# Bhutan for Life
# Environmental and Social Management Plan for
# National Plant Protection Centre
# 2024

## 1. INTRODUCTION

- **(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 increase 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 stage to manage its own 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 wellbeing 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 and 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 potential negative impacts.

This ESMP will be implemented by 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 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 in accordance with the relevant RGoB Laws and WWF's safeguard operational policies and guidelines.
- Preventing environmental degradation because 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 that all stakeholders are engaged in the project activities' preparation and implementation, and their concerns are fully addressed.

**(D) Applicable law, policies, and regulations**

This ESMP is developed in strict adherence and compliance to the guidelines set forth 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, 1995; Forest and Nature Conservation Rules and Regulations of Bhutan, 2017; 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 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. Regarding 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 that 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. With regard to 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 that lack any formal legal ownership title or usage rights) are eligible to 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 require 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:

***Samdrup Jongkhar (Largyap, and tshotshaluchiwog)***

Samdrup Jongkhar Dzongkhag is situated in the southeastern corner of the country, sharing its southern and northern borders with the Indian states of Assam and Arunachal Pradesh respectively. To its west lies Pemagatshel Dzongkhag and to its north Trashigang Dzongkhag. The Dzongkhag is in the sub-tropical climate zone, with an elevation of 200 meters to 3600 meters with major portion of the land within 600 meters to 1200 meters. Its southern strip consists of fertile plain lands. The temperature ranges from a minimum of 14°C to a maximum of 36°C during the peak summer of the year. The average annual temperature is 23.8°C. About 2749 mm of precipitation falls annually. More than three quarters of its area is under forest cover - higher than the national coverage and of mostly the broad leaved sub-tropical evergreen type.

In addition, being within/near to the protected areas, the farmers frequently encounter different cases with wild animals, especially elephants. The wild animals in search of food encroach the settlements with cultivated farmlands which provides them with easy access to food. At times, they lose their crop yields to wild elephants, monkeys, and wild boars. Other times, confrontation with wild elephants also lead to the properties being damaged and people being injured/displaced for days until they can safely return to their homes. Such incidences demotivate the farmers as farming is labor intensive and there are also concerns from the forestry officials on the retaliation from the farmers.

To support farmers and their livelihoods, e-fencing have been installed in some of the HWC prone areas and these interventions have been found efficient in reducing wildlife encroachment. Therefore, has proposed to install the portable electric fencing in the Orong and Lauri gewog of the Dzongkhag.

***Tashi Yangtse (Yalang, Dukti, Jangphutse, Omba, Gongzha)***

Trashi Yangtse Dzongkhag, located in eastern Bhutan, boasts a diverse environmental landscape characterized by lush forests, steep valleys, and high-altitude terrain. Situated at an average altitude of around 1,850 meters (6,070 feet), the region experiences a temperate climate with warm summers and cool winters. However, due to its proximity to wildlife-rich areas, Trashi Yangtse faces significant human-wildlife conflict, particularly concerning crop predation by wild animals such as elephants, deer, and wild boars. This conflict arises as animals venture into agricultural fields in search of food, often causing damage to crops and leading to tensions between local communities and wildlife conservation efforts. Efforts to mitigate these conflicts include the establishment of buffer zones and implementing measures to deter wildlife from encroaching on agricultural land.

***Lhuentse (Tsenkhar)***

Lhuentse Dzongkhag is bordered by Bumthang in the West, Tashi Yangtse in the East, Mongar in the South and China in the North. The Dzongkhag covers an area of approximately 2853.55 sq. km with altitudes ranging from 600 to 5800 meters above sea level. It has warm summers and cold winters. The annual average temperature rises to 24 °C in summer and falls to 15 °C in winter. Annual rainfall ranges from 1000 to 1500 mm.

The Dzongkhag being near or within the protected areas the farmers encounter major HWC.

