

འབྲུག་ཆེ་སློག་མ་དངུལ།
 Bhutan for Life
 མཐའ་ལོའ་ཁན་སྤངས་དང་མི་སྡེའི་འཛིན་སྐྱོང་འཆར་གཞི།
Environmental and Social Management Plan for
སྤྱན་བར་ལམ་གཉིས་པ་ གྲྲ་བ་འདུས་མངགས་ལྗེ་ཡིག་ཚང་། ༢༠༢༦
Biological Corridor 2 (Wangdue) for 2026
 བོད་ཁྱབ་བརྩུ་དོན།

འབྲུག་ཆེ་སློག་མ་དངུལ་འདི་མཐའ་ལོའ་ཁན་སྤངས་དང་མི་སྡེའི་འོས་འབབ་ཅན་གྱི་ལས་འགུལ་གྱི་དབྱེ་ཁག་ལ་པ་ (Category B) རང་ལུ་ཚུད་དེ་ཡོད་པ་ཡིན། དེ་ཡང་ལས་འགུལ་འདི་ལས་བརྟེན་ཏེ་སྤངས་སྤོངས་ཁོངས་ནང་སྤྱོད་མེད་མི་སེར་དང་ཡང་ན་སྤངས་སྤོངས་ཁོངས་ཀྱི་མཐའ་སྐོར་ཏེ་འཛོལ་སྤངས་སྤོངས་ཁོངས་ལུ་བརྟེན་སྤྱོད་མེད་མི་སེར་ཡང་ན་གཞན་ཅན་གྱི་མཐའ་སྐོར་གནས་སྤངས་ཀྱི་སྤོངས་ཚུ་ལུ་གཞན་པ་འབྱུང་ནིའི་ཉེན་ཁ་ཡོད་པ་དང་། གཞན་ཉེན་ཚུ་དམིགས་གསལ་ས་གནས་ནང་རྒྱུ་མ་ཅིག་འབྱུང་ནི་དང་། གཞན་ཉེན་མར་ཡབ་རྒྱལ་ནི་དང་ཅ་མེད་ཡང་གཏང་ཚུགས་པ་ཡིན།

དེ་འབད་མ་ལས་འབྲུག་ཆེ་སློག་མ་དངུལ་ཐོག་ལུ་རྒྱབ་སྐྱོར་འབད་ཡོད་པའི་ལས་འགུལ་དང་ལས་སྤྱོད་མཐའ་ལོའ་ཁན་སྤངས་དང་མི་སྡེ་གཉིས་ལུ་ཡུན་བརྟེན་གྱི་པན་པ་ཡོད་པ་བཟོ་བགམ་ཆེད་འབྲུག་ཆེ་སློག་མ་དངུལ་གྱི་སྤྱོད་ལམ་སྤྱོད་དང་འཁྲིལ་བཅས་ལས་མཐའ་ལོའ་ཁན་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་འདི་དགོས་དེ་མི་དམངས་ཀྱིས་བསྟན་དང་ ཅུས་དང་ཅུས་སྲུ་མི་དམངས་ལུ་གསང་བ་བཤད་ནི་འདི་དགོས་ཡིན།

སྤྱན་བར་ལམ་གཉིས་པ་ (དབང་འདུས་མངགས་ལྗེ་ཡིག་ཚང་།) གི་རང་བཞིན་གནས་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་གྲིང་ཀ་དང་སློག་ཆགས་རྒྱུན་ལམ་ཚུ་ནང་ལས་སྤྱོད་ཚུ་འབད་བའི་སྐབས་ཐབས་ལམ་དང་བཟང་སྤྱོད་ཚུ་གསལ་སྤྱོད་འབད་མ་ཡིན་པ་དང་། འདི་ཡང་ལས་སྤྱོད་གདམ་སེལ་ལམ་ལུགས་དང་འཁྲིལ་ཏེ་ཡིན། གདམ་སེལ་འབད་ཡོད་པའི་ལས་སྤྱོད་གི་ནང་ལས་མཐའ་ལོའ་ཁན་སྤངས་དང་མི་སྡེ་ལུ་གཞན་ཉེན་ཡོད་པའི་ལས་སྤྱོད་གི་དོན་ལུ་

མཐའ་ལོའ་ཁན་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་བཟོ་དགོ། འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་ལས་སྤྱོད་འགོ་མ་བཟུགས་པའི་ཉེ་མ་གཞི་བཟུགས་འབད་བའི་སྐབས་དང་མཇུག་བསྟུན་པུ་

མཐའ་ལོའ་ཁན་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་དང་གཞན་ཉེན་མར་ཡབ་ཀྱི་ཐབས་ལམ་ཚུ་བཟུགས་དགོས་ཡིན། དེ་འབད་མ་ལས་འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་ ལས་སྤྱོད་ མི་སྡེ། ལུ་འགན། བད་སྤྱོད་དང་སྤྱོད་ལུ།

དེ་ལས་སྤྱོད་ལམ་ལུགས་ཚུ་གི་སྐོར་ལས་འབྲེལ་བཤད་ཁ་གསལ་ཚུད་དགོས་ཡིན། འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་ལུ་གཞི་གཉིས་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་གཞི་གཉིས་འཆར་གཞི་དགོ། གཞི་གཉིས་འཆར་གཞི་འདི་ནང་ཁེ་གཏང་ཡོད་མི་དོས་འཛིན་འབད་ནི་དང་གཞི་གཉིས་འབད་ནིའི་ལམ་ལུགས་ དེ་ལས་གཞི་གཉིས་ཀྱི་ཅུས་ཚུ་དང་བཅའ་སྤྱི་གཞི་ཚུ་ཚུད་དགོས་ཡིན།

