

Bhutan for Life

Environmental and Social Management Plan for

Biological Corridor 4

(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 Social Safeguards Integrated Policies and Procedures (SIPP), the project's Environmental and Social Management Framework (ESMF), and applicable national legislation and regulations.

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

This ESMP will be implemented by 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 (The Local Government Act of Bhutan, 2009; Livestock Act of Bhutan, 2001; The Biodiversity Act of Bhutan, 2003; The Pesticides Act of Bhutan, 2000; The Penal Code of Bhutan, 2004; National Access and Benefit Sharing (ABS) Policy (Draft), 2014).

WWF's safeguards standards that are relevant to this project are as follows: Standard on Environment and Social Risk Management; Standard on Protection of Natural Habitats; Standard on Access Restriction and Resettlement; Standard on Indigenous Peoples; Standard on Pest Management; Standard on Grievance Systems; Standard on 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

Biological Corridor 4 (BC 4) covers an area of 594 sq.km and the elevation ranges from 228-4570 masl and it is largest of the biological corridors in Bhutan. It has 94 species of vascular plants, 25 species of mammal and 150 species of birds.

The management of the BC 4 is managed by Zhemgang Forest Division, and there are four technical sections. Two range offices from Zhemgang Forest Division and one from Bumthang Forest division are immediate implementation of conservation works as shown in figure 1.

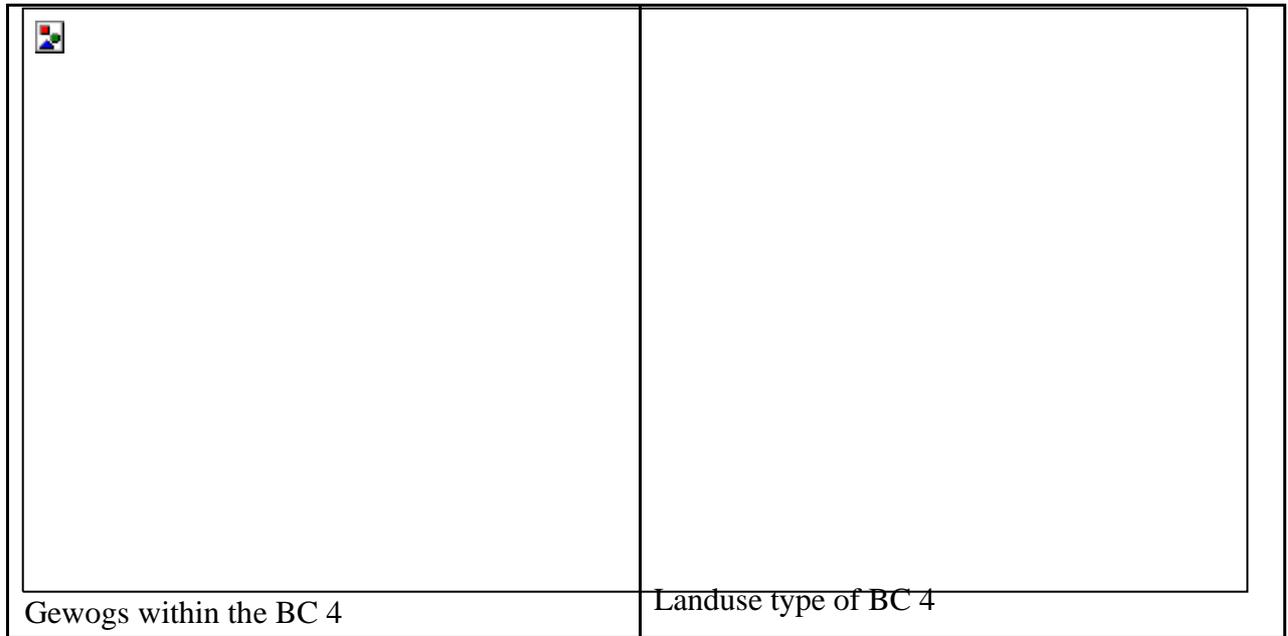
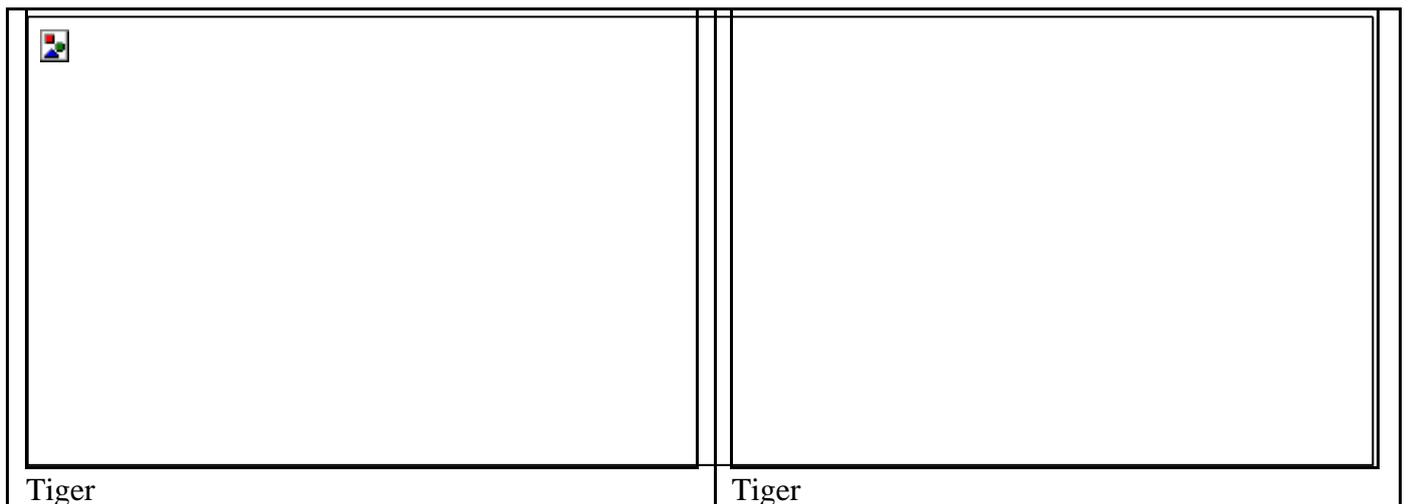


Figure 1: Maps of BC 4

Mammals recorded from the photographic capture as provided under the Figure 2 are: Tiger, Asiatic golden cat, marbled cat, Sambar deer (female & male), red panda, black bear, long tail shrike, whiskered Yuhina, Long tail minivet, Himalayan monal Pheasant and blood pheasant.





