

Executive Summary

BFL has been categorized as a Category B project, as the potential adverse environmental and social impacts on population within the Protected Areas or those living around who depend on the PA for their livelihoods or environmentally important areas are site-specific, reversible and can be readily mitigated.

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 (ESMP) for Biological Corridor (BC) 2,-Tsirang describes mitigation measures/good practices at activity level which are required as per the screening protocol. All the screened activities which has potential risks to environment and social management have to prepare ESMP which include environment management and mitigation plans during pre-activity, activity implementation and closing phases. Hence, it contains 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 BC3 -Tsirang are as follows:

1. Maintenance of Tsirang Division and Range Office
2. Maintenance of Forest Nursery at Tsirang
3. Maintenance off Waterhole at Darachu

བཀོད་ཁྱབ་བཅུད་དོན།

འབྲུག་རྒྱལ་ཡོངས་སློབ་ཀྱི་ཆེ་སློག་མ་དདུལ་འདི་མཐའ་འཁོར་གནས་སྤངས་དང་མི་ཟེའི་འོས་འབབ་ཅན་གྱི་ལས་འགུལ་གྱི་དབྱེ་ཁག་ ཁ་བ་(Category B) རྒྱ་ལྷན་པུ་ཨིན། དེ་ཡང་ལས་འགུལ་འདི་ལས་བརྟེན་ཏེ་སྤྱད་སློབ་ས་ཁོངས་ནང་སྤྱད་མེད་མི་སེར་དང་ ཡང་ན་ སྤྱད་སློབ་ས་ཁོངས་ཀྱི་མཐའ་སྐོར་ཏེ་འཆོ་བ་སྤྱད་སློབ་ས་ཁོངས་ལྷན་པུ་བརྟེན་སྤྱད་མེད་མི་སེར་ ཡང་ན་ གཤམ་ཅན་གྱི་མཐའ་སྐོར་གནས་སྤངས་ཀྱི་ས་ཁོངས་ཚུ་ལྷན་པུ་འབྱུང་ནི་ཉེན་ཁ་ཡོད་པ་ད་ གཤམ་སྤྱད་གཞོན་པ་འབྱུང་པ་ཅིན་ གཞོན་ཉེན་ཚུ་དམིགས་གསལ་ས་གནས་ནང་རྒྱུང་མ་ཅིག་འབྱུང་ནི་དང་ གཞོན་ཉེན་མར་པ་བ་རྒྱུ་ནི་དང་ ཅ་མེད་ཡང་གཏང་ཚུགས་པ་ཨིན།

དེ་འབད་མ་ལས་ འབྲུག་རྒྱལ་ཡོངས་སློབ་ཀྱི་ཆེ་སློག་མ་དདུལ་ཐོག་ལྷན་ རྒྱུ་སྐྱོར་འབད་ཡོད་པའི་ལས་འགུལ་དང་ལས་ལྷན་ཚུ་ མཐའ་འཁོར་གནས་སྤངས་དང་ མི་ཟེའི་གཉིས་ལྷན་པུ་བརྟེན་གྱི་པན་པ་ཡོད་པ་བཟོ་བ་གི་མ་ཆད་ འབྲུག་རྒྱལ་ཡོངས་སློབ་ཀྱི་ཆེ་སློག་མ་དདུལ་གྱི་སྤྱད་བྱས་ལམ་སྟོན་དང་འབྲེལ་ཐབས་ལྷན་ མཐའ་འཁོར་གནས་སྤངས་དང་མི་ཟེའི་འཛིན་སྐྱོང་འཆར་གཞི་འདི་དགོ་པ་ད་ མི་དམངས་གྲོས་བསྟུན་དང་ དུས་དང་དུས་སྤྱི་མི་དམངས་ལྷན་གསལ་བ་བཤད་ནི་འདི་དགོ་པ་ཨིན།

རང་བཞིན་གནས་སྤངས་དང་མི་ཟེའི་འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་ སློབ་ཀྱི་དང་སློག་ཆགས་རྒྱན་ལམ་ཚུ་ནང་ལས་སྤྱ་ཚུ་འབད་བའི་སྐབས་ ཐབས་ལམ་དང་བཟང་སྤྱད་ཚུ་གསལ་སྟོན་འབད་མ་ཨིན་པ་ད་ འདི་ཡང་ལས་སྤྱི་གདམ་སེལ་ལམ་ལྷགས་དང་འབྲེལ་ཏེ་ཨིན། གདམ་སེལ་འབད་ཡོད་པའི་ལས་སྤྱ་གི་ནང་ལས་ མཐའ་འཁོར་གནས་སྤངས་དང་མི་ཟེའི་ལྷན་པུ་གཞོན་ཉེན་ཡོད་པའི་ལས་སྤྱ་ཚུ་གི་དོན་ལྷན་ མཐའ་འཁོར་གནས་སྤངས་དང་མི་ཟེའི་འཛིན་སྐྱོང་འཆར་གཞི་བཟོ་དགོ། འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་ ལས་སྤྱ་འགོ་མ་བཅུགས་པའི་ཉེ་མ་གཞི་བཅུགས་འབད་བའི་སྐབས་དང་མཚུགས་བསྟུན་པ་ལྷན་ མཐའ་འཁོར་གནས་སྤངས་འཛིན་སྐྱོང་དང་གཞོན་ཉེན་མར་པ་བ་ཀྱི་ཐབས་ལམ་ཚུ་བཅུགས་དགོ་པ་ཨིན།

