Bhutan for Life
Environmental and Social Management Plan for One Gewog One Product (OGOP), Queen's Project Office (2022)

1. Introduction

(A) Project Background

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

BFL seeks to achieve the following objectives:

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

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

(B) Scope of ESMP

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

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

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

(C) Purpose of ESMP

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

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

2. Environmental and Socio-Economic Conditions

Bumdeling:

The project site is in Bumdeling gewog which is under the management of Bumdeling Wildlife Sanctuary. Bumdeling is one of the largest gewog in terms of area in Trashi Yangtse Dzongkhag. It consists of 18 main villages with 363 households, covering an area of about 850.7 square kilometres. The Gewog shares its boundary with the Tibetan Region of China and Arunachal Pradesh of India. The Gewog has population of around 3219 (registration office), with male 1653 and female 1566. The density of population is 3.8 per sq.km. The elevation of the Dzongkhag ranges from 1200 m to 5400 m above sea level and most of the land (about 23.4%) falls under the altitude of 2400-3000m.

Trashi Yangtse Dzongkhag falls under the greater Himalayan sequence and the valleys along the Kulong chhu form a variant of the North-South valleys and ranges. Although the valleys are quite deeply cut, with steep convex side slopes and narrow V shaped valley floors the topography is not as steep as other Dzongkhag like Lhuentse. The soil types are temperate soils, stagnogleys, podzols, and alpine meadow soils (Norbu *et al*, 2003). The Dzongkhag lies in the temperate zone and mostly experiences warm summers and cold winters throughout most of the Dzongkhag. Parts of Bumdeling and Yangtse gewogs at elevations above 2600 m experience much colder winters. Humidity is highest during summer monsoons. The amount of rainfall across each gewog varies with altitude but on an average the annual rainfall for the past three years has been 1222 mm. Rainfall is highest during summer monsoons. Temperatures also vary according to the altitudes. The mean maximum temperature ranges from 13.26° C in January to 24° C in August and minimum temperature drop down to 2.96° C during winters.

Drametse:

Drametse Gewog, under Mongar Dzongkhag with an area of 79 Sq. km has the population of 3788 (1934 male and 1854 females) with 428 household. It is located in the lower altitudes which experiences subtropical climate and it generally experiences hot and wet summers and cool dry winters. The mean maximum temperature ranges from 14ºC in January to 25 ºC in August while the minimum temperatures in winter drop down to as low as 6 ºC. The average annual rainfall received over is 886mm, but total rainfall goes up as high as 1200mm. The months of November to January are usually pretty dry with little or no rainfall.

In terms of area coverage, Khamzhing/dryland cultivation is the most important land use, followed by Chuzhing/wetland cultivation and Tseri (slash and burn cultivation) in a few places. The annual crops are maize, rice, barley and wheat. Common vegetables grown in most gewogs are potatoes, chilli, ginger, onions, beans, peas, tomatoes, carrots and vegetables. The

major fruit crop is Orange followed by Bananas. To further promote agriculture, irrigation channels and power tiller tracks have been constructed by the Dzongkhag. Livestock rearing is an important source of livelihood and the important livestock products are butter, cheese, milk and meat. Other less significant livestock include poultry, horses, goats and pigs. A number of households earn income through collection of lemon grass for the central distillery located at Kurizampa. Resin taping is another small-scale industrial activity which provides cash income to the rural population

Gongdu:

Gongdue Gewog, with an area of 187 Sq. km has the population of 3513 (1801 male and 1712 females) with 335 households. It is located in the lower altitudes which experiences subtropical climate and it generally experiences hot and wet summers and cool dry winters. The mean maximum temperature ranges from 18ºC in January to 28 ºC in August while the minimum temperatures in winter drop down to 12 ºC. The average annual rainfall received over is 900mm, but total rainfall goes up as high as 1200mm. The months of November to January are usually pretty dry with little or no rainfall.

In terms of area coverage, Khamzhing/dryland cultivation is the most important land use, followed by Chuzhing/wetland cultivation and Tseri (slash and burn cultivation) in a few places. The annual crops are maize, rice, barley and wheat. Common vegetables grown in most gewogs are potatoes, chilli, ginger, onions, beans, peas, tomatoes, carrots and vegetables. The major fruit crop is Oranges. Gongdue is known for bamboo and cane artisans especially their Bangchungs are very popular amongst the Bhutanese

Livestock rearing is an important source of livelihood and the important livestock products are butter, cheese, milk and meat. Other less significant livestock include poultry, horses, goats and pigs. A number of households earn income through collection of lemon grass for the central distillery located at Kurizampa. Resin taping is another small-scale industrial activity which provides cash income to the rural population

The Gewog is known for cane and bamboo handicrafts and it is also one of the major income sources alongside mandarin. The traditional skills and knowledge of cane and bamboo crafts have been handed down through generations but due to growing rural to urban migration, we are facing the imminent danger of losing this age-old tradition. The loss of trade can also be attributed to its high prices and old-fashioned designs.

Out of the thirteen different types of arts and crafts practiced by Bhutanese artisans popularly known as Zorig Chusum the Kheng region is known for the art of Tsharzo, or the bamboo and cane handicrafts. Today, a variety of beautiful multi-colored cane and bamboo crafts are sold in arts and crafts shops as gifts and souvenirs, and these craft products are mostly produced in the Kheng region. Gongdue is located in the upper Kheng region. Gongdue is blessed with abundance of natural resources like cane and bamboos; and, the community have engaged in this Tsharzo art for generations. Only in the last decade or so, this art was driven toward producing decorative gift items, which also energized the handicraft market and transformed the lives of local artisans. It is a craft that needs proper training and expertise, and a great deal of practice. As a result of the burgeoning popularity of this art and craft, the region has seen an escalation in socio-economic growth and sustainable development.