Asiatic Golden cat

Marbled cat

Sambar deer (Female)

Sambar deer (Male)

Red Panda

Black Bear

Bhutan Laughing Thrush

Long tail shrike

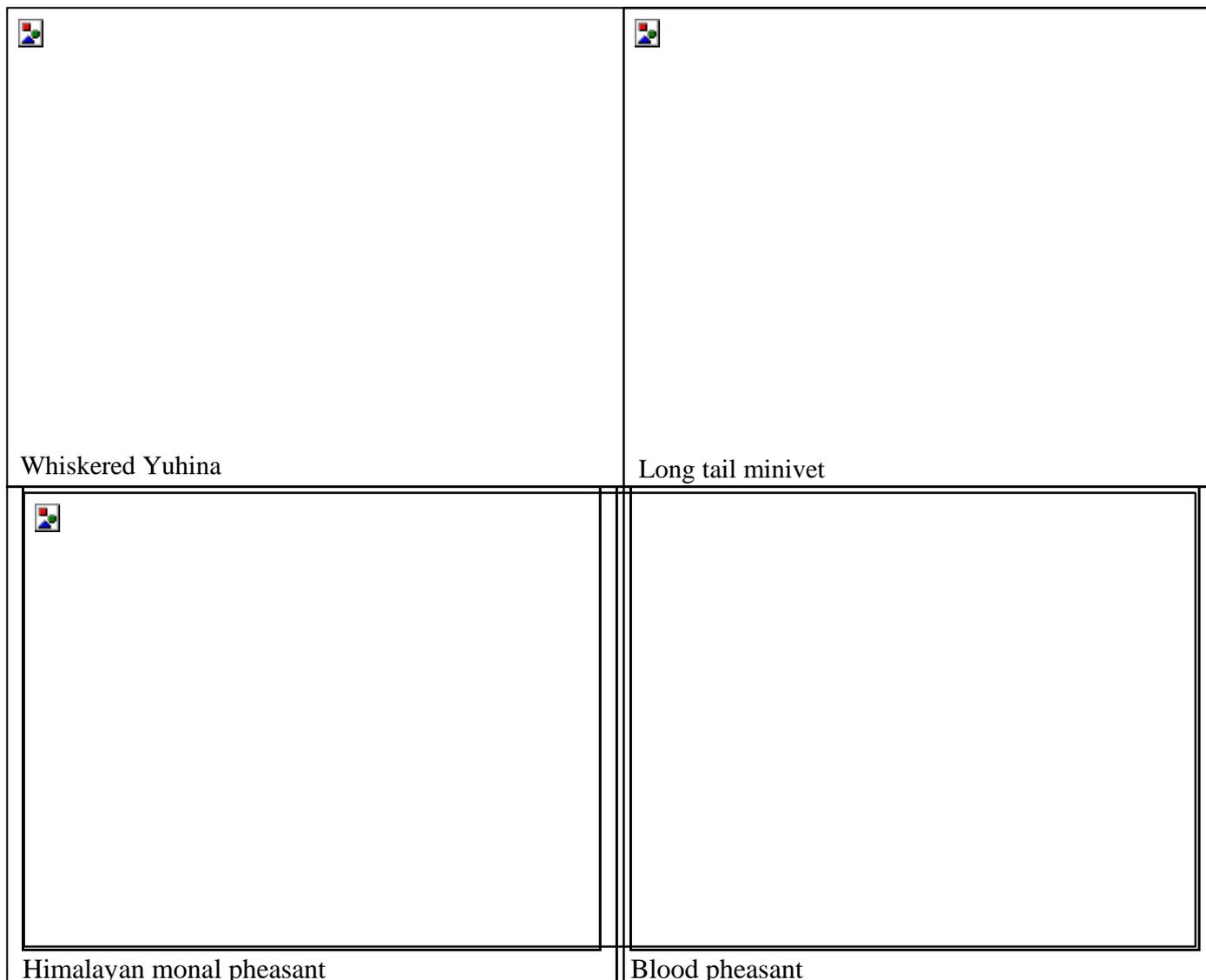


Figure 2: Photos of mammals, birds and plants species in BC 4

BC 4 covers four Gewogs as given in the Table 1. People in the area are mostly Khengpa. It has 74 households permanently inside the BC4 and 250 households in its buffer area. Socio Economic Survey conducted from the year 2015-2016 reveals that there are two dialect speaking community living in and around the corridor boundary. It holds a population of 7653. The ratio of men and women are almost equivalent with 3869 men and 3784 women as seen in the graph in the Figure 3.

