances by negotiating and mediating between the affected parties if the issues is of lesser gravity. For more grievous issues, the Gup shall refer the grievance to the Gewog Grievance Redressal Committee consisting of: (1) Gup as Chairperson; (2) Mangi; (3) Relevant RNR official; and (4) Concerned Tshogpa. The Gewog GRC shall verify and investigate, if necessary, the grievance and render its decision within 7 working days. In the event, the parties are not satisfied with the decision of Gewog GRC, the parties shall submit appeal to the Dzongkhag within 10 days from the date of decision.
- (c) If the Park/Divisional Forest 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. However, if the grievance requires the attention of Tshogpa and Gewog, such grievances shall be forwarded to the Gewog GRC immediately.
- (d) Upon receipt of grievance appeal from Gewog, the Dasho Dzongdag shall refer the grievances to the Dzongkhag GRC consisting of: (1) Dasho Dzongdag/Dzongrab as Chairperson; (2) Concerned Park Manager/Chief of Divisional Forest Office; (3) Relevant Dzongkhag RNR sector official; (4) Dzongkhag Environmental Officer (if applicable); and (5) Dzongkhag Legal Officer. The Dzongkhag GRC shall verify and investigate, if necessary, the grievance and render its decision within 15 working days. In the event, the parties are not satisfied with the decision of the Dzongkhag GRC, the parties shall submit appeal to the Ministry of Agriculture and Forests within 10 days from the date of decision.
- (e) 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. 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.

- (f) Any grievances/conflicts involving different communities under same Gewog shall be directly reported to Gewog GRC through concerned Tshogpa. While grievances involving different communities falling under different Gewogs shall be directly reported to the Dzongkhag GRC through concerned Gewogs, grievances involving communities falling under different Dzongkhags shall be directly reported MoAF GRC.

(9) 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 analyzed and evaluated to make policy and/or process changes to minimize similar grievances in the future. Record of each grievance reported and its resolution is recorded. Progress reporting of BFL activities should include a reporting on grievance resolution.

6.7. Capacity Building

The PAs and BC management comprise of professional foresters and natural resource experts. Therefore, they do have the expertise in environmental safeguards. However, the PAs and BCs would need technical support and capacity enhancement on the social safeguards. To provide technical assistance and support the PAs and BCs, a permanent Environmental and Social Safeguards Expert is recommended to be recruited by the Project at the BLF Coordination Unit. The expert will provide support to all PAs and BCs in terms of environment assessment for all field specific activities, preparation of ESMPs, monitoring of compliance and in reporting on overall safeguards to the BFL Board, Competent Authorities and to the NECs. In order to build safeguard capacity within the MoAF, a National Environment and Social Safeguards Officer shall be appointed by the MoAF as a counter part to the expert housed in BFL Coordination Unit. From the 6th year onwards, the National Environment and Social Safeguards Officer shall assume the full responsibility for technical support and further capacity development.

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. During the community consultations for the ESMF, the communities in the PAs and BCs identified need to train the local representatives in the eight priority areas of:

- Land and its regulations to understand regulatory framework on grazing and pasture management, land acquisition, land leasing mechanisms

- Water Act and its regulations to understand water rights and management
- Forest and nature Conservations Rules, 2017 to understand timber entitlement, watershed management
- Frameworks for creation of farmer groups
- Capacity for environmental impacts assessment
- Training of natural resources management related to water source management, grazing, community forests and NWFP management
- Participatory decision-making process and facilitation
- Conflict resolution and management

6.8 Disclosure of the ESMF

During the preparation of the ESMF, consultations were held with relevant agencies and concerned officials comprising of the Bhutan For Life Coordination team, the Policy and Planning Division, MoAF, the Nature Conservation Division, Department of Forests and Parks Services and the management of 8 PAs and 4 BCs. Geowg level consultation workshops were held in these PAs and BC.

The stakeholders 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 and DoFPs as well as that of the WWF US and WWF Bhutan websites. Also the hard copies need to be placed in appropriate locations. A final version of the full ESMF will be shared with all PAs and BCs for further intimation and awareness to the concerned communities in the 85 gewog of the PAs and BCs. The PA and BC management will take responsibility to conduct awareness session in their respective jurisdiction or project areas.

During the implementation of BFL, activity-specific mitigation plans should be disclosed to all stakeholders, including affected communities and Civil Society Organizations (CSOs) prior to project concept finalization. Before plans can be disclosed, they must be reviewed and approved by the BFL Coordination Unit in consultation with the Transition Fund. The BFL Coordination Unit must also disclose to affected parties the final plans prior to implementation and any action plans prepared during project implementation, including gender mainstreaming. Disclosure should occur in a manner that is meaningful and understandable to the affected people for their consent. For this purpose an executive summary of mitigation plans- either ESMP or terms and conditions that come with environment clearance should be disclosed on MoAF and the WWF web sites.

Table 21: Disclosure framework for ESMF related documents

| Documents to be disclosed | Frequency | Where |
|---|---|---|
| Environment and Social Management Framework | Once in the entire project cycle. Must remain on the website and other disclosure locations | On the website of MoAF and WWF, Bhutan Program. Copies at the PAs and BC Management |

| | | |
|--|--|--|
| | throughout the project period. | Offices and at the Project Coordination Office |
| 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 MoAF and WWF, Bhutan Program. Copies at the PAs and BC Management Offices and at the Project Coordination Office |
| 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 MoAF and WWF, Bhutan Program. Copies at the PAs and BC Management Offices and at the Project Coordination Office |
| EMP - Monthly Progress Report | Monthly | Project Coordination Unit |
| Minutes of Formal Public Consultation Meetings | Within two weeks of meeting | On the web site of the MoAF (Project Coordination Unit) |
| Grievance redressal process | Throughout the project cycle | On the web site MoAF. Hard copies available at the PAs and TFDs offices, Gewog Office and at the RNR Extension Centers |

6.9 Cost of ESMF Implementation

The key elements of the environmental and social management cost of any project usually include the following:

Cost of environmental and social safeguards personnel:

Cost of one full time Environment and Social Expert for the first 5 years, the Independent National Safeguards M&E Consultant for PAs and BCs calculated at 60 days per year for 14 years is estimated at US\$ 308,000.00

Cost of trainings, orientations, awareness programs and information dissemination:

This estimate comprise of training of 85 Gups, 85 Mangmis, 340 Tshogpas, 311 Chairpersons of Community Forest Groups, 64 Chairpersons of Farmer groups and 88 Chairs of Farmer Cooperatives (970 persons). Estimating a short duration of two days each for the 8 courses identified in the capacity building section The cost for these trainings over the first two years is estimated at US\$ 467,040.00.

Travels costs for the ESS Expert, National ESS Officer and Independent National Safeguards M&E Consultant for PAs and BCs is estimated at US \$ 70,500.00.

Cost of the Socio-economic baseline survey (within first 4 months of project implementation) is estimated at US \$ 12,000.00

The total cost of ESMF implementation is estimated at US \$. 857,540.00

Table 22: Cost details for ESMF Implementation

| Cost Item | Unit | Unit Cost | No of Units | Total cost |
|---|--|-----------|-------------|-------------------|
| Environmental and social safeguards personnel | | | | 308,000.00 |
| Safeguards Specialist | Salaries/month (US \$) for first 5 yrs. | 3500 | 1 | 210,000.00 |
| National Safeguards Officer (National) | RGOB for 14 yrs | - | - | - |
| Independent National Safeguards M&E Consultant (PAs and BCs) | Honorarium for 2 months/year (US\$) for 14 yrs | 3500 | 1 | 98,000.00 |
| Training | | | | 467,040.00 |
| Gups | Daily cost/person (US \$) for 2 Days per training for 8 courses: 4 courses in year 1 & 4 courses in yr 2 | 30 | 85 | 40,800.00 |
| Mangmis | Daily cost/person (US \$) for 2 days per training for 8 courses: 4 courses in year 1 & 4 courses in yr 2 | 30 | 85 | 40,800.00 |
| Tshogpas (4 per/Gewog) | Daily cost/person (US \$) for 2 days per training for 8 courses: 4 courses in year 1 & 4 courses in yr 2 | 30 | 340 | 163,200.00 |
| Chair of CFMGs in the PAs and BCs | Daily cost/person (US \$) for 2 days per training for 8 courses: 4 courses in year 1 & 4 courses in yr 2 | 30 | 311 | 149,280.00 |
| Chair of Farmer Groups (NWFPs, Agriculture and Livestock groups) in the PAs and BCs | Daily cost/person (US \$) for 2 days per training for 8 courses: 4 courses in year 1 & 4 courses in yr 2 | 30 | 64 | 30,720.00 |
| Chairperson of Farmer Cooperatives in the PAs and BCs | Daily cost/person (US \$) for 2 days per training for 8 courses: 4 courses in year 1 & 4 courses in yr 2 | 30 | 88 | 42,240.00 |
| Travels | | | | 70,500.00 |
| ESS Expert | Per day cost for 30 days/year (US\$) for 5 yrs | 50 | 1 | 7,500.00 |
| National ESS Officer | Per day cost for 30 days/year (US\$) for 14 yrs | 50 | 1 | 21,000.00 |
| Independent National Safeguards M&E Consultant (PAs and BCs) | Per day cost for 60 days/year (US\$) for 14 yrs. | 50 | 1 | 42,000.00 |
| Studies and Surveys | | | | 12,000.00 |
| Socio-economic baseline survey (within first 4 months of project implementation) | Lunpsum for study (US \$) | 1 | 1 | 12,000.00 |
| | Total cost (US \$) | | | 857,540.00 |

Annex 1: WWF BFL Environmental and Social Safeguards Categorization Memorandum

| | |
|--|--|
| <p>Project Title: BHUTAN FOR LIFE (BFL) – Climate Adaptive Natural Resource Management In Bhutan's Protected Areas System</p> | <p>Date: 1/17/2016</p> |
| <p>Project Location and salient physical characteristics relevant to the safeguard analysis:</p> <p>Project activities will be in 10 protected areas (and the Royal Botanical Park) and the 8 Biological corridors. There are 35,000 people (7,000 households) living within the protected area network, most of whom depend on natural resources for their livelihoods.</p> <p>Wangchuck Centennial Park Established in 2008 and located in central-northern Bhutan, it is the country’s largest national park covering 4,914 square kilometers. It is source to headwaters of four major river systems: Punatsang chu, Mangde chu, Chamkhar chu and Kuri chu. The park is home to 693 species of vascular plants, 43 mammal species and 250 bird species. The Park is also home to 10588 people.</p> <p>Jigme Dorji National Park is Bhutan’s second largest protected area covering 4,316 square kilometers. The park is a vital watershed covering almost half of northern Bhutan, and is an important natural conservatory of glaciers, alpine meadows and scrublands, sub-alpine and temperate conifer forests, warm and cool temperate broadleaf forests, and the flora and fauna that inhabit these ecosystems. Jigme Dorji National Park is home to about 6000 people.</p> <p>Jigme Singye Wangchuck National Park covers an area of 1,723 square kilometers and includes a wide range of habitat types, from broadleaf forests to coniferous forests, alpine pasture and lakes, to permanent ice. The park constitutes the largest, richest and most intact temperate forest reserve in the entire Himalaya. More than 270 species of birds are recorded in the park, including the vulnerable Black-necked crane. Approximately about 6,000 people resides within the park.</p> <p>Bumdelling Wildlife Sanctuary is located in the north-eastern part of Bhutan, covering an area of 1,520 square kilometers. The Sanctuary contains a rich diversity of flora and fauna as well as some of the most scenic alpine lakes. Sanctuary has several cultural and religious sites of international significance in terms of preservation of culture and traditional practices. Sanctuary has 343 bird species, 734 species of plant, 202 butterfly species, 18 species of Snakes and 7 species of fishes. The park has resident population of about 8047 people.</p> <p>Royal Manas National Park is the oldest park in Bhutan. Covering 1,057 square kilometers, it is home to megafauna like Royal Bengal Tiger, Elephant, and Gaur. It is also home to 426 species of birds and several flora species that are have commercial, medicinal, and religious significance. Park inhabited by about 5,331 people living in remote, isolated villages within the park.</p> <p>Phrumsengla National Park in central Bhutan covers 905 square kilometers and protects large tracts of old-growth fir forests. The Park has 361 species of Birds and of which, 6 are globally threatened. Phrumsengla is home to about 5600 people.</p> <p>Sakten Wildlife Sanctuary was established in 2003 and covers an area of 740 square</p> | <p>Project Categorization (A,B,C): B</p> |

kilometers. Saktien is designed to protect the country's eastern-most temperate ecosystems. Sanctuary has recorded 30 species of mammals, 227 species of birds and 63 species of Butterflies.

Jigme Khesar Strict Nature Reserve, is the only strict nature reserve in Bhutan. The Reserve covers 609 square kilometers, protects the westernmost temperate forests of the country. Unlike Bhutan's other protected areas, Jigme Khesar Strict Nature Reserve has no resident human population within the park.

Phibsoo Wildlife Sanctuary is Bhutan's second smallest park covering only 269 square kilometers area. It is the only area in Bhutan to have spotted deer, and the only remaining natural Sal (*Shorea robusta*) forests in the country. Phibsoo is home to Elephant, Royal Bengal Tiger and Gaur. The park has no human residents.

Jomotshangkha Wildlife Sanctuary is situated in the south eastern most part of the country, it is the smallest park in the country. However, the park is an important habitat for Elephant, Gaur and other tropical wildlife species.

