

Executive Summary

BFL has been categorized as a Category B project, as the potential adverse environmental and social impacts on the 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.

Therefore, to ensure that all BFL funded projects and programs are environmentally and socially sustainable as well as in line with BFL's policies and guidelines, an Environmental and Social Management Plan (ESMP) involving stakeholder participation and timely public disclosure is required.

An Environmental and Social Management Plan for **Wangchuck Centennial National Park** describes mitigation measures/good practices at the activity level, which are required as per the screening protocol. All the screened activities which has potential risks to the environment and social management have to prepare ESMP, which includes environment management and mitigation plans during pre-activity, activity implementation, and closing phases. Hence, it contains a description of the detailed actions, including communities, roles, communication and reporting, and monitoring processes required as part of the implementation. In order to ensure that the issues of all stakeholders are taken into account, it includes a stakeholder engagement plan. The plan includes identification of stakeholders, method of engagement, timing and logistics. It is a requirement for all parks and biological corridors to keep record, reporting, review, auditing and update ESMP yearly as per the planned activities.

The activities that required ESMPs for the year 2025 under **Wangchuck Centennial National Park** are as follows:

1. Maintenance of Forest Range Office, Dungkhar
2. Re-construction of Kerab and Tshampa wooden Bridge

བཀོད་ཁྱབ་བཅུད་དོན།

འབྲུག་རྒྱལ་ཡོངས་སློང་ཀའི་ཆོ་སྲོག་མ་དདུལ་འདི་མཐའ་འཁོར་གནས་ལྟངས་དང་མི་ཟླའི་འོས་འབབ་ཅན་གྱི་ལས་འགུལ་གྱི་དབྱེ་ཁག་ ཁ་བ་ (Category B) རང་ལུ་ཚུད་དེ་ཡོད་པ་ཡིན། དེ་ཡང་ལས་འགུལ་འདི་ལས་བརྟེན་ཏེ་སྤང་སྟོབ་ས་ཁོངས་ནང་སྤྱོད་མིའི་མི་མེར་དང་ ཡང་ན་ སྤང་སྟོབ་ས་ཁོངས་ཀྱི་མཐའ་སྐོར་ཏེ་ འཆོ་བ་སྤང་སྟོབ་ས་ཁོངས་ལུ་བརྟེན་སྤྱོད་མིའི་མི་མེར་ ཡང་ན་ གལ་ཅན་གྱི་མཐའ་སྐོར་གནས་ལྟངས་ཀྱི་ས་ཁོངས་ཚུ་ལུ་གཞོན་གཞོན་པ་འབྱུང་ནིའི་ཉེན་ཁ་ ཡོད་པ་ད་ གལ་སྲིད་གཞོན་པ་འབྱུང་པ་ཅིན་ གཞོན་ཉེན་ཚུ་དམིགས་གསལ་ས་གནས་ནང་རྒྱུང་མ་ཅིག་འབྱུང་ནི་དང་ གཞོན་ཉེན་མར་ཕབ་རྒྱབ་ནི་དང་ཅ་མེད་ ཡང་གཏང་ཚུགས་པ་ཡིན།

དེ་འབད་མ་ལས་ འབྲུག་རྒྱལ་ཡོངས་སློང་ཀའི་ཆོ་སྲོག་མ་དདུལ་ཐོག་ལུ་ རྒྱབ་སྐྱོར་འབད་ཡོད་པའི་ལས་འགུལ་དང་ལས་ལྷ་ཚུ་ མཐའ་འཁོར་གནས་ལྟངས་དང་མི་ ཟླའི་གཉིས་ལུ་ལུན་བརྟེན་གྱི་ཕན་པ་ཡོད་པ་བཟོ་བ་གི་མ་ཚད་ འབྲུག་རྒྱལ་ཡོངས་སློང་ཀའི་ཆོ་སྲོག་མ་དདུལ་གྱི་སྤྱོད་བྱས་ལམ་སྟོན་དང་འབྲེལ་ཐབས་ལུ་ མཐའ་ འཁོར་གནས་ལྟངས་དང་མི་ཟླའི་འཛིན་སྐྱོང་འཆར་གཞི་འདི་དགོང་ད་ མི་དམངས་སྲོས་བརྩན་དང་ དུས་དང་དུས་སུ་མི་དམངས་ལུ་གསང་བ་བཤད་ནི་འདི་ དགོང་ཡིན།

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༡ དུང་དཀར་ལུ་ བགས་ཚལ་སློང་འཛིན་ ཉམས་བཅོས་འབད་ནི་དང།

༢ སྐྱེ་རབ་དང་མཚམས་པ་ལུ་ ཤིང་ཟམ་ ལོག་རྒྱབ་ནི།

Environmental and Social Management Plan for Wangchuck Centennial National Park (2025)

1. INTRODUCTION

1. (A) Project Background

The Bhutan for Life (BFL) project aims to ensure a robust network of protected areas and biological corridors that secures human well-being, biodiversity conservation, and increases climate resilience in Bhutan. The project provides a 14-year financial bridge that allows for immediate improvement in the management of Bhutan's protected areas for climate resilience, and the efficient delivery of mitigation, adaptation, and biodiversity gains, while the country gradually reaches the stage to manage its financing resources.

BFL seeks to achieve the following objectives:

- Help Bhutan remain carbon neutral by increasing forest and vegetative cover within the Protected Area System;
- Enhance the socio-economic well-being of communities in and in the vicinity of the PAS through climate-informed natural resources management;
- Maintain stable, thriving, and diverse populations of key species contributing toward national and global biodiversity goals;
- Strengthen organizational, institutional, and financial capacity for effective management of PAs.

BFL includes five components that reflect these goals, divided into 16 milestones (or outputs) and over 80 detailed activities.