Table 1: Four gewogs covered by BC 4

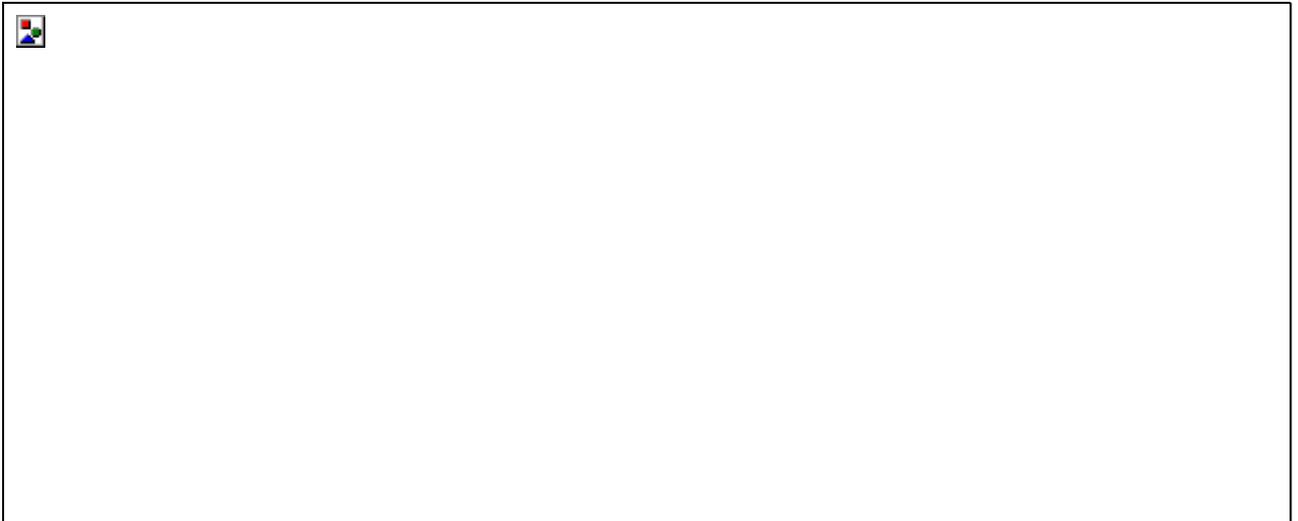
Sl. No.	Geogs inside BC 4	Dzongkhag
1	Langthel	Trongsa
2	Trong	Zhemgang
3	Nangkhor	Zhemgang
4	Shingkhar	Zhemgang

The major source of livelihood for the communities residing inside and along the buffer (5 km outside the boundary) of the corridor is from agriculture and livestock rearing. Livestock rearing is more than a source of income to household as it provides food for nutrition and manure for agriculture. Agricultural farms and meadows form about 10 sq. km of the total area. Occasionally, additional income were also generated from sale of non-wood forest products and daily wage labour.

There are three types of agriculture which can be categorized in the BC region: wetland (chhuzhing), dry land (kamzhing) and Tseri (swidden agriculture). The wetland is the most productive of these and requires a good deal of water. As a result, it is not very widespread and can only be found in those parts that have good irrigation facilities.

Kamshing or dryland cultivation is the most common as can be seen in land holding graph under Figure 3. It is practiced by nearly every household in the Chiwog. Tseri cultivation is also commonly seen in patches though the government has discouraged such practices due to impact of environment damage.

In addition to such cultivation of grains, all farming households also maintain kitchen gardens, where they grow a variety of vegetables. Although some of the vegetables are sold in the nearby towns of the villages, cultivation of grains are mainly subsistence-oriented, aiming only to meet the needs of the household. Mandarin, banana, guava constitute the most important cash crop in the region but they are mostly grown in small scale. Cardamom plantation is the common cash crop followed by hazelnut plantation to supplement the income of the farmers.



3. **Planned activities in Year 2022**

The planned activities that require ESMP are as follow:

Activity 1. Ecotourism development at Zarkabla

Approved budget: Nu. 0.650m

Activity timeline: Year 4 (April – June, 2022)

The Nature Conservation Division in collaboration with Mongar Forest Division and Zhemgang Forest Division has carried out the project feasibility study and identified the Mahseer High End Recreational Fishing as a unique ecotourism product along the stretch of Drangmechu River. The products will be developed at two spots; Yangbari and Zarkabla. Yangbari falls under the jurisdiction of Mongar Forest Division and Zerkabla falls under Zhemgang Forest Division.

Zarkapla is a small village located in Chabdempa chiwog of Bjoka Gewog, Panbang Dungkhang. A total of six households with about 21 people resides in the village. Zarkapla is one of the remote villages in Zhemgang Dzongkhag recently connected with electricity and yet to be connected by farm road. It takes about six hours to reach the village from the nearest motorable road in Yumdang village. People mostly depends on subsistence farming and animal husbandry for living. With funding support from the Gewog Livestock Office, the people of the village now rear improved breed cattle. The people of Zarkapla village used to live in hut built by bamboo and roofing with thatch grasses and banana leaves. However, with funding support from Tarayan Foundation, villagers have been able to construct proper houses. The mighty Drangmechhu flows along the village and it takes about little less than 10 minutes for the people from the village to get to the banks of the river.

Zhemgang Forest Division has conducted consultation meeting in year 2021 to discuss the proposed ecotourism development plan. Ten members from Zarkabla village attended the consultation meeting and the participants were briefed about the BFL Initiatives and potential activities that can be implemented in their area through the project. Most importantly, the communities were briefed about the division's plan in developing ecotourism products along the Drangmechhu basin which will complement the government's initiative on the development and promotion of Mahseer High End Recreational Fishing supported by the BFL Project.

The meeting came to a consensus that an Ecolodge in Zarkabla will be constructed for which sites was also identified. Further, the meeting had also agreed on work execution modality, whereby the community expressed their interest and intention in being actively engaged in the execution of the proposed development activity and provide their labor and skills wherever required. Around 15 people from the community will be engage as laborer for the implementation of the activities.

