

Bhutan for Life Environmental and Social Management Plan (ESMP) for Biological Corridor 6, 2022

1. Introduction

(A) Project Background

The Bhutan for Life (BFL) project aims to ensure a robust network of protected areas and biological corridors that secures human well-being, biodiversity conservation and increase climate resilience in Bhutan. The project provides a 14-year financial bridge that allows for immediate improvement in the management of Bhutan's protected areas for climate resilience, and the prompt delivery of mitigation, adaptation and biodiversity gains, while the country gradually ratchets up its own financing resources.

BFL seeks to achieve the following objectives:

- Help Bhutan remain carbon neutral by increasing forest and vegetative cover within the Protected Area System;
- Enhance the socio-economic wellbeing of communities in and in the vicinity of the PAS through climate-informed natural resources management;
- Maintain stable, thriving and diverse populations of key species contributing toward national and global biodiversity goals;
- Strengthen organizational, institutional, and financial capacity for effective management of PAS.

BFL includes five components that reflect these goals, divided into 16 milestones (or outputs) and over 80 detailed activities.

(B) Scope of ESMP

The preparation of this Environmental and Social Management Plan (ESMP) was required in order to manage the environmental and social impacts through and specific mitigation actions required to implement the project in accordance with the requirements of WWF's SIPP, the project's Environmental and Social Management Framework (ESMF), and applicable national legislation and regulations.

The ESMP provides an overview of the environmental and social baseline conditions on the routes of the proposed second segment of the project, summarizes the potential impacts associated with the proposed activities and sets out the management measures required to mitigate any potential negative impacts.

This ESMP will be implemented by BFL focal person in each park authority (PA) and biological corridor (BC), and by the contractor to be commissioned by each PA\BC for the project.

(C) Purpose of ESMP

This Site-Specific ESMP is a project-specific source document detailing the environmental and social protection requirements to mitigate and minimize the adverse impacts. The ESMP's primary purpose is to ensure that the environmental requirements and social commitments associated with the project are carried forward into implementation and operational phases of the project and are effectively managed. The specific objectives of this ESMP are as hereunder:

- Minimizing any adverse environmental, social and health impacts resulting from the project activities;
- Conducting all project activities in accordance with the relevant RGoB Laws and WWF's safeguard operational policies and guidelines;
- Preventing environmental degradation as a result of either individual subprojects or their cumulative effects;
- Enhancing the positive environmental and social outcomes of project activities;
- Ensuring that the proposed mitigation measures are feasible and cost-efficient;
- Providing an Action Plan to ensure that the project impact mitigation measures are properly implemented and monitored;
- Ensuring that all stakeholders are engaged in the project activities' preparation and implementation, and their concerns are fully addressed.

(D) Applicable law, policies, and regulation

This ESMP is developed by following the guidelines as set forth in the BFL's ESMF. Applicable RGoB laws and policies include the Constitution of the Kingdom of Bhutan, 2008; legislation on land and moveable property (Land Act of Bhutan 2007; Land Rules, 2007; The Moveable Cultural Property act of Bhutan, 2005); legislation and regulations on forests and protected areas (National Environment Protection Act, 2007; Forest and Nature Conservation Act of Bhutan, 1995; Forest and Nature Conservation Rules and Regulations of Bhutan, 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 (Livestock Act of Bhutan, 2001; The Biodiversity Act of Bhutan, 2003; The Pesticides Act of Bhutan, 2000; The Penal Code of Bhutan, 2004; National Access and Benefit Sharing (ABS) Policy (Draft), 2014).

WWF's safeguards policies that are relevant to this project are as follows: Policy on Environment and Social Risk Management; Policy on Protection of Natural Habitats; Policy on Involuntary Resettlement; Policy on Indigenous Peoples; Standard on Pest Management; Policy on Accountability and Grievance System; Standard on Physical Cultural Resources; as well as general standards on occupational and community health and safety and on energy efficiency.

In general, RGoB's laws, policies, and guidelines are in line with the WWF's environmental and social safeguards requirements. However, there are a few differences between the two systems. With regard to environmental impacts, there are no direct contradictions between the RGoB laws and regulations and the WWF's SIPP, but the requirements of the latter are more extensive. All project activities should fully comply both with the RGoB's Regulations on the Environmental Clearance of Projects, and with the procedures and mitigation measures prescribed in this ESMF. In case that the WWF's SIPP requirements are more extensive, strict, or detailed than the RGoB legislation and policies, the former will apply to all project activities.

With regard to social impacts, the primary discrepancies between the RGoB laws and regulations and the WWF’s SIPP refer to the status of non-title holders and informal land use, and the commitment to participatory decision-making processes. First, according to the WWF’s SIPP, all users of land and natural resources (including people that lack any formal legal ownership title or usage rights) are eligible to some form of assistance or compensation if the project adversely affects their livelihoods. The RGoB laws only recognize the eligibility of land owners or formal users to receive compensation in such cases. Second, the WWF’s SIPP require extensive community consultations as part of the development of various safeguards documents and during project activities. RGoB legislation does not include similar requirements. For the purposes of the BFL project, the provisions of the WWF’s SIPP shall prevail over the RGoB legislation in all cases of discrepancy.

2.Environmental and Socio-Economic Conditions:

BC 6 connects Sakteng Wildlife Sanctuary (SWS) in the north with Jomotsangkha Wildlife Sanctuary (JWS) in the South with total area of 270.80 km² out of which about 124.56 km² or 46% is under Trashigang District (Kangpara; 19.87% & Merak; 26.38%) under Trashigang District, while 54 percent lies under Samdrup Jongkar District (Laurii; 15.93%, Martshella; 17.13%, Serthi; 17.70% and Samrang; 2.96%).

It is situated approximately between 26°98666N and 27.240223N latitudes and 91.78820E and 91.928484 longitudes. Biological corridor 06 has an altitudinal variation from 530 to 4300 meters above mean sea level (masl). Tropical broad-leaved forest is a main vegetation composition of the Biological corridor 06.

