

## **Bhutan for Life**

### **Environmental and Social Management Plan for Jomotsangkha 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

Well known by the name Khaling Wildlife Sanctuary (KWS) was notified in 1974 and gazetted in 1993. The sanctuary has an area of 362.49 sq.km making it the second smallest naturally protected area of Bhutan. It is located in south-eastern part of Bhutan under Samdrup Jongkhar district. In the year 2014, KWS was renamed as Jomotsangkha Wildlife Sanctuary (JWS). JWS has topography of plain grasslands with deep gully formations in the foothills due to heavy rainfall and there are steep slopes when getting to the high hills. Sandy soils are found mostly in the plains, loamy soils along the hills, and across the valleys there are clay deposits from which the wild animals get their natural mineral licks. There are 14 different sizes of perennial water bodies that flow through the sanctuary.

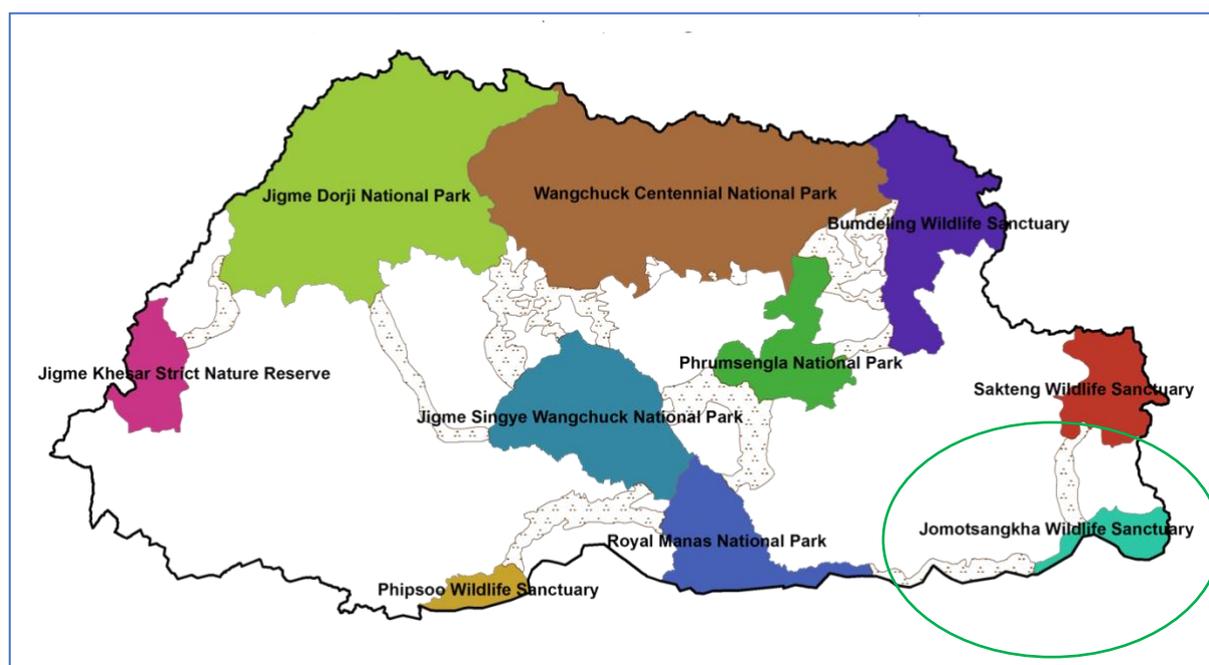


Figure 1 Location of Jomotsangkha Wildlife Sanctuary

The Sanctuary manages Phuntshothang, Pemathang, Samrang, Martshalla under Samdrupcholing Dungkhag and Langchenphug, Serthig and Lauri under Jomotsangkha Dungkhag. As can be seen in Figure 1, the Sanctuary is bordered by Assam to the south, Dewathang gewog to the west, Sakteng Wildlife Sanctuary to the north and Arunachal Pradesh to the east. It lies between 26° 48.26' 60" (northing), 91°42.92' 08" E (easting). The altitude of the sanctuary ranges from 174 masl to 2228 masl which consist of Sub-tropical Forest, Cool Broadleaved Forest, Warm Broadleaved forest and narrow grasslands spreading along the southern flood plains.

