

འབྲུག་ཆེ་སློག་མ་དངུལ

Bhutan for Life

མཐའ་ལོར་གནས་སྤངས་དང་མི་སྡེའི་འཛིན་སྐྱོང་འཆར་གཞི།

Environmental and Social Management Plan for

སྒྲིལ་བར་ལམ་གསུམ་པ་ ༡ ཅི་རང་མངགས་སྡེ་ཡིག་ཚང་། ༢༠༢༦

Biological Corridor 03 (Tsirang) for 2026

བོད་ལྗོངས་བཅུད་དོན།

འབྲུག་ཆེ་སློག་མ་དངུལ་འདི་མཐའ་ལོར་གནས་སྤངས་དང་མི་སྡེའི་འོས་འབབ་ཅན་གྱི་ལས་འགུལ་གྱི་དབྱེ་ཁག (Category B)
ནང་ལུ་ཚུད་དེ་ཡོད་པ་ཡིན། དེ་ཡང་ལས་འགུལ་འདི་ལས་བརྟེན་ཏེ་སྤྱད་སྤྱོད་ས་ཁོངས་ནང་སྤྱད་མིའི་མི་སེར་དང་ ཡང་ན་
སྤྱད་སྤྱོད་ས་ཁོངས་ཀྱི་མཐའ་སྐོར་ཏེ་འཛོལ་སྤྱད་སྤྱོད་ས་ཁོངས་ལུ་བརྟེན་སྤྱད་མིའི་མི་སེར་ ཡང་ན་
གཤམ་ཅན་གྱི་མཐའ་སྐོར་གནས་སྤངས་ཀྱི་ས་ཁོངས་ཚུ་ལུ་གཞོན་པ་འབྱུང་ནིའི་ཉེན་ཁ་ཡོད་པ་ད་ གཤམ་སྤྱི་གཞོན་པ་འབྱུང་པ་ཅེན་
གཞོན་ཉེན་ཚུ་དམིགས་གསལ་ས་གནས་ནང་རྒྱུ་ཅིག་འབྱུང་ནི་དང་ གཞོན་ཉེན་མར་ཕབ་རྒྱབ་ནི་དང་ཕ་མེད་ཡང་གཏང་ཚུགས་པ་ཡིན།
དེ་འབད་ཕ་ལས་ འབྲུག་ཆེ་སློག་མ་དངུལ་ཐོག་ལུ་ རྒྱབ་སྐྱོར་འབད་ཡོད་པའི་ལས་འགུལ་དང་ལས་སྐྱུ་ཚུ་ མཐའ་ལོར་གནས་སྤངས་དང་
མི་སྡེ་གཉིས་ལུ་ཡུན་བརྟན་གྱི་ཕན་པ་ཡོད་པ་བཟོ་བ་གི་མ་ཆད་ འབྲུག་ཆེ་སློག་མ་དངུལ་གྱི་སྤྱི་བྱས་ལམ་སྟོན་དང་འབྲེལ་ཐབས་ལུ་
མཐའ་ལོར་གནས་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་འདི་དགོང་ད་ མི་དམངས་གྲོས་བསྟུན་དང་
དུས་དང་དུས་སུ་མི་དམངས་ལུ་གསང་བ་བཤད་ནི་འདི་དགོང་ཡིན།