The BC 6 has over 99.28 percent (268.86Km²) of the land covered under forest cover with different types of forest types such as Cool and warm Broad-Leaved Forest and Fir Forest, shrubs (0.33%: 0.899 Km²) and meadows (0.03%; 0.863km²).

BC6 was declared in 1999. However, there is no management plan as of now. Even the local communities are not aware of BC6 existence. Thus, an awareness program is crucial before implementing the activities under BC6.

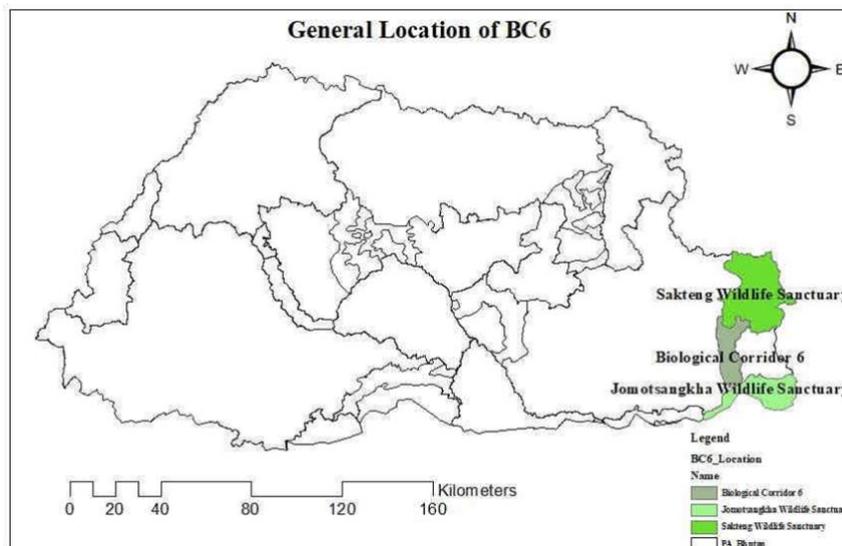


Figure 1: General Location of BC 6 in relation to B2C2 in Bhutan (This is as per New PAs size)

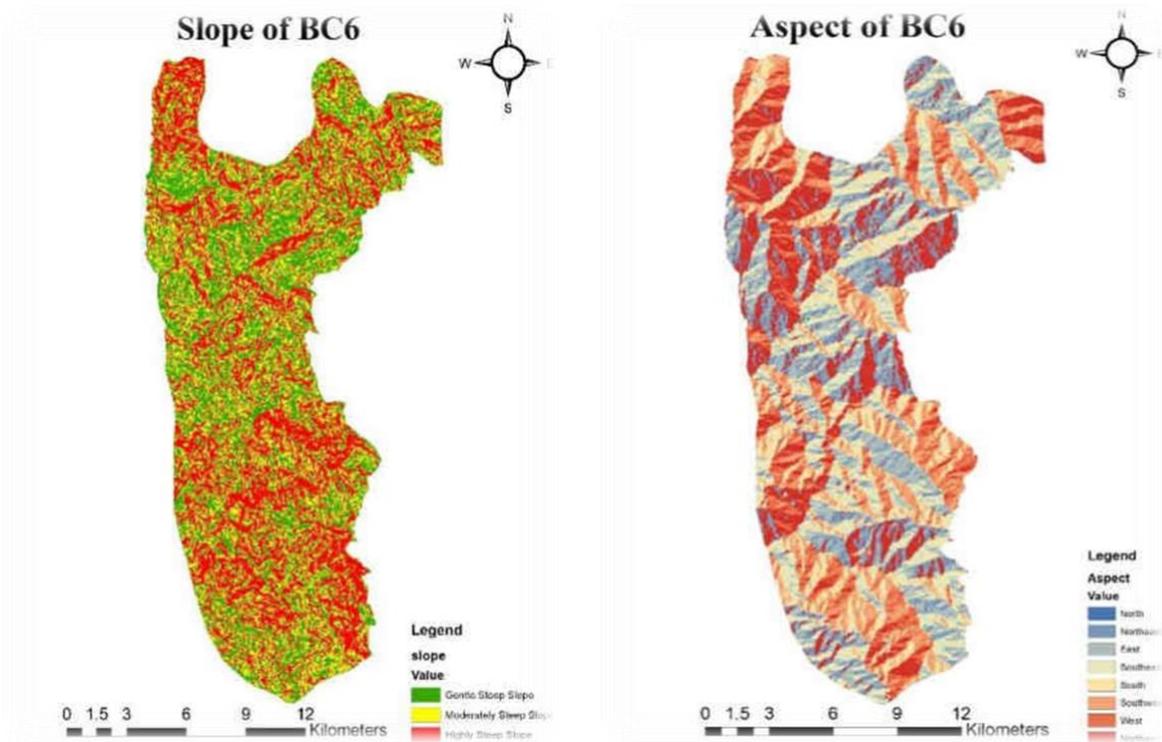


Figure 2: Slope & Aspect of BC 6 (Slope is re-classified into Gentle ($\leq 25^\circ$), Moderate ($\geq 25^\circ$ to 35°) & Steep Slope ($\geq 35^\circ$))

(a) Geological and topographical conditions

(a) Climatic conditions

BC 6 falls within the Humid subtropical climate or Subtropical Oceanic highland climate (Cwb) as per the Koppens climates classification of Bhutan. with Majority (80 %) of areas falling under temperate, dry winter and warm summer (Cwb), While the northern areas adjoining SWS and Chenla areas experiencing cold, dry winter, warm summer (Dwb).