དེ་འབད་མ་ལས་འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་ ལས་སྤྱ་ མི་ཟེའི་ ལྷན་པུ་བརྟེན་ བརྟེན་དང་སྤྱན་ལྷན་ དེ་ལས་སྤྱ་ཆོག་ལམ་ལྷགས་ཚུ་གི་སྐོར་ལས་འགུལ་བཤད་ཁ་གསལ་ཚུད་དགོ་པ་ཨིན། འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་ལྷན་ གཤམ་གཏོགས་འབད་དགོ་པའི་ཁེ་གུང་ཡོད་མི་ཚུ་གི་ཉོག་བཤད་ཚུ་ཚུད་དགོ་པའི་ཁར་ ཁེ་གུང་ཡོད་པའི་མི་ཚུ་གི་དོན་ལྷན་གཤམ་གཏོགས་འཆར་གཞི་དགོ། གཤམ་གཏོགས་འཆར་གཞི་འདི་ནང་ ཁེ་གུང་ཡོད་མི་ངོས་འཛིན་འབད་ནི་དང་གཤམ་གཏོགས་འབད་ནི་འཆར་ལམ་ལྷགས་ དེ་ལས་གཤམ་གཏོགས་ཀྱི་དུས་ཚོད་དང་བཅའ་སྤྱི་གུ་ཚུད་དགོ་པ་ཨིན། སློབ་ཀྱི་དང་སློག་ཆགས་རྒྱན་ལམ་ཡིན་ཆང་ཚུ་གི་མཆར་གཞི་ལས་སྤྱ་དང་འབྲེལ་ཏེ་ དན་ཐོ་དང་སྤྱན་ལྷན་ བསྟུར་ཞིབ། ཅིས་དབྱུང་འབད་ནི། དེ་ལས་ མཐའ་འཁོར་གནས་སྤངས་དང་མི་ཟེའི་འཛིན་སྐྱོང་འཆར་གཞི་འདི་ལོ་བསྟར་བཞིན་དུ་དུས་མཐུན་བཟོ་དགོ་པ་ཨིན།

སྤྱི་ཐུན་བར་ལམ་གཉིས་པ་ ཅི་རང་ མངའ་ཕྱེ་ རྒྱགས་ཆལ་ ཡིག་ཆང་ དོན་ལྷན་ལྷན་ ༡༠༡༥ རང་མཐའ་འཁོར་གནས་སྤངས་དང་མི་ཟེའི་འཛིན་སྐྱོང་འཆར་གཞི་དགོ་པ་ཡོད་པའི་ལས་སྤྱ་ཚུ་ཡང་།

༡༥ ཅི་རང་ མངའ་ཕྱེ་ དང་ སློབ་འཛིན་ ཡིག་ཆང་ ཉམས་བཅོས་འབད་ནི།

༢༥ དྲ་རྒྱའི་ མཆོ་ ཉམས་བཅོས་འབད་ནི་དང་།

༣༥ ཅི་རང་ མངའ་ཕྱེ་རྒྱགས་ཆལ་ ཤིང་གསོ་སྐྱོང་ཁང་ ཉམས་བཅོས་འབད་ནི།

Bhutan for Life
Environmental and Social Management Plan for
Biological Corridor 3 Tsirang (2025)

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 prompt delivery of mitigation, adaptation and biodiversity gains, while the country gradually ratchets up 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) was required in order 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 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 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 that all stakeholders are engaged in the project activities' preparation and implementation, and their concerns are fully addressed.

(D) Applicable law, policies, and regulation

This ESMP is developed by following the guidelines as set forth in the 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, 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 (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).

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; as well as general standards on occupational and community health and safety and on 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 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.

