

འབྲུག་ཆེ་སློག་མ་དངུལ་

Bhutan for Life

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

Environmental and Social Management Plan for

འཛིགས་མེད་གེསར་རང་བཞིན་སྤྱད་མ་དྲགས་ཁོངས་ཡིག་ཚང་ ༢༠༢༦

Jigme Kheser Strict Nature Reserve for 2026

བོད་ཡུལ་བཟུང་དོན།

འབྲུག་ཆེ་སློག་མ་དངུལ་འདི་མཐའ་འཁོར་གནས་སྤངས་དང་མི་སྡེའི་འོས་འབབ་ཅན་གྱི་ལས་འགུལ་གྱི་དབྱེ་ཁག་ལ་ (Category B) ཅན་ལུ་ཚུད་དེ་ཡོད་པ་ཡིན།
དེ་ཡང་ལས་འགུལ་འདི་ལས་བརྟེན་ཏེ་སྤྱད་སྤྱོད་སྤངས་ནང་སྤྱོད་མིའི་མི་སེར་དང་ཡང་ན་སྤྱད་སྤྱོད་སྤངས་ཀྱི་མཐའ་སྐོར་ཏེ་འཛོལ་སྤྱད་སྤྱོད་སྤངས་ལུ་བརྟེན་སྤྱོད་
དེ་མིའི་མི་སེར་ཡང་ན་གཤམ་ཅན་གྱི་མཐའ་སྐོར་གནས་སྤངས་ཀྱི་སྤངས་ཚུ་ལུ་གཞོན་པ་འབྱུང་ནིའི་ཉེན་ཁ་ཡོད་པ་དག་གིས་གཞོན་པ་འབྱུང་པ་ཅིན་གཞོན་ཉེན་ཚུ་ད
མིགས་གསལ་ས་གནས་ནང་རྒྱུ་འབྱུང་ནི་དང་གཞོན་ཉེན་མར་ཕབ་རྒྱུ་ཞི་དང་ཚུ་མེད་ཡང་གཏང་ཚུ་གསལ་ཡིན།

དེ་འབད་མ་ལས་ འབྲུག་ཆེ་སློག་(BFL) མ་དངུལ་ཐོག་ལུ་ རྒྱུ་སྐྱོར་འབད་ཡོད་པའི་ལས་འགུལ་དང་ལས་སྐྱ་ཚུ་ མཐའ་འཁོར་གནས་སྤངས་དང་
མི་སྡེ་གཉིས་ལུ་ཡུན་བརྟན་གྱི་ཡན་པོ་ཡོད་པ་བཟོ་བགི་མ་ཆད་ འབྲུག་ཆེ་སློག་མ་དངུལ་གྱི་སྤྱད་སྤྱོད་སྤངས་ལམ་སྟོན་དང་འཁྲིལ་ཐབས་ལུ་
མཐའ་འཁོར་གནས་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་འདི་དགོས་དུ་ མི་དམངས་གྲོས་བསྟུན་དང་
དུས་དང་དུས་སུ་མི་དམངས་ལུ་གསལ་བ་བཤད་ནི་འདི་དགོས་ཡིན།

འཛིགས་མེད་གེསར་རང་བཞིན་སྤྱད་མ་དྲགས་ཁོངས་ཀྱི་རང་བཞིན་གནས་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་གི་དང་སློག་ཆགས་རྒྱུན་ལམ
ཚུ་ནང་ལས་སྐྱ་ཚུ་འབད་བའི་སྐབས་ ཐབས་ལམ་དང་བཟང་སྤྱོད་ཚུ་གསལ་སྟོན་འབད་མེན་ཏེ་ འདི་ཡང་ལས་སྐྱའི་གདམ་སེལ་ལམ་ལུ་གསལ་དང་འཁྲིལ་ཏེ་ཡིན།
གདམ་སེལ་འབད་ཡོད་པའི་ལས་སྐྱ་གི་ནང་ལས་ མཐའ་འཁོར་གནས་སྤངས་དང་མི་སྡེ་ལུ་གཞོན་ཉེན་ཡོད་པའི་ལས་སྐྱ་ཚུ་གི་དོན་ལུ་
མཐའ་འཁོར་གནས་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་བཟོ་དགོ། འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་
ལས་སྐྱ་འགོ་མ་བཟུགས་པའི་ཉེ་མ་གཞི་བཟུགས་འབད་བའི་སྐབས་དང་མཚུག་བསྐྱུལ་དུ་མཐའ་འཁོར་གནས་སྤངས་འཛིན་སྐྱོང་དང་གཞོན་ཉེན་མར་ཕབ་ཀྱི་ཐབས་
ལམ་ཚུ་བཟུགས་དགོས་ཡིན།

དེ་འབད་མ་ལས་འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་	ལས་སྐྱ།	མི་སྡེ།	ལུ་འགན།	བརྟེན་སྤྱོད་དང་སྟོན་ལུ།
དེ་ལས་ལྟོགས་ལམ་ལུ་གསལ་ཚུ་གི་སྐོར་ལས་འཁྲིལ་བཤད་ཁ་གསལ་ཚུ་དགོས་ཡིན།				འཛིན་སྐྱོང་འཆར་གཞི་འདི་ནང་ལུ་
གཤམ་གཏོགས་འབད་དགོ་པའི་ཁོ་གཏུ་ཡོད་མི་ཚུ་གི་ཉེན་ཁ་བཤད་ཚུ་ཚུད་དགོ་པའི་ཁར་				ཁོ་གཏུ་ཡོད་པའི་མི་ཚུ་གི་དོན་ལུ་གཤམ་གཏོགས་འཆར་གཞི་དགོ།
གཤམ་གཏོགས་འཆར་གཞི་འདི་ནང་				ཁོ་གཏུ་ཡོད་མི་ཚུ་འཛིན་འབད་ནི་དང་གཤམ་གཏོགས་འབད་ནིའི་ལམ་ལུ་གསལ་
དེ་ལས་གཤམ་གཏོགས་ཀྱི་དུས་ཚོད་དང་བཅའ་སྤྱི་གཞི་ཚུ་ཚུད་དགོས་ཡིན།				གླིང་ཀ་དང་སློག་ཆགས་རྒྱུན་ལམ་ཡིན་ཆང་ཚུ་གི་མཆར་གཞི་ལས་སྐྱ་དང་འཁྲིལ་ཏེ་
བརྟེན་སྤྱོད་དང་སྟོན་ལུ།	བསྐྱར་ཞིབ།	ཅིས་དཔྱད་འབད་ནི།		དེ་ལས་
མཐའ་འཁོར་གནས་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་འདི་ལོ་བསྟར་བཞིན་དུ་དུས་མཐུན་བཟོ་དགོས་ཡིན།				