Annual Mean temperature (AMT) of BC6 is 20.80°C with warm Annual Mean Clod Temperature (ACMT) & Annual Warm Mean Temperature (AWMT) of 23.58°C respectively. The areas experience a mean precipitation of 2164.9 mm per year as per the table below:

Table 1: Climatic condition BC 6 as per secondary sources

Weather Station	Life Zone	Altitude	AMT	ACMT	WMT	PPT
Khaling station	Wet Forest	2020	13.73	6.35	19.51	1614.39
Thrimshing Station	Moist Forest	1350	16.26	6.76	22.82	1371.22
Daifarm Station	Wet Forest	280	23.35	17.61	27.67	2824
Koipani Station	Wet Forest	240	29.87	16.57	24.32	2850
Average Mean			20.803	11.8225	23.58	2164.9

Source: weather station of Bhutan, Data Source: Climate Data of MoAF, ArcGis

(b). Slope and Aspect

The general topography for this corridor is moderate to steep slope ranging from zero degrees to more than 35 degrees. The slope classification was carried out based on the standard adopted

for developing Local Forest Management Plans (LFMP) in Bhutan. It was classified at an interval of 0 – 25 degrees, 25-35 degrees and more than 35 degrees corresponding to gentle slope, moderately steep slope and steep slope respectively. The spatial information was generated in ArcGis 10.4 Version with LULC 2016.

Table 2: Reclass slope

Slope Class	Cell Count	Area in Sq. Km	Percent cover
0-25	97220	83.70505834	30.91088876
25-35	102562	88.30444552	<u>32.60936611</u>
>35	114735	98.78522802	<u>36.47974513*</u>
		270.7947319	100

BC 6 areas have equal proportion of slope with slight differences in percent cover. Steep slope constitutes 36%, followed by 32% of gentle slope and only about 30% are gentle slope. The spatial occurrences are well distributed all across BC 6 areas. Typically, gentle slope is concentrated in higher altitude of sub-alpine areas and valley, whereas, the middle portion of areas, near Tshong-Tshongma base and Largab areas, the slope is steep. These are the areas that occurs mostly along the ridges and at many parts were found to be inaccessible to people. North-West facing dominates the areas with 18.94%, followed by East and South East Facing slope

Table 3: Re-classed Aspect of BC 6

Aspect Class	Area in Sq. Km	Percent cover
North	0.4106903	0.1516611
Northeast	33.237503	12.274058
East	42.566287	15.719023
Southeast	40.610987	14.996964
South	32.275782	11.918911
Southwest	37.59237	13.882238
West	32.800983	12.112859
Northwest	51.300128	<u>18.944286*</u>
	270.79473	100

(b) Hydrological conditions

The rivers, streams and water bodies contribute to about 0.02 Percent (0.05 Sq. Km) of the total corridor area. mainly consisting from portion of *Nyera Ama* river in West and *Jomorii* in East. Water bodies such as small lake, ponds, marshland and waterhole are found in its natural extent.

(c) Flora and fauna

Currently, BC 6 has an enumeration of 46 Mammals, 107 Birds and 393 plant species However, with revision and extension of areas from 160 sq. km to 270 sq.km, Additional around eight Biodiversity Grids (1614 to 2092) were assigned to BC6. Currently, BC 6 has about 18 Biodiversity Plots to explores the flora and fauna and accordingly, implement the conservation program in it. Flora and fauna.

Wildlife (Flora & Fauna) of Biological Corridor Six (BC6), Trashigang Eastern Bhutan, has remained unexplored and unprotected. This report summarizes the results of a comprehensive biological survey in Northern BC 6 areas (*Chenla*), and lays down the foundation for establishing the first management plan for BC 6 to conserve biodiverse hotspots

1.Mammal

BC 6 has direct and indirect sighting of 46 mammal species including 15 species of small mammals, representing about 24.5 percent mammal species in Bhutan hitherto. The recorded mammal constitutes Four Endangered (EN) Species namely Red Tiger (*Panthera tigris*), Red Panda (*Ailurus fulgens*), Dhole (*Cuon alpinus*) and Asiatic Elephant (*Elephas maximus*), Seven Vulnerable (VU) species such as Common Leopard, Clouded Leopard, Gaur, Himalayan Black Bear, Sambar, Capped Langur & Smooth-coated Otter, while Seven Near Threatened (NT) species like Asiatic Golden Cat, Marble cat, Himalayan Serrow, Himalayan Goral, Assamese Macaque and Black Giant Squirrel and Bhutan giant flying squirrel are sighted.

2. Birds

Assessment of bird diversity is being carried out using MacKinnon's listing methods especially in Alpine and sub-alpine forest. We recorded about 107 species of birds, which represents about 14.22 percent of bird records in Bhutan. Rapid survey on birds had been carried out only in Alpine and sub-Alpine Forest mostly concentrated in four Micro-habitat such as Alpine meadow, fire forest, Cool broad leaved and water bodies in higher altitudes.

Pheasant species such as Monal pheasant, Himalayan monal, blood pheasant, *Satyr tragopan* and Jungle fowl were recorded. Recording of *Trimicks tragopon* and *Blyth tragopon* from the vicinity of BC 6, signify the need for further exploration of Birds in other region of the areas (Birds data is under compilation-new lists will be updated soon).

3.Plant

Stratified random sampling method was used as sampling design for four different strata via. Fir forest, sub-alpine forest, Open Meadow and Cool Broad-Leaved Forest. Sample plots were laid along altitudinal gradient or laterally inside 4x4km NFI grids with Plot size of 20x20m & 2x2m were used for three, regeneration and herb assessment. We recorded about 393 species of plants, representing about 7 percent to the total plant records in Bhutan, with good record of Rhododendron species (33 Species), representing 69 percent of Rhododendron species in Bhutan. *Rhododendron kesangiae*, native to Bhutan and endangered species such as *Tetracentron sinense*, *Primula bhutanica*, *Sapria himalayana* and newly discovered *Bulbophyllum trongsaense* were also recorded from the locality.

(d)Socio-economic conditions

There are no records of permanent settlement inside BC areas (LULC 2016). However, about 2253 Household with a population of over 18,902 are recorded in Six Geog of Merak, Kangpara, Lauri, Serthig, Marteshela & Samrang under Trashigang and Samdrup Jonkhar District respectively in which BC 6 falls partially or in buffer areas.