གྲིང་ཀ་དང་སློག་ཆགས་རྒྱུན་ལམ་ཡིན་ཆེད་ཚུ་གི་མཆར་གཞི་ལས་སྤྱོད་དང་འཁྲིལ་ཏེ་ བསྐྱོད་སྤྱོད་ལུ། བསྐྱོད་ཞིབ། ཕྱིས་དཔྱད་འབད་ནི། དེ་ལས་

མཐའ་ལོའ་ཁན་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་འདི་ལོ་བརྟན་བཞིན་ཅུས་མཐུན་བཟོ་དགོས་ཡིན།

སྤྱན་བར་ལམ་གཉིས་པ་ (དབང་འདུས་མངགས་ལྗེ་ཡིག་ཚང་།) རོན་ལུ་སྤྱི་ལོ་ ༢༠༢༦ རྒྱུ་མཐའ་ལོའ་ཁན་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་དགོས་ཡོད་པའི་ལས་སྤྱོད་ཚུ་ཡང་།

༡) དབར་རྒྱས་བཟོ་གི་སྤྱོད་ཀྱི་སྤོངས་ནང་ ལྷན་ཐབས་ཀྱི་རྟེན་གཞི་གོང་འཕེལ་གཏང་ནི་ལུ་ རྒྱབ་སྐྱོར་འབད་དོ།

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 Wangdue Forest Division Biological Corridor (BC) 2 describes mitigation measures/good practices at the activity level, which are required as per the screening protocol. All the screened activities that have potential risks to environment and social management have to prepare an ESMP, which includes environment management and mitigation plans during pre-activity, activity implementation, and closing phases. Hence, it contains a description of the detailed actions, including communities, roles, communication, and reporting and monitoring processes required as part of the implementation.

In order to ensure that the issues of all stakeholders are taken into account, it includes a stakeholder engagement plan. The plan includes identification of stakeholders, method of engagement, timing, and logistics. It is a requirement for all parks and biological corridors to keep records, report, review, audit, and update ESMP yearly as per the planned activities.

The activities that required ESMPs for the year 2026 under BC2 of Wangdue Forest Division are as follows:

1. Support for development of additional infrastructure at Dabjeezab campsite

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 increased 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 (PAS).
- Enhance the socio-economic well-being of communities in and in the vicinity of the PAS through climate-informed natural resource 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 to manage the environmental and social impacts through specific mitigation actions required to implement the project in accordance with the requirements of WWF's Social Safeguards Integrated Policies and Procedures (SIPP), the project's Environmental and Social Management Framework (ESMF), and applicable national legislation and regulations. The ESMP provides an overview of the environmental and social baseline conditions on the routes of the proposed second segment of the project, summarizes the potential impacts associated with the proposed activities, and sets out the management measures required to mitigate any potential negative impacts. This ESMP will be implemented by the BFL focal person in each park authority (PA) and biological corridor (BC) and by the contractor to be commissioned by each PA/BC for the project.

(C) Purpose of ESMP

This Site-Specific ESMP is a project-specific source document detailing the environmental and social protection requirements to mitigate and minimize the adverse impacts. The ESMP's primary purpose is to ensure that the environmental requirements and social commitments associated with the project are carried forward into 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; and preventing environmental degradation as a result of either individual subprojects or their cumulative effects.
- Enhancing the positive environmental and social outcomes of project activities and 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 and 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 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 movable property (Land Act of Bhutan 2007; Land Rules, 2007; The Moveable Cultural Property Act of Bhutan, 2005); legislation and regulations on forests and protected areas (National Environment Protection Act, 2007; Forest and Nature Conservation Act of Bhutan, 1995; Forest and Nature Conservation Rules and Regulations of Bhutan, 2017; National Forest Policy, 2011); legislation on water and waste prevention (Water Act of Bhutan, 2011; Waste Prevention and Management Act, 2009); legislative requirements on environmental assessment (Environmental Assessment Act, 2000 and Regulations on the Environmental Clearance of Projects, 2001); and other relevant laws (The Local Government Act of Bhutan, 2009; Livestock Act of Bhutan, 2001; The Biodiversity Act of Bhutan, 2003; The Pesticides Act of Bhutan, 2000; The Penal Code of Bhutan, 2004; National Access and Benefit Sharing (ABS) Policy (Draft), 2014).

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, and 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 with both 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.

Regarding 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, WWF's SIPP requires extensive community consultations as part of the development of various safeguards documents and during project activities. RGoB legislation does not include similar requirements. For the purposes of the BFL project, the provisions of the WWF's SIPP shall prevail over the RGoB legislation in all cases of discrepancy.

The occupational health and safety of workers in construction will comply with the Labour and Employment Act of 2007, the Regulation on Occupational Health, Safety, and Welfare of 2012, and any other national documents. The list of the OHS requirements shall be attached along with the Bill of Quantities (BoQ) along with an appropriate item description to allow the bidder to quote reasonably against the item, and to enable strict compliance and ease the monitoring during the project implementation time.

1. Environmental and Socio-Economic Conditions:

a. Background.