འཛིགས་མེད་གེསར་རང་བཞིན་སྤྱད་མ་དྲགས་ཁོངས་ཀྱི་དོན་ལུ་སྤྱི་ལོ་ ༢༠༢༦ ནང་མཐའ་འཁོར་གནས་སྤངས་དང་མི་སྡེ་འཛིན་སྐྱོང་འཆར་གཞི་དགོས་ཡོད་པ་
འི་ལས་སྐྱ་ཚུ་ཡང་།

- ༡) ལོ་ལྷེ་ཐང་ལུ་ ལུ་ལ་པའིན་རྩ་ཐང་འཛིན་སྐྱོང་ཡེ་ཀར་ ༣༠ བཏང་ནི་ལུ།
- ༢) འཛིགས་མེད་གེསར་རང་བཞིན་སྤྱད་མ་དྲགས་ཁོངས་ཀྱི་ལུ་གཙུག་ཅིན་མཐའ་བསྐོར་གྱི་མཚམས་ཆགས་ལུ།

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 Jigme Kheser Strict Nature Reserve, 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 a description of the detailed actions including communities, roles, communication and reporting and monitoring processes required as part of the implementation.

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

The activities that required ESMPs for the year 2026 under Jigme Kheser Strict Nature Reserve are as follows:

1. Alpine grassland management in Lolithang (30ha)
2. River embankment work at JKSNR Head Office

1. Introduction

1.1 Project Background

The Bhutan for Life (BFL) project aims to ensure a robust network of Protected Areas (PAs) and Biological Corridors (BCs) that secure human well-being, biodiversity conservation, and increased climate resilience in Bhutan. The project shall be sustained for 14 years; in this duration, an immediate improvement to the management of Bhutan's protected areas for climate resilience and biodiversity gains is sought. Meanwhile, the country would gradually ratchet 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 well-being of communities 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; and
- 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.

1.2 Scope of ESMP

The preparation of this Environmental and Social Management Plan (ESMP) was deemed necessary in order to manage the environmental and social impacts. The mitigation actions required to implement the project were 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 the 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.

1.3. 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; and
- Ensuring that all stakeholders are engaged in the project activities' preparation and implementation, and their concerns are fully addressed.

1.4 Applicable law, policies, and regulations

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

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

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

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

In general, RGoB's laws, policies, and guidelines are in line with the WWF's environmental and social safeguards requirements. However, there are a few differences between the two systems. Regarding environmental impacts, there are no direct contradictions between the RGoB laws and regulations and the WWF's SIPP, but the requirement of the latter is more extensive. All project activities should fully comply both with the RGoB's regulations on the environmental clearance of projects and with the procedures and mitigation measures prescribed in this ESMF. In case the WWF's SIPP requirements turn out to be extensive, strict, or detailed compared to RGoB legislation and policies, the former will apply to all project activities.

Regarding social impacts, the status of non-title holders, informal land use, and the commitment to participatory decision-making processes conclude the primary discrepancies between the RGoB laws and regulations and the WWF's SIPP. First, according to the WWF's SIPP, all users of land and natural resources (including people that lack any formal legal ownership title or usage rights) are eligible to some form of assistance or compensation if the project adversely affects their livelihoods. The RGoB laws only recognize the eligibility of land owners or formal users to receive compensation in such cases. Second, the WWF's SIPP requires extensive community consultations during the project in order to develop various safeguards documents. RGoB legislation does not include three requirements reflected in SIPP. For the purpose 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

Geological and topographical conditions

The only Strict Nature Reserve declared by the Royal Government of Bhutan in 1993 came into operation in 2010. It was initially known as the Toorsa Strict Nature Reserve. In October 2014, it was renamed as the Jigme Khesar Strict Nature Reserve (JKSNR) in honor of His Majesty the King Jigme Khesar Namgyel Wangchuck for his extraordinary contributions to the protection and conservation of the natural environment. The entire area has a coverage of 784.225 km², which can be categorized into different habitat zones from tropical broadleaf forest in the south to alpine in the north.