To support farmers and their livelihoods, e-fencing has been installed in some of the HWC prone areas and these interventions have been found efficient in reducing wildlife encroachment. Therefore, has proposed to install the portable electric fencing in the Kurtoe and Khoma gewogs of the Dzongkhag.

***Trashigang (Drowachenma, Threlphu- Kangpara, Thrakthri)***

Trashigang Dzongkhag, located in eastern Bhutan, ranges in altitude from around 600 meters in the foothills to over 4,000 meters in the mountains. The climate varies from subtropical in the lower regions to temperate in the higher elevations. The area is known for its rich biodiversity and dense forests, which support a wide range of wildlife including elephants, bears, deer, and monkeys. However, this diversity also brings about challenges, particularly in terms of human-wildlife conflict. Farmers often face crop predation by wild animals such as Boars and monkeys, leading to significant economic losses and tensions between conservation efforts and agricultural livelihoods. Efforts to mitigate this conflict include the implementation of fencing, wildlife corridors, and community-based conservation initiatives.

***Bumthang (Tang and Ura)***

Bumthang Dzongkhag, situated in central Bhutan, encompasses a diverse range of altitudes, from approximately 2,600 meters in the valleys to over 4,000 meters in the mountains. The climate varies from subtropical in the lower regions to temperate in the higher elevations, with cool winters and mild summers. The area is characterized by its lush forests, pristine rivers, and fertile valleys, making it a vital agricultural region. However, this agricultural abundance also attracts wild animals such as monkeys, deer, and wild boars, which often raid crops and cause significant damage to farmers' livelihoods. Human-wildlife conflict is a prevalent issue in Bumthang, leading to efforts to implement measures such as crop diversification, community-based deterrents, and conservation initiatives to mitigate the conflict and promote coexistence between humans and wildlife.

***Mongar (Saling-Thridangbi, drepoong, Silambi, Khalangzhi (Chali Geog), Drametse)***

Mongar Dzongkhag, located in eastern Bhutan, encompasses a range of altitudes from approximately 400 meters in the valleys to over 4,000 meters in the mountains. The climate varies from subtropical in the lower regions to temperate in the higher elevations, with relatively mild winters and warm summers. The region is characterized by its rugged terrain, dense forests, and fertile agricultural land. However, this biodiversity also brings about challenges, particularly in terms of human-wildlife conflict. Farmers in Mongar frequently face crop predation by wild animals such as monkeys, deer, and wild boars, leading to significant economic losses and food insecurity. Efforts to address this conflict include the implementation of community-based deterrents, such as fencing and scare tactics, as well as promoting

sustainable farming practices to minimize crop damage while fostering coexistence between humans and wildlife.

***Trongsa (Nubi and Tangsibje)***

Trongsa Dzongkhag, situated in central Bhutan, spans a range of altitudes from approximately 600 meters in the valleys to over 4,000 meters in the mountains. The climate varies from subtropical in the lower regions to temperate in the higher elevations, characterized by cool winters and mild summers. The landscape is marked by rugged terrain, dense forests, and fertile agricultural land. However, this biodiversity also brings about challenges, particularly in terms of human-wildlife conflict. Farmers in Trongsa often face crop predation by wild animals such as monkeys, deer, and wild boars, resulting in significant economic losses and food insecurity. Efforts to mitigate this conflict include the implementation of fencing, scare tactics, and community-based conservation initiatives aimed at promoting coexistence between humans and wildlife while ensuring sustainable agricultural practices.

***Zhemgang (Bjoka, Ngangla)***

Zhemgang Dzongkhag, located in central-southern Bhutan, encompasses altitudes ranging from approximately 600 meters in the valleys to over 2,000 meters in the mountains. The climate varies from subtropical in the lower regions to temperate in the higher elevations, with warm summers and cool winters. The region is characterized by its lush forests, pristine rivers, and diverse wildlife. However, the presence of wild animals such as elephants, monkeys, and deer often lead to human-wildlife conflict, particularly in terms of crop predation. Farmers in Zhemgang frequently experience damage to their crops, resulting in economic losses and food insecurity. Efforts to address this conflict include the implementation of fencing, scare tactics, and community-based conservation initiatives aimed at promoting coexistence between humans and wildlife while safeguarding agricultural livelihoods.