Khotokha:

The Khotokha wetland is one of the sources for the tributaries of the Puna Tsang Chhu (river flowing through Wangdue phodrang district). The sub-alpine shrub marshes consisting of peat

bogs and fens, is one of the larger marshes that are typically present in sub-alpine regions of Bhutan. The wetland is covered in mist in the summer season and invites a lot of butterflies, insects and birds which is very different from its situation in the winter when it cold and the Black Necked Cranes (Grus nigricollis) are the only prominent bird spotted apart from the usual crows. It is surrounded by pine and oak forests and many historical and cultural sites considered very important to the Bhutanese communities. The water seeping out of the marshes form small gully streams that accumulate to form a larger stream and flow down south providing irrigation water and water for drinking and other domestic purposes.

One of the main livelihood of the inhabitants of Khotokha is dairy and the cattle graze on the marshes. The water from the marshes are used for potato farming, another main cash crop of the village. The Black Necked Cranes winter at the sites each year due to the good roosting ground in the marshes and feeding ground in the farmlands. However, the number has been dwindling over the years. The local inhabitants live in harmony with the migratory birds considering them sacred and signifying a good harvest. The biodiversity is not very rich but is very unique.

Khotokha is one of the unique places of Bhutan where summer-winter migration of farmers are practiced. The main incomes of the farmers are dairy farming, potato farming and logging activities. All over Bhutan the trend has been disappearing but Khotokha upholds this system with the farmers from Bjena and Ruepisa practicing it. All agriculture land in Khotokha is dry land. The important crops are wheat, buckwheat, potato, and chili. The valley is too high in altitude for rice to grow. It is also one of the unique places of Bhutan where summer-winter migration of farmers are practiced. The valley is surrounded by 6 religious sites and 13 Buddhist temples which are considered very important by the Bhutanese. The local community also believes that the Black Necked Cranes are auspicious and therefore, they do not harm them. The birds feed in the farms freely. The absences of the cranes are believed to be an ill omen to the local people. Khotokha valley consist of wide wetland which is often used by Black-necked cranes during winter and the valley was designated as RAMSAR site in 2012.

3. Planned activities in Year 2022

Activities that will be implemented by QPO for 2022 include the following:

Activity1: Develop and promote Herbal Tea Production Unit
Budget: US$ 67,953
Timeline: January 2022 to December 2022
Location: Bumdeling Gewog

The interested 13 households from Bumdir, Berteng, Phanbu, Kholang and Sogomay under Bumdeling geog initiated as Bumdir herbal tea management group with the objective to improve rural livelihood through sustainable management & utilization of herbal tea resources through income generation of marketing the herbal tea products. The group was also formed based on their indigenous knowledge for making variety of Bhutanese tea leaves for Suja (butter tea) which has passed down from generations. The other reason for forming the group was to supplement the livelihood in addition to the agriculture farming and livestock being the major source of livelihood income. However, the lack of infrastructures has hampered the production of herbal tea within this management group.

Therefore, to further promote the herbal tea production by the group, the following sub-activities will be carried out as part of this activity:

- Construction of permanent basic infrastructure (production unit, water supply, toilet and fencing)
- Procure grinding & packaging machines and materials/equipment
- Procure green house, solar fan/dryer to dry the tea leaf
- Enhance capacity building of the herbal group members including health and hygiene.
- Prepare a business plan to guide the future management and marketing of the products.
- Supply of waste bins

The site was identified mainly due to the fact that there is no permanent structure for Herbal Tea Management Group to produce verities of herbal tea. Owing to the lack of infrastructures, the production of herbal tea within this management group is hampered. So, the site was selected to enhance the production of herbal tea by small group of local people from few villages under Bumdeling gewog. Furthermore, the people of this community have indigenous knowledge for making verity of tea leaves for Suja (butter tea) which has passed down from their fore fathers. The Bumdir herbal tea management group is established with the aims to improve rural livelihood through sustainable management & utilization of herbal tea resources and generate income through marketing of herbal tea. Moreover, the group members will implement production of diverse herbal tea products through sustainable management and harvesting of herbal tea resources as per the harvesting prescription of individual species.

The selection and formation of Herbal Tea Management group was initiated based on the proposal submitted by concerned local people or group members through Gewog Administration to BWS management to establish herbal tea production group in their locality since there is no other management group as like other locality within same gewog. Based on their proposal, the management of BWS and Gewog Administration, Bumdeling has executed consultation meeting with local communities and thoroughly discussed all pertaining issues and agreed to manage the production group based on the bylaws, management plan and Forest and Nature Conservation Rules and Regulations, 2017 during the implementation period. Furthermore, local community of other villages were not interested to join the group as they are member to already existing management groups such as Community Forest, Aurkabangala (chilli pickle group) and Daphne paper production groups which are functioning well till date. To ensure sustainable management of herbal tea management group the comprehensive management plan, bylaws, individual species harvesting guidelines issued by Department of Forest and Park Services and the FNCRR, 2017 will be strictly followed by group members. While the planning and decision making for implementation of any activity to herbal tea production will be decided and discussed by all group members during the annual meeting based on the bylaws. The herbal team management group has already appointed and elected the executive members such as Chairman, Secretary and Treasurer by group members with various roles and responsibilities to be taken care during the implementation of production of herbal tea. Therefore, no major issues or conflict related to management and production of herbal tea is expected with the existing management regime and also since the group formation and approval of management plan was done based on proposal, initiatives and agreement by concern local communities. In case if conflict rises within the herbal tea production the executive members will settle and resolve the issues and conflict within the community level. The group members will fully adopt by-laws, business plan and agreement to manage and

ensure equal distribution of income and herbal tea resources collection among the users. Besides, this infrastructure will also use as production house as well sell counter by management group.
The proposed land for this activity is a State Reserve forest (SRF) with major gentle sloppy terrain. Around 13 workers or NWFP group members will be involved, mainly local people and the duration will be for 3 to 4 months. There will be no machinery used and there will be no camping for the workers as the workers will commute from the nearest community which is almost 100 to 200 meters away from the site with 30 households.