The biological corridors in Bhutan were introduced in 1999 to connect all protected areas together into a single contiguous area providing free mobility to wild animals. Isolated populations of wildlife or plants are less genetically viable and at much greater risk than connected populations. The corridors' locations were chosen to balance many factors, including the risk of forest fires, migration patterns of keystone species, difficulty of terrain, habitat condition, human impacts, and the passage's shape, such as the width of narrowest constriction. The longest corridor is the North Corridor, with a total length of 76 km, and the shortest is the 16 km connection between Phrumsengla National Park and the North Corridor.

Project Description:

Bhutan for Life is a 14-year financial bridge that allows for immediate improvement in the management of Bhutan's protected areas for climate resilience, and the prompt delivery of mitigation, adaptation and biodiversity gains, while the country gradually ratchets up its own financing resources.

Component A: Mitigation: Increasing forestry and land use climate mitigation

This component focuses on monitoring systems that detect forest cover change and ecological responses of forests and other systems to impacts of climate change. The findings will be used to develop climate resilient forest management practices and restoration of the degraded lands to conserve and enhance carbon stock.

Component B: Adaptation I: Integrated adaptation in communities and ecosystems to improve natural resource management for livelihoods and climate resilience

This component focuses on harnessing climate, hydrological, and natural resources information to design and implement resilience and adaptation measures in Bhutan's protected areas (PAs). This component will work to benefit nature and the livelihood of the population living both inside and in the vicinity of the PAs.

Component C: Adaptation II: Climate-smart conservation to enhance provision of ecosystem services

This component focuses on harnessing climate, natural resource and biological information to design and implement ecosystem based adaptation management of Bhutan’s PAs. This component will work to secure wildlife, habitat, and reduce human wildlife conflict in the changing climate while ensuring the sustainable flow of ecosystem services.

Component D: Protected Areas: Effective Management of Protected Areas

This component focuses on strengthening the organizational, institutional and resource capacity for effective management of PAs. This is a crucial component as the success of the initiative is dependent on fully equipped, well trained staff; full funding; essential infrastructures; and well organized system of managing the protected areas.

Component E: BFL program management: Management, Monitoring, Reporting & Evaluation, Policy Support, Contingencies

This component groups all the management activities necessary for the effective implementation of BFL. As such, its purpose is to ensure the efficient implementation of the BFL program.

| Safeguard Policies Triggered | Yes | No |
|------------------------------|-----|----|
| Natural Habitats | X | |
| Pest Management | | X |
| Indigenous Peoples | X | |
| Involuntary Resettlement | X | |

Summary of Key Safeguard Issues:

Natural Habitat: Overall activities of the project will derive significant conservation benefits and any potential adverse environmental impacts on human populations or environmentally important areas including forests, grasslands and other natural habitats are expected to be very limited. However, An environmental and social management framework will prepared to properly manage the risk of any unforeseen adverse environmental impact on natural habitats, including critical natural habitats, as well as measures to enhance the project's positive environmental outcomes.

Indigenous People: People in every valley/region in Bhutan can be considered indigenous people, with almost every valley/region having distinct dialects. For example in the Jigme Singye Wangchuck National Park has two groups – the Monpas in Trongsa and Olep in Wangdue could be considered IPs under WWF’s Indigenous People policy given their distinct cultural practices and traditions. However, their social and cultural identity although distinct from dominant society, does not make them vulnerable or disadvantaged therefore a separate documentation does not need to be prepared but will be included in the safeguards documentation.

Involuntary Resettlement: No involuntary resettlement and land acquisition will take place under the proposed project. Even though involuntary land acquisition and resettlement of individuals and/or families will not take place due to project activities, ecosystem restoration and improved land use and conservation planning are likely to affect land use patterns of the communities. This will have an impact on their livelihoods should be included in the safeguards documentation.

Pest Management: The project will not involve the procurement and use of pesticides.

Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

The project expects to achieve improved conservation and sustainable use of natural resources as its long term impact of project interventions, which will be both environmentally and socially positive.

Required actions: (type of ESIA, ESMP, IPP, IPMP, RAP, consultations, disclosure)

An Environment Social Management Framework will be prepared before project concept finalization.

Anushika Karunaratne
Safeguards Coordinator

Brent Nordstrom,
Senior Director, Public Sector Support

Annex 2a: Areas under different agro-ecological zones in Bhutan (in Ha)

| Dzongkhag | All dzongkhags | | | | | |
|-----------------|------------------|----------------|-----------------|-------------------|----------------|-----------------|
| | Alpine | Cool Temperate | Dry Subtropical | Humid Subtropical | Warm Temperate | Wet Subtropical |
| Bumthang | 166,959 | 96,337 | 8 | 0 | 3,385 | 0 |
| Chhukha | 5,648 | 44,463 | 39,955 | 33,385 | 50,958 | 13,546 |
| Dagana | 6,825 | 28,417 | 32,630 | 32,479 | 43,939 | 26,980 |
| Gasa | 259,288 | 29,023 | 282 | 0 | 6,515 | 0 |
| Haa | 77,289 | 66,938 | 13,149 | 4,523 | 28,490 | 76 |
| Lhuentse | 116,574 | 87,218 | 19,587 | 2,898 | 58,798 | 0 |
| Mongar | 2,929 | 42,239 | 52,315 | 34,519 | 55,687 | 6,338 |
| Paro | 56,948 | 54,262 | 0 | 0 | 17,483 | 0 |
| Pemagatshel | 0 | 19 | 28,679 | 42,619 | 9,475 | 21,403 |
| Punakha | 17,928 | 32,571 | 19,492 | 204 | 40,762 | 0 |
| Samdrupjongkhar | 716 | 13,678 | 48,124 | 43,135 | 39,094 | 42,914 |
| Samtse | 941 | 9,231 | 27,860 | 34,843 | 26,435 | 26,300 |
| Sarpang | 554 | 4,689 | 40,839 | 41,505 | 35,022 | 42,895 |
| Thimphu | 113,824 | 54,170 | 0 | 0 | 11,178 | 0 |
| Trashigang | 41,369 | 71,813 | 32,542 | 9,635 | 64,165 | 240 |
| Trashiyangtse | 46,641 | 49,821 | 9,833 | 3,577 | 34,862 | 0 |
| Trongsa | 31,677 | 75,117 | 18,496 | 4,869 | 51,161 | 51 |
| Tsirang | 357 | 4,475 | 19,575 | 20,183 | 14,457 | 4,737 |
| Wangdue | 144,663 | 128,717 | 35,384 | 12,814 | 75,500 | 649 |
| Zhemgang | 5,488 | 23,956 | 64,716 | 71,511 | 47,188 | 28,790 |
| Total | 1,096,618 | 917,155 | 503,465 | 392,700 | 714,554 | 214,918 |

Annex 2b: Areas under different agro-ecological zones in PAs and BCs (in ha)

| Dzongkhags under PAs/BCs | | | | | |
|--------------------------|----------------|-----------------|-------------------|----------------|-----------------|
| Alpine | Cool Temperate | Dry Subtropical | Humid Subtropical | Warm Temperate | Wet Subtropical |
| 166,959 | 96,337 | 8 | | 3,385 | |
| | | 1,447 | 7,368 | 24 | 15,659 |
| 171,202 | 24,525 | 282 | | 6,344 | |
| 74,068 | 45,528 | 6,748 | 1,452 | 18,014 | |
| 116,502 | 87,218 | 19,587 | 2,898 | 58,798 | |
| 2,879 | 35,723 | 18,728 | 9,329 | 22,819 | 911 |
| 52,925 | 21,840 | | | 2,667 | |
| | | | | | |
| 17,883 | 29,698 | 11,897 | 2 | 30,947 | |
| 716 | 13,433 | 38,374 | 33,719 | 34,180 | 31,693 |
| 941 | 7,454 | 10,179 | 6,668 | 15,871 | 2,519 |

| | | | | | |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 554 | 4,689 | 40,269 | 39,351 | 35,022 | 38,031 |
| 96,660 | 27,712 | | | 5,274 | |
| 40,373 | 54,948 | 3,465 | | 26,084 | |
| 44,959 | 28,248 | 175 | | 11,586 | |
| 31,677 | 75,117 | 18,496 | 4,869 | 51,161 | 51 |
| 357 | 4,475 | 14,167 | 13,459 | 13,715 | 2,782 |
| 144,661 | 102,661 | 28,041 | 11,816 | 66,487 | 649 |
| 5,488 | 21,912 | 49,981 | 52,076 | 39,962 | 21,862 |
| 968,803 | 681,519 | 261,845 | 183,006 | 442,340 | 114,157 |

Annex 3: Community Forest within BFL areas and across the country

| Dzongkhag | All dzongkhags | | | Dzongkhags under PAs/BCs | | |
|-----------------|----------------|---------------|---------------|--------------------------|---------------|---------------|
| | Nos_ CF | CF_Area_Ha | CF_HHs | Nos_ CF | CF_Area_Ha | CF_HHs |
| Bumthang | 30 | 3,079 | 876 | 30 | 3,079 | 876 |
| Chhukha | 46 | 3,221 | 1,554 | 0 | 0 | 0 |
| Dagana | 25 | 1,843 | 942 | 0 | 0 | 0 |
| Gasa | 7 | 452 | 181 | 7 | 452 | 181 |
| Haa | 18 | 1,697 | 534 | 10 | 950 | 312 |
| Lhuentse | 23 | 1,608 | 721 | 23 | 1,608 | 721 |
| Mongar | 30 | 6,519 | 1,808 | 10 | 2,014 | 430 |
| Paro | 26 | 4,218 | 1,485 | 6 | 695 | 275 |
| Pemagatshel | 43 | 3,724 | 2,112 | 0 | 0 | 0 |
| Punakha | 39 | 3,623 | 1,305 | 19 | 1,757 | 635 |
| Samdrupjongkhar | 41 | 5,275 | 2,113 | 30 | 3,942 | 1,651 |
| Samtse | 50 | 4,556 | 2,024 | 9 | 563 | 349 |
| Sarpang | 31 | 3,164 | 1,192 | 22 | 2,138 | 826 |
| Thimphu | 21 | 2,750 | 837 | 10 | 984 | 361 |
| Trashigang | 50 | 9,229 | 2,818 | 5 | 1,189 | 224 |
| Trashiyangtse | 29 | 3,372 | 1,389 | 8 | 1,018 | 270 |
| Trongsa | 27 | 2,764 | 870 | 27 | 2,764 | 870 |
| Tsirang | 38 | 5,766 | 2,303 | 15 | 2,868 | 833 |
| Wangdue | 78 | 5,860 | 2,188 | 61 | 4,589 | 1,673 |
| Zhemgang | 25 | 2,671 | 1,037 | 19 | 1,582 | 673 |
| Total | 677 | 75,391 | 28,289 | 311 | 32,193 | 11,160 |

Annex 4: Farmer groups within BFL project areas and across the country.

| Dzongkhag | All dzongkhags | | | | Dzongkhags under PAs/BCs | | | |
|-----------------|----------------|--------------|--------------|---------------|--------------------------|------------|------------|---------------|
| | Nos. FGs | FG-Male | FG-Female | Total Members | Nos. FGs | FG-Male | FG-Female | Total Members |
| Bumthang | 7 | 22 | 109 | 131 | 7 | 22 | 109 | 131 |
| Chhukha | 7 | 94 | 38 | 132 | 0 | 0 | 0 | 0 |
| Dagana | 2 | 91 | 30 | 121 | 0 | 0 | 0 | 0 |
| Haa | 4 | 34 | 60 | 94 | 2 | 14 | 26 | 40 |
| Gasa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lhuentse | 9 | 93 | 88 | 181 | 9 | 93 | 88 | 181 |
| Mongar | 23 | 105 | 186 | 291 | 2 | 11 | 22 | 33 |
| Paro | 6 | 37 | 92 | 129 | 0 | 0 | 0 | 0 |
| Pemagatshel | 15 | 245 | 104 | 349 | 0 | 0 | 0 | 0 |
| Punakha | 10 | 78 | 139 | 217 | 6 | 45 | 67 | 112 |
| Samdrupjongkhar | 17 | 448 | 189 | 637 | 14 | 369 | 168 | 537 |
| Samtse | 25 | 292 | 205 | 497 | 0 | 0 | 0 | 0 |
| Sarpang | 4 | 99 | 38 | 137 | 3 | 49 | 16 | 65 |
| Thimphu | 4 | 67 | 66 | 133 | 1 | 8 | 4 | 12 |
| Trashigang | 34 | 346 | 267 | 613 | 6 | 72 | 36 | 108 |
| Trashiyangtse | 18 | 229 | 181 | 410 | 3 | 23 | 6 | 29 |
| Trongsa | 5 | 14 | 86 | 100 | 5 | 14 | 86 | 100 |
| Tsirang | 2 | 25 | 27 | 52 | 1 | 8 | 24 | 32 |
| Wangdue | 8 | 70 | 178 | 248 | 3 | 14 | 57 | 71 |
| Zhemgang | 2 | 38 | 36 | 74 | 2 | 38 | 36 | 74 |
| Total | 202 | 2,427 | 2,119 | 4,546 | 64 | 780 | 745 | 1,525 |

