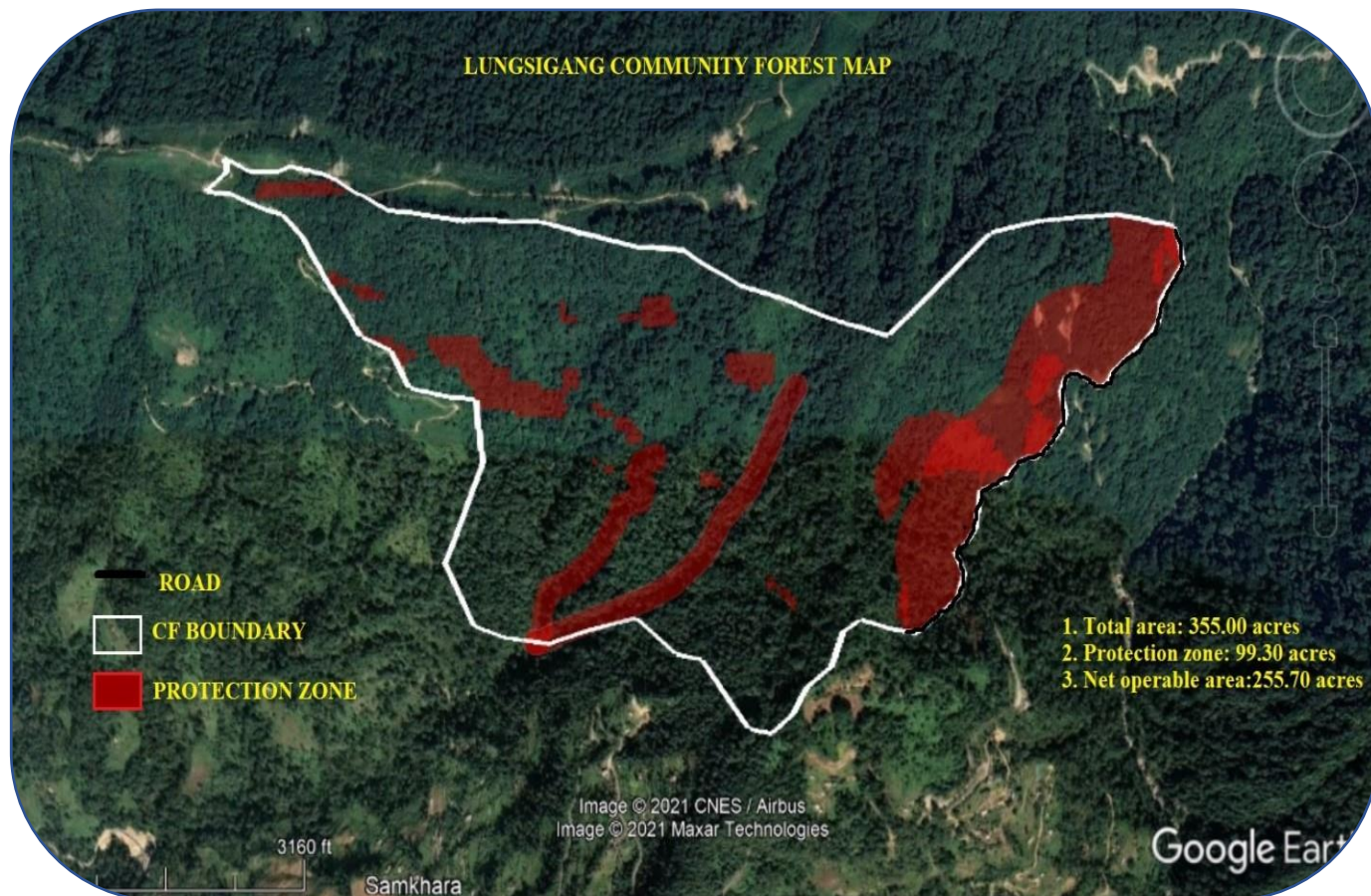

LUNGSIGANG COMMUNITY FOREST MANAGEMENT PLAN

(1st REVISION)








Village: ***Batasay & Samkhara***
Chiwog: ***Samkhara***
Gewog: ***Jigmecholing***
Dzongkhag: ***Sarpang***

Plan Period: January 2023-December 2032

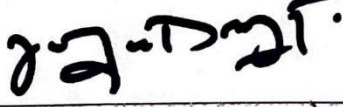

APPROVAL SHEET

Name of Community Forest	Lungsigang Community Forest
Village	Samkhara, Batasay
Chiwoq	Samkhara
Gewog	Jigmechoeling
Dzongkhag	Sarpang
Production area (Hectare/Acre)	255.70 acres
Protection area (Hectare/Acre)	99.30 acres
Total Community Forest area (Hectare/Acre)	355 acres
Total CFMG Member (No. of HH)	41 households

Prepared and Submitted for Approval

	Community Forest Management Group	Forestry Representative (CFMP Facilitator)	Gewog Administration	Social Forestry Section	Divisional/Park Office
Signature					
Name	Mani Lal Rai	Tshering Dorji	Kumar Gurung	Sonam Tobgay	Phub Dendup
Title	Chairman	Sr. Forestry Officer	Sr. Forest Ranger I	Sr. Forest Ranger I	Chief Forestry Officer

REVIEWED and RECOMMENDED FOR APPROVAL

Signature		
Name	Tsekhon Dorji	Sonam Tobgay
Title	Focal Officer	Chief Forestry Officer
Division	Forest Resources Planning and Implementation Section	Forest Resources Planning and Management Division

APPROVED BY:



DIRECTOR

Department of Forest and Park Services

Acronyms

AAC:	Annual Allowable Cut
CF:	Community Forest
CFMG:	Community Forest Management Group
CFO:	Chief Forestry Officer
Cfts.:	Cubic feet (volume measurement)
Chiwog:	Village Hemlet
DFO:	Divisional Forest Office
DoFPS:	Department of Forests and Park Services
FNCRR:	Forest and Nature Conservation Rules and Regulations
GT:	Gewog Tshogde
Gup:	Locally elected leader
Ha:	Hectares
M ³ :	Cubic meter (Volume measurement)
LULC:	Land Use Land Cover, 2016
NRPC:	Natural Resources Pricing Committee
SRFL:	State Reserved Forest Land
Tshogpa:	Representative of the CFMG in CF management committee

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Executive Summary

Lungsigang Community Forest (CF) is located in Jigmecholing geog under Sarpang Dzongkhag covering an area of 355 acres (143.7 ha). It is within vicinity of Batasey and Samkhara villages. Few people from Samkhara village who had initially shown interest to join the CF opt for Samkhara CF as Lungsigang CF was bit far for them. Lungsigang CF is located 48 km away from Gelephu Thromde on the Gelephu-Trongsa highway. It is divided into four blocks mainly for efficient and effective management of the CF area. The aspects of Norbuchu block and kuwapani49 block is southeast whereas Patsagang and Dhap block is southwest. The CF altitude ranges from lowest of 1140.18 masl inside Dhap block and highest of 2021.31 masl that falls on the border of Patsagang and Kuwapani49 block. CF area consist mainly of broadleaved tree species thickly covered with dense bamboos, canes, and nettles vegetation. There are only few pockets of degraded areas inside CF. Currently CF has 36 members.

During quantitative resource assessment, average basal area of each block was found that Patsagang block has 12.02 m² /ha, Dhap block with 12.14 m²/ha, Kuwapani49 block with 14.28 m²/ha and Norbuchu block with 22.03 m²/ha. The overall basal area for the CF is 15.12 m²/ha which indicates very good forest condition.

The CF management plan includes all the By-laws for proper management of CF enacted by the members. This revised CF management plan is prepared in consultation with CFMG members by Divisional Forest Office, Sarpang. The by-laws are the refined and are all inclusive decisions made by the members during the revision of CFMP from 22nd-30th, October 2021.

The plan is prepared for 10 years, and it is focused on participatory forest management. Part A of the management plan contains technical information collected during the resource assessment and field survey. Part B of the management plan emphasize on By-laws for smooth functioning of the CFMG.

Part A: Forest Management

1. Introduction

According to the village elders, CF area has been exploited during the construction of Jigmcholing Dratshang. As per the current Chairman of the CF, about 10500 cft. of timber were being transported to Jigmecholing for construction of Dratshang from the CF area. The community realizing the depletion of forest areas then sought support to Dzongkhag Forest office in 2009. With the establishment of CF in the year 2012, it has seen greater control over the use and management of natural resources.

CFMG desires to restore and diversify availability of forest products within the CF area including timber for construction and non-wood for generating rural income. The CFMG will also help in the protection of water resources for drinking and irrigation of their agriculture fields. CF establishment instigate sense of ownership for our natural resources. CF also educate people on importance of forest management that caters our daily needs.