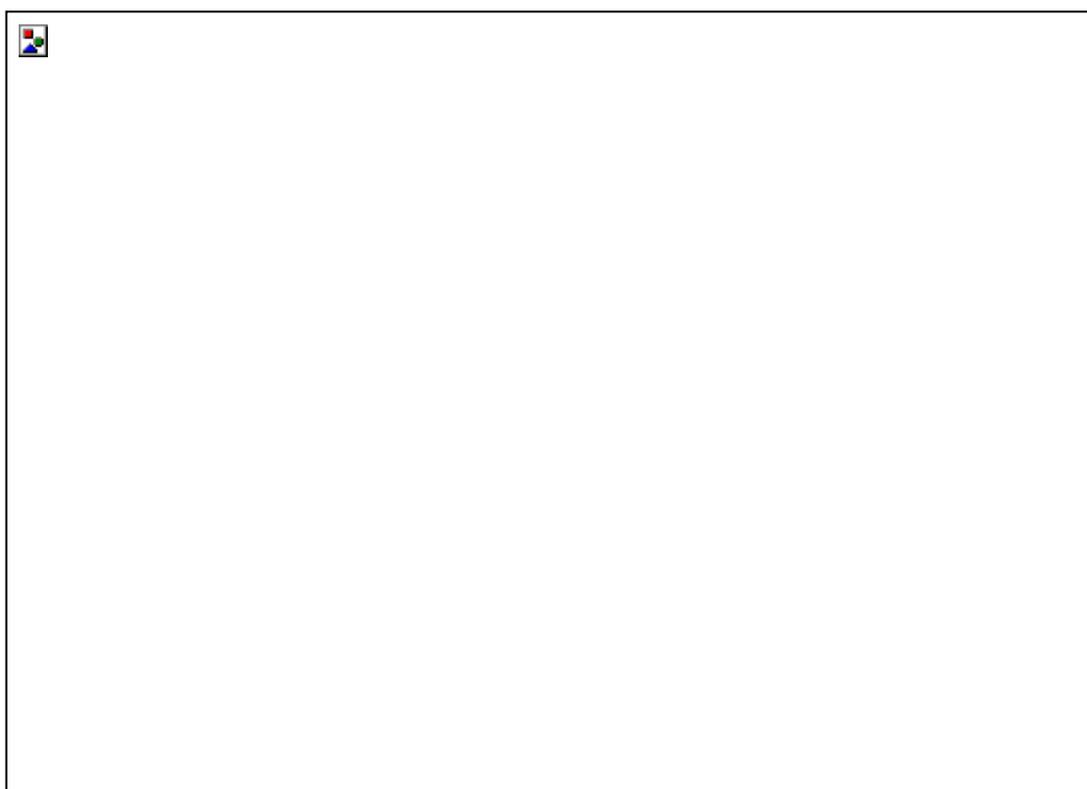
Attractions at Zarkabla

1. *Mahseer High End Recreational fishing and River Rafting:*
2. *Visit to the Mussel Conservation site*
3. *Outdoor activities on the sand beaches*
4. *Explore rural life and Local Cuisine*

The ecotourism project planned to be developed at Zarkabla will be implemented by Zhemgang Forest Division in collaboration with the community. The activities are proposed to be implemented on two phases. (Phase I: 2021-2022 and Phase II: 2022-2023)

During the Phase I: 2021-2022, the following mentioned activities will be implemented;

1. Community group will be identified and constituted who will be involved and engaged in the management and operation of the ecotourism project.
2. Identification and Development of campsite
3. Enhancement of the Mussel Conservation Site
4. Maintenance of walking trail to Zarkabla Tsho Procurement of tents and other camping equipment and handing over to the community group. Provide basic training to the community group on hospitality like food preparation, visitor management, and accounts keeping and pitching of tents.
5. Draw up management agreement with clear Terms of Reference for the management and operation of the ecotourism business (operation of campsite) with the community group. Further, clear mechanism on maintenance of the property, replacement of tents and other camping equipment and revenue plough back (when? How? And what %?) to the government should be agreed and clearly reflected in the agreement
6. Preparing design and budget estimates for community lodge with provision for toilets and kitchen.
7. Processing and obtaining necessary sector clearance and approvals related to land and construction from community and concerned government offices for the development work proposed in second phase.



Following sub-activities are proposed as part of the activity for the Phase I (2021-2022)

Sl #	Sub-Activity	Amount (Nu.)	Implementation period
1	Construction of 2 unit toilet cum bathroom	553,378.00	April-June, 2022
2	Drinking water supply	80,000.00	
3	Clearing and ground levelling of camping site	16,622.00	
Total		650,000.00	

Sub-activity 1: Construction of 2 unit toilet cum bathroom

The identified site for construction of toilet is located alongside of the Drangmechu river below the Zarkabka village and it takes about little less than 10 minutes for the people from the village to get to the construction site. The identified site is at the riverbank with plain area. The surrounding area has thick sub-tropical broadleaved forest giving beautiful landscape scene.

The construction materials like stone, gravel, sand and timbers will be extracted from the nearby construction sites after obtaining the permit from the forest office at Panbang. Other materials like CGI sheet, cement, rod, toilet pot, toilet flush, nails, electric bulb and wires will be transported from Panbang. There are six households with around 21 people residing in the village and these people will be engaged as temporary workers during the entire period of implementation of the activity. The workers will commute from their respective houses for the work and no separate accommodation will be required for them. People mostly depends on subsistence farming and animal husbandry for living and the income earn from this project will be additional income for the family members.

Given the scale of the project, social and environmental impacts are expected to be minimal, site-specific and those for which mitigation measures can easily be developed through standard and applicable regulations. These impacts are again site-specific, reversible and can be minimized/mitigated by developing appropriate measures. Specifically, to address these concerns, the project will comply with the relevant Acts and Rules and Regulations of the Kingdom of Bhutan. ESMP is prepared as per requirement based on ESMF to ensure adequate mitigation measures.

Potential environmental and social impacts that could arise from implementation of development of ecotourism campsite are as mentioned below:

- Workers' health and safety
- Waste from workers campsite
- Illegal fishing

Sub-activity 2: Drinking water supply

In order to ensure a continuous flow of water to the eco-tourism camp site, the water supply activities will be carried out in the current plan period. The identified site for drinking water supply is located in the same area as indicated in the sub-activity 1, where it is located alongside of the Drangmechu river below the Zarkabka village and it takes about little less than 10 minutes for the people from the village to get to the construction site. The identified site is at the river bank with plain area. The surrounding area has thick sub-tropical broadleaved forest giving beautiful landscape scene.

