

Bhutan for Life

Environmental and Social Management Plan for Phibsoo Wildlife Sanctuary (2020)

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

In general, RGoB's laws, policies, and guidelines are in line with the WWF's environmental and social safeguards requirements. However, there are a few differences between the two systems. With regard to environmental impacts, there are no direct contradictions between the RGoB laws and regulations and the WWF's SIPP, but the requirements of the latter are more extensive. All project activities should fully comply both with the RGoB's Regulations on the Environmental Clearance of Projects, and with the procedures and mitigation measures prescribed in this ESMF. In case that the WWF's SIPP requirements are more extensive, strict, or detailed than the RGoB legislation and policies, the former will apply to all project activities. With regard to social impacts, the primary discrepancies between the RGoB laws and regulations and the WWF's SIPP refer to the status of non-title holders and informal land use, and the commitment to participatory decision-making processes. First, according to the WWF's SIPP, all users of land and natural resources (including people that lack any formal legal ownership title or usage rights) are eligible to some form of assistance or compensation if the project adversely affects their livelihoods. The RGoB laws only recognize the eligibility of land owners or formal users to receive compensation in such cases. Second, the WWF's SIPP require extensive community consultations as part of the development of various safeguards documents and during project activities. RGoB legislation does not include similar requirements. For the purposes of the BFL project, the provisions of the WWF's SIPP shall prevail over the RGoB legislation in all cases of discrepancy.

2. Environmental and Socio-Economic Conditions

Phibsoo Wildlife Sanctuary (PWS) is the smallest protected areas amongst all the Protected Areas in Bhutan with only an area of 269 Km². In the year 1974, PWS was established as Phibsoo Reserved Forests and finally in 1993 it got upgraded to Wildlife Sanctuary. PWS got its first conservation management plan approved in the year 2012. Subsequently in the year 2014, PWS got separated from Sarpang Forest division and became a fully independent office. PWS is located in between in the south-central Bhutan as shown in Figure 1. Figure 2 shows the Phibsoo Wildlife Sanctuary zones in detail. The elevation ranges from 200 meters to 1,600 meters above mean sea level. PWS stretches its border from right flank of Punatsangchhu (Sunkosh) River in the west till Singye village in the east and with Dhanishri ridge bordering the north edge. The entire southern boundary shares Indo-Bhutan International border with Ripu-Chirang Reserved Forest. PWS covers Nichula and Singye gewog under Dagana and Sarpang dzongkhag. The PWS headquarter is located at Shariphu under Singye gewog. The sanctuary has 94 households in Nichula and 13 households in Singye Gewog.

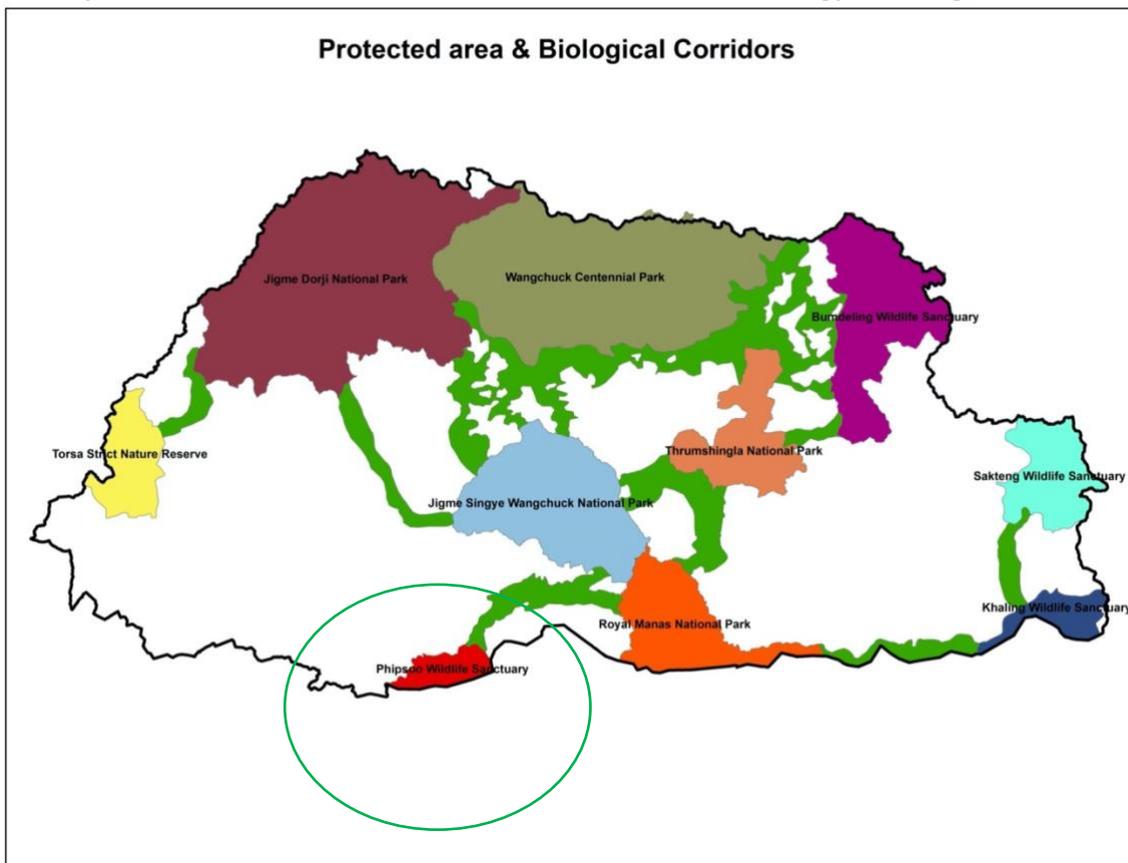


Figure 1: Location of Phibsoo Wildlife Sanctuary

PWS falls in the Indo-Malayan bio-geographic realm. Entire area has sub-tropical forest ecosystem which can be categorized into Sub-tropical Semi Evergreen Forest, Sub-tropical Moist Deciduous Forest and Subtropical Moist Evergreen. There are approximately 1259 acres of plantations created between 1960 and 1975. PWS has one of the richest biodiversity, despite being the smallest park in the country. It is home to all the eight (8) cat species, Asiatic elephant, guar and endangered golden langur. It is the only natural habitat of spotted deer (Chital) and wild Sal and agar wood forest in the country.