Annex 5a: Livestock Population in Bhutan (yaks included with cattle)

| Dzongkhag | All dzongkhags | | | | | Livestock grazing density (GLU/km ²) |
|-----------------|-----------------|--------------|--------|--------|--------|--|
| | Improved cattle | Local cattle | Horses | Sheep | Goats | |
| Bumthang | 5,975 | 8,723 | 121 | 694 | 5 | 5.6 |
| Chhukha | 4,403 | 16,897 | 569 | 620 | 5,779 | 12.3 |
| Dagana | 5,243 | 13,593 | 379 | 267 | 7,182 | 12.0 |
| Gasa | 495 | 6,796 | 2,268 | 6 | 68 | 3.0 |
| Haa | 3,266 | 10,922 | 1,081 | 2 | 13 | 8.1 |
| Lhuentse | 3,159 | 10,879 | 1,463 | 206 | 86 | 5.4 |
| Mongar | 8,150 | 18,213 | 1,465 | 16 | 82 | 14.2 |
| Paro | 5,983 | 9,540 | 1,408 | 10 | 662 | 13.4 |
| Pemagatshel | 5,053 | 2,786 | 450 | 6 | 78 | 8.0 |
| Punakha | 3,128 | 9,000 | 461 | 19 | 185 | 11.3 |
| Samdrupjongkhar | 6,148 | 10,756 | 624 | 90 | 2,305 | 9.5 |
| Samtse | 4,892 | 26,676 | 252 | 9,329 | 21,484 | 29.1 |
| Sarpang | 7,582 | 16,961 | 495 | 1,013 | 6,645 | 15.9 |
| Thimphu | 1,984 | 11,549 | 121 | 4 | 74 | 7.8 |
| Trashigang | 7,842 | 33,750 | 2,055 | 4,414 | 378 | 20.0 |
| Trashiyangtse | 3,279 | 8,278 | 1,184 | 4 | 334 | 8.7 |
| Trongsa | 3,693 | 7,711 | 406 | 161 | 137 | 6.5 |
| Tsirang | 6,778 | 5,861 | 115 | 356 | 11,813 | 23.7 |
| Wangdue | 4,882 | 20,427 | 596 | 1,124 | 757 | 6.7 |
| Zhemgang | 1,947 | 9,014 | 1,065 | 2 | 106 | 4.9 |
| Total | 93,882 | 258,332 | 16,578 | 18,343 | 58,173 | 9.9 |

Annex 5b: Livestock Population in PAs and BCs (yaks included with cattle)

Dzongkhags under PAs/BCs

| Improved cattle | Local cattle | Horses | Sheep | Goats | Livestock grazing density (GLU/km ²) |
|-----------------|--------------|--------|-------|-------|--|
| 5,975 | 8,723 | 121 | 694 | 5 | 5.6 |
| 0 | 0 | 0 | 0 | 0 | 0.0 |
| 1,917 | 2,035 | 6 | 0 | 1,135 | 2.4 |
| 495 | 3,200 | 757 | 6 | 68 | 1.4 |
| 1,716 | 7,853 | 802 | 0 | 12 | 5.5 |
| 3,159 | 10,879 | 1,463 | 206 | 81 | 5.4 |
| 1,940 | 3,420 | 212 | 16 | 10 | 2.8 |
| 666 | 4,224 | 952 | 7 | 10 | 4.5 |
| 0 | 0 | 0 | 0 | 0 | 0.0 |
| 1,357 | 4,826 | 431 | 19 | 132 | 5.9 |

Dzongkhags under PAs/BCs

| Improved cattle | Local cattle | Horses | Sheep | Goats | Livestock grazing density (GLU/km ²) |
|-----------------|--------------|--------|-------|--------|--|
| 4,230 | 7,707 | 547 | 90 | 2,301 | 6.8 |
| 866 | 6,893 | 58 | 1,366 | 4,929 | 6.9 |
| 6,071 | 15,640 | 495 | 955 | 5,456 | 14.0 |
| 627 | 7,088 | 121 | 0 | 0 | 4.5 |
| 730 | 21,565 | 1,532 | 4,383 | 258 | 11.1 |
| 334 | 1,954 | 184 | 0 | 0 | 1.7 |
| 3,693 | 7,711 | 340 | 161 | 137 | 6.4 |
| 1,880 | 2,338 | 101 | 144 | 3,431 | 7.8 |
| 3,821 | 16,853 | 431 | 1,124 | 698 | 5.5 |
| 1,481 | 6,693 | 537 | 1 | 96 | 3.6 |
| 40,958 | 139,602 | 9,090 | 9,172 | 18,759 | 5.0 |

Annex 6a: Agriculture production in Bhutan (MT)

| Dzongkhag | All dzongkhags | | | | | |
|-----------------|----------------|---------------|--------------|---------------|--------------|---------------|
| | Cereals | Potato | Spices | Vegetables | Oilseeds | Fruits/Nuts |
| Bumthang | 1,148 | 3,112 | 11 | 768 | 18 | 160 |
| Chhukha | 4,284 | 5,378 | 697 | 2,108 | 133 | 2,828 |
| Dagana | 7,160 | 171 | 134 | 1,078 | 156 | 5,620 |
| Gasa | 303 | 189 | 13 | 107 | 2 | 5 |
| Haa | 997 | 1,704 | 139 | 2,982 | 47 | 385 |
| Lhuentse | 5,289 | 1,106 | 96 | 830 | 17 | 616 |
| Mongar | 16,915 | 5,170 | 245 | 3,941 | 217 | 2,278 |
| Paro | 7,310 | 2,678 | 8 | 4,403 | 29 | 5,107 |
| Pemagatshel | 3,840 | 1,185 | 105 | 568 | 81 | 3,131 |
| Punakha | 8,938 | 91 | 62 | 1,600 | 36 | 812 |
| Samdrupjongkhar | 10,487 | 2,047 | 886 | 1,505 | 263 | 5,549 |
| Samtse | 7,576 | 108 | 2,012 | 850 | 99 | 3,758 |
| Sarpang | 7,158 | 93 | 478 | 448 | 248 | 8,243 |
| Thimphu | 483 | 1,058 | 14 | 1,492 | 1 | 911 |
| Trashigang | 9,893 | 6,400 | 238 | 2,546 | 193 | 1,258 |
| Trashiyangtse | 5,619 | 3,055 | 122 | 1,162 | 151 | 554 |
| Trongsa | 3,693 | 321 | 17 | 697 | 16 | 372 |
| Tsirang | 6,093 | 261 | 242 | 1,146 | 140 | 6,040 |
| Wangdue | 7,020 | 13,260 | 113 | 7,623 | 76 | 395 |
| Zhemgang | 4,575 | 137 | 59 | 259 | 39 | 1,570 |
| Total | 118,781 | 47,524 | 5,692 | 36,115 | 1,963 | 49,592 |

Annex 6b: Agriculture production in PA and BCs (MT)

| Dzongkhag | Dzongkhags under PAs/BCs | | | | | |
|-----------------|--------------------------|---------------|--------------|---------------|------------|---------------|
| | Cereals | Potato | Spices | Vegetables | Oilseeds | Fruits/Nuts |
| Bumthang | 1,148 | 3,112 | 11 | 768 | 18 | 160 |
| Chhukha | 0 | 0 | 0 | 0 | 0 | 0 |
| Dagana | 405 | 6 | 4 | 17 | 1 | 530 |
| Gasa | 239 | 180 | 13 | 83 | 2 | 5 |
| Haa | 709 | 792 | 106 | 1,678 | 32 | 132 |
| Lhuentse | 5,289 | 1,106 | 96 | 830 | 17 | 616 |
| Mongar | 1,656 | 334 | 52 | 360 | 13 | 327 |
| Paro | 1,178 | 483 | 3 | 204 | 2 | 475 |
| Pemagatshel | 0 | 0 | 0 | 0 | 0 | 0 |
| Punakha | 4,662 | 41 | 40 | 1,005 | 17 | 478 |
| Samdrupjongkhar | 8,936 | 1,637 | 867 | 1,321 | 247 | 3,204 |
| Samtse | 1,137 | 20 | 279 | 107 | 12 | 343 |
| Sarpang | 6,678 | 85 | 452 | 357 | 237 | 7,251 |
| Thimphu | 100 | 641 | 3 | 785 | 0 | 280 |
| Trashigang | 666 | 349 | 11 | 297 | 11 | 64 |
| Trashiyangtse | 575 | 388 | 5 | 153 | 2 | 27 |
| Trongsa | 3,693 | 321 | 17 | 697 | 16 | 372 |
| Tsirang | 1,877 | 97 | 86 | 543 | 91 | 1,600 |
| Wangdue | 3,665 | 12,335 | 67 | 6,865 | 28 | 233 |
| Zhemgang | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 42,614 | 21,927 | 2,114 | 16,071 | 745 | 16,099 |

Annex 7: Estimated population at the national level and within the PA & BCs

| Dzongkhag Name | All dzongkhags | | | Dzongkhags under PAs/BCs | | |
|-----------------|-----------------|-----------------|-------------|--------------------------|-----------------|-------------|
| | Est. hhs (2016) | Est. Pop (2016) | Pop density | Est. hhs (2016) | Est. Pop (2016) | Pop density |
| Bumthang | 2,725 | 12,807 | 4.8 | 2,725 | 12,807 | 4.8 |
| Chhukha | 9,129 | 42,906 | 22.8 | 0 | 0 | 0.0 |
| Dagana | 5,113 | 24,030 | 14.0 | 595 | 2,796 | 1.6 |
| Gasa | 649 | 3,050 | 1.0 | 419 | 1,967 | 0.6 |
| Haa | 2,425 | 11,397 | 6.1 | 1,316 | 6,184 | 3.3 |
| Lhuentse | 3,350 | 15,747 | 5.6 | 3,350 | 15,747 | 5.6 |
| Mongar | 7,738 | 36,369 | 18.7 | 1,261 | 5,928 | 3.0 |
| Paro | 7,889 | 37,077 | 29.6 | 1,271 | 5,973 | 4.8 |
| Pemagatshel | 4,968 | 23,349 | 22.8 | 0 | 0 | 0.0 |
| Punakha | 4,978 | 23,398 | 21.1 | 2,004 | 9,419 | 8.5 |
| SamdrupJongkhar | 6,895 | 32,406 | 17.3 | 4,627 | 21,745 | 11.6 |
| Samtse | 12,500 | 58,752 | 45.0 | 2,987 | 14,038 | 10.8 |
| Sarpang | 6,203 | 29,155 | 17.5 | 4,967 | 23,345 | 14.0 |
| Thimphu | 3,025 | 14,219 | 8.1 | 1,514 | 7,118 | 4.1 |
| Trashigang | 10,035 | 47,163 | 21.4 | 1,469 | 6,905 | 3.1 |
| Trashiyangtse | 3,596 | 16,903 | 11.7 | 502 | 2,360 | 1.6 |
| Trongsa | 2,637 | 12,393 | 6.8 | 2,637 | 12,393 | 6.8 |
| Tsirang | 4,282 | 20,128 | 31.5 | 1,238 | 5,818 | 9.1 |
| Wangdue | 5,568 | 26,170 | 6.7 | 3,896 | 18,310 | 4.7 |
| Zhemgang | 3,555 | 16,707 | 6.9 | 2,484 | 11,674 | 4.8 |
| Total | 107,260 | 504,123 | 13.1 | 39,261 | 184,529 | 4.8 |

Annex 8: Summary Note of Field Notes from Community Consultations for preparation of ESMF, Bhutan For Life

1. Introduction:

A team comprising of the ESMF Consultant, Gender Consultant, Lawyer of the Ministry of Ministry of Agriculture and Forests, Representative of the Wildlife Conservation Division (now known as the Nature Conservation Division of the Department of Forests and Parks Services and a Representative of the BFL Coordination Office, WWF Program Officer in Thimphu visited 8 out of the 10 PAs, 4 out of the 8 BCs covering east, west, north and southern part of the country. During these visits, the team had community consultations in 12 Gewogs under the coordination and facilitation of the ESMF Consultant. Consultations were held with 239 community members (171 men and 68 women) from these 12 Gewogs. The process involved 51 officials of the concerned PAs and BCs.

The members of the team comprised of the following individuals;

1. Mr. Tandin Dorji, Senior Forester, Nature Conservation Division, DoFPS, MoAF
2. Mr. Ugyen Tshewring, Lawyer, Policy and Planning Division, MoAF
3. Ms. Jamyang C. Penjore, BFL Coordination Unit, WWF, Bhutan Program Office
4. Ms. Tshering Choden, Gender Safeguards Consultant
5. Mr. Nidup Peljor, ESMF Consultant, Bhutan Philanthropy Ventures Pvt. Ltd.

2. The Approach and Process of the Consultations

Major focus during the consultations were placed on achieving insights into Tenure and Rights over resources, Activities and Potential Impacts of BFL, FPIC Process preferred by the communities, Grievance Mechanism, Capacity needs and gender issues related to natural resources management. The field consultations were held in each location with participants divided into four group of men, women, elderly and youth. Each such group consultations were preceded by introduction of the BFL objectives, time frame, BFL partners and major activities.