***Wangdue Phodrang (Bjena- Khotokha)***

The climate varies from subtropical in the lower regions to temperate in the higher elevations, characterized by mild winters and warm summers. The area is renowned for its picturesque landscapes, including lush forests, fertile valleys, and pristine rivers. However, the region also grapples with human-wildlife conflict, particularly concerning crop predation by wild animals such as monkeys, deer, and wild boars. Farmers in Wangdue Phodrang often face significant economic losses due to damage to their crops, exacerbating food insecurity. To mitigate this conflict, various strategies are employed, including the installation of fencing, scare tactics, and community-based conservation efforts aimed at promoting harmonious coexistence between humans and wildlife while safeguarding agricultural livelihoods.

***Paro (Naja)***

Paro Dzongkhag, located in western Bhutan, boasts altitudes ranging from approximately 2,200 meters in the valleys to over 4,000 meters in the mountains. The climate varies from subtropical in the lower regions to temperate in the higher elevations, featuring cool winters and warm summers. The region is renowned for its stunning landscapes, including lush valleys, dense forests, and snow-capped peaks. However, Paro also faces challenges related to human-wildlife conflict, particularly concerning crop predation by wild animals such as monkeys, deer, and

wild boars. Farmers in the area often experience significant economic losses due to damage to their crops, exacerbating food insecurity. To address this issue, measures such as the installation of fencing, scare tactics, and community-based conservation initiatives are employed to foster coexistence between humans and wildlife while safeguarding agricultural livelihoods

***Haa (Sangbeykha)***

The climate is temperate, characterized by cool summers and cold winters. The region is known for its pristine natural beauty, including lush forests, alpine meadows, and glacial lakes. However, Haa also faces challenges related to human-wildlife conflict, particularly concerning crop predation by wild animals such as monkeys, deer, and wild boars. Farmers in the area often suffer economic losses due to damage to their crops, which can exacerbate food insecurity. Efforts to mitigate this conflict include the implementation of fencing, scare tactics, and community-based conservation initiatives aimed at promoting coexistence between humans and wildlife while safeguarding agricultural livelihoods.

***Dagana (Nichula Gewog)***

The region is known for its diverse ecosystems, including dense forests, fertile agricultural land, and scenic rivers. However, Dagana also grapples with human-wildlife conflict, particularly concerning crop predation by wild animals such as elephants, monkeys, and wild boars. Farmers in the area frequently endure economic losses due to damage to their crops, exacerbating food insecurity and livelihood challenges. Efforts to address this conflict include the implementation of fencing, scare tactics, and community-based conservation initiatives aimed at promoting harmonious coexistence between humans and wildlife while safeguarding agricultural productivity.

***Tsirang (Tsakaling Gewog)***

The region is known for its lush forests, fertile agricultural land, and scenic landscapes. However, Tsirang also faces challenges related to human-wildlife conflict, particularly concerning crop predation by wild animals such as elephants, monkeys, and wild boars. Farmers in the area often experience economic losses due to damage to their crops, which can lead to food insecurity and livelihood challenges. Efforts to mitigate this conflict include the implementation of fencing, scare tactics, and community-based conservation initiatives aimed at promoting coexistence between humans and wildlife while safeguarding agricultural productivity.

***Sarpang (Senggye and Chudzom)***

Sarpang Dzongkhag, located in southern Bhutan, encompasses altitudes ranging from approximately 200 meters in the valleys to around 1,500 meters in the mountains. The climate is subtropical, characterized by hot summers and mild winters. The region is known for its fertile agricultural land, dense forests, and diverse wildlife. However, Sarpang also faces challenges related to human-wildlife conflict, particularly concerning crop predation by wild animals such as elephants, monkeys, and wild boars. Farmers in the area often suffer economic losses due to damage to their crops, which can lead to food insecurity and livelihood challenges. Efforts to mitigate this conflict include the implementation of fencing,

scare tactics, and community-based conservation initiatives aimed at promoting coexistence between humans and wildlife while safeguarding agricultural productivity.