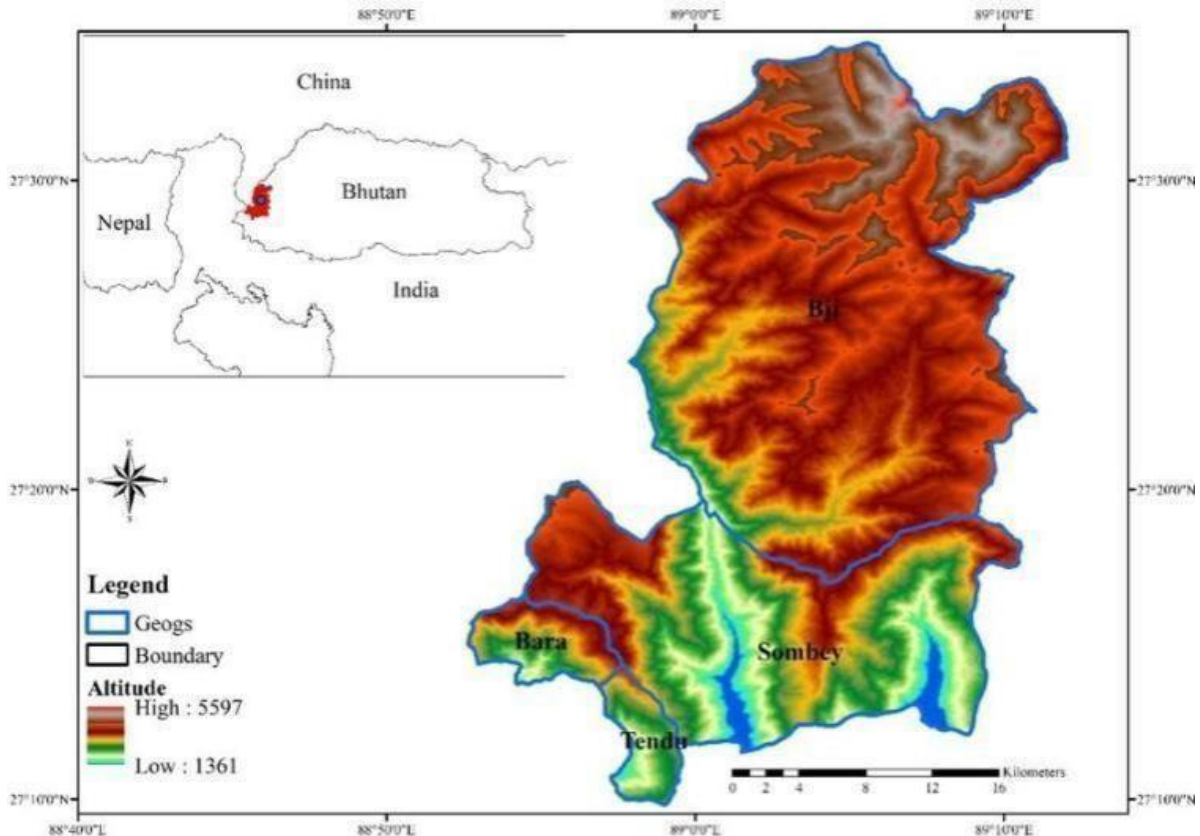


Figure 1: Location map showing the different altitude zones in the reserve area

The Reserve falls in the western part of Bhutan between 27°34' and 27°11' latitude and 89°54' and 89°10' longitude bordering with Indian state of Sikkim to its west and forming a contiguous natural habitat of alpine meadows with Autonomous Tibet region of China in its north. The altitude ranges from 1361 masl to over 5597 masl. Geographically, the northern part of the reserve consists mostly of rugged mountain terrains, rocky peaks, scree, and harboring numerous sacred alpine lakes and few plains. The southern parts are scoured steeply by streams and rivers forming narrow valleys. Alluvial and colluvial formation are apparent in the narrow valleys of the reserve, which consist of soil, silt, clay, sand and gravels brought about by the action of the soil and water erosion.

As shown in map 1, JKSNR covers 4 gewogs; Bjee and Sangbay under Haa and Tendruk and Norgaygang under Samtse Dzongkhag. It has a total of 506 households which includes herders of Esue and Katsho gewog under Haa. It forms a part of the Sacred Himalayan landscape (SHL) building links with three major trans-boundary conservation areas in China, India and Bhutan (**Map 2**). It also falls within Kangchenjunga Landscape linking further to Bhutan Biological Conservation Complex that has the natural connectivity to the rest of the Protected Areas of

Bhutan. The whole trans-boundary landscape is significant for the conservation of snow leopards in the region forming part of the Indo-Burman biodiversity hotspot; one of the 10 hotspots of the world.