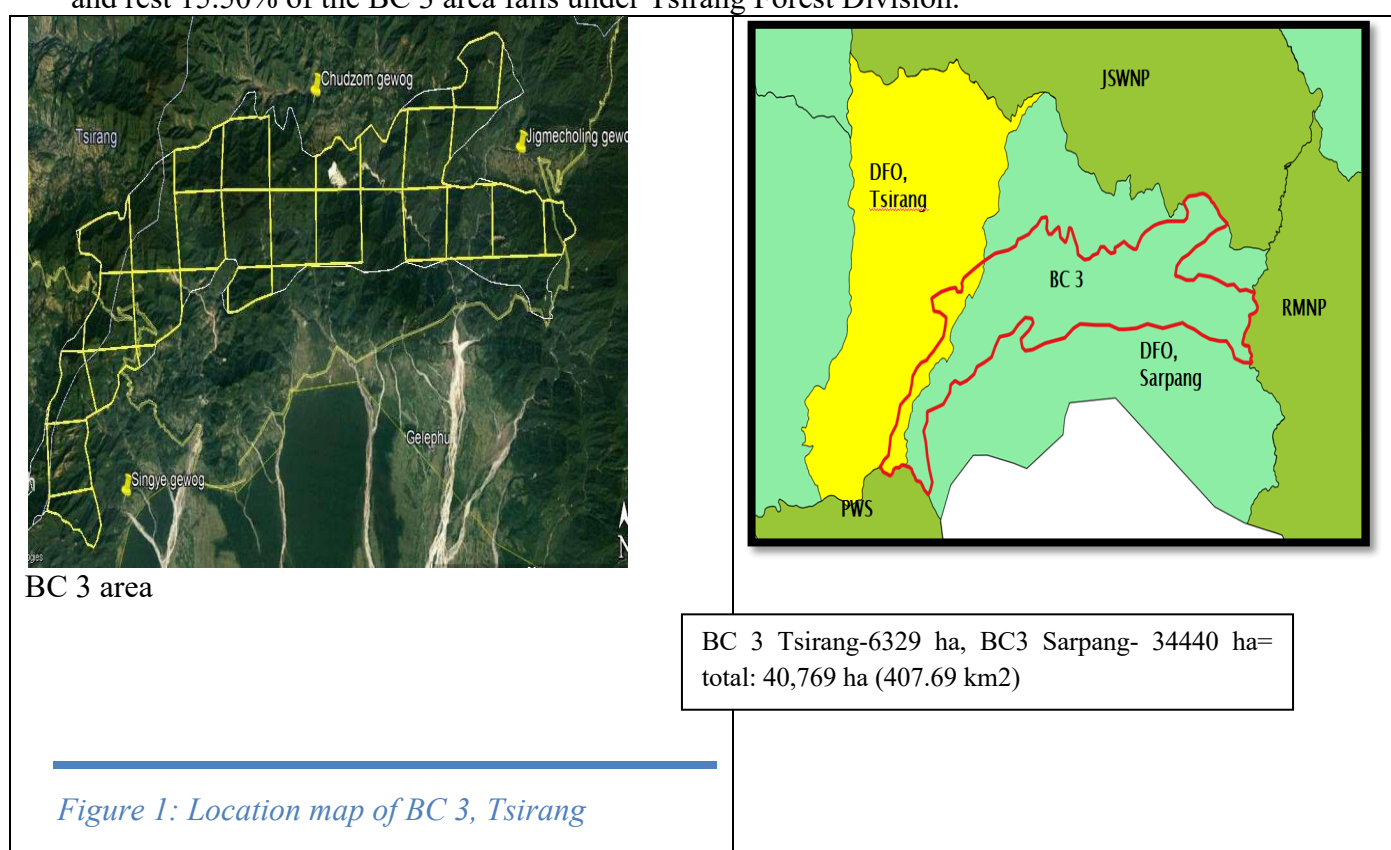
With regard to social impacts, the primary discrepancies between the RGoB laws and regulations and the WWF's SIPP refer to the status of non-title holders and informal land use, and the commitment to participatory decision-making processes. First, according to the WWF's SIPP, all users of land and natural 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 land owners 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: BC 3

Geographical Location

BC-3 has a total area of 407.69km² with elevation range of 440-2300masl and it is exactly located between JSWNP-RMNP in the North-east to Pibsoo Wildlife Sanctuary in the south-west under Sarpang district. About 84.50% of BC (03) falls within Sarpang Forest Division and rest 15.50% of the BC 3 area falls under Tsirang Forest Division.



Climatic conditions

BC 3 (Tsirang) is located in one of the ecological zone of Bhutan with a pleasant summer and relatively warmer during winter. The climatic condition in lower elevation adjoining Phibsoo Wildlife Sanctuary is hot and humid in summer while the climatic condition in the northern part of BC 3, adjoining Jigme Singye National Park, is cool and moderate.

Hydrological conditions

In general, Tsirang receive monsoon rainfall only by 2nd week of June every year. The rainfall is fed by South West monsoon from Bay of Bengal. However, BC 3 does receive seasonal rain

in spring (April-May) from westerly disturbance with lightning and thunder. These seasonal rains provide favorable conditions for the vegetation growth and food for wildlife. The moisture loaded wind from the South get cooler and provide maximum rainfall in Darachu, Patshaling and Dunglagang Geog, while rest of the Geogs in Tsirang receive less rainfall as it falls in the rain shadow area. BC 3 receives maximum rain in July averaging more than 1000 mm and least rain fall in winter months (less than 150 mm). The springs and small rivers in Tsirang are fed by summer rain, usually flow of water in all tributaries increases with the arrival of monsoon and recedes during the lean season (winter months).

Flora and fauna

The forest types of the BC 3 (Tsirang) can be described as predominantly broadleaf. Broadleaf is the largest forest type at 76.48 % of the land area Chir pine forest with 4.20%, and mixed conifer forests found at the outer reaches of the Dzongkhag stand at about 6.71 %. (LCMP, 2010.) The other significant vegetation is the shrubs at 3.30%, which is spread along the mountain slope bordering Jigme Singye National Park (JSWNP) in the north of the district.

The BC-3 is adorned with subtropical forest with abundant hardwood trees. It enjoys hot rainy summer and cold winter seasons. The diversity of the flora and fauna is rich. Total of 180 species from 39 NFI grids further classified into four major habitats were recorded, i.e. majority of the birds species were recorded from warm broadleaved forest (n = 64), followed by riverine (n = 51), agriculture (n = 35), and sub-tropical forest (n = 30).

BC-03 is dominated by barking deer (n = 99), followed by wild pigs (n= 80), samber deer and elephant (n = 70) each. This shows that barking deer, wild pigs and samber deer had wide ranges of habitat uses within the different elevation and habitat types. Some of the critically endangered bird species in BC 3 are White Bellied Heron, Rufous Necked Hornbill.