སྒྲིལ་བར་ལམ་གསུམ་པ་ ཅི་རང་མངགས་སྡེ་ཡིག་ཚང་གི རང་བཞིན་གནས་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་
གླིང་ཀ་དང་སློག་ཆགས་རྒྱུན་ལམ་ཚུ་ནང་ལས་སྐྱུ་ཚུ་འབད་བའི་སྐབས་ ཐབས་ལམ་དང་བཟང་སྟོན་ཚུ་གསལ་སྟོན་འབད་ཕ་ཡིན་པ་ད་
འདི་ཡང་ལས་སྐྱུ་འདི་གདམ་སེལ་ལམ་ལུ་གསལ་དང་འབྲེལ་ཏེ་ཡིན། གདམ་སེལ་འབད་ཡོད་པའི་ལས་སྐྱུ་གི་ནང་ལས་
མཐའ་ལོར་གནས་སྤངས་དང་མི་སྡེ་ལུ་གཞོན་ཉེན་ཡོད་པའི་ལས་སྐྱུ་ཚུ་གི་དོན་ལུ་ མཐའ་ལོར་གནས་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་བཟོ་དགོ།
འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་ ལས་སྐྱུ་འགོ་མ་བཟུགས་པའི་ཉེ་མ་གཞི་བཟུགས་འབད་བའི་སྐབས་དང་མཇུག་བསྟུན་པ་ལུ་
མཐའ་ལོར་གནས་སྤངས་འཛིན་སྐྱོང་དང་གཞོན་ཉེན་མར་ཕབ་ཀྱི་ཐབས་ལམ་ཚུ་བཟུགས་དགོས་ཡིན། དེ་འབད་ཕ་ལས་འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་
ལས་སྐྱུ། མི་སྡེ། ལཱ་འགན། བན་སྟོན་དང་སྟན་ལུ། དེ་ལས་ལྟོགས་ལམ་ལུ་གསལ་ཚུ་གི་སྐོར་ལས་འགྲེལ་བཤད་ཁ་གསལ་ཚུད་དགོས་ཡིན།
འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་ལུ་ གཤམ་གཏོགས་འབད་དགོ་པའི་ཁེ་གཏང་ཡོད་མི་ཚུ་གི་ཉེན་ཁ་བཤད་ཚུ་ཚུད་དགོ་པའི་ཁར་
ཁེ་གཏང་ཡོད་པའི་མི་ཚུ་གི་དོན་ལུ་གཤམ་གཏོགས་འཆར་གཞི་དགོ། གཤམ་གཏོགས་འཆར་གཞི་འདི་ནང་
ཁེ་གཏང་ཡོད་མི་ངོས་འཛིན་འབད་ནི་དང་གཤམ་གཏོགས་འབད་ནིའི་ལམ་ལུ་གསལ་ དེ་ལས་གཤམ་གཏོགས་ཀྱི་དུས་ཚོད་དང་བཅའ་སྲིག་ཚུ་ཚུད་དགོས་ཡིན།
གླིང་ཀ་དང་སློག་ཆགས་རྒྱུན་ལམ་ཡིན་ཆང་ཚུ་གི་མཆར་གཞི་ལས་སྐྱུ་དང་འབྲེལ་ཏེ་ བན་སྟོན་དང་སྟན་ལུ། བསྐྱར་ཞིབ། ཅིས་དབྱེད་འབད་ནི། དེ་ལས་
མཐའ་ལོར་གནས་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་འདི་ལོ་བསྟར་བཞིན་དུ་མཐུན་བཟོ་དགོས་ཡིན།

སྒྲིལ་བར་ལམ་གསུམ་པ་ཅི་རང་མངགས་སྡེ་ཡིག་ཚང་གི་དོན་ལུ་ ༢༠༢༦ ནང་མཐའ་ལོར་གནས་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་དགོང་ཡོད་པའི་
ལས་སྐྱུ་ཚུ་ཡང་།

༡༽ རིན་ཐང་ཆེ་བའི་ཤིང་ཆས་རིགས་ཀྱི་ འཇུགས་སྐྱོང་དང་ལྷང་མ་བཟུགས་ནིའི་བཟོ་སྐྱུ་ན།

༢༽ སྤྱི་ཚུ་ཁར་ལུ་ རྒྱ་ཆར་ ལ གི་ཤིང་བཟུགས་ལས་རིམ།

Executive Summary

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

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

An Environmental and Social Management Plan (ESMP) for Biological Corridor (BC) 3, under Tsirang Forest Division describes mitigation measures/good practices at activity level which are required as per the screening protocol. All the screened activities which have 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 2026 under BC3 of Tsirang Forest Division are as follows:

1. Nursery management and seedling production of high value timber species
2. 5 Ha Plantation at Sirutar, BC3

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 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: BC 3