3. Summary of Findings from the Consultations:

In general, the major observations from the field include

- High level of awareness among communities within the PAs and BCs on importance of nature and motivation to use resources sustainably
- Local level institutions such as Farmer Groups, local governance structures are deep rooted and are highly regarded as credible forms of organization and well accepted to represent the interests and stake of local communities. These include the Tshogpa, Mangmi, Gewog Administration, and Gewog Tshogde; these are considered formal mechanisms for community consent, grievance redress and conflict resolution.
- Informal and traditional forms of community consent and grievance redress are not commonly in practice

- Indigenous and cultural norms of using natural resources are fading (hemp fibres, nettle clothes, medicinal plants for treatment). However new forms of NWFP markets seem to emerge rapidly. Hence, popular aspirations for formalized and sustainable use of NWFPs to avoid over exploitation and for local benefits. This indicates that there is scope and acceptance among communities to start nature based enterprises to take off significantly.
- Most common community based activities preferred include protection of water sources for sustainable use; nature and NWFP based enterprise development; formalization of resource uses such as for NWFPs; Capacity development of communities and local institutions.
- Lack of awareness on grazing regulations and rights
- Overlap of one or more Park boundary over one Gewog causing administrative confusion in terms of access to services. There is need to rationalize the PAs and BCs boundaries in line with local administrative boundaries. Out of 85 Gewogs the 35 of these Gewogs fall under both a PA or a BC. Hence these Gewogs are subjected to two approaches of management. Gewogs such as Tang in Bumthang, Jigmechoeling in Sarpang, Khoma in Lhuentse, Kazhi in Wangdue and Trong in Zhemgang are examples.
- Data on number of households and of the population are reported differently in different sources of reports. While the PAs carry out socio-economic surveys for preparation of management plans, these surveys take place in different times depending on the termination of respective management plans. More over, there is no report of such surveys in the BCs. For BFL, there is need for a common baseline as PAs and BCs, particularly in terms of establishing a comprehensive socio-economic baseline.
- Preferred timing for consultations with communities is during the winter season.
- Preferred channel for community consent include the local institutions such as the Tsohogpa, Mangmi and the Gup.
- NWFP management is a growing concern amongst the communities in the PAs and BCs. The most common NWFPs and issues associated are as follows;
- The PAs and BC management comprise of professional foresters and natural resource experts. Therefore, they do have the expertise in environmental safeguards. However, the PAs and BCs would need technical support and capacity enhancement on the social safeguards.

Consultation with relevant civil society group comprising of the Bhutan Ecological Society (ECS), Clean Bhutan, Loden Foundation, the Youth Development Fund (YDF), the Royal Society for the Protection of Nature (RSPN) suggested that there is a need for deeper understanding of issues related to Indigenous Knowledge (IK) and Traditional Knowledge (TK) and that depletion of resources in the nature or their economic values could further result into decline in the practice of such IK and TK. It would be relevant for the civil societies to be engaged in such studies, promotion of ecotourism initiatives, capacity building and awareness and in establishment of potential youth or gender based and nature based enterprises.

4. Recommendations:

- During the community consultations, the communities identified need to train the local representatives in the field of:
 - Land and its regulations to understand regulatory framework on grazing and pasture management, land acquisition, land leasing mechanisms
 - Water Act and its regulations to understand water rights and management
 - Forest and nature Conservations Rules, 2017 to understand timber entitlement, watershed management
 - Frameworks for creation of farmer groups
 - Capacity for environmental impacts assessment
 - Training of natural resources management related to water source management, grazing, community forests and NWFP management
 - Participatory decision-making process and facilitation
 - Conflict resolution and management

These training activities should be included as BFL project's community capacity building for environment and social safeguards.

- Wherever possible community consultations should be conducted during winter season when agriculture activities are minimal.
- Within the first four months of the BFL project implementation, a common baseline should for the PAs and BCs or the BFL landscape areas should be established through a comprehensive socio-economic baseline survey.
- A priority list of NWFPs should be drawn for which sustainable management plans can be drawn for specific locations and communities to avoid over exploitation and to bring about local benefits.
- Most common community based activities preferred include protection of water sources for sustainable use; nature and NWFP based enterprise development; formalization of resource uses such as for NWFPs; Capacity development of communities and local institutions.
- Relevant civil society organizations could be could be engaged in promotion of ecotourism initiatives, capacity building and awareness and in establishment of potential youth or gender based and nature based enterprises.
- To provide technical assistance and support the PAs and BCs, a permanent Environmental and Social Safeguards Expert is recommended to be recruited by the Project at the BLF Coordination Unit. The expert will provide support to all PAs and BCs in terms of environment assessment for all field specific activities, preparation of ESMPs, monitoring of compliance and in reporting on overall safeguards to the BFL Board, Competent Authorities and to the NECs. In order to build safeguard capacity within the MoAF, a National Environment and Social Safeguards Officer shall be appointed by the MoAF as a counter part to the expert housed in BFL Coordination Unit. From the 6th year onwards, the National Environment and Social Safeguards Officer shall assume the full responsibility for technical support and further capacity development.

5. List of persons met

Biological Corridor 3 (BC3), Gakidling Gewog

| S/N | Name | Sex | Age | Occupation | Chiwoq / Organization | Gewog | Group |
|-----|------------------|-----|-----|------------|-----------------------|-----------|----------|
| 1 | Chada | M | 65 | Farmer | Geytemkha | Gakidling | Elderly |
| 2 | Wangdi | M | 59 | Farmer | Geytemkha | Gakidling | Elderly |
| 3 | Kumbu Tshadary | M | 54 | Farmer | Geytemkha | Gakidling | Men |
| 4 | Tika Ram Rai | M | 62 | Farmer | Geytemkha | Gakidling | Elderly |
| 5 | Karna Bdr Rai | M | 48 | Farmer | Geytemkha | Gakidling | Men |
| 6 | Ram Bhakta Rai | M | 37 | Tshogpa | Geytemkha | Gakidling | Men |
| 7 | Lhachu Man Thara | M | 58 | Farmer | Gagiling | Gakidling | Elderly |
| 8 | Man Bdr Rana | M | 58 | Farmer | Relangthang | Gakidling | Elderly |
| 9 | Indra Man Rana | M | 47 | Farmer | Relangthang | Gakidling | Men |
| 10 | Mohan Rana | M | 28 | Farmer | Relangthang | Gakidling | Youth |
| 11 | Dambar Bdr Rana | M | 38 | Tshogpa | Relangthang | Gakidling | Men |
| 12 | Portap Singh Rai | M | 55 | Farmer | Menchulam | Gakidling | Men |
| 13 | Dew Kumar Thara | M | 34 | Farmer | Sangkha | Gakidling | Youth |
| 14 | Biram Rai | M | 34 | Farmer | Gagiling | Gakidling | Youth |
| 15 | Pema Sherpa | M | 36 | Farmer | Sangkha | Gakidling | Men |
| 16 | Arjun Rai | M | 47 | Farmer | Menchulam | Gakidling | Men |
| 17 | Bhim Kr Raika | M | 28 | Thshogpa | Gagiling | Gakidling | Youth |
| 18 | Rajid Raika | M | 30 | Farmer | Gagiling | Gakidling | Youth |
| 19 | Padam Rai | M | 53 | Farmer | Gagiling | Gakidling | Men |
| 20 | Ratman Rave | M | 30 | Gaydrung | Gagiling | Gakidling | Youth |
| 21 | Karna Bdr Rai | M | 48 | Farmer | | Gakidling | Men |
| 22 | Phub Dhendup | M | | CFO | Sarpang TFD | Gakidling | Men |
| 23 | Pema Rinzin | M | | FO | Sarpang TFD | Gakidling | Men |
| 24 | Karma Choki | M | | FO | Sarpang TFD | Gakidling | Men |
| 25 | Singye Wangchuk | M | | Sr. Ranger | Sarpang TFD | Gakidling | Resource |
| 26 | Karma Gyamtsho | M | | Sr. Ranger | Sarpang TFD | Gakidling | Resource |
| 27 | Nim Dorji | M | | Gup | Gewog Adm | Gakidling | Men |
| 28 | Ram Bdr Pilakoti | M | | Mangmi | Gewog Adm | Gakidling | Men |

Biological Corridor 4 (BC4), Nangkor Gewog

| | | | | | | | |
|----|-------------------|---|----|----------------|---------------|---------|----------|
| 29 | Dawa Zangpo | M | 30 | CF, Treasurer | KNC | Nangkor | Men |
| 30 | Ugyen Wangdi | M | 30 | Tshogpa | Duenmang | Nangkor | Men |
| 40 | Sonam Choden | F | 30 | Chipeon | Dhakupel-Tali | Nangkor | Women |
| 41 | Sonam | M | 35 | Member | Duenmang | Nangkor | Men |
| 42 | Tshering Wangchuk | M | 49 | CF, Chairman | CF, Naykhor | Nangkor | Men |
| 43 | Karpo | M | 39 | CF, Accountant | Naykhor | Nangkor | Men |
| 44 | Ugyen Phuntsho | M | 31 | GAO | Gewog Adm | Nangkor | Men |
| 45 | Tashi Dendup | M | 44 | Offg. CFO | Zhemgang | Nangkor | Resource |
| 46 | Norbu Zangmo | F | 33 | FO | Zhemgang | Nangkor | Women |

Biological Corridor 6 (BC6), Kangpar Gewog

| | | | | | | | |
|----|-------------------|---|----|--------------|----------------------|----------|----------|
| 47 | Tshering Laythro | M | 56 | CF Chair | Merdha | Kangpara | Elderly |
| 48 | Tshewang Tenzin | M | 27 | CF Secretary | Merdha | Kangpara | Youth |
| 49 | Thinley Gyeltshen | M | 39 | Farmer | Merdha | Kangpara | Men |
| 50 | Rinzin Lotey | M | 31 | Risup | Merdha | Kangpara | Men |
| 51 | Kunzang Tobgay | M | 28 | Tshogpa | Merdha | Kangpara | Men |
| 52 | Tandin Wangchu | M | 38 | Farmer | Merdha | Kangpara | Men |
| 53 | Nidup Norbu | M | 21 | Farmer | Merdha | Kangpara | Youth |
| 54 | Nima Tenzin | M | 26 | Farmer | Merdha | Kangpara | Youth |
| 55 | Melam Dorji | M | 64 | CF Chair | Pasaphu | Kangpara | Elderly |
| 56 | Ngajo Dorji | M | 29 | Farmer | Pasaphu | Kangpara | Men |
| 57 | Leki Tshering | M | 35 | CF Secretary | Pasaphu | Kangpara | Men |
| 58 | Melam Dorji | M | 32 | CF Chair | Pedung | Kangpara | Men |
| 59 | Sangay Wangpo | M | 46 | Farmer | Pedung | Kangpara | Men |
| 60 | Tshering Phuntsho | M | 42 | CF Secretary | Pedung | Kangpara | Men |
| 61 | Tshering Jamtsho | M | 26 | CF Chair | Pasaphu | Kangpara | Youth |
| 62 | Sangay Wangdi | M | 62 | CF Chair | Lamyong | Kangpara | Elderly |
| 63 | Jurmey | M | 69 | CF Secretary | Lamyong | Kangpara | Elderly |
| 64 | Tshering Tobgay | M | 20 | Farmer | Lamyong | Kangpara | Youth |
| 65 | Kinzang Peldon | F | 21 | Farmer | Lamyong | Kangpara | Youth |
| 66 | Ngagi Tshering | M | 26 | Farmer | Zorthung | Kangpara | Youth |
| 67 | Ugyen Tshwang | M | 58 | Tshogpa | Kangpara | Kangpara | Elderly |
| 68 | Wangda | M | 48 | Tshogpa | Maduwa | Kangpara | Men |
| 69 | Sangay Tenzin | M | 28 | Mangmi | Gewog | Kangpara | Men |
| 70 | Pema Dorji Moktan | M | 25 | Agr. EO | RNR EC | Kangpara | Resource |
| 71 | Phuntsho Wangdi | M | 27 | Beat Officer | Kangpara Beat Office | Kangpara | Resource |
| 72 | Sonam Dorji | M | 39 | Ranger | Kangpara Beat Office | Kangpara | Resource |
| 73 | Tshering Dorji | M | | Ranger | Range, Thrimshing | Kangpara | Resource |

Bumdeling Wildlife Sanctuary (BWS), Khoma Gewog

| | | | | | | | |
|----|------------------|---|----|------------------------|-------------|-------|---------|
| 74 | Dorji | M | 50 | Farmer | Babtong | Khoma | Elderly |
| 75 | Choni Dorji | M | 30 | Farmer | Goenpa kap | Khoma | Youth |
| 76 | Karma Tshering | M | 52 | Farmer | Babtong | Khoma | Elderly |
| 77 | Mr.kelzang Tashi | M | 50 | Yak Herder | Ronmateng | Khoma | Elderly |
| 78 | Karma Yangku | M | 40 | Yak Herder | Ronmateng | Khoma | Men |
| 79 | Thinley Dorji | M | 48 | Yak Herder | Ronmateng | Khoma | Men |
| 80 | Kuenzang Lhamo | F | 28 | Weaving Group | Tsango | Khoma | Youth |
| 81 | Norzin Lhamo | F | 37 | Weaving Group | Tsango | Khoma | Women |
| 82 | Karma Tshomo | F | 40 | Weaving Group | Tsango | Khoma | Women |
| 83 | Guru Tshering | M | 40 | Agriculture – Group | Pangkhar | Khoma | Men |
| 84 | Sangay Dorji | M | 54 | Agriculture – Group | Pangkhar | Khoma | Elderly |
| 85 | Tshewang Choki | F | 64 | Weaving Group | Kemo Lukchu | Khoma | Elderly |
| 86 | Kinley Wangmo | F | 50 | Weaving Group | Kemo Lukchu | Khoma | Elderly |
| 87 | Rinzin Lhamo | F | 37 | Weaving Group | Kemo Lukchu | Khoma | Women |
| 88 | Sonam Drupchu | M | 36 | Farmer | Pangkhar | Khoma | Men |
| 89 | Sonam Tenzin | M | 39 | Electric Fencing Group | Babtong | Khoma | Men |

