

Bhutan for Life
Environmental and Social Management Plan
for
Bumdeling Wildlife Sanctuary (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.

2. Environmental and Socio-Economic Conditions

Bumdeling Wildlife Sanctuary was gazetted in the year 1994 to safeguard ecological habitats of eastern Bhutan. The sanctuary encompasses parts of Trashiyangtse, Lhuntse and Mongar with area coverage of 1534.24Sq.Km. It shares international borders with Tibet autonomous region (China) in the north and Arunachal Pradesh State (India) in the northeast. The elevation of the sanctuary ranges from 1390 to 6400 meters above sea level (masl). Geographically, the Sanctuary consists mostly of rugged mountainous terrains, rocky peaks, permanent snow, small glaciers, glacial lakes, steep river valleys, and few plains. Almost 90% of the Sanctuary lies between 2500m and 5000m elevation. These glacial lakes and permanent snow capped mountains serve as perennial water sources for important major drainage systems such as Kholongchhu, Khomachhu and Sherichhu.

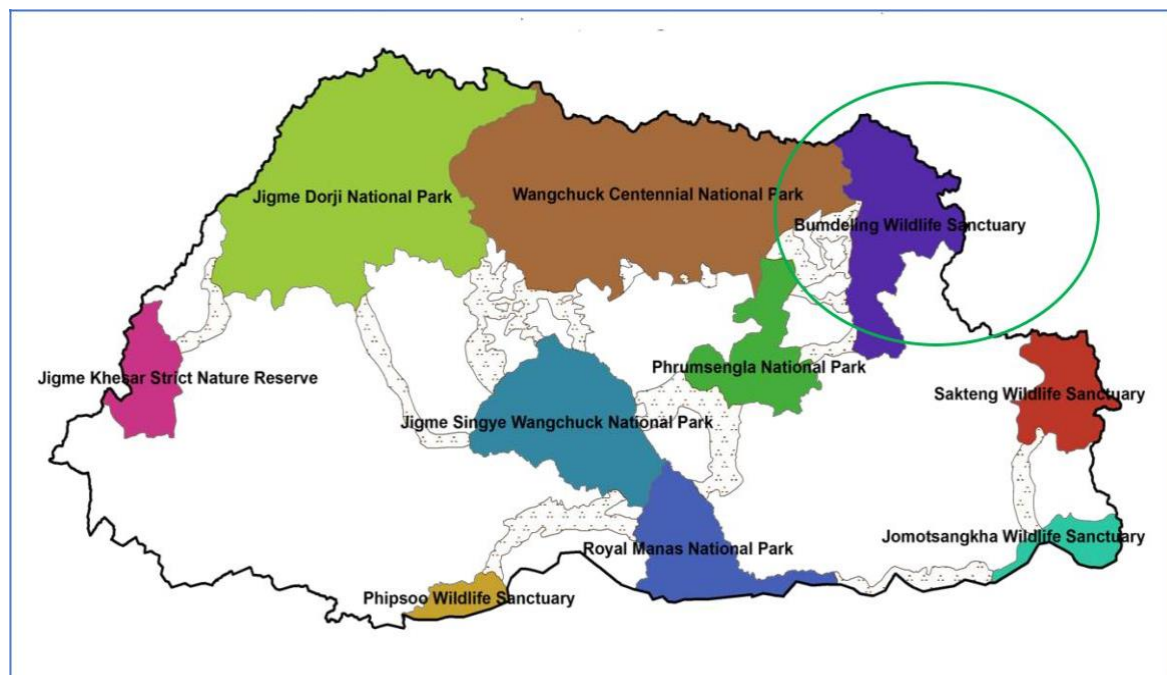


Figure 1: Location of Bumdeling Wildlife Sanctuary

It covers Eastern Himalayan ecosystem ranging from warm broadleaved forest to alpine meadows and scree slopes. More than 60 per cent of the area within the PAs is covered by forest while a proportion of more than one third is covered by snow, rock and shrub.

Furthermore, the Ramsar Convention recognizes Bumdeling flood plain as an important wetland area. The Kholongchu River and its three tributaries flow through the wetland. The tributaries provide local communities with a source of water for irrigation and drinking and the main river is the site of a hydropower project 35 km south of the wetland.

The Sanctuary has about 1,119 households – mainly involved in rice in lower areas; maize and grains in the higher regions and yak herders in the high mountains. The sanctuary is of high significance in terms of the preservation of cultural and traditional practices. ‘Kishuthara’ weaving (Silk textiles) and the production of wooden containers (known locally as ‘Dappa’) are important sources of income. The area is also well known for its Black Necked Cranes and thus attracts tourists.

The following table shows a brief background summary about the BWS:

Table 1 Summary of BWS

No. of Mammals spp	52
No. of Plants spp.	966
No. of Birds spp (Nos)	356
No. of households	1119
Population (inside PA)	8782
No. of Dzongkhags covered	3 (Lhuentse, Mongar, Trashigang)
No. of Gewogs covered	3 (Khoma, Shermuhung, Bumdeling)
Ethnic groups	Sharcho, Kurtoes, Yangtsep, Sharcho, Yangtsep and Tshangla dialects.
Farming system	Rice, Maize, Yak Herders, Dappa makers, Daphne makers
Highlight Species	Black-necked cranes, Snow Leopard, Tiger, Asiatic wild dog, Himalayan Musk Deer, Red panda, Bumdeling floodplain is a declared Ramsar site

(a) Geological and topographical condition

Geographically, the Sanctuary consists mostly of rugged mountainous terrains, rocky peaks, permanent snow, small glaciers, glacial lakes, steep river valleys, and few plains. Almost 90% of the Sanctuary lies between 2500m and 5000m elevation. Most of the Sanctuary is underlain by Gneiss with some areas with Quartzite, Graphite Schist and limestone, which contribute to the formation of different landscapes. The slopes are formed due to the accumulation of talus materials moving down the slopes due to gravity. Alluvial and colluvial formation are apparent in the narrow valleys of BWS, which consist of soil, silt, clay, sand, and gravels brought down by the action of soil and water erosion.