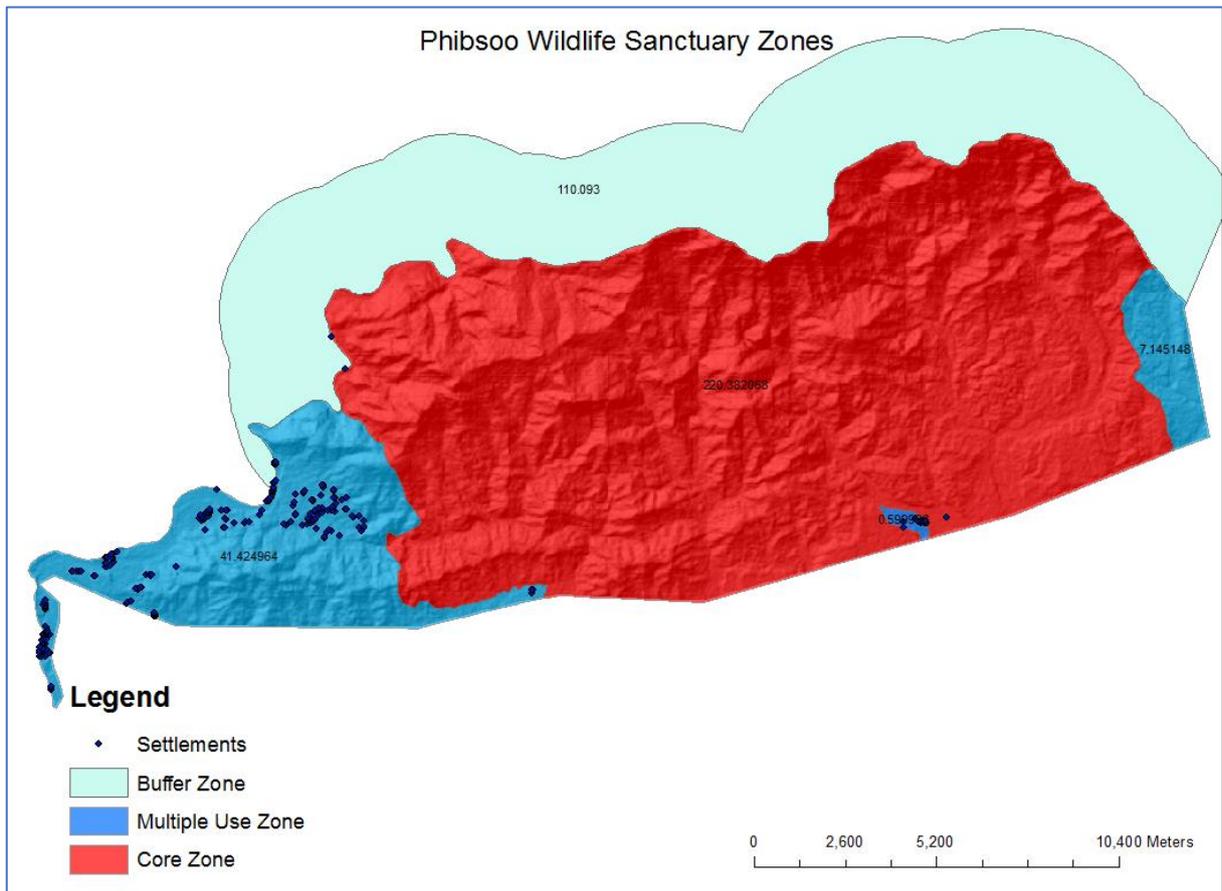


Figure 2 Phibsoo Wildlife Sanctuary Zone



Figure 3: Cat Species



Figure 4: Spotted Deer



Figure 5: Natural Sal and Agar Wood

In the recent past, PWS have proven to be the potential habitat of globally endangered White-bellied heron along Phibsoo river and Longa river. It has over 300 acres of pristine subtropical rangeland, which is potential prime habitat of pygmy hog and hispid hare. There are about 637 species of flowering plants, 28 species of mammals and 132 species of birds recorded still there are chances of increasing the numbers of flora and fauna over time.

Phibsoo Wildlife Sanctuary head office has two section Resource Allocation and Management section, Species Conservation and Management Section. There are two range offices which are Phibsoo range and Nichula Range and one is an outpost.

3. Planned activities in Year 2020

Activities that are planned in PWS in 2020 include the following:

1. Construction of Range Office: It involves site development and construction of range office, at Shariphu, Yerpheling, Singye under Sarpang Dzongkhag. Sites have been identified which is within a community and below the existing office of Phibsoo Wildlife Sanctuary. The area is almost 2 acres and the construction shall be on 10 decimal land. Planned date for the activity is June 2020- July 2021. The site is currently used by Phibsoo Wildlife Sanctuary as office compound and belongs to the Sanctuary. There are 300 households in Singye gewog and around 82 households within the construction site. The water source used for the construction will be same as the one used by the community which is about 6 km from the site. This is expected to result in the shortage of water and thus create conflict between the workers and the communities in relation to water distribution. There is already existing approach road towards the construction site. The community will not be affected in terms of access to services, road etc., by the construction. There will be consultations prior to the starting of the construction. There will be around 30 workers employed who will be mainly local workers and they will be staying in a temporary shelter. The site is centrally located and is adjacent to other offices like RNR office, Gewog Office and BHU. The proposed budget for the activity is USD 65,000.

There will be adverse environmental and social impacts as follows:

Environmental Impacts:

- **Noise disturbance:** Possible noise disturbance as a result of outdoor equipment usage and transportation vehicles driving around the construction site. The communities are close to the construction site (around 200 m from Gewog centre)
- **Air quality:** Dust and possible emissions from transportation vehicles and machineries like excavator, mixer etc.
- **Waste:** Generation of waste as a result of construction activities (materials such as cement, sand, bricks, tiles etc.)