(B) Scope of ESMP

The preparation of this Environmental and Social Management Plan (ESMP) is required to manage the environmental and social impacts through specific mitigation actions required to implement the project in accordance with the requirements of WWF's Social Safeguards Integrated Policies and Procedures (SIPP), the project's Environmental and Social Management Framework (ESMF), and applicable national legislation and regulations.

The ESMP provides an overview of the environmental and social baseline conditions on the routes of the proposed second segment of the project, summarizes the potential impacts associated with the proposed activities and sets out the management measures required to mitigate any possible negative consequences.

This ESMP will be implemented by the BFL focal person in each park authority (PA) and biological corridor (BC), and by the contractor to be commissioned by each PA/BC for the project.

(C) Purpose of ESMP

This Site-Specific ESMP is a project-specific source document detailing the environmental and social protection requirements to mitigate and minimize the adverse impacts. The ESMP's

primary purpose is to ensure that the environmental requirements and social commitments associated with the project are carried forward into the implementation and operational phases of the project and are effectively managed. The specific objectives of this ESMP are as hereunder:

- Minimizing any adverse environmental, social, and health impacts resulting from the project activities;
- Conducting all project activities under the relevant RGoB Laws and WWF's safeguard operational policies and guidelines;
- Preventing environmental degradation as a result of either individual subprojects or their cumulative effects;
- Enhancing the positive environmental and social outcomes of project activities;
- Ensuring that the proposed mitigation measures are feasible and cost-efficient;
- Providing an Action Plan to ensure that the project impact mitigation measures are properly implemented and monitored;
- Ensuring all stakeholders are engaged in the project activities' preparation and implementation, and their concerns are fully addressed.

2. (D) Applicable law, policies, and regulations

This ESMP is developed with strict adherence and compliance to the guidelines outlined in BFL's ESMF.

Applicable RGoB laws and policies include the Constitution of the Kingdom of Bhutan, 2008; legislation on land and moveable property (Land Act of Bhutan 2007; Land Rules, 2007; The Moveable Cultural Property act of Bhutan, 2005); legislation and regulations on forests and protected areas (National Environment Protection Act, 2007; Forest and Nature Conservation Act of Bhutan, 2023; Forest and Nature Conservation Rules and Regulations of Bhutan, 2023; National Forest Policy, 2011); legislation on water and waste prevention (Water Act of Bhutan, 2011; Waste Prevention and Management Act, 2009); legislative requirements on environmental assessment (Environmental Assessment Act, 2000 and Regulations on the Environmental Clearance of Projects, 2001); and other relevant laws (The Local Government Act of Bhutan, 2009; Livestock Act of Bhutan, 2001; The Biodiversity Act of Bhutan, 2003; The Pesticides Act of Bhutan, 2000; The Penal Code of Bhutan, 2004; National Access and Benefit Sharing (ABS) Policy (Draft), 2014); and Local Government Act of Bhutan, 2009.

WWF's safeguards policies that are relevant to this project are as follows:

- Policy on Environment and Social Risk Management;
- Policy on Protection of Natural Habitats;
- Policy on Involuntary Resettlement;
- Policy on Indigenous Peoples;
- Standard on Pest Management;
- Policy on Accountability and Grievance System;
- Standard on Physical and Cultural Resources
- General standards on occupational and community health and safety and energy

efficiency.

In general, RGoB's laws, policies, and guidelines are in line with the WWF's environmental and social safeguards requirements. However, there are a few differences between the two systems. With regard to environmental impacts, there are no direct contradictions between the RGoB laws and regulations and the WWF's SIPP, but the requirements of the latter are more extensive. All project activities should fully comply both with the RGoB's Regulations on the Environmental Clearance of Projects and with the procedures and mitigation measures prescribed in this ESMF. In case the WWF's SIPP requirements are more extensive, strict, or detailed than the RGoB legislation and policies, the former will apply to all project activities. Concerning social impacts, the primary discrepancies between the RGoB laws and regulations and the WWF's SIPP refer to the status of non-title holders and informal land use, and the commitment to participatory decision-making processes. First, according to the WWF's SIPP, all users of land and natural resources (including people who lack any formal legal ownership title or usage rights) are eligible for some form of assistance or compensation if the project adversely affects their livelihoods. The RGoB laws only recognize the eligibility of landowners or formal users to receive compensation in such cases. Second, the WWF's SIPP requires extensive community consultations as part of the development of various safeguards documents and during project activities. RGoB legislation does not include similar requirements. For the purposes of the BFL project, the provisions of the WWF's SIPP shall prevail over the RGoB legislation in all cases of discrepancy.

2. Environmental and Socio-Economic Conditions:

Located in the northern central region of the country spread over 4914 sq.km, WCNP is the largest protected area of the country. It covers the northern frontiers and the central part of the country. There are nine *gewogs* of five different *Dzongkhags* (Gasa, Wangdue Phodrang, Trongsa, Bumthang, and Lhuentse), which fall wholly or partly under the park's jurisdiction. It has around 860 households with more than 7300 residents inside the park. The majority of the Park residents depend on farming for their livelihoods and there are some communities (communities in highland areas), whose livelihood is solely dependent on the *Cordyceps* and livestock rearing. With low-lying valleys to the snowcapped peaks, the altitude of the park ranges from 1350 to over 7500 meters above sea level. The Park has rich biodiversity and it is home to 693 species of vascular plants, 43 mammal species, 250 birds, and 246 species of butterflies. The fauna list includes some of iconic species such as Tiger (*Panthera tigris tigris*), Snow leopard (*P. uncia*), Tibetan wolf (*Canis lupus*), Bhutan takin (*Budorcus taxicolor whitei*), Himalayan black bear (*Ursus thibetanus*), Himalayan musk deer (*Moschus chrysogaster*) and red panda (*Ailurus fulgens*) as captured in Figure 1.