## 3. Planned activities for Year 2024

***Activity: Installation of portable electric fencing in the prioritized sites***

***(****Drowachenma, Threlphu- Kangpara, Thrakthri, Yalang, Dukti, Jangphutse, Omba, Gongzha, Tang, Ura, Saling-Thridangbi, drepoong, Silambi, Khalangzhi (Chali Geog), Drametse, Sangbaykha, Nja, Bjena- Khotokha, Bjoka, Ngangla, Nubi, Tangsibje, Nichula, Largyap, khashiding, and kheliphu, tshotshalu chiwog, Tshakaling, Nichula, Chudzom, Senggye)*

a. *Budget*: Nu. 6950000/-
b. *Timeline*: January to June 2024

As a part of HWC management intervention, the portable electric fencing will be installed at the mentioned sites to minimize crop losses to wildlife. It will approximately benefit 200 households in the community from wild elephants, boars, deer, monkeys, and other wildlife attacks. As a part of this activity, the following activities will be carried out.

- Procurement of portable electric fencing items like metal fencing post, energizer, polywires, insulators, insulation tapes,
- Erection of fencing post after digging hole and clearing unwanted weeds at the site.
- Preparation of EF bylaws.

The main likely environmental impacts for the activities related to construction of electric fencing are generation of waste from the workers and minor disturbance to the soil through the digging of holes to install fencing poles. On the social impact, it will largely be beneficial to the communities directly benefiting from the proposed activity. The electric fencing is likely to help farmers to maintain their food and livelihood through farming activities without the risk of being attacked by the wild animals. Nonetheless, the occupational health and safety of the workers will have to be taken care of and create community safety measures by providing awareness on voltage requirements and procedures to follow in terms of possible current leakages.

*Following is some of the possible common environmental and social impacts foreseen during the implementation of the proposed activities:*

- Solid waste generation at camp sites
- Minor disturbance to the soil – digging of holes
- Occupational health and safety of workers

## 4. Mitigation Measures for Environmental and Social Impacts

| Potential impact | Impact scale | Proposed mitigation measures | Responsible Party | Costs (million) |
|---|---|---|---|---|
| Activity: Installation of Portable Electric fencing | | | | Nu. 6950000/- |
| Worker's health and safety[1] | Short term minor | ● Comply with worker's health safety guidelines. | Gewog Agriculture Extensions, Dzongkhag Agriculture Officer NPPC | |
| Community safety awareness –voltage requirement or current leakage | Short term minor | ● Provide awareness to the beneficiaries on the current requirement to deter animals from entering the farmlands.<br>● Practical demonstration on the handling of electric fencing; and<br>● Ensure use of quality electric fencing (EF) materials approved by the technical working group at NPPC during the implementation of the work, carry out quality check before implementation of work – to avoid current leakage. | Gewog Agriculture Extension and Dzongkhag Agriculture Officers | |
| Generation of waste – construction activities | Short term minor | ● Identification and segregation of the different waste types at the activity site.<br>● Proper containers/waste bins should be provided at the activity site.<br>● Dumping of waste on the sides of the road, on private land, or in other non-designated places should be prohibited; and<br>● Collection, transportation, and final disposal of all waste to designated waste disposal sites will be undertaken regularly. | Gewog Agriculture Extension and NPPC | |
| Minor disturbance to soil – digging of holes | Short term minor | ● Holes in the soils should be dug as per the technical guidance mentioned in the 'Reference Manual for electric fence'; and<br>● Distance between poles should be maintained so that only required portion of soil surfaces are dug. | Gewog Agriculture Extension, Dzongkhag Agriculture Officer and NPPC | |

[1] Refer Annexure 1.