The construction materials like stone, gravel and sand will be extracted from the nearby construction sites after obtaining the permit from the forest office at Panbang. Other materials like pipe, cement, rod, and bib-cock will be procure from the shops and transported to the site by laborers. There are six households with around 21 people residing in the village and around 15 people will be engaged as temporary labor during the implementation of the activity. People mostly depends on subsistence farming and animal husbandry for living and the income earn from implementing this activity will be additional income for the family members.

Potential environmental and social impacts that could arise from implementation of drinking water supply to the campsite as below:

- Workers' health and safety
- Waste from workers campsite

Sub-activity 3: Clearing and ground levelling of camping site

In order to have a pleasant and comfortable stay for the visitors during their visit to the Zarkabla, the camping ground will be cleared and levelled. The identified campsite is located in the same area as indicated in the sub-activity 1 and 2, where it is located alongside of the Drangmechu river below the Zarkabka village and it takes about little less than 10 minutes for the people from the village to get to the construction site. The identified site is at the river bank with plain area. The surrounding area has thick sub-tropical broadleaved forest giving beautiful landscape scene.

There are six households with around 21 people residing in the village and these people. Ten people from the village will be engaged as temporary labor during the implementation of the activity. People mostly depends on subsistence farming and animal husbandry for living and the income earn from implementing this activity will be additional income for the family members.

Potential social and environmental impacts that could arise from clearing and ground levelling of camping site are as follows:

- Workers' health and safety
- Waste from workers campsite

3. Mitigation Measures for Environmental and Social Impacts

For all the potential adverse impacts of environment and social related to each activity, mitigation measures have been prepared as shown below:

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Cost
Sub-activity 1: Construction of 2 unit toilet cum bathroom				
Natural Habitat protection	Minor	<ul style="list-style-type: none"> Make sure to get the forestry clearance for the activity to avoid impact on the environment due to the activity. 	Panbang Range Office BFL focal	
Workers' health and safety including COVID-19 precautions	Short term minor	<ul style="list-style-type: none"> Comply with the workers' health and safety guidelines (attached) 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 food for workers shall be provided to all workers 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 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. Strictly abide by COVID prevention protocols (use masks, maintain distance, 	Panbang Range Office BFL focal Contractor	Workers health and safety gears (Occupational health and safety): Nu.16372.13/- (embedded in the activity budget)

		wash hands regularly etc.), and disciplinary practices;		
Waste from workers camp and campsite after the operationalization	Short term minor	<ul style="list-style-type: none"> • Pre-construction: requirements for appropriate waste management should be included in the bidding documents and contracts, as a precondition for the contractor's selection • During construction: 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; • 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 [specify: bi-weekly] • 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; • The options for reuse/recycling of the generated waste should be taking into consideration (e.g., excavated soil, etc.) • Burning of construction waste should be prohibited. • <i>"Garbage in and garbage out"</i> practice will be initiated in the campsites after the construction and operationalization of campsites to encourage tourist to take their own waste from the campsites. 	Panbang Range Office BFL focal Contractor	To be incorporated into workers contract agreement
Illegal fishing	Short term minor	<ul style="list-style-type: none"> • The laborers will be briefed and made aware that fishing without valid permit is an illegal and the forestry official will monitor regularly. 	Panbang Range Office	
Risk of water contamination from the construction		<ul style="list-style-type: none"> • Avoid dumping of any construction wastes in the nearby river • Ensure that waste water from the workers camp is not directed into the river • Regular monitoring to ensure that the water is not contaminated. 		

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Cost
<i>Sub-activity 2: Drinking water supply</i> <i>Sub-activity 3: Clearing and ground levelling of camping site</i>				
Natural habitat protection	Minor	<ul style="list-style-type: none"> Make sure to get the forestry clearance for the activity to avoid impact on the environment due to the activity. 	Panbang Range Office BFL focal	
Workers' health and safety including COVID-19 precautions	Short term minor	<ul style="list-style-type: none"> Comply with the workers' health and safety guidelines (attached) 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 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. Strictly abide by COVID prevention protocols (use masks, maintain distance, wash hands regularly etc.), and disciplinary practices; 	Panbang Range Office BFL focal Contractor	Workers health and safety gears: <i>The same laborers engaged for the toilet construction will be engage</i>
Waste from workers camp and campsite	Short term minor	<ul style="list-style-type: none"> Pre-construction: requirements for appropriate waste management should be included in the bidding documents and contracts, as a 	Panbang Range Office	To be incorporated

<p>after the operationalization</p>		<p>precondition for the contractor’s selection</p> <ul style="list-style-type: none"> • During construction: 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; • 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 [specify: bi-weekly] • 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; • The options for reuse/recycling of the generated waste should be taking into consideration (e.g., excavated soil, etc.) • Burning of construction waste should be prohibited. • “Garbage in and garbage out” practice will be initiated in the campsites after the construction and operationalization of campsites to encourage tourist to take their own waste from the campsites. 	<p>BFL focal Contractor</p>	<p>into workers contract agreement</p>
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5. ESMP Implementation Arrangements

The implementation of project activities will be carried out by the Panbang Range Office under Zhemgang Forest Division. The Range Officer 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 office will sign with the Contractor(s) for implementation of the planned activities at Zarkabla in 2021-2022. 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 start the project activities and prior any specific tasks with high health risks.

The Supervising Engineer needs to monitor the implementation of proposed measures by the Contractor and Contractor's subcontractors with visual checking, 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-compliances should be reported to the ESS focal immediately, and the ESS focal 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 will be contingent upon their full compliance with the safeguard's requirements.

6. ESMP Monitoring Arrangements

The BFL focal person in BC 4 and Panbang Range Office will closely monitor the implementation of all planned activities and the required mitigation measures, and ensure that they fully comply with this ESMP and with the terms and conditions included in the environment clearances issued by RGoB's national authorities.

BC 4 is also fully responsible for the compliance of all external contractors and service providers working in the BC 4 with the safeguard's requirements outlined in the ESMP.