The adverse environmental and social impacts will be:

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

Activity 2: **Construction of Solar Dryer Parabola Dome**
Budget: US$ 2,619
Timeline: January 2022 to December 2022
Location: Yangner Tsing and Leymi village, Drametse Gewog

Darmetse Women's Group was formed after one of the founding members attended Dry Fruits and Fruit Candy processing and packaging training organized by One Gewog One Product (OGOP). There are 119 household in the two villages of Yangner Tsing and Leymi but only 10 households are currently engaged as the group members. The group will be producing wild apple and goose berry fruit candies as OGOP guaranteed to provide them market through its various platforms.
The objectives of the group are:

1. To Improve the livelihood through sustainable management of NWFP.
2. To Knowledge sharing amongst the non-members for wholesome development of the community.

The group has already availed an interest free loan of US$ 17,000 from QPO for the construction of processing and packaging unit but they were not able to fund the construction of solar dryer. Therefore, in this project, the following sub-activities will be carried out:

3.2.1 Construction of two Solar Dryer Parabola Dome.
3.2.2 Capacity Development.
3.2.3 Procurement of equipment and machineries.
3.2.4 Procurement of packaging materials (one time)
3.2.5 Monitoring and evaluation

Solar Dryer Parabola Dome
Solar Dryer Parabola Dome is the result of 30 years of research by Dr. Serm Janjai of Silpakorn University. The dryer works with the principles of greenhouse drying for agricultural products such as bananas, tomatoes, chili, coffee, spices and herbs, etc. Their parabolic shape allows the best use of solar radiation, and rain water runs off easily. The polycarbonate sheets used to cover the dome creating the greenhouse effects are made of high-value, high-quality Covestro polycarbonate, and are coated with a UV protection layer. Being shielded from UV, agricultural produce keeps its vibrant colors and valuable nutrient values. This results in higher valued final products.

The dryer is can be easily transported and installed locally. It reduces significantly the risk of spoilage and hygiene concerns caused by dust, water contamination, and livestock animals.

Construction of Parabola Dome

The site for the construction of Parabola Dome will be within the agricultural fields of one of the group members but since the dome needs a specialist, therefore, QPO have already requested the Royal Government of Thailand to facilitate in sending one Thai expert from Chiang Mai Rajabhat University to assist in the construction. As per the construction modality of QPO, the group members will provide the labour contribution and QPO shall provide the technical support. Further, the fund for the procurement of construction materials will be disbursed to local governance and all the construction materials shall be procured based on the Dzongkhag quotation.

Figure1: Sample for Parabola Dome

Figure 2: Sample Products

Benefits:

a) This solution in post-harvesting processing can help tackle the post-harvest loss.
b) Enhance the resilience against climate change among farming communities.

Environmental and Social Impacts:

- Wastes from construction activities will be negligible.
- Safety of construction workers.

Activity 3: Construction of Honey Processing and Production Unit
Budget: US$ 34,030
Timeline: January 2022 to December 2022
Location: Khotokha, Phobjikha Gewog, Wangdue Phodrang

Honeybees play an essential role for rural communities and the environment. Honeybee products, especially honey and beeswax, are an important source of income, nutrition, and medicine, while the bees themselves play an equally or even more important role as pollinators for agriculture and natural ecosystems. As pollinators, they support agricultural production, forestry, and the maintenance of biodiversity. They also help to combat soil degradation by enhancing the replenishment cycle. All four groups of bees play a role in pollination – bumble bees, stingless bees, solitary bees, and honeybees – but the honeybee is the most important. It is estimated that one third of the human diet comes from insect-pollinated plants, and that honeybees provide 80% of that pollination. Honeybees are the only bee that can be managed by farmers.
In more recent times, beekeeping has become a more professional activity. The advent of frame hives made it possible for bees to be managed, hives to be moved around to appropriate places, and honey production to be increased to commercial levels. At the same time, a reduction in natural pollinators as a result of loss of natural habitats and increased use of insecticides has made it essential to keep bees for the pollination of agricultural crops.
Therefore, Phobjikha Sibjam Detchen will be formed with the following objectives:

i. To increase the honey production.
ii. To conserve the environment
iii. To increase the community income and self-employment.
iv. To provide entrepreneurial opportunities to youth

The following sub-activities will be carried out:

3.3.1 Construction of Honey Collection and Processing Center.
3.3.2 Capacity Development.
3.3.3 Procurement of equipment and machineries.
3.3.4 Monitoring and evaluation

Construction of Honey Processing and Production Unit
The site for the construction of Honey Processing and Production Unit is a SRF land within the vicinity of the village of Khotokha which has been identified and approved by the Dzongkhag Administration, Wangdue in close consultation with National Highland Research and Development Center, Bumthang and Regional Livestock Development Center, Wangdue.
As per the construction modality of QPO, the group members will provide the labour contribution and QPO shall provide the technical support. Further, the fund for the procurement of construction materials will be disbursed to local governance and all the construction materials shall be procured based on the Dzongkhag quotation.