The details of the households in and around the vicinity of the Sanctuary are given in the Table below:

Table 1: Household details under JWS

Sl. No.	Name of Dungkhag	Name of Gewog	HHs	Chewog
1	Jomotsangkha	Langchenphu	240	5
2		Lauri	545	5
3		Serthi	365	5
4	Samdrupcholing	Pemathang	301	5
5		Phuntshothang	517	5
6		Samrang	54	5
7		Martshala	504	5

The Sanctuary lies in the Indo-Malayan realm and is known by its wilderness of nature and being habitat to many keystone and flagship species such as tiger, common leopard, elephant and gaur. It is the home to critically endangered species viz. Chinese Pangolin and Lady Slipper. Out of 11 cat species found in the country, 7 species are recorded in the Sanctuary. There are four types of hornbills of Bhutan (Great Hornbill, Oriental Pied Hornbill, Rufous-necked Hornbill and Wreathed Hornbill) with active nesting sites. Also, sanctuary harbors some of the important wildlife species such as Himalayan Black Bear, Gaur, Serow and Sambar among many others.

### 3. Planned activities in Year 2020

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

1. The **construction of Head office for JWS** at Langchenphu, Samdrupjongkhar is being carried out by a private contractor at an estimated cost of US \$ 224,113 on an area of 33.7 m x 14.9 m (502.13 m<sup>2</sup>) which is the actual building area. The project started in July 2019 and is scheduled to complete by December 2020.

The proposed site is approximately 1.8 km from Dungkhag Office, Gewog office, schools and hospital (Bhutan Health Unit) and is an ideal location for public to avail services. There are no disturbances to the communities during the construction due to proximity from the community. Nearest town is located about 2km from the construction site and there are two households sparsely located near the construction site which is around 300 m. After completion of the Range Office, it will be easier to avail services as all facilities will be operational from one building. Furthermore, from this location, all other areas of the sanctuary can be covered efficiently. At the moment, the sanctuary operates from a rented building where the building is not able to accommodate all staff.

The present location is within the jurisdiction of the Sanctuary and do not foresee dispute over land. The land on which the structure is built is not owned by any private individuals and its ownership is with state. It was an abandoned agriculture land belonging to the Government. The site for the project is flat and about 60% of the area has a gentle slope of 5-10%. For the development of the site, three of the existing trees were felled, however, most of the trees were retained. The felled trees would be replanted immediately after the completion of the construction works with the indigenous trees. There are bushes comprising invasive species such as *Lantana camara* and *Chromoleana odorata* which has to be removed from the site during site development.

For the construction, water is sourced from a stream at a distance of 1km from the construction site. The quantity of water usage would be approximately 400 litres per day. The solid waste like residual of bricks, iron bars, set cements are likely to be generated during construction. However, the proper disposal of the wastes will be done in close coordination with the contractor. There are 14 Indian workers, and they are living within the construction site at the temporary sheds as shown in Figures 2 and 3. There are separate toilets for the workers.

The adverse environmental and social impacts for the activity are:

Environment Impacts:

- Vegetation clearing: three trees were cut down for the construction prior to site development.
- Noise disturbance: Possible noise disturbance as a result of outdoor equipment usage such as slab casting machineries and transportation vehicles driving around the construction site

- Waste: generation of waste as a result of construction activities (plastics and other construction materials)



Figure 2 Workers' camp.



Figure 3 Workers' room

#### Social Risks/Impacts:

- Access to and usage of water sources due to same water source being used by community in Langchenphu village with 30 households which is around 2 kms away from the site.
- Workers' health and safety.
- Conflict between temporary workers and local communities due to the water source being shared between the workers and the community.

## 2. Improvement of waterholes and salt licks

The activity is planned to be implemented in October to November 2020. Total activity budget is USD 1361. The area for this activity is 2 acres. Improvement of waterholes includes maintenance of existing waterholes and this includes clearing of trails for the wildlife movement around the waterholes. This activity includes removal of sediments and debris from the waterholes to make it bigger so that there will be enough water for the animals. Since there are heavy sediment deposits, machines for clearing the debris shall be used. The waterhole has an existing approach road which is used for logging.

The existing waterhole has shrunk due to accumulation of debris and growth of weeds. There are no settlement or private properties within the area of the activity. The project site is located 3 kms from Jampani village of 15 households in the middle of the forest. It is in the prime habitat of the elephants and other wild animals. Consultation meeting with village people was done on 10 October 2019 and consent was given by them to carry out the improvement works thereafter. There are 20 local workers and they will work from the nearby settlements as day labor. To minimize the risk of human wildlife conflict, they will be advised to move in groups after dawn and before dusk.