The monitoring of activities under this ESMP will be carried out in the following manner:

S N	Activities	Monitoring team	Timeline		Location	Means Verification of
			Start	Complete		
1	Construction of 2-unit toilet cum bathroom	Field focal	April, 2022	June, 2022	Zarkapla	progress report
		ESS officer	May, 2022	June, 2022		Monitoring report
2.	Drinking water supply	Field focal	April, 2022	June, 2022		Progress Report
		ESS Officer	May, 2022	June, 2022		Monitoring Report
3	Clearing and ground levelling of camping site	Field focal	April, 2022	June, 2022		Progress Report
		ESS Officer	May, 2022	June, 2022		Monitoring Report

For all activities:

Monitoring by implementing entities:

- o Field visits at least twice - during the intervention and within four months after the intervention – April, 2022 and June, 2022.
- o Reports by the implementing entities submitted to ESS focal within a week after each field visit – May, 2022 and June, 2022
- Monitoring by ESS focal:
 - o Field visits by ESS officer - at least once during the intervention, together with the implementing party - May, 2022
 - o Reports by ESS focal to the PCU (M&E officer) - within one week after the field visit – April, 2022 – June, 2022
- Bi-annual Reports by PCU (M&E officer) to Secretariat
 - o Annual Progress Report - 15 January, 2023
 - o Semi-Annual Progress Report - 15 July 2022

7. Capacity Need and Budget

Activities under this ESMP will be implemented by the Panbang Range Office, BFL focal person, and a contractor. The budget for the activities is Nu. 0.650 Million.

Sl #	Sub-Activity	Amount (Nu.)	ESS Budget
1	Construction of 2-unit toilet cum bathroom	553,378.00	Nil (will embedded in the activity cost)
2	Maintenance of Drinking water supply	80,000.00	
3	Clearing and ground levelling of camping site	16,622.00	
Total		650,000.00	

8. Summary of Previous Consultations

This ESMP is prepared by BC 4 implementing entity under the supervision of Chief Forestry Officer of Zhemgang Forest Division.

Community and stakeholder consultation was carried out at Panbang and Yangbari for site selection and identification of the activity. The copy of the minutes of the meeting during the consultation along with the list of participants is attached in annexure.

Further, community consultation will be carried out as soon as the budget is released before the implementation of the activity to inform local communities regarding the planned project activities to solicit their opinions, and enable them to question proposed mitigation measures. The issues raised by the local community during the consultation if any will be recorded and the detailed minutes of the consultation meeting should be attached to this ESMP, along with a full list of participants (disaggregated by gender and age).

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

9. Stakeholder Engagement Plan

The local community that resides in the vicinity of the planned BFL activities has been consulted in year 2021. Following is the stakeholder engagement schedule:

- Consultation with the communities of zarkabla on 10/8/2021-11/8/2021 and for Yumdhang from 12/8/2021 to 13/8/2021
- Stakeholder Consultation Meeting with Community of Yangbari under Mongar Dzongkhag- 24th September
- Feasibility study for the proposed site by implementing stakeholders – 3rd week Nov to 1st week of December

Further the residents will be consulted before the implementation of the activities following stakeholder will be engaged during the implementation of the activity

Local Governance:

- Identification of the project site
- Initiate discussion with the local communities
- Act as bridge between the local communities and the implementing partners

Local communities

- Construction services during the implementation of the activity
- Receive information on ESMP and grievance mechanisms
- Provide logistic arrangement for the tourist and generate income from it
- Manage the campsites and its amenities after handing over the campsite to the group.

Zhemgang Divisional Forest office (including the BFL focal):

- Process for forestry clearance
- Ensure that all the safeguard measures are practiced during implementation of the activity
- Monitoring & Evaluation on regular basis
- Liaison with all the stakeholders
- Submission of progress report to BFL

10. Disclosure and Grievance Mechanisms

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

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

BFL-specific Grievance Mechanism

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

- I. Respective nearby gewog office
- II. Nearby Forest Range/Beat office
- III. Zhemgang Divisional Forest headoffice
- IV. BFL, PCU at Nature Conservation Division (Norbu Yangdon, 17987200, norbuyangdon@Moaf.gov.bt)

WWF Grievance Mechanism

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

Email: SafeguardsComplaint@wwfus.org

Mailing address:

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

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

GCF Independent Review Mechanism

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

Annexure I. Minutes of the consultation for Golden Masher Recreational Fishing

Venue: Zarkabla & Yumdhang

Date: 10/8/2021-11/8/2021 at Zarkabla & 12/8/2021 to 13/8/2021 at Yumdhang

Agenda:

1. Basic information on BFL (Description of activities & sub-activities)
2. Eligibility for the project activity
3. General information regarding the project activities & its potential environmental and social impacts
4. Discussion on Selection of the site
5. Detail of the proposed sub-activities and work execution modality

Minutes of the consultation

Mr. Sherab Dorji, Forest Ranger made over all presentation on BFL activities -development of Eco-lodge & camp sites along Drangmechu Basin from Yangbari to Panbang. The public were presented on development of golden masher high end recreational fishing at proposed sites -Dingrung, Zarkabla & Yumdhang which covers Bjoka, Ngangla & Gongdu Gewog under Zhemgang & Mongar Dzongkhags respectively. They were further asked if the proposed sites were agreeable to them and whether it would be beneficial to them.

The communities were very happy to see such type of activities coming up in their remote villages & they are keen to take up the activities responsively. Opinion from the communities regarding choice of any alternative sites or other sites were also solicited and they were also asked whether the project activities will have any negative impacts in the locality. The communities said that the suggested locations are feasible for the proposed activity so no other alternative area was suggested by them.

Furthermore, the community gave their assurance that the proposed activity will not impact them negatively but will only benefit them.