Geographical Location

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

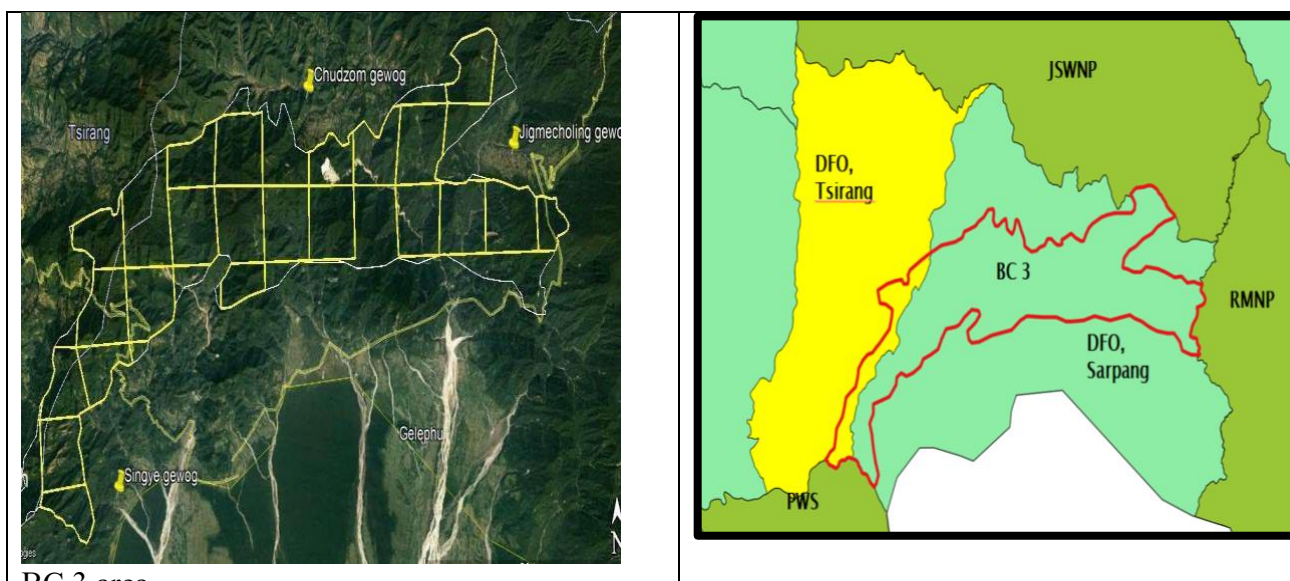


Figure 1; Location of BC3, BC 3 Tsirang-6329 ha, BC3 Sarpang- 34440 ha= total: 40,769 ha (407.69 km²)

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 receives monsoon rainfall only by the 2nd week of June every year. The rainfall is fed by the Southwest 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 vegetation growth and food for wildlife. The moisture loaded wind from the South get cooler and provides maximum rainfall in Darachu, Patshaling and Dunglagang Geog, while the rest of the Geogs in Tsirang receive less rainfall as they fall in the rain shadow area. BC 3 receives maximum rain in July, averaging more than 1000 mm and least rainfall in winter month (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 cover of BC 3 Tsirang is about 87.39 %. The main forest types of the BC 3 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 Dunlagang (23 household of Tsakaling chiwog under Patshaling Geog resides within 2km distance)] under Tsirang. A total of 1,664 households and 106 households in Sarpang and Tsirang respectively depend on BC-3.

People in Sarpang and Tsirang mostly speak Lhotsamkha, Sharchop and Dzongkha. Primary income sources for the public are from livestock and agriculture products. 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 FY 2026 and 2027 for Tsirang Dzongkhag

Activities that are planned in BC 3 in 2026 and 2027 are:

3.1.Nursery management and seedling production of high-value timber species

3.2.Creation of 5 ha bamboo plantation at Sirutar

3.1. Nursery Management and Seedling Production of High-Value Timber Species

Budget: Nu. 3,830,000/- (Three Million Eight Hundred and Thirty Thousand)

Implementation period: August 2026 to June 2027

Location: Damphu/Divisional Nursery (Geo coordinates: 27.014757° N, 90.121686° E)

Geog: Kikorthang

Dzongkhag: Tsirang

As part of the activity, maintenance of the 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 pertains to installation of facilities such as GSB (Granular Sub Base) road, construction of nursery store cum caretaker's house, green house, nursery materials (poly pot, flexible pipe, rose cans, other nursery tools, green net, leaf moulds, top soil, sand and tree seeds) and installation of sprinkle system.

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 additional infrastructure will be put in place for effective raising of nursery stocks. 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 15,000 high value timber species will be raised for various types of plantations: Community plantations, afforestation, schools and institutions.

The Nursery management and seedlings production is governed by Norms and Standards 2020 and the Forest Management codes of Bhutan. 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*, *Juglans regia* (walnut), *Ziziphys*



Figure 4: Existing Nursery at Division compound, Damphu

budhenensis (Rossary), *Quercus griffithii* (Oak) and *Bambusa balcooa* Thick-walled Bamboo 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. However, during the summertime it becomes muddy, wherein vehicles cannot reach the nursery site. This approach road will be made of a base course (Granular subbase). To provide modern amenities, a nursery store cum caretaker's house will be constructed, and a two-unit greenhouse and a sprinkler system will be put in place.