(b) Climatic condition

The Sanctuary has warm temperate climate in the south, cool temperate climate in the centre and alpine in the northern part. In the lower parts of the Sanctuary, the maximum temperature ranges from 20°C to 30°C and minimum between 8°C to 15°C, while the centre region experiences maximum temperature of 15°C to 20°C with minimum temperature ranging

between 3°C to 10°C. The North part of the Sanctuary usually remains cold with most of the time under snow cover. Maximum rainfall is received in the months of May - September. The annual rainfall ranges from 1000mm to 3500mm.

(c) Hydrological condition

Bumdeling Wildlife Sanctuary has three major rivers systems flowing through it. The Kholongchhu flows in the centre of the sanctuary while Khomachhu (Lhuentse) flows from the western part of the sanctuary. Sherichhu (Mongar) form the main drainage systems flowing from the south. Numerous tributaries feed these three major drainage systems. The Major tributaries of the Kholongchhu include Shingphelchhu, Lamzangchhu, Langmalachhu, Wominangchhu and Dongdechhu. The mega hydropower project is located on the downstream of Kholongchhu. Singyedzongchhu and Roelmatengchhu are the major tributaries that feed Khomachhu while Sherichhu is fed by Phunningchhu and Nyendhachhu.

(d) Flora and fauna

The floral species diversity (H') is found highest in Cool Broadleaved forest followed by Warm Broadleaved forest and Mixed Conifer forest whereas, the species diversity is lowest at Rhododendron Shrub and Dry alpine shrub regions of BWS. Due to vast altitudinal variation in the sanctuary, BWS houses varied species of floral diversity. There are 966 species of plants known to occur in BWS including 130 species of trees, 31 species of ferns, 579 species of herbs, 64 species of orchids and 162 species of shrubs.

With the huge variation in altitude from 1390 - 6400masl and existence of complex vegetation zones, BWS harbours diverse biodiversity in terms of faunal presence. It provides home to critically endangered and threatened faunal species. The rapid biodiversity survey of 2018 revealed store of terrestrial, avian, herpetofauna and aquatic species that added to existing lists in BWS. BWS recorded 52 mammal species, which constitutes 25.6% of 203 mammals recorded in Bhutan. Of the 52 mammals, 11 (21.15%) species are listed in IUCN Red List (4 species are endangered, 5 species are vulnerable and 2 species are near threatened) and/or schedule I of FNCA 1995.

(e) Socio-economic conditions

Major source of income for the park residents comes from sale of agriculture products (rice and vegetables such as chilli and potatoes). Non-farm activities (contract work and pottering, business and shops, weaving, salary, carpentry, farmhouse and sale of bamboo products, *Dapa* and paper products) and sale of livestock products were other sources of income for the residents of Sanctuary. In Khoma geog, weaving is the most important source of income with 30% of the respondents involved in weaving followed by agriculture (23%) and livestock (22%). This is because the people of Khoma geog are specialized in weaving and the best Bhutanese textile comes from Khoma and nearby geogs under Lhuentse Dzongkhag. The other incomes for the people of Khoma geog are bamboo weaving, *Cordyceps*, off-farm activities, performing rituals, government employment, and NWFP.

In Sherimung geog, the agriculture was the main source of cash income with 33% of the respondents involved in agriculture followed by off-farm labour (28%) and livestock (27%). The other category of income for the people of Sherimung geog includes NWFP, contribution, performing rituals, carpentry, contract works and business. In Bumdeling geog, agriculture is the main source of income with 26% of the respondents involved in agriculture works followed by livestock (25%) and off-farm labour (16%). The other categories of income source include contract works, shares, logging, NWFP and painting.



Figure 2: Existing project sites

3. Planned Activities in Year 2022

Activities that are planned in BWS for 2022 include the following:

3.1 Management of RAMSAR site (Develop basic structures as BNC visitor center)

Budget: USD 39000.

Timeline: January 2022 to December 2022

Location: RAMSAR site

This activity will include development of basic structures such as BNC visitor center, observation tower, fencing of the area, construction of protection wall, development of parking areas, foot paths & toilet, connecting water supply, and procuring good quality camera and binoculars to monitor and observe Black Necked Cranes within the RAMSAR site. Public consultation and develop business plan will also be carried out as part of the activity. The site was identified since there is no permanent structure for Black-Necked Crane monitoring and observation in Bumdeing valley and the proposed site is suitable for the activity. Owing to the lack of structure and other infrastructure

the field monitoring of the species is hampered and also discontentment is created among the visitors who come to observe the cranes in the valley. Moreover, due to lack of these amenities the Black-necked Cranes often get disturbed during feeding and roosting by the visitors.

Therefore, to curb the issue, to enhance adequate services to encourage more international and national tourist to visit Bumdeling RAMSAR site which will ultimately benefit local communities of Bumdeling and also help in conservation of the species.

Following are the list of activities proposed:

- Consultation on Youth Initiative group
- Construct BNC visitor center with amenities such as observation tower, fencing, protection wall, parking areas, foot paths, toilet, water supply
- Develop Business/Action plan in consultation with the local communities
- Procure furniture and field equipment such as camera and binoculars
- Install waste and other signages in specific location

Community consultation and focus group discussion will be held with all the communities in the vicinity along with the gewog administration and other relevant stakeholders before the implementation of the work to solicit their opinions, and enable them to question proposed mitigation measures. The entire visitor center will be managed by youth initiative group through proper business plan, bylaws and under guidance of BWS management.

Planned date for all the above activities is from January 2022 to December 2022 and budget allocated is USD 3,9000. The proposed land for this activity is a State Reserve forest with major gentle sloppy terrain. Around 25 to 30 workers will be involved, mainly local people and the duration will be for 4 to 5 months. No machinery will be used during the construction and no camping for the workers as the workers will commute from the nearest community which is almost 200 to 300 meters away from the site.

The adverse environmental and social impacts will be:

- Wastes from construction activities
- Worker's health and safety.



Figure 4: Black-necked Crane and information sign board

3.2 Ecotourism Infrastructure Development from Tsaling-Kharchendra Ney

Budget: USD 64000.

Timeline: July 2022 to June 2023.