Social Risks/Impacts:

- Access to and usage of water sources
- Workers' health and safety
- Conflict between workers and local communities such as water distribution and waste management

2. Maintenance of Range Office and Headquarter: It includes changing of windows and frames, roofing and electrical wiring of old structure building. It is on the existing structure at Themba. The proposed budget is USD 7500. There will be 8 local workers who will be commuting from the nearest town which is 10 Kms. The activity will be for three months and it is planned to start from July 2020 and complete by September 2020.

Some of the site-specific environmental and social impacts are:

- Waste: generation of waste as a result of construction activities such as old iron, wires, and electrical wastes.
- Workers' health and safety

3. Improvement of waterholes: Waterholes are considered important habitat for wildlife as it provides water to wildlife for drinking especially in winter when all water sources in nearby stream gets dried. The activity involves replacing the old pipes with new ones in the existing water hole. It includes digging of trenches, laying and burial of pipelines on the existing areas where the pipes will be laid. The area is on the flat not exceeding 5% slope. Planned date is July 2020 to December 2020. The site is currently used by foresters and army as their outposts/camps. They perform monthly turnover duty without leaving the station empty. There is no community except foresters and army in the vicinity. The proposed budget is USD 4761. There will be 20 number of local workers escorted by the forestry officials.

If not monitored well, there will be likely of poaching in those areas but PWS has selected waterhole places in areas which can be monitored well by the rangers. To minimize the risk of human wildlife conflict, they will be advised to move in groups after dawn and before dusk.

For this activity, some of the potential environmental and social impacts are following:

- Wastes: soil from excavation activities and waste from digging activities
- Workers' health and safety
- Increased poaching waterholes will become a hotspot for animals gathering in one site thereby increasing the risk of poaching
- Human wildlife conflict.

4. Improve lowland grasslands by removing of exotic invasive plant species (*Chromolana odorata*, *lantana camera*, *mikinia micranth*) and prescribe burn in the grassland (using fire as a management tool based on fire and species science). It is on flat land with 0

percent slope in the middle of the forest which is used by wildlife. The activity is planned from October 2020 and complete by June 2021 and will be carried out in two seasons (summer and winter). The proposed budget is USD 11,000. This will be carried out by 30 forestry officials. The area is around 30 hectares each for two seasons.

The adverse impacts of the activity are:

- Risk of forest fire with air pollution

5. Combined zonation: This activity includes demarcation of PWS into core, buffer and multiple zones. The activity covers the whole area of PWS and is included in the conservation management plans of PWS. The planned date is from July 2020 to December 2020 and the budget for the activity is USD 49500. There will be physical demarcation like installation of boundary pegs. The area includes combination of conserved area and settlements by local community of around 190 households. The demarcation will be carried out as per the existing zonation guidelines where the access of local community to any resources will not be restricted.

The activity includes two phases. First phase is consultation with the community for making zones of park area where the community have access to the natural resources and their user right and all the settlements who are within the administrative boundaries. Communities use timber, firewood, fodder and sand from the allocated areas.

The following are the impacts for the activity:

- Wastes during the consultation meeting and peg fixation at the sites

6. River bank protection: There are two sites for this activity. One is at Phibsoo and another one is at Nichula. The proposed budget for the two river bank protection is USD 50057. The two sites have different adverse impacts which are described as follows:

a. **River bank protection at Phibsoo outpost:** This activity includes river bank protection at Phibsoo outpost. There will be collection of riverside materials such as soil, boulders etc. making sure that the disturbance to the river ecosystem will be negligible. It is planned that the gabion wall will be constructed for protecting the prime grassland from erosion. As Phibsoo is known for its vast grassland which is the important natural habitat of wildlife protection, it has become of prime importance to protect the grassland. There are spotted deer and natural agarwood, grassland and Sal forest which will be protected by the river bank from erosion. However, with incessant summer rainfall the grassland area is at a risk of erosion. The site is taken care by foresters and army which is near the outpost station. Though there is no community near the site, it is connected by 20 KM of PWS patrol route. There will be use of tractors for transporting boulders from the nearby area. The planned date is July 2020 - December 2020. The activity is for 6 months. There are no communities nearby and the activity includes construction of wall of 80 metres long along the river with 3 metres height. A community contract will be employed for this work with 30 workers who will be local and they will be staying in a temporary shelter. The construction activities of the wall will have the following adverse impacts:

- Disturbance of natural habitat of Phibsoo due to machineries as well as workers
- Waste management during construction
- Water contamination as a result of construction
- Workers' health and safety

b. **River bank protection at Nichula:** It is planned to construct a gabion wall of 25 m along and 3 m height to protect a forestry office which is at risk of erosion from the flood during summer. There are also 30 households near the river which will also be protected by the river

bank protection wall. The planned date is from July 2020 to December 2020. A community contract will be employed for this work with 15 workers who will be local and they will be commuting from the town for the work. The activity is for 6 months. River bank protection at Nichula includes construction of wall which have the following adverse impacts:

- Waste management during construction
- Water contamination as a result of construction
- Workers' health and safety
- Affecting downstream communities' water access