The construction of nursery store cum caretaker's house will be tendered through the government procurement system and the successful bidder will be awarded the construction of the infrastructure works 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 of store cum caretaker's house, GSB road includes electrical wires, sands and stones, aggregates, cement, paints, varnishes, screws, nails, timber, etc which the contractor will purchase for the work. For the construction of the infrastructure, the contractor will be engaging 5-7 skilled workers, mainly carpenters, masons, plumbers, and electricians.

In addition to the existing nursery caretaker, around 2 to 3 part-time workers will be engaged in poly pot filling, seed sowing, watering seedlings, weeding, and cleaning of nursery beds. There will not be any accommodation requirement for the nursery laborers as they will be engaged from local communities, who reside in their own houses.

The contractor will be allocated an appropriate site for the construction of temporary huts, toilets, and bathrooms for the workers and site for storage of construction materials. The water for the construction work and for the workers will be tapped from the existing water supply for the Divisional Forest Office, Tsirang.

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

- a. OHS-related risk during the construction of nursery store and caretaker's house
- b. Risk of disturbance to the habitat during leaf molds and topsoil collection
- c. Safety of workers during construction and maintenance work

3.2. Creation of 5 hectares bamboo plantation at Sirutar

Budget: Nu. 1,250,000/- (one million two hundred and fifty thousand)

Implementation period: August 2026 to June 2027

Location: Sirutar (2 ha below road 90.076431°, 27.053453) and 3 ha above road (90.076266°, 27.051994°)

Geog: Tsirangtoe

Dzongkhag: Tsirang

As a part of this activity, the 5 ha bamboo plantation will be established at Sirutar under Tsirangtoe Geog, Tsirang. The activity is for the plantation of high-value timber species – a constructional bamboo species *Bambusa balcoa* and it includes site clearance (removal of bushes and grasses), disposal of debris, alignment and stacking, fencing, pit digging and planting of bamboo seedlings. The activity also involves the procurement and transportation of planting materials namely barbed wire, nails, Unails, and plantation sign board.



Figure 5: Proposed 5 ha plantation at Sirutar above and below road

As a part of enrichment plantation, bamboo species (*Bambusa balcoa*, *Bambusa tulda* and *Dendrocalamus hamiltoni*) are identified species for commercial plantation by the Department in the 13 FYP. The site for the establishment of a 5 ha bamboo plantation has been identified at Sirutar above and below the national highway, 3 ha and 2 ha respectively. The creation of a bamboo plantation will be implemented in May-June 2027.

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

- Soil disturbance/soil erosion
- Waste generation
- Road safety hazard
- Workers' health and safety

4. Mitigation Measures for Environmental and Social Impacts

The following ESS and GESI mitigation measures are as per the approved ESS forms shared in the link ([Links for List of Approved ESS form for Year 8 BFL implementation](#)).

Potential impact	Impact scale	Proposed Mitigation Measures	Responsible Party	Costs (million)
Activity 4.1: Nursery Management and seedling production of high-value timber species at Damphu, Tsirang				Nu.3,830,000
Air and noise pollution	Short term minor	Pre-construction: - Requirements to limit emissions should be included in the bidding documents, as a precondition for the contractor's selection; During Construction: - Nursery store cum caretaker's house construction materials should be stored in appropriate and covered places to minimize dust; - Construction site and materials handling sites should be water-sprayed on dry and windy days; - Vehicle loads likely to emit dust need to be covered; - Workers should wear protective masks if dust appears; - Vehicle speed should be regulated within the construction site; - Nursery store cum caretaker's house construction site will be fenced with green net to prevent dust pollution; - All construction materials should be covered during transportation to avoid waste dispersion - Burning of construction waste should be prohibited.	BFL focal person (BC 3), Adm Div HQ, RO Tsirang and Contractor	To be part of contract agreement from the activity cost and based on norms and standards for plantation.
Risk of introducing forest pest and diseases and possible disturbance to the habitat	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, Tsirang	Based on Norms and standards for nursery and plantation