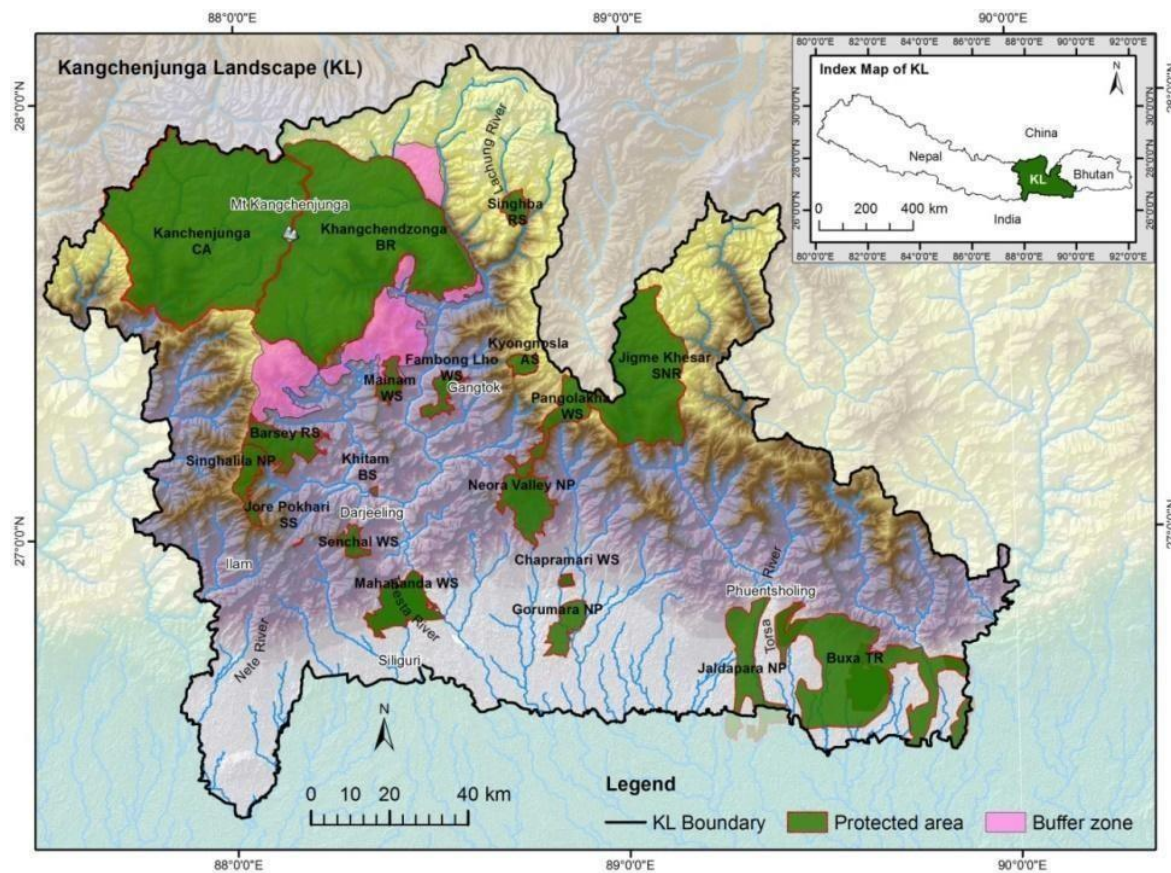


Figure 2: Linkage of Kangchenjunga Landscape & JKSNR (Source: ICIMOD, Nepal)

The Reserve is currently administered by four sections (Nature Conservation Section; Forest Protection and Enforcement Section; Social Forestry and Extension Section; and Forest Resources Management Section) from the head office. There are two range offices and three outposts under the Reserve. The management is currently manned with 26 technical and 4 nontechnical staff. This level of manpower is adequate to successfully implement the reserve activities within the given time frame.

Climatic conditions

The reserve experiences a cold climatic condition in the alpine zone and warmer in the lower foothills. As shown in figure 1, minimum and maximum temperature was recorded as -11.090 and 08 with mean temperature as 0.667°C. Maximum Relative Humidity recorded was 98%, minimum 39% and mean RH was 77% respectively. The snowfall occurs from November to April. Snowmelt occurs during April and July, providing an abundance of soil water prior to the monsoon period. Maximum rainfall was recorded in June-August.

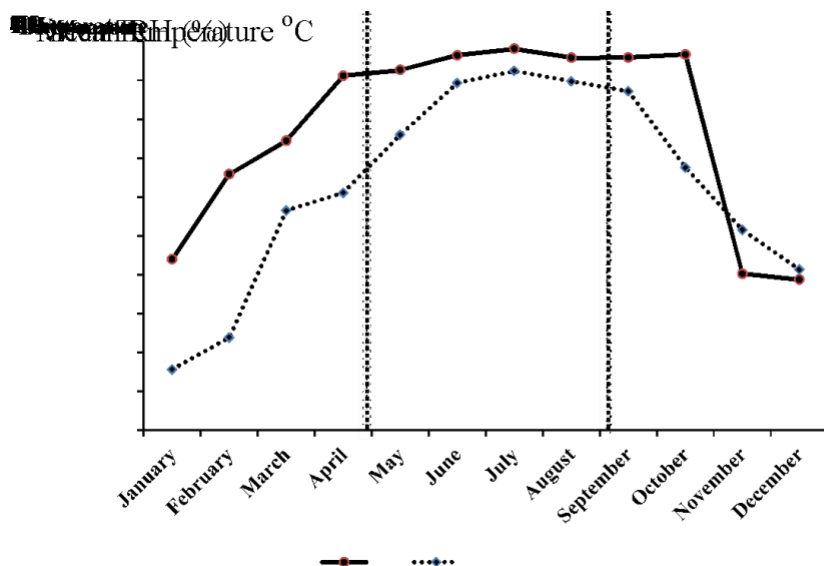


Figure 3: Pluviothermic diagram showing wet and dry months at study sites. Based on mean relative humidity and temperature

Hydrological conditions

The Reserve has several cultural and historical sites such as Nub-Tshonapata lake, Ngatsho, Dungshtsho, Ngetotsho, Regotsho, Chunduegang and Chundulhatsho which are legendary lakes attributed with historical, spiritual and traditional beliefs. Story of the origin of Nublang (*Bos indicus*, native cattle breed) and Relm (Cymbals) are said to be treasures discovered from NubTshonapata lake by the Tertor Sherab Mebar. These lakes are equally important sources for many streams under Haa Dzongkhag for agriculture, drinking and other domestic purposes. The reserve also sources many tributaries for Haa Chhu, Wang Chhu and Amochhu.

Flora and fauna

This is the only protected area in Bhutan without permanent human settlements, except for few migratory yak herding communities. It protects the western most variant of temperate forests in the country ranging from broadleaf forests to alpine meadows in the north. Being virtually uninhabited, the Reserve has one of the most pristine temperate and alpine vegetation in the entire Himalayas, considered as a control plot in the country for the conservation experiments. The area is truly a conservation jewel in the Eastern Himalayas abounded by many globally endangered mammal species, high value medicinal plants, diverse plant communities, and endowed with many critical watersheds for two major rivers of Bhutan.

It is home to many endemic and threatened species such as Tiger, Snow Leopard, Red Panda, Alpine Musk Deer, Bhutan Takin, Asiatic Black Bear, and endemic plant species such as *Meconopsis superba* and *Bhutanthera himalayana* are in the northern part of the reserve area. The Reserve has a record of 754 plants including tree & shrub (205), herb & grasses (193) and orchids (112), 42 mammal species, 236 bird species, 71 butterflies, 17 reptiles, and 7 species of fishes. It has 4 endangered species, 7 vulnerable species, 9 near-threatened species, 19 least concern species and 5 species of Schedule I under Forest Nature Conservation Act of Bhutan 2023.