Figure 1: Some of the endangered and vulnerable mammals of the park

The park also has a few trekking routes, hot springs, and cultural and religious sites frequented by local people and international tourists. A hot spring popularly known as Dhur Tshachhu is located 3400 meters above sea level in the Fir (*Abies densa*) forest on the bank of Mangdichhu. The hot spring is believed to have been blessed by Guru Rinpoche and contains mineral properties that help to heal or cure diseases. Many people within the country visit the hot spring and tourists trekking via the snowmen trekking route also spend a few days at the hot spring. There is considerable seasonal and local variation in climatic conditions in the park, largely attributable to the latitudinal and altitudinal range and the mountainous terrain. At more than 27° N of the equator, the park is north of the Tropic of Cancer, and thus in the temperate realm. It is therefore influenced by seasonal changes. The complex mountainous terrain also contributes to local variation in weather, such as warmer and moister conditions in the southern river valleys and colder, drier conditions in the high elevations. Thus, the variation in altitude and rainfall also creates extreme variability in climate. The southwest monsoon rains from June to September contribute most of the annual rainfall in the park. The park is the source of several streams and rivers that are very crucial for downstream areas and the Hydropower projects.

3. Planned activities in Year 7 (2025)

Activity 3.1: Maintenance of Dungkar Range Office

- **Budget:** Nu. 2,300,000.00
- **Timeline:** July 2025 to June 2026
- **Location:** Dungkar, Kurtoed, Lhuentse

The country's largest national park is spread across five districts covering an area of 4914 square kilometres. The park management is mandated to provide forestry services to the communities residing within the park, besides the conservation programs. To ensure effective and timely services to the communities, three range offices support park management, The Chokhor Range, Sephu Range and Dungkhar Range. Dungkar Rrange is responsible for conserving areas of Kurtoed and Gangzur gewogs of the Lhuentse district and providing services to communities of these two gewogs.

Five chiwogs of Kurtoed gewog comprising 235 households and a total area of 961.60 sq km, and a chiwog of Gangzur gewog with 90 households fall under the jurisdiction of the Dungkar range. To cater services to the communities and timely monitor and implement conservation activities, the park management constructed an office and two-unit staff quarters in Dungkar in 2016.

Currently, the range has seven staff serving the communities of two gewogs, regular monitoring of the protected area, and implementing conservation activities in line with the park conservation management plan.

Dungkar is located in the cool broadleaved forest and the area is mostly humid during the summer and autumn. Further, the office compound is located near villages, and livestock freely roam around the office compound. Due to humid and moist conditions, the wooden parts and walls of the office building require maintenance to provide a sound working space for the staff. Drinking water in the office and staff quarters has been an acute problem for some years, as the source of drinking water connected during initial construction was washed away by landslides at the source.

The main activities during this year include minor maintenance of the office building, maintenance of drinking water intake tanks and pipelines, office compound fencing, and construction of a cattle trap gate.

Potential environmental and social impact

The maintenance work of the range office would create better working and living conditions for the staff and enhance effective service delivery to the public. The activity will not have an impact on the communities residing nearby as the activity will be implemented within the office compound. The maintenance work may provide the opportunity for local people to earn alternative income through engagement as laborers and the sale of farm products. The maintenance of drinking water pipelines would ensure safe drinking water for the staff and the people visiting the range to avail services, which will ultimately contribute to improving healthy living.

Environmentally, the proposed activity would have minimal impact, which could be addressed through proper mitigation measures in place. The maintenance work within the office compound won't have an impact on wildlife as it is in already occupied premises, except for the generation of some construction waste. The maintenance of drinking water pipelines may entail clearing bushes and digging pipelines. The activities will be implemented in strict

compliance with the clauses of the clearances issued by the authorities. The following are some of the possible impacts foreseen during the implementation of the proposed activity.

- Solid waste generation
- Health hazard to workers (workers' safety)
- Generation of dust and noise during the implementation of work

3. Activity 3.2: Re-Construction Wooden Bridges at Tshampa and Kerab

- **Budget:** Nu 794,000.00
- **Timeline:** September 2025 to December 2025
- **Location:** Tshampa and Kerab, Chokhor gewog, Bumthang

The national park is spread across five districts in the northern-central region of the country, therefore, the park covers most of the high-altitude areas in the region. Many Yak herding families graze their livestock during the summer and autumn seasons. From Chokhor Gewog, only 41 Yak herding families herd their Yaks in the Khang Drok, Dhur Drok, and Tendrok areas of the Gewog. Tshampa and Kerab fall in the Tendrok area; these areas are the main entry points to the grazing areas on the Gangkar Puensum and Melakarchung sides.

Tshampa is located at a distance of two days from the nearest road head. It is the diversion point of the route to Gangkar Puensum and Melakarchung when one travels from Nasiphel village. There is a community Lhakhang where the herders perform annual rituals before they migrate to lower regions in the winter. The place has a gentle slope and is located near the confluence of the rivers from Gangkar Puensum and Melakarchung. It is the bifurcation point of the trekking route from Chokhor to Gangkar Puensum and Melakarchung. The place is a common area for acclimatization for tourists and other trekkers. The existing wooden bridge over the river that originates from Melakarchung has been damaged and has become risky for commuters and livestock. The bridge is the only point crossing the river to enter the Gangkar Puensum area. The bridge is used daily by herders during summer and autumn, Cordyceps collectors during the collection season, and tourists and government officials during field visits. The wooden bridge at Kerab is across the river that flows from the Melakarchung areas and joins the river originating from the Gangkar Puensum area at Tshampa to form the main Chamkharchhu. Kerab is three days' walk from the nearest road head and one day's walk from the Tshampa. Kerab zam is the bypass for travellers between Dhirup in the east and Chacheyna in the west. It will greatly benefit the seven nomadic herders, Cordyceps, and NWFP collectors in the Melakarchung area and park officials in forming regular monitoring.