during leaf moulds and topsoil collection		The collected materials like leaf mould, topsoil and seeds will be treated prior to use in the nursery. This can include solarization (covering soil with plastic under sunlight for a few weeks), drying, or sieving to remove weed seeds to prevent pests and disease.		
Waste Management	Short term minor	- The wastes such as damaged polypot bags, bottles, plastics, etc shall be collected and disposed of in the waste bins, which later will be dumped at the designated dumping yard. - The workers/labourers shall be briefed to collect food waste wrappers, plastics and mineral water bottle etc., after the daily work - Burning of waste should be prohibited; - Dumping of waste on the nursery sites, or in other non-designated places will be prohibited. - All construction wastes such as broken bricks, plastics, bottles, glass, tin, CGI sheet, tiles, waste timbers and bamboos shall be removed from the project site and dumped at designated waste disposal site through the municipal waste van	BFL focal person (BC 3), RO, Tsirang	Based on Norms and standards for nursery and plantation
Workers' health and safety	Short term minor	- All OHS requirements shall be included in tender documents and signed agreement as part of contractor bidding document. - Bidding contractor shall comply with the workers' health and safety guidelines - The contractor shall provide decent living housing/camp at the construction site for the labourers - The contractor shall ensure safe drinking water will be tapped and provided - The contractor shall provide toilet facility for the workers at the construction site - The contractor and BC 3 Management shall ensure workers are provided with basic safety gears (boot, safety jacket, hand gloves, mask etc) at the construction site	BFL focal person (BC 3), RO, Tsirang	Based on Norms and standards for nursery and plantation

		• The Contractor shall make basic first Aid kits box available at the construction site with first aid kits such as detox, cotton wool, sterilized cotton wool, bandages, PCM, burnt ointment. • The contractor shall ensure that the labourers shall have access to health facilities pre and during construction activities as and when required. • Ensure that no under-age workers, or children are engaged; • Cautionary signboards displaying Occupational Health and Safety (OHS) information shall be installed at the construction site • Implement a grievance redressal mechanism for workers and maintain a proper registry; • Implement a grievance mechanism, all workers shall be briefed about the GRM before starting the work.		
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Potential impact	Impact scale	Proposed Mitigation Measures	Responsible Party	Costs (million)
Activity 4.2: Creation of 5 ha plantation at Sirutar				Nu.1.250M
Soil Disturbance/soil erosion	Short term Minor	• Proper lay out and alignment shall be carried out to prevent soil erosion. • Planting pits shall be constructed along the contour and not across the contour as part of soil and water conservation. • Mulching of planting pits shall be carried out with leaf mould and grass soil and water conservation measures on sloping areas will be adopted at the site. • Retain vegetation buffer strips of 15 meters from the river bank	BFL focal person (BC 3), plantation focal	Based on Norms and standards for nursery and plantation
Waste Management	Short term Minor	• The wastes such as damaged polypot bags, bottles, plastics, etc shall be collected and disposed of in the waste bins, which later shall be dumped at the designated dumping yard. • The workers/laborers shall be briefed to bring back the food waste wrappers, plastics and mineral water bottle etc. after the daily work	BFL focal person (BC 3), plantation focal	Based on Norms and standards for nursery and plantation

		• Burning of waste should be prohibited; • Dumping of waste on the sides of the road, on private land, or in other non-designated places will be prohibited.		
Road safety hazard	Short term Minor	• Come up with road safety plan: Appoint a supervisor for crossing the highway; • Store plantation materials and waste away from road and especially not for storage within 20–25 m of the highway edge; • Workers will be asked to wear high-visibility vests • Cautionary signboards displaying Occupational Health and Safety (OHS) information shall be installed at the plantation site/road crossing • Place warning signs for vehicles (“<i>Men at work, drive carefully</i>”) • Plantation labourers shall be briefed on safety measures while crossing the road • Commuters will be briefed to maintain speed along the stretch	BFL focal person (BC 3), Plantation focal	Based on Norms and standards for nursery and plantation
Invasive potential of bamboo species	Short term Minor	• The specific high value constructional bamboo species (like <i>Dendrocalamus hamiltonii</i>, <i>Bambusa tulda</i>, or <i>Bambusa balcooa</i>) to be planted must be verified with the DoFPS to confirm that the chosen species is not invasive and Avoid species with a known history of invasiveness in similar climatic zones.	BFL focal person (BC 3), Plantation focal	Based on Norms and standards for nursery and plantation
Workers’ Health and Safety: (Refer to the full OHS guidelines attached wherever relevant)	Short-term Minor	• Comply with the workers’ health and safety guidelines of BFL and Pre-work orientation shall be carried out to plantation labourers on possible remedial measures against snake bite, heat stress, safe tool use • Plantation workers shall be advocated and instructed to comply with basic safety gears such as gum boot, long sleeve shirts, trouser jackets & Ensure that no underage workers, or children are engaged in plantation. • Basic first Aid kits box shall be made available at the plantation site such as detox, cotton wool, sterilized cotton wool, bandages, PCM, burnt ointment, insect repellent). • Ensure that the workers are employed on the principle of equal opportunity and fair treatment, and there is no discrimination concerning any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits),	BFL focal person (BC 3), Plantation focal	Based on Norms and standards for nursery and plantation