These are tentative figures as the socio-economic survey is yet to be assessed. The main source of income for the communities in the area is agricultural farming in lower Geog of BC 6, such as Martshela, Serthig, Kangpara and Samrang. however, community of Merak and Lauri are into livestock-based farming.

2. Planned activities in Year 2022

The planned activities in BC_6 that require an ESMP are the following:

Activity 1: Maintenance of Beat Office at Khaling

- *Budget: Nu. 1.3M*
- *Timeline: June 2022 to June 2023*
- *Location: Khaling RNR*

The Activity is implemented to facilitate office working environment, to create additional office space for four staff working under the single room of 4*5m room in current Office. The Office has no space for working and as well as to provides service delivery to clients. As the current Beat Office is hosted along with the Office of the Livestock and Agriculture Extension Office under single roof. Office maintenance work and extension work for Khaling Beat Office is indented to implement during 4th Year of BFL funding (2022), from the 2nd Quarter of 4th Year till the 2nd Quarter of 5th Year of BFL funding (April 2022 to June 2023). Drawing and estimates for the maintenance work are ready and is in due process of seeking approval from the concerned agency. The site is located in existing Beat Office, Khaling, within the RNR campus. The campus has enough areas with flat slope for one units Office expansion, with the existing structure of 3 units staff quarter, Offices, FCB outlets and Cold storage. There are Eight Household (5 RNR staff, 2 FCB and 1 health staff), they are all civil servants in the vicinity and there are no communities residing in the vicinity of the maintenance work.

Following are the proposed major activity proposed for constructing a separate Beat officer(s) Office adjoining the current Beat Office;

- 1. Maintenance work for RNR office:** Major Maintenance work for all RNR Office (Agriculture, Livestock and Forestry), such as Roofing, Ceiling, flooring, paneling work, Toilet & rest room, window & door replacement along sanitation, plumbing and painting work.
- 2. Maintenance work for staff quarters (RNR) and Beat:** selective Roofing and Ceiling replacement works along with draining, sanitation & plumbing and re-electrification and door replacement

Nu. 1.3M is proposed for the activity and will be implemented from 2nd Quarter of 4th Year BFL financing. The activity will be implemented through community contract awards with technical and administrative support from Geog Administration, Khaling. Approximately 10 to 15 local workers will be employed for about 6 Months. They will be hosted at old structure of Geog Office, which is 20 M away from the construction site. Electricity and water will be

used from the existing Office or FCB, while Water will be shared from the RNR tap head, which is 10 m away from the camp, and temporarily pit toilet will be constructed for sanitation.



Figure 3: Images of General location of Khaling beat Office with Beat Office extension site. **A.** Image showing campus along with RNR Office and staff quarter, Khaling. **B.** Main structure of RNR Office, Khaling. The single units Host Offices of Agriculture, Livestock and Forest Beat Office, Khaling. **C.** Image Showing the Side View of RNR Office along with the Flat Terrain without vegetation, the Site show the proposed areas for the Office Extension, attached to current one units Office. **D.** Sign Boards of RNR Office, Khaling.

There will not be any major social and environment impact due to the activity, since the activity is not new and is the maintenance of the existing structure. Following are the minor impacts that can be mitigated:

- Noise disturbance: Possible noise disturbance as a result of outdoor equipment usage and transportation vehicles driving around the construction site
- Air quality: dust as a result of construction works and possible emissions from transportation vehicles
- Waste: generation of waste as a result of construction activities
- Workers’ health and safety
- COVID-19 related risk

Activity 2: Beat Office Maintenance at Thrimshing

- *Budget: Nu.0.900 M*
- *Timeline: June 2022 to June 2023*
- *Location: Thrimshing Beat Office*

Located above the Dungkhag Administration, the Beat office in Thrimshing is 10m away from the Dungkhag. Current structure is in need for the maintenance work. The campus has enough areas without permanent fencing, footpath and other safety amenities for the Office. Major Maintenance work of Beat Office along with the compound fencing and footpath maintenance will be carried out as part of this activity. The office maintenance work and extension work for Thrimshing Beat Office is indented to implement during 4th Year of BFL funding (2022), from the 2nd Quarter of 4th Year till the 2nd Quarter of 5th Year of BFL funding (April 2022 to June 2023). Drawing and estimates for the maintenance work are ready and is in due process of seeking approval from the concerned agency. While, the Furniture house construction will be supported from July 2022 to December 2022 (3rd & 4th Quarter of 4th Year of BFL Funding).

Following are the activities that will be carried out as part of the activity:

1. **Major Office Maintenance works:** Selective roofing replacement, ceiling and flooring change, Rest room development, re-electrification, sanitation and plumbing works, site drain and door replacement, painting, footpath development and compound fencing work with installation of street light.

Nu. 0.900 M is proposed for the Activity. It will be implemented through community contract awards with technical and administrative support from Dungkhag Administration, Thrimshing. Approximately 10 to 15 local workers will be employed. They will be hosted in old RNR Office, which is about 30 away from the construction site. Electricity, sanitation and water will be used form the old RNR Office.



- Noise disturbance: Possible noise disturbance as a result of outdoor equipment usage and transportation vehicles driving around the construction site
- Air quality: dust as a result of construction works and possible emissions from transportation vehicles
- Waste: generation of waste as a result of construction activities
- Workers' health and safety
- COVID-19 related risk

Activity 3: construction of furniture house (Traditional Painting House) for Tshendaling CF along with equipment supports and skill enhancement at Merdha, Kangpara.

- *Budget: Nu.0.500 M*
- *Timeline: June 2022 to December 2022*
- *Location: Tshendaling CF, Merdha, Kangpara*

This activity will support to Tshendaling CF furniture house (Traditional painting house) which is located 18 Km away from Kangpara Geog Center. Tshendaling CF furniture house is located at Merdha under Kangpara Geog. The CFMG is formed by 35 Household Tshendaling who are dependent on cash crop such as chilli and potatoes and tradition furniture such as Alters for their livelihood.