Socio-economic conditions

Administratively JKSNR comprises four geogs namely Bjee and Sombaykha geog under Haa, and Tendruk and Norgaygang geog under Samtsee dzongkhag. Almost 70% of the reserve area falls under Bjee geog. JKSNR does not have a permanent settlement residing inside the reserve area; however, few seasonal herders of Bjee, Kartsho and Eusu are traditional grazers in the area. Subsistence farming was practiced in Sombaykha, Tendruk and Norgaygang geogs.

3. Planned activities for January 2026 - June 2027

Activity 3.1 Improvement of alpine meadows

Budget: Nu. 150,000

Timeline: October 2026 - March, 2027

Location: Lhangjab· Lat 27.428170° Lon 89.136079°,

Labana Lat: 27.432424° lon: 89.127608°

The alpine meadow restoration work at Lhangjab and Labana area was selected as per the recommendation in the technical report on plant composition assessment of alpine meadows for management and development of alpine habitat under JKSNR, DoFPs, Haa 2019. Those sites were located in an alpine zone which is almost two days walk from Damthang.

Alpine meadow is a major vegetation component of this strict nature reserve and it occupies about 40% of the reserve. Alpine zone provides a suitable habitat for the co-existence of key wildlife and domestic animals since immemorial. These areas are used exclusively by domestic animals like Yaks (*Bos grunniens*), horses, and local cattle in addition to Musk Deer (*Moschus chrysogaster*), Sambar Deer (*Rusa unicolor*) and Blue Sheep (*Pseudois nayaur*) which are the main prey for Snow Leopards (*Panthera uncia*) inside the reserve. However, with onset of climate change effects and existence of reserve management in the area, the majority of a natural pasture inside the reserve area were encroached by Juniper-Rhododendron Krumsholtz scrubs and are left inaccessible for livestock and wildlife grazing. As a consequence, the remaining portion of the natural pasture is under intensive grazing pressure leading to patchy rill erosion, and eventually, the quantity and quality of palatable grasses might be reduced.



Figure 4: *Alpine meadow restoration sites: Lhangjab, Labana*

Therefore, on a trial basis as a prescription to address the current threat, the management will carry out a prescribed burning in these areas where Rhodo-Juniper Krumholtz has encroached the pasture land and summer habitat of the black necked crane.



Figure 5: *Current status of project site - Rill erosion, Rhodo-Juniper Krumholtz, Yak grazing, summer habitat of Black necked Crane.*

The project implementation sites fall in the alpine scrub covered with alpine screes and rocky outcrops surrounded by natural pastures. The sites were dominated with various sizes of stones/boulders.

The following activities shall be carried out in the identified alpine meadow restoration project sites under the reserve area:

1. Manual clearing of Rhodo-juniper scrubs using power chain saw, knife, axe, spade and shovel will be carried out in the project site. The work will be executed within the 1st week of October to December 2026.
2. Bio-engineering works: This activity will engage 5-10 workers for 10-15 days in developing a few small check dams, bush layering and counter bunding works. This activity will be carried out at Lhangjab block in the month of October 2026.

Solid waste generation such as bottles and plastics are expected. However, the proper disposal of wastes will be done in close coordination with the work coordinator and Bjee Range Office. The sewage sludge from kitchen and toilet are probable to be produced from the laborers working with the project during the activity implementation. The waste will be managed by disposing with the garbage-in and garbage-out policy.

The expected quantity of water to be used will be sourced from the stream that runs next to the project site at a distance of about 100 meters. The quantity of water used would be approximately 5000 liters in full operation. Solar lights will be used. The activity is expected to generate noise from the operation of chain saws. However, safety gears like ear plugs will be provided to the workers and no work shall be done in the odd hours of the night. The activity being site specific and at a smaller scale, the expected pollution and damage in nearby forest will be minimized through strict monitoring by range office and BFL focal person.

Potential social and environmental impacts

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

i. Environmental Impacts:

- Risk of forest fire
- Generation of construction waste during check dam construction
- Generation of general waste by the workers

ii. Social Impacts

- Risk of fire burns during the burning
- Workers' health and safety

Activity 3.2 River embankment work at JKSNR Hq.

Budget: Nu. 700,000

Timeline: October 2026 - March, 2027

Location: JKSNR HQ, Tokey Bji, (lat 27.411178° long 89.235430°)

The proposed activity involves the construction of a culvert bridge and river embankment near the JKSNR Headquarters to mitigate recurring flooding during the monsoon season. Heavy rainfall causes the stream to overflow, resulting in damage to the road leading to the office and disrupting access for staff and visitors. The flooding also poses a risk to the settlements located downstream, leading to complaints from local residents. The construction of the culvert bridge will improve drainage and ensure uninterrupted road connectivity, while the river embankment will strengthen riverbank protection, reduce erosion, and minimize flood impacts on nearby infrastructure and communities.

Potential social and environmental impacts

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

i. Environment Impacts:

- Generation of construction waste during construction of Culvert Bridge
- Generation of general waste by the workers

ii. Social Impacts

- Workers' health and safety



Figure 6: *Current status of the proposed site*

The following activities shall be carried out in the site for river embankment and construction of culvert bridge:

1. Construction of a reinforced concrete culvert bridge across the stream near the JKSNR office to ensure uninterrupted road connectivity and prevent blockage caused by debris. The work will be executed within the August to December 2026. This activity will engage 5-10 workers.
2. Construction of river embankment along the stream to mitigate the overflow during monsoon: This activity will engage 3-5 workers to arrange large boulders along the stream with help of a backhoe. The work will be executed from January 2027 to March 2027.