Location: Tsaling-Kharchendra

Construction of ecotourism infrastructure such as guest house, kitchen, walking trails, wildlife viewing facilities (canopy), water supply, toilet and waste collection points in Bumdeling Gewog under Trashiyangtse Dzongkhag will be carried out under this activity. The site is identified by based on the below mentioned criteria and also recommended by the concerned dzongkhag and Gewog administrations since Tsaling-Kharchendra Ney trail was the main traditional route connecting Bumdeling Gewog and Trashiyangtse town in the past and playing significant role in the cultural history of the dzongkhags.

Tsaling to Kharchendrag Ney trail was the main traditional route that connected Tsaling and Bumdeling village under Trashiyangtse Dzongkhag in the past. This cultural site is very unique from other religious sites and it is around 2-3 hours leisure trek from nearest village (Tsaling). The cultural site has a *roaming* lake which is believed to form once in a year. Visitors face difficulties with no proper trail and related amenities along the trail. Having such avenues would conserve the cultural heritage site but also boost ecotourism opportunities. Therefore, the site was selected to promote and conserve important cultural sites through improvement of ecotourism facilities as well as to provide better services to the national and international visitors to cultural and religious sites in the area.

Therefore, the site was selected to promote and conserve important cultural sites through improvement of ecotourism facilities as well as to provide better services to the national and international visitors to cultural and religious sites in the area. The proposed site is located very far from the settlements and entire area falls under the State Reserve Forest land with gentle sloppy terrain. The planned date is from July 2022 to June 2023. Activities include digging, clearing and construction activities along the proposed sites. Since the entire site falls under the government land there is no conflict over user rights by the community. The location of the site is 2 to 3 hours walk from the nearest community with 30 households. There is no access to road so construction will be carried out manually with 15-20 workers for duration of 6 months. There will be a national contractor with local workers hired for the activity or the works will be carried out by the experienced local community contractor.

During the year 4 of BFL project period the improvement of trails, canopy and waste collection points will be executed and whereas the construction of guest house, kitchen, toilet, water supply and other necessary amenities shall be carried out within the year 5 and 6 of BFL project. The construction of infrastructure will use locally available materials wherever possible and there would not be any issues related to water since water sources are available near the site. Management of waste and other structures would also not be an issue since the entire amenities and structures will be handed over as a package to local management group from the nearest villages. This ecotourism product development will not only benefit the management community group members but also to the neighboring communities through sale of local products and other services such as transportation and porter services during the visit for cultural and religious pilgrims to Kharchendrag Ney. Community consultation and focus group discussion will be held with all the communities in the vicinity along with the

gewog administration and other relevant stakeholders before the implementation of the work to solicit their opinions, and enable them to question proposed mitigation measures. Moreover, the business plan, bylaws and agreement will be drawn between the local communities/management group and BWS to ensure sustainable management of ecotourism product in their locality to show the best ecotourism product management in BWS.

Selection criteria for the ecotourism site are as follows:

- The selected area is prioritized by the dzongkhag and communities due to its cultural significance and religious sentiment of people. The site (Kharchendra Ney) is considered as one of the significant cultural sites in the country.
- The area is selected as the local community has proposed the area and also initiated to form ecotourism management group in their locality to have proper management plan, bylaws and agreement on sustainable management ecotourism amenities.
- The community group was selected since they are initiating to establish first ever ecotourism management group in Bumdeling Gewog to preserve important cultural sites and generate income to enhance their livelihood. Furthermore, it will not only benefit the group but also benefit the communities residing within the vicinity of the area with boost of ecotourism amenities. Since the developed amenities would mean better services thus a greater number of visitors on pilgrimage will contribute to the enhancement of livelihoods of the local communities through cash earnings via shops, transportation services, meals, night halts etc.
- The community group is the only community residing in the vicinity of the ecotourism site and the management of ecotourism facilities would require regular monitoring and care for sustainable management. Thus, they are the only appropriate community to establish ecotourism management group for the activity.

The adverse impacts are:

- Construction impacts
- Human wildlife conflict
- Animals may look for food in the waste bins, get poisoned and spread waste
- Worker's health and safety
- Local community's health and safety