Formed by 35 Household Merdha. Currently, CF has one structure for traditional carpentry works and processing of furniture. Site is located inside CF areas and about 10 Decimal of pvt. Registered land is being procured by the CFMG for the furniture house. It is connected by 15 farm road and has about 5 meter of approach road to the furniture house.

Tshendaling CF furniture house will be supported for the following activities from BFL in 4th Year:

1. **Traditional painting house construction:** Material such as CGI sheet, ridging, Nails, cements, glass and other construction material(s)
2. **Sanitation and plumbing supports;** Material such as HDPE pipe, CGI sheet, nail, joints, cements, gravel and other sanitary items will be supported
3. **Management:** By law will be prepared to keep records of equipment or facility used among the members as well as other M & E process and procedures will be developed through the support.

Nu. 0.500M is proposed for the construction of traditional painting house construction at Merdha, for 35 HH of Tshendaling CF. The Furniture house construction will be supported from July 2022 to December 2022 (3rd & 4th Quarter of 4th Year of BFL Funding).

The BC office will support through providing construction material for construction of one unit's painting house, retaining wall, toilet and 500m water facility creation while the CFMG members will be contributing in the form of labour for the work. About 30 to 35 CFMG members from the Tshendaling CF will be contributing labour force for the construction for about 2 weeks. They will be engaged only during the day, while they will be retrieving back to their respective home in night.



Figure 5: Various Image showing location of Tshendaling furniture house at Merdha under Kangpara Geog. Trashigang. **A:** Traditional furniture in process on refining with traditional painting in same room. **B.** front view of furniture house, showing planner equipment and timber seasoning done on open space. **C.** Planner and traditional furniture (Chodrom) on open space. **D.** CF executive members and technical staff during consultation on Furniture house supports. **E.** Over all view of the furniture house inside Tshendaling CF and proposed site for the traditional painting house, it lies just below the farm road, less than 10 m with approach road to it. **F.** Front view of current furniture house, proposing for permanent retaining wall construction for permanent and stability.

Some of the minor social and environment impact that need to be mitigated are as follows:

- Noise disturbance: Possible noise disturbance as a result of outdoor equipment usage and transportation vehicles driving around the construction site
- Air quality: dust as a result of construction works and possible emissions from transportation vehicles
- Waste: generation of waste as a result of construction activities
- Workers' health and safety
- COVID-19 related risk

3. Mitigation Measures for Environmental and Social Impacts

Potential impact	Impact scale	Proposed mitigation measures	Responsible Party	Costs (million)
Activity 1: Maintenance of Beat Office, Khaling				Nu. 1.3M
Noise disturbance: Possible noise disturbance as a result of outdoor equipment usage and transportation vehicles driving around the construction site	Short term minor	<ul style="list-style-type: none"> The construction work should not be permitted during the nights, the operations on site shall be restricted to the hours 7am—7pm Vehicles that are excessively noisy shall not be operated until corrective measures have been taken; Earplugs and protecting devices shall be provided to workers on site if necessary 	DFO, Trashigang	
Air quality: dust as a result of construction works and possible emissions from transportation vehicles	Short term minor	<ul style="list-style-type: none"> Construction site, transportation routes and materials handling sites should be water-sprayed on dry and windy days; Construction materials should be stored in appropriate and covered places to minimize dust; <p>Before allowing vehicles on site, fitness and emission test documents of the vehicle shall be produced</p> <ul style="list-style-type: none"> Vehicle loads likely to emit dust need to be covered; Workers should wear protective masks if dust appears 	DFO, Trashigang	
Waste: generation of waste as a result of construction activities	Short term minor	<ul style="list-style-type: none"> Identification of the different waste types at the project site (soil, construction waste, asphalt, food, etc.); 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; 	DFO, Trashigang	Refreshment during waste management Nu. 10000 for ESS

		<ul style="list-style-type: none"> • Collection, transportation and final disposal of all waste should be undertaken regularly [specify: weekly, Every Friday along with Divisional Office Social Work], • Possible hazardous waste (motor oils, vehicle fuels, etc.) should be collected separately and disposed by contractor to areas identified by concerned authority, such as National Environment Commission (NEC) • All construction materials should be covered during the transportation to avoid waste dispersion; • Burning of construction waste should be prohibited. • All waste shall be removed from the project site. 		
Workers' health and safety	Short term minor	<ul style="list-style-type: none"> • Comply with the workers' health and safety guidelines • Access to health facilities for the workers pre and during construction activities need to be available and ensure first aid kit is available at construction site all the time- Basic health unit (BHU) needs to be available in walkable distance or the workers need to be checked once in a month by authorized medical doctor. • Ensure that no underage workers, or children are engaged • Ensure decent work conditions, including an appropriate salary, working hours, accommodation and other essential amenities as per the Operational Health and Safety Guidelines are available for workers • 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 	DFO, Trashigang	<i>Will be met from the activity cost</i>

		<p>and benefits), working conditions and terms of employment, and disciplinary practices</p> <ul style="list-style-type: none"> • Implement a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns- the worker with grievance shall report in their grievance to Range/beat/ HQ or gewog office. All workers shall be briefed about the GRM before the starting the work 		
COVID-19 related risk	Short term minor	<ul style="list-style-type: none"> • Follow Covid safety protocols circulated by Ministry of Health (MoH). 	DFO, Trashigang	
Activity 2: Maintenance of Beat Office, Thrimshing				Nu. 0.900M
Noise disturbance: Possible noise disturbance as a result of outdoor equipment usage and transportation vehicles driving around the construction site	Short term minor	<ul style="list-style-type: none"> • 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; <p>Earplugs and protecting devices shall be provided to workers on site if necessary</p>	DFO, Trashigang	
Air quality: dust as a result of construction works and possible emissions from transportation vehicles	Short term minor	<ul style="list-style-type: none"> • Construction site, transportation routes and materials handling sites should be water-sprayed on dry and windy days; • Construction materials should be stored in appropriate and covered places to minimize dust; <p>Before allowing vehicles on site, fitness and emission test documents of the vehicle shall be produced</p> <ul style="list-style-type: none"> • Vehicle loads likely to emit dust need to be covered; <p>Workers should wear protective masks if dust appears</p>	DFO, Trashigang	
Waste: generation of waste as a result of construction activities	Short term minor	<ul style="list-style-type: none"> • Identification of the different waste types at the project site (soil, construction waste, asphalt, food, etc.); 	DFO, Trashigang	