The major work in this activity would be minor maintenance of the embankment wall on either flank at both sites, as well as replacement of wooden parts. The park management plans to execute the work on a community contract basis, so that it could be awarded to the herders who graze cattle in that locality. Therefore, the construction work would not require engaging labourers from distant areas, which reduces concerns over labourers' shelters, safe drinking water, sanitation, and solid waste accumulation at the site. To ensure completion of the activity within the proposed plan period, 10 labourers will be engaged at both sites.

Potential environmental and social impact

The proposed bridges will greatly benefit the herders by providing them safe and smooth movement of both livestock and people from one herd to another throughout the year. It will also serve as a connecting line between grazing communities during emergencies and times of need, which will enhance social coherence and vitality among the herding families.

As the bridges are proposed to be constructed at the existing bridge, there is no requirement for major site development, clear vegetation/trees, earth excavation, and river diversion. The work entails the replacement of rotten wooden parts and minor maintenance of the foundation and embankment walls. The required timber for construction will be allotted from unrestricted areas in compliance with the prevailing rules and regulations. Therefore, the impact on the environment would be very minimal and could be mitigated through proper measures. The following are the likely impacts from the project activity, and mitigation measures to reduce them will be taken during the implementation.

- Generation of construction waste
- Worker's health and safety

4. Mitigation Measures for Environmental and Social Impacts

Potential impact	Impact scale	Proposed mitigation measures	Responsible Party	Costs (million)
Activity 1: Maintenance of Dungkar Range office				Nu. 2.30
Worker's health and safety	Short term minor	<ul style="list-style-type: none"> ● Comply with workers' health and safety guidelines ● Ensure decent work conditions, including an appropriate salary, working hours, accommodation, and other essential amenities as per the Operational Health and Safety Guidelines are available for workers. ● Ensure the first aid kit is always available at the construction site. ● Refer to the Primary Health Care Centre in case of injuries and sickness 	Contractor Site Engineer Project focal Range Officer	
Generation of waste as a result of construction activities	Short term minor	<ul style="list-style-type: none"> ● Identification and segregation of the different waste types at the project site. ● Proper containers/waste bins should be provided at the project site; ● Dumping of waste on the sides of the road, on private land, or in other non-designated places is prohibited; ● Collection, transportation, and final disposal of all waste will be undertaken regularly 	Contractor Range Officer Project Focal	
Disturbance by noise and dust	Short term	<ul style="list-style-type: none"> ● Regulate working hours ● Avoid work during the night and early morning. ● Wear appropriate mask and protective gear 	Contractor Site Engineer Range Officer	
Activity 2: Reconstruction of Wooden Bridge at Tshampa and Kerab				Nu. 0.794

Generation of construction waste	Short term minor	<ul style="list-style-type: none"> ● Dumping of waste on the sides of the road, on private land, or in other non-designated places is prohibited; ● Proper containers/waste bins should be provided at the project site; ● Collection, transportation, and final disposal of all waste will be undertaken regularly 	Contractor Site supervisor Range Officer Project Focal	
Worker's health and safety	Short term minor	<ul style="list-style-type: none"> ● Comply with worker's health and safety guidelines ● Ensure decent work conditions, including an appropriate salary, working hours, accommodation and other essential amenities as per the Operational Health and Safety Guidelines are available for workers. ● Refer to RBA medical personnel at Tshampa during medical emergencies. 	Contractor Site supervisor Range Officer	

5. ESMP Implementation Arrangements

The Park management will implement the project in collaboration with the concerned implementing partners. The Park management will be responsible for the compliance of all procedures outlined in this ESMP, as well as compliance with any requirements to obtain clearances, permits, approvals, or consent documents from relevant authorities and stakeholders.

This ESMP will be part of the contract that the PA will sign with the Contractor(s) for implementation of the planned activities in WCNP in the year 2025–2026. The Contractor/Worker is obligated to perform all proposed preventive or mitigation environmental and social measures in this plan and to keep the evidence of any documents related to applying these measures (e.g., letter asking the municipality for disposal of inert waste, records on OHS information session performed for all workers before start of activities, all developed EHS plans, etc.). The Contractor should organize an OHS information session for all workers before the start of the project activities and before any specific tasks with high health risks.

The WCNP site supervisors and supervising Engineer from the concern gewog will monitor the implementation of proposed measures by the Contractor and site managers with visual checking, reviewing the records of evidence that the measures have been applied, and ask the contractor to apply the measures as soon as possible. Non-compliances will be recorded and the Report on any non-compliances will be reported to the ESS officer immediately, and the ESS officer will report it to the PCU (M&E Officer). Each non-compliance with the guidelines will be resolved with appropriate measures and the evidence should be maintained.

Disbursement of project funds to the Contractors will be contingent upon their full compliance with the safeguard's requirements.

6. ESMP Monitoring Arrangements

The BFL focal person of the Wangchuck Centennial National Park in collaboration with Dzongkhag and gewog administrations, and concern range officers will closely monitor the implementation of all planned activities and the required mitigation measures and ensure that they fully comply with this ESMP. The terms and conditions included in the environment clearances issued by RGoB's national authorities wherever and whenever required must be strictly followed. WCNP is also fully responsible for the compliance of all external contractors and service providers working in the WCNP with the safeguard's requirements outlined in the OHS.