Figure 4 waterholes management with stone walls



Figure 5 Cleaning of debris and sediments in a dried waterhole

For the improvement of waterholes and salt licks, the environmental and social impacts are following:

- Wastes: Soil from excavation activities and waste from construction activities and waste generated by workers
- Workers' health and safety
- Increased poaching as the waterholes and salt licks site will become a hotspot for animals gathering in one site thereby increasing the risk of poaching
- Human wildlife conflict as the area is a prime habitat of elephants

### 3. Restoration to enhance quality and resilience of lowland grasslands

The activities are planned to be implemented in October to December 2020. Total activity budget is US\$ 7000.

The activity seeks to enhance the grazing area for wild animals. The area is currently covered with unpalatable plants, and the activity will consist of the removal of these plants, and assistance for more palatable plants to grow.

The activity site is located in Tshoduen (Satpokheri), Samrang, Samdrup Jongkhar, and its total size is 56.68 acres. It is located in the middle of the forest, nearby a water source and is heavily used by wild herbivore. It is also within the elephant prime habitat. The terrain is characterized by gentle slope within a flat land in the middle of a forest.

Four households are located about 3km from the activity site, and none of these households depend on the site for livelihood purposes. No construction materials or any water sources are required for the activity.

While managing the lowland grasslands, non-palatable plant species mostly those invasive species eg. *Lantana camara*, *Chromolaena odorata*, *Pogostemon benghalensis*, *Ageratina adenophora*, *Mekania micrantha* shall be removed. Management includes removal of these species in winter when they are dried and when there are very dense growth of these species. Control burning will be carried out to suppress the weeds and assist growth of palatable grass.

More than 30 local people shall be involved for more than 20 days to complete this work. Tractors and light machines (JCB) shall be used to clear thick invasive non palatable bushes from the site.

The activity is included in the management plan of the JWS, and thus no national clearances were needed for its implementation. The activity of improvement of lowland grassland include removal of unpalatable species for which the impacts are:

- Change in vegetation by removal of unpalatable plants.
- Risk of forest fires
- Disturbance to the natural habitat such as elephants while using the machinery such as tractors for clearing the thick bushes.

#### **4. River protection work**

This activity includes construction of a protection wall at Jomochu that triggers flash floods during the monsoon. It is located in the protected area and the area is used by elephants and other wild animals as their grazing ground. The location is inside the State Reserve Forest Land and there is no settlement or private property within the project site. The site is chosen for the specific activity because the site gets flooded every year destroying wildlife habitat along the river plain and also pose risk to the Range Office and a temple located near the river. The project site is located 200 meters away from the Park Range Office, school and temple and this activity will protect all these facilities. The activity will not change the course of the river but will direct the flow into its natural flow. There will be a hired excavator and it will be executed in dry season when the level of flow is at the lowest i.e. in October to December 2020. Only one operator will be hired as the activity consists of stacking boulders as a protection wall.

The total length of the river embankment is 1415m and width is 30m. The work will be awarded to a contractor where Dungkhag Administration, JWS and Gewog administration shall jointly monitor the progress of the work. The drawing and estimates as shown in Figure 7 have already been completed and were technically supported by the Dungkhag engineer section. The cost for this activity is USD 13605. The picture of the river bank protection site is as shown in the Figure 6.