Community Forest Management objectives

1. To manage CF for sustainable production and utilization of timber/ NWFP.
2. To protect water sources for drinking and irrigation purpose.
3. To rehabilitate barren area with appropriate timber/plant species.
4. To generate cash income by selling NWFP as per harvesting guidelines prescribed.
5. Protect forest from illegal activities.

2. Legal Status

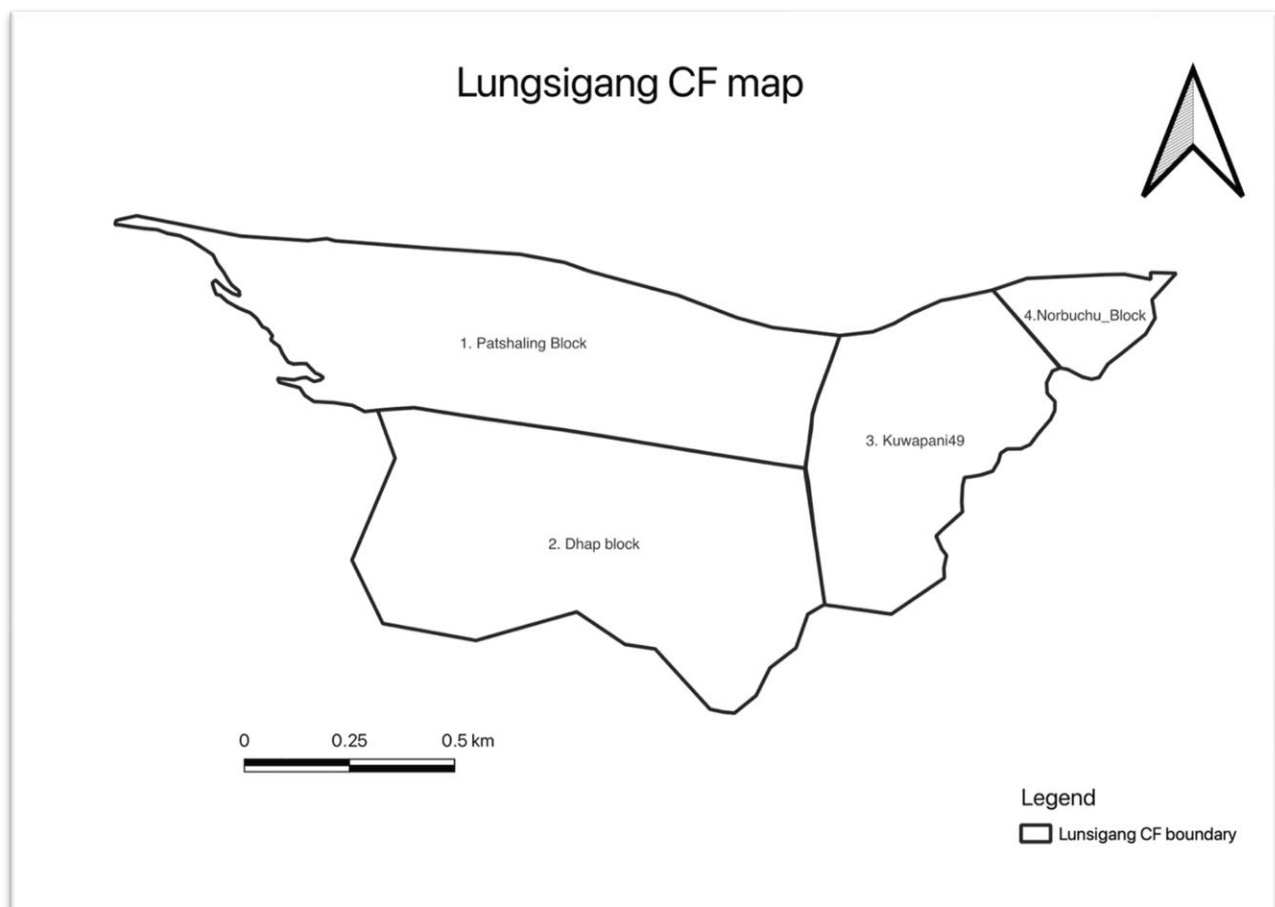
The verification on forest boundary and demarcation was done in consultation with representative staff of Dzongkhag forestry and Division Forest Office, Sarpang in the year 2009. The revised CF management plan including re-survey of CF boundary was carried out by Divisional Forest Office, Sarpang in 2021. CF area was found to be 383 acres after the resurvey. The CF area included 28 acres inside Jigme Singye Wangchuck National Park and 22 acres inside Royal Manas National Park. After thorough discussion with the CF members, it was agreed that 28 acres of GRF inside JSWNP will be cut off from CF area to minimize complication between CF and park management plans. The CF will thus have 355 acres of area as before.

3. Traditional Forest Management Systems & Forest Use Systems

From the ancestral time, the farmers of Batasay (now Lungsigang) had rights to utilize the forest resources based on their requirement. There was no traditional system for sharing resources and no problems of inequity and conflict among the farmers with respect to forest resources.

Community extract timbers for house construction, fuelwood for cooking, collects fodder for livestock and use the forest land for free grazing. Earlier, there was no forest management practices. Forest areas were used as per the local convenience bringing deterioration of forest areas. With establishment of CF in 2012, the area was managed in aligned with CFMP and FNCRR, 2017. CF has now seen drastic improvement in forest conditions including stock and NWFP products. Also, a water source (Beteni khola) used for drinking as well as for irrigation purposes by community has been provided with appropriate intervention and protection enhancing the water supply.

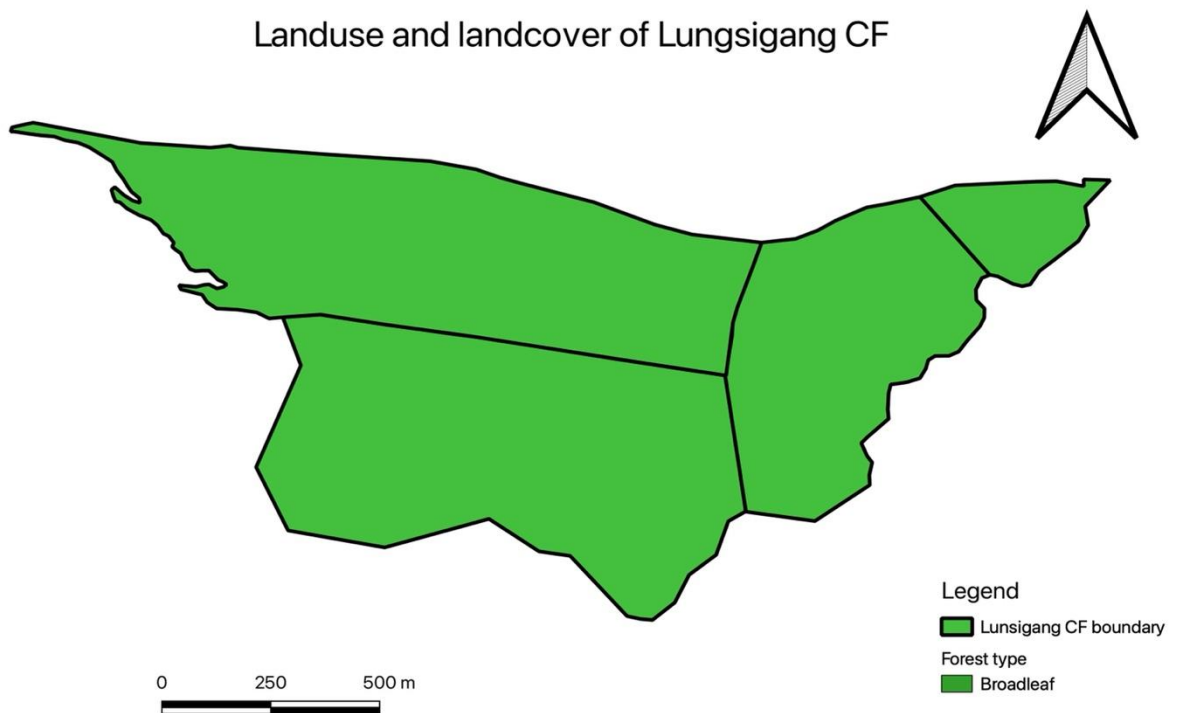
4. Community Forest Map



Out of 355 acres, 12.96 acres is sloping above 45 degree, 9.99 acres falls within 100 feet of rivers and 21.85 acres falls within road buffer of 180m above the road. 4.6 acres of slope above 45 degrees are within road buffer. With this 99.30 acres of CF areas are falling under protection zone.