		working conditions and terms of employment, termination of employment, and disciplinary practices. ● Ensure a GRM for the workers is in place and maintain a registry		
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5. ESMP Implementation Arrangements

The implementation of project activities Nursery Management and production of high value timber species Damphu, Tsirang; and creation of 5 ha bamboo plantation at Sirutar 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 2026 and 2027. **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 start the project activities and prior any specific tasks with high health risks following Covid protocol and safety measures.**

The nursery management and seedlings at the 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. The works related to the construction of the nursery store, caretaker's house and GSB road construction, the BC 3 supervising engineer/site engineer needs to monitor the implementation of proposed safeguard measures by the contractor.

The creation of 5 ha bamboo plantation at Sirutar will be carried out by nursery and plantation focal of Tsirang Forest Division through community contract following the norms and standards for nurseries and plantations of Bhutan. 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	Activity 6.2: Nursery Management and seedlings Production of high value timber species at Damphu	Field Focal: Range Officer Tsirang and Plantation focal	August 2026	June 2027	Damphu, Tsirang	Work progress report, MoV as per updated impact and mitigation in place
		ESS focal: BFL Focal, DFO Tsirang Plantation head	Oct 2026	June 2027		
		PCU: ESS & GESI Officer, M&E Officer	August 2026	September 2026		
2	Activity 6.3: Creation of 5 ha plantation Sirutar	Field Focal: Range Officer Tsirang and Plantation focal	August 2026	June 2027	Sirutar, Tsirang	Work progress report, MoV as per updated Impact and mitigation in placed
		ESS focal: BFL Focal, DFO Tsirang Plantation head	August 2026	June 2027		
		PCU: ESS & GESI Officer, M&E Officer	Sept 2026	October 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.

Activity 1: Nursery Management and seedling production of high value timber species at Damphu, Tsirang

- Monitoring by implementing entities: during the intervention and then monthly as part of the compliance monitoring – monthly starting August 2026. Reports by the implementing entities submitted to ESS consultants on monthly basis during the intervention till the completion in June 2027.
- Monitoring by ESS consultants: Twice during the construction phase (October 2026 and June 2027)
- Reports by ESS consultants to the PCU (M&E officer) within two weeks after the field visit and for semi-annual reporting- 15th October 2026 and 15th June 2027.
- Quarterly reports by PCU (M&E officer) to Secretariat: 20 Dec 2026

- Bi-annual reports of the Secretariat to WWF US (as part of mid-year and final APRs)- 30 Dec 2026 and June 2027

Activity 2: Creation of 5 ha plantation at Sirutar

- Monitoring by implementing entities: during the intervention and then monthly as part of the compliance monitoring – monthly starting August 2026. Reports by the implementing entities submitted to ESS consultants on quarterly basis during the intervention till the completion in June 2027.
- Monitoring by ESS consultants: Twice during the construction phase (October 2026 and June 2027)
- Reports by ESS consultants to the PCU (M&E officer) within two weeks after the field visit and for semi-annual reporting- 15th October 2026 and 15th June 2027.
- Quarterly reports by PCU (M&E officer) to Secretariat: 20 Dec 2026
- Bi-annual reports of the Secretariat to WWF US (as part of mid-year and final APRs)- 30 Dec 2026 and June 2027.

7. Capacity Need and Budget

Activities under this ESMP will be implemented by the BFL focal person, supervising engineer/staff, and a contractor who 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 nursery management and seedling production of high value timber species is estimated at Nu 3,830,000 for raising 15,000 nursery seedlings at Division Nursery, Damphu and the work is scheduled in the years 8 & 9 of project (2026-2027).