4. Environmental and Social Impacts and Mitigation Measures

1. A. Construction of Range Office

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
Activity: Construction of Range Office at Shariphu				US\$ 65,000
Noise disturbance: Possible noise disturbance as a result of outdoor equipment usage and transportation vehicles driving around the construction site. The communities are close to the construction site (around 200 m from Gewog center)	Short term Minor	<p><i>Pre-construction:</i> requirements to limit noise pollution should be included in the bidding documents, as a precondition for the contractor's selection</p> <p><i>During construction:</i></p> <ul style="list-style-type: none"> • The control of the noise level of excavator and trucks should be performed before the startup of construction • The construction work should be not permitted during the nights, the operations on site shall be restricted to the hours 7am-7pm • Vehicles that are excessively noisy shall not be operated until corrective measures have been taken (Fitness certificate needs to be there and verified) • Earplugs and protecting devices shall be provided to workers on site. 	BFL focal person in [PWS] Contractor	Included in the bidding documents from the activity budget.
<i>Air quality:</i> dust and possible emissions from transportation vehicles and machineries like excavator, mixer etc.	Short term Minor	<p><i>Pre-construction:</i> requirements to limit emissions should be included in the bidding documents, as a precondition for the contractor's selection</p> <p><i>During construction:</i></p> <ul style="list-style-type: none"> • Construction site, transportation routes and materials handling sites should be Water-sprayed on dry and windy days; 	BFL focal person in [PWS] Contractor	Included in the bidding documents from the activity budget

		<ul style="list-style-type: none"> • Construction materials should be stored in appropriate and covered places to minimize dust; • Before allowing vehicles on site, fitness and emission test of the vehicle shall be performed; • Vehicle loads likely to emit dust need to be covered; • Ensure usage of protective masks for the workers if dust appears; • Restriction of the vehicle speed within the construction sites; • Perform regular maintenance of the vehicles and construction machinery in order to reduce the leakages of motor oils, emissions and dispersion of pollution; • Burning of debris from ground clearance not permitted. 		
<p><i>Waste:</i> generation of waste as a result of construction activities (materials such as cement, sand, bricks, tiles etc)</p>	<p>Short term Minor</p>	<p><i>Pre-construction:</i> requirements for appropriate waste management should be included in the bidding documents, as a precondition for the contractor's selection</p> <p><i>During construction:</i></p> <ul style="list-style-type: none"> • Identification of the different waste types at the project site (soil, cement, sand, 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 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 [weekly] • All construction materials should be covered during the transportation to avoid waste dispersion; • The options for reuse/recycling of the generated waste should be 	<p>BFL focal person in [PWS] Contractor</p>	<p>Hiring and collection of wastes: Nu. 18,000 = USD 255.32</p>

		<p>taken into consideration (e.g. excavated soil, etc.).</p> <ul style="list-style-type: none"> • Burning of construction waste should be prohibited. <p><i>After construction:</i></p> <ul style="list-style-type: none"> • All waste shall be removed from the project site. 		
Access to and usage of water sources	Short term (only for the duration of the construction)	<ul style="list-style-type: none"> • Prepare water management plan in consultation with local community to ensure that community's access to water sources is not disturbed, and usage of water sources is fairly allocated (e.g., by specifying water usage times for workers). 	BFL focal point in [PWS] Contractor	<p>Number of communities:300 Costs: Nu 315 Total costs: Nu.94,500 (USD 1347.52)</p>
Workers' health and safety	Short term Minor	<ul style="list-style-type: none"> • Follow the workers' health and safety guidelines as attached to the ESMP (BFL guidelines). • Ensure regular health screening for the workers pre and during construction activities • Ensure that no underage workers, or children are engaged • Decent work conditions, including an appropriate salary, working hours, accommodation and food for workers shall be provided to all workers. • 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, job assignment, termination of employment or retirement, and disciplinary practices. • A grievance mechanism for workers to raise workplace concerns should be in place. 	BFL focal point in [PWS] Contractor	Included in the bidding documents from the activity budget
Conflict between workers and local communities such as water distribution and waste management	Short term Minor	<ul style="list-style-type: none"> • Workers shall be made aware of local situation, as well as the legal consequences of harassment and intimidation, especially with regards to sexual harassment and gender-based violence. 	BFL focal point in [PWS] Contractor	Consultation (same as above in "Access to water")

		<ul style="list-style-type: none"> Local communities shall be made aware of the engagement of temporary workers in project sites. Strict monitoring shall be carried out to ensure conflicts are minimized. 		
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2. Maintenance of Range Office at Outpost (changing of window, roofing and lighting)

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
Activity: Maintenance of Range Office on existing structure				US\$ 7,500
Waste: generation of waste as a result of construction activities such as old iron, wires, and electrical wastes	Short term Minor	<p><i>Pre-maintenance:</i> requirements for appropriate waste management should be included in the bidding documents, as a precondition for the contractor's selection</p> <p><i>During maintenance:</i></p> <ul style="list-style-type: none"> Identification of the different waste types at the project site (soil, iron, old sheets for roof, 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 wastes should be undertaken regularly [weekly] Possible hazardous waste such as glasses and old iron should be collected separately and authorized collector and transporter should be sub-contracted to transport and finally dispose; The options for reuse/recycling of the generated waste streams should be taking into consideration (e.g. excavated soil, etc.). 	BFL focal person in [PWS]	Included in the bidding documents from the activity budget

		<ul style="list-style-type: none"> Burning of construction waste should be prohibited. <p><i>After maintenance:</i></p> <ul style="list-style-type: none"> All waste shall be removed from the project site. 		
Workers' health and safety	Short term Minor	<ul style="list-style-type: none"> Follow the workers' health and safety guidelines as attached to the ESMP. Ensure First kit and working wears for the workers' safety. Ensure that no underage workers, or children are engaged Decent work conditions, including an appropriate salary, working hours, accommodation and food for workers shall be provided to all workers 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, , job assignment, promotion, termination of employment or retirement, and disciplinary practices. A grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns should be in place. 	BFL focal point in [PWS] Contractor	Included in the bidding documents from the activity budget

3. Waterhole restoration by replacing the old pipes with new ones in the existing water hole

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
Activity: Water hole restoration				US\$4,761.9
Waste: soil from excavation activities and waste from digging 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, in the protected areas 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; 	BFL focal point in [PWS]	Included in the activity budget