Environmental and Social Impacts:

- Wastes from construction activities will be negligible.
- Safety of construction workers.

Activity 4: Construction of Bamboo Processing and Production Unit

Budget: US$ 18,381
Timeline: January 2022 to December 2022
Location: Gongdue, Mongar

Gongdue is one of the most remote gewogs under Mongar Dzongkhag but the Gewog is known for cane and bamboo handicrafts and it is also one of the major income sources alongside mandarin. The traditional skills and knowledge of cane and bamboo crafts have been handed down through generations but due to growing rural to urban migration, the community are facing the imminent danger of losing this age-old tradition. The loss of trade can also be attributed to its high prices and old-fashioned designs.

Therefore, Gongdue Tsharzo Detchen will be formed with the following objectives:

- To diversify the products according to the market demand
- To provide entrepreneurial opportunities to youth
- To safeguard and promote the local knowledge through the concept of community learning center.

The following sub-activities will be carried out:

i. Construction of Bamboo collection and Processing Center.
ii. Capacity Development.
iii. Procurement of equipment and machineries.
iv. Monitoring and evaluation

Construction of Bamboo Processing and Production Unit

The site for the construction of Bamboo Processing and Production Unit is a GRF land within the vicinity of the village of Gongdue which has been identified and approved by the Dzongkhag Administration, Mongar. As per the construction modality of QPO, the group members will provide the labour contribution and QPO shall provide the technical support. Further, the fund for the procurement of construction materials will be disbursed to local governance and all the construction materials shall be procured based on the Dzongkhag quotation.

Benefits

a) Improved the living standards.
b) Preservation and promotion of traditional knowledge

Environmental and Social Impact

- Over harvesting of cane and bamboo
- Construction waste

4. Mitigation Measures for Environmental and Social Impacts

Potential impact	Impact scale	Proposed mitigation measures	Responsible party	Costs
***For all construction activities (solar dryer parabola dome,* production unit, water supply, toilet and fencing) in activity 1 to 4.**				
Cutting down vegetation: cutting down of trees and other vegetation for construction purposes	Short term minor	• **Pre-construction**: Design the construction in a way that minimizes the need to cut down trees (by selecting proper activity sites and ensuring that damage to vegetation is minimized on each selected site) • **During construction**: Ensure that no accidental damage is caused to local vegetation • Major trees that are supposed to be cut shall be clearly marked, and only marked trees will be cut; After construction: Development of the construction site with ornamentals plants/fruit trees in place of the cut tree	BFL focal person in (QPO)	

Waste: soil from excavation activities and waste from construction activities	Short term Minor	• **Pre-construction**: requirements for appropriate waste management should be included in the bidding documents and contracts, as a precondition for the contractor's selection • **During construction**: Identification of the different waste types at the project site (soil, construction waste, asphalt, food, etc.). • Ensure that camps are located away from existing stream, river, or water sources, and that no discharge from camps is made into nearby water bodies • Proper containers/waste bins should be provided at the project site; • Dumping of waste on the sides of the road, on private land, or in other non-designated places should be prohibited; • Dumping waste shall be prohibited on fragile slopes, forests, religious or other culturally sensitive areas or areas where livelihood is derived; • Collection, transportation and final disposal of all waste should be undertaken regularly [specify: bi-weekly] • Possible hazardous waste (motor oils, vehicle fuels, etc.) should be collected separately and disposed by contractor to areas identified by concerned authority, such as National Environment Commission (NEC) • All construction materials should be covered during the transportation to avoid waste dispersion; • The options for reuse/recycling of the generated waste should be taking into consideration (e.g., excavated soil, etc.) • Burning of construction waste should be prohibited. • **Post construction:** All waste shall be removed from the site.		
Workers' health and safety including COVID-19 precautions	Short term Minor	• Comply with the workers' health and safety guidelines (attached) • Access to health facilities for the workers pre and during construction activities need to be available and ensure first aid kit is available at construction site all the time- Basic health unit (BHU) needs to be available in walkable distance or the workers need to be checked once in a month by authorized medical doctor. • Ensure that no underage workers, or children are engaged	BFL Focal person in QPO and contractor	From the activity cost Included in the bidding document of the contractor

		• Ensure decent work conditions, including an appropriate salary, working hours, accommodation and food for workers shall be provided to all workers. • Ensure that workers are employed on the principle of equal opportunity and fair treatment, and there is no discrimination with respect to any aspects of the employment relationship, such as recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, and disciplinary practices. • Implement a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns- the worker with grievance shall report in their grievance to Range/beat/ HQ or gewog office. All workers shall be briefed about the GRM before the starting the work. • Strictly abide by COVID prevention protocols (use masks, maintain distance, wash hands regularly etc.)		

5. ESMP Implementation Arrangements

The implementation of project activities will be carried out by the BFL focal person in QPO. 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 QPO will sign with the Contractor(s) if any for implementation of the planned activities in respective areas in 2022. The Contractor is obligated to perform all proposed preventive or mitigation environmental and social measures in this plan and to keep the evidence of any documents related to applying these measures (e.g., letter asking the municipality for disposal of inert waste, records on OHS information session performed for all workers before start of activities, all developed EHS plans, etc.). An OHS information session should be organized by the Contractor for all workers prior start the project activities and prior any specific tasks with high health risks.

The QPO'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 officer immediately, and the ESS officer will report it to the PCU (M&E Officer). Each non-compliance should be closed with appropriate measure/s and the evidence should be kept.