Bumdeling Wildlife Sanctuary (BWS), Khoma Gewog...contd...

| | | | | | | | |
|-----|------------------|---|----|--------------------------|--------------|-------|----------|
| 90 | Thinley Tshomo | F | 26 | Lekchey Community Forest | Kemtsong | Khoma | Youth |
| 91 | Yangchen Lhamo | F | 38 | Farmer | Kemtsong | Khoma | Women |
| 92 | Kuenzang Wangmo | F | 26 | Farmer | Kemtsong | Khoma | Youth |
| 93 | Dema Yangchen | F | 44 | Yarn Group | Goenpa kap | Khoma | Women |
| 94 | Jimba Lhamo | F | 25 | Yarn Group | Goenpa kap | Khoma | Youth |
| 95 | Sherab Tharchen | M | 32 | Tshokpa | Goenpa kap | Khoma | Men |
| 96 | Sonam Darjay | M | 41 | Farmer | Khoma | Khoma | Men |
| 97 | Pema Dechen | F | 35 | Farmer | Khoma | Khoma | Women |
| 98 | Tashi Pemo | F | 36 | Farmer | Khoma | Khoma | Women |
| 99 | Namgay Zangmo | F | 48 | Farmer | Khoma | Khoma | Women |
| 100 | Chezom | F | 57 | Farmer | Khoma | Khoma | Elderly |
| 101 | Tshewang Dema | F | 46 | Farmer | Khoma | Khoma | Women |
| 102 | Sonam Tobgay | M | 41 | Tshokpa | Gangla khema | Khoma | Men |
| 103 | Phuntsho Wangdi | M | 30 | Tshokpa | Pangkhar | Khoma | Youth |
| 104 | Shacha Wangchuk | M | 29 | Tshokpa | Tsango | Khoma | Youth |
| 105 | Kelzang Wangdi | M | 38 | GAO | Gewog Adm | Khoma | Men |
| 106 | Pema Tshering | M | | Mangme | Gewog Adm | Khoma | Men |
| 107 | Pema Wangchuk | M | | Gedrung | Gewog Adm | Khoma | Men |
| 108 | Karma Tempa | M | | CFO | BWS | HO | Resource |
| 109 | Norbu Wangchuk | M | | FO | BWS | HO | Resource |
| 110 | Tempa Gyeltshen | M | | FO | BWS | HO | Resource |
| 111 | Tshering Dendup | M | | FO | BWS | HO | Resource |
| 112 | Tshering Dawa | M | | Sr. FR III | BWS | HO | Resource |
| 113 | Kuenzang Thinley | M | | RO | BWS | KPRO | Resource |
| 114 | Kumbu Dorji | M | | Sr. Forester | BWS | KPRO | Resource |
| 115 | Sonam Wangmo | F | | FR | BWS | KPRO | Resource |
| 116 | Pema Wangchuk | M | | Forester | BWS | KPRO | Resource |
| 117 | Tashi Dhendup | M | | Forester | BWS | KPRO | Resource |
| 118 | Jigme Lhaden | F | | Sr. Forester | BWS | KPRO | Resource |

Jigme Dorji Wangchuck National Park (IDNP), Khamoed Gewog

| | | | | | | | |
|-----|----------------|---|----|---------|--------|-------|---------|
| 119 | Karma | M | 60 | Farmer | Damji | Khame | Elderly |
| 120 | Kencho | M | 48 | Farmer | Damji | Khame | Men |
| 121 | Gyem Lham | F | 32 | Farmer | Damji | Khame | Youth |
| 122 | Nim Dorji | M | 58 | Farmer | Jabesa | Khame | Elderly |
| 123 | Kencho Zam | F | 39 | Farmer | Zomina | Khame | Women |
| 124 | Pem | F | 42 | Farmer | Zomina | Khame | Women |
| 125 | Pasang Dem | F | 74 | Farmer | Jabesa | Khame | Elderly |
| 126 | Phurb Dorji | M | 37 | Farmer | Barsha | Khame | Men |
| 127 | Ugyen Tshering | M | 40 | Farmer | Yemina | Khame | Men |
| 128 | Gyembo | M | 38 | Tshogpa | Yemina | Khame | Men |
| 129 | Kinley Dorji | M | 36 | Tshogpa | Damji | Khame | Youth |
| 130 | Lhamo | F | 20 | Farmer | Bara | Khame | Youth |
| 131 | Pem Dem | F | 63 | Farmer | Barsha | Khame | Elderly |

Jigme Dorji Wangchuck National Park (IDNP).... Contd...

| | | | | | | | |
|-----|-----------------|---|----|---------------|--------------|-------|----------|
| 132 | Thinley Pem | F | 60 | Farmer | Damji | Khame | Elderly |
| 133 | Dawa Pem | F | 39 | Farmer | Geyza | Khame | Women |
| 134 | Damcho Pem | F | 28 | Farmer | Barsha | Khame | Women |
| 135 | Deki | F | 50 | Farmer | Bara | Khame | Elderly |
| 136 | Shelkar | F | 38 | Farmer | Jabesa | Khame | Women |
| 137 | Pem | F | 44 | Farmer | Jabesa | Khame | Women |
| 138 | Kencho Wangdi | M | 48 | Farmer | Khailo | Khame | Men |
| 139 | Damchoe Dorji | M | | Mangmi | Mangmi | Khame | Men |
| 140 | Yangka | F | | GAO | Gewog | Khame | Women |
| 141 | Tenzin Rabgay | M | 27 | Range Officer | Laya Range | | Resource |
| 142 | Karma Gyaltshe | M | 39 | Forester | Lunana Range | | Resource |
| 143 | Ugyen Rinzin | M | 35 | Forester | Lunana Range | | Resource |
| 144 | Kinga | M | 37 | Forester | Lunana Range | | Resource |
| 145 | Sherab Tenzin | M | 27 | Forester | Laya Range | | Resource |
| 146 | Sangay Tenzin | M | 35 | Forester | HQ, Damji | | Resource |
| 147 | Janchub | M | 50 | Forester | Damji | | Resource |
| 148 | Pema Dhendup | M | 38 | FO | HQ, Damji | | Resource |
| 149 | Jigme Gyeltshen | M | 35 | FR | HQ, Damji | | Resource |
| 150 | Namgay | M | 43 | Parm Manager | HQ, Damji | | Resource |
| 151 | Kado Drukpa | M | 49 | FR | Ramena | | Resource |
| 152 | Tandin | M | | FR | Ramena | | Resource |
| 153 | Choden | F | | FR | HQ | | Resource |
| 154 | Wanhchuk | M | | Farmer | HQ | | Resource |
| 155 | Karma Jamtshe | M | | FR-I | HQ | | Resource |
| 156 | Tshering Dorji | M | | FR-II | | | Resource |

Jgme Khesar Strict Nature Reserve (JKSNR), Bjee Gewog

| | | | | | | | |
|-----|---------------|---|----|---------|-----------|------|---------|
| 157 | Sonam Zam | F | 27 | Farmer | Yangthang | Bjee | Youth |
| 158 | Gaki | F | 61 | Farmer | Yangthang | Bjee | Elderly |
| 159 | Wangmo | F | 29 | Tshokpa | Yangthang | Bjee | Women |
| 160 | Kaley | F | 62 | Farmer | Tokey | Bjee | Elderly |
| 161 | Tshering Gem | F | 24 | Farmer | Chempa | Bjee | Youth |
| 162 | Sonam Zangmo | F | 23 | Farmer | Gaychukha | Bjee | Youth |
| 163 | Tshering Gyem | F | 19 | Farmer | Chempa | Bjee | Women |
| 164 | Passang Dem | F | 51 | Farmer | Tokey | Bjee | Women |
| 165 | Chamchoe | F | 80 | Farmer | Tokey | Bjee | Elderly |
| 166 | Nidup Zangmo | F | 27 | Farmer | Tokey | Bjee | Youth |
| 167 | Passang | F | 50 | Farmer | Chempa | Bjee | Women |
| 168 | Youden | F | 60 | Farmer | Tokey | Bjee | Elderly |
| 169 | Karma Wangmo | F | 36 | Farmer | Tokey | Bjee | Women |
| 170 | Chundu Lham | F | 41 | Farmer | Tokey | Bjee | Women |
| 171 | Pema Lekzin | F | 20 | Farmer | Tokey | Bjee | Youth |

Jgme Khesar Strict Nature Reserve (JKSNR) & BC 1. Bjee Gewog

| | | | | | | | |
|-----|-------------------|---|----|---------|-----------|------|---------|
| 172 | Pasang | M | 44 | Tshokpa | Talung | Bjee | Men |
| 173 | Tsherin Penjor | M | 29 | Farmer | Chumpa | Bjee | Men |
| 174 | Passang Dorji | M | 33 | Gup | Talung | Bjee | Men |
| 175 | Kencho Wangdi | M | 36 | Farmer | Chumpa | Bjee | Men |
| 176 | Karma Dorji | M | 28 | Farmer | Chumpa | Bjee | Men |
| 177 | Dawa Penjo | M | 28 | Farmer | Chumpa | Bjee | Men |
| 178 | Tshering | M | 72 | Farmer | Talung | Bjee | Elderly |
| 179 | kaka Tshering | M | 18 | Farmer | Yangthang | Bjee | Youth |
| 180 | Sonam Dorji | M | 28 | Farmer | Chumpa | Bjee | Men |
| 181 | Chundu Tshering | M | 30 | Tshokpa | Chumpa | Bjee | Men |
| 182 | Dorji | M | 28 | Farmer | Yangthang | Bjee | Men |
| 183 | Thsering Phuntsho | M | 28 | Farmer | Yangthang | Bjee | Men |
| 184 | Sangey Nidup | M | 18 | Farmer | Talung | Bjee | Youth |
| 185 | Kencho | M | 28 | Farmer | Talung | Bjee | Men |
| 186 | Pem Tenzin | M | 63 | Farmer | Talung | Bjee | Elderly |
| 187 | Tshering Wangchuk | M | 50 | Farmer | Tokey | Bjee | Men |
| 188 | Dorji | M | 73 | Farmer | Gyensa | Bjee | Elderly |
| 189 | Tashi | M | 55 | Farmer | Gyensa | Bjee | Men |
| 190 | Nim | M | 55 | Farmer | Tokey | Bjee | Men |
| 191 | Ugyen | M | 32 | Farmer | Tokey | Bjee | Men |
| 192 | Tshering | M | 58 | Farmer | Tokey | Bjee | Men |
| 193 | Tshering | M | 60 | Farmer | Chempa | Bjee | Elderly |
| 194 | Tashi Tobgay | M | 33 | Farmer | Chempa | Bjee | Men |
| 195 | Chab Tshering | M | 34 | Tshokpa | Gyensa | Bjee | Men |
| 196 | Passang | M | 69 | Farmer | Tokey | Bjee | Elderly |
| 197 | Gado | M | 40 | Farmer | Tokey | Bjee | Men |
| 198 | Lengo | M | 79 | Farmer | Talung | Bjee | Elderly |

Jigme Singye Wangchuck National Park (JSWNP), Langthel Gewog

| | | | | | | | |
|-----|---------------|---|----|---------|----------|----------|-----|
| 199 | Nyonthoe | M | 36 | Famer | Phumzor | Langthel | Men |
| 200 | Larhi | M | 40 | Famer | Phumzor | Langthel | Men |
| 201 | Bargo | M | 30 | Famer | Phumzor | Langthel | Men |
| 202 | Karma Dorji | M | 30 | Famer | Wangling | Langthel | Men |
| 203 | Nechung | M | 40 | Famer | Wangling | Langthel | Men |
| 204 | Tshagay | M | 42 | Chipon | Phumzor | Langthel | Men |
| 205 | Phurpala | M | 29 | Famer | Jangbi | Langthel | Men |
| 206 | Phurpa | M | 45 | Farmer | Phumzor | Langthel | Men |
| 207 | Nakphel | M | 29 | Farmer | Jangbi | Langthel | Men |
| 208 | Karma | M | 27 | Farmer | Phumzor | Langthel | Men |
| 209 | Pema Rinzin | M | 34 | Farmer | Wangling | Langthel | Men |
| 210 | Sherab | M | 44 | Farmer | Wangling | Langthel | Men |
| 211 | Lhagyel | M | 38 | Tshokpa | Jangbi | Langthel | Men |
| 212 | Sonam Dhendup | M | 40 | Gup | Gewog | Langthel | Men |
| 213 | Chimi Rinzin | M | 28 | Famer | Jangbi | Langthel | Men |

Jigme Singye Wangchuck National Park (JSWNP), Langthel Gewog... contd...

| | | | | | | | |
|-----|---------------|---|----|-----------------|----------------|----------|----------|
| 214 | Delang | M | 36 | Famer | Phumzor | Langthel | Men |
| 215 | Norbu | M | | Principal | Jangey CS | Langthel | Men |
| 216 | Sonam Dorji | M | 43 | FO | HO, Tshangka | JSWNP | Resource |
| 217 | Dorji Dupa | M | 40 | Forester | HO, Tshangka | JSWNP | Resource |
| 218 | Namgay Tenzin | M | 42 | Forester | Lagnthil Range | JSWNP | Resource |
| 219 | Kado Rinchen | M | 42 | Sr. Forester | Lagnthil Range | JSWNP | Resource |
| 220 | Choki Dorji | M | 48 | Sr. Forester II | HO, Tshangka | JSWNP | Resource |
| 221 | Pankay Dukpa | M | | CFO | HO, Tshangka | JSWNP | Resource |