Socio-Economic

BC-03 covers 2 Dzongkhag (Sarpang and Tsirang). It encompasses 7 Gewogs [Senge, Chudzom, Gelephu, Samtenling, Dekiling, Shershong and Gakidling] under Sarpang and 2 gewogs [Patshaling and Dunglagang (23 household of Tsaka Ling chiwog under Patshaling Geog resides within 2km distance)] under Tsirang. 1664 households and 106 households of Sarpang and Tsirang respectively depend on BC-3.

Peoples in Sarpang and Tsirang mostly speak Lhotsamkha, Sharchop and Dzongkha. Primary income source for the population is from livestock and agriculture product. People residing within the vicinity of BC 3 Tsirang do subsistence farming, mostly of the people each livelihood through vegetable farming, as their area is favorable for vegetable production. Most of the households rear livestock, poultry and cardamom plantation to earn cash income.

3. Planned activities in Y 2025 and 2026 for Tsirang Dzongkhag

Activities that are planned in BC 3 in 2025 and 2026 are:

- 3.1 Maintenance & re-electrification of Division HQ, Damphu, Tsirang and Range Office, Tsirang
- 3.2 Revival of Water hole/lake at Darachu
- 3.3 Nursery Management: Nursery development and seedling production

3.1 Maintenance and re-electrification of Div Hq, Divisional Forest Office and Range office, Tsirang

Budget: Nu. 900,000 (nine hundred thousand)

Implementation period: July 2025 to June 2026

Location: Damphu (Dekiling)

Geog: Kikorthang/Damphu Thorm

Dzongkhag: Tsirang

The activity entails Maintenance & Electrification of the Division Office and Range Office, Tsirang

As a part of the activity, the maintenance of the existing Forest Division Hq Office & Range Office at Damphu, Tsirang will be carried out. The proposed activity pertains to the repair of the existing Division Office & Range Office at Damphu viz repair of plinth protection, toilet repair, drainage, window frame change, socket changes and re-electrification, earthing installation and roof painting to have a conducive working environment for effective public service delivery.

The proposed re-electrification and maintenance works only pertains to renovating the existing structure and no fresh construction is planned. The maintenance /renovation is necessary as the office is in dire need of maintenance such as re-electrification, installation of earthing, roof painting, plinth protection, toilet repair, window frame replacement, and store and drainage system to add durability to the existing structure.



Figure 2: Existing Division Office, Damphu



Figure 3: Existing Range Office, Damphu

The re-electrification and maintenance work of Division & Range Office will be tendered through the government procurement system and the successful bidder will be awarded the maintenance cum re-electrification work based on the technical estimate prepared by the supervising engineer. The materials and specifications as per BoQ (bill of quantities) will be followed and strictly monitored during the construction phase.

The resource for the construction activity includes electrical wires, cashing taping, sands and stones, aggregates, cement, paints, varnishes, screws, nails, timber, cement, etc., which the contractor will purchase for the work. For the re-electrification and maintenance of the Offices, the contractor will be engaging 3-5 skilled workers mainly carpenters, masons, plumbers, and

electricians. The contractor will not be allocated an appropriate site for the construction of temporary huts, toilet, and bathrooms for the workers and site for storage of construction materials as the existing facility will be utilized. The water for the construction work and for the workers will be taken from the existing water connection of the existing infrastructure (Division HQ, Tsirang).

Some of the potential environmental and social impacts could be the following:

- a. Waste generated from the maintenance site
- b. Noise and dust pollution
- c. Occupational health and safety of the workers and office goes
- d. Disturbance to the office during maintenance work

3.2 Revival of waterhole/Lake at Darachu, Patshaling

Budget: Nu. 485,000 (Four hundred and Eighty-Five thousand)

Implementation period: July 2025 to June 2026

Location: Darachu, Patshalingtoed

Geog: Patshaling

Dzongkhag: Tsirang



Figure 4: Overview of water hole at Darachu, Patshaling

The activity involves the revival of the drying-up lake at Darachu, the drying of Darachu lake has been in the social media and attention is solicited for the revival of the lake in question. Given the importance of the lake for wildlife for drinking water and also a site for ecotourism development due to its ideal location, the revival activity is taken up.

As a part of activity, the revival of waterhole/lake at Darachu, Pathsaling will be carried out. The activity pertains to clearing of sediment loads from the drying-up lake, uprooting water plants and weeds, removal of soil to allow water to accumulate during the rainy season. One side of the lake needs a retention bund/wall constructed. As the lake is filled with sediments, the surface runoff water easily drains out as it freely flows. The activity is intended to collect surface runoff from the catchment to store water for wild animals and also for recharging

springs originating from the lake. A vegetative check dam will be constructed just above the existing structure (lake) to prevent siltation.

The chosen location /site is a crucial wildlife habitat and is in forested land; there is water scarcity in the selected site and it is seen as wild animal foraging area as it falls within the state forest land inside BC3, Tsirang. There is a scope to revive this lake by construction of bund and clearing of debris, and sediments load from the lake. Around 1.5 acres is still marshy land and water inside and on the surface is full of sediment loads and grasses.

The revival of Lake/water hole at Darachu will be tendered through the government procurement system and the successful bidder will be awarded the construction work based on the technical estimate prepared by the supervising engineer. The materials and specifications as per BoQ (bill of quantities) will be followed and strictly monitored during the construction phase. The Resource for the revival of Darachu includes JBC for removal of siltation, spade and other soil removing tools. Around 1 TL of sand, ½ TL of aggregates and 2 TL of soil is expected to be used, which the contractor will purchase for the work. The contractor will be engaging 7-8 workers (mostly locals) for the work.