Protocol for monitoring of activities under this ESMP will be carried out as follows:

Sl#	Activities	Monitoring team	Timeline		Location	Means of Verification
			Start	Complete		
1	Maintenance of Dungkar Range Office	Field Focal	September,2025	March 2026	Dungkar Range	Field visits Reports and field visits
		ESS focal	December 2025	March 2026		
		BFL-PCU	March 2026	April 2026		
2.	Reconstruction of wooden bridge at Tshampa and Kerab	Range office and gewog	September, 2025	December 2025	Tshampa and Kerab	Field visit Reports and field visits
		ESS focal	November 2025	December 2025		
		BFL-PCU	December 2025	March 2026		

Monitoring by ESS officer at PCU:

- Monitoring through photographic/video evidence submitted by the IAs during the implementation as per the given date line in the table above.
- Reports by ESS officer to BFL Fund Secretariat – Annual report submitted to the BFL Fund Secretariat in January 2026.
- Bi-annual reports of the Secretariat to WWF US (as part of mid-year and final APRs)

7. Capacity Need and Budget

Activities under this ESMP will be implemented by the BFL focal person, supervising engineer/staff, and a contractor that will employ workers as mentioned in the contract agreement.

- *The budget for each of the activities is: (last section)*

Sl#	Activity	Amount (Nu.)	Budget for ESS mitigation
1	Maintenance of Dungkar Range Office	2,300,000	00
2	Reconstruction of the Wooden bridge at Tshampa and Kerab	794,000	00
	Total Nu.	3,094,000	00.00

The proposed activities are of very small scale and do not involve huge construction and use of heavy machinery and equipment, there are no adverse social and environmental impacts which require mitigation measures. Therefore, a separate fund for mitigation measures is not proposed.

8. Consultation and Disclosure Mechanisms

The proposed activity during this financial year is the priority of the park management and the local communities. For the maintenance of the Dungkar Range office, consultation with local communities may be required as it is within the range compound and there is no involvement of communities and the local government. However, the approved ESMP will be shared with local government for support and cooperation during the implementation phase.

Reconstruction of wooden bridges at Tshampa and Kerab was prioritized in consultation with Chokhor Range and Gewog Administration. A similar consultation would be done to finalize the mode of work award on the Community Contract basis.

The detailed minutes of the consultation meetings/official correspondences will be kept as a requirement for this ESMP, along with a full list of participants (disaggregated by gender and age).

The full English version of this ESMP, as well as an executive summary in Bhutanese, shall be disclosed/uploaded on the website of MoENR, BFL, and WWF AE. The hard copies of the ESMP will be made available at the PA Management Office and at the PCU Office.

9. Stakeholder Engagement Plan

Lhuentse dzongkhag administration, Kurtoed and Chokhor gewogs, WCNP, DoFPS, besides the local communities are the main stakeholders in the proposed activity. Dzongkhag and gewog administration will be engaged in the tendering and work award process for execution of the activity at the site and the regular supervision. The park management, DoFPS, and the local communities will be engaged throughout the implementation of these activities as workers on a community contract basis.

The ESS focal will submit the consultation reports to the PCU (M&E officer) one week after their receipt. The PCU (M&E officer) will report to the Secretariat on a semi-annual basis.

10. Grievance Redressal Mechanisms

This ESMP and its mitigation measures are required to be disclosed to communities for 30 days prior to the start of implementation of activities.

In addition, the BFL focal point is responsible for making local communities aware of the grievance mechanisms: the BFL-specific grievance mechanism, WWF's Grievance Mechanism, and the GCF Independent Review Mechanism.

BFL-specific Grievance Mechanism

A grievance redressal mechanism (GRM) is in place to address any grievances arising from the implementation of BFL activities, on resources, non-performances of project obligation including safeguards, violation of law and/or corruption, project governance and implementation, fair access and benefit sharing, stakeholder engagement, labor-related issues and incidents, gender related issues and others.

If the stakeholders have any grievances related to the BLF project they can report their grievances via letter, phone call or verbally to nearby gewog or forest offices. The report can also be sent to the BFL PCU office or WWF office. The specific brochure for the GRM is attached in the annexure for any grievance related to implementation of the project activities.

WWF Grievance Mechanism

A grievance can be filed with the Project Complaints Officer (PCO), a WWF staff member fully independent from the Project Team, who is responsible for the WWF Grievance Mechanism and who can be reached at:

Email: SafeguardsComplaint@wwfus.org

Mailing address:

Project Complaints Officer

Safeguards Complaints,

World Wildlife Fund

1250 24th Street NW

Washington, DC 20037

Stakeholders may also submit a complaint online through an independent third-party platform at <https://secure.ethicspoint.com/domain/media/en/gui/59041/index.html>.

GCF Independent Review Mechanism

The Independent Review Mechanism (IRM) provides recourse to those affected or who may be affected by GCF projects. Complainants can find information on filing a complaint and proceed to file a complaint on the GCF IRM website: <https://irm.greenclimate.fund/case-register/file-complaint>

Annexures 1

BFL: Suggested Occupational Health and Safety Standards

Employers and supervisors are obliged to implement all reasonable precautions to protect the health and safety of workers. Implementing entities should hire contractors that have the technical capability to manage the occupational health and safety issues of their workers, extending the application of the hazard management activities through formal procurement agreements.

This section provides guidance and examples of reasonable precautions to implement in managing principal risks to occupational health and safety. It is based on the IFC's Environmental, Health, and Safety Guidelines (April 30, 2007)¹ and the Occupational Health and Safety Guidelines of Bhutan's Construction Development Corporation Ltd., which relies on the national Regulation on Occupational Health, Safety and Welfare 2012, Regulation on Working Conditions 2012 and Labour Act 2007, and in compliance to Sl. No. 21 of Regulation on Occupational Health, Safety and Welfare 2012.

4. General Facility Design and Operation

Integrity of Workplace Structures

Permanent and recurrent places of work should be designed and equipped to protect occupational health and safety:

- Surfaces, structures and installations should be easy to clean and maintain, and not allow for accumulation of hazardous compounds.
- Buildings should be structurally safe, provide appropriate protection against the climate, and have acceptable light and noise conditions.
- Fire resistant, noise-absorbing materials should, to the extent feasible, be used for cladding on ceilings and walls.
- Floors should be level, even, and non-skid.
- Heavy oscillating, rotating or alternating equipment should be located in dedicated buildings or structurally isolated sections.