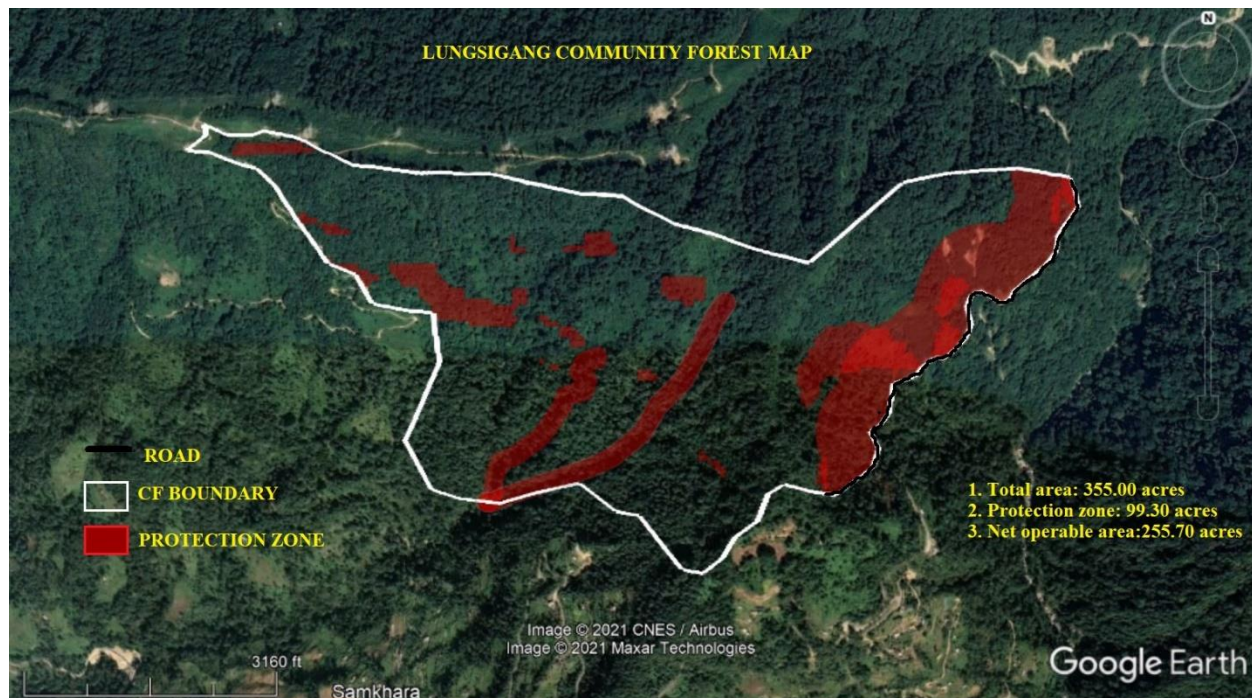
Community Forest Boundaries

Boundaries	Permanent features
East	Royal Manas National Park
West	Lungsigang village
North	Jigme Singye Wangchuck National Park
South	Samkahara village



The landuse and landcover of Lungsigang CF is 100% broadleaved forest. There are no settlements or roads inside the CF.

Map of protection areas of Gakidling CF



Landuse type	Area (Ha)
Broadleaf	143.66
Total CF area	143.66

Protection area	Area (ha)
Total protection area	40.13

Net production/operable area	103.48
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5. Traditional Forest Management and responsibilities

There was not much traditional management system in the past. Some management systems that were being followed regarding the management of forest were as stated below:

Products	Rights	Responsibilities	Traditional Management system
Timbers	Villagers of Lungsigang and Samkhara villages	Villagers of Lungsigang and Samkhara villages	Extraction as per Forest rules and regulation within chiwog boundaries
Firewood			Collects only dry woods.
NWFP			Collected only for the domestic consumption.

Fodder			Fodder along the peripheral of their lands were enough. They seldom had to enter deep jungles for collection of fodder.
Grazing			Free grazing

6. Planning Process

The Community Forest Management Plan was prepared with the full support from the Dzongkhag Forestry Office, Sarpang and was thoroughly revised by Divisional Forest Office, Sarpang in 2021. All the stakeholders have been involved actively in all aspects of CF management planning including site identification, surveying, boundary demarcation, preparation, and revision of management plan preparation. The major plan process and the steps are as mentioned below:

Month	Activities	Collaborators
1 st -20 th November, 2009	Initiation of Community Forest	DzFS, GFEO
21 st -30 th November, 2009	CF boundary survey and map drawing.	DzFS, GFEO and CFMG.
1 st -15 th December 2009	Forest preliminary resource assessment.	DzFS, GFEO and CFMG
19 th -24 th December, 2009	Quantitative resource assessment of block I and block II	DzFS,GFEO and CFMG
11 th -30 th January, 2010	Meeting on capacity building, rights and responsibilities, Forest product prioritization, demand matrix management objectives of each block and preparation for whole CF management objectives and writing By-laws	DzFS, GFEO and CFMG members
1 st -15 th February, 2010	Writing draft management plan and By-laws and submission.	GFEO. CFMG
June, 2010	Submission of draft management plan to DoFPS for approval	DzFO & SFD
July, 2010	Review and final submission of the management plan	DzFO, SFD
January, 2012	Approval of Lungsigang CF	DzFO
22 nd -30 th October, 2021	Revision of Lungsigang CF	DFO, Sarpang

7. Social Information

Batasey village has 35 households in total as per the census record and 72 households at Samkhara village. This is also due to the fragmentation of family land holdings. The Ethnic groups settled at Samkhara and Batasay are Lhotsamp with dozens of resettlements. The majority of Lhotsamp are Rai, Tamang, Gurung and Mongar. The CFMG has adequate drinking & irrigation water sources. Farm road, electricity and tele-communications and other modern amenities are being facilitated to the villagers. Improved breeds of cattle, enhanced agriculture machineries, like other part of the country, community practice mix subsistence farming. They rear livestock such as cattle, poultry, fishery, Goats, Sheep and Piggery. The living standard of the farmers is very marginal and sometimes depend their livelihood on off farm activities such as rendering labor in construction works.

There is a community school at Samkhara whereby it is easy for them to send their child to school. Before they had to walk all the way to Jigmecholing. The community is also facilitated with NFE centre and ORC at Samkhara. There is also not much community-based management activities carried out at present. However, since there is almost group of a same race, there is a good cooperation and coordination among the group. Thus, the establishment of community forest is further expected to enhance better people's participation and form a basis for developing group management.

Name of the villages	Batasay and Samkhara
Ethnic groups with CFMG	Lhotsampa
Basic amenities	Electricity, paved roads, mobile networks, community school, Lhakhang, irrigation facilities, ORC, NFE
Total Households (HH) number of CFMG	36
Population of CFMG	428
% male & % female	256 male and 172 females
Main source of income	Livestocks products and vegetables
Cattle population of the CFMG	144 cattles
Main crops	Maize, millet,
Cropping pattern	Mixed cropping
Any other information (Average income)	40000-80000 annully

8. Forest Information

The forest type is Warm broad leaved forest with dominant broadleaved species like Katus, Tarshin g, Angary, Batarasay, Bhanghi, Panisaj, Balocut, Chelauney, Champ, Tooni, sherti, Labsey, Mawa, Ambakey, Arkhawla, kawla, Guley, Sisifall, pipalpatey, patpatey, bazarath, phalath, Malata, Seris, Utis etc. The ground covers are of climbers, pipla, ferns, bamboos, and banana. The site also reveals as home for various fauna such as Bear, Monkey, wild boar, deer, Sambhar, Tharr, Langur, wild dog, wild cat, Snakes, Porcupine, Leeches, Marten, squirrel etc. Common bird species found in the Community area are Eagle, Hornbill, Pheasant, and Jungle fowl.

The Community Forest is divided into four blocks namely Norbuchhu Block, Kuwapani⁴⁹ and Patshagang Block separately marked by the geographical features such as a Parengdangra. The Patshagang block has abundant barren areas since forest have been heavily exploited in the past. Thus, it needs to be rehabilitated with high economical timber. The Patshagang block is found to be critically degraded and community members have agreed to retain the area under complete protection for the first management plan period.

The community forest has a major challenge of protecting water resources for irrigation & drinking water supply. The general discussion with the public revealed that the volume of flow of Beteni khola was once very low due to the heavy extraction of timber from Dhap area during the construction of Dratshang and extraction of timber by outsider. It was said that the issues were put up to DYT and endorse not to harvest timber from the site hence. However, the same practices continue as of now but with the formation of CFMG and with the sense of ownership of CF, outsider will not be allowed to harvest any products from CF.