Phrumsengla National Park (PNP), Medtsho Gewog

| | | | | | | | |
|-----|------------------|---|----|---------|--------|--------|----------|
| 222 | Pema Norbu | M | 52 | Farmer | Ungar | Metsho | Men |
| 223 | Tshering Dorji | M | 59 | Farmer | Ungar | Metsho | Elderly |
| 224 | Tobgay | M | 67 | Farmer | Ungar | Metsho | Elderly |
| 225 | Sonam Wangchuk | M | 60 | Farmer | Ungar | Metsho | Elderly |
| 226 | Tshering Dorji | M | 27 | Farmer | Ungar | Metsho | Youth |
| 227 | Sherub Gyeltshen | M | 28 | Farmer | Ungar | Metsho | Youth |
| 228 | Rinchen Nidup | M | 30 | Farmer | Ungar | Metsho | Men |
| 229 | Pemala | M | 58 | Farmer | Ungar | Metsho | Men |
| 230 | Sithar la | M | 65 | Farmer | Ungar | Metsho | Elderly |
| 231 | Chimi Dorji | M | 40 | Farmer | Paang | Metsho | Men |
| 232 | Chimi Dorji | M | 40 | Farmer | Chambu | Metsho | Men |
| 233 | Donma Lhamo | F | 45 | Farmer | Ungar | Metsho | Women |
| 234 | Sonam Pelzom | F | 33 | Farmer | Ungar | Metsho | Women |
| 235 | Ugyen Zangmo | F | 28 | Farmer | Ungar | Metsho | Youth |
| 236 | Tshering Wangmo | F | 54 | Farmer | Ungar | Metsho | Women |
| 237 | Pema Chezom | F | 52 | Farmer | Ungar | Metsho | Women |
| 238 | Sonam Wangmo | F | 25 | Farmer | Ungar | Metsho | Youth |
| 239 | Tshering Tshomo | F | 29 | Farmer | Ungar | Metsho | Women |
| 240 | Pema Seldon | F | 29 | Farmer | Ungar | Metsho | Women |
| 241 | Kunzang Tshomo | F | 53 | Farmer | Ungar | Metsho | Women |
| 241 | Minjur Dema | F | 62 | Farmer | Ungar | Metsho | Elderly |
| 243 | Tandin Wangmo | F | 35 | Farmer | Ungar | Metsho | Women |
| 244 | Donma Lhamo | F | 37 | Farmer | Ungar | Metsho | Women |
| 245 | Kache Wangmo | F | 27 | Farmer | Ungar | Metsho | Youth |
| 246 | Lhazom | F | 60 | Farmer | Ungar | Metsho | Elderly |
| 247 | Jamyangmo | F | 28 | Farmer | Ungar | Metsho | Youth |
| 248 | Dondrup Zangmo | F | 34 | Farmer | Ungar | Metsho | Women |
| 249 | Kelzang Tshomo | F | 43 | Tshogpa | Ungar | Metsho | Women |
| 250 | Kunzang Jurme | M | 32 | Gup | Ungar | Metsho | Men |
| 251 | Gembo | M | 37 | Farmer | Ungar | Metsho | Men |
| 252 | Tshewang | M | 72 | Farmer | Ungar | Metsho | Elderly |
| 253 | Phurba | M | | FO | PNP | | Resource |
| 254 | Kezang | M | | FO | PNP | | Resource |

Phisoo Wildlife Sanctuary (PWS), Nichula Gewog

| | | | | | | | |
|-----|--------------------|---|----|---------|--|---------|----------|
| 255 | Dilip Kr | M | 38 | Gup | | Nichula | Male |
| 256 | Laxman | M | 33 | RO | | Nichula | Resource |
| 257 | Chogyal Tenzin | M | 37 | GAO | | Nichula | Male |
| 258 | Kencho Rigzin | M | 27 | FO | | Nichula | Youth |
| 259 | Rajesh Mongar | M | 31 | Farmer | | Nichula | Male |
| 260 | Tshering Nidup | M | 40 | Farmer | | Nichula | Male |
| 261 | Kumar Karki | M | 42 | Tshogpa | | Nichula | Elderly |
| 262 | Ash Bdr Tang | M | 30 | Tshogpa | | Nichula | Male |
| 263 | Didi Ram Adhilari | M | 38 | Farmer | | Nichula | Male |
| 264 | Tanka Bdr Kanki | M | 26 | Farmer | | Nichula | Youth |
| 265 | Rudra Bdr Bista | M | 68 | Farmer | | Nichula | Male |
| 266 | Kharga Bdr Chhetri | M | 49 | Tshogpa | | Nichula | Elderly |
| 267 | Kalina Bdr Powrel | M | 49 | Farmer | | Nichula | Elderly |
| 268 | Tshering Wangdi | M | 29 | Farmer | | Nichula | Youth |
| 269 | Tshewang Tenzin | M | 31 | Farmer | | Nichula | Male |
| 270 | Kuenley gyeltshen | M | 41 | Farmer | | Nichula | Male |
| 271 | Kinga Norbu | M | 40 | Farmer | | Nichula | Male |

Sagteng Wildlife Sanctuary (SWS), Merak & Sakteng Gewogs

| | | | | | | | |
|-----|-----------------|---|----|-----------------|----------|---------------|----------|
| 278 | Phurba | M | 36 | Mangmi | Merak | Merak | Men |
| 279 | Lhuendrup | M | 60 | Mangmi | Sakteng | Sakteng | Men |
| 280 | Tenzin Dorji | M | 27 | Tshogpa | Merak | Merak | Men |
| 281 | Leki Tshering | M | 31 | Farmer | Sakteng | Sakteng | Men |
| 282 | Dorji Norbu | M | 24 | Chipon | Sakteng | Sakteng | Men |
| 283 | Rinchen Chopel | M | 23 | Gewog Caretaker | Sakteng | Sakteng | Men |
| 284 | Nima | M | 37 | Farmer | Merak | Merak | Men |
| 285 | Jurmey | M | 54 | Tshogpa | Merak | Merak | Men |
| 286 | Tenzin Norbu | M | 61 | Farmer | Merak | Merak | Men |
| 287 | Lobzang | M | 43 | Farmer | Merak | Merak | Men |
| 288 | Karchung | M | 41 | Chipon | Sakteng | Sakteng | Men |
| 289 | Tashi | M | 50 | Tshogpa | Sakteng | Sakteng | Men |
| 290 | Sangey Eden | F | 22 | Farmer | Joenkhar | Sakteng | Women |
| 291 | Thukten Yangzom | F | 71 | Farmer | Joenkhar | Sakteng | Women |
| 292 | Dorji Phuntsho | M | 46 | Farmer | Merak | Merak | Men |
| 293 | Nima Yangzom | F | 30 | Farmer | Merak | Merak | Women |
| 294 | Pema Lhaden | F | 50 | Farmer | Merak | Merak | Women |
| 295 | Rinchen Wangdi | M | 31 | Tshogpa | Merak | Merak | Men |
| 296 | Kezang Dorji | M | 46 | Sr. FR | SWS | HO | Men |
| 297 | Tenzin Lhuendup | M | 42 | Sr. FR | SWS | HO | Men |
| 298 | Pema Rinzin | M | 37 | Sr. FR | SWS | Sakteng Range | Resource |
| 299 | Dorji | M | 43 | Sr. FR | SWS | Merak Range | Resource |
| 300 | Jamtsho | M | 37 | Forester | SWS | Merak Range | Resource |
| 301 | Pema Tshewang | M | 37 | Sr. Forester | SWS | Merak Range | Resource |

Sagteng Wildlife Sanctuary (SWS), Merak and Sakteng Gewogs

| | | | | | | | |
|-----|-------------------------|---|----|-----------|-----|---------------|----------|
| 302 | Kezang Norbu | M | 25 | Caretaker | SWS | Merak Range | Resource |
| 303 | Lhundrup Pema Chojey | M | 49 | Adm. | SWS | HO | Resource |
| 304 | Dechen Druba | M | 28 | Act | SWS | HO | Resource |
| 305 | Sangey Chopel | M | 28 | FR | SWS | Joekhar Range | Resource |

Annex 9: Review of RGOB's Policies, laws, Regulations Guidelines

The Constitution of the Kingdom of Bhutan, 2008: That Constitution of Bhutan has the following provisions relating to the BFL activities;

Article 1.12: The rights over mineral resources, rivers, lakes and forests shall vest in the State and are the properties of the State, which shall be regulated by law.

Article 4: The State shall endeavor to preserve, protect and promote the cultural heritage of the country, including monuments, places and objects of artistic or historic interest, Dzongs, Lhakhangs, Goendeys, Ten-sum, Nyes, language, literature, music, visual arts and religion to enrich society and the cultural life of the citizens.

Article 4.3: The State shall conserve and encourage research on local arts, custom, knowledge and culture.

Article 5.1: It is the fundamental duty of 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 through the adoption and support of environment friendly practices and policies

Article 5.2: The Royal Government shall:

- (a) Protect, conserve and improve the pristine environment and safeguard the biodiversity of the country;
- (b) Prevent pollution and ecological degradation;
- (c) Secure ecologically balanced sustainable development while promoting justifiable economic and social development; and
- (d) Ensure a safe and healthy environment.

Article 5.3: The Government shall ensure that, in order to conserve the country's natural resources and to prevent degradation of the ecosystem, a minimum of sixty percent of Bhutan's total land shall be maintained under forest cover for all time.

Article 5.4: Parliament may enact environmental legislation to ensure sustainable use of natural resources and maintain intergenerational equity and reaffirm the sovereign rights of the State over its own biological resources.

Article 5.5: Parliament may, by law, 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.

Article 22.3: Local Governments shall ensure that local interests are taken into account in the national sphere of governance by providing a forum for public consideration on issues affecting the local territory.

Article 7: Fundamental Rights states that 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. This clause may apply to construction of helipads and installation of wind profiler depending on the location selection and the ownership status of the land in question.

Land Act of Bhutan 2007: Defines legal framework to manage, regulate and administer the ownership and use of land for socio-economic development and environmental well-being of the country. The Act clarifies that trees, either naturally grown or planted, belong to the landowner when grown on registered land.

The act provides for effective land administration, security of land tenure, operation of land market, effective use of land resources and conservation of the ecosystem. It enables leasing of government reserved forestland for economic and various other activities.

The act defines removal of Tsamdro (grazing land registered in individual names – with usufruct rights only) from the individual ownership. Such grazing land will be reverted and maintained as Government land in towns and Government Reserved Forests land in rural areas. However, the Tsamdro can be leased contingent to eligibility clauses.

An individual household or community owning livestock shall be eligible to lease the reverted Tsamdro which have been converted to Government Reserved Forests land for use as Tsamdro based on herd size. However, preference shall be given to the previous rights holders and community. Highlanders who are directly dependent on Tsamdro may retain their Tsamdro rights under lease irrespective of possession of livestock and their herd size. Grazing and pasture development on Tsamdro shall be permitted based on a Tsamdro management plan. The Department of Forests, Department of Livestock, and the lessee shall be responsible to prepare Tsamdro management plan. The following shall be the basic profile of a Tsamdro management plan.

The Act also states that any mineral resources found in registered land belongs to the state and will be governed by the Mines and Minerals Management Act for its extraction (Section 69).

A right of way established over a land through local customs by uninterrupted use for a period of more than 5 years shall be respected and the landowner shall not object to its use (Section 268).

Forest and Nature Conservation Act of Bhutan, 1995: This Act ensures the protection and sustainable utilization of forests, fauna, and other natural resources of Bhutan to benefit present and the future generations. The Department of Forests and Parks Services is fully responsible for sustainably managing, protecting, producing, and regulating all natural resources within Government Reserved Forests as well as outside. The Royal Government is empowered to declare any land in the country as a National Park, Wildlife Sanctuary, Wildlife Reserve, Nature Reserve, Strict Nature Reserve, Protected Forest, Research Forest, Conservation Area, Cultural or Natural Heritage Site, Biosphere

Reserve, Critical Watershed or other category of Protected Area for the preservation of areas of natural beauty of national importance, protection of biological diversity, management of wildlife, conservation of soil and water and related purposes.

Wild animals and plants listed in the Schedule I are declared as totally protected. The Forest and Nature Conservation Rules of Bhutan 2017 has been formulated to support the implementation of this Act.

The Biodiversity Act of Bhutan 2003: The Act enables equitable sharing of benefits derived from the use of genetic resources, protects Traditional Knowledge, innovation and practices of local communities associated with biodiversity, prevents illegal access to genetic and biochemical resources and associated Traditional Knowledge. It provides for the conservation and sustainable use of biological and genetic resources, the equitable sharing of benefits from the use of genetic resources, as well as the transfer of technology and capacity-building at national and local levels on conservation and the use of biological diversity. Access covered by this Act shall be subject to the prior informed consent of the Competent Authority of Bhutan, representing national interests and the interests of the local communities, harbouring, cultivating, developing and maintaining the biological diversity concerned. Therefore, 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.

National Access and Benefit Sharing (ABS) Policy (Draft), 2014: The National Access and Benefit Sharing (ABS) Policy is developed to guide access to Bhutan's genetic resources and associated traditional knowledge and ensure the fair and equitable sharing of benefits arising from their research and commercial utilization. The policy provides for security and trusteeship of the Bhutanese people over their biological resources and associated traditional knowledge and promote long term mutually supportive relationships based on trust between the providers and users of Bhutan's genetic resources and associated traditional knowledge.