Some of the potential environmental and social impacts could be the following:

- a. Generation of waste (debris and sediments from the lake)
- b. Occupational health and safety of workers
- c. Risk of increased poaching of wildlife, due to the site improvement and ultimately more wildlife visiting the water hole/lake
- d. Risk of disturbance to the flora and fauna diversity in the lake.

3.3 Nursery Management: Nursery Development and Seedlings Production at Divisional Nursery

Budget: Nu. 210,000/-

Implementation period: July 2025 to June 2026

Location: Damphu/Divisional Nursery

Geog: Kikorthang

Dzongkhag: Tsirang

As a part of this activity, maintenance of nursery and seedlings production at the Divisional Forest Nursery at Damphu will be carried out. The existing nursery will be used for seedlings production and the major works pertain to the purchase of poly pot, flexible pipes, rose cans, other nursery tools, green net, leaf moulds, topsoil, sand and tree seeds.

The chosen location /site is located within the Division nursery which is centrally located and there is existing infrastructure available for maintenance and seedlings production. The existing Divisional nursery site is located with a favourable climate where seedlings of a variety of species will be raised to meet the needs of various types of plantations. Around 5,000 tree nursery seedlings will be raised for various type of plantations: Community plantations, afforestation, schools and institutions. No import of exotic seeds will be done, and only local and endemic seedlings such as *Michelia doltsopha*, *bamboo*, *Phoebe spp*, *Terminalia spp*, *Gmelina arborea*, *Chroespondias axillaries*, *Persea fructifera*, etc. will be raised.

The nursery has an approach road connected with existing nursery beds, which makes seedling production work easy viz transportation of leaf moulds, sand and topsoil. This approach road will

also be used while disposing of seedlings to planting sites. The Nursery management and seedlings production is governed by Norms and Standards 2020 and the Forest Management codes of Bhutan.



Figure 4: Existing Nursery at Division compound, Damphu

Around 2 to 3 part time workers will be engaged in poly pot filling, seed sowing, weeding, and cleaning of nursery beds. There will not be any accommodation requirement for the nursery laborers as they will be engaged from locals who reside in their own houses.

Some of the potential environmental and social impacts could be the following:

- a. Risk of disturbance to the habitat during leaf molds and topsoil collection
- b. Safety of workers during maintenance work

4. Mitigation Measures for Environmental and Social Impacts

Potential impact	Impact scale	Proposed mitigation measures	Responsible Party	Costs (million)
Activity 4.1: Maintenance and re-electrification of Div Hq, Tsirang Forest Division and Range Office Tsirang				Nu. 900,000
Noise & dust pollution: Possible noise and dust pollution as a result of outdoor /indoor equipment usage and transportation of materials at the construction site	Short term minor	• Pre-construction: Requirements to limit noise & dust pollution should be included in the bidding documents as a precondition for the contractor's selection • Noise screening at construction site as part of bidding document • During the construction: The construction work should not be permitted during the nights, the operations on site shall be restricted to the hours 7am—7pm • Vehicles that are excessively noisy shall not be operated until corrective measures have been taken; • Earplugs and protecting devices shall be provided to workers on site if necessary • Minimize noise disturbance to the office by providing screening nets/CGI sheets at the construction site • Construction materials should be stored in appropriate and covered places to minimize dust • Workers should wear protective masks if dust appears;	BFL focal person (BC 3), Adm Div HQ, RO Tsirang and Contactor	To be part of contract agreement from the activity cost.
Waste: generation of waste as a result of construction/maintenance activities	Short term minor	• Pre-construction: requirements for appropriate waste management should be included in the bidding documents, as a precondition for the contractor's selection • During construction: • Proper containers/waste bins should be provided at the project site; • Dumping of waste on the sides of the road, office campus/ or on private land, or in other non-designated places should be prohibited;	BFL focal person (BC 3), Adm Div HQ, RO Tsirang and Contactor	To be part of contract agreement from the activity cost.

		• Dumping of waste shall be prohibited on fragile slopes, forests, religious or other culturally sensitive areas or areas • Collection, transportation and final disposal of all waste should be carried out on a daily basis and not left in the office premises • All construction materials should be covered during transportation to avoid waste dispersion • Burning of construction waste should be prohibited. • After the construction: • All waste shall be removed from the project site. • Waste should be disposed of through the municipal waste van		
Workers' health and safety	Short term minor	• Comply with the workers' health and safety guidelines • Access to health facilities for the workers pre and during construction activities need to be available and ensure first aid kit is available at construction site all the time- Basic health unit (BHU)/hospital needs to be available in walkable distance or the workers need to be checked once in a month by authorized medical doctor. • 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. • Implement a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns- the workers with grievances shall report in their grievance to Primary Grievance Officer/Secondary Grievance Officer/ Range Officer Tsirang/ Division HQ Damphu. All workers shall be briefed about the GRM before starting the work.	BFL focal person (BC 3), Adm Div HQ, RO Tsirang and Contactor	To be part of contract agreement from the activity cost.