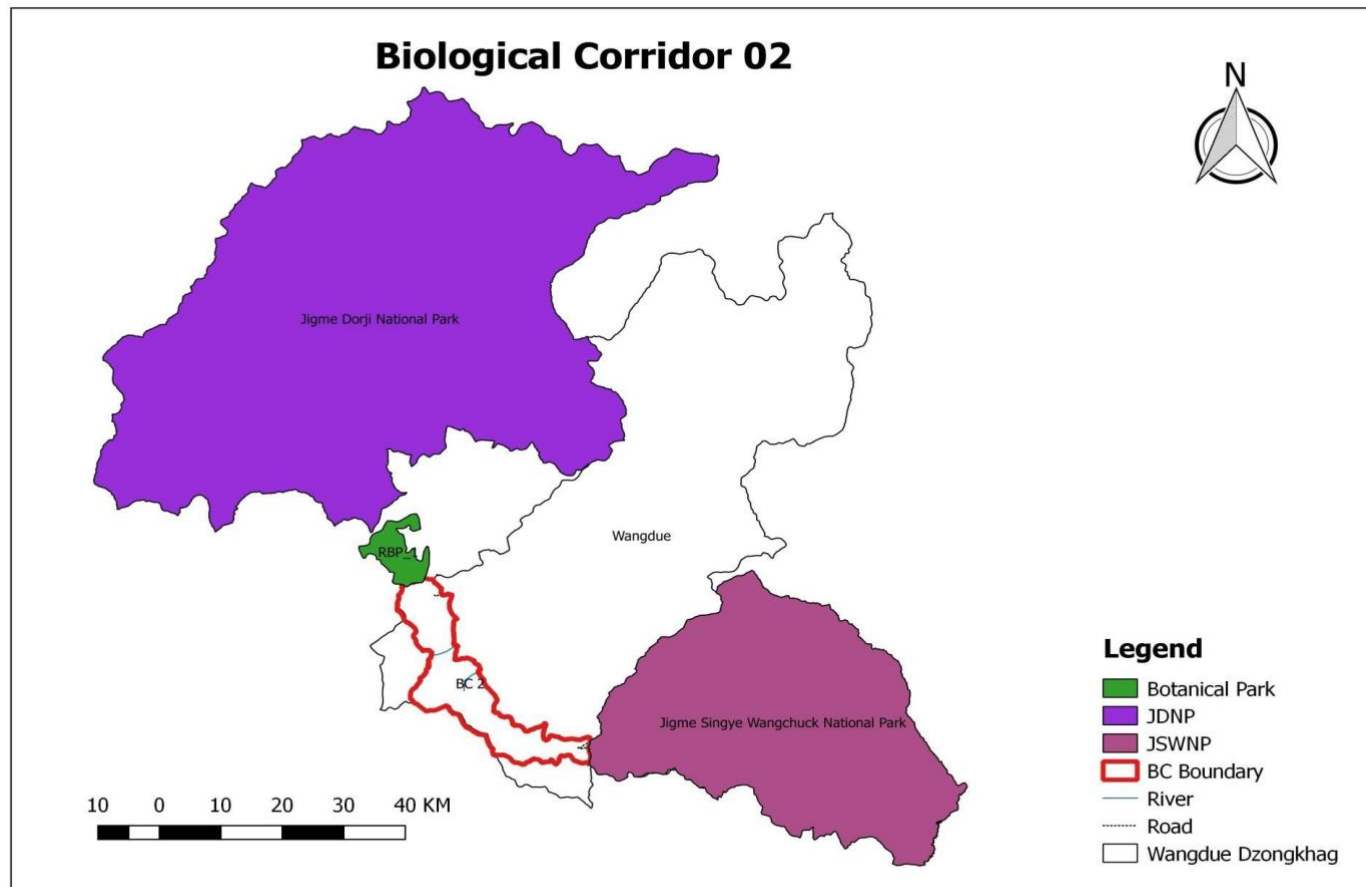
BC 02 was conceptualized concurrently as a landscape that connects Jigme Singye Wangchuck National Park and Royal Botanical Park. BC 02 covers part of Daga, Gasetshowom, Gasetshogom, Nahi, and Athang Gewogs under Wangdue Dzongkhag and part of Tseza Gewog under Dagana Dzongkhag. There are communities living inside and along the buffer of BC 02, including the nomadic herders. The BC 02 encompasses 291.76 km² of area ranging from subtropical to temperate climates and offers safe havens for rare, fascinating, and endangered animals, including tigers, red panda, musk deer, clouded leopards, and rufous-necked hornbills. The Biological Corridor has 27 species of mammals, 186 species of birds, 246 species of plants, 111 orchid species, and 122 butterfly species based on the first rapid biodiversity assessment (RBA), opportunistic listing, National Forest Inventory (NFI), National Tiger Survey (NTS), and socio-economic survey (SES).



Figure 3: Boundary map of BC 02

BC 02 in the central landscape functions as the connecting landscape between Jigme Singye Wangchuck National Park and Royal Botanical Park, Lampelri, providing connectivity to the different habitats while:

- a. Providing a secured migratory habitat to facilitate movement (dispersal or migration) of several threatened wildlife species, including Royal Bengal Tiger
- b. Maintaining genetic diversity of species and
- c. Providing a supplementary feeding habitat for animals



Geological and topographical condition of Biological Corridor 2

BC 02, encompassing an area of 291.75 square kilometers, is situated within a geographically diverse region characterized by varying topographical aspects. The predominant orientation of the landscape within BC 02 aligns with the broader Himalayan topography, primarily facing east and south. In contrast, only a small portion of the terrain exhibits north and west-facing slopes.

The orientation of these slopes or aspects is crucial in shaping the microclimatic conditions that influence biodiversity within BC 02. South and east-facing slopes receive more solar radiation, leading to warmer and often drier conditions. In contrast, north and west-facing slopes tend to be cooler and more humid. This variation in solar exposure significantly affects the thermal and moisture regimes of both soil and air, ultimately impacting the growth patterns, distribution, and diversity of plant and animal species in the area.

The diverse aspects of the BC 02 landscape create a mosaic of microhabitats, each supporting distinct communities of flora and fauna. This heterogeneity, driven by the varying orientations of the landscape, is a crucial factor in determining the overall biodiversity within BC 02, highlighting the significance of its topographical features.

The BC 02 landscape is defined by its diverse altitude, which spans from 450 meters above sea level (masl) to 4050 masl. This dramatic elevation gradient fosters a variety of microclimates and habitats, each supporting distinct types of vegetation and wildlife. The lowest elevation in the BC 02 region is found in the Harachuu area, at approximately 450 masl, and the highest elevations are recorded at Dagala, Heleyla, and Lungchuzey areas, reaching around 4050 masl. The major chunk of BC 02 lies within the elevation range of 1890 to 3330 masl.