Figure 6 River bank protection

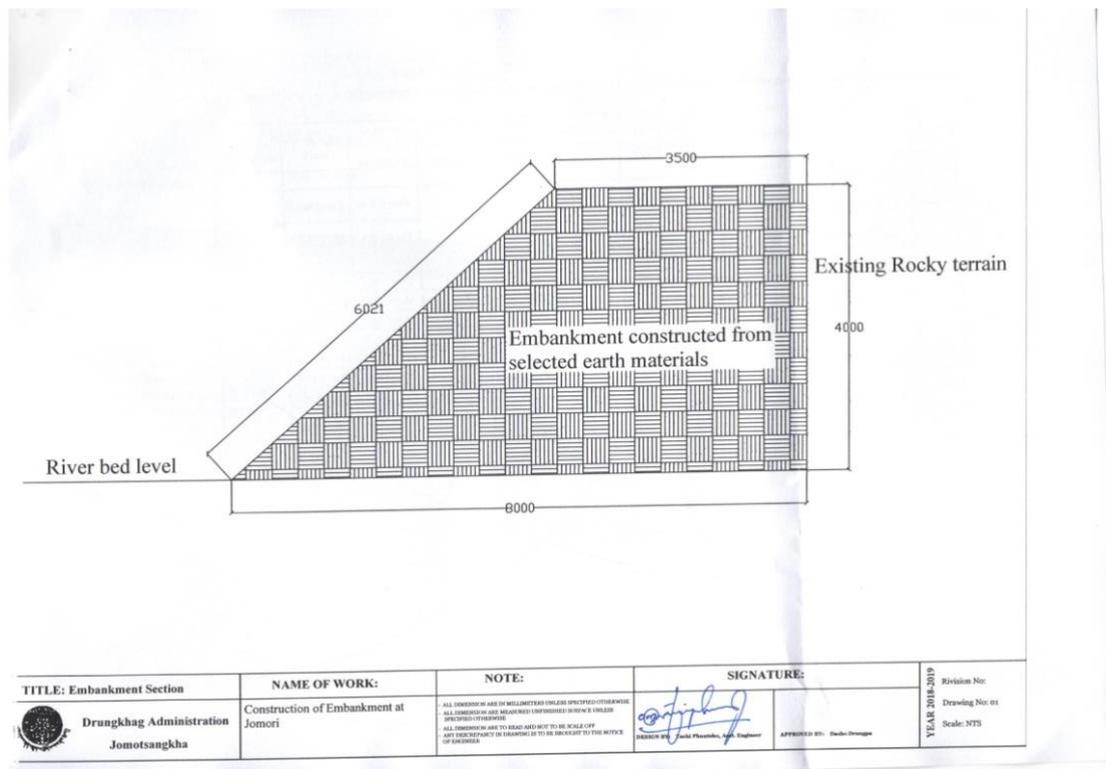


Figure 7 Drawing of river bank protection

The river protection wall includes construction activities of the wall which will have the following adverse impacts:

- Disturbance of natural aquatic habitat along the riverbank as there will use of machineries to pick up boulders for the embankment. There will be disturbance of sediments which will affect the aquatic habitat.

## 6. Maintenance of Park Range Office and staff quarters

This activity includes change of roofings, ceilings and electrification of 3 residential units located at Langchenphu in Samdrupjongkhar on the existing building. There will be 4 to 6 workers employed based on the availability of skilled worker who are local. Planned date of the activity is from August - September, 2020 and the budget for the activity is USD 113.50. It requires 150 meters of electrical wire, 2 GI post, 10 pieces of CGI sheet, 8 numbers of particle board.

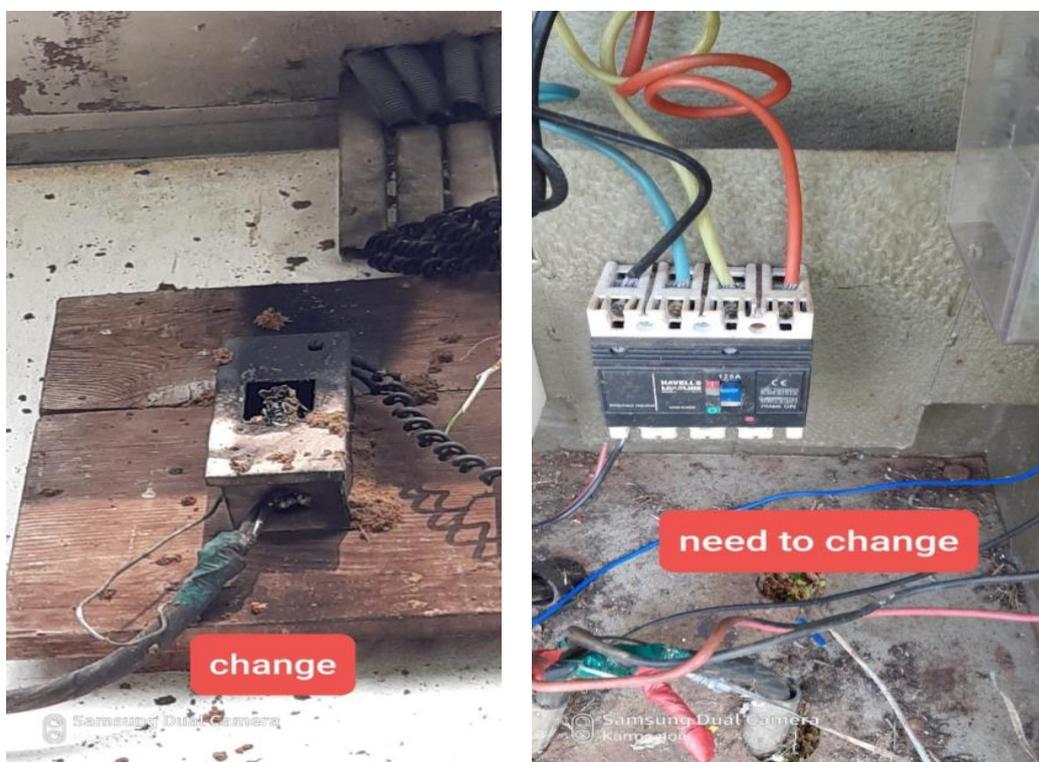


Figure 8 Electrical units in the residential units

Maintenance of range office and staff quarters have the following adverse impacts:

- Wastes: generation of waste as a result of construction activities such as wires and roofs.

## 4. Environmental and Social Impacts and Mitigation Measures

### 1. Construction of head office

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs (1USD=Nu.70.5)
<b>Activity 1: Construction of head office</b>				<b>USD 194,987</b>
Vegetation clearing: three trees were cut down for the construction for construction site development.	Long term Minor	<p><i>During construction:</i></p> <ul style="list-style-type: none"> <li>• Ensure that no accidental damage is caused to any additional trees or local vegetation.</li> </ul> <p><i>After construction:</i></p> <ul style="list-style-type: none"> <li>• Replant trees after construction. (3-6 numbers of trees)</li> </ul>	BFL focal person in JWS	Number of seedlings: 6 Costs per seedling is Nu. 10 Worker's costs: Nu. 500 Costs: Nu 560 = USD 8
Noise disturbance: Possible noise	Short term Minor	<ul style="list-style-type: none"> <li>• To minimize the noise disturbance for the workers, the following</li> </ul>	BFL focal person Contractor	To be incorporated in the bidding

<p>disturbance as a result of outdoor equipment usage such as slab casting machineries and transportation vehicles driving around the construction site. Nearest town is located 2km from the construction site and there are two households sparsely located near the construction site (300 m), and thus noise disturbance is likely to be minimal</p>		<p>mitigation measures need to be undertaken:</p> <ul style="list-style-type: none"> <li>• Noise level control should be performed before the startup of construction activities;</li> <li>• The construction work should not be permitted during the nights, the operations on site shall be restricted to the hours 7am—7pm;</li> <li>• Vehicles that are excessively noisy shall not be operated until corrective measures have been taken and fitness are carried out (contractor to check the fitness certificates of the vehicles);</li> <li>• Earplugs and protecting devices shall be provided to workers on site.</li> </ul>		<p>document from the activity cost</p>
<p>Waste: generation of waste as a result of construction activities (plastics and construction materials)</p>	<p>Short term Minor</p>	<ul style="list-style-type: none"> <li>• Identification of the different waste types at the project site (soil, cement, food, plastics etc.);</li> <li>• Proper containers/waste bins should be provided at the project site;</li> <li>• Dumping of wastes on the sides of the road, on private land, or in other non-designated places should be prohibited;</li> <li>• Dumping waste shall be prohibited on fragile slopes, forests, religious or other culturally sensitive areas or areas where livelihood is derived;</li> <li>• Collection, transportation and final disposal of all waste should be undertaken regularly on a weekly basis;</li> <li>• Possible hazardous waste (motor oils, vehicle fuels, etc.) should be collected</li> </ul>	<p>BFL focal person Contractor</p>	<p>Waste management after construction: Nu 21,000 = USD: 297.87</p>

		<p>separately and authorized collector and transporter should be sub-contracted to transport and finally dispose;</p> <ul style="list-style-type: none"> <li>• All construction materials should be covered during the transportation to avoid waste dispersion;</li> <li>• The options for reuse/recycling of the generated waste streams should be taking into consideration (e.g. excavated soil, etc.).</li> <li>• Burning of construction waste should be prohibited.</li> </ul> <p><i>After construction:</i></p> <ul style="list-style-type: none"> <li>• All waste shall be removed from the project site.</li> </ul>		
Access to and usage of water sources due to the same water source being used by nearby community (Langchenphu village about 30 households)	Short term (only for the duration of the construction )	<ul style="list-style-type: none"> <li>• Prepare water management plan in consultation with the 30 households to ensure that community's access to water sources is not disturbed, and usage of water sources is fairly allocated between local communities and construction workers (e.g., by specifying water usage times for workers).</li> </ul>	BFL focal point in [JWS] Contractor	Consultation costs: Nu. 7,000 = USD 99.29
Conflict between temporary workers and local communities due to the water source being shared between the workers and the community	Short term Minor	<ul style="list-style-type: none"> <li>• Consultations with the community as well as the temporary workers on water usage plan and distribution system.</li> <li>• Local communities shall be made aware of the engagement of temporary workers in project sites.</li> <li>• Strict monitoring shall be carried out to ensure conflicts are minimized</li> </ul>	BFL focal point in [JWS] Contractor	To be incorporated in activity budget