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

6. ESMP Monitoring Arrangement

The BFL focal person in QPO 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. QPO is also fully responsible for the compliance of all external contractors and service providers working in the QPO with the safeguard's requirements outlined in the ESMP.

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

Sl. No	Activities	Monitoring team	Timeline		Location	Means of Verification
			Start	Complete		
1	Construction of permanent basic infrastructure (production unit, water supply, toilet and fencing)	QPO focal	July 2022	December 2022	BWS	Weekly field visit & monthly progress report
		ESS officer	Sept 2022	Oct 2022		Monitoring report
2	Construction solar dryer parabola dome and fencing	QPO focal	Jan 2022	December 2022	Drametse	Quarterly progress report
		ESS officer	Sept 2022	Oct 2022		Monitoring report
3	Construction of Honey Processing and Production Unit	QPO focal	July 2022	December 2022	Khotokha	Quarterly Report
		ESS officer	Sept 2022	Oct 2022		Monitoring report
4	Construction of Bamboo Processing and Production Unit	QPO Focal	Jan 2022	December 2022	Gongdue	Quarterly Report
		ESS officer	Sept 2022	Oct 2022		Monitoring 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 activity is as follows:

Sl.No.	Activity	Amount (Nu)	Budget for ESS mitigation (Nu)
1	Develop and promote herbal tea production unit	4,892,588	Nil
2	Construction of Solar Dryer Parabola Dome	1,335,720	Nil
3	Construction of Honey Collection and Processing Center	2,450,160.00	Nil
4	Construction of Bamboo Processing and Production Unit	1,323,440	Nil

8. Summary of Previous Stakeholder Consultations

Virtual consultation meeting was done with the officials of BWS on several times to draft the proposal and the proposal was drafted in consultation with the group members and also with the involvement of local governance. For the selection of site, LG officials, Gewog engineer, Dzongkhag Environment Official, Survey official and official from BAFRA was consulted and they physically verified the location of the construction site.

The community members under Drametse Gewog had formed the group after one of the community members had attended the training organized by QPO for the Eastern Region farmers on processing of dry fruits and dry fruit candies at Lingmithang, Mongar.To upscale the production and well as improve the quality of the product, several consultation meetings were held virtually between the gewog agriculture officials and forest officials. The group has already availed an interest free loan from QPO for the construction of Processing and Production house. The parabola dome will be solely used for the purpose of drying the fruits which will help improve the quality of the product and further increase the productivity

Beekeeping is one useful option of income generating activities in Bhutan. It is one of the main agricultural activities carried out by the rural communities in Bhutan. Honey is in high demand in Bhutan and the Bhutanese consumer prefer local honey than the commercial honey. The communities of Khotokha has shown keen interest in apiculture, and RLDC, Wangdue has requested for necessary support to the QPO. QPO has been working in close collaboration with NHRDC, Bumthang and RLDC, Wangdue to promote beekeeping in the country and together, 10 beekeeping groups (Darla, Logchina, Tshangkha, Khebisa, Dorokha, Patshaling, Tashiling, Tshendagang, Jigmechoeling, Phuntshothang Sibjam Detchen) have been formed and trained along with providing them with honey collection and processing center and necessary basic equipment. SRF land has been allocated by Dzongkhag for the construction of the Honey Collection and Pressing center within the vicinity of Khotokha village.

One of the most sought-after products in OGOP is the gift hamper, wherein, the gift basket is made from bamboo with a cane frame. The product is very popular amongst the government agencies and the millennials. Currently, OGOP has trained only one Tsharzo group at Bjokha, Zhemgang to produce these gift baskets. The quantity produced is not able to meet the market demand. Since, Gongdue, is well known as generational bamboo artisans, QPO had consulted with Dasho Dzongdag of Mongar Dzongkhag on the feasibility of training these artisans. The Dzongkhag has approved the GRF land for the construction of the Collection and Processing Center within the vicinity of the village.

All the relevant stakeholders including with local communities residing in the vicinity of the project will be consulted before implementation of the activity in respective areas to solicit their opinion and if required make changes in the activity plan. The issues raised by the local community during the consultation if any will be recorded and the detailed minutes of the consultation meeting shall be attached to this ESMP, along with a full list of participants (disaggregated by gender and age).

During the implementation phase, stakeholders will be updated on the progress of the activities quarterly. The stakeholders will be engaged in the implementation of the construction activities but for the training activities, QPO will be engaging our institute linkages to recruits the experts from both Bhutan and Thailand. Trainings will be conducted in consultation with all the relevant stakeholders, especially, the local governance and training reports will be submitted within a week of completion of the activity.

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 QPO and PCU Office.

9. Disclosure and Grievance Mechanisms

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

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

BFL-specific Grievance Mechanism

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

I. Respective nearby gewog office
II. Nearby Forest Range/Beat office
III. Bumdeling Wildlife Sanctuary head office
IV. Queen's Project Office, Thimphu (Nima Wangdi, nimawangdi@gmail.com)
V. BFL, PCU at Nature Conservation Division (Norbu Yangdon, 17987200, norbuyangdon@Moaf.gov.bt)