Local community members will be engaged for the construction work, so no accommodation will be required as workers will stay in their homes. Minor solid waste such as plastics, bottles, and construction-related waste will be generated and properly disposed of at the Anaphu landfill in coordination with the work coordinator and Bjee Range Office. Water requirement, estimated at about 15,000 liters, will be sourced from a nearby stream located approximately 10 meters from the site. Noise from machinery is expected, but impacts will be minimized by providing protective gear such as earplugs and restricting activities to daytime working hours only. As the project is small-scale and site-specific, potential environmental impacts are expected to be minimal and will be managed through close monitoring by the Range Office and BFL focal person

5. Mitigation Measures for Environmental and Social Impacts

Potential impacts to the environment and society along with the mitigating measures according to the ESS form are listed below in the table, 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 mitigations measures	Responsibility party	Cost
Activity 1: Restoration of alpine meadow				150,000
1. Risk of forest fire	Minor (Short term)	● Create awareness on forest fire prevention to the workers involved and appropriate prescribed burning techniques training ● Control measures like putting off fire after cooking and constructing a fire line around the labor camp. ● Use of water backpack pump for fire suppression	BFLfocal, Contractor, Bjee Range Officer	To be included in contract agreement
2. Generate sewage sludge	Minor (Short term)	● Proper toilets will be used by the workers during the period. ● Pit toilet will be constructed away from the streams to avoid contamination of nearby streams		To be included in contract agreement
3. Generation of waste—masonry waste during check dam construction and general waste of the workers	Minor (Short term)	<i>During Construction:</i> ● Ensure that camps are located away from Chuthangna river or water sources and that no wastewater is discharged from water bodies. ● Proper containers/waste bins should be provided at the project site; and waste collected shall be transported to Anaphu dumping site. ● Dumping of waste on the sides of the road, on private land, or in other non-designated places should be prohibited; ● Dumping waste shall be prohibited on fragile slopes, forests, religious or other culturally sensitive areas or areas where livelihood is derived; ● Collection, transportation and final disposal of all waste should be undertaken regularly on a weekly basis; All construction materials should be covered during transportation to avoid waste dispersion ● After construction all waste shall be removed from the project site and transported to <i>Anaphu</i> dumping site.		To be included in contract agreement.

4.Worker's health and safety	Minor (Short term)	● Comply with workers' health and safety guidelines and provide First-Aids kits for cuts and burn such as ointments, bandage and basic medicine ● Ensure hand gloves & gumboots are provided and ensure workers have basic thick clothing to prevent from cold ● Ensure that no underage workers, or children are engaged; ● Ensure decent work conditions, including an appropriate salary/wage, working hours, accommodation and food for workers shall be provided to all workers; ● 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. ● Implement a grievance redressal mechanism for workers (and their organizations, where they exist) to raise workplace concerns and maintain a proper registry.	BFL focal, Contractor, Bjee Range Officer	Nu. 10,000
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Activity 2: River embankment work at JKSNR Hq.				Nu. 700,000/-
1. Risk of flooding during construction period	Minor (Short term)	The activity will be carried out during the autumn or dry season to avoid flooding during the monsoon season	BFL focal, Contractor, Bjee Range Officer	No Budget required
2. Generation of waste of waste from construction.	Minor (Short term)	<i>During Construction:</i> ● 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, water bodies, on private land, or in other non-designated places should be prohibited; ● Dumping waste shall be prohibited on fragile slopes, forests, religious or other culturally sensitive areas or areas where livelihood is derived; ● Collection, transportation and final disposal of all waste should be undertaken regularly on a weekly basis; ● All construction materials should be covered during transportation to avoid waste dispersion ● After construction all waste shall be removed from the project site. ● All the woody shrubs removed will be staked in the identified area for decomposition	BFL focal, Contractor, Bjee Range Officer	To be included in contract agreement

3. Emission from minimal machinery (Air pollution)	Short term minor	• Use machinery only when absolutely necessary • Deploy well-maintained and fuel-efficient machinery and equipment • Avoid unnecessary idling of engines during operation • Schedule works efficiently to reduce machine operating hours • Conduct regular inspection and maintenance of equipment to minimize exhaust emissions. • Encourage the use of manual labor wherever feasible to minimize reliance on machinery.	BFL focal person, Contractor	No budget required
4. Increase the sediment load in the local water bodies	Minor (Short term)	• Excavated soil shall be transported and dumped at designated sites.	BFL focal, Contractor, Bjee Range Officer	No Budget required
5. Worker's health and safety	Minor (Short term)	• Comply with workers' health and safety guidelines and install appropriate safety and directional signage including providing first aid kits • Ensure that no underage workers, or children are engaged; • Provide safety gears such as hand gloves, gumboots, and face mask. • Establish Grievances Redressal Mechanism and maintain a proper registry.	BFL focal, Contractor, Bjee Range Officer	Nu. 10,000

6. ESMP Implementation arrangements

The implementation of project activities will be led by the BFL focal of JKSNR and carried by respective range offices. 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 JKSNR in 2026 to 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 to starting the project activities and prior to any specific tasks with high health risks.**

The JKSNR management needs to monitor the implementation of proposed measures by the Contractor and Contractor's subcontractors with visual checking, reviewing the records of evidence that the measures have been applied and ask the Contractor to apply the measures as soon as possible. Non-compliances should be recorded and report any non-compliances 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 requirements.

7. ESMP monitoring arrangements

The BFL focal and respective range officers in JKSNR 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.