Severe Weather and Facility Shutdown

- Workplace structures should be designed and constructed to withstand the expected elements for the region and have an area designated for safe refuge (e.g., in case of earthquake).

Workspace and Exit

- The space provided for each worker, and in total, should be adequate for safe execution of all activities, including transport and interim storage of materials and products.

Fire Precautions

The workplace should be designed to prevent the start of fires through the implementation of fire codes applicable to industrial settings. Other essential measures include:

- The workplace shall be provided with adequate means of protection and escape in case of fire.
- The workplace shall be provided with adequate number of relevant fire extinguishers.
- Workers shall wear shoes without iron or steel nails or any other exposed ferrous materials which is likely to cause sparks by friction.
- Smoking, lightening, or carrying of matches, lighters or smoking materials shall be prohibited.
- All other precautions, as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks, overheated surfaces of machinery or plant, chemical or physical, chemical reaction and radiant heat.
- At every workplace adequate provision of water supply for firefighting shall be provided and maintained.
- Equipping facilities with firefighting equipment (e.g., fire extinguishing bottle). The equipment should be maintained in good working order and be readily accessible. It should be adequate for the dimensions and use of the premises, equipment installed, physical and chemical properties of substances present, and the maximum number of people present.
- Manual firefighting equipment shall be easily accessible and simple to use.
- Fire extinguishers and emergency alarm systems that are both audible and visible should be in place.

Lavatories and Showers

- Adequate lavatory facilities (toilets and washing areas) should be provided for the number of people expected to work in the facility (at least one for every 20 workers). Toilet facilities should also be provided with adequate supplies of hot and cold running water and soap.

Potable Water Supply

- Adequate supplies of potable drinking water should be provided to workers at the work site.

Clean Eating Area

- Where there is potential for exposure to substances poisonous by ingestion, suitable arrangements are to be made for provision of clean eating areas where workers are not exposed to the hazardous or noxious substances.

Lighting

- Workplaces should, to the degree feasible, receive natural light and be supplemented with sufficient artificial illumination to promote workers' safety and health, and enable safe equipment operation. Supplemental 'task lighting' may be required where specific visual acuity requirements should be met.
- Emergency lighting of adequate intensity should be installed upon failure of the principal artificial light source to ensure safe shut-down, evacuation, etc.

Safe Access

- Passageways for pedestrians and vehicles within and outside buildings should be segregated and provide for easy, safe, and appropriate access.
- Equipment and installations requiring servicing, inspection, and/or cleaning should have unobstructed, unrestricted, and ready access.
- Covers should, if feasible, be installed to protect against falling items.
- Measures to prevent unauthorized access to dangerous areas should be in place.

First Aid

- The employer should ensure that qualified first-aid can be provided at all times. A sufficient number of first aid boxes or cupboards shall be provided and maintained so as to be readily available during all working hours, provided that the distance of the nearest first aid box or a cupboard stall be not more than 200m from any working place.
- First aid kits include all equipment outlined in Annex 1 to these Guidelines.
- Remote sites should have written emergency procedures in place for dealing with cases of trauma or serious illness up to the point at which patient care can be transferred to an appropriate medical facility.

Work Uniform

- The contractor shall provide a working uniform to each worker.
- All workers shall be required to attend the duty in proper uniform unless otherwise instructed by the Contractor.

Air Supply

- Sufficient fresh air should be supplied for indoor and confined workspaces. Factors to be considered in ventilation design include physical activity, substances in use, and process related emissions. Air distribution systems should be designed so as not to expose workers to draughts.
- Re-circulation of contaminated air is not acceptable. Heating, ventilation and air conditioning (HVAC) systems should be equipped, maintained and operated so as to prevent growth and spreading of disease agents (e.g. Legionella pneumophila) or breeding of vectors (e.g. mosquitoes and flies) of public health concern.

5. Information Provision on Occupational Health and Safety (OHS)

- The Contractor is responsible to hold an information session to familiarize all workers with the OHS procedures specified in these guidelines, in order to ensure they are apprised of the basic site rules of work at / on the site and of personal protection and preventing injury to fellow workers.
- The information session should consist of basic hazard awareness, site-specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Any site-specific hazard or color coding in use should be thoroughly reviewed as part of orientation training.

6. Physical Hazards

Physical hazards represent potential for accident or injury or illness due to repetitive exposure to mechanical action or work activity.

Rotating and Moving Equipment

Injury or death can occur from being trapped, entangled, or struck by machinery parts due to unexpected starting of equipment or unobvious movement during operations. Recommended protective measures include:

- Designing machines to eliminate trap hazards and ensuring that extremities are kept out of harm's way under normal operating conditions. Examples of proper design considerations include two-hand operated machines to prevent amputations or the availability of emergency stops dedicated to the machine and placed in strategic locations.
- Where a machine or equipment has an exposed moving part or exposed pinch point that may endanger the safety of any worker, the machine or equipment should be equipped with, and protected by, a guard or other device that prevents access to the moving part or pinch point. Guards should be designed and installed in conformance with appropriate machine safety standards.

Noise

- No worker should be exposed to a noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection. In addition, no unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB(C).
- The use of hearing protection should be enforced actively when the equivalent sound level over 8 hours reaches 85 dB(A), the peak sound levels reach 140 dB(C), or the average maximum sound level reaches 110dB(A). Hearing protective devices provided should be capable of reducing sound levels at the ear to at least 85 dB(A).
- Although hearing protection is preferred for any period of noise exposure in excess of 85 dB(A), an equivalent level of protection can be obtained, but less easily managed, by limiting the duration of noise exposure. For every 3 dB(A) increase in sound levels, the 'allowed' exposure period or duration should be reduced by 50 percent.
- Prior to the issuance of hearing protective devices as the final control mechanism, use of acoustic insulating materials, isolation of the noise source, and other engineering controls should be investigated and implemented, where feasible.
- Periodic medical hearing checks should be performed on workers exposed to high noise levels.