The Water Act of Bhutan, 2011: The Act accords priorities for allocation of water for drinking, agriculture, energy, and industrial use, tourism and recreation and for other uses. It requires location of water to be based on the principle that water is a resource owned by the State and that every citizen has equal right to these resources. The Act stipulates that use of water should not result in denial of water to any individual or community, including downstream and upstream needs or discharge of any effluent directly or indirectly to any water resource unless the discharge is in compliance with the Effluent Discharge Standard. At the Dzongkhag level, the Act accords 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 the relevant local Governments in collaboration with religious bodies and Ministry of Home and Cultural Affairs have the responsibility for protection of 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 where 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.

Livestock Act of Bhutan, 2001: An Act to regulate livestock breeding, health and production aimed at enhancing their productivity and preventing diseases so as to enhance rural income and livelihood. The Act facilitates only quality and appropriate breeds of livestock, poultry and fish to be introduced and requires that introduction and spread of diseases, particularly the notifiable and zoonotic diseases are prevented;

Waste Prevention and Management Act, 2009: Precautionary Principle of the Act, under section 8 defines that every person shall take all precautionary measures in maintaining a clean and healthy environment and further in its section 10, the Act prescribes that a person polluting the environment or causing ecological harm shall be responsible for the costs of avoidance, contamination, abatement, medical compensation, mitigation, remediation and restoration in application of the Polluter Pays Principle. The lead implementing agencies shall make arrangements (sections 22) for dealing with waste. This clause is applicable in management of waste in the protected areas in general and at locations of eco-tourism enterprises in the project areas.

National Environment Protection Act, 2007: This Act outlines principles and a legal framework that have implications for forest governance and management. It requires that a person taking natural resources from the environment, or deriving economic benefits from it, should ensure sustainable use and management of the resources and ecosystems.

Environment 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 programme. Issuance of an environmental clearance is to be a prerequisite to the issuance of a development consent. A project of the Royal Government that does not require development consent may commence only after receiving an environmental clearance from the Secretariat, which shall set out environmental terms for the project. An environment clearance is issued when the effects of a proposed project on the environment are foreseeable and acceptable; the applicant is capable of carrying out the terms of the environmental clearance; the project, alone or in connection with other programs or activities, contributes to the sustainable development of the Kingdom and the conservation of its natural and cultural heritage. It should also be clear that adequate attention has been paid to the interests of concerned people and that the project is consistent with the environmental commitments of Bhutan.

When a decision on the environmental clearance has been taken, the Secretariat or the competent authority shall make a public announcement of the decision and make the following information available to the public:

- A description of the project;
- The environmental terms;

- A description of measures to avoid or mitigate potential adverse impacts and enhance positive impacts of the project;
- The main reasons and considerations on which the decision is based, including the basis for the acceptance or rejection of views and arguments presented by other authorities and concerned people;
- A non-technical summary of the information of the items included in the public announcement

However, information specified by the by the applicant to cause substantial harm to their commercial and industrial interests can be maintained confidential.

The act and ensuing notifications from the NECS identifies sectors that do not require environment clearances and delegates identified competent authorities to issue environment clearances for specified sectors. The act accords the secretariat or competent authority shall monitor and control compliance with the terms of environmental clearances. The competent authorities shall report annually to the Secretariat on implementation, monitoring and enforcement and the Secretariat shall report annually to the Commission.

The competent authority shall monitor, control and enforce the terms of the environmental clearance attached to development consents including ordering sanctions and compensation for environmental damage. The CA shall report annually to the NECs on implementation, monitoring and enforcement and the NECs shall report annually to the NEC.

The Regulations for Issuance of Environment Clearance for developmental activities requires that all developmental activities must undergo ESIA and obtain EC from the NECS or the designated CAs. According to the EA Act and its regulations, the ESIA demands public consultation, wherein consent of the affected families and individuals is required whenever there are impacts. The laws are also specific for conforming compensations and replacement of the properties if land acquisition and property displacement is involved (NEPA and EA Act). This may be applicable to the construction of infrastructure for park management, for promotion of ecotourism and minor maintenance and rehabilitation of existing facilities in the project areas. An EC issued by the CA or the NECS would include terms to ensure that the project is managed in an environmentally sound and sustainable way.

The Penal Code of Bhutan, 2004: A principle under the Penal Code of Bhutan define that one (victim) is considered capable of consent when the consent is not obtained by fraud, duress, compulsion, or coercion; or one (victim) giving consent has authority to do so. This aspect is relevant as a principle in obtaining free and prior informed consent from local communities and stakeholders for BFL project activities affect or associate with community use.

The Water Policy, 2002: This Act recognizes that the sustained flow of good quality water depends on the integrity of the watersheds. It places an emphasis on water resource

management within river basins and aquifers, including upstream and downstream water users. It calls for an integrated approach to the management of water resources and provides a directive to protect all forms of these resources. The policy seeks sound watershed management through extensive soil conservation, watershed area treatment, conservation of forests and increasing the extent of forest cover in order to reduce the incidence and intensity of floods.

National Forest Policy, 2011; The policy is based on the principles of equity and justice in access, optimal utilization, conservation of forest resources and its ecosystem services; contribution of forest products and services to poverty reduction; people centred forest management practices and application of good science and indigenous knowledge in all aspects of forest planning and management. It empower rural communities to manage forests sustainably for socio-economic benefits, poverty reduction and to contribute to overall sustainable forest management at national level. The policy envisions the network of PAs and BCs to maintain species persistence and ensure long term sustainability of Bhutan's biodiversity, ecosystem services, natural habitats and cultural heritage for positive environmental outcomes. It calls for integration of conservation of cultural/sacred, heritage sites, local water supply sources and riparian reserves, soil protection, specific wild floral/faunal habitat and species protection, historical/cultural sites and local traditions in PA management. The policy provides an enabling environment for promotion of nature-based tourism to bring benefits to local communities and enhance conservation in the PAs and BCs. It also include enabling creation of public recreational areas and/or facilities that should managed based on code of best practices. It allows regulated grazing in multiple-use and buffer zones although not in the core zone and requires development and implementation of measures to protect natural ecosystems against invasive alien plant species.

Forest and Nature Conservation Rules and Regulations of Bhutan, 2017: It restricts allotment of land within the PAs except to the local residents and for public service facility. Land allotment in such cases can happen only when nearby the existing inhabited area; gradient is less than 45 degrees of 100%; land is located beyond 30 meters of the bank or edge of any river and 15 meters of stream or water source; when not within 180 meters uphill or 90meters downhill of national highway. Such lands should be located beyond 500 meters of existing monastery or dzong. The regulations restricts livestock grazing shall in the area fenced for natural regeneration for a specified period and in the plantation area whether fenced or not till the seedlings are well established. It allows goat grazing only within a confined area and not freely in SRF. However, the regulations provides right of ways to existing "tsalam" and 'chulam", traditionally used during the migration, provided, such routes are not lawfully closed by the Government.

The regulations requires that that PAs must prepare Management Plans in consultation with local community, local authority and other member of the public who are affected by the Protected Area as well as other relevant stakeholder or recognized Civil Society Organization (CSO).

Land Rules, 2007: The land rule specifies details on land acquisition and lease. It requires private registered lands shall be acquired only under unavoidable circumstances and not

without providing appropriate compensation based on valuation by the PAVA. Land under acquisition shall be taken over only after registering the substitute land in the name of the affected landowner or cash compensation has been made to the landowner.

It allows the lease of land from the SRF. However such land should be used based on an approved management plan. This requirement covers land leased for commercial agriculture, grazing and sokhshing. Lease of SRF for commercial farms and sokhshing should not be for a period beyond 30 yrs while that of grazing should be renewed every 10 years.

Lease of SRF for grazing is based on livestock ownership and herd size while that for agriculture is based on ownership and size of agriculture land. However, highlanders shall be eligible for Tsamdro on lease, irrespective of possession of livestock and herd size. They are also eligible to sub-leased the leased Tsamdro.

The Moveable Cultural Property act of Bhutan, 2005: Requires that all cultural properties shall be registered in the name of the Dratshang, the Government, Community or private individuals based on their ownership. Cultural Property registered in a Thram shall not be sold, used for personal means, exchanged, gifted or damaged. Considering that foreign visitors are often not familiar with the Cultural Property Act of Bhutan, it is the legal responsibility of the concerned agency/host/guide to brief the visitor on the Act where applicable.

If any items considered to be Valuable Cultural Property, as mentioned under Section 59, are discovered during the construction of roads or buildings or any other related works, this discovery shall be immediately reported to the Department of Culture through the concerned Dzongkhag.

Regulation for the Environmental Clearance of Projects, 2001; The regulations require that environmental clearance shall be issued only after screening and assessing the environmental impacts of such projects. For the environmental screening process should include, the applicant should submit complete environmental information comprising of

- The potential adverse effects of the project on the environment including the direct, indirect and cumulative effects;
- Compliance with relevant sectoral guidelines or code of best practices, if any, issued by the Secretariat or Competent Authorities;
- How impacts of the project will be avoided, minimized or reduced; and
- The environmental benefits of the project, including how the project will benefit concerned people and use clean and sustainable technologies.

The Secretariat or Competent Authority shall screen the application for environmental clearance as per sectoral guidelines. The Secretariat or Competent Authority may issue an environmental clearance for the project on the basis of the environmental application with terms and conditions or may ask the applicant to carry out environmental assessment or

issue a blanket denial to the project. If an EC is issued, the NECs or the CA shall issue a public notification.

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

4. The applicant is shall draw up terms of reference for the environmental assessment report which has to be approved by the NECs or CA
5. Applicant shall prepare an environmental assessment report consistent with the terms of reference approved by the Secretariat or Competent Authority
6. In the process of the EA report preparation, a public consultation must be held

Upon receipt of 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.

Annex 10: PCR Chance Find Procedures

| 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 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 PA/BC 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 | Park Manager or CFO of concerned Biological Corridor | As soon as the report by the Site In-charge |
| x) Inspect site the Dzongdag, Concerned Gup and Dzongkhsg Cultural Office; xi) Confirm additional information and location on the map xii) Advise the Dzongkhag Culture Officer and request written permission | Archaeologist, Dzongdag, Gip/Dzongkhag Culture Officer, PM/CFO | As soon as the confirmation by archaeologist |
| xiii) Report to the Department of Culture | Dzongdag | |

Annex 11: Procedural guidance for land user rights

| Steps | Actions | Time line | Responsible |
|--------------|--|--|--------------------------------|
| 1 | Submission of application (letter of intent) to the Dzongkhag or Thromde Administration (Dzongkhag/Thromde Land Acquisition Committee). The application should contain: <ul style="list-style-type: none"> • Purpose of the land • Area required • Owner detail (in case of private land) • Location of the proposed land • Avoid selecting Chhuzhing or land belonging to Dratshang • Include private land only under unavoidable circumstance • Clearance from the Ministry of Agriculture and Forests in case of Government land | | PA/BC Management |
| 2 | The Dzongkhag Administration submits the application for preliminary approval to the NLC | | Dzongkhag Land Records Officer |
| 3 | Preliminary approval by NLCS | 2 weeks after receipt of the application | NLCS |
| 4 | If feasible, the Secretariat shall instruct the Dzongkhag/Thromde Committee to submit a detailed report or informs the applicant otherwise, stating the reasons. | | |
| 5 | Dzongkhag/Thromde submits the detail report to the NLCS | | |
| 6 | Upon final decision (from the NLC) the NLCS shall convey to Dzongkhag Committee | Within 1 month from date of receipt | |
| 7 | Release of the government land in case of acquiring government land as per the decision of NLC | Within 30 days from the decision of the Commission | DFO/Park Manager/Thromde |

Annex 12: Procedures for a Pest Management

Pest Management under the PFL 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 Center 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 |

| Type | Recommended Action (based on NPPC technical recommendation) |
|------------------------------|--|
| 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 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 |

| Type | Recommended Action (based on NPPC technical recommendation) |
|---------------------------------------|---|
| 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, do not leave any depression around plant base |
| | Use furrow irrigation |
| Apple Rust | First spray of Hexaconazole during the pink bud stage |
| | Second spray of Hexaconazole after petal fall |
| | Third spray of Hexaconazole 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 |
| Anthracnose 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 distigum | 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 neighboring wild trees to reduce the risk of spread into the crop |

Annex 13: Format for Safeguard Eligibility and Impacts Screening for Sub-components

PART 1: BASIC INFORMATION

| | | |
|----|--|---|
| 1 | BFL Activity Name | |
| 2 | Type of Activity: | New activity <input type="checkbox"/> Rehabilitate <input type="checkbox"/> |
| 3 | Project location: Chiwog/Village: | |
| | Gewog: | |
| | Dzongkhag: PA/BC | |
| 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 kilometers 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. S | Yes | No | Description of the potential impacts |
|----------------------------------|-----|----|--------------------------------------|
| <i>1. PRE-CONSTRUCTION PHASE</i> | | | |

| No. S | | Yes | No | Description of the potential impacts |
|------------------------------|--|-----|----|--|
| | Will the project activity | | | <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: ix. Permanently: Temporarily: In which: x. 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> | | | xi. Number of trees to be cut down: xii. 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 |
| 2.5 | <i>Pollution of soil and water sources</i> (From waste and wastewater generation, excavated soil, acid sulphate soil, construction, packaging materials, domestic and sewerage wastes generated by the workers) | | | 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). Leakage of oil stored at the site may also cause soil and water pollution |
| 2.6 | <i>Localized flooding related to disturbance to existing drains, changes in ground elevation etc.</i> | | | Localized flooding may occur if existing/natural drainage path is blocked or disrupted. Consider the issues at construction sites, camps, borrow pits, quarries and disposal sites. If materials are bought from existing licensed borrow pits and quarries, the issues would not be considered in the project |

| No. S | | Yes | No | Description of the potential impacts |
|-------|---|-----|----|--|
| 2.7 | <i>Sedimentation in areas next to construction site as surface runoff wash away loose materials from construction sites?</i> | | | Loose construction materials and excavated soil may be blown by wind or washed away by surface water runoff and cause sedimentation in existing drains |
| 2.8 | <i>Damage or interrupt operations of existing infrastructure (drain, power line, roads, etc.)</i> | | | 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 |
| 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> | | | 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. Construction activities may also cause dust, noise, and visual impacts to these sites. |
| 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 involved 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 |

| No. S | | Yes | No | Description of the potential impacts |
|---------------------------|--|-----|----|--|
| | | | | also disrupt traffic and/or cause traffic safety risks |
| 2.15 | Others (specify) | | | Identify and describe site-specific and type-specific issues, concerns, risks, 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.