## 5. ESMP Implementation Arrangements

The Dzongkhag Administrations of Samdrup Jongkhar, Lhuentse, Trashi Yangtse, Haa, Wangdue Phodrang, Trongsa, Zhemgang, Dagana, Trashigang, Sarpang, Tsirang, and Mongar will implement the project in collaboration with National Plant Protection Centre (NPPC). The mentioned Dzongkhag Administrations 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 should be part of the contract that the Dzongkhag Administration will sign with the Contractor(s) for implementation of the planned activities mentioned in this ESMP in January 2023 – December 2023. National Plant Protection Centre (NPPC) 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 Dzongkhag Agriculture Office along with the Gewog Agriculture Extensions should monitor the implementation of proposed activities with physical 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 should be recorded and the Report on any non-compliances should be reported to the ESS officer immediately, and the ESS officer will report it to the PCU (M&E Officer). Each non-compliance to the guidelines should be resolved with appropriate measures and the evidence should be maintained.

## 6. ESMP Monitoring Arrangements

The BFL focal person of the NPPC, Dzongkhag Agriculture Officer, gewog Extension Officers, in collaboration with gewog administration will closely monitor the implementation of all planned activity 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. 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 | Installation of portable electric fencing | Field Focal | Jan, 2024 | June 2024 | Selected sites | Reports and field visits |
| | | ESS Focal | May, 2024 | June 2024 | | |
| | | BFLFS | June, 2024 | June 2024 | | |

- Monitoring by implementing entities:
  - Field visits at least twice - during the intervention and then monthly as part of the "SMART patrolling" activity (please adapt based on field conditions, and also based on the availability of SMART patrolling activities)
  - Reports by the implementing entities submitted to ESS focal during the intervention and then after the intervention completion
- Monitoring by ESS officer:
  - Field visits by ESS focal - at least once during the intervention
  - Reports by ESS focal to the PCU (M&E officer) - within two weeks after the field visit and for semi-annual reporting
- Annual Reports by PCU (M&E officer) to Secretariat
  - Annual Progress Report – 15th January, 2025

## 7. Capacity Need and Budget

Activities under this ESMP will be implemented by the BFL focal person, supervising extension staff, and/or a contractor that will employ workers as mentioned in the contract agreement. The budget for each of the activities is:

| Sl# | Activity | Amount (Nu.) | Budget for ESS mitigation |
|---|---|---|---|
| 1 | Installation of Portable Electric Fencing. | 6,950,000 | No separate budget required |

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

## 8. Consultation and Disclosure Mechanisms

The detailed minutes of the consultation meeting/ official correspondences will be kept as a requirement for this ESMP, along with a full list of participants (disaggregated by gender and age). Any grievance during the consultation or implementation will have to be noted and resolved in line with the BFL Grievance Redressal Mechanism and Dzongkhag Grievance Redressal system.

The full English version of this ESMP, as well as an executive summary in Bhutanese, shall be disclosed/uploaded on the website of MoAF, BFL and WWF-Bhutan Program. The hard copies of the ESMP would be made available at the Dzongkhag Administration, Gewog Office, PA Management Office and at the PCU Office.

## 9. Stakeholder Engagement Plan

The Dzongkhag Administrations with technical support from the NPPC along with the Gewog Administrations and local communities would be the main stakeholders in the proposed activity. The concerned Gewog Administration officials will be engaged in execution of the activity at site and the regular supervision.

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 Mechanism

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 and further the complainant can also contact the nearby forest office/gewog office/NPPC project focal 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.

## Annexure 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)[2] 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.

## 1. 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.

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- 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., Legionnella pneumophilia) or breeding of vectors (e.g., mosquitoes and flies) of public health concern.

**2. 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.

**3. 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 workstation 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' accommodation[3]**

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.

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- 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 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 cupboards**

The first aid boxes or cupboards 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)
19. A supply of suitable splint

20. ***Annexure II - BFL Specific GRM Brochure***