Disturbance: Disturbance to the office during maintenance work	Short-term minor	- Noise screening at the construction site as part of bidding document - Restrict working hours during weekends and after 5 pm - To avoid disturbance to public service delivery, work from home may be considered - Public service delivery to be addressed through online	BFL focal person (BC 3), Adm Div HQ, RO Tsirang and Contactor	To be part of a contract agreement from the activity cost.
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Potential impact	Impact scale	Proposed Mitigation Measures	Responsible Party	Costs (million)
Activity 4. 2: Revival of waterhole/lake at Darachu, Patshaling				Nu. 485,000
Waste: generation of waste as a result of construction activities	Short term minor	Pre-construction: requirements for appropriate waste management should be included in the bidding documents, as a precondition for the contractor's selection During construction: Ensure that workers' camps are located away from existing stream, river, or water sources, and that no discharge from camps is made into nearby water bodies; - 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 should be prohibited; - Dumping of waste shall be prohibited on fragile slopes, forests, religious or other culturally sensitive areas - Collection, transportation and final disposal of all waste should be carried out on a daily basis and not left in the protected areas - All construction materials should be covered during the transportation to avoid waste dispersion - Burning of construction waste should be prohibited. After the construction: All waste shall be removed from the project site.	BFL focal person (BC 3), RO, Mendrelgang and contractor	To be part of contract agreement from the activity cost.

Risk of disturbance to flora and fauna diversity in the lake as a result of lake cleaning and construction work	Short term minor	• Pre-construction: Requirements for appropriate measures to prevent water contamination should be included in the bidding documents as a precondition for the contractor's selection • During the construction: An environment-friendly bioengineering and retaining bund to avoid disturbances to flora and fauna in the lake • Open defecation in the vicinity of lake and project sites should be prohibited • Use environment-friendly materials like cuttings and vegetative propagation materials to prevent siltation and soil erosion • Regularly monitor and patrol the sites	BFL focal person (BC 3), RO, Mendrelgang and contractor	To be part of contract agreement from the activity cost.
Workers' health and safety	Short term minor	• Comply with the workers' health and safety guidelines • Access to health facilities for workers during and before construction activities needs to be available, and a first aid kit must always be available at the construction site. • Ensure decent work conditions, including appropriate safety gears such as gumboots, mask, helmets, jackets, accommodation and other essential amenities as per the Operational Health and Safety Guidelines are available for workers. • Implement a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns- the worker with a grievance shall report in their grievance to Primary Grievance Officer/Secondary Grievance Officer/ Range Officer Tsirang/ Division HQ Damphu. All workers shall be briefed about the GRM before the starting the work.	BFL focal person (BC 3), RO, Mendrelgang and contractor	To be part of contract agreement from the activity cost.
Risk of poaching wildlife: The water hole site will become a hotspot for wild animal	Long term	• Increase frequency of patrolling during and after the revival of lake/water hole • Install camera trap to see illegal poaching and wildlife movement	BFL focal person (BC 3), RO, Mendrelgang and contractor	To be part of contract agreement from the activity cost.

gathering, thereby risk of poaching by hunters				
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Potential impact	Impact scale	Proposed Mitigation Measures	Responsible Party	Costs (million)
Activity 4.3: Nursery management: Nursery development and seedlings production at Divisional Nursery, Damphu				Nu.210,000
Risk of disturbance to the habitat during leaf molds and top soil collection	Short term minor	• Leaf mould collection should be carried out in an environmentally friendly manner • Workers should be guided to prevent the uprooting of seedlings/saplings from the topsoil and leaf mould collection site • Monitor and supervise the soil and humus collection to reduce negative environmental impact	BFL focal person (BC 3), RO, Tsirangr	Based on Norms and standards
Workers' health and safety	Short term minor	• Comply with the workers' health and safety guidelines • Access to health facilities for the workers pre and during nursery maintenance activities need to be available, • Ensure decent work conditions, including appropriate safety gears like gloves, masks and boots and other essential amenities as per the Operational Health and Safety Guidelines are available for workers. • Implement a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns- the worker with a grievance shall report in their grievance to Primary Grievance Officer/Secondary Grievance Officer/ Range Officer Tsirang/ Division HQ Damphu. All workers shall be briefed about the GRM before starting the work.	BFL focal person (BC 3), RO, Tsirangr	Based on Norms and standards

5. ESMP Implementation Arrangements

The implementation of project activities (Re-electrification and maintenance of Div Hq, Divisional Forest Office, re-electrification and maintenance of Range Office, Damphu, Tsirang and revival of waterhole/lake at Darachu, Patshaling, Tsirang) will be carried out by the BFL focal person in BC 3. The focal person will be responsible for compliance with 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 PA will sign with the Contractor(s) for implementation of the planned activities in BC 3 in 2025 and 2026. The Contractor 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 OHS plans, etc.). An OHS information session should be organized by the Contractor for all workers prior to the start of the project activities and prior to any specific tasks with high health risks following Covid protocol and safety measures.

The nursery management and seedlings at Divisional nursery at Damphu will be carried out by the Nursery and plantation focal of Tsirang Range and Norms and standards for Nursery and plantation 2020 will be followed for nursery seedlings production.

For the Re-electrification and maintenance of Division and Range Office, Tsirang and Revival of water holes Darachu, the BC 3 Supervising Engineer needs to monitor the implementation of proposed measures by the Contractor and Contractor's subcontractors with visual checking, reviewing the records of evidence that the measures have been applied and asking the Contractor to apply the measures as soon as possible. Non-compliances should be recorded and the Report on any non-compliance should be reported to the ESS expert at PCU immediately, and the ESS expert will report it to the PCU (M&E Officer). Each non-compliance should be closed with appropriate measure/s and the evidence should be kept.