B Climatic conditions

Meteorological data has been derived from station record of Punakha (Thinleygang) and Wangduephodrang (Gasello) from the Meteorology Section, Department of Hydromet Services, Ministry of Economic Affairs Thimphu (Fig 2)

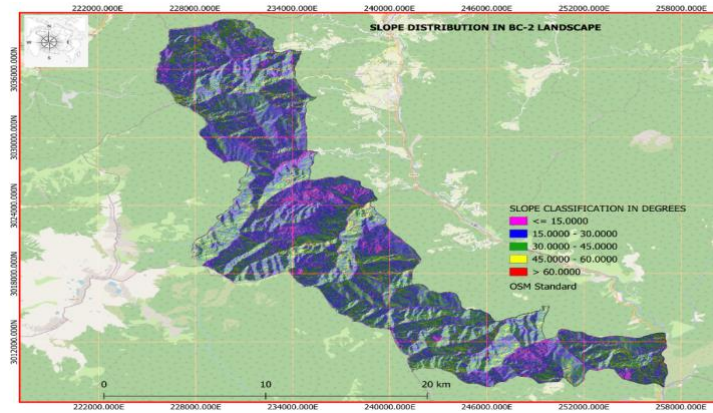


Figure 1. Distribution of slope categories in BC-02

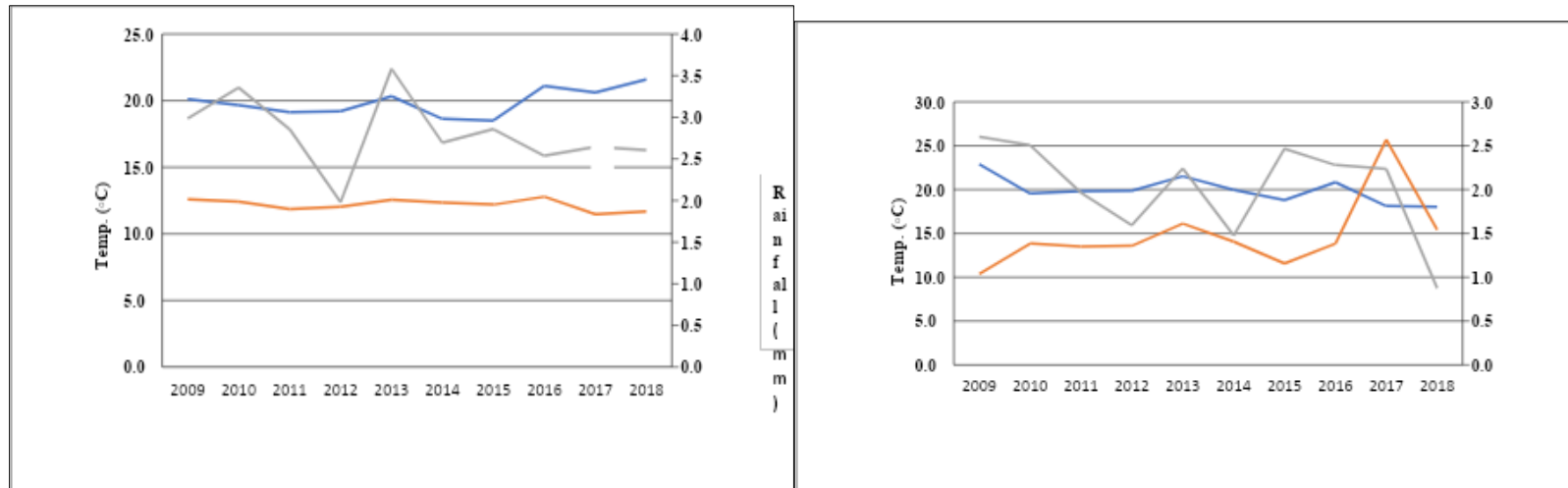


Figure 2: Avg. maximum and minimum temperatures and avg. rainfall from the Thinleygang weather station.

Figure 3 Avg. maximum, minimum temperatures, and avg. rainfall from Gasello weather station.

The maximum temperature was recorded in the year 2018 at 21.6°C, and the lowest temperature was in the year 2017 at 12.15°C (Figure 2). The highest rainfall was received in the year 2013 with 3.6 mm and was received the lowest in the year 2012 with 2.00 mm towards the northern part of Biological Corridor C-02 (Figure 2). The northern part of Biological Corridor-02 was referenced from the Thinleygang meteorological data station, Punakha Dzongkhag.

Towards the southern part of Biological Corridor-02, the maximum and minimum temperatures were received in the year 2009 with 22.9 °C and 10.4 °C (Figure 10). The highest rainfall was received in the year 2009 with 2.6 mm, and the lowest rainfall received was in the year 2018 with 0.99 mm (Figure 3). The southern part of Biological Corridor-02 was referenced from the Gasello meteorological data station, Wangdue Dzongkhag.

C. Hydrological conditions

The BC 02 area is home to a diverse array of perennial and seasonal streams and springs, most of which drain into the main Punatsangchu River. It features eight prominent streams, including Nahi Chhu, Hesokha Chhu, Baso Chhu, Rurichhu, Baychhu, Kamina Chhu, and Gaywachhu, which serve as vital lifelines for many downstream communities, providing water for both irrigation and drinking purposes. Notably, Hesokha and Baso Chhu are utilized for hydropower generation at the Basochu Hydropower Plant. All streams and springs ultimately flow into the Punatsangchu River, which traverses the valley bottom. In the Gyawachhu area, the Punatsangchu River forms the border of the BC 02 region.