WWF Grievance Mechanism

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

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

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

GCF Independent Review Mechanism

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

10. Stakeholder Engagement Plan

Stakeholders	Engagement Plan
1. Develop and promote herbal tea production unit	
Local Governance	• Identification of the project site • Land lease • Approval for water and electricity provision
BAFRA	• Involved for consultation for the outlay of processing house • GHM & GMP Certification of the processing House
Dzongkhag Environment Office	• Environmental clearance
Dzongkhag Survey Office	• Approval of land lease for SRF land
Gewog Engineer	• Production house design outlay and drawings
Group member	• Labour contribution during the construction • Receive information on ESMP • Informed of grievance mechanisms
BWS	• Monitoring and evaluation • Procurement of materials for the construction • Submission of progress report to QPO
QPO	• Monitoring & Evaluation on regular basis • Training the group members of processing of herbal tea • Procurement of machineries & equipment • Liaison with all the stakeholders • Submission of progress report to BFL • Provide ready market to sell the produce
2.Construction of solar dryer parabola dome and fencing	
Local Governance	• Gewog Agriculture officials will be the key implementing partners to handhold the members by constantly encouraging the members to produce quality products.
Range Office	• Monitoring and evaluation of the groups progress • Submission of progress report to QPO
Group member	• Labour contribution during the construction

	• Receive information on ESMP • Informed of grievance mechanisms
QPO	• Monitoring & Evaluation on regular basis • Training the group members of processing of dried wild fruits and fruit candies • Procurement of construction materials: since the dome will use polycarbonate sheets, this materials will not be available in the local market. • Liaison with all the stakeholders • Submission of progress report to BFL • Provide ready market to sell the produce
3.Construction of Honey Collection and Processing Center	
Local Governance	• Identification and approval of the project site • Land lease • Approval for water and electricity provision
BAFRA	• Involved for consultation for the outlay of processing house • GHM & GMP Certification of the processing House
Dzongkhag Environment Office	• Environmental clearance
Dzongkhag Survey Office	• Approval of land lease for SRF land
Gewog Engineer	• Production house design outlay and drawings
Group member	• Labour contribution during the construction • Receive information on ESMP • Informed of grievance mechanisms
Range Office	• Monitoring and evaluation • Procurement of materials for the construction • Submission of progress report to QPO
NHRDC & RLDC	• Provide training and technical support to the group members.
QPO	• Monitoring & Evaluation on regular basis • Training the group members of production of gift hamper baskets • Procurement of machineries & equipment • Liaison with all the stakeholders • Submission of progress report to BFL • Provide various marketing platform to sell their produce
4.Construction of Bamboo Processing and Production Unit	
Local Governance	• Identification and approval of the project site • Land lease • Approval for water and electricity provision
BAFRA	• Involved for consultation for the outlay of processing house • GHM & GMP Certification of the processing House
Dzongkhag Environment Office	• Environmental clearance
Dzongkhag Survey Office	• Approval of land lease for SRF land
Gewog Engineer	• Production house design outlay and drawings
Group member	• Labour contribution during the construction • Receive information on ESMP • Informed of grievance mechanisms
Range Office	• Monitoring and evaluation • Procurement of materials for the construction • Submission of progress report to QPO
NHRDC & RLDC	• Provide training and technical support to the group members.
QPO	• Monitoring & Evaluation on regular basis • Training the group members of production of gift hamper baskets • Procurement of machineries & equipment • Liaison with all the stakeholders • Submission of progress report to BFL • Provide various marketing platform to sell their produce

Annexure III- BFL: OCCUPATIONAL HEALTH AND SAFETY STANDARDS

Employers and supervisors are obliged to implement all reasonable precautions to protect the health and safety of workers. Implementing entities should hire contractors that have the technical capability to manage the occupational health and safety issues of their workers, extending the application of the hazard management activities through formal procurement agreements.
This section provides guidance and examples of reasonable precautions to implement in managing principal risks to occupational health and safety. It is based on the IFC's Environmental, Health, and Safety Guidelines (April 30, 2007) [1] and the Occupational Health and Safety Guidelines of Bhutan's Construction Development Corporation Ltd., which relies on the national Regulation on Occupational Health, Safety and Welfare 2012, Regulation on Working Conditions 2012 and Labour Act 2007, and in compliance to Sl. No. 21 of Regulation on Occupational Health, Safety and Welfare 2012.

1. General Facility Design and Operation

Integrity of Workplace Structures
Permanent and recurrent places of work should be designed and equipped to protect occupational health and safety:

- Surfaces, structures and installations should be easy to clean and maintain, and not allow for accumulation of hazardous compounds.
- Buildings should be structurally safe, provide appropriate protection against the climatic conditions, and have acceptable light and noise conditions.
- Fire resistant, noise-absorbing materials should, to the extent feasible, be used for cladding on ceilings and walls.
- Floors should be level, even, and non-skid.
- Heavy oscillating, rotating or alternating equipment should be located in dedicated buildings or structurally isolated sections.

Severe Weather and Facility Shutdown

- Workplace structures should be designed and constructed to withstand the expected elements for the region and have an area designated for safe refuge (e.g., in case of earthquake).

Workspace and Exit

- The space provided for each worker, and in total, should be adequate for safe execution of all activities, including transport and interim storage of materials and products.

Fire Precautions
The workplace should be designed to prevent the start of fires. Other essential measures include:

- The workplace shall be provided with adequate means of protection and escape in case of fire.
- The workplace shall be provided with adequate number of relevant fire extinguishers.
- Workers shall wear shoes without iron or steel nails or any other exposed ferrous materials which is likely to cause sparks by friction.
- Smoking, lightening, or carrying of matches, lighters or smoking materials shall be prohibited within and around the construction sites.
- All other precautions, as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks, overheated surfaces of machinery or plant, chemical or physical, chemical reaction and radiant heat.
- At every workplace adequate provision of water supply for firefighting shall be provided and maintained.
- Facilities shall be equipped with firefighting equipment (e.g., fire extinguishing bottle). The equipment should be maintained in good working order and be readily accessible. It should be adequate for the dimensions and use of the premises, equipment installed, physical and chemical properties of substances present, and the maximum number of people present.
- Manual firefighting equipment shall be easily accessible and simple to use.
- Fire extinguishers and emergency alarm systems that are both audible and visible should be in place.
- Fire exits should be identified and marked in Dzongkha and English- all workers should be made aware of the fire exits.