## 2. Improvement of water holes and salt licks

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs (1USD=Nu.70.5)
<b>Activity 2: Restoration of waterholes</b>				<b>USD 4,761</b>
Waste: soil from excavation activities and wastes from construction activities	Short term Minor	<ul style="list-style-type: none"> <li>• Proper containers/waste bins should be provided at the project site;</li> <li>• 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.</li> <li>• Dumping of waste shall be prohibited on fragile slopes, forests, religious or other culturally sensitive areas or areas where livelihood is derived;</li> <li>• Collection, transportation and final disposal of all waste should be carried out on a daily basis and not left in the protected areas</li> <li>• After the construction of waterholes, all wastes (non-degradable) should be brought back and dumped in a proper designated area.</li> <li>• Burning of any wastes should be prohibited on the site.</li> </ul>	BFL focal person Contractor	To be incorporated in activity budget

Workers' health and safety	Short term Minor	<ul style="list-style-type: none"> <li>• Comply with the workers' health and safety guidelines of BFL.</li> <li>• Ensure safety gears and first aid kits to the workers while working.</li> <li>• Ensure that no underage operator, or children are engaged.</li> <li>• Ensure decent work conditions, including an appropriate salary, working hours and food for workers.</li> <li>• Ensure that the 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, termination of employment and disciplinary practices.</li> <li>• Ensure a grievance mechanism for the workers are in place.</li> </ul>		
Increased poaching as the waterhole site will become a hotspot for animals gathering in one site thereby increasing the risk of poaching	Long term Major	<ul style="list-style-type: none"> <li>• Construct waterholes in areas where poaching is limited</li> <li>• Increase the frequency of patrolling during and after waterhole construction</li> </ul>	BFL focal person Contractor	Included in regular patrolling
Human wildlife conflict	Short term Minor	<ul style="list-style-type: none"> <li>• The workers will be advised to move in groups.</li> <li>• Working hours should be planned seasonal when the elephants and other wild animals migrate to other parts of the forests.</li> </ul>	BFL focal person	Included in the activity budget.

		<ul style="list-style-type: none"> <li>• There will be strict working hours (after dawn and before dusk).</li> <li>• Movement shall be prohibited before dawn and after dusk</li> </ul>		
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### 3. Restoration to enhance quality and resilience of lowland grasslands

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs (1USD=Nu.70.5)
<b>Activity 3: Restoration to enhance quality and resilience of lowland grasslands</b>				<b>USD 7,000</b>
Change in vegetation: Removal of unpalatable plants	Long term Minor	<ul style="list-style-type: none"> <li>• Ensure that no accidental damage is caused to local vegetation - major trees or plants that are supposed to be cut shall be clearly marked, and only marked trees will be cut;</li> <li>• Only native species will be planted</li> <li>• No trees should be removed</li> </ul>	BFL focal person	To be incorporated in activity budget
Risk of forest fire	Short term Minor	<ul style="list-style-type: none"> <li>• Burning of trees and other plants should be avoided and if necessary, burning should be carried out in a controlled manner avoiding dry and windy seasons.</li> <li>• Controlled burning to be carried out by making fire line.</li> </ul>		
Disturbance to the natural habitat such as elephants while using the machinery such as tractors for clearing the thick bushes.	Short term Minor	<ul style="list-style-type: none"> <li>• Ensure careful siting and timing of works (seasonal when elephants migrate to other parts).</li> <li>• Avoid using heavy machinery.</li> <li>• Avoid soil excavation and noise disturbance to minimize impact on natural habitats</li> </ul>		

### 4. Construction of embankment to prevent flooding of adjacent area during monsoons

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs (1USD=Nu.70.5)
<b>Activity 4: Construction of embankment to prevent flooding of adjacent area during monsoons</b>				<b>USD 11,500</b>
Disturbance of natural aquatic habitat along the river bank	Long term Major	<ul style="list-style-type: none"> <li>• Ensure careful siting, alignment, design of construction sites, and/or timing of works (to be</li> </ul>	BFL focal person Contractor	To be incorporated in bidding document