D.1 Floral diversity

BC 02 has a total of 106 tree species and shrub species belonging to 47 families recorded within 9 forest types. Floral species composition in BC 02 includes four major life forms, such as evergreen trees, deciduous trees, deciduous shrubs, and evergreen shrubs. All the life form groups form contrasting physiognomic patterns along altitudinal gradients. The evergreen trees consist of 78%, deciduous trees 19%, deciduous shrubs 1.5%, and evergreen shrubs 1.5%, respectively. The results revealed the tree's vegetation was mostly dominated by *Castanopsis tribuloides*, *Quercus lanata*, and *Q. griffithii* in the mid-elevations. In the upper reaches the dominant species were *Juniperus recurva* and *Abies densa*.

Total ground vegetation was composed of 65 families, of which 24 were tree regeneration, 52 shrubs, 82 herbs, 17 perennial ferns, 9 grasses, and 4 orchid species. Tree regeneration consists of 10%, shrubs 19%, herbs 42%, perennial fern 8%, perennial grass 20%, and orchids 0.9%, respectively.

The result revealed the ground vegetation was mostly dominated by *Fragaria nubicola*, *Rubus calycinus*, *Ophiopogon clarkei*, *Eupatorium adenophorum*, *Chromolaena odorata*, *Pilea umbrosa*, *Bidens pilosa*, *Adiantum caudatum*, *Nephrolepis* sp., *Smilax* sp., *Gaultheria fragrantissima*, etc. The tree regeneration mostly consists of *Pinus bhutanica* and *Quercus griffithii*.

D.2 Faunal diversity.

A total of 27 mammal species from 15 families were recorded in BC 02 through camera traps and transect surveys. Furthermore, additional secondary sources like National Tiger Survey (NTS) and Biodiversity Monitoring Grids (BMG) were also used. Of these, four are endangered, five are vulnerable, and five are near threatened as per the International Union for Conservation of Nature's (IUCN) Red List of Threatened Species (IUCN 2014). Mammals of conservation importance, such as the tiger (*Panthera tigris*), clouded leopard (*Neofelis nebulosa*), Asiatic golden cat (*Catopuma temminckii*), leopard cat (*Pardofelis marmorata*), grey langur (*Semnopithecus entellus*), red panda (*Ailurus fulgens*), spotted linsang (*Prionodon pardicolor*), and others, are present in the corridor.



Avifauna of BC-02

D.3 Bird diversity.

A total of 186 bird species under 48 families have been recorded in BC 02 (Annexure II), out of which 1 was critically endangered, 181 were Least Concerned, 3 were Near Threatened, 2 were Vulnerable, and 9 fall under Schedule II of FNCRR 2023.

A total of 129 species were recorded in cool broad-leaved forest, 62 in blue pine, 54 in warm broad-leaved, 27 in fir forest, 56 in mixed conifer, and 35 in chirpine.

E. Socio-economic conditions.

Communities within and at the periphery of BC 02 perform varieties of activity for income generation. Income from other sources outranks the other income generated from agriculture, livestock, and forestry resources in all three gewogs significantly. The income from other sources includes income generated through activities such as business, wages, salaries, and financial support from family members. Financial help from family members comprises 22% of the income generated from other sources for Daga Gewog, 42% for Gasetsho Wogm, and 35% for Nahi Gewog.

The second highest income-generating activity for Daga and Nahi gewogs is agriculture, while livestock generates more income for Gasetsho Wogm gewog. The annual expenditures of the communities were assessed and listed under 14 categories. The community spends the most on conducting rituals, with each household spending an average of Nu.63,424.24 in a year. Expenses on household utilities, child education, and agriculture also load heavily on the BC 02 community.

The primary livelihood of communities residing in and around the corridor is subsistence agricultural practices. However, few communities in Uma Khamey, Kamina, and Wogayna under Daga Gewog; Hebese under Gasetsho Wogm Gewog; Tongcheythangka, Nabisa, Khujula, and Hebese under Nahi Gewog have ventured into commercial agriculture farming for their livelihood.

In total, the residents of BC 02 grew 46 income-generating crops. Rice is the highest income-generating crop, which constitutes about 13.5% of income for Daga gewog, 20.8% for Gasetshowom gewog, and 24.9% for Nahi gewog. Nahi Gewog alone generated a sum of Nu.584,056 from the sale of rice in the year 2023. Daga Gewog has generated the highest income through the sale of agricultural crops (Nu. 3,214,515) and has the highest holding of land with 682.025 acres in total.

Besides agriculture, livestock rearing is another important component of rural livelihood. People raise livestock like cattle, pigs, poultry, and goats mainly for the purpose of egg, dairy, meat, and manure production. All 65 sample households interviewed in Gasetsho Wogm Gewog own one or more types of livestock (Figure 20), while 93.10% (81 households) in Nahi Gewog and 95.09% (97 households) in Daga Gewog also keep livestock. Communities across all three Gewogs practice poultry farming, although fish farming was reported in only one household in Daga Gewog. The household with the highest number of cattle is in Wogay village under Daga Gewog, with a total of 70 cattle. Cattle are the primary income-generating livestock for all the Gewogs in BC 02. In terms of income generated from the sale of livestock and its products, Gasetsho Wogm Gewog reports the highest annual income, amounting to Nu. 2,300,080.

2. Planned activities in Year 8 (2026)

Given the scale of the project, these risks are expected to be minimal and site-specific and those for which mitigation measures can easily be developed through standard and applicable regulations. These impacts are again site-specific and reversible and can be minimized/mitigated by developing appropriate measures. Specifically, to address these concerns, the project will comply with the relevant Acts and Rules and Regulations of the Kingdom of Bhutan.