Disbursement of project funds to the PA will be contingent upon their full compliance with the safeguards requirements.

6. ESMP Monitoring Arrangements

Protocol for monitoring of activities under this ESMP will be carried out as follow;

Sl#	Activities	Monitoring team	Timeline		Location	Means of Verification
			Start	Complete		
1	6.1 Maintenance and re-electrification of Div Hq, & Range Office, Tsirang	Field Focal	July 2025	June 2026	Damphu, Tsirang	Work progress report, MoV as per updated Impact and mitigation in placed
		ESS focal	April 2026	April 2026		
		BFLS	Dec 2025	June 2026		

2	Activity 6.2: Revival of waterhole/Lake at Darachu, Patshaling	Field Focal	July 2025	June 2026	Darachu, Patshaling toed, Patshaling	Work progress report, MoV as per updated Impact and mitigation in placed
		ESS focal	April 2026	April 2026		
		BFLS	Dec 2025	June 2026		
3	Activity 6.3: Nursery Management: Nursery development and seedlings Production at Division nursery	Field Focal	July 2025	June 2026	Damphu, Tsirang	Work progress report, MoV as per updated Impact and mitigation in placed
		ESS focal	April 2026	April 2026		
		BFLS	Dec 2025	June 2026		

The BFL focal person in BC 3 will closely monitor the implementation of all planned activities and the required mitigation measures, and ensure that they fully comply with this ESMP and with the terms and conditions included in the environment clearances issued by RGoB's national authorities. BC 3 PA is also fully responsible for the compliance of all external contractors and service providers working in the BC 3 with the safeguards requirements outlined in the ESMP.

Frequency of Monitoring by various BFL Offices:

Activity 1: Maintenance & re-electrification of Div Hq, Divisional Forest Office & Range Office, Tsirang

- Monitoring by implementing entities: during the intervention and then monthly as part of the compliance monitoring – monthly starting July 2025. Reports by the implementing entities submitted to ESS consultants on a monthly basis during the intervention till completion June 2026.
- Monitoring by ESS consultants: Twice during the construction phase (October 2025 and June 2026)
- Reports by ESS consultants to the PCU (M&E officer) within two weeks after the field visit and for semi-annual reporting- 15th October 2025 and 15th June 2026.
- Quarterly reports by PCU (M&E officer) to Secretariat: 20 Dec 2025
- Bi-annual reports of the Secretariat to WWF US (as part of mid-year and final APRs)- 30 Dec 2025 and June 2026

Activity 2: Revival of waterhole/lake at Darachu, Patshaling toed Tsirang

- Monitoring by implementing entities: during the intervention and then monthly as part of the compliance monitoring – monthly starting July 2025. Reports by the implementing entities submitted to ESS consultants on monthly basis during the intervention till completion June 2026.
- Monitoring by ESS consultants: Twice during the construction phase (October 2025 and June 2026)
- Reports by ESS consultants to the PCU (M&E officer) within two weeks after the field visit and for semi-annual reporting- 15th October 2025 and 15th June 2026.
- Quarterly reports by PCU (M&E officer) to Secretariat: 20 Dec 2025

- Bi-annual reports of the Secretariat to WWF US (as part of mid-year and final APRs)- 30 Dec 2025 and June 2026

Activity 3: Nursery Management: Nursery development and seedlings production at Damphu, Tsirang

- Monitoring by implementing entities: during the intervention and then monthly as part of the compliance monitoring – monthly starting July 2025. Reports by the implementing entities submitted to ESS consultants on monthly basis during the intervention till the completion June 2026.
- Monitoring by ESS consultants: Twice during the construction phase (October 2025 and June 2026)
- Reports by ESS consultants to the PCU (M&E officer) within two weeks after the field visit and for semi-annual reporting- 15th October 2025 and 15th June 2026.
- Quarterly reports by PCU (M&E officer) to Secretariat: 20 Dec 2025
- Bi-annual reports of the Secretariat to WWF US (as part of mid-year and final APRs)- 30 Dec 2025 and June 2026

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.

Activities under this ESMP will be implemented by the BFL focal person, supervising engineer, and a contractor. The budget for re-electrification and maintenance of Division Hq. Tsirang Forest Division and Range Office, Tsirang is scheduled as per the BFL activity plan in the 7th year 2025. The budget for the activity is estimated Nu 900,000 (450,000 for Div Hq and 450,000 for Tsirang Range Office. Prior to tendering, Dzongkhag Engineering sector will come up with revised estimate following BSCR 2024.

The Budget for the revival of the waterhole/lake at Darachu is scheduled as per the BFL activity plan in the year 7 & 8 2025-2026). The budget for the activity is estimated at Nu. 485,000.

The budget for nursery management and seedling production is estimate Nu 60,000 for raising 5,000 seedlings at Division Nursery, Damphu and the work is scheduled in the year 7 & 8 (2025-2026).