9. Block wise Information.

I. Patsagang Block

Format 1. Forest Resource Assessment Format	
Name of Community Forest	Lungsigang CF
Date of Assessment	27/10/21
Name of block	Patsagang block
Block area	50.94
Name of recorder	Tshering Dorji

Forest & Habitat Type			
Forest	<input checked="" type="checkbox"/>	Thicket/pole stage	<input type="checkbox"/>
Grassland	<input type="checkbox"/>	Plantation	<input type="checkbox"/>
Shrubland	<input type="checkbox"/>	Other	<input type="checkbox"/>
Vegetation type			

Subtropical forest <input type="checkbox"/>	Chir pine forest <input type="checkbox"/>	Warm broadleaved forest <input checked="" type="checkbox"/>	Blue pine forest <input type="checkbox"/>
Cool broadleaved forest <input type="checkbox"/>	Mixed conifer forest <input type="checkbox"/>	Fir forest <input type="checkbox"/>	Other <input type="checkbox"/>

Definitions	
Broadleaf forest	75% or more of the tree species present are hardwoods
Conifer forest	75% or more of the tree species present are coniferous
Mixed forest	All other combinations of tree species
Mature Forest	Vegetation dominated by mature trees (trees > 40 cm dbh)
Thicket/pole stage	Vegetation > 3m in height consisting of young trees usually < 40cm dbh
Shrubs	Non-tree species > 2m in height (often thorny and multi-stemmed)
Shrub-land	Vegetation dominated by woody multi-stemmed plants or single stemmed plants and regeneration mostly < 3 m tall
Grassland	Vegetation dominated by grass species and where only a small part of the area is covered by trees or shrubs.
Crown cover	The percentage of the area covered by the crowns of trees forming the main canopy (usually mature trees)
Regeneration	Seedlings, saplings, and coppice re-growth of naturally occurring tree species that are less than 1.3 meters tall but greater than 30cm tall
Seed trees	Mature trees with healthy crowns capable of producing flowers and seed
Soil Cover	The percentage of the area with soil surface covered either by live vegetation or a layer of other plant vegetation

Forest Condition	
Write the names of main tree species	
Local name	Scientific name
Katus	<i>Quercus spp</i>
Champ	<i>Michelia champaca</i>
Tooni	<i>Toona ciliata</i>
Plantation	
Is there any plantation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Approximate height of planted trees (m)
Year planted	Is the plantation? Under stocked <input type="checkbox"/> Stocked <input type="checkbox"/> Overstocked <input type="checkbox"/>

Forest Condition -Age			
Mature <input type="checkbox"/> Main canopy of matured trees	Pole stage <input type="checkbox"/> Main canopy of pole-stage trees	Shrubland <input checked="" type="checkbox"/> Main canopy of shrubs, young trees, or regeneration	Any <input type="checkbox"/> No continuous canopy. Isolated trees only
Fir and Hemlock			

Forest Condition - Canopy density		
Dense <input type="checkbox"/> Canopy density > 70%	Open <input checked="" type="checkbox"/> Canopy density < 70%	Very open <input type="checkbox"/> No real canopy. Isolated trees only

Forest Condition – Regeneration		
Abundant <input type="checkbox"/> Regeneration easy to find in most places	Scattered/few <input checked="" type="checkbox"/> Regeneration only in some places and hard to find	None <input type="checkbox"/> No regeneration
Write the names of the 3 main tree species in the regeneration		
1) <i>Schima wallichii</i>	2) <i>Macaranga</i>	3) <i>Chukrasia tabularis</i>
Regeneration: Seedlings > 30cm and < 1.3m height		

Forest Condition – Approximate density of seed trees		
High <input type="checkbox"/> > 50 seed trees per ha	Moderate <input type="checkbox"/> 10 – 50 seed trees per ha	Low <input checked="" type="checkbox"/> < 10 seed trees per ha

Block Condition – Summary			
(Use the forest condition class box below to get an average condition for the block)			
Poor <input type="checkbox"/>	Average <input type="checkbox"/>	Good <input checked="" type="checkbox"/>	Very Good <input type="checkbox"/>
Does the main forest canopy consist of large, mature trees?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Forest Condition Class Box				
Age	Canopy density	Regeneration & coppice	Seed tree class	Condition
Mature forest	Dense	Abundant		
		Scattered/few		
	Open	Abundant		
		Scattered/few		Average
Pole stage forest	Dense	Abundant		
		Scattered/few		
	Open	Abundant		
		Scattered/few		
	Dense		Low	Moderate
	Open		Low	Average
Any	Very open	None		

Open spaces	
Approximate total open space area (ha)	None
Dominant vegetation type in the open space	NA
Cause of open space e.g. grazing, fire, harvesting, etc.	NA

Grazing and fodder			
Grassland type			
Natural	<input checked="" type="checkbox"/>	Man-made	<input type="checkbox"/>
Mixture	<input type="checkbox"/>	Predominantly forest	<input type="checkbox"/>

Main fodder species being used (<i>list 3 only</i>)	
Local name	Scientific name
Khamari	<i>Gmelina arborea</i>
Mawa	<i>Engelhardia spicata</i>
Katus	<i>Castanopsis spp</i>

Pasture quality (list the 3 dominant species in the grassland)		
Local name	Scientific name	Palatable/unpalatable
Use pattern	Seasonal <input type="checkbox"/>	All year <input type="checkbox"/>

Type of user	Migratory <input type="checkbox"/>	Local <input checked="" type="checkbox"/>	Both <input type="checkbox"/>
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Catchment Condition	
(i) Catchment condition – soil cover	
Soil cover	Soil cover class
> 50% of the soils are covered by vegetation	high <input type="checkbox"/>
25 - 50% of the soils are covered by vegetation	moderate <input checked="" type="checkbox"/>
< 25% of the soils are covered by vegetation	low <input type="checkbox"/>
(ii) Catchment Condition - Soil type and erosivity	
Soil type (colour, texture and type)	
Erosive <input type="checkbox"/>	Non-erosive <input checked="" type="checkbox"/>
disperses and/or breaks up in water easily	stable to water flow
(iii) Catchment Condition – Slope	
Slope (degrees)	Slope steepness class
<10°	Gentle <input type="checkbox"/>
10° – 30°	Moderate <input checked="" type="checkbox"/>
> 30°	Steep <input type="checkbox"/>
Catchment Condition – Summary (Use the catchment condition class box below to get the average condition for the block)	
Less critical <input checked="" type="checkbox"/>	Moderately critical <input type="checkbox"/>
	Highly critical <input type="checkbox"/>

Catchment Condition Class Box			
Slope category	Soil erosivity	Cover class	Condition class
Flat	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	any	Less critical
Moderate	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	Any	Less critical
Steep	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	Any	Low critical

Fauna			
Local Name		Scientific name	
Bear		<i>Ursus spp</i>	
Deer		<i>Muntjacs Muntiacus</i>	
Wild pig		<i>Sus scrofa</i>	
Monkey		<i>Macaca mulatta</i>	
Hornbill		<i>Buceros bicornis</i>	
Leopard		<i>Panthera pardus</i>	
Biotic Pressures			
Fire	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Grazing	Heavy <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Fodder collection (list main species used)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
NWFP collection (list the main products including bamboo & cane)	Common <input type="checkbox"/> Mushroom & Bamboo	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Leaf litter collection	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Encroachment	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Pole harvesting	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Fuelwood harvesting	Common <input checked="" type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input type="checkbox"/>
Timber harvesting	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Hunting	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>

Potential Management Options <i>(list any potential management options for the CF/block)</i>	
1	Single tree selection is must while extracting trees for timber and firewood.

II. Dhap block

Format 1. Forest Resource Assessment Format	
Name of Community Forest	Lungsigang CF
Date of Assessment	27/10/2021
Name of block	Dhap block
Block area	52.76
Name of recorder	Sonam Dorji

Forest & Habitat Type					
Forest	<input checked="" type="checkbox"/>	Thicket/pole stage	<input type="checkbox"/>	Shrubland	<input type="checkbox"/>
Grassland	<input type="checkbox"/>	Plantation	<input type="checkbox"/>	Other	<input type="checkbox"/>
Vegetation type					
Subtropical forest	<input type="checkbox"/>	Chir pine forest	<input type="checkbox"/>	Warm broadleaved forest	<input checked="" type="checkbox"/>
Cool broadleaved forest	<input type="checkbox"/>	Blue pine forest	<input type="checkbox"/>	Mixed conifer forest	<input type="checkbox"/>
		Fir forest	<input type="checkbox"/>	Other	<input type="checkbox"/>

Definitions	
Broadleaf forest	75% or more of the tree species present are hardwoods
Conifer forest	75% or more of the tree species present are coniferous
Mixed forest	All other combinations of tree species
Mature Forest	Vegetation dominated by mature trees (trees > 40 cm dbh)
Thicket/pole stage	Vegetation > 3m in height consisting of young trees usually < 40cm dbh
Shrubs	Non-tree species > 2m in height (often thorny and multi-stemmed)
Shrub-land	Vegetation dominated by woody multi-stemmed plants or single stemmed plants and regeneration mostly < 3 m tall
Grassland	Vegetation dominated by grass species and where only a small part of the area is covered by trees or shrubs.
Crown cover	The percentage of the area covered by the crowns of trees forming the main canopy (usually mature trees)
Regeneration	Seedlings, saplings and coppice re-growth of naturally occurring tree species that are less than 1.3 meters tall but greater than 30cm tall
Seed trees	Mature trees with healthy crowns capable of producing flowers and seed
Soil Cover	The percentage of the area with soil surface covered either by live vegetation or a layer of other plant vegetation