The activities that are planned in BC-02 that require ESMP are:

1. Support for the development of additional infrastructure at Dazijab campsite

Budget: Nu, 1.4 million

Timeline: January 2027 to June 2027

Location: Dazijab, Phobji Gewog, Wangdue Phodrang (GPS: 27°27'3.54"N, 90°11'23.86"E)

Area: 0.89 Acre



The existing eco-camp, measuring 0.5 acres, is located at Dazijab, above the Phobji Gewog Center Road in Phobji Gewog, Wangdue Phodrang. It is successfully operated by five local women from Phobjikha and currently serves domestic visitors from all over the country. The current facility includes one canopy, two toilets, a kitchen, and a dining room where visitors can enjoy tea and food. To better accommodate overnight campers, additional space is now required to expand the campsite, install a secure compound fence, and build a four-unit traditional hot stone bath. The proposed expansion will take place adjacent and above the existing campsite on State Reserved Forest (SRF) land, which is an open, gently sloping area with no existing private ownership or tree cover. Because the site is clear, the expansion will involve absolutely no cutting or felling of trees. Furthermore, the construction work will be executed with minimal disturbance to the soil, ensuring that there are no major changes to the land or the local topography.

To meet the daily operational and construction needs of the expansion, the project will require a reliable water supply and a specific inventory of locally sourced materials. Water requirements are estimated at 4,000 liters, which will be tapped from a nearby stream that is currently unutilized by any other local community. For the construction of the hot stone bath units and the perimeter fencing, the activity is expected to utilize 300 cubic feet (cft) of wood procured from local sawmills, along with 1.16 metric tons (MT) of cement sourced from a registered cement agent. Additionally, bulk aggregates will include 3.4 MT of sand from the Natural Resources Development Corporation Limited (NRDCL) and 6.9 MT of aggregate from a regional crushing plant. For the security perimeter, 405 square meters of chain-link fencing and 1,040 kilograms of mild steel (MS) angle posts will be purchased from hardware shops. To transport these construction materials to the site, trucks are expected to consume approximately 1,000 liters of diesel fuel over the course of the logistics phase.

To carry out the construction, the contractor expects to hire a total workforce of 10 individuals. This workforce is expected to consist of 5 workers hired directly from the local communities and 5 skilled or specialized workers brought in from outside the area. Utilizing local labor provides immediate employment opportunities and economic benefits to the Phobjikha community, while the external workers will assist with the specialized technical aspects of the required work. Because the work is on a small scale, minimal dust and minimal pollution are expected throughout the project duration. Furthermore, since the nearest human settlement is located 270 meters away from the site, there will be very little disturbance to local residents. To ensure that peace is maintained, all construction activities and transportation will be strictly confined to daylight hours, keeping the temporary generation of construction waste, worker health and safety management, and minor noise disturbance to an absolute minimum.

From an ecological perspective, the project poses no risk to local biodiversity. No endemic, rare, or threatened species have been identified at the project site, and the construction zone sits entirely outside the habitats of any critical or endangered species. The expansion will not introduce any potentially invasive or non-indigenous species, ensuring minimal to no impact on native flora and fauna. Socially, the project is surrounded by a community engaged in farming, livestock rearing, and daily wage labor at the adjacent farm owned by the Farm Machinery Corporation Limited (FMCL), small shop businesses, and local government administration. The Eco camp expansion will not restrict access to anyone's livelihood, nor will it block access to religious or cultural sites or negatively affect any cultural resources. It will not affect vulnerable groups or disrupt local communities, and there are no potential foreseen cumulative effects of conflict within the landscape relating to this activity. While minor physical risks may exist when handling construction materials, these will be fully mitigated through proper guidance and the mandatory use of safety gears. Finally, there is no report of labor management issues or illegal child labor, ensuring that the project remains socially responsible, compliant, and beneficial to the entire community.

Environmental and Social Impacts and Mitigation Measures

The construction work is of small scale, consisting of hot stone baths and compound fencing, producing minimal noise, and there are no immediate communities near the proposed land. The risks involved are to the workers who would be handling the construction materials, and the contractor will be informed to have appropriate safety gear available for workers. The waste generated from construction materials is expected to be minimal and will be disposed of in the allocated dumpsite. 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	Cost
Activity: Additional support work for campsite at Dazijab				
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: ❖ Identification of the different waste types at the project site (soil, asphalt, food); ❖ Ensure that 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; ❖ Collection, transportation, and final disposal of all waste should be undertaken regularly (monthly). ❖ Possible hazardous waste (motor oils, vehicle fuels, etc.) should be collected separately and authorized collectors and transporters should be subcontracted to transport and finally dispose of it; ❖ All construction materials should be covered during transportation to avoid waste dispersion; ❖ The options for reuse/recycling of the generated waste streams should be taken into consideration (e.g., excavated soil, etc.).	BFL Focal and Contractor	Cost to be met by the contractor

		❖ Burning of construction waste should be prohibited. After construction: ❖ All waste shall be removed from the project site, and in case of non-removal, a portion of the security deposit shall be used to clean up the project site.		
Noise disturbance: Possible noise disturbance as a result of outdoor equipment usage and transportation vehicles driving around the construction site	Short-term Minor	Pre-construction: requirements to limit noise pollution should be included in the bidding documents, as a precondition for the contractor's selection During construction: ❖ Noise level control should be performed before the startup of construction activities. ❖ 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.	BFL focal and Contractor	To be met by the contractor
Social impacts				
Workers' health and safety	Short-term Minor	❖ All OHS requirements shall be included in tender documents and signed agreement as part of the contractor bidding document. ❖ The bidding contractor shall comply with the workers' health and safety guidelines ❖ Contractor shall provide decent living housing/camp at the construction site for the laborers. ❖ Contractor shall ensure safe drinking water will be tapped and provided ❖ The bidding contractor shall provide toilet facility for the workers at the construction site	Contractor	ESMP mitigation fund to be met from activity cost