		<ul style="list-style-type: none"> Collection, transportation and final disposal of all waste should be collected on a daily basis and not left in the protected areas. Burning of wastes should be prohibited. 		
Workers' health and safety	Short term Minor	<ul style="list-style-type: none"> Follow the workers' health and safety guidelines as attached to the ESMP. Ensure first aid kits and safety gears to the workers. Ensure that no underage workers, or children are engaged Decent work conditions, including an appropriate salary, working hours, accommodation and food for workers shall be provided to all workers workers are employed on the principle of equal opportunity and fair treatment, and there is no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices. A grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns should be in place. 	BFL focal point in [PWS]	Included in the activity budget
Increased poaching	Short term Minor	<ul style="list-style-type: none"> Waterholes restoration is in the existing area. Increased patrolling of park authorities should be carried out during and after the waterhole restoration. 	BFL focal point in [PWS]	Included in the activity budget

4. Improvement of lowland grasslands

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
<i>Activity: Restoration of lowland grassland</i>				<i>US\$11,000</i>
Risk of forest fire	Short term Minor	<ul style="list-style-type: none"> Plan the activity during spring and summer when there is no wind. Avoid dry season. Controlled and prescribe burning by making fire line 	BFL focal person (PWS)	Included in the activity budget

5. Combined zonation

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
Activity: Combined zonation				USD 49,500
Wastes during consultation and peg fixing	Short term Minor	<ul style="list-style-type: none"> • Proper containers/waste bins should be provided at the consultation and the peg fixation sites; • 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 	BFL focal person	Included in the activity budget

6. River Bank protection in Phibsoo and Nichula

a. River bank protection at Phibsoo

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
Activity: River protection wall				
Disturbance of natural habitat of Phibsoo	Short term Minor	<ul style="list-style-type: none"> • Avoid using heavy machinery. • Avoid soil excavation to minimize impact on natural habitats. 	BFL focal point in [PWS] Contractor	Cost will be met from the activity budget
Waste management during construction of wall	Short term Minor	<p><i>Pre-construction:</i> requirements for appropriate waste management should be included in the bidding documents, as a precondition for the contractor's selection.</p> <p><i>During construction:</i></p> <ul style="list-style-type: none"> • Identification of the different waste types at the project site (soil, sand, cement, 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. • Dumping of waste on the sides of the road, on private land, or in other non-designated places or into the rivers 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 [weekly] 	BFL focal point PWS Contractor	Included from the activity budget

		<ul style="list-style-type: none"> • Possible hazardous wastes should be collected separately and authorized collector and transporter should be sub-contracted to transport and finally dispose; • The options for reuse/recycling of the generated waste should be taking into consideration (e.g. food, excavated soil, etc.). • Burning of construction wastes as well as throwing of wastes in the river should be prohibited. <p><i>After construction:</i></p> <ul style="list-style-type: none"> • All waste shall be removed from the project site. 		
Water contamination as a result of construction.	Short term Minor	<ul style="list-style-type: none"> • Avoid pouring construction materials into the river. 	BFL focal point in [PWS] Contractor	Included in the bidding documents from the activity budget
Workers' health and safety	Short term Minor	<ul style="list-style-type: none"> • Follow the workers' health and safety guidelines as attached to the ESMP. • Ensure regular health screening for the workers pre and during construction activities. • Ensure that no underage workers, or children are engaged. • Decent work conditions, including an appropriate salary, working hours, accommodation and food for workers shall be provided to all workers. • workers are employed on the principle of equal opportunity and fair treatment, and there is no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices. • A grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns should be in place. 	BFL focal point in [PWS] Contractor	Included in the bidding documents from the activity budget

b. River bank protection at Nichula

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
Activity: River protection wall				USD 50,057
Waste management during construction of wall	Short term Minor	<p><i>Pre-construction:</i> requirements for appropriate waste management should be included in the bidding documents, as a precondition for the contractor's selection.</p> <p><i>During construction:</i></p> <ul style="list-style-type: none"> • Identification of the different waste types at the project site (soil, sand, cement, 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. • Dumping of waste on the sides of the road, on private land, or in other non-designated places or into the rivers 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 [weekly] • Possible hazardous wastes should be collected separately and authorized collector and transporter should be sub-contracted to transport and finally dispose; • The options for reuse/recycling of the generated waste should be taking into consideration (e.g. food, excavated soil, etc.). • Burning of construction wastes as well as throwing of wastes in the river should be prohibited. <p><i>After construction:</i></p> <ul style="list-style-type: none"> • All waste shall be removed from the project site. 	BFL focal point PWS Contractor	Included in the bidding documents from the activity budget
Water contamination	Short term Minor	<ul style="list-style-type: none"> • Avoid pouring construction materials into the river. 	BFL focal point in [PWS] Contractor	Included in the bidding documents

as a result of construction.				from the activity budget
Workers' health and safety	Short term Minor	<ul style="list-style-type: none"> Follow the workers' health and safety guidelines as attached to the ESMP. Ensure regular health screening for the workers pre and during construction activities. Ensure that no underage workers, or children are engaged. Decent work conditions, including an appropriate salary, working hours, accommodation and food for workers shall be provided to all workers. workers are employed on the principle of equal opportunity and fair treatment, and there is no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices. A grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns should be in place. 	BFL focal point in [PWS] Contractor	Included in the bidding documents from the activity budget
Affecting downstream communities' water access	Short term Minor	<ul style="list-style-type: none"> Ensure that downstream communities are informed regarding planned project activities and these activities are designed in consultation with the communities 	BFL focal point in [PWS] Contractor	Number of communities: 100, Costs= 315*100= Nu. 31500 (USD 453.9)

5. ESMP Implementation Arrangements

The implementation of project activities will be carried out by the BFL focal person in PWS. 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 PWS in 2020. 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 PWS’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 consultants 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 safeguards requirements.

6. ESMP Monitoring Arrangements

The BFL focal person in PWS 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 Royal Government of Bhutan’s national authorities.

PWS’s PA is also fully responsible for the compliance of all external contractors and service providers working in the PWS with the safeguards requirements outlined in the ESMP.

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

1. Construction of Range office at Themba

- Monitoring by implementing entities:
 - At least weekly field visits: first day of every week starting from June 2020 after the start of work.