Forest Condition	
Write the names of main tree species	
Local name	Scientific name
Katus	<i>Quercus spp</i>
Saur	<i>Betula alnoides</i>
Tooni	<i>Toona ciliata</i>

Plantation	
Is there any plantation?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Year planted	Approximate height of planted trees (m) Is the plantation? Under stocked <input type="checkbox"/> Stocked <input type="checkbox"/> Overstocked <input type="checkbox"/>

Forest Condition -Age			
Mature <input type="checkbox"/>	Pole stage <input type="checkbox"/>	Shrubland <input checked="" type="checkbox"/>	Any <input type="checkbox"/>
Main canopy of matured trees	Main canopy of pole-stage trees	Main canopy of shrubs, young trees or regeneration	No continuous canopy. Isolated trees only
Fir and Hemlock			

Forest Condition - Canopy density		
Dense <input type="checkbox"/>	Open <input checked="" type="checkbox"/>	Very open <input type="checkbox"/>
Canopy density > 70%	Canopy density < 70%	No real canopy. Isolated trees only

Forest Condition – Regeneration		
Abundant <input type="checkbox"/>	Scattered/few <input checked="" type="checkbox"/>	None <input type="checkbox"/>
Regeneration easy to find in most places	Regeneration only in some places and hard to find	No regeneration
Write the names of the 3 main tree species in the regeneration		
1) <i>Schima wallichii</i>	2) <i>Macaranga</i>	3) <i>Chukrasia tabularis</i>
Regeneration: Seedlings > 30cm and < 1.3m height		

Forest Condition – Approximate density of seed trees		
High <input type="checkbox"/>	Moderate <input type="checkbox"/>	Low <input checked="" type="checkbox"/>
> 50 seed trees per ha	10 – 50 seed trees per ha	< 10 seed trees per ha

Block Condition – Summary			
(Use the forest condition class box below to get an average condition for the block)			
Poor <input type="checkbox"/>	Average <input type="checkbox"/>	Good <input checked="" type="checkbox"/>	Very Good <input type="checkbox"/>
Does the main forest canopy consist of large, mature trees?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Forest Condition Class Box				
Age	Canopy density	Regeneration & coppice	Seed tree class	Condition
Mature forest	Dense	Abundant		
		Scattered/few		
	Open	Abundant		

		Scattered/few		Average
Pole stage forest	Dense	Abundant		
		Scattered/few		
	Open	Abundant		
		Scattered/few		
	Dense		Low	Moderate
	Open		Low	Average
Any	Very open	None		

Open spaces

Approximate total open space area (ha)	None
Dominant vegetation type in the open space	NA
Cause of open space e.g. grazing, fire, harvesting, etc.	NA

Grazing and fodder

Grassland type			
Natural <input checked="" type="checkbox"/>	Man-made <input type="checkbox"/>	Mixture <input type="checkbox"/>	Predominantly forest <input type="checkbox"/>

Main fodder species being used (*list 3 only*)

Local name	Scientific name
Khamari	<i>Gmelina arborea</i>
Mawa	<i>Engelhardia spicata</i>
Katus	<i>Castanopsis spp</i>

Pasture quality (list the 3 dominant species in the grassland)

Local name	Scientific name	Palatable/unpalatable
Use pattern	Seasonal <input type="checkbox"/>	All year <input type="checkbox"/>

Type of user	Migratory <input type="checkbox"/>	Local <input checked="" type="checkbox"/>	Both <input type="checkbox"/>
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Catchment Condition

(i) Catchment condition – soil cover

Soil cover	Soil cover class
> 50% of the soils are covered by vegetation	high <input type="checkbox"/>
25 - 50% of the soils are covered by vegetation	moderate <input checked="" type="checkbox"/>
< 25% of the soils are covered by vegetation	low <input type="checkbox"/>

(ii) Catchment Condition - Soil type and erosivity

Soil type (colour, texture and type)	
Erosive <input type="checkbox"/> disperses and/or breaks up in water easily	Non-erosive <input checked="" type="checkbox"/> stable to water flow

(iii) Catchment Condition - Slope

Slope (degrees)	Slope steepness class
<10°	Gentle <input type="checkbox"/>
10° – 30°	Moderate <input checked="" type="checkbox"/>

> 30°	Steep	<input type="checkbox"/>
Catchment Condition – Summary (Use the catchment condition class box below to get the average condition for the block)		
Less critical	<input checked="" type="checkbox"/>	Moderately critical <input type="checkbox"/> Highly critical <input type="checkbox"/>

Catchment Condition Class Box			
Slope category	Soil erosivity	Cover class	Condition class
Flat	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	any	Less critical
Moderate	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	Any	Less critical
Steep	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	Any	Low critical

Fauna			
Local Name	Scientific name		
Bear	<i>Ursus spp</i>		
Deer	<i>Muntjacs Muntiacus</i>		
Wild pig	<i>Sus scrofa</i>		
Monkey	<i>Macaca mulatta</i>		
Hornbill	<i>Buceros bicornis</i>		
Wild dog	<i>Cuon alpinus</i>		
Biotic Pressures			
Fire	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Grazing	Heavy <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Fodder collection (list main species used)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
NWFP collection (list the main products including bamboo & cane)	Common <input type="checkbox"/> Mushroom & Bamboo	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Leaf litter collection	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Encroachment	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Pole harvesting	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Fuelwood harvesting	Common <input checked="" type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input type="checkbox"/>
Timber harvesting	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Hunting	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>

Potential Management Options (list any potential management options for the CF/block)	
1	Plantation and thinning are recommended
2	Single tree selection is must while extracting trees for timber and firewood.

III. Kuwapani block

Format 1. Forest Resource Assessment Format	
Name of Community Forest	Lungsigang CF
Date of Assessment	27/10/2021
Name of block	Block
Block area	29.54 ha
Name of recorder	Tandin Wangchuk

Forest & Habitat Type					
Forest	<input checked="" type="checkbox"/>	Thicket/pole stage	<input type="checkbox"/>	Shrubland	<input type="checkbox"/>
Grassland	<input type="checkbox"/>	Plantation	<input type="checkbox"/>	Other	<input type="checkbox"/>
Vegetation type					
Subtropical forest	<input type="checkbox"/>	Chir pine forest	<input type="checkbox"/>	Warm broadleaved forest	<input checked="" type="checkbox"/>
Cool broadleaved forest	<input type="checkbox"/>	Mixed conifer forest	<input type="checkbox"/>	Blue pine forest	<input type="checkbox"/>
		Fir forest	<input type="checkbox"/>	Other	<input type="checkbox"/>

Definitions	
Broadleaf forest	75% or more of the tree species present are hardwoods
Conifer forest	75% or more of the tree species present are coniferous
Mixed forest	All other combinations of tree species
Mature Forest	Vegetation dominated by mature trees (trees > 40 cm dbh)
Thicket/pole stage	Vegetation > 3m in height consisting of young trees usually < 40cm dbh
Shrubs	Non-tree species > 2m in height (often thorny and multi-stemmed)
Shrub-land	Vegetation dominated by woody multi-stemmed plants or single stemmed plants and regeneration mostly < 3 m tall
Grassland	Vegetation dominated by grass species and where only a small part of the area is covered by trees or shrubs.
Crown cover	The percentage of the area covered by the crowns of trees forming the main canopy (usually mature trees)
Regeneration	Seedlings, saplings, and coppice re-growth of naturally occurring tree species that are less than 1.3 meters tall but greater than 30cm tall
Seed trees	Mature trees with healthy crowns capable of producing flowers and seed
Soil Cover	The percentage of the area with soil surface covered either by live vegetation or a layer of other plant vegetation

Forest Condition	
Write the names of main tree species	
Local name	Scientific name
Katus	<i>Quercus spp</i>
Champ	<i>Michelia champaca</i>

Kimbu	<i>Morus laevigata</i>
Plantation	
Is there any Yes <input type="checkbox"/> plantation? No <input checked="" type="checkbox"/>	Approximate height of planted trees (m)
Year planted	Is the plantation? Under stocked <input type="checkbox"/> Stocked <input type="checkbox"/> Overstocked <input type="checkbox"/>