		❖ Contractor and BC 2 Management shall ensure workers are provided with basic safety gears (boot, safety jacket, hand gloves, mask, etc.) at the construction site ❖ Contractor shall make basic first Aid kits box available at the construction site with fast aid kits such as detox, cotton wool, sterilized cotton wool, bandages, PCM, burnt ointment, insect repellent. ❖ The contractor shall ensure that the laborers shall have access to health facilities before and during construction activities as and when required. ❖ Ensure that no under-age workers, or children, are engaged; ❖ Implement a grievance redressal mechanism for workers; ❖ Cautionary signboards displaying Occupational Health and Safety (OHS) information shall be installed at the construction site. ❖ Ensure decent work conditions, including an appropriate salary but not less than the approved National Wage Rate, 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 worker with grievance shall report their grievance to the primary grievance officer/secondary grievance officer/range officer Nobding, Division HQ, Lobesa. All workers shall be briefed about the GRM before starting the work. ❖ Ensure that workers are employed on the principle of equal opportunity and fair treatment, and there is no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices.		
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3. ESMP Implementation Arrangements

The implementation of project activities will be carried out by the BFL focal person BC-02. The focal person will be responsible for compliance with all procedures outlined in this ESMP, as well as compliance with any requirements to obtain clearance, 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-02 in 2026-2027. **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., a letter asking the municipality for disposal of inert waste, records on OHS information sessions performed for all workers before the start of activities, all developed EHS plans, etc.). **An OHS information session should be organized by the Contractor for all workers prior to starting the project activities and prior to any specific tasks with high health risks.**

The supervising engineer needs to monitor the implementation of proposed measures by the contractor and contractor's subcontractors with visual checking, review the records of evidence that the measures have been applied, and ask the contractor to apply the measures as soon as possible. Non-compliances should be recorded, and the report on any non-compliance should be reported to the ESS officer immediately, and the ESS officer 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 safeguard's requirement.

3. ESMP monitoring arrangements

The BFL focal person in BC-02 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-02 is also fully responsible for the compliance of all external contractors and service providers working in BC-02 with the safeguard's requirements outlined in the ESMP. The monitoring of activities under this ESMP will be carried out in the following manner:

S/No	Activities	Monitoring team	Timeline		Location	Means of Verification
			Start	Complete		
1	Additional support for the campsite at Dazijab	Range Office: Field focal (Range Officer, Nobding Range)	Jan. 2027	June, 2027	Dazijab, Phobji Gewog, Wangdue	Frequent site visits, RO Nobding will assign Beat Officer Phobjikha for regular monitoring and compliance. Progress and ESS compliance report to BFL focal officer in the form of short writeup and pictorial evidence

		BC2-DFO Wangdue: - ESS/BFL focal (Mr. Tsheringla, DFO, Wangdue	Jan. 2027	June, 2027		Field visit to site, handing over, and completion report, ESS compliance report in Google Docs, and pictorial evidence
		PCU: ESS&GESI Officer and M&E Officer	March 2027	April 2027		Field Visit during project implementation. Review ESS compliance and other ESMPs' prescriptions, Report and pictorial evidence.

4. Capacity Need and Budget

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

- *The budget for each of the activities is:*

Sl#	Activity	Amount (Nu.)	Budget for ESS mitigation
1	Additional support for the campsite at Dazijab	1.4 million	ESS mitigation cost to be met from activity cost
Total		1.4 million	

9. Consultation and Disclosure Mechanisms

This ESMP has been prepared in a participatory manner involving concerned section heads and range officers. A community consultation will be carried out as described in section 9. This is mainly to inform local communities regarding the planned project activities, solicit their opinions, and enable them to question proposed mitigation measures.

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

The full English version of this ESMP, as well as an executive summary in Bhutanese, shall be disclosed on the websites of MoENR, BFL, and WWF, US AE Project website. Hard copies of the ESMP should also be available at the PA Management Office and at the PCU Office.

10. Stakeholder engagement plan

The consultation was not needed as there was no community nearby. However, BFL PCU had a discussion with the women that were managing the eco-camp, and they raised the need for a bigger area for camping and the requirement of a hot stone bath. However, consultation will be carried out with the women's group managing the eco-camp and Phobjika Gewog Administration.

11. Grievance 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

If the stakeholders have any grievances related to the BLF project, they can report their grievances via letter, phone call or verbally to following offices:

- I. Gangtey-Phobji Beat Office, Mr. Kelzang penjor, Gangtey-Phobji Beat Officer, Contact: 17794746, email: kelden606@gmail.com
- II. Nobding Range Office Tshewang Namgay, Nobding Range Officer, Contact no.: 17560810, email: nobdingrangeoffice@gmail.com
- III. PA/BC (BC-02) Wangdue Divisional Forest Office Head Office, Grievance officer name: Tsheringla, email ID: Tsheringla@moenr.gov.bt
- IV. BFL, PCU at Department of Forest and Park Services, Ugyen Dechen, 17491881.projectofficer@bfl.org.bt

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>

12. Certification of Mitigation Measures and Approvals for ESMPs

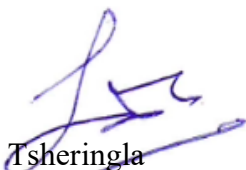
This section serves to clarify that the Environmental and Social Management Plan (ESMP) and its associated mitigation measures are fully compliant with the BFL Environmental and Social Management Framework (ESMF) and have undergone the intensive review and approval process.