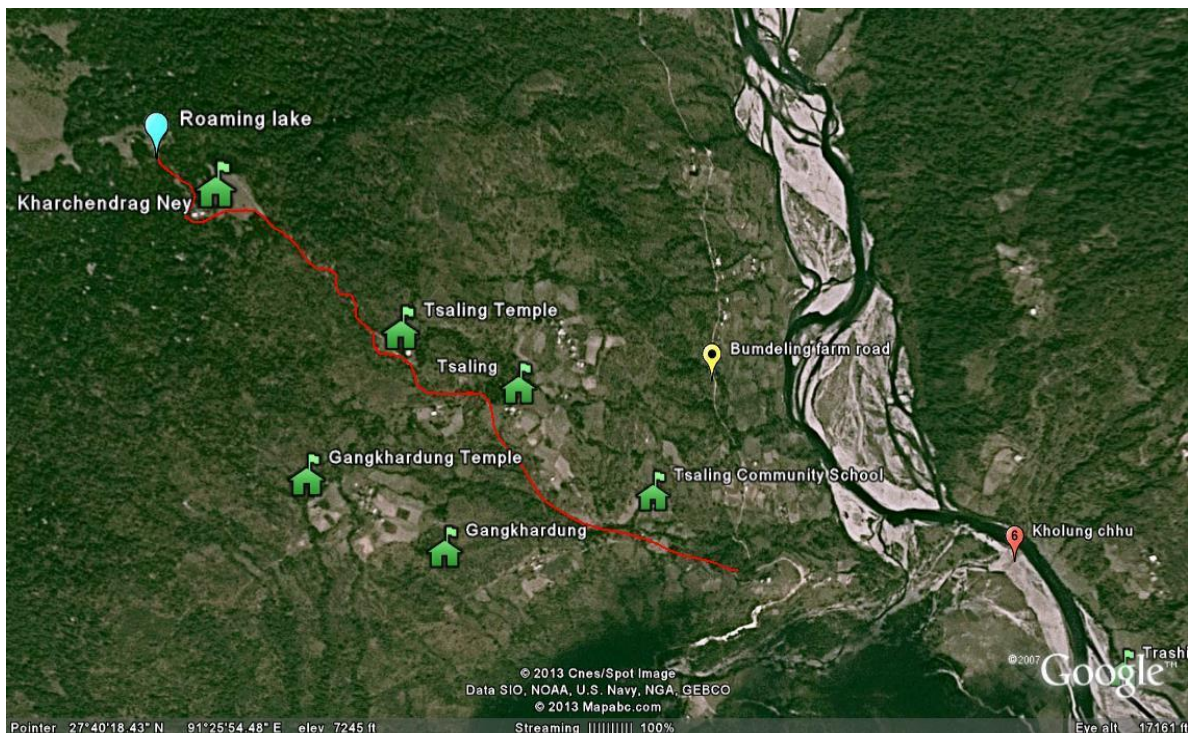


Figure 5: Location of Kharchendra Ney ecotourism development

3.3 Renovation and maintenance of buildings in BWS

Budget: USD 48000.

Timeline: January 2022 to December 2022

Location: Shingphel & Singyedzong, Bumdeling, Khoma Range, Serzhong Range, Mongar and Dungzam Range, Womanang guard post, Aja Guardpost, Tsarzam checkpoint and BWS HQ

The activity includes conducting major renovation and maintenance of permanent structures to enhance the conservation works as well as to ease the service delivery to the communities residing within the vicinity of the area. Renovation and maintenance of work includes renovation of Singyedzong and Shingphel guard posts, maintenance of BWS guest house, Range offices, guard post and check post under BWS. During the year 4 of BFL project period renovation of 2 guardpost, maintenance of guest house and 1 Range office maintenance will be carryout due to severe damages in few parts of the office building and other structures. Whereas the other remaining maintenance of 2 Range offices, 2 guard post and check post will be implemented during the year 5 of BFL project period. The site was identified mainly due to the fact that the old structures are urgently in need of major renovation and maintenance for sanctuary's staff to reside to conduct regular wildlife monitoring and service delivery works. Moreover, part of the office buildings, furniture and other equipment are not functional and is in need for immediate replacement to enhance effective service delivery in the sanctuary. The entire proposed sites is located far from the settlements and all area falls under the government registered land. The planned date for implementation of activity is from January 2022 to December 2022. Following activities were proposed:

- Renovation Shingphel and Singyedzong guard posts
- Maintenance of guest house/transit camp
- Maintenance of wall, roofing, flooring, window, door, drain, toilet, water facilities, painting and lighting system for Range office, guard post and check post.

The nearest community from the project site is approximately 200-300 meters away and there are around 6 office structures of other agencies in the vicinity. The few proposed sites do not have access to road and for the renovation of 2 guard posts, the area is located at 3 days walk from the nearest motorable road. So, the maintenance works will be carried out manually by local contractors for duration of 6 months. The renovation and maintenance works will use locally available resources. Water sources used for the renovation and maintenance works are located nearby the sites and no issues on water supply with neighboring communities since the location of BWS structures are away from the settlements.

The adverse impacts are:

- Generation of waste as a result of construction activities
- Dust and noise pollution
- Worker's health and safety



Figure 6: Condition of BWS office structures

3.4 Bio-engineering works at Dingtsho lake

Budget: USD 15000.

Timeline: January 2022 to December 2022

Location: Dingtsho Lake

The activity includes improvement and revival works such as clearing, cleaning, natural greening and development of other amenities within the vicinity of Dingtsho lake. The planned date is January 2022 to December 2022. It is a continuation activity from Year 3 of BFL implementation. Dingtsho is a socially revered lake which started to dry since 2010. The communities believe that the existence of lake blesses them with good fortune and well-being besides showering them with bounty harvests. It also provides good habitats for about forty species of aquatic lives, water birds and ducks. In order to retain the water volume, the office constructed river protection wall around the lake in 2020-2021. Therefore, social clearance has been already obtained and the work has already started in 2020-2021.

For 2022, around 20 to 30 workers will be involved with using available machineries or excavator to clear the bushes from the lake for 6 months. Workers will commute from the nearest community and there will be no camping facility at the activity site. Since the foundation of the wall has already been built in year 3, it is proposed to cover the wall, prepare the surrounding of lake and design in such a way to give natural look to the wall in year 4. So that the lake looks natural and its aesthetic doesn't get diluted by the concrete structure of the protection wall. Other activity also includes natural greening of lake with

native species to improve aesthetic value of lake and improvement of religious structures such as chorten and other structure within the vicinity of Dingtsho lake. The community contractor will take care of waste generated from the construction.

The nearest community resides within 200 m distance from the site with 369 households. Community does not depend directly on the lake for their livelihoods but the lake has spiritual value for them. The lake also has aesthetic value for tourism as it greets the valley at its entrance. Improvement and revival of Dingtsho lake does not have major adverse impacts on the natural habitat instead it helps to promote habitat for water birds and other aquatic life. Moreover, there will be no social risks or inter-community tensions since the communities residing within the vicinity has agreed and approved the social clearance for improvement and revival of Dingtsho lake.

The adverse impacts of the activity are:

- Disturbance of natural habitat
- Waste management cleaning and renovation of structure
- Water contamination as a result of construction
- Worker's health and safety



Figure 7: Improvement and revival of Dingtsho lake

3.5 Develop basic structures such as fencing, entrance gate and footpath for recreational site

Budget: USD 10700.

Timeline: January 2022 to December 2022

Location: Bumdeling

This activity plans to develop basic amenities such as fencing, entrance gate and foot path for existing recreational site developed in Bumdeling valley. It is also proposed to develop natural swimming pool within recreational site to entertain visitors. The site was identified since the area is already developed as recreational site to entertain the national and international tourist in Bumdeling valley to promote and boost the ecotourism. Owing to the lack of amenities such as fencing, entrance gate, foot path & etc., the existing infrastructure are at the risk of damage by domestic animals and other wildlife. So, the site was selected to promote and develop recreational site with other amenities to enhance adequate services. This would encourage more international and national tourist to visit Bumdeling valley and benefit local communities through ecotourism.