Dates	Location	Report
June, 2020	PWS	Implementation
July-December, 2020	PWS	Supervision and advise on safety
December, 2020	PWS	Completion report

- Monthly reports prepared by implementing entities and submitted to ESS consultants in first week of every month after the start of activity.

Dates	Location	Report
June, 2020	PWS	Implementation
July-December, 2020	PWS	Supervision and advise on safety
December, 2020	PWS	Completion report

- Monitoring by ESS consultants:
 - At least quarterly field visits by ESS consultants

Dates	Location	Report
August, 2020	PWS	Supervision and Monitoring
December, 2020	PWS	Completion and inspection

- Quarterly reports by ESS consultants to the PCU (M&E officer)

Dates	Location	Report
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December, 2019	PCU	Supervision and Monitoring report
July, 2020	PCU	Supervision and Monitoring report
December, 2020	PCU	Completion report

- Quarterly reports by PCU (M&E officer) to Secretariat

Dates	Location	Report
15 January, 2020	BFL	Annual Progress Report
15 July, 2020	BFL	Semi-Annual Progress Report
15 January, 2021	BFL	Annual Progress Report

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

Dates	Location	Report
31 January, 2020	WWF	Annual Progress Report
31 July, 2020	WWF	Semi-Annual Progress Report
31 January, 2021	WWF	Annual Progress Report

2. Maintenance of Range Office

- Monitoring by implementing entities:

- At least weekly field visits

Dates	Location	Report
August, 2020	PWS	Implementation
August - September, 2020	PWS	Supervision and advise on safety
November 2020	PWS	Completion

- Monthly reports prepared by implementing entities and submitted to ESS consultants

Dates	Location	Report
August, 2020	PWS	Implementation report
August - September, 2020	PWS	Monitoring report
December, 2020	PWS	Completion report

- Monitoring by ESS consultants:

- At least one field visit by ESS consultants

Dates	Location	Report
October, 2020	PWS	Implementation

- Reports by ESS consultants to the PCU (M&E officer)

Dates	Location	Report
October, 2020	PCU	Implementation status report
December 2020	PCU	Annual Progress Report

- Reports by PCU (M&E officer) to Secretariat

Dates	Location	Report
15 January, 2021	BFL	Annual Progress Report

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

Dates	Location	Report
31 January, 2021	WWF	Annual Progress Report

3. Waterhole management:

- Monitoring by implementing entities:
 - Field visits at least twice - during the intervention and then monthly as part of the “SMART patrolling” activity (please adapt based on field conditions, and also based on the availability of SMART patrolling activities).

Dates	Location	Report
July, 2020	PWS	Implementation of the activity
August - November, 2020	PWS	Monitoring
December, 2020	PWS	Completion

- Reports by the implementing entities submitted to ESS consultants weekly during the intervention and then monthly after the intervention completion

Dates	Location	Report
July, 2020	PCU, Thimphu	Implementation Report
August - November, 2020	PCU, Thimphu	Monthly Monitoring Report
December, 2020	PCU, Thimphu	Completion Report

- Monitoring by ESS consultants:
 - Field visits by ESS consultants – at least once during the intervention;

Dates	Location	Report
August, 2020	PWS	Monitoring

- Reports by ESS consultants to the PCU (M&E officer) – within two weeks after the field visit and for semi-annual reporting

Dates	Location	Report
August, 2020	PCU	Progress report
December, 2020	PCU	Annual Progress Report

- Bi-annual reports by PCU (M&E officer) to Secretariat

Dates	Location	Report
15 January, 2021	BFL	Annual Progress Report

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

Dates	Location	Report
31 January, 2021	BFL	Annual Progress Report

4. Restoration of lowland grasslands (habitat management):

- Monitoring by implementing entities:
 - Field visits at least twice—during the intervention and within three months after the intervention

Dates	Location	Report
October, 2020	PWS	Implementation
October - November, 2020, March- April 2021	PWS	Monitoring report and implementation
June, 2021	PWS	Completion

- Reports by the implementing entities submitted to ESS consultants within a week after each field visit

Dates	Location	Report
October, 2020	PWS	Implementation report

October - November, 2020, March - April 2021	PWS	Monitoring report and implementation report
June, 2021	PWS	Completion report

- Monitoring by ESS consultants:
 - Field visits by ESS consultants - at least once during the intervention, together with the implementing party

Dates	Location	Report
October, 2020	PWS	Implementation
March, 2021	PWS	Implementation

- Reports by ESS consultants to the PCU (M&E officer) - within one week after the field visit and within three months after the intervention

Dates	Location	Report
October, 2020	PCU	Implementation
December, 2020	PCU	Monitoring report
March, 2021	PCU	Monitoring report
June, 2021	PCU	Completion

- Reports by PCU (M&E officer) to Secretariat – within two weeks after receipt of ESS consultants’ report

Dates	Location	Report
15 January, 2021	BFL	Annual Progress Report
15 July, 2021	BFL	Semi-Annual Progress Report

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

Dates	Location	Report
31 January, 2021	WWF	Annual Progress Report
31 July, 2021	WWF	Semi-Annual Progress Report

5. Combined zonation:

- Monitoring by implementing entities:
 - Field visits—at least once during the intervention by implementing entities, and then three months after the intervention.

Dates	Location	Report
July, 2020	PWS	Implementation
October, 2020	PWS	Monitoring

- Reports submitted by the implementing entities to ESS consultants once after the completion of the intervention, and then three months after the intervention

Dates	Location	Report
August, 2020	PWS	Implementation report
November, 2020	PWS	Monitoring report

- Monitoring by ESS consultants:
 - Field visits - at least once during the intervention

Dates	Location	Report
August, 2020	PWS	Implementation

- Reports submitted once by ESS consultants within a week after the field visit, and then for semi-annual reporting to the PCU (M&E officer).