- xi. Main environmental issues are:.....
- xii. Permits/ clearance needed are:
- xiii. Main social issues are.
- xiv. Land acquisition and involuntary resettlement (permanent or temporary) if any;
- xv. 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 14: Initial Environmental Examination (IEE) Form

1. General Information
 1. Name of the project:
 2. Proposal for new project/expansion of existing project:
 3. Name of the project proponent with following details
 1. Name of the applicant:
 2. Address:
 3. Phone/Fax:
 4. Email:
5. Location of the project (Dzongkhags/ Geogs/ Thromdeys):
6. Geographical details

| | |
|-------------------------------------|--|
| i) Latitude | |
| ii) Longitude | |
| iii) Elevation above Mean Sea Level | |
7. Cost of the project:
8. Does the project falls in Notified Industrial Area/Estate (Yes/No):

If yes, then:

 1. Total land required for the project (in ha):

If no, then:

 2. Describe the total land requirement as well as the current land use pattern of the proposed project site under the following headings:
 - Agricultural
 - Government
 - Forest
 - Private
 - Others

Total

3. If it is private land, and if land acquisition is involved then

- Number of families or households likely to be displaced: *NA*
- Number of houses likely to be demolished: *NA*

4. Alternative sites considered (not applicable for projects coming in notified industrial area/state)

- i) *None*
- ii) _____
- iii) _____
- iv) _____

State the reasons for selecting the proposed site:

5. Describe whether proposed land use is as per approved Master Plan/ Development plan of the area. If there is no approved plan, the consent from appropriate authority should be taken and should be submitted along with IEE form or at the time of Environmental Clearance. If an area is outside municipal limits/ outside planning area, a full justification for the proposed development should be provided.

6. Describe the terrain characteristic at the project site and in surrounding area:

7. Presence of any of the following within the study area (core and buffer area) of the project

1. River
2. Spring, stream, water crossing
3. Flood plain, if applicable
4. Forest, then status of forest
5. Wildlife Habitat
6. Habitat of endangered/threatened/endemic species
7. Others

None

8. Presence of any of the following within the study area (core and buffer area) of the project

1. Historical site
2. Defense installation
3. Hospital
4. Presence of religious site or archaeological site
5. Any others sensitive receptors

None

Note: The Study area will be decided by NECS/CA

6. Is the proposed site located in a low-lying area?

Yes No

If yes,

- Level before filling (above MSL, in meters) _____
- Level after filling (above MSL in meters) _____

| Quantity of Fill Material required (in cum.) | Source |
|---|--------|
| | |

7. Does the project require cutting of trees?
 Yes

If yes, please furnish the following details:

- How many trees are proposed to be cut?
- Species of the above trees
- Are there any protected/endangered species?
 Yes No.

If yes, provide details:

8. Numbers of vehicles likely to be increased during project's construction/operation, if applicable:
9. Description of existing infrastructure such as, roads, educational facility, health centre, other industries, commercial area etc. in the project study area
10. Project details
1. Type of project (industrial/commercial/residential/ waste management etc)
 2. Describe the project activities
 3. Technology to be used
 4. Provide the following details, wherever it is applicable
 - Total site area: ---sq feet
 - Total built up area (provide area details) and total activity area:
 - Source of water and total water requirement (m³/day)
 - Source of energy and total energy requirement
 - Parking/Stockyard requirements
 5. Describe the list of raw materials to be used in the manufacturing process, their daily consumption, sourcing, and methods of storage.
 6. Describe list of hazardous chemicals, toxic or inflammable substances (including carcinogenic materials) to be used in the process, if yes, then specify
 1. Type of material
 2. Daily requirements
 3. Storage methods
 4. Details of waste types (solid/liquid and gas) including the quantity and characteristic of waste, if any.

5. Employment potential in term of numbers, during construction and operational stage including the daily or average working hour:

Table 1: Sensitivity of the project site and adjoining areas

| S.No | Information/Checklist confirmation | Yes/No | Distance from the project site with proper explanation and provide supporting documents wherever applicable |
|------|---|--------|---|
| | Protected areas under international conventions, national or local legislation for their ecological importance | | |
| | Project will affect the access of people to common resources. For example, the site was initially used as common grazing land, or fishing pond, or source of revenue for local community/ community forests etc.) | | |
| | Risk to aquatic flora and fauna due to release of wastewater | | |
| | Project site or adjoining areas used as routes by the public/tourists /pilgrims to access recreational/tourist site or pilgrimage areas in the vicinity | | |
| | Project site or adjoining areas occupied by sensitive man-made land user (<i>schools, park, playground/religious site/community facilities</i>) | | |
| | Project site or adjoining areas already subjected to pollution or environmental damage. (<i>Where existing legal environmental standards have exceeded</i>) | | |
| | Areas susceptible to natural hazard such as <i>earthquakes, subsidence landslides, erosion, flooding or extreme or adverse climatic conditions</i> | No | |

Table 2: Change in physical structure (topography, land use, changes in water bodies, etc.) due to construction and operation of the development project

| S.No | Information/Checklist confirmation | Yes/No | Details thereof (with approximate quantities /rates, wherever possible) with source of information data/ provide explanations, wherever applicable. |
|------|---|--------|---|
| | Potential to cause permanent or temporary change in land use, land cover or topography. | | |
| | Will the project involve clearance of existing land vegetation? | | |
| | Will the project involve demolition of the existing structure? | | |
| | Will the project operation/activities trigger land disturbance, erosion, subsidence and instability | | |
| | Will the project involve construction of new road during construction and operation? | | |
| | Will the project involve closure or diversion or realignment of existing natural drain? | | |

| | | | |
|--|--|--|--|
| | Potential to increase influx of people either temporarily (workers) or permanently to an area? | | |
| | Will the project involve abstraction or transfers of water from ground or surface water? | | |

Table 3: Use of resources for construction or operation of the project (such as land, water, materials or energy)

| S.No | Information/Checklist confirmation | Yes/No | Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, <i>Wherever applicable.</i> |
|------|---|--------|--|
| | Expected quantity of water to be used by the project during construction and operation including source of water | | |
| | Expected Quantity of construction materials to be used – stone, aggregates and soil (in MT) and mode and place of sourcing. | | |
| | Energy requirement – electrical energy (in kWh) and fuel (coal, gas, diesel others in tons) and mode of sourcing. | | |
| | Any other resources (use appropriate standard units) | | |

Table: 4 Production of solid wastes and liquid during project construction and operation

| S.No | Information/Checklist confirmation | Yes/No | Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, <i>Wherever applicable.</i> |
|------|--|--------|--|
| | Will the project have potential to generate solid wastes, if yes, then specify types and quantity of wastes, wherever it is applicable | | |
| | Will the project have potential to generate sewage sludge, wastes such as domestic and commercial wastes | | |
| | Will the project have potential to produce hazardous waste from process, treatment plant and other allied activities? | | |
| | Any other wastes (specify) | | |

Table: 5 Air pollution and emissions

| S.No | Information/Checklist confirmation | Yes/No | Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, <i>Wherever applicable.</i> |
|------|---|--------|--|
| | Location of project in an industrialized area where there are | | |

| | | | |
|--|---|--|--|
| | other sources of air pollutants | | |
| | Will the project have potential to alter ambient air quality during construction and operation? | | |
| | Emissions from production processes and/or utilities, specify the type of pollutants, if applicable. | | |
| | Potential to generate odour from handling, storage, process and operation of pollution control equipment. | | |
| | Emissions from incineration of waste, if applicable. If yes, specify the type of pollutants. | | |
| | Potential to generate fugitive emissions | | |
| | Potential to release gaseous pollutants, if yes, then specify | | |
| | Will the project have potential to release toxic gas from handling, transport, storage and its use? | | |
| | Any other emissions, specify | | |

Table 6: Generation of noise

| S.No | Information/Checklist confirmation | Yes/No | Details thereof (with approximate quantities /rates, wherever possible) with source of information data/ provide explanations, wherever applicable. |
|------|--|--------|---|
| | Will the project have potential to alter the ambient noise due to the following listed activities 1. Construction of project 2. Plant operations 3. Increase in traffic | Yes | |
| | Will the project have potential to increase the risk of occupational noise hazard or cause disturbance to adjoining human settlements? | | |
| | Any other potential sources that may cause occupational hazard specify. | | |

Table 7: Risks of contamination of land or water from release of pollutants into the sewers, surface waters and groundwater

| S.No | Information/checklist confirmation | Yes/No | Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, Wherever applicable. |
|------|--|--------|---|
| | Located in potential erosion/landslide prone area | | |
| | Will project activities increase the sediment load in the local water bodies? | | |
| | Potential to contaminate land and water due to handling, transport, storage of raw material/chemical or hazardous substances | | |
| | Discharge of sewage or other effluents to water or land (Expected mode and place of discharge) | | |
| | From any other sources, specify | | |

Table 8: Risk and disaster

| S.No | Information/checklist confirmation | Yes/No | Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, Wherever applicable. |
|------|---|--------|---|
| | Activities/operations or processes leads to fire risk/ explosion/ electrocution and others. | | |
| | Risk of road accident | | |
| | Any other risk, specify | | |

Table 9: Information on Socio-economic environment

| S.No | Information/checklist confirmation | Yes/No | Details thereof (with Approximate quantities /rates, wherever possible) with source of information data/ provide explanations, Wherever applicable. |
|------|--|--------|---|
| | Will the project involve land acquisition? | | |
| | Will the project impacts the common/local community resources such as grazing land, fishing area, source of drinking water, play ground, recreational place, religious or historical site etc. | | |
| | Project would likely to improve the social infrastructure of an areas (schools, hospitals and roads) | | |
| | Will the commissioning of project significantly improve the lifestyle and increase employment opportunities? | | |

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

| | |
|---|---|
| 1 | Layout plan of the project |
| 2 | Summary of the project proposal |
| 3 | No objection certificate from various departments and others relevant stakeholders (applicable if EA is not required) |
| 4 | Environment Management Plan (applicable if EA is not required) |

5. Declaration certificate stating with name & signature of project proponent

Seal:

Signature of the project proponent

Name:

Address:

Phone:

Date:

Annex 15: Format for Environmental Compliance Monitoring

Project Activity/Contract package:

Monitoring Officer:

Name: Mobile phone number email

Date 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 16:Environmental Assessment Report Format

- (i) **Title Page** - Name and location of the project/activity, the name of the proponent, the name, qualification and address of the preparer;
- (ii) **Table of Contents**
- (iii) **Terms of Reference** - A copy of terms of reference approved by NECs of the CA
- (iv) **Project Summary**
 - Name and location of the project
 - List of any development permit or public financial assistance and summary of the current status of each application
 - Summary of alternatives to the project/activity
 - Summary of potential environmental impacts
 - List of mitigation measures for the project
- (v) **Project Description**
 - Type, size, and proposed use of the project
 - Objectives and anticipated benefits
 - Physical characteristics of the project and its surroundings location map and site plan,
 - Timetable, approximate cost, and the methods and timing of establishment
- (vi) **Alternatives to the Project**
 - Feasible alternatives and analysis of the feasible alternatives
 - Principal differences among the feasible alternatives regarding potential environmental impacts;
 - Alternative of not undertaking the project and alternatives not considered with reasons
 - Environmental management
- (vii) **Existing Environment** - Physical, biological, chemical, economic, and social conditions of the project site
- (viii) **Assessment of Impacts**
 - Negative and positive potential environmental impacts (in quantitative terms, to the maximum extent practicable)
- (ix) **Mitigation Measures**
 - Assessment of physical, biological and chemical measures and management techniques designed to limit negative environmental impacts or to cause positive environmental impacts during development and operation
- (x) **Compliance** - with relevant sectoral guidelines of best practices
- (xi) **Response to Comments** - received from NECs or the CA
- (xii) **Appendices.**

Annex 17: Outline of ESMP and its Contents

- **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 activities and 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.
- **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.
- ***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.

- **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.

- **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 Dzongkhags.

- **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.
- **Institutional Strengthening Plan:**

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

- **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.

- **Consultation, Disclosure of the ESMP:**

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

- **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 BFL activities in general and of ESMP in particular should include a stakeholder engagement plan that defines the following;

| | |
|--------------------------------------|--|
| 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. Most of the communities have identified winter season as best |

| | |
|---|---|
| | time for community consultations during the consultations for the preparation of ESMF.) |
| 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 |

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