Planned date for all the above activities is from January 2022 to December 2022. The proposed land for this activity is a State Reserve Forest with major gentle sloppy terrain. Around 10 to 15 workers will be engaged, mainly local people and for the duration of 1 to 2 months. No machinery will be used during the implementation of activities and no camping

for the workers as the workers will commute from the nearest community which is almost 100 to 200 meters away from the site.

Community consultation and focus group discussion will be held with all the communities in the vicinity along with the gewog administration and other relevant stakeholders before the implementation of the work to solicit their opinions, and enable them to question proposed mitigation measures. The entire recreational site will be managed by youth initiative group through proper business plan, bylaws and agreement from BWS management.

The adverse impacts of the activity are:

- Cutting down vegetation
- Waste management cleaning
- Worker's health and safety



Figure 8: Amenities developed for recreational site



4. Mitigation Measures for Environmental and Social Impacts

4.1 Management of RAMSAR site (Develop basic structure as BNC visitor center)

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
<i>Activity: Construction of visitor center and installation of waste bins and signages</i>				
Waste: soil from excavation activities and waste from construction activities	Short term Minor	<ul style="list-style-type: none"> • Proper containers/waste bins should be provided at the project site; • Dumping of waste in the waterholes, on the sides of the road, on private land, or in other non-designated places should be strictly prohibited. • Dumping of 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 carried out on a daily basis and not left in the protected areas • Burning of construction waste should be prohibited. 	BFL focal person in (BWS)	Waste cleaning after construction Nu.10000
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 • 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. 		From the activity cost Included in the bidding document of the contractor

		<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. • Strictly abide by COVID prevention protocols (use masks, maintain distance, wash hands regularly etc.) 		
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4.2 Ecotourism Infrastructure Development from Tsaling to Kharchendra Ney

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
<i>Activity: Construction canopy, improvement of trails and others</i>				
Social and cultural integrity	Long term Minor	Pre construction requirement: Awareness/prior information need to be provided to the visitors so that local culture and traditional etiquettes are respected. Pamphlets can be developed for dissemination of the information.	BFL focal person	Included in the bidding document of the contractor
Community conflicts over access rights	Long term Minor	All project activities will only be undertaken upon consultation with local communities, local authorities and other members of the public who are affected or have a stake in local land use. Community management plans should be developed in a participatory and consultative manner to ensure that access rights are agreed upon among community members.	BFL focal person	Included in the bidding document of the contractor

<p>Workers' health and safety including COVID-19 precautions</p>	<p>Short term Minor</p>	<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 conducive working environments, including an appropriate salary, working hours and accommodation shall be provided to all workers • Ensure that workers are employed on the principle of equal opportunity and fair treatment, and there is no discrimination with respect to any aspects of the employment relationship, 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. <p>Strictly abide by COVID prevention protocols (use masks, maintain distance, wash hands regularly etc.)</p>	<p>BFL focal focal/contractor</p>	<p>Included in the bidding document of the contractor</p>
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Human wildlife conflict	Long term Minor	<ul style="list-style-type: none"> • Construct trails in a way that minimizes any disturbance to wildlife • Provide proper signs along the trails to warn tourists regarding wildlife • Touristic activities should be adjusted to the natural time cycle of wildlife (e.g., restricted by time of the day) 	BFL focal person	Included in the bidding document of the contractor
<i>Activity: waste bins installation</i>				
Animals may look for food in the waste bins, get poisoned and spread waste	Long term Minor	<ul style="list-style-type: none"> • Proper waste management practice in place (end to end) • Carry out waste management awareness and advocacy 	BFL focal person	
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 • 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. • 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 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.) 	BFL focal/Contract or	From the activity cost

Local community's health and safety	Short term Minor	<ul style="list-style-type: none"> • Ensure the safety of all project-related equipment, in line with the requirements above • Minimize the use of hazardous materials, and ensure that community members are not exposed to them. In case that the use of such materials is necessary, provide sufficient notice to local community members and inform them on safety and protection measures. • Avoid dumping any waste or otherwise contaminating community sources of water supply and water quality. • Provide information to local communities on construction activities and plans 	BFL focal /Contractor	From the activity cost
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4.3 Renovation and maintenance of buildings in BWS

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
Waste: generation of waste as a result of construction activities	Short term Minor	<p>Pre-construction:</p> <ul style="list-style-type: none"> • requirements for appropriate waste management should be included in the bidding documents, as a precondition for the contractor's selection <p>During construction:</p> <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; • 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; 	BFL focal person in (BWS)	Waste cleaning after maintenance works Nu.10000

		<ul style="list-style-type: none"> • 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. <p>After construction:</p> <ul style="list-style-type: none"> • Pit toilets are dismantled and pits are covered • All waste is removed from the project site 		
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 • 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. • 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 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.) 	BFL focal person & contractor	From the activity cost Included in the bidding document of the contractor

4.4 Bio-engineering works at Dingtsho lake

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
Disturbance of natural habitat	Long term Major	<ul style="list-style-type: none"> • Ensure careful siting, alignment, design of rig sites, and/or timing of works (seasonal) • Limit use of heavy machinery and avoid using it when important species are present at site. • Ensure soil excavation is carried out with minimal impact to natural habitats 	BFL focal person Contractor	
Waste management during construction	Short term Minor	<ul style="list-style-type: none"> • Proper containers/waste bins should be provided at the project site. • Dumping of waste in the river, in its vicinity, or in other non-designated places should be strictly prohibited. • Collection, transportation and final disposal of all waste should be carried out on a daily basis and not left in the river areas • Burning of construction waste should be prohibited. 	BFL focal person Contractor	Waste cleaning after improvement works Nu.10000
Water contamination as a result of construction	Short term Minor	Avoid pouring construction materials into the lake.	BFL focal person Contractor	
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 • 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 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 	BFL focal person in (BWS)	From the activity cost Included in the bidding document of the contractor

		<p>(including wages 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. • Strictly abide by COVID prevention protocols (use masks, maintain distance, wash hands regularly etc.) 		
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4.5 Develop basic structures like fencing, entrance gate and footpath for recreational site