Vibration

Exposure to hand-arm vibration from equipment such as hand and power tools, or whole-body vibrations from surfaces on which the worker stands or sits, should be controlled through choice of equipment, installation of vibration dampening pads or devices, and limiting the duration of exposure.

Electrical

Exposed or faulty electrical devices, such as circuit breakers, panels, cables, cords and hand tools, can pose a serious risk to workers. Overhead wires can be struck by metal devices, such as poles or ladders, and by vehicles with metal booms. Vehicles or grounded metal objects brought into close proximity with overhead wires can result in arcing between the wires and the object, without actual contact. Recommended actions include:

- Marking all energized electrical devices and lines with warning signs
- Locking out (de-charging and leaving open with a controlled locking device) and tagging-out (warning sign placed on the lock) devices during service or maintenance
- Checking all electrical cords, cables, and hand power tools for frayed or exposed cords and following manufacturer recommendations for maximum permitted operating voltage of the portable hand tools
- Double insulating / grounding all electrical equipment used in environments that are, or may become, wet; using equipment with ground fault interrupter (GFI) protected circuits
- Protecting power cords and extension cords against damage from traffic by shielding or suspending above traffic areas
- Appropriate labeling of service rooms housing high voltage equipment ('electrical hazard') and where entry is controlled or prohibited
- Establishing "No Approach" zones around or under high voltage power lines
- Rubber tired construction or other vehicles that come into direct contact with, or arcing between, high voltage wires may need to be taken out of service for periods of 48 hours and have the tires replaced to prevent catastrophic tire and wheel assembly failure, potentially causing serious injury or death
- Conducting detailed identification and marking of all buried electrical wiring prior to any excavation work

Eye Hazards

Solid particles from a wide variety of industrial operations, and/or a liquid chemical spray may strike a worker in the eye causing an eye injury or permanent blindness. Recommended measures include:

- Use of machine guards or splash shields and/or face and eye protection devices, such as safety glasses with side shields, goggles, and/or a full-face shield. Frequent checks of these types of equipment prior to use to ensure mechanical integrity is also good practice.
- Where machine or work fragments could present a hazard to transient workers or passers-by, extra area guarding or proximity restricting systems should be implemented, or PPE required for transients and visitors.
- Provisions should be made for persons who have to wear prescription glasses either through the use overglasses or prescription hardened glasses.

Welding / Hot Work

Welding creates an extremely bright and intense light that may seriously injure a worker's eyesight. In extreme cases, blindness may result. Additionally, welding may produce noxious fumes to which prolonged exposure can cause serious chronic diseases. Recommended measures include:

- Provision of proper eye protection such as welder goggles and/or a full-face eye shield for all personnel involved in, or assisting, welding operations. Additional methods may include the use of welding barrier screens around the specific work station (a solid piece of light metal, canvas, or plywood designed to block welding light from others). Devices to extract and remove noxious fumes at the source may also be required.

Working Environment Temperature

Exposure to hot or cold working conditions in indoor or outdoor environments can result temperature stress-related injury or death. Use of personal protective equipment (PPE) to protect against other occupational hazards can accentuate and aggravate heat-related illnesses. Extreme temperatures in permanent work environments should be avoided through implementation of engineering controls and ventilation. Where this is not possible, such as during short-term outdoor work, temperature-related stress management procedures should be implemented which include:

- Monitoring weather forecasts for outdoor work to provide advance warning of extreme weather and scheduling work accordingly
- Providing temporary shelters to protect against the elements during working activities or for use as rest areas
- Use of protective clothing
- Providing easy access to adequate hydration such as drinking water or electrolyte drinks, and avoiding consumption of alcoholic beverages

Ergonomics, Repetitive Motion, Manual Handling

Injuries due to ergonomic factors, such as repetitive motion, overexertion, and manual handling, take prolonged and repeated exposures to develop, and typically require periods of weeks to months for recovery. These OHS problems should be minimized or eliminated to maintain a productive workplace. Controls may include:

- Facility and workstation design with 5th to 95th percentile operational and maintenance workers in mind

- Use of mechanical assists to eliminate or reduce exertions required to lift materials, hold tools and work objects, and requiring multi-person lifts if weights exceed thresholds
- Selecting and designing tools that reduce force requirements and holding times, and improve postures
- Incorporating rest and stretch breaks into work processes, and conducting job rotation
- Implementing quality control and maintenance programs that reduce unnecessary forces and exertions

Working at Heights

Fall prevention and protection measures should be implemented whenever a worker is exposed to the hazard of falling more than two meters; into operating machinery; into water or other liquid; into hazardous substances; or through an opening in a work surface. Fall prevention / protection measures may also be warranted on a case-specific basis when there are risks of falling from lesser heights. Fall prevention may include:

- Installation of guardrails with mid-rails and toe boards at the edge of any fall hazard area
- Proper use of ladders and scaffolds by trained workers
- Use of fall prevention devices, including safety belt and lanyard travel limiting devices to prevent access to fall hazard area, or fall protection devices such as full body harnesses used in conjunction with shock absorbing lanyards or self-retracting inertial fall arrest devices attached to fixed anchor point or horizontal life-lines
- Appropriate training in use, serviceability, and integrity of the necessary PPE
- Inclusion of rescue and/or recovery plans, and equipment to respond to workers after an arrested fall

Illumination

Work area light intensity should be adequate for the general purpose of the location and type of activity, and should be supplemented with dedicated work station illumination, as needed.