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

Sl. No	Activities	Monitoring team	Timeline		Location	Means of Verification
			Start	Complete		
1	Restoration of Alpine meadow	Field focal	Oct 2026	December 2026	Lhangjab and Labana	Site visit and report
		ESS Focal: BFL focal and Section Head	November 2026			Conducted virtually
		PCU: ESS&GESI, M&E Officer	November 2026			
2	River embankment	BFL Focal	October 2026 – March 2027		Tokey	Site visit and report
		PCU: ESS&GESI, M&E Officer	November 2026			PCU team will make a visit during implementation as per M&E framework

Monitoring Arrangement for alpine restoration

- Monitoring by implementing entities:
 - At least weekly field visits
 - Monthly reports prepared by implementing entities and submitted to ESS officer at PCU
- Monitoring by ESS officer at PCU:
 - Quarterly reports by PCU (M&E officer) to Secretariat
 - Bi-annual reports of the Secretariat to WWF US (as part of mid-year and final APRs)

8. Capacity Need and Budget

Activities under this ESMP will be implemented by the BFL focal, supervising engineer, and the 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	Restoration of alpine meadows- Lhangjab and Labana	250,000	10,000
2.	River embankment	700,000	30,000
	Total	950,000	40,000

The proposed activities are of very small scale and there are no adverse social and environmental impacts which require mitigation measures. Therefore, a sum of Nu. 40,000 (Forty thousand) only is set for procurement of safety gears for workers.

9. Consultation and Disclosure Mechanisms

This ESMP has been prepared in a participatory manner, and a community consultation was carried out as follows:

1. Restoration of alpine meadows (Bjee Gewog) -
2. Construction culvert Bridge and River embankment

The Park management will be consulting with two yak herders just before the implementation of activities in October 2026. The consultation with Tokey community were already carried out. These consultations were carried to inform the local communities regarding the project activities, solicit their opinions, and enable them to question proposed mitigation measures. The main issues that were raised during the consultation meeting include the following: “Is the office going to construct river embankment to prevent flooding during summer?”.

The full English version of this ESMP, as well as an executive summary in Bhutanese, shall be disclosed on the website of MoENR and WWF, Bhutan Program. Hard copies of the ESMP should also be available at the PA Management Office and at the PCU Office. The copies of ESMP will be shared with relevant local elected leaders for compliance.

10. Stakeholder engagement plan

The local community that resides in the vicinity of the planned BFL activities in JKSNR will be engaged throughout the implementation of these activities as follows:

1. Restoration of alpine meadows – Lhangjab and Labana
 - Dates: October 2026
 - Agenda: Improvement of alpine meadow
 - Location: Gewog Office
2. Construction of culvert bridge and river embankment
 - Dates: October 2026
 - Agenda: Construction of culvert bridge near JKSNR HQ office and river embankment
 - Location: JKSNR HQ Office

11. Grievance Redressal Mechanisms

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

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

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

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

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

Email: SafeguardsComplaint@wwfus.org

Mailing address:

Project Complaints Officer
Safeguards Complaints,
World Wildlife Fund
1250 24th Street NW
Washington, DC 20037

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

GCF Independent Review Mechanism

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



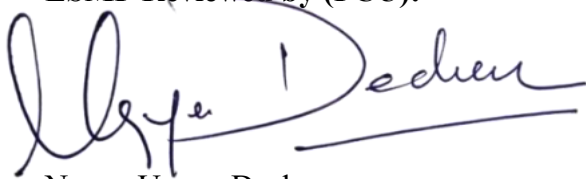
Name: Sangay Wangchuk

Title: Sr. Forest Ranger III

Date: 5/5/2026

Date: 5/5/2026

ESMP Reviewed by (PCU):



Name: Ugyen Dechen

Title: Project Officer

Date: 29th June 2026

ESMP Approved by (AE):



Signed:

Name: Nathalie Simoneau

Title: Senior Director – Gender, Social Inclusion & Safeguards

Date: June 29, 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 sitespecific hazard or color coding in use should be thoroughly reviewed as part of orientation training.

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

Rotating and Moving Equipment

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

- Designing machines to eliminate trap hazards and ensuring that extremities are kept out of harm's way under normal operating conditions. Examples of proper design considerations include two-hand operated machines to prevent amputations or the

availability of emergency stops dedicated to the machine and placed in strategic locations.

Where a machine or equipment has an exposed moving part or exposed pinch point that may endanger the safety of any worker, the machine or equipment should be equipped with, and protected by, a guard or other device that prevents access to the moving part or pinch point. Guards should be designed and installed in conformance with appropriate machine safety standards.

Noise

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

Vibration

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

Electrical

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

- Marking all energized electrical devices and lines with warning signs
- Locking out (de-charging and leaving open with a controlled locking device) and tagging-out (warning sign placed on the lock) devices during service or maintenance
- Checking all electrical cords, cables, and hand power tools for frayed or exposed cords and following manufacturer recommendations for maximum permitted operating voltage of the portable hand tools

- Double insulating / grounding all electrical equipment used in environments that are, or may become, wet; using equipment with ground fault interrupter (GFI) protected circuits
- Protecting power cords and extension cords against damage from traffic by shielding or suspending above traffic areas
- Appropriate labeling of service rooms housing high voltage equipment ('electrical hazard') and where entry is controlled or prohibited
- Establishing "No Approach" zones around or under high voltage power lines
- Rubber tired construction or other vehicles that come into direct contact with, or arcing between, high voltage wires may need to be taken out of service for periods of 48 hours and have the tires replaced to prevent catastrophic tire and wheel assembly failure, potentially causing serious injury or death
- Conducting detailed identification and marking of all buried electrical wiring prior to any excavation work

Eye Hazards

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

Use of machine guards or splash shields and/or face and eye protection devices, such as safety glasses with side shields, goggles, and/or a full-face shield. Frequent checks of these types of equipment prior to use to ensure mechanical integrity is also good practice.

- Where machine or work fragments could present a hazard to transient workers or passers-by, extra area guarding or proximity restricting systems should be implemented, or PPE required for transients and visitors.
- Provisions should be made for persons who have to wear prescription glasses either through the use overglasses or prescription hardened glasses.