Forest Condition -Age			
Mature <input type="checkbox"/> Main canopy of matured trees	Pole stage <input type="checkbox"/> Main canopy of pole- stage trees	Shrubland <input checked="" type="checkbox"/> Main canopy of shrubs, young trees, or regeneration	Any <input type="checkbox"/> No continuous canopy. Isolated trees only
Fir and Hemlock			

Forest Condition - Canopy density		
Dense <input type="checkbox"/> Canopy density > 70%	Open <input checked="" type="checkbox"/> Canopy density < 70%	Very open <input type="checkbox"/> No real canopy. Isolated trees only

Forest Condition – Regeneration		
Abundant <input type="checkbox"/> Regeneration easy to find in most places	Scattered/few <input checked="" type="checkbox"/> Regeneration only in some places and hard to find	None <input type="checkbox"/> No regeneration
Write the names of the 3 main tree species in the regeneration		
1) <i>Schima wallichii</i>	2) <i>Macaranga</i>	3) <i>Chukrasia tabularis</i>
Regeneration: Seedlings > 30cm and < 1.3m height		

Forest Condition – Approximate density of seed trees		
High <input type="checkbox"/> > 50 seed trees per ha	Moderate <input type="checkbox"/> 10 – 50 seed trees per ha	Low <input checked="" type="checkbox"/> < 10 seed trees per ha

Block Condition – Summary (Use the forest condition class box below to get an average condition for the block)			
Poor <input type="checkbox"/>	Average <input type="checkbox"/>	Good <input checked="" type="checkbox"/>	Very Good <input type="checkbox"/>
Does the main forest canopy consist of large, mature trees?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Forest Condition Class Box				
Age	Canopy density	Regeneration & coppice	Seed tree class	Condition
Mature forest	Dense	Abundant		
		Scattered/few		

Pole stage forest	Open	Abundant		
		Scattered/few		Average
	Dense	Abundant		
		Scattered/few		
	Open	Abundant		
		Scattered/few		
	Dense		Low	Moderate
	Open		Low	Average
Any	Very open	None		

Open spaces	
Approximate total open space area (ha)	None
Dominant vegetation type in the open space	NA
Cause of open space e.g. grazing, fire, harvesting, etc.	NA

Grazing and fodder			
Grassland type			
Natural <input checked="" type="checkbox"/>	Man-made <input type="checkbox"/>	Mixture <input type="checkbox"/>	Predominantly forest <input type="checkbox"/>

Main fodder species being used (<i>list 3 only</i>)	
Local name	Scientific name
Khamari	<i>Gmelina arborea</i>
Mawa	<i>Engelhardia spicata</i>
Katus	<i>Castanopsis spp</i>

Pasture quality (list the 3 dominant species in the grassland)		
Local name	Scientific name	Palatable/unpalatable
Use pattern	Seasonal <input type="checkbox"/>	All year <input type="checkbox"/>

Type of user	Migratory <input type="checkbox"/>	Local <input checked="" type="checkbox"/>	Both <input type="checkbox"/>
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Catchment Condition	
(i) Catchment condition – soil cover	
Soil cover	Soil cover class
> 50% of the soils are covered by vegetation	high <input type="checkbox"/>
25 - 50% of the soils are covered by vegetation	moderate <input checked="" type="checkbox"/>
< 25% of the soils are covered by vegetation	low <input type="checkbox"/>
(ii) Catchment Condition - Soil type and erosivity	
Soil type (colour, texture and type)	
Erosive <input type="checkbox"/> disperses and/or breaks up in water easily	Non-erosive <input checked="" type="checkbox"/> stable to water flow
(iii) Catchment Condition – Slope	
Slope (degrees)	Slope steepness class
<10°	Gentle <input type="checkbox"/>

10° – 30°	Moderate	<input checked="" type="checkbox"/>
> 30°	Steep	<input type="checkbox"/>
Catchment Condition – Summary (Use the catchment condition class box below to get the average condition for the block)		
Less critical	<input checked="" type="checkbox"/>	Moderately critical <input type="checkbox"/> Highly critical <input type="checkbox"/>

Catchment Condition Class Box			
Slope category	Soil erosivity	Cover class	Condition class
Flat	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	any	Less critical
Moderate	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	Any	Less critical
Steep	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	Any	Low critical

Fauna	
Local Name	Scientific name
Bear	<i>Ursus spp</i>
Deer	<i>Muntjacs Muntiacus</i>
Wild pig	<i>Sus scrofa</i>
Monkey	<i>Macaca mulatta</i>
Hornbill	<i>Buceros bicornis</i>

Biotic Pressures			
Fire	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Grazing	Heavy <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Fodder collection (list main species used)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
NWFP collection (list the main products including bamboo & cane)	Common <input type="checkbox"/> Mushroom & Bamboo	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Leaf litter collection	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Encroachment	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Pole harvesting	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Fuelwood harvesting	Common <input checked="" type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input type="checkbox"/>
Timber harvesting	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Hunting	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>

Potential Management Options (list any potential management options for the CF/block)	
1	Plantation and thinning is recommended
2	Single tree selection is must while extracting trees for timber and firewood.

IV. Norbuchu Block

Format 1. Forest Resource Assessment Format	
Name of Community Forest	Lungsigang CF
Date of Assessment	27/10/21
Name of block	Norbuchu
Block area	6.46 ha
Name of recorder	Jigmy Zangmo

Forest & Habitat Type					
Forest <input checked="" type="checkbox"/>		Thicket/pole stage <input type="checkbox"/>		Shrubland <input type="checkbox"/>	
Grassland <input type="checkbox"/>		Plantation <input type="checkbox"/>		Other <input type="checkbox"/>	
Vegetation type					
Subtropical forest <input type="checkbox"/>		Chir pine forest <input type="checkbox"/>		Warm broadleaved forest <input checked="" type="checkbox"/>	Blue pine forest <input type="checkbox"/>
Cool broadleaved forest <input type="checkbox"/>		Mixed conifer forest <input type="checkbox"/>		Fir forest <input type="checkbox"/>	Other <input type="checkbox"/>

Definitions	
Broadleaf forest	75% or more of the tree species present are hardwoods
Conifer forest	75% or more of the tree species present are coniferous
Mixed forest	All other combinations of tree species
Mature Forest	Vegetation dominated by mature trees (trees > 40 cm dbh)
Thicket/pole stage	Vegetation > 3m in height consisting of young trees usually < 40cm dbh
Shrubs	Non-tree species > 2m in height (often thorny and multi-stemmed)
Shrub-land	Vegetation dominated by woody multi-stemmed plants or single stemmed plants and regeneration mostly < 3 m tall
Grassland	Vegetation dominated by grass species and where only a small part of the area is covered by trees or shrubs.
Crown cover	The percentage of the area covered by the crowns of trees forming the main canopy (usually mature trees)
Regeneration	Seedlings, saplings and coppice re-growth of naturally occurring tree species that are less than 1.3 meters tall but greater than 30cm tall
Seed trees	Mature trees with healthy crowns capable of producing flowers and seed
Soil Cover	The percentage of the area with soil surface covered either by live vegetation or a layer of other plant vegetation

Forest Condition	
Write the names of main tree species	
Local name	Scientific name
Katus	<i>Quercus spp</i>
Champ	<i>Michelia champaca</i>

Chilawney	<i>Schima wallichii</i>
Plantation	
Is there any Yes <input type="checkbox"/> plantation? No <input checked="" type="checkbox"/>	Approximate height of planted trees (m)
Year planted	Is the plantation? Under stocked <input type="checkbox"/> Stocked <input type="checkbox"/> Overstocked <input type="checkbox"/>

Forest Condition -Age			
Mature <input type="checkbox"/> Main canopy of matured trees	Pole stage <input type="checkbox"/> Main canopy of pole- stage trees	Shrubland <input checked="" type="checkbox"/> Main canopy of shrubs, young trees or regeneration	Any <input type="checkbox"/> No continuous canopy. Isolated trees only
Fir and Hemlock			

Forest Condition - Canopy density		
Dense <input type="checkbox"/> Canopy density > 70%	Open <input checked="" type="checkbox"/> Canopy density < 70%	Very open <input type="checkbox"/> No real canopy. Isolated trees only

Forest Condition – Regeneration		
Abundant <input type="checkbox"/> Regeneration easy to find in most places	Scattered/few <input checked="" type="checkbox"/> Regeneration only in some places and hard to find	None <input type="checkbox"/> No regeneration
Write the names of the 3 main tree species in the regeneration		
1) <i>Schima wallichii</i>	2) <i>Macaranga</i>	3) <i>Chukrasia tabularis</i>
Regeneration: Seedlings > 30cm and < 1.3m height		

Forest Condition – Approximate density of seed trees		
High <input type="checkbox"/> > 50 seed trees per ha	Moderate <input type="checkbox"/> 10 – 50 seed trees per ha	Low <input checked="" type="checkbox"/> < 10 seed trees per ha