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)



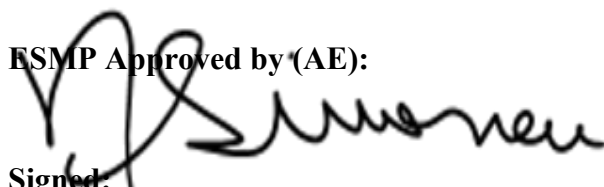
Name: Tsheringla
Title: Sr. Forestry Officer
Date: 5/5/2026

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: OCCUPATIONAL HEALTH AND SAFETY STANDARDS

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

This section provides guidance and examples of reasonable precautions to implement in managing principal risks to occupational health and safety. It is based on the IFC's Environmental, Health, and Safety Guidelines (April 30, 2007)¹ and the Occupational Health and Safety Guidelines of Bhutan's Construction Development Corporation Ltd., which relies on the national Regulation on Occupational Health, Safety and Welfare 2012, Regulation on Working Conditions 2012, and Labour Act 2007, and in compliance with 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 the accumulation of hazardous compounds.
- Buildings should be structurally safe, provide appropriate protection against the climatic conditions, 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 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 the 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. 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 an adequate number of relevant fire extinguishers.
- Workers shall wear shoes without iron or steel nails or any other exposed ferrous materials that are likely to cause sparks by friction.
- Smoking, lighting, or carrying matches, lighters, or smoking materials shall be prohibited within and around the construction sites.

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 reactions, and radiant heat.

- At every workplace adequate provision of water supply for firefighting shall be provided and maintained.

- Facilities shall be equipped with firefighting equipment (e.g., fire extinguishing bottles). 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.
- Fire exits should be identified and marked in Dzongkha and English; all workers should be made aware of the fire exits.

Lavatories and Showers

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

Potable Water Supply

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

Clean Eating Area

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

Lighting

- The workplace should receive adequate natural light and, if required, be supplemented with artificial illumination to promote workers' safety and enable safe equipment operation.
- Emergency lighting of adequate intensity should be provided in case of failure of the power line.

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 service, inspection, and/or cleaning should have unobstructed, unrestricted, and ready access.
- Covers need to be provided wherever necessary if there is risk of falling overhead objects.
- Measures to prevent unauthorized access to dangerous areas should be in place.

First Aid

- The employer should ensure that qualified first aid can always be provided. Enough first aid boxes or cupboards shall be provided and maintained so as to be readily available during all working hours, provided that the distance to the nearest first aid box or cupboard shall not be more than 200 m from any working place.
- First aid kits include all equipment outlined in Annex 1 to these Guidelines.
 - Each first aid box or a cupboard shall be distinctly marked "FIRST AID."

Air Supply

- Workplace should have adequate ventilation for fresh air

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

2. The contractor is responsible for holding an information session to familiarize all workers with the OHS procedures specified in these guidelines, 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.

3. 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 accidents 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 90 dB(A) for a duration of more than 8 hours per day without wearing earplugs/earmuffs.
- Exposures to impulsive or impact noise shall not exceed 140dB(A).
- For every 3 dB(A) increase in sound levels from the permissible limit of noise, the 'allowed' exposure period or duration should be reduced by 50 percent.
- Where it is not practicable to reduce the noise, the employer must limit the duration of time persons employed or working in the workplace are exposed to the noise so that such persons are not exposed to excessive noise.
- 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

In any workplace where people are at work in any process or operation that involves exposure to vibration, which may constitute a risk to their health, it shall be the duty of the employer to provide, so far as is reasonably practicable, effective means to reduce the vibration.

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 (placing a 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 hazards) and where entry is controlled or prohibited
- Establishing “No Approach” zones around or under high-voltage power lines
- Conducting detailed identification and marking of all buried electrical wiring prior to any excavation work
- Every person who is working on an electric supply line or apparatus or both shall be provided with tools and devices such as gloves, rubber shoes, safety belts, ladders, earthing devices, helmets, line testers, and hand lines, whichever is relevant for protecting him/her from mechanical and electrical injury.

Eye Hazards

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

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

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 workstation.

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.

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:

- 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 (adult man-50kg, adult female-25 kg)
- 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 areas, 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 lifelines

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 arrest fall

Illumination

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

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

4. Personal safety equipment for workers

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

Workers that are exposed to dust should also be provided with eye protection glasses and face 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 an overhang shirt, jackets, mufflers, etc.
- Tuck shirt and jacket well.
- Secure helmet with a belt under the chin.
- Tuck the bottom sleeves of the trousers inside the safety boot.
- Dress with reflector

5. Standards for workers' accommodation²

1. General living facilities

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

2. Drainage: The site is adequately drained.

Heating, air conditioning, ventilation and light

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

4. Water

- Workers have easy access to a supply of clean/potable water in adequate quantities.
- The quality of the water complies with national/local requirements and is regularly monitored.
- 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

5. Wastewater and solid waste

- Wastewater, sewage, food, and any other waste materials are adequately discharged in compliance with national and/or international standards and without causing any significant impacts on camp residents, the environment, or surrounding communities.
- Specific containers for waste collection are provided and emptied on a regular basis.

6. Rooms/dormitories facilities

- Rooms/dormitories are kept in good condition. They 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.
- Separate sleeping areas are provided for men and women.
- A separate bed is provided for every worker, and use of double-deck bunks is minimized.
- Workers are provided with comfortable mattresses. Workers may be expected to use their own pillows and bed linens.
- Adequate facilities for the storage of personal belongings are provided.
- Separate storages for work clothes and PPE and, depending on condition, drying/airing areas are provided.

8. Sanitary and toilet facilities

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

9. Cooking and laundry facilities

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

Annex 1. Contents of first aid box or cupboards

The first aid boxes or cupboards shall be distinctively marked with a 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. (2 oz.) Bottle containing a two percent alcoholic solution of iodine (1)
7. (2 oz.) 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 (5 g): 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: GRM pamphlet of BC2



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.

DIVISION OFFICE

- Tsheringla
- 17978388
- Tsheringla@moe.n.gov.bt
- Divisional Forest Office, Wangdue

RANGE OFFICE

- Tshewang Namgay
- 17560810
- Nobdingrangeoffice@gmail.com
- Forest Range Office, Nobding

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
- 117491881
- bflprojectofficer@gmail.com
- BFL Project Coordination Unit, Department of Forests and Park Services, Ministry of Energy and Natural Resources, Taba, Thimphu

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.