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
<p>Wastes: from construction activities such as soil, wood, and waste from workers</p>	<p>Short term Minor</p>	<p><i>Pre-construction:</i> -Awareness of waste management for the workers by the forest officials <i>During construction:</i> -Identification of the different waste at the project site (soil, Plastics, food, etc.); -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 undertaken regularly; -The options for reuse/ recycling of the generated waste streams should be taking into consideration (e.g., excavated soil, etc.); -Burning of construction waste should be prohibited; <i>After construction:</i> -All waste shall be removed from the project site -All waste collected in the waste collection points and waste bins shall be cleared by concern authority</p>	<p>BFL focal person in (BWS)</p>	

<p>Workers’ health and safety including COVID-19 precautions</p>	<p>Short term Minor</p>	<ul style="list-style-type: none"> • Comply with the workers’ health and safety guidelines • 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. • 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 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.) 	<p>BFL focal person in (BWS)</p>	
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5. ESMP Implementation Arrangements

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

This ESMP should be part of the contract that the PA will sign with the Contractor(s) for implementation of the planned activities in BWS in 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 BWS's 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 consultants immediately, and the ESS officer will report it to the PCU (M&E Officer). Each non-compliance should be closed with appropriate measure/s and the evidence should be kept.

Disbursement of project funds to the PA will be contingent upon their full compliance with the safeguard's requirements.

6. ESMP Monitoring Arrangement

The BFL focal person in BWS 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.

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

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

Sl. No	Activities	Monitoring team	Timeline		Location	Means of Verification
			Start	Complete		
1	Management of RAMSAR site (Develop basic structure as BNC visitor center)	Field focal	July 2022	December 2022	BWS	Weekly field visit & monthly progress report
		ESS officer	1 August 2022	30 August 2022	BWS	Monitoring report
2	Ecotourism Infrastructure Development from Tsaling to Kharchendra Ney	Field focal	July 2022	December 2022	BWS	Monthly progress report
		ESS officer	August 2022	September 2022	BWS	Monitoring report
3	Renovation and maintenance of buildings in BWS	Field focal	July 2022	December 2022	BWS	Monthly progress report
		ESS officer	1 August 2022	30 August 2022	BWS	Monitoring report
4	Bio-engineering works at Dungtsho lake	Field focal	July 2022	December 2022	BWS	Weekly field visit & monthly progress report
		ESS officer	August 2022	September 2022	BWS	Monitoring report
5	Develop basic structure like fencing, entrance gate and foot path for recreational site	Field focal	July 2022	December 2022	BWS	Weekly field visit & monthly progress report
		ESS officer	August 2022	September 2022	BWS	Monitoring report

- 1. Management of RAMSAR site (Develop basic structure as BNC visitor center) &**
- 2. Ecotourism Infrastructure Development from Tsaling to Kharchendra Ney**

Monitoring by implementing entities:

- a. At least weekly field visits
- b. Monthly reports prepared by implementing entities and submitted to ESS officer

Monitoring by ESS officer:

- c. Field monitoring by ESS officer – monitoring of the work once during the implementation and through field report from IAs after completion of the work.
- d. 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)

3. Renovation and maintenance of buildings in BWS

Monitoring by implementing entities:

- Field visits—at least monthly
- Quarterly reports by the implementing entities submitted to ESS officer

Monitoring by ESS officer at PCU:

- Field monitoring by ESS officer – monitoring of the work through field report from IAs during and 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)

4. Bio-engineering works at Dungscho lake

Monitoring by implementing entities:

- Field visits—at least weekly
- Monthly reports by the implementing entities submitted to ESS officer

Monitoring by ESS officer at PCU:

- a. Field monitoring by ESS officer – monitoring of the work once during the implementation and through field report from IAs after completion of the work.
- b. 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)

5. Develop basic structure like fencing, entrance gate and foot path for recreational site

Monitoring by implementing entities:

- Field visits—at least weekly
- Monthly reports by the implementing entities submitted to ESS officer

Monitoring by ESS officer at PCU:

- Field monitoring by ESS officer – monitoring of the work 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.

7. Capacity Need and Budget

Activities under this ESMP will be implemented by the BFL focal person, supervising engineer, and a contractor that will employ workers as mentioned in the contract agreement. The budget for each activity is as follows:

Sl.No.	Activity	Amount (Nu)	Budget for ESS mitigation (Nu)
1	Management of RAMSAR site (Develop basic structure as BNC visitor center)	25,00,000.00	10000.00
2	Ecotourism Infrastructure Development from Tsaling to Kharchendra Ney	40,00000.00	
3	Renovation and maintenance of buildings in BWS	31,00,000.00	10000
4	Bio-engineering works at Dungscho lake	10,00,000.00	10000.00
5	Develop basic structure like fencing, entrance gate and foot path for recreational site	7,00,000.00	
Total		11300000	30000

8. Consultation and Disclosure Mechanisms

This ESMP has been prepared in a participatory manner, and a community consultation was carried out in the month of October, 2021 in BWS to consult the local communities regarding the planned project activities mainly, bio-engineering work for Dungscho lake to, solicit their opinions, and enable them to question proposed mitigation measures. There were no issues as such but the communities all agreed on giving the clearance for construction and bio-engineering around the lake as the lake was drying up. For the remaining activities the consultation could not be conducted with local communities however the community representative and relevant agencies within the respective gewogs were consulted through telephonic calls. The minutes are not kept but the evidence of the social clearance was obtained as attached to this ESMP, along with a full list of participants.

The full English version of this ESMP, as well as an executive summary in Dzongkha, 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 in BWS will be engaged throughout the implementation of these activities.

- For all construction activities (ecotourism, BNC visitor center, herbal tea production unit, renovation of guard post and bio-engineering works) – one consultation meeting will be organized before the implementation of the activity, and subsequent consultations if required during the implementation of the activity

(it will be combined with consultations for other BFL or non-BFL activities if convenient).

Official minutes of consultation meetings (along with a list of participants, disaggregated by gender and age) will be submitted by BFL focal to ESS officer at PCU 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.