Lavatories and Showers

[1] https://www.ifc.org/wps/wcm/connect/1d19c1ab-3ef8-42d4-bd6b-cb79648af3fe/2%2BOccupational%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES&CVID=ls62x8l.

- Adequate lavatory facilities (toilets and washing areas) should be provided for the number of people expected to work in the facility (one for at least one for every 20 workers). Toilet facilities should also be provided with adequate supplies of water and soap and also be connected to sewerage system.

Potable Water Supply

- Adequate supplies of clean drinking water should be provided to workers at the work site.

Clean Eating Area

- Where there is potential for exposure to substances poisonous by ingestion, suitable arrangements are to be made for provision of clean eating areas where workers are not exposed to the hazardous or noxious substances.

Lighting

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

Safe Access

- Passageways for pedestrians and vehicles within and outside buildings should be segregated and provide for easy, safe, and appropriate access.
- Equipment and installations requiring servicing, inspection, and/or cleaning should have unobstructed, unrestricted, and ready access.
- Covers need to be provided where ever necessary, if there is risk of falling of overhead object.
- Measures to prevent unauthorized access to dangerous areas should be in place.

First Aid

- The employer should ensure that qualified first-aid can be provided at all times. A sufficient number of first aid boxes or cupboards shall be provided and maintained so as to be readily available during all working hours, provided that the distance of the nearest first aid box or a cupboard stall be not more than 200m from any working place.
- First aid kits include all equipment outlined in Annex 1 to these Guidelines.
- Each first aid box or a cupboard shall be distinctly marked "FIRST AID"

Air Supply

- Workplace should have adequate ventilation for fresh air

2.Information Provision on Occupational Health and Safety (OHS)

2. The Contractor is responsible to hold an information session to familiarize all workers with the OHS procedures specified in these guidelines, in order to ensure they are apprised of the basic site rules of work at / on the site and of personal protection and preventing injury to fellow workers.
3. The information session should consist of basic hazard awareness, site-specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Any site-specific hazard or color coding in use should be thoroughly reviewed as part of orientation training.

3. Physical Hazards

Physical hazards represent potential for accident or injury or illness due to repetitive exposure to mechanical action or work activity.

Rotating and Moving Equipment

Injury or death can occur from being trapped, entangled, or struck by machinery parts due to unexpected starting of equipment or unobvious movement during operations. Recommended protective measures include:

- Designing machines to eliminate trap hazards and ensuring that extremities are kept out of harm's way under normal operating conditions. Examples of proper design considerations include two-hand operated machines to prevent amputations or the availability of emergency stops dedicated to the machine and placed in strategic locations.

- Where a machine or equipment has an exposed moving part or exposed pinch point that may endanger the safety of any worker, the machine or equipment should be equipped with, and protected by, a guard or other device that prevents access to the moving part or pinch point. Guards should be designed and installed in conformance with appropriate machine safety standards.

Noise

- No worker should be exposed to a noise level greater than 90 dB(A) for a duration of more than 8 hours per day without wearing ear plugs/ear muffs.
- Exposures to impulsive or impact noise shall not exceed 140dB(A).

- For every 3 dB(A) increase in sound levels from the permissible limit of noise, the 'allowed' exposure period or duration should be reduced by 50 percent.
- Where it is not practicable to reduce the noise, the employer must limit the duration of time persons employed or working in the workplace are exposed to the noise so that such persons are not exposed to excessive noise.
- Prior to the issuance of hearing protective devices as the final control mechanism, use of acoustic insulating materials, isolation of the noise source, and other engineering controls should be investigated and implemented, where feasible.
- Periodic medical hearing checks should be performed on workers exposed to high noise levels.

Vibration

In any workplace where persons are at work in any process or operation which involves exposure to vibration which may constitute a risk to their health, it shall be the duty of the employer to provide, so far as is reasonably practicable, effective means to reduce the vibration.

Electrical

Exposed or faulty electrical devices, such as circuit breakers, panels, cables, cords and hand tools, can pose a serious risk to workers. Overhead wires can be struck by metal devices, such as poles or ladders, and by vehicles with metal booms. Vehicles or grounded metal objects brought into close proximity with overhead wires can result in arcing between the wires and the object, without actual contact. Recommended actions include:

- Marking all energized electrical devices and lines with warning signs
- Locking out (de-charging and leaving open with a controlled locking device) and tagging-out (warning sign placed on the lock) devices during service or maintenance
- Checking all electrical cords, cables, and hand power tools for frayed or exposed cords and following manufacturer recommendations for maximum permitted operating voltage of the portable hand tools
- Double insulating / grounding all electrical equipment used in environments that are, or may become, wet; using equipment with ground fault interrupter (GFI) protected circuits
- Protecting power cords and extension cords against damage from traffic by shielding or suspending above traffic areas
- Appropriate labeling of service rooms housing high voltage equipment ('electrical hazard') and where entry is controlled or prohibited
- Establishing "No Approach" zones around or under high voltage power lines
- Conducting detailed identification and marking of all buried electrical wiring prior to any excavation work
- Every person who is working on an electric supply line or apparatus or both shall be provided with tools and devices such as gloves, rubber shoes, and safety belts, ladders, earthing devices, helmets, line testers, hand lines whichever is relevant for protecting him/her from mechanical and electrical injury.