		<ul style="list-style-type: none"> • 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; • Collection, transportation and final disposal of all waste should be undertaken regularly [specify: weekly, every Friday] • Possible hazardous waste (motor oils, vehicle fuels, etc.) should be collected separately and disposed by contractor to areas identified by concerned authority, such as National Environment Commission (NEC) • All construction materials should be covered during the transportation to avoid waste dispersion; • Burning of construction waste should be prohibited. • All waste shall be removed from the project site. 		Nu. 10000 for waste management
Workers' health and safety	Short term minor	<ul style="list-style-type: none"> • Comply with the workers' health and safety guidelines • Access to health facilities for the workers pre and during construction activities need to be available and ensure first aid kit is available at construction site all the time- Basic health unit (BHU) needs to be available in walkable distance or the workers need to be checked once in a month by authorized medical doctor. • Ensure that no underage workers, or children are engaged • Ensure decent work conditions, including an appropriate salary, working hours, accommodation and other essential amenities as per the Operational Health and Safety Guidelines are available for workers 	DFO, Trashigang	

		<ul style="list-style-type: none"> • 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, and disciplinary practices • Implement a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns- the worker with grievance shall report in their grievance to Range/beat/ HQ or gewog office. All workers shall be briefed about the GRM before the starting the work 		
COVID-19 related risk	Short term minor	<ul style="list-style-type: none"> • Follow Covid safety protocols circulated by Ministry of Health (MoH). 	DFO, Trashigang	
Activity 3: Material Support for the Tshendaling CFMG members for Furniture production				Nu. 0.500M
Noise disturbance: Possible noise disturbance as a result of outdoor equipment usage and transportation vehicles driving around the construction site	Short term minor	<ul style="list-style-type: none"> • The construction work should not be permitted during the nights, the operations on site shall be restricted to the hours 7am—7pm • Vehicles that are excessively noisy shall not be operated until corrective measures have been taken; • Earplugs and protecting devices shall be provided to workers on site if necessary (procurement of Safety Gears=10,000/-) 	DFO, Trashigang	
Air quality: dust as a result of construction works and possible emissions from transportation vehicles	Short term minor	<ul style="list-style-type: none"> • Construction site, transportation routes and materials handling sites should be water-sprayed on dry and windy days; • Construction materials should be stored in appropriate and covered places to minimize dust; <p>Before allowing vehicles on site, fitness and emission test documents of the vehicle shall be produced</p>	DFO, Trashigang	

		<ul style="list-style-type: none"> • Vehicle loads likely to emit dust need to be covered; Workers should wear protective masks if dust appears (Procurement of Mask and safety Gear=10,000/-) 		
Waste: generation of waste as a result of construction activities	Short term minor	<ul style="list-style-type: none"> • Identification of the different waste types at the project site (soil, construction waste, asphalt, food, etc.); • 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; (Fabrication and installation of Wastebin=10,000/-) • Collection, transportation and final disposal of all waste should be undertaken regularly [specify: weekly, every Friday] (Refreshment cost: 10,000/-) • Possible hazardous waste (motor oils, vehicle fuels, etc.) should be collected separately and disposed by contractor to areas identified by concerned authority, such as National Environment Commission (NEC) • All construction materials should be covered during the transportation to avoid waste dispersion; • Burning of construction waste should be prohibited. <p>All waste shall be removed from the project site.</p>	DFO, Trashigang	Nu. 20000 for waste management
COVID-19 related risk	Short term minor	<ul style="list-style-type: none"> • Follow Covid safety protocols circulated by Ministry of Health (MoH). (Procurement of COVID-19 field items or equipment) 	DFO, Trashigang	

4. ESMP Implementation Arrangements

The implementation of project activities will be carried out by the BFL focal person in BC 6. The focal will be responsible for a compliance with all procedures outlined in this ESMP, as well as compliance with any requirements to obtain clearances, permits, approvals, or consent documents from relevant authorities and stakeholders.

This ESMP should be part of the contract that the PA will sign with the Contractor(s) for implementation of the planned activities in BC 6 in the 2022. 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 EHS plans, etc.). An OHS information session should be organized by the Contractor for all workers prior to starting of the project activities and prior any specific tasks with high health risks.

The BC-6 Supervising Engineer needs to monitor the implementation of proposed measures by the Contractor and Contractor's subcontractors with visual checking, reviewing the records of evidence that the measures have been applied and 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). All non-compliances 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.

5. ESMP Monitoring Arrangements

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

Sl#	Activities	Monitoring team	Timeline		Location	Means of Verification
			Start	Complete		
1	Maintenance of Khaling and Thrimshing Beat office	Field Focal	Sept 2022	April 2023	Khaling	Picture of work and register/ Work Completion report
		ESS officer	Oct - Nov, 2022			
3	Furniture house support	Field Focal	August 2022	October 2022	Merdha	Picture of work and register/ Work Completion report
		ESS officer	Oct, 2022			

Activity 1&2: Maintenance of Beat office at Khaling and Thrimshing

Monitoring by implementing entities:

- Monitoring after awarding and one time in two months during maintenance work, however, Field staff will be monitoring regularly.

Monitoring by ESS consultants:

- Field monitoring by ESS officer – monitoring of the work once during the implementation and through field report from IAs after completion of the work.
- Reports by ESS officer to BFL Fund Secretariat – Annual report submitted to the BFL Fund Secretariat in January, 2023.