The budget for creation of 5 ha bamboo plantation is estimated Nu 1250,000/-

Sl#	Activity	Amount (Nu.)	Budget for ESS mitigation
1	Nursery Management and seedlings production of high value timber species at Divisional Nursery at Damphu	3,830,000	Based on Norms & Standards for Nursery and Plantation 2020 and to be part of the contract agreement from the activity cost
2	Creation of 5 ha bamboo plantation at Sirutar	1,250,000	Based on Norms & Standards for Nursery and Plantation 2020
	Total	10,833,736	

8. Consultation and Disclosure Mechanisms

This ESMP which is being prepared for the 1) Nursery management and seedling production of high value timber species at Damphu; 2) Creation of 5 ha bamboo plantation at Sirutar, will be shared with relevant stakeholders namely the community residing near the construction site, and local government (LGs - Dzongkhag & Kikorthang Tsirang and Barshong Geog, Tsirang) will be consulted in a participatory manner. The community and LGs will be consulted on the planned activities, solicited for their opinions, will have a chance to provide feedback on impacts and mitigation measures in place, so as to avoid any complication in the 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	Nursery Management and seedling production of high value timber species at Divisional Nursery, Damphu	2nd week of September, 2026	Bamboo House, Damphu, Tsirang
2	Creation of 5 ha bamboo plantation at Sirutar	1st week of October 2026	Sirutar, Tsirangtoe

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 for

1. Nursery Management and seedling production of high value timber species at Divisional Nursery, Damphu
- 2.. Creation of 5 ha bamboo plantation at Sirutar 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 2026 & 2027. Refer to the stakeholder consultation schedule for each activity in the table above.

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 Annexure II 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>.

11. Certification of Mitigation Measures and Approvals for ESMPs

This section serves to clarify that the Environmental and Social Management Plan (ESMP) and its associated mitigation measures are fully compliant with the BFL Environmental and Social Management Framework (ESMF) and have undergone the intensive review and approval process.

All the mitigation measures, environmental and social management prescriptions, and good practices outlined in this ESMP are based on the following approved documentation:

1. **Screening and Scoping Tools (SST):** The identification of potential impacts and subsequent mitigation measures are derived from the approved SST submitted to the PCU by IAs and approved by ESS & GESI experts in a WWF-US AE team.
2. **Site-specific template and endorsement from implementing agencies (IAs):** all mitigation actions are formulated as per the approved SST, ensuring they are mitigation prescriptions that are site-specific and relevant to the planned activities and are further endorsed from IAs for implementation.

This ESMP is hereby certified for implementation. All parties involved in the execution of the project activities are obligated to perform all proposed preventive and mitigation measures as detailed in the plan, and compliance with these measures is the prerequisite for the disbursement of project funds.

ESMP prepared by (IAs)



Name: K.N Ghimeray

Title: BC3 Tsirang Focal/Sr Forest Ranger

Date: 5.5.2026

ESMP Reviewed by (PCU):

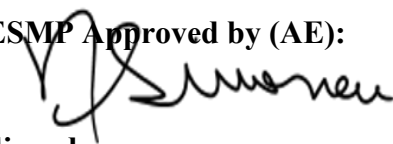


Name: Ugyen Dechen

Title: Project Officer

Date: 25th June 2026

ESMP Approved by (AE):



Signed:

Name: Nathalie Simoneau

Title: Senior Director – Gender, Social Inclusion & Safeguards

Date: June 30, 2026

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 stall be not more than 200m from any working place.
- First aid kits include all equipment outlined in Annex 1 to these Guidelines.
- Remote sites should have written emergency procedures in place for dealing with cases of trauma or serious illness up to the point at which patient care can be transferred to an appropriate medical facility.

Work Uniform

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

Air Supply

- Sufficient fresh air should be supplied for indoor and confined workspaces. Factors to be considered in ventilation design include physical activity, substances in use, and process related emissions. Air distribution systems should be designed so as not to expose workers to draughts.

- Re-circulation of contaminated air is not acceptable. Heating, ventilation and air conditioning (HVAC) systems should be equipped, maintained and operated so as to prevent growth and spreading of disease agents (e.g. *Legionella pneumophila*) or breeding of vectors (e.g. mosquitoes and flies) of public health concern.