Eye Hazards

Solid particles from a wide variety of industrial operations, and/or a liquid chemical spray may strike a worker in the eye causing an eye injury or permanent blindness. Recommended measures include:

- Use of machine guards or splash shields and/or face and eye protection devices, such as safety glasses with side shields, goggles, and/or a full-face shield. Frequent checks of these types of equipment prior to use to ensure mechanical integrity is also good practice.
- Where machine or work fragments could present a hazard to transient workers or passers-by, extra area guarding or proximity restricting systems should be implemented, or PPE required for transients and visitors.

Welding / Hot Work

Welding creates an extremely bright and intense light that may seriously injure a worker's eyesight. In extreme cases, blindness may result. Additionally, welding may produce noxious fumes to which prolonged exposure can cause serious chronic diseases. Recommended measures include:

- Provision of proper eye protection such as welder goggles and/or a full-face eye shield for all personnel involved in, or assisting, welding operations. Additional methods may include the use of welding barrier screens around the specific work station.

Working Environment Temperature

Exposure to hot or cold working conditions in indoor or outdoor environments can result temperature stress-related injury or death. Use of personal protective equipment (PPE) to protect against other occupational hazards can accentuate and aggravate heat-related illnesses. Extreme temperatures in permanent work environments should be avoided through implementation of engineering controls and ventilation. Where this is not possible, such as during short-term outdoor work, temperature-related stress management procedures should be implemented which include:

- Monitoring weather forecasts for outdoor work to provide advance warning of extreme weather and scheduling work accordingly
- Providing temporary shelters to protect against the elements during working activities or for use as rest areas
- Use of protective clothing
- Providing easy access to adequate hydration such as drinking water or electrolyte drinks.

Ergonomics, Repetitive Motion, Manual Handling

Injuries due to ergonomic factors, such as repetitive motion, overexertion, and manual handling, take prolonged and repeated exposures to develop, and typically require periods of weeks to months for recovery. These OHS problems should be minimized or eliminated to maintain a productive workplace. Controls may include:

- Use of mechanical assists to eliminate or reduce exertions required to lift materials, hold tools and work objects, and requiring multi-person lifts if weights exceed thresholds (adult man- 50kg, adult female- 25kg)
- Selecting and designing tools that reduce force requirements and holding times, and improve postures
- Incorporating rest and stretch breaks into work processes, and conducting job rotation
- Implementing quality control and maintenance programs that reduce unnecessary forces and exertions

Working at Heights

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

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

Illumination

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

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

4. Personal safety equipment for workers

All workers are equipped with the following personal safety equipment: helmet, gloves, ordinary boots and reflective vest.

Workers that are exposed to dust should also be provided with eye protection glasses and face mask. Workers that are exposed to noise should be provided with ear plugs. Workers that need to work in the dark should be provided with hand and cap lamps.

Workers are instructed regarding safety equipment as follows:

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

5. Standards for workers' accommodation[2]

1. General living facilities

- The location of the facilities is designed to avoid flooding or other natural hazards

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

- The living facilities are located within a reasonable distance from the worksite.
- Transport is provided to worksite safe and free if the accommodation is reasonably far from the worksite.
- The living facilities are built using adequate materials, kept in good repair and kept clean and free from waste and refuse.

2. Drainage

- The site is adequately drained.

3. Heating, air conditioning, ventilation and light

- Living facilities are provided with adequate heating, ventilation, and light systems including emergency lighting.

4. Water

- Workers have easy access to a supply of clean/ potable water in adequate quantities.
- The quality of the water complies with national/local requirements and is regularly monitored.
- Tanks used for the storage of drinking water are constructed and covered to prevent water stored therein from becoming polluted or contaminated.
- The quality of the drinking water

5. Wastewater and solid waste

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

6. Rooms/dormitories facilities

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

8. Sanitary and toilet facilities

- Sanitary and toilet facilities are constructed from materials that are easily cleanable.
- Sanitary and toilet facilities are cleaned frequently and kept in working condition.
- Toilets, showers/bathrooms and other sanitary facilities are designed to provide workers with adequate privacy including ceiling to floor partitions and lockable doors.
- Separate sanitary and toilet facilities are provided for men and women.
- Toilet and shower facilities are conveniently located and easily accessible.
- Toilet facilities are environmentally friendly (e.g., pit toilet) and sewage is not disposed into the worksite.
- Open defecation in the vicinity of project sites should be prohibited.
- An adequate number of hand wash basins and showers/bathrooms facilities are provided.

9. Cooking and laundry facilities

Cooking and laundry facilities should available for workers at the worksite or in close vicinity to it. These facilities should be kept in clean and sanitary conditions.

Annex 1. Contents of first aid box or cup-boards

The first aid boxes or cup-boards shall be distinctively marked with white cross on a green background and shall contain the following equipment:

1. Small sterilized dressings (12)
2. Medium size sterilized dressings (6)

3. Large size sterilized dressings (6)
4. Large size sterilized burn dressings (6)
5. (1/2 oz.) Sterilized cotton wool (6 packets)
6. (2oz.) Bottle containing a two per cent alcoholic solution of iodine (1)
7. (2oz.) Bottle containing Betadine (antiseptic solution) having the dose and mode of administration indicated on the label (1)
8. Roll of adhesive plaster (1)
9. A snake bite lancet (1)
10. Torch light (1)
11. Pair of scissors (1)
12. Tablets Aspirin (5gms) 2 dozen
13. Burn Ointment (2 tubes)
14. Dettol (2 phial, about 2 ozs)
15. Bandages 4 inches wide
16. Bandages 2 inches wide
17. Triangular bandages (2)
18. Packets of safety pins (1)
19. A supply of suitable splint