Bi-annual reports of the Secretariat to WWF US (as part of mid-year and final APRs)

Activity 3: Furniture house support, Merdha

Monitoring by implementing entities:

- Monitoring during material issuing and one time in two months during maintenance work, however, Field staff will be monitoring regularly.

Monitoring by ESS consultants:

- Field monitoring by ESS officer – monitoring of the work once during the implementation and through field report from IAs after completion of the work.
- Reports by ESS officer to BFL Fund Secretariat – Annual report submitted to the BFL Fund Secretariat in January, 2023.

Bi-annual reports of the Secretariat to WWF US (as part of mid-year and final APRs)

6. 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: (last section)*

Sl#	Activity	Amount (Nu.)	Budget for ESS mitigation
1	Major Maintenance work of Khaling Beat Office	1.300 M	0.010M
2	Major Maintenance work of Thrimshing Beat Office	0.900M	0.010M
3	Material support to Tshendaling CF furniture house	0.500M	0.020M
Total		2.7M	0.040M

7. Consultation and Disclosure Mechanisms

This ESMP has been prepared in a participatory manner, and consultation with CFMG members of Tshendaling CF is carried out for the material support. Following issues were discussed with the CFMG members of Tshendaling CF during the consultation:

- Resources use, pricing and material or equipment use by-laws will be developed and revised

The full English version of this ESMP, as well as an executive summary in Bhutanese, shall be disclosed on the website of MoAF and WWF, Bhutan Program. Hard copies of the ESMP should also be available at the PA Management Office and at the PCU Office.

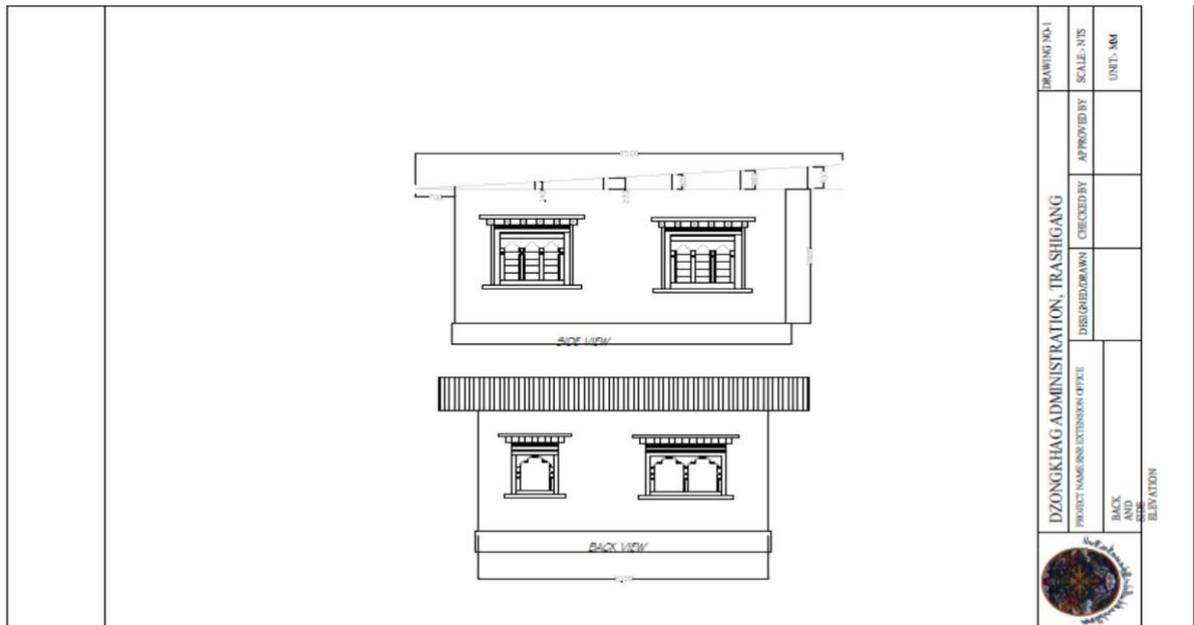
8. Stakeholder Engagement Plan

Mention how the stakeholders will be engaged during the process of implementation of the activity