		<p>planned in winter or spring when the flow is low)</p> <ul style="list-style-type: none"> <li>• Avoid plying on the bed of the river</li> </ul>		
Operator's health and safety	Short term Minor	<ul style="list-style-type: none"> <li>• Comply with the workers' health and safety guidelines of BFL.</li> <li>• Ensure regular health screening for the operator's pre and during construction activities.</li> <li>• Ensure a valid license for operating the excavator</li> <li>• Ensure that no underage operator, or children are engaged.</li> <li>• Ensure decent work conditions, including an appropriate salary, working hours, accommodation and food for operator shall be provided to the operator.</li> <li>• Ensure that the operator is 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, termination of employment and disciplinary practices.</li> <li>• Implement a grievance mechanism for the operator</li> </ul>	BFL focal person Contractor	To be incorporated in activity budget

### 5. Maintenance of Range Office and staff quarters

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs (1USD=Nu.70.5)
<b>Activity 5: Maintenance of Range Office and staff quarters</b>				<b>USD 3,000</b>
Wastes: generation of waste as a result of construction activities such as old wires and old roofs.	Short term Minor	<p><i>Pre-maintenance:</i></p> <ul style="list-style-type: none"> <li>• requirements for appropriate waste management should be included and made aware to the local workers</li> </ul> <p><i>During maintenance:</i></p>	BFL focal person in [JWS]	Included in the bidding documents from the activity budget

		<ul style="list-style-type: none"> <li>• Identification of the different waste types at the site (roofs, wires, food, etc.);</li> <li>• Proper containers/waste bins should be provided at the site;</li> <li>• Dumping of waste on the sides of the road, on private land, or in other non-designated places should be prohibited.</li> <li>• Dumping waste shall be prohibited on fragile slopes, forests, religious or other culturally sensitive areas or areas where livelihood is derived;</li> <li>• Collection, transportation and final disposal of all waste should be undertaken regularly [weekly]</li> <li>• 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;</li> <li>• The options for reuse/recycling of the generated waste streams should be taking into consideration (e.g. excavated soil, etc.).</li> <li>• Burning of construction waste should be prohibited.</li> </ul> <p><i>After maintenance:</i> All wastes shall be removed from the site.</p>	BFL focal person in [JWS] Contractor	
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### 5. ESMP Implementation Arrangements

The implementation of project activities will be carried out by the BFL focal person in JWS. 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 JWS 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 JWS’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 safeguard’s requirements.

#### 6. ESMP Monitoring Arrangements

The BFL focal person in JWS 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.

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

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

##### 1. Construction activities:

- Monitoring by implementing entities:
  - At least weekly field visits:

Dates	Location	Report
June - December, 2019, Januray - July 2020	Langchenphu	Supervise and monitor the progress of construction activities, advise on safety measures of workers and wastes management.
September 2019, December 2019, February 2020, April 2020, May 2020	Langchenphu	Site development and inspection, conflicts resolving

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

Dates	Location	Report
July 2019	Langchenphu	Semi-Annual Progress Report
December 2019	Langchenphu	Annual Progress Report
April 2020	Langchenphu	First quarter progress report
June 2020	Langchenphu	Semi-Annual Progress Report
July 2019	Langchenphu	Completion Report

- Monitoring by ESS consultants:

- At least quarterly field visits by ESS consultants

Dates	Location	Report
December 2019	Langchenphu	Preparation of ESMP for 2019
June 2020	Langchenphu	Mid-term review report
July 2020	Langchenphu	Final report

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

Dates	Location	Report
December 2019	PCU	Implementation report
July 2020	PCU	Mid-term report
October 2020	PCU	Final report

- Annual report by PCU (M&E officer) to Secretariat

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

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

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

## 2. 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	JWS	Progress Report
December, 2020	JWS	Progress Report

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

Dates	Location	Report
October, 2020	PCU	Progress Report
December, 2020	PCU	Progress Report

- Monitoring by ESS consultants:

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

Dates	Location	Report
20 October, 2020	JWS	Monitoring of ESMP

- 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
July 2020	PCU	Mid-term report
December 2020	PCU	Final report

- Annual Report by PCU (M&E officer) to Secretariat

Dates	Location	Report
15 January, 2021	BFL	Annual Progress Report

- Annual report by the Secretariat to WWF US (as part of mid-year and final APRs)

Dates	Location	Report
30 January, 2021	WWF	Annual Progress Report

### 3. Waterhole and salt lick 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 for SMART

Dates	Location	Report
October, 2020	JWS	Report on SMART patrolling
November	JWS	
December, 2020	JWS	