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 of 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 in 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 masks. 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 a complete set of protective wear.
- Do not wear loose clothing, such as overhang shirts, jackets, mufflers etc.
- Tuck shirt and jacket well.
- Secure helmet with belt under the chin.
- Tuck the bottom sleeves of the trousers 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 the 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

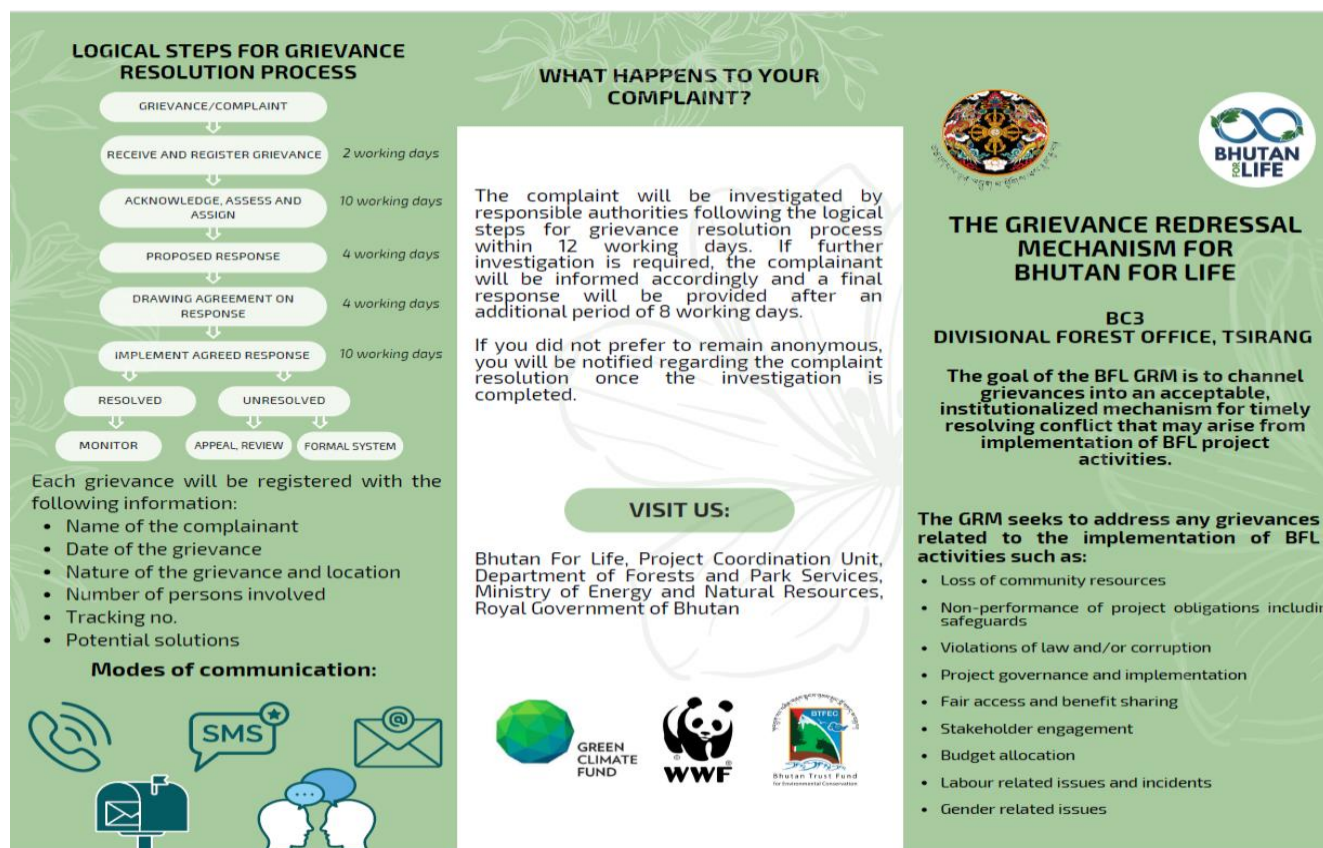
- A separate bed is provided for every worker.
- The practice of “hot-bedding” is prohibited.
- There is a minimum space of 1 meter between beds.
- The use of double deck bunks is minimized.
- If double deck bunks are in use, there is enough clear space between the lower and upper bunk of the bed.

- Workers are provided with comfortable mattresses. Workers may be expected to use their own pillows and bed linens.
 - Workers wash bed linen frequently and apply it 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 of 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

- Kharananda GHimeray
- 17645692
- ghimirey.kharananda@gmail.com
- Tsirang Division Office, Damphu, Tsirang

TSIRANG 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, Taba, 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:

Kikorthang Gewog - 17425696

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/may be 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.