Controls should include:

- Use of energy efficient light sources with minimum heat emission
- Undertaking measures to eliminate glare / reflections and flickering of lights
- Taking precautions to minimize and control optical radiation including direct sunlight.
- Exposure to high intensity UV and IR radiation and high intensity visible light should also be controlled
- Controlling laser hazards in accordance with equipment specifications, certifications, and recognized safety standards. The lowest feasible class Laser should be applied to minimize risks.

4. Personal safety equipment for workers

All workers are equipped with the following personal safety equipment: helmet, gloves, ordinary boots and reflective vest.

Workers that are exposed to dust should also be provided with eye protection glasses and face mask. Workers that are exposed to noise should be provided with ear plugs. Workers that need to work in the dark should be provided with hand and cap lamps.

Workers are instructed regarding safety equipment as follows:

- Always wear complete set of protective wear.
- Do not wear loose clothing, such as overhang shirt, jackets, mufflers etc.
- Tuck shirt and jacket well.
- Secure helmet with belt under the chin.

- Tuck the bottom sleeves of trouser inside safety boot.
- Dress with reflector

5. Standards for workers' accommodation²

1. General living facilities

- The location of the facilities is designed to avoid flooding or other natural hazards
- The living facilities are located within a reasonable distance from the worksite.
- Transport is provided to worksite safe and free.
- The living facilities are built using adequate materials, kept in good repair and kept clean and free from rubbish and other refuse.

2. Drainage

- The site is adequately drained.

3. Heating, air conditioning, ventilation and light

- Living facilities are provided with adequate heating, ventilation, and light systems including emergency lighting.

4. Water

- Workers have easy access to a supply of clean/ potable water in adequate quantities.
- The quality of the water complies with national/local requirements or WHO standards.
- Tanks used for the storage of drinking water are constructed and covered to prevent water stored therein from becoming polluted or contaminated.
- The quality of the drinking water is regularly monitored.

5. Wastewater and solid waste

- Wastewater, sewage, food and any other waste materials are adequately discharged in compliance with national and/or international standards and without causing any significant impacts on camp residents, the environment or surrounding communities.
- Specific containers for rubbish collection are provided and emptied on a regular basis.
- Pest extermination, vector control and disinfection are undertaken throughout the living facilities at least once.

6. Rooms/dormitories facilities

- Rooms/dormitories are kept in good condition.
- Rooms/dormitories are aired and cleaned at regular intervals.
- Rooms/dormitories are built with easily cleanable flooring material.
- Rooms/dormitories and sanitary facilities are located in the same buildings.
- Residents are provided with enough space.
- The number of workers sharing the same room/dormitory is minimized.
- Doors and windows are lockable and provided with mosquito screens when necessary.
- Mobile partitions or curtains are provided.
- Adequate number of furniture such as table, chair, mirror, and lamps are provided for all workers.
- Separate sleeping areas are provided for men and women.

7. Bed arrangements and storage facilities

- A separate bed is provided for every worker.
- The practice of "hot-bedding" is prohibited.
- There is a minimum space of 1 meter between beds.
- The use of double deck bunks is minimized.
- If double deck bunks are in use, there is enough clear space between the lower and upper bunk of the bed.

- Workers are provided with comfortable mattresses. Workers may be expected to use their own pillows and bed linens.
- Workers wash bed linen frequently and applied with adequate repellents and disinfectants (where conditions warrant).
- Adequate facilities for the storage of personal belongings are provided.
- Separate storages for work clothes and PPE and depending on condition, drying/airing areas are provided.

8. Sanitary and toilet facilities

- Sanitary and toilet facilities are constructed from materials that are easily cleanable.
- Sanitary and toilet facilities are cleaned frequently and kept in working condition.
- Toilets, showers/bathrooms and other sanitary facilities are designed to provide workers with adequate privacy including ceiling to floor partitions and lockable doors.
- Separate sanitary and toilet facilities are provided for men and women.
- Toilet facilities are conveniently located and easily accessible.
- Toilet facilities are environmentally friendly (e.g., pit toilet) and sewage is not disposed into the worksite.
- Open defecation in the vicinity of project sites should be prohibited.
- An adequate number of hand wash basins and showers/bathrooms facilities are provided.
- Shower facilities are provided with water heating facilities.

9. Cooking and laundry facilities

Cooking and laundry facilities should be available for workers at the worksite or in close vicinity to it. These facilities should be kept in clean and sanitary conditions.

10. Leisure, social and telecommunications facilities

- Basic social collective spaces should be available to workers.
- Workers are provided with dedicated places for religious observance, as appropriate.
- The employer provides workers with local sim cards that can be used for communication on their personal cell phones.

Contents of first aid box or cup-boards

The first aid boxes or cup-boards shall be distinctively marked with white cross on a green background and shall contain the following equipment:

1. Small sterilized dressings (12)
2. Medium size sterilized dressings (6)
3. Large size sterilized dressings (6)
4. Large size sterilized burn dressings (6)
5. (1/2 oz.) Sterilized cotton wool (6 packets)
6. (2oz.) Bottle containing a two per cent alcoholic solution of iodine (1)
7. (2oz.) Bottle containing Betadine (antiseptic solution) having the dose and mode of administration indicated on the label (1)
8. Roll of adhesive plaster (1)
9. A snake bite lancet (1)
10. Torch light (1)
11. Pair of scissors (1)
12. Tablets Aspirin (5gms) 2 dozen
13. Burn Ointment (2 tubes)
14. Dettol (2 phial, about 2 ozs)
15. Bandages 4 inches wide
16. Bandages 2 inches wide
17. Triangular bandages (2)
18. Packets of safety pins (1)

Annexure 2: BFL specific GRM pamphlet