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

Dates	Location	Report
October, 2020	PCU, Thimphu	Progress 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
October, 2020	JWS	Progress Report

- 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
October, 2020	JWS	Monitoring report

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

Dates	Location	Report
15 January, 2021	BFL, Thimphu	Annual Progress Report

- Annual report by the Secretariat to WWF US (as part of mid-year and final APRs)

Dates	Location	Report
30 January, 2021	BFL, Thimphu	Annual Progress Report

### 4. Embankment construction to protect from flooding:

- Monitoring by implementing entities:

Dates	Location	Report
October, 2020	JWS	Inspection and monitoring during the intervention
October - December 2020	JWS	Monitoring of progress

- Monthly reports by the implementing entities submitted to ESS consultants

Dates	Location	Report
November, 2020	PCU	Implementation and Monitoring report
December, 2020	PCU	Completion report

- Monitoring by ESS consultants:

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

Dates	Location	Report
October, 2020	JWS	Progress Report
December, 2020	JWS	Completion Report

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

Dates	Location	Report
October, 2020	PCU	Monitoring and Progress report

- Annual report by PCU (M&E officer) to Secretariat

Dates	Location	Report
15 January, 2021	BFL	Annual Progress Report

- Annual report by the Secretariat to WWF US (as part of mid-year and final APRs)

Dates	Location	Report
30 January, 2021	WWF	Annual Progress Report

## 5. Maintenance of Range office and staff quarters

- Monitoring by implementing entities:

- At least weekly field visits

Dates	Location	Report
August, 2020	JWS	Progress report
August - September, 2020	JWS	Monitoring report
October, 2020	JWS	Completion report

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

Dates	Location	Report
August, 2020	JWS	Progress report
October, 2020	JWS	Completion report

- Monitoring by ESS consultants:

- Field visit at least during the implementation by ESS consultants

Dates	Location	Report
September, 2020	JWS	Progress

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

Dates	Location	Report
September, 2020	PCU	Progress and completion report
December, 2020	PCU	Annual Progress Report

- Annual report by PCU (M&E officer) to Secretariat

Dates	Location	Report
15 January, 2021	BFL	Annual Progress Report

- Annual report of the Secretariat to WWF US (as part of mid-year and final APRs)

Dates	Location	Report
30 January, 2021	BFL	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:

1. Construction of the Office is: USD 194,987
2. Improvement of waterholes: USD 4,761
3. Restoration of lowland grassland: USD 7,000
4. River protection wall: USD 11,500
5. Maintenance of Range office and staff quarters: USD 3,000

A separate budget of USD 408 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 for the construction of the office building on June 19 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:

- For the consultation held on June, 2019, the main agenda was to obtain the community clearance for construction. The meeting was held to get the clearance from the relevant authority and it has been obtained as attached in Annexure I.
  - The main issues raised on the following dates were regarding the water conflict with the communities. The dates are; 29<sup>th</sup>, August, 2019, 03 September 2019, 02 December 2019, 10 February 2020, 15 April 2020, 29 May 2020. Although the conflicts are resolved on water distribution and timing between the communities and the workers, there are no minutes of meeting maintained. However, the BFL focal will now keep a record of any consultations with minutes of meeting.

The detailed minutes of the consultation meeting were not recorded but in future the focal will keep the record of the consultation meeting as a requirement for 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 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 JWS will be engaged throughout the implementation of these activities. For some activities such as construction, consultations were carried out with the agenda as follows. There were no minutes of meeting kept for all the consultation meetings but will be kept henceforth:

1. Consultations carried out with the communities for construction:
  - a. Date: 29<sup>th</sup>, August, 2019, 03 September 2019, 02 December 2019, 10 February 2020, 15 April 2020, 29 May 2020
    - i. Agenda: Conflicts resolving on water distribution and timing between the communities and the workers
  - b. Date: June, 2019
    - i. Agenda: community clearance for construction
2. Consultations carried out with the communities for river embankment
  - a. Date: 20 January 2020
    - i. Agenda: The local leader and communities have been consulted for this activity and consent for carrying out the activity.
3. For activities that have no direct impact on communities (improvement of lowland grassland and waterhole rehabilitation)—consultation meetings have to be organized once a year (can be combined with consultations for other BFL or non-BFL activities).
  - a. Planned dates of consultation for restoration of lowland grassland: 15th September, 2020
  - b. Planned dates of consultation for waterholes and salt lick management: 21st September, 2020

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 1: Gewog Clearance