General information on the project activities was also presented to the participants for them to have general idea of the proposed activity so that they can provide their opinion and feedback on them. Following topics were further deliberated:

1. Establishment of Eco-lodge and camping sites
2. Location of the camping sites

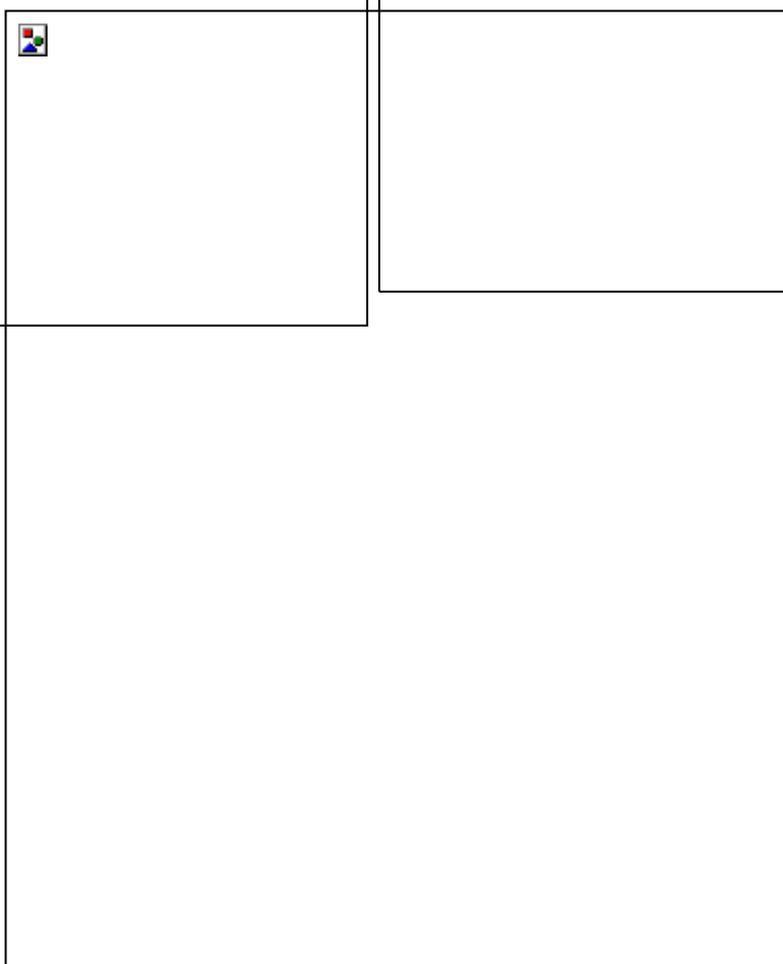
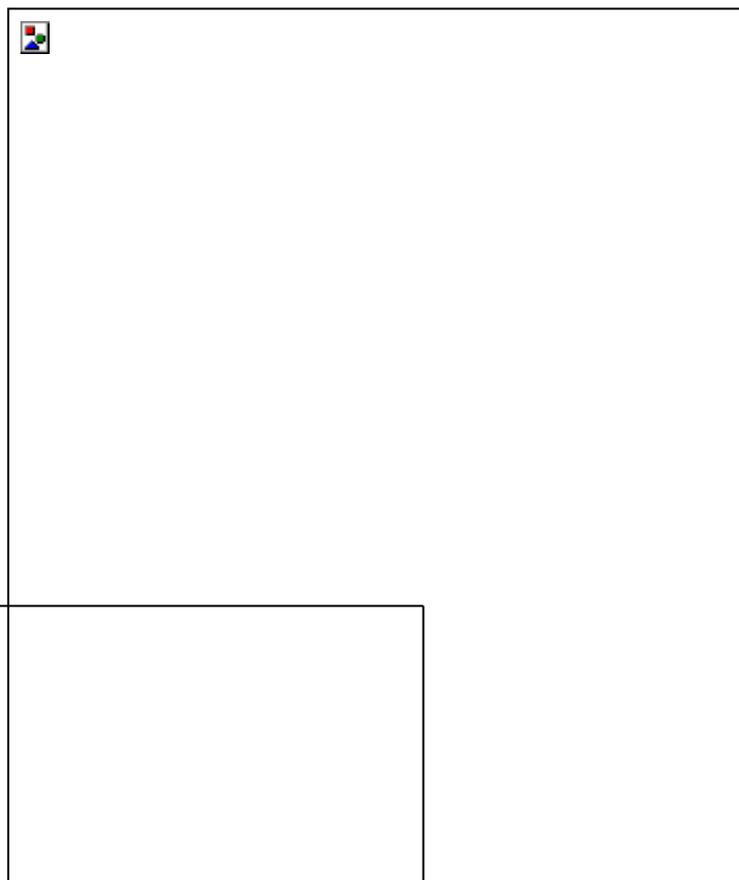
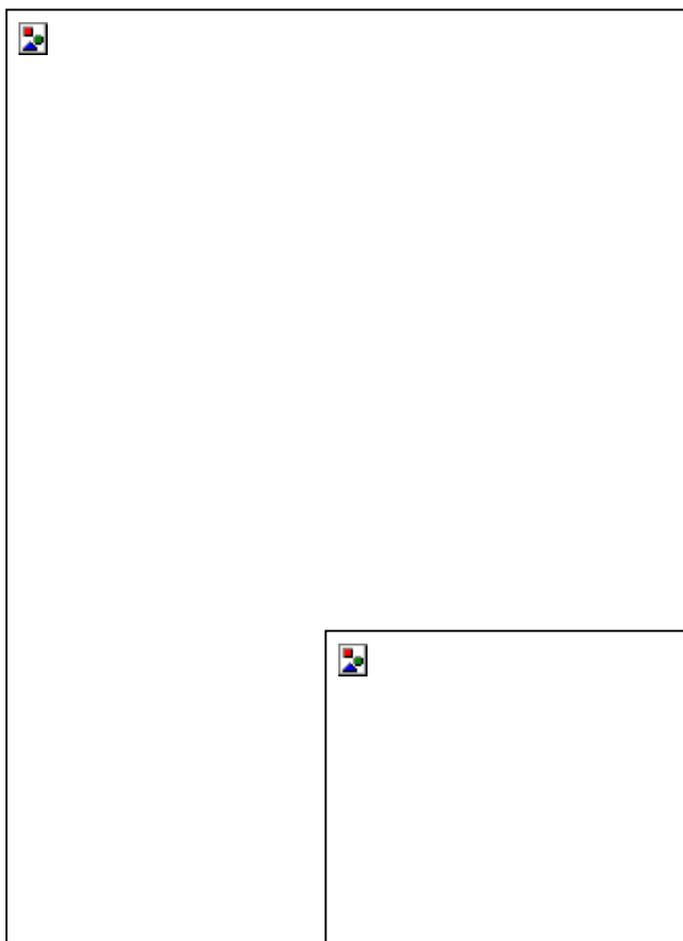
It was agreed that the eco lodge will be constructed at Zarkabla & Yumdhang and the campsites will be constructed at at Yangbari (Camp 1) & at Yumdhang (camp 2)
The work execution modalities were also discussed with the participants and pursued for suggestion. The participants said that they want to actively engage in the activity and will be happy to provide their skills wherever possible for implementation of work.
With this the meeting ended by the range officer thanking the communities for their time and informed them that before the implementation of activities, they will once again be consulted for their views.