ANNEXURE 1: Social clearance from the community




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ROYAL GOVERNMENT OF BHUTAN

LOCAL GOVERNMENT, GEOG ADMINISTRATION OF BOOMDELING

TRASHI YANGTSE DZONGKHAG



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གཙོ་འཛིན་མཚོགས་ལུ།

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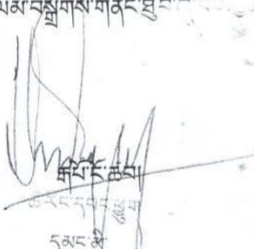
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Email: cdem@trashiyangtse.gov.bt

File No. 38

3077/ Mangmi 17595815

Oungzam Park Range, Bumdeling

File No. 38 70

10/10/19

File No. 38



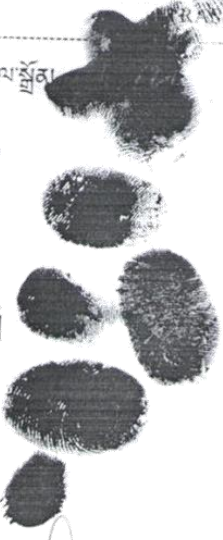
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ROYAL GOVERNMENT OF BHUTAN

LOCAL GOVERNMENT, GEOG ADMINISTRATION OF BOOMDELING
TRASHI YANGTSE DZONGKHAG



- ༤-བསོད་ནམ་དཔལ་སྐྱོན།
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- ༥-ཕོ་མོ།
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Email: cdem@trashiyangtse.gov.bt / 17428077/ Mangmi 17595815

Minutes of Meeting

Venue: Bumdeling Geog Meeting Hall

Date: 9/12/2020

Participant lists

1. Phub Thinley, Gup
2. Tshering Wangchuk, Mangmi
3. Chimi Dem, Geog Administration Officer
4. Pema Dorji, Bamdir-Womanang Chiwog Tsogpa
5. Tshering Dorji, Pangkhar-Tarphel Chiwog Tsogpa
6. Thukten Dorji, Tshaling-Gangkhardung Tsogpa
7. Tshering Wangchuk, Phanteng-Ngalimang Tsogpa
8. Sangay Drukpa, Sr. Park Ranger, Dungzam Range
9. Tshering Nidup, Geydrung

Coinciding with the monthly waste cleaning day, the Range Officer, Dungzam Park Range called short meeting with the GYT Committee members of Bumdeling geog on the 9th December mainly to discuss on the waste management issues in Bumdeling geog and following points were discussed and resolve accordingly. The meeting was chaired by Gup, Bumdeling geog administration.

SI #	Points	Discussion	Resolutions
1	Waste Bins placed at Dungzam and Bumdeling	There are two waste collection unit placed at Dungzam and Bumdeling by Dzongkhag Emt. Section and BWS respectively. The bins are always found filled but no one take responsibility to clean/ empty it.	The Park Range Office and Geog will try to clean/ empty the bins and later SOP will be developed to keep the bins always empty.
2	Budget for Waste bins (collection unit) construction at Bumdeling	Through BFL Project, Bumdeling Wildlife Sanctuary has allocated Budget for construction of waste collection bins in Bumdeling and about 5-6 bins can be constructed as per estimation done by Site Engineer. The work can be awarded to community to encourage them in waste management program later.	Since the identified sites cover whole Bumdeling geog, the GT Committee suggested that the work can be awarded to a group of community who is willing help in cleaning of the Bins when it is filled. So, it was resolved that the village Tsogpas will inform the community and accordingly identify the group for construction and submit 'Expression of interest letter' to range Office and accordingly work will be awarded.

Minute Keeper

(Sangay Drukpa)
Sr. Park Range Officer

Noted by:

(Phub Thinley)
Gup, Bumdeling geog

ANNEXURE II: Consultation meeting

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ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF AGRICULTURE AND FORESTS
DEPARTMENT OF FORESTS AND PARK SERVICES
BOOMDELING WILDLIFE SANCTUARY
TRASHIYANGTSE, BHUTAN



BWS/Adm-21/2020-2021//5

11th October, 2021

The Gup,
Bumdeling Geog Administration,
Trashiyangtse.

Subject: Consultation meeting on Planned Activities of BWS in Bumdeling Geog

Sir,

The Bumdeling Wildlife Sanctuary, Trashiyangtse is pleased to inform that the park is in the position to finalize and get budget for following activities in Bumdeling Geog through BFL Project:

1. Improvement of Dingtsho Lake for ecotourism development
2. Waste management and construction of amenities
3. Improvement of Alpine Meadows for Yak Herders
4. Camera Trapping programs
5. National Forest Inventory and
6. Discuss and plan the activities for next fiscal years.

In this regard, the park would like to present and discuss on the working modalities, identify the sites for construction of amenities and also plan for next activities in the geog.

Therefore, you are requested to attend the meeting with all the GT Committee members on 13th October, 2021 at 10.00 am. The meeting will be arranged at Geog meeting hall.

Yours Sincerely,

(Tshering Dendup)
Offg. Chief Forestry Officer

Copy to:

1. The Project Director, BFL for kind information please.
2. The Sr. Park Range Officer, Dungzom Range for arrangement and coordination.
3. The BFL Focal, BWS to prepare of presentation.
4. Account Officer for information and attend the meeting.



དཔལ་ལྷན་འབྲུག་གཞུང། མེད་འོག་བདག་སྐྱོང་འབྲུམ་ལྗེ་སློང།
ROYAL GOVERNMENT OF BHUTAN
 LOCAL GOVERNMENT, GEWOG ADMINISTRATION OF BOOMDELING
 TRASHI YANGTSE DZONGKHAG