Block Condition – Summary (Use the forest condition class box below to get an average condition for the block)			
Poor <input type="checkbox"/>	Average <input type="checkbox"/>	Good <input checked="" type="checkbox"/>	Very Good <input type="checkbox"/>
Does the main forest canopy consist of large, mature trees?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Forest Condition Class Box				
Age	Canopy density	Regeneration & coppice	Seed tree class	Condition
Mature forest	Dense	Abundant		
		Scattered/few		

Pole stage forest	Open	Abundant		
		Scattered/few		Average
	Dense	Abundant		
		Scattered/few		
	Open	Abundant		
		Scattered/few		
	Dense		Low	Moderate
	Open		Low	Average
Any	Very open	None		

Open spaces	
Approximate total open space area (ha)	None
Dominant vegetation type in the open space	NA
Cause of open space e.g. grazing, fire, harvesting, etc.	NA

Grazing and fodder							
Grassland type							
Natural	<input checked="" type="checkbox"/>	Man-made	<input type="checkbox"/>	Mixture	<input type="checkbox"/>	Predominantly forest	<input type="checkbox"/>

Main fodder species being used (<i>list 3 only</i>)	
Local name	Scientific name
Khamari	<i>Gmelina arborea</i>
Mawa	<i>Engelhardia spicata</i>
Katus	<i>Castanopsis spp</i>

Pasture quality (list the 3 dominant species in the grassland)		
Local name	Scientific name	Palatable/unpalatable
Use pattern	Seasonal <input type="checkbox"/>	All year <input type="checkbox"/>

Type of user	Migratory <input type="checkbox"/>	Local <input checked="" type="checkbox"/>	Both <input type="checkbox"/>
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Catchment Condition	
(i) Catchment condition – soil cover	
Soil cover	Soil cover class
> 50% of the soils are covered by vegetation	High <input type="checkbox"/>
25 - 50% of the soils are covered by vegetation	moderate <input checked="" type="checkbox"/>
< 25% of the soils are covered by vegetation	Low <input type="checkbox"/>
(ii) Catchment Condition - Soil type and erosivity	
Soil type (colour, texture and type)	
Erosive <input type="checkbox"/> disperses and/or breaks up in water easily	Non-erosive <input checked="" type="checkbox"/> stable to water flow
(iii) Catchment Condition – Slope	
Slope (degrees)	Slope steepness class
<10°	Gentle <input type="checkbox"/>

10° – 30°	Moderate	<input checked="" type="checkbox"/>
> 30°	Steep	<input type="checkbox"/>
Catchment Condition – Summary (Use the catchment condition class box below to get the average condition for the block)		
Less critical	<input checked="" type="checkbox"/>	Moderately critical <input type="checkbox"/> Highly critical <input type="checkbox"/>

Catchment Condition Class Box			
Slope category	Soil erosivity	Cover class	Condition class
Flat	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	Any	Less critical
Moderate	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	Any	Less critical
Steep	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	Any	Low critical

Fauna			
Local Name		Scientific name	
Bear		Ursus spp	
Deer		Muntjacs Muntiacus	
Wild pig		Sus scrofa	
Monkey		Macaca mulatta	
Biotic Pressures			
Fire	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Grazing	Heavy <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Fodder collection (list main species used)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
NWFP collection (list the main products including bamboo & cane)	Common <input type="checkbox"/> Mushroom & Bamboo	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Leaf litter collection	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Encroachment	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Pole harvesting	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Fuelwood harvesting	Common <input checked="" type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input type="checkbox"/>
Timber harvesting	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Hunting	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>

Potential Management Options (list any potential management options for the CF/block)	
1	Plantation and thinning is recommended

10. Forest management and procedure

Objective	Activities	Priority (H,M, L)	Procedure	Responsibilities
To manage CF for sustainable production and utilization of timber/ NWFP.	Removal of dead and dying trees	H	Dead and dying trees will be allotted for timber and firewood.	CFMG
	Thinning	H	Remove pole sized trees from dense	CFMG
	Plantation/Afforestation	M	Plantation/afforestation should be carried out in places wherever necessary.	CFMG
To protect water sources for drinking and irrigation purposes	Fencing	M	Water sources will be adequately fenced.	CFMG
	Plantation	M	Plantation around water sources and along the rivers will be carried out wherever necessary.	CFMG
To rehabilitate barren area with appropriate timber/plant species	Thinning	H	Remove pole sized trees from dense	CFMG
	Plantation/Afforestation	M	Plantation/afforestation should be carried out in places wherever necessary.	CFMG
To generate cash income by selling NWFP as per harvesting guide lines prescribed.	To sell available NWFP	M	CFMG member will harvest as per harvesting guidelines with support from forest officials and will sell accordingly	CFMG and forest officials
Protect forest from illegal activities	Patrol inside CF	H	Resoop will patrol inside CF once in a month and report accordingly	Resoop as well as all CFMG members

11. Forest produce demand assessment

Produce	Annul requirement estimated)		No of Households that require produce annually (C)	Total requirement of the produce (annually)		Total requirement of produce in 10yers	
	Num ber (A)	Volume in cft or m ³ (B)		Number (8C)=D	Volume (in cft or m ³) (B*C)=E	Number (D*10)	Volume (in cft or

							m ³) (E*10)
For new Construction							
Drashing	5		4	20		200	
Cham	2		4	8		80	
Tsim	20		4	80		800	
Dangchung	40		4	160		1600	
For Repairing/Extension							
Drashing	2		6	12		120	
Cham	1		6	6		60	
Tsim	10		6	60		600	
Dangchung	20		6	120		1200	
For Other constructions (Kitchen, Toilet, Cowshed, Field guard)							
Drashing	1		5	5		50	
Firewood	1		41	41		410	
Fencing post (Tsim size)	25		20	500		5000	
Flag poles	108		5	540		5400	
Bamboo	500		41	20500		205000	
cane	30		41	1230		12300	

In relation to the demand and forest products prioritization done by CFMG as illustrated above, the proposed CF has no capacity to meet the above demand. Therein, their additional requirement must be met from the Government Reserved Forest. However, the restoration of the barren area and other aspects of management will be carried out by the community in accordance with the management plan.

12. Annual Allowable Cut

Annual Allowable cut table								
Block	Annual Allowable cut table (AAC)	dangchung	Tsim	Cham	Drashing	Firewood	Flag post	Fencing Post
Block I (Patsagang)	Stand and stock data	23.69	5.18	26.66	17.76	12.58	4.44	2.96

	(Volume M3)	10.97	2.40	12.35	8.22	5.83	2.06	1.37
	in cft	387.48	84.73	436.06	290.49	205.76	72.62	48.41
	No of trees	220.16	24.00	30.88	4.11	2.91	41.26	41.15
Block 2 (Dhap Block)	Stand and stock data	23.69	5.18	26.66	24.42	13.33	4.44	4.44
	(Volume M3)	11.36	2.48	12.79	11.71	6.39	2.13	2.13
	in cft	401.33	87.75	451.64	413.69	225.82	75.22	75.22
	No of trees	228.03	24.86	31.99	5.86	3.20	42.74	63.92
Block 3 (Kuwapani49 Block)	Stand and stock data	53.33	48.00	20.00	21.33	25.33	33.33	17.33
	(Volume M3)	14.32	12.89	5.37	5.73	6.80	8.95	4.65
	in cft	505.84	455.28	189.70	202.32	240.26	316.14	164.38
	No of trees	287.41	128.97	13.43	2.86	3.40	179.62	139.70
Block 4 (Norbuchhu Block)	Stand and stock data	47.58	66.67	6.67	14.25	26.67	13.33	34.24
	(Volume M3)	2.79	3.92	0.39	0.84	1.57	0.78	2.01
	in cft	98.69	138.29	13.84	29.56	55.32	27.65	71.02
	No of trees	56.08	39.18	0.98	0.42	0.78	15.71	60.36
Whole CF	(Volume M3)	39.45	21.69	30.90	26.50	20.59	13.92	10.17
	in cft	1393.34	766.05	1091.24	936.06	727.16	491.62	359.03
	No of trees	791.67	217.01	77.28	13.25	10.30	279.33	305.12

13. Annual Allowable Cut and demand comparison

Annual Allowable Cut and Demand Format							
Produce	Total ACC		Total Annual Demand		Difference		Comments
	No of trees	Volume (either in cft/m ³)	No of trees	Volume (either in cft/m ³)	No of trees	Volume (either in cft/m ³)	
Drashing	13		32		-19	25080.59 cft	The drashing can be met from GRF
Cham	77		14		+63	1547.95 cft	The Cham is in excess
Tsim	217		140		+77	192.36 cft	The tsim is in excess
Dangchung	791		280		+511	10.15 cft	The dangchung is in excess
Firewood	10		41		-31	-	The firewood can be met from GRF however members have been using

							lops and tops including dried and fallen trees so far
Fencing posts	305		500		-195	-	The fencing post can be met from GRF
Flag poles	279		540		-261	-	The flagpoles can be met from GRF

Comparing the AAC and the demand, it's very clear that most of the drashing size timbers and firewood need to be met from the Government Reserved Forest.