Dates	Location	Report
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August, 2020	PCU	Implementation report
December, 2020	PCU	Annual Progress Report

- Reports by PCU (M&E officer) to Secretariat

Dates	Location	Report
15 January, 2021	BFL	Annual Progress Report

- Reports of the Secretariat to WWF US - bi-annually, as part of mid-year and final APR

Dates	Location	Report
30 January, 2021	WWF	Annual Progress Report

6. River bank protection at Phibsoo and Nichula:

- Monitoring by implementing entities:

- Field visits - at least weekly

Dates	Location	Report
September 2020	PWS	Implementation
Every week until June 2021	PWS	Supervision and monitoring
December, 2020	PWS	Monitoring the impact
June, 2021	PWS	Monitoring the impact

- Monthly reports by the implementing entities submitted to ESS consultants

Dates	Location	Report
September 2020	PWS	Implementation
Every week until June 2021	PWS	Supervision and monitoring
December, 2020	PWS	Monitoring
June, 2021		Completion Report

- Monitoring by ESS consultants:

- Field visits - at least twice during the construction activities.

Dates	Location	Report
October, 2020	PWS	Implementation
February, 2021	PWS	Supervision and monitoring

- Reports by ESS consultants to the PCU (M&E officer) – quarterly reports

Dates	Location	Report
October, 2020	PCU	Implementation report
December, 2020	PCU	Supervision and monitoring report
June, 2021	PCU	Annual Progress Report

- Reports by PCU (M&E officer) to Secretariat

Dates	Location	Report
15 January, 2021	BFL	Annual Progress Report
15 July, 2021	BFL	Semi-Annual Progress Report

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

Dates	Location	Report
31 January, 2021	WWF	Annual Progress Report
31 July, 2021	WWF	Semi-Annual Progress Report

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 of the activities is as follows:

- Construction of Range Office: USD 65000
- Maintenance of Range Office: USD 7500
- Waterhole management: USD 4761
- Restoration of lowland grasslands (habitat management): USD 11000
- Combined zonation: USD 49500
- River bank protection: USD 50057

A separate budget of USD 2070.92 which is for community consultation for access to water usage and river bank protection will cover the implementation of the ESMP mitigation measures.

8. Consultation and Disclosure Mechanisms

This ESMP has been prepared in a participatory manner, and a community consultation was carried out on the following dates and locations to inform local communities regarding the planned project activities, solicit their opinions, and enable them to question proposed mitigation measures. The main issues that were raised during the consultation meeting include the following:

- Waterholes restoration
 - Consultation was held on: 29/11/2019 for Nichula and 27/01/2020 for Singye gewog on awareness on waterholes restoration grassland management and forest management. This consultation helped to mitigate human wildlife conflict and the community understood why there is a need for waterholes, grassland management and enrichment planting.
- Lowland grassland
 - Consultation was held on 6/12/2019 for Nichula and 27/01/2020 for Singye gewog on importance of grassland management, waterhole and forest management to Nichula and Singye gewog
- Combined zonation
 - Consultations was held on 6/12/2019 for Nichula and 27/01/2020 for Singye for zonation of PWS to mitigate the conflicts with the community on their access rights to natural resources for their livelihoods.

The detailed minutes of the consultation meeting are 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 in PWS will be engaged throughout the implementation of these activities.

1. Construction of office
 - a. Dates of consultation: 27/01/2020
 - b. Agenda: Information on construction of office including conservation awareness to Singye gewog
 - c. Location: Singye gewog
2. Waterholes restoration
 - a. Dates of consultation: 29/11/2019 for Nichula and 27/01/2020 for Singye gewog
 - b. Agenda: Conservation awareness to Nichula and Singye Gewog which includes importance of grassland management, waterhole and forest management.
 - c. Location: Singye and Nichula gewog
3. Lowland grassland
 - a. Dates of consultation: 6/12/2019 for Nichula and 27/01/2020 for Singye gewog
 - b. Agenda: Conservation awareness on importance of grassland management, waterhole and forest management to Nichula and Singye gewog
 - c. Location: Nichula and Singye Gewog
4. Combined zonation
 - a. Dates of consultation: 6/12/2019 for Nichula and 27/01/2020 for Singye
 - b. Agenda: Public consultation for zonation of PWS
 - c. Location: Nichula and Themba
5. River bank protection
 - a. Dates of consultation: Will be done on 15th July, 2020
 - b. Agenda: Information sharing and consent for river bank protection in Nichula and Phibsoo
 - c. Location: Nichula and Phibsoo

As the maintenance of office building is in the existing structure, there will be no consultations. Annexure I and II has the details of consultations and lists of agenda.

The BFL focal person has to submit the official minutes of consultation meetings (along with a list of participants, disaggregated by gender and age) to ESS consultants within one week after the completion of the consultation. The ESS consultants 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 II: Multi program at Nichula

Multi Program, Nichula Range Agenda

Date: 04/12/2019

Venue: Nichula Range and Gewog Administration

1. Pre-consultation and preparatory staff coordination meeting
2. Sensitization on financial rules & regulation and ePEMS to forestry staff

Time	Program	Responsibility
09:00	Registration of participants	
09:15-10:00	Presentation and discussion on Local Forest Management Plan preparation	PRO
10:00-10:30	Tea Break	
10:30-01:00	Presentation and discussion on Presentation and discussion on PWS Zonation	
01:00-02:00	Lunch Break	
02:00-02:30	Presentation and discussion on Forestry Clearance	RAMS
02:30-03:00	Presentation and discussion on FNCRR 2017	
03:00-03:30	Tea Break	
03:30-04:00	G2C services and it procedures	G2C and Data Management
04:00-04:30	Financial rules and regulation	Accountant
04:30-04:00	ePEMS	Accountant
04:30-08:00	Program preparation, content screening and preparation of LFMP materials for group works	PM, SHs, ROs and staffs