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

Sl#	Activity	Amount (Nu.)	Budget for ESS mitigation
1	Maintenance & Re-electrification and maintenance of Division Hq, Tsirang and Range Office Tsirang	900,000	To be part of contract agreement from the activity cost
2	Revival of Waterhole/Lake at Darachu, Patshalingtoed, Tsirang	485,000	To be part of contract agreement from the activity cost

3	Nursery Management: Nursery development and seedlings production at Divisional Nursery at Damphu	210,000	Based on Norms & Standards for Nursery and Plantation 2020
	Total	1,445,000	

8. Consultation and Disclosure Mechanisms

This ESMP which is being prepared, for the renovation and maintenance of Division Hq and Range Office, Tsirang, revival of waterhole/lake at Darachu, Patshaling and nursery seedlings production at Damphu, will be shared with relevant stakeholders namely the community residing near the construction site, and local government (Dzongkhag & Kikorthang Geog and Patshaling Tsirang) will be consulted in a participatory manner. The community and LGs will be discussed with on the planned activities, solicits their opinions, impact and mitigation measures in placed so as to avoid any complication in future.

The tentative public consultation is scheduled as follows: Any issues raised during the consultation meeting will be documented and appropriate mitigation measures will be addressed.

Sl no	Activity	Tentative public consultation schedule	Venue
1	Maintenance & re-electrification of Div. Hq and Range Office	1 st week of August, 2025	Bamboo House, Damphu, Tsirang
2	Revival of the waterhole/lake at Darachu	2nd week of September 2025	Patshalingtoed, Patshaling, Tsirang
3	Nursery Management: Nursery development and seedling production at Divisional nursery, Damphu	2nd week of September, 2025	Bamboo House, Damphu, Tsirang

9. Stakeholder Engagement Plan

The local community that resides in the vicinity of the planned BFL activity adjoining BC3 will be engaged throughout the implementation of the construction and infrastructure development (Re-electrification and maintenance Division & Range Office, Revival of water hole at Darachu & nursery seedling production). Since the proposed construction activity is planned outside the BC 3, the LGs and local communities residing around the construction site will be consulted on the planned activity that will be implemented in 2025 & 2026.

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>.

Annexure I- 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) 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.
- 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 shall 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.

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 check 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 passersby, 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 over glasses 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' accommodation

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.

3. 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.
4. 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.
 5. 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.
 6. 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.
 7. 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.
 8. Cooking and laundry facilities
 9. 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)
19. A supply of suitable splint

Annexure II- BFL specific GRM Brochure



HOW TO FILE YOUR COMPLAINT

To file your complaint, please contact any of the designated individuals provided below. You may maintain anonymity if you prefer.

BFL FOCAL

- Chhimi Dorji
- 17994373
- chhimidorji@moenr.gov.bt
- Tsirang Division Office, Damphu, Tsirang

MENDREL GANG RANGE OFFICE

- Gempa
- 17995648
- rubjibgempa@gmail.com
- Mendrelgang Range Office, Tsirang

DAMPHU RANGE OFFICE

- Shacha Dorji
- 17688295
- sachad@moenr.gov.bt
- Tsirang Range Office, Damphu, Tsirang

YOU MAY ALSO CONTACT THE BFL PROJECT COORDINATION UNIT (PCU) OR FUND SECRETARIAT (FS) AT:

BFL FUND SECRETARIAT (FS)

- Kuenzang Tobgay
- 17750414
- kuenzangtobgay@bfl.org.bt
- Bhutan For Life Fund Secretariat, Royal Textile Academy, Thimphu

BFL PROJECT COORDINATION UNIT (PCU)

- Ugyen Dechen
- 17491881
- bflprojectofficer@gmail.com
- BFL Project Coordination Unit, Department of Forests and Park Services, Ministry of Energy and Natural Resources, Thapa, Thimphu

IF YOU ARE NOT COMFORTABLE FILING YOUR COMPLAINTS AT PROTECTED AREA OFFICES, YOU MAY ALSO FILE YOUR COMPLAINTS AT THE NEAREST FOLLOWING GEWOG OFFICE:

Mendrelgang Gewog - 17653551

IF THE NATIONAL PROCESS OF GRM IS UNABLE TO RESOLVE THE GRIEVANCE, COMPLAINTS MAY ALSO BE FILED WITH WORLD WILDLIFE FUND (WWF).

Write to the WWF GCF Accredited entity at:

SafeguardsComplaint@wwfus.org
Project Complaints Officer, Safeguards Complaints,
World Wildlife Fund 1250 24th Street NW Washington,
DC 20037

COMPLAINTS MAY ALSO BE FILED WITH GCF INDEPENDENT REDRESS MECHANISM (IRM) OPTION. COMPLAINT CAN BE FILED BY:

- Sending it by mail or email at irm@gcfund.org
- Sending a voice or video recording
- Filling out the online complaints form available at:
<https://gcf.isight.com/external/case/new/group=Complaint>

A complaint for IRM should generally include:

- Name, address and contact information
- A description of the programme (caused adverse impacts to the complainant)
- A description of how the complainants have been/maybe adversely impacted by the project/programme
- Whether confidentiality is being requested and the reasons for it.

COMPLAINTS MAY ALSO BE FILED WITH THE WWF THIRD PARTY GRIEVANCE REPORTING MECHANISM BY USING ETHICS POINT WEBSITE AT:

<https://secure.ethicspoint.com/domain/media/en/gui/59041/index.html>

This mechanism can receive reports online or by phone in multiple languages.

IF YOU ARE UNSATISFIED WITH THE COMPLAINT RESOLUTION PROCESS, YOU CAN APPEAL TO:

GRM Appeal Committee, Bhutan For Life Project,
DoFPS, Thimphu, Bhutan.