14. Participatory Environment assessment

Activities proposed in CFMP	Potential Environmental effects				Potential Socio-economic effects			
	Soil	Water	Wild animals	plants	Traditional forest use	Cultural and religious values	Local employment	Local benefits from forest produces
Plantation	+++	+++	+++	0	+++	++	+++	+++
Thinning	+++	+++	0	+++	+++	0	+++	+++
Timber/F/wood/Flagpoles/Fencing posts harvesting	---	---	---	---	--	0	+++	+++
Protection of water sources	++	+++	++	+++	++	++	+	+
NWFP collections	--	--	---	+	0	0	+	++

Positive effect shown by +++, Negative effect ---, No effect (or not relevant) shown by 0

15. Procedure to address potential negative environment effect

Activity	Procedure
Timber/F/wood/flagpoles/Fencing posts harvesting	<ul style="list-style-type: none"> - Felling of trees on the steep slopes will be strictly prohibited - Avoid felling within the water catchment area - Dragging of logs/timbers down the slopes will not be permitted
NWFP collection	<ul style="list-style-type: none"> -Any NTFP collection requiring digging of soil shall be refilled by concerned individual. -Harvesting of any NWFP should be as per the guidelines

16. Climate hazard matrix

	Drought	Forest Fire	Animal diseases	Reduced crop yields
Drought	X	Forest fire	Animal Diseases	Reduced crop yields
Forest Fire		X	Animal Diseases	Reduced crop yields
Animal diseases			X	Reduced crop yields
Reduced crop yields				X

17. Forest Produces Prioritization and Ranking Matrix

Forest Produces Prioritization Matrix							
	Timber	Firewood	NTFP	Fodder	Leaf litter	Water	Grazing
Timber	x	Timber	Timber	Timber	Timber	Water	Timber
Firewood		x	Firewood	Firewood	Firewood	Water	Grazing
NTFP			x	NTFP	NTFP	Water	Grazing
Fodder				x	Fodder	Water	Grazing
Leaf Litter					x	Water	Grazing
Water						x	Water
Grazing							x

Water – 6, Timber – 5, Grazing-4, F/wood-3, NTFP-2, Fodder-1, Leaf litter-0

Water is found to be the most crucial resources for the CFMG members followed by timber, grazing and firewood. NTFP and fodder have been ranked to be fair with leaf litter as least priority for the members. Therefore, it is necessary for the members to carry out relevant activities to protect and preserve resources that are more of important to them.

18. Species preferences and availability.

The reasons for carrying out species preferences and availability is mainly to understand what species are preferred most against the availability of that species by the CF members. Accordingly, CF members will understand what species of timber need to be planted, protected or removed depending on their requirement. This will also help in decision making of forest management for the CFMG.

species	Uses	Firewood	Timber	Leaf litter	Fencin gpost	Flag poles	Agri-tools
<i>Lali</i>	Preference	XXX	XXXX	-	X	-	X
	Abundance	OOO	OOO	-	OOO	-	O
<i>Quercus</i>	Preference	XXX	XXX	XXX	-	-	-
	Abundance	OOO	OOO	OOOOO	-	-	-
<i>Champ</i>	Preference	X	XXXXX	XXX	-	-	-
	Abundance	OOO	O	O	-	-	-
<i>Ambakhey</i>	Preference	XXXXX	X	-	XXX	-	-
	Abundance	OOOOO	OOO	OOO	OOO	-	-
<i>Arkawla</i>	Preference	XXXXX	-	-	XXX	-	-
	Abundance	OOOOO	-	-	OOO	-	-
<i>Mawa</i>	Preference	XXX	XXX	-	-	-	-
	Abundance	OOO	OOO	-	-	-	-
<i>Pipal patey</i>	Preference	XXX	XXX	-	X	X	-
	Abundance	OOO	OOO	-	O	O	-
<i>Saur</i>	Preference	XXX	XXX	-	XXX	-	X
	Abundance	O	O	OOO	OOO	-	O
<i>Malata</i>	Preference	X	-	-	-	-	-
	Abundance	O	-	OOO	OOO	-	-

NB:High preference/abundance: XXXXX/OOOOO,

Medium preferences/Abundance:XXX/OOO,

Low preference/abundance: X/O

NA: -

19. Waste management

No non-biogradable waste will be allowed to be disposed inside CF area. The CFMG members will as far as possible try to maintain zero waste inside CF. Any waste inside CF will be collected and disposed properly. The defaulter(s) of waste disposal inside CF will be dealt as per Waste Prevention and Management Regulation of Bhutan, 2012.

20. Harvesting and collection of forest products

[illegible]

Rhus chinense (Bokimblo)												
Namdha (Namnam)												

21. Work Plan

The CFMG prepared activities to be implemented over ten year's period of CF Management Plan. The table shows details of operational plan for the next ten years.

Location	Activity	Year										Responsibility
		1	2	3	4	5	6	7	8	9	10	
Patsagang Block	Thinning											CFMG
	Surface collection feasibility study											CFMG
	Revival of old lake at Pakheydara											CFMG
Dhap block	Plantation of Bamboo											CFMG
	Nursery establishment											CFMG
	Plantation maintenance											CFMG
	Water source protection											CFMG
Norbuchu Block	Thinning											CFMG
	Water source protection											CFMG
	Plantation											CFMG
Kuwapani Block	Study in surface collection feasibility											CFMG
	Thinning											CFMG
	Plantation											CFMG

22. Evaluation and Management Plan

Chairperson and committee members will lead the CFMG to review and monitor the CF management plan and other implemented activities embedded as per the CF management plan during their committee and general meetings. The concern officials from Divisional Forest Office, Sarpang will regularly monitor the CFM activities. Further, the CFMG reporting would be done in accordance with the guidelines of DoFPS. Lungsigang CFM plan shall be evaluated jointly by a team from Divisional Forest Office, Sarpang during **last quarter of the 5th year** of the plan period. Final evaluation and revision shall be done at the **last quarter of the 9th year** of the plan period.

PART B: BY- LAWS

1. Membership Arrangement

A total of 41 households are the members for Lungsigang CF. All members should have house no and thram no. to be a member of CF. The annual membership fee for the CFMG is Nu.150/member. The membership fees will be collected in the month of January every year.

The new member can join CF by paying sum of all the member fees paid till date. Sum of nu. 7500 should be paid by the new member as compensation to CF for first 10 years of their active services. The new member is liable to pay sum of additional nu. 500 for every passing year of the CF since establishment.

However, separated (Bhai-chut) of CFMG member who is a resident of the village under separate Gung and Thram of his own can become member after paying double the amount of the membership fee collected till date.

All new members and separated (bhai-chut) who desires to join the CF is liable for payment that is mentioned above inclusive of any period of that particular year.

Members may leave the CFMG under following condition

- ✓ Any members who wish to withdraw should resign after submission of duly filled CFMG membership resignation application form to Chairman as per Annexure 13 of Forestry Field Manual for Bhutan, 2018.
- ✓ Any member leaving the CFMG at his/her wish including terminated members shall not get any shares and will not be allowed to re-join the group.
- ✓ If any of the members happen to leave from the CFMG on domestic ground and other unavoidable circumstances he/she can withdraw from membership and avail shares entitled to him/her till date. The shares entitled to him/her will be total amount of membership fees paid to CF till the date of withdrawal.
- ✓ Any members that are mandatorily required to terminate by the CFMG due to his/her negligence and adherence to CFMP by-laws will be take disciplinary action as per the CFMP. The defaulters will be given period of one month for clearing all the issues made against his/her name. If issue is not solved within the given period, the cases will be further forwarded to Gewog/Divisional Forest Office, Sarpang.

2. Management Committee Formation

The CFMG shall form members to function as Management Committee. The committee will be the highest decision-making body of CF management. Following are the members of CF management committee:

Sl no	Responsibility	Name	Remarks
1	Chairman	Mani Lal Rai	
2	Secretary	Padam Lal Tamang	
3	Treasurer	Ram Bdr Tamang	
4	Resoop 1	Lak Man Rai	Kuwapani49 & Norbuchhu
5	Resoop 2	Lakpa Tshering Tamang	Dhap & Patshagang
6	Auditor 1	Pema Tshering Tamang	
7	Auditor 2	Cheku Dolma Tamang	
8	Messenger 1 (Tshogpa)	Dawa Dorji Tamang	
9	Messenger 2 (Tshogpa)	Ashok Rai	

3. Tenure of committee members:

The tenure of Management Committee will be for