3. Public consultation on Local Forest Management Plan preparation

Date: 05/12/2019

Venue: Gewog Adm. and Range Office, Nichula

Time	Program	Responsibility
09:00-09:15	Registration of participants	
09:15-10:00	Introduction of LFMP Objectives Benefits of LFMP	RO, Phibsoo
10:00-10:30	Tea Break	
10:30-10:00	Participatory forest resource mapping (Chewog wise group work)	RO, Phibsoo
1:00-2:00	Lunch Break	
02:00-03:00	Participatory mapping of sacred sites, water sources and wetland (Chewog wise group work)	Participants
03:00-03:30	Tea Break	
03:30-4:30	Group presentation and discussion	Communities, PM, SHs, ROs and staffs
5:30-8:00	Program preparation, content screening and preparation of PA zonation materials for group works	PM, SHs, ROs and staffs

4. Public consultation on PWS Zonation

Date: 06/12/2019

Venue: Gewog Adm. and Range Office, Nichula

Time	Program	Responsibility
08:30-09:00	Registration of participants	Participants
09:00-10:30	<ul style="list-style-type: none"> • Introduction of zonation • Objectives (Why zonation is important in today's conservation world) • Zone types 	SCMS
10:30-11:30	Tea break	
11:30-12:00	HWC result presentation and discussion	SCMS
12:00-01:00	HWC situation analysis and group work	Chewogs wise
01:00-02:00	Lunch Break	
02:00-02:30	Socio-economic research result presentation	SCMS

02:30-03:00	Stock taking group work for HWC mitigation intervention required	Chewog wise
03:00-03:30	Tea Break	
03:30-04:00	Participatory resource mapping and presentation (Chewog wise group work)	Chewog wise
4:30-8:00	Program preparation, content screening and preparation of awareness materials	PM, SHs, ROs and staffs

5. Conservation awareness

Date: 07/12/2019

Venue: Gewog Adm. and Range Office, Nichula

Time	Program	Responsibility
08:30-09:00	Registration of participants	
09:15-10:00	Conservation policies in Bhutan	PM
10:00-11:00	PWS implementation report presentation (2012-2017)	SCMS
11:00-11:30	Tea Break	
11:30-01:00	PWS and HWC situation still data and result of HWS research report presentation	SFES
01:00-02:00	Lunch Break	
02:00-03:00	Prohibited activities in PA	SCMS
03:00-03:30	Tea break	
03:00-04:00	Social Forestry <ul style="list-style-type: none"> • CFMG Roles and responsibilities • Previsions of development activities in CF • Power of the department 	SFES
1:00-2:00	Lunch Break	
09:00-10:30	Registration of participants	
10:30-11:00	G2C services rendered by DoFPS	G2C & DMS
11:00-11:30	Tea Break	
11:30-12:30	Waste management plan	SFES
12:30-01:00	Forestry Offense Fines and penalties	RO, Nichula
01:00-02:00	Lunch Break	
02:00-03:00	Forestry Offense, Fines and penalties	RO, Nichula
03:00-03:00	Tea break	
03:00-04:30	Forest Clearances	RAMS
05:00-7:30	Finalization and program discussion for CF/NWFP handing over ceremony. Delegation of job	PM, SHs, ROs and staffs

Community Forest handing over ceremony

Date: 08/12/2019

Venue: Gewog Adm. and Range Office, Nichula

Time	Program	Responsibility
08:30-09:00 AM	Arrival of participants and registration	
09:15-09:30 AM	Arrival of Chief Guest	
09:30-09:40 AM	Marching	Gup, Nichula
09:40-09:50 AM	Opening address	Park Manger
09:50-10:00 AM	Key note address	Chief Guest
10:00-10:10 AM	Opening of CF signboards	Chief Guest
10:10-10:20 AM	Photo Session	All participants
10:20-10:30 AM	Suja Desi	
10:30-10:40 AM	Handing over CF and NWFP certificates <ul style="list-style-type: none"> • Gangtokha CFMG • Dangribu CFMG • Dangchuna-Yespheling-Dramtsegaysa NWFP certificates 	Dasho Dunga and Lam Lam and Park Manager
11:20-11:25 AM	Address by CF Chairperson	Gangtokha CF
11:30-11:35 AM	Address by CF Chairperson	Dangribu CF

11:35-11:40 PM	Address by NWFP Chairperson	Dangchuna-Yespheing-Dramtsegaysa NWFP certificates
11:40-12:00 PM	Handing over of energy efficient appliances <ul style="list-style-type: none"> • Gangtokha Chewog • Damchuna Chewog • Dramzeygaytsa Chewog • Hindu Mandir • Yarpheling Chewog • Dangribu Chewog • Individual Households 	Dasho Dungpa Dasho Dungpa Lam Lam Gup Park Manager Dasho Dungpa
12:00-12:10 PM	Handing over Solar fencing materials <ul style="list-style-type: none"> • Yarpheling Chewog 	Lam
12:10-12:20 PM	Vote of thanks by Gewog Administration, Nichula	Gup, Nichula
12:20-12:30 PM	Vote of Thanks	Mr. Phuntsho Tobgay, PWS
12:30-01:00 PM	Cultural program and Tashi Leybay	Participants
1:00-2:30 PM	Lunch	
2:30-4:30 PM	Dismantling of Chadri and handing over to Gewog Adm. Nichula	
5:00-8:00 PM	Information gathering, analysis and reporting on LFMP result generated from community consultation workshop	SCMS and RO, Phibsoo

**Post-consultation workshop amongst PWS staff
APA 2019-2020 review and mid-term progress entry in the Google sheet in presence of SHs and ROs and for
submission to before 13/12/2019**

Date: 09/12/2019

Venue: Nichula Range Office

Time	Program	Responsibility
08:30-01:00	Information gathering, analysis and reporting on LFMP result generated from community consultation workshop	SCMS and RO, Phibsoo
10:00-10:30	Tea Break	
10:30-01:00	Information gap analysis and collection deadline setting	Park Manager and Section Heads and Range Officers
13:00-14:00	Lunch	
14:00-15:00	Information gathering, analysis and reporting on PA zonation result generated from group works of community consultation workshop	SCMS
15:00-15:30	Tea Break	
15:30-16:30	Data gap analysis for PA zonation and collection deadline setting	Park Manager, Section Heads and Range Officers
17:00-18:00	APA review and MTR reporting	Park Manager and Section Heads and Range Officers