འབྲུམ་མེད་བཀའ་བརྒྱ/07/2021-2022/164

སྤྱི་ཚེས 12/10/2021

འབྲུམ་ལྗེ་སློང་མེད་འོག་གིས་ཚོགས་པ་དང་སྤྱི་འཐོད་ཡོངས་ལྷན། དོན་འབྲུམ་ དེ་ནི་ གཏུང་ཟམ་འཛིན་དྲགས་སྤྱིང་འཛིན་ཡིག་ཚང་ལས་
 འབྲོར་བའི་ཡིག་ཡང་ BWS/Adm-21/2020-2021/115 ཅན་མའི་ནང་གསལ་ལྟར་ སྤྱི་ཚེས
 12/10/2021 ལུ་ འོག་ལུ་བཀོད་དེ་ཡོད་པའི་ལས་སྡུ་ཚུ་གིས་ མ་དངུལ་བགོ་སྐྱེམས་འབད་ནི་འོ་དོན་ལས་དང་ འཆར་ལོ་རྒྱུང་
 མའི་སྐོར་ལས་ མེད་བསྐྱུན་འབད་ནི་ཡིན་མཁའ་ལས་ ཚོགས་པ་དང་སྤྱི་འཐོད་ཡོངས་ཚོ་བུ་ཚུ་ཚོད་ 10 ལུ་ མེད་འོག་ཚོགས་ཁང་ན་
 རྒྱུད་པ་འབད་འོང་དགོ་པའི་སེམས་ལུ་ངེས་བར་བཟྱི།

- 1/ སྤྱི་ལྷན་གནས་སྐབས་བཟུ་བཏལ་དོན་ལས་གཏུང་འཛོལ་གསལ་བཅོས་འབད་ནི།
- 2/ ལྷགས་སྤྱིགས་དང་མཐུན་ཚུན་སྐོར།
- 3/ ལུ་ཚོར་གཡག་ཚུ་གིས་རྩ་ཐངས་ལེགས་བཅོས་འབད་ནི།
- 4/ རྒྱུང་བཀའ་མི་པར་ཆས་ཀྱི་སྐོར།
- 5/ རི་དྲགས་སྤུང་སྐྱོབ་ཀྱི་ཅ་ཆས་ཐོ་གཞུང་གིས་སྐོར།

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འབྲུག་གླེ་གླིང་རི་དྭགས་སྤྱང་སྐྱོབ་སའོ་ཁོངས།

Royal Government of Bhutan

Ministry of Agriculture and Forests, Department of Forests and Park Services

Bumdeling Wildlife Sanctuary, Trashiyangtse, BHUTAN



Minutes of Consultation Meeting

Date : 13th October, 2021

Venue: Bumdeling Geog Centre

Participants: Officiating CFO, Gup, Mangmi, BFL focal, Dungzam Range Officer, ADM and Dungzam Range Staffs and GT member (Bumdeling Geog).

Minute Keeper: Namgay Shacha

Opening Remarks

Dungzam Range Officer formally opened the consultation meeting by whole heartily welcoming all the participants. The meeting mainly focused on completed activities, planned activities to be carried out, sustainable management of waste and amenities developed by Bhutan For Life (BWS) in Bumdeling Geog. BFL was started in 2009 and it covers 10 protected parks in Bhutan. The BFL activities will be for the period of 14 years with funding received from multiple donors (Royal Government of Bhutan). The resolution adopted and endorsed during this meeting will serve as a social clearance from the geog administration and community representatives for the conduct of the planned activities. The meeting started at 10:50 am.

Sl. No.	Agenda	Discussions	Resolution
1	Waste management and development of stationary waste collection units.	Waste has become an issue in Bumdeling geog and it is mainly due to poor monitoring of waste management system. In the settlement areas, waste should be properly managed by the people residing in that area but in the area of state reserved forest, the waste should be managed by the DoFPS. For the proper management of waste, we should know the amount of waste collected from each waste collection points and will also enhance in developing the rule and regulations accordingly. Geog administration will be allocating certain budget for the waste management in Bumdeling geog. GT will discuss the waste issues and its management and they will further do the follow up in DT.	Geog administration will carry out the user mapping and then developed effective bylaws to solve waste issues inside the geog. It will be discussed in GT and then follow up in DT.
2	Improvement of Dingtso lake for ecotourism product development	Dingtso lake will be developed in a natural way including cleaning of the lake in coming fiscal year through budget from BFL. All the planning and estimation for the preparation of the lakes are ready and would like to start the activities after obtaining social clearance from the community representatives. The GT members mention that such type of activities is must and will surely benefit the local resident from the ecotourism product.	This assured the social clearance from geog administration and community representatives to carry out reviving of Dingtso lake.

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འབྲུག་གླེ་གླིང་རི་དྭགས་སྤྱང་སློབ་སའོངས།



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Bumdeling Wildlife Sanctuary, Trashiyangtse, BHUTAN



3	Development of stationary waste collection units.	BWS management have planned to construct additional two stationary waste collection point in Bachothang and Tarphel based on preliminary studies. The sustainable management of waste in this two proposed areas will be similar to the earlier one as discussed.	The meetings has consented the construction of stationary waste collection points in Tarphel and Bachothang.
4	Waste management and sustainable management of amenities developed in Bumdeling geog (Rigsum Goenpa and recreational area in Nakpola)	Bumdeling geog in collaboration with BWS will develop Youth Ecotourism Initiatives and then recognized some unemployed youth from the resident for the waste management, monitoring the safety of infrastructure developed and also the benefits of local resident. There was also a consent from the geog and they also proposed if there are some additional infrastructure development like development of children's park and fencing. In the coming fiscal year, BWS management is planning to endorsed the proposed activities of geog administration. If BWS management and geog could come up with some ideas like development of ecolodge/homestay as a source of income for the local resident which will fascinate them for the waste management and monitoring the safety of infrastructure developed.	Bumdeling geog in collaboration with BWS will develop Youth Ecotourism Initiatives and then recognized some unemployed youth from the resident for the waste management, monitoring the safety of infrastructure developed.
5	Improvement of alpine meadows	The activities aimed to improve pasture land for the highlander which was previously colonized by the non-palatable tree species. The activities will be carried out based on the needs and remarks from the local resident.	The community representatives consent the improvement of alpine meadow for yak in highlands.
6	NFI and National Tiger Survey Programs	Department of Forest and Park Services is conducting National Forest Inventory and going to install 36 numbers of camera traps in Bumdeling geog for National Tiger Survey. Therefore the management of BWS would like to request geog administration to inform the local resident about the camera traps to avoid damages.	A notification will be notified to the local resident about the camera traps for National Tiger Survey by geog.

Annexure III- 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.

¹

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

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

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

- 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.
- 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