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

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

Working Environment Temperature

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

during short-term outdoor work, temperature-related stress management procedures should be implemented which include:

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

Ergonomics, Repetitive Motion, Manual Handling

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

- Facility and workstation design with 5th to 95th percentile operational and maintenance workers in mind
- Use of mechanical assists to eliminate or reduce exertions required to lift materials, hold tools and work objects, and requiring multi-person lifts if weights exceed thresholds
- Selecting and designing tools that reduce force requirements and holding times, and improve postures
- Incorporating rest and stretch breaks into work processes, and conducting job rotation
- Implementing quality control and maintenance programs that reduce unnecessary forces and exertions

Working at Heights

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

- Installation of guardrails with mid-rails and toe boards at the edge of any fall hazard area
- Proper use of ladders and scaffolds by trained workers
- Use of fall prevention devices, including safety belt and lanyard travel limiting devices to prevent access to fall hazard area, or fall protection devices such as full body harnesses used in conjunction with shock

absorbing lanyards or self-retracting inertial fall arrest devices attached to fixed anchor point or horizontal life-lines

- Appropriate training in use, serviceability, and integrity of the necessary PPE
- Inclusion of rescue and/or recovery plans, and equipment to respond to workers after an arrested fall

Illumination

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

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

4. Personal safety equipment for workers

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

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

- Always wear complete set of protective wear.
- Do not wear loose clothing, such as overhang shirt, jackets, mufflers etc.
- Tuck shirt and jacket well.
- Secure helmet with belt under the chin.
- Tuck the bottom sleeves of trouser inside safety boot.
- Dress with reflector

5. Standards for workers' accommodation

1. General living facilities

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

2. Drainage

- The site is adequately drained.

3. Heating, air conditioning, ventilation and light

- Living facilities are provided with adequate heating, ventilation, and light systems including emergency lighting.
4. Water
 - Workers have easy access to a supply of clean/ potable water in adequate quantities.
 - The quality of the water complies with national/local requirements or WHO standards.
 - Tanks used for the storage of drinking water are constructed and covered to prevent water stored therein from becoming polluted or contaminated.
 - The quality of the drinking water is regularly monitored.
 5. Wastewater and solid waste
 - Wastewater, sewage, food and any other waste materials are adequately discharged in compliance with national and/or international standards and without causing any significant impacts on camp residents, the environment or surrounding communities.
 - Specific containers for rubbish collection are provided and emptied on a regular basis.
 - Pest extermination, vector control and disinfection are undertaken throughout the living facilities at least once.
 6. Rooms/dormitories facilities
 - Rooms/dormitories are kept in good condition.
 - Rooms/dormitories are aired and cleaned at regular intervals.
 - Rooms/dormitories are built with easily cleanable flooring material.
 - Rooms/dormitories and sanitary facilities are located in the same buildings.
 - Residents are provided with enough space.
 - The number of workers sharing the same room/dormitory is minimized.
 - Doors and windows are lockable and provided with mosquito screens when necessary.
 - Mobile partitions or curtains are provided.
 - Adequate number of furniture such as table, chair, mirror, and lamps are provided for all workers.
 - Separate sleeping areas are provided for men and women.
 7. Bed arrangements and storage facilities
 - A separate bed is provided for every worker.
 - The practice of “hot-bedding” is prohibited.
 - There is a minimum space of 1 meter between beds.
 - The use of double deck bunks is minimized.
 - If double deck bunks are in use, there is enough clear space between the lower and upper bunk of the bed.
 - Workers are provided with comfortable mattresses. Workers may be expected to use their own pillows and bed linens.
 - Workers wash bed linen frequently and 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.

8. Sanitary and toilet facilities

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

9. Cooking and laundry facilities

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

10. Leisure, social and telecommunications facilities

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

Contents of first aid box or cup-boards

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

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

Annexure 4 - BFL specific GRM Brochure

LOGICAL STEPS FOR GRIEVANCE RESOLUTION PROCESS

Each grievance will be registered with the following information:

- Name of the complainant
- Date of the grievance
- Nature of the grievance and location
- Number of persons involved
- Tracking no.
- Potential solutions

Modes of communication:

WHAT HAPPENS TO YOUR COMPLAINT?

The complaint will be investigated by responsible authorities following the logical steps for grievance resolution process within 12 working days. If further investigation is required, the complainant will be informed accordingly and a final response will be provided after an additional period of 8 working days.

If you did not prefer to remain anonymous, you will be notified regarding the complaint resolution once the investigation is completed.

VISIT US:

Bhutan For Life, Project Coordination Unit, Department of Forests and Park Services, Ministry of Energy and Natural Resources, Royal Government of Bhutan

THE GRIEVANCE REDRESSAL MECHANISM FOR BHUTAN FOR LIFE

JIGME KHESAR STRICT NATURE RESERVE

The goal of the BFL GRM is to channel grievances into an acceptable, institutionalized mechanism for timely resolving conflict that may arise from implementation of BFL project activities.

The GRM seeks to address any grievances related to the implementation of BFL activities such as:

- Loss of community resources
- Non-performance of project obligations including safeguards
- Violations of law and/or corruption
- Project governance and implementation
- Fair access and benefit sharing
- Stakeholder engagement
- Budget allocation
- Labour related issues and incidents
- Gender related issues

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 OFFICER

- Sangay Wangchuk
- 17542375
- sangaywangchuk1@moenr.gov.b
- Jigme Khesar Strict Nature Reserve, Haa

GAKILING RANGE OFFICE

- Dophu
- 17734800
- dophu271984@gmail.com
- Gakiling Range Office, Sombaykha Dungkhag

SOMBAWKHA RANGE OFFICE

- Nima Tshering
- 17805598
- nimarabselyoezer@gmail.com
- Sombaykha Range Office, Sombaykha Dungkhag

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

- Bji Gewog - 17682055
- Gakiling Gewog - 77238333/17304877
- Sombaykha Gewog - 77985518

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.

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