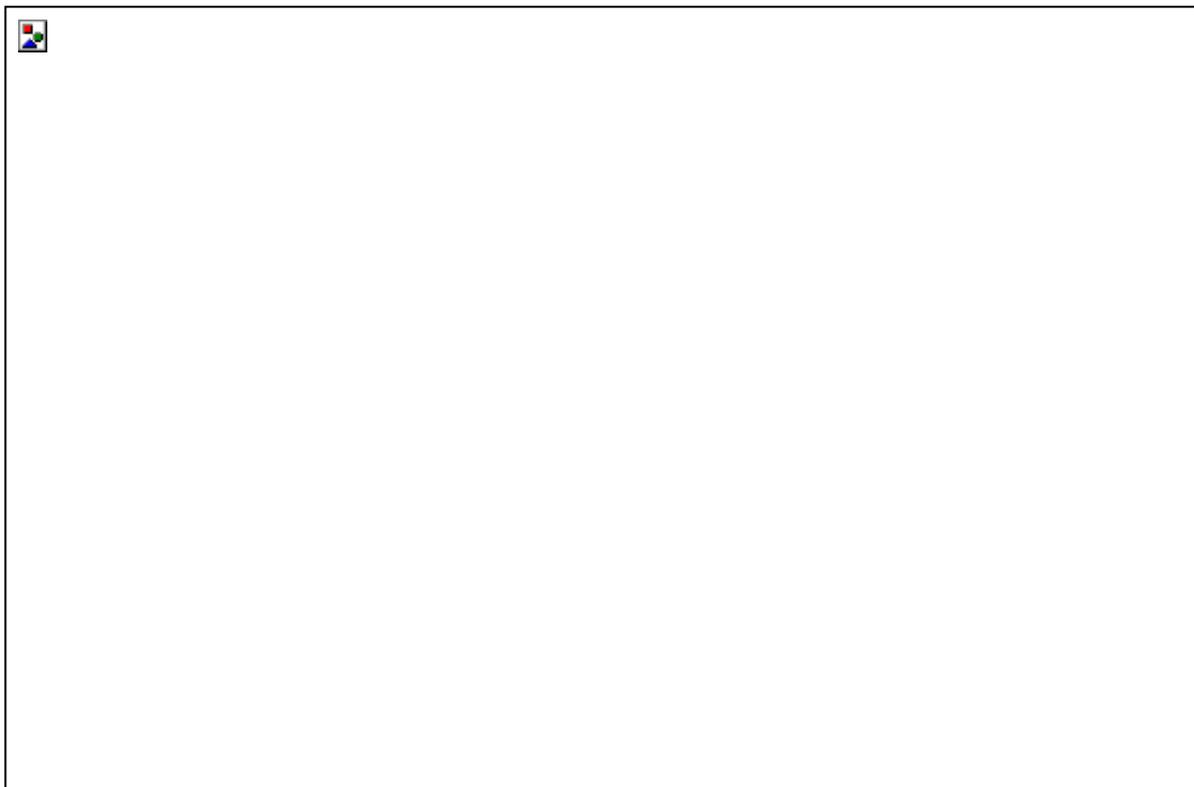
Minute keeper:

Mr. Kiran Mongar

Sr. Forester

Forest Range Office, Panbang





***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 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 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 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

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-ijetNIh

5. Wastewater and solid waste

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

6. Rooms/dormitories facilities

- Rooms/dormitories are kept in good condition. They are aired and cleaned at regular intervals.
- Rooms/dormitories are built with easily cleanable flooring material.
- Rooms/dormitories and sanitary facilities are located in the same buildings.
- Residents are provided with enough space.
- The number of workers sharing the same room/dormitory is minimized.
- Doors and windows are lockable and provided with mosquito screens when necessary.
- Separate sleeping areas are provided for men and women.
- A separate bed is provided for every worker and use of double deck bunks is minimized.
- Workers are provided with comfortable mattresses. Workers may be expected to use their own pillows and bed linens.
- Adequate facilities for the storage of personal belongings are provided.
- Separate storages for work clothes and PPE and depending on condition, drying/airing areas are provided.

8. Sanitary and toilet facilities

- Sanitary and toilet facilities are constructed from materials that are easily cleanable.
- Sanitary and toilet facilities are cleaned frequently and kept in working condition.
- Toilets, showers/bathrooms and other sanitary facilities are designed to provide workers with adequate privacy including ceiling to floor partitions and lockable doors.
- Separate sanitary and toilet facilities are provided for men and women.
- Toilet and shower facilities are conveniently located and easily accessible.
- Toilet facilities are environmentally friendly (e.g., pit 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