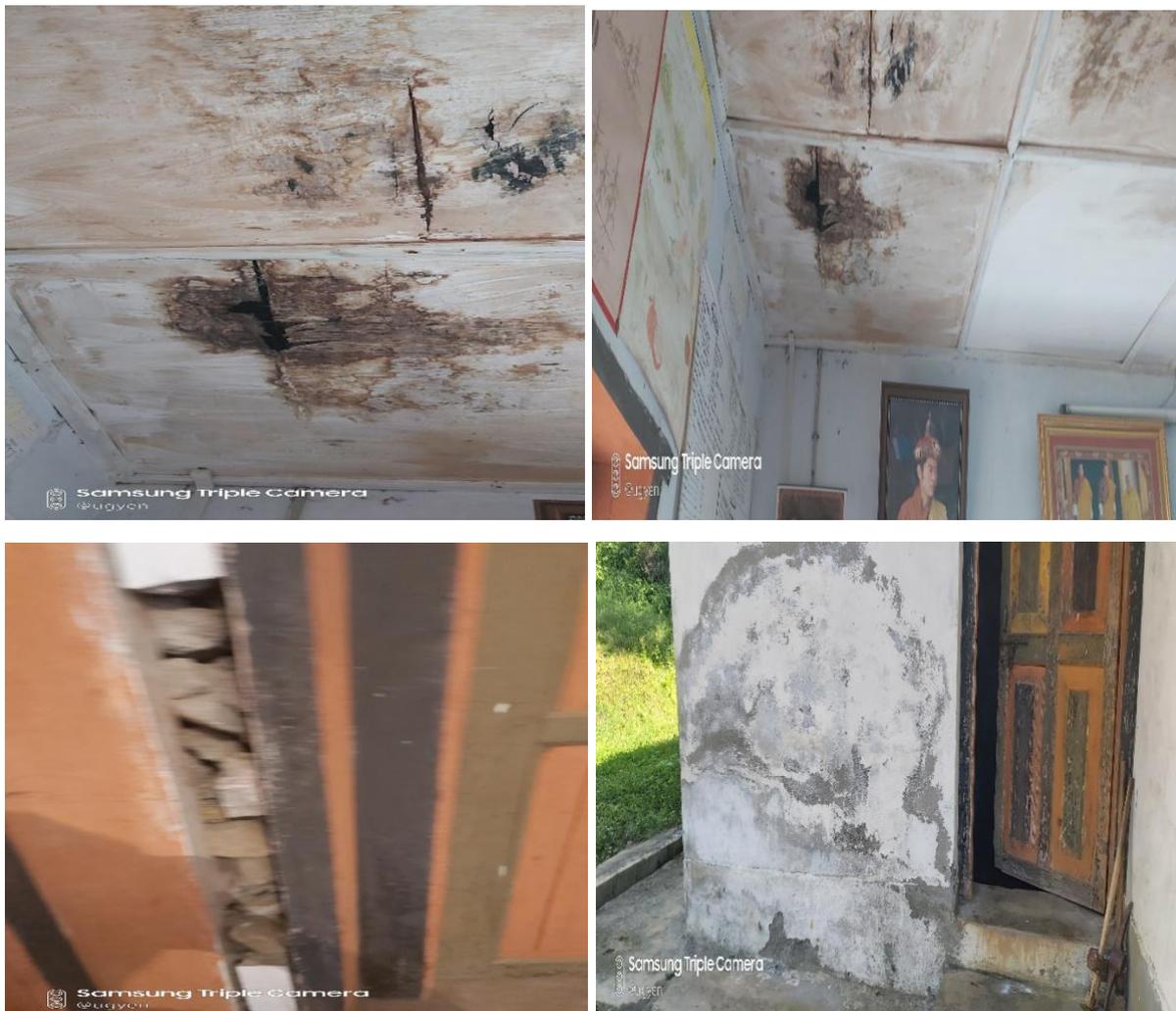
- For the Maintenance works, Stakeholders from Geog and Dungkhag Administration are involved during maintenance reccy survey, designing, drawing and estimate preparation. Further, the same team will be involved, such as engineers while work implementing and handing-taking.
- The stakeholders meeting involving different sectors and local communities will take place after the election and minutes of the same will be shared to the ESS office at PCU.

The BFL focal person has to submit the official minutes of consultation meetings (along with a list of participants, disaggregated by gender and age) to ESS officer within one week after the completion of the consultation. The ESS officer will submit the consultation reports to the PCU (M&E officer) one week after their receipt. The PCU (M&E officer) will report to the Secretariat on a semi-annual basis. The participant list and the consultation minutes shall be shared to PCU while submitting the physical progress report at later stage.

Annexure 3; Plan drawing for Khaling Beat Office maintenance work



Annexure 4: Picture of Beat Office (Khaling & Thrimshing) showing the need for Maintenance work



Annexure 4: Image showing the cramped Office Space at Khaling Beat



Annexure II. 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 to SI. 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 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 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. 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 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 reaction 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 bottle). The equipment should be maintained in good working order and be readily accessible. It should be adequate for the

¹

<https://www.ifc.org/wps/wcm/connect/1d19c1ab-3ef8-42d4-bd6b-cb79648af3fe/2%2BOccupational%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES&CVID=1s62x8l>.

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 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 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

- Workplace should receive adequate natural light and if required supplemented with artificial illumination to promote worker's safety and enable safe equipment operation.
- Emergency lighting of adequate intensity should be provided in case of failure of the powerline.

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 need to be provided where ever necessary, if there is risk of falling of overhead object.
- Measures to prevent unauthorized access to dangerous areas should be in place.

First Aid

- The employer should ensure that qualified first-aid can be provided at all times. A sufficient number of first aid boxes or cupboards shall be provided and maintained so as to be readily available during all working hours, provided that the distance of the nearest first aid box or a cupboard shall be not more than 200m from any working place.
- First aid kits include all equipment outlined in Annex 1 to these Guidelines.
- 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 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.
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 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 90 dB(A) for a duration of more than 8 hours per day without wearing ear plugs/ear muffs.
- 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 persons are at work in any process or operation which 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 (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
- 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, and safety belts, ladders, earthing devices, helmets, line testers, 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 work station.

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.

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- 25kg)
- Selecting and designing tools that reduce force requirements and holding times, and improve postures
- Incorporating rest and stretch breaks into work processes, and conducting job rotation
- Implementing quality control and maintenance programs that reduce unnecessary forces and exertions

Working at Heights

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

- Installation of guardrails with mid-rails and toe boards at the edge of any fall hazard area
- Proper use of ladders and scaffolds by trained workers
- Use of fall prevention devices, including safety belt and lanyard travel limiting devices to prevent access to fall hazard area, or fall protection devices such as full body harnesses used in conjunction with shock absorbing lanyards or self-retracting inertial fall arrest devices attached to fixed anchor point or horizontal life-lines
- Appropriate training in use, serviceability, and integrity of the necessary PPE
- Inclusion of rescue and/or recovery plans, and equipment to respond to workers after an arrested fall

Illumination

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

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

4. Personal safety equipment for workers

All workers are equipped with the following personal safety equipment: helmet, gloves, ordinary boots and reflective vest. Workers that are exposed to dust should also be provided with eye protection glasses and face mask. Workers that are exposed to noise should be provided with ear plugs. Workers that need to work in the dark should be provided with hand and cap lamps.

Workers are instructed regarding safety equipment as follows:

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

5. Standards for workers' 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 worksite safe and 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.

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 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.

² Based on Workers' accommodation: processes and standards—A guidance note by IFC and the EBRD (August 2009): https://www.ifc.org/wps/wcm/connect/60593977-91c6-4140-84d3-737d0e203475/workers_accomodation.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-60593977-91c6-4140-84d3-737d0e203475-jqetNIh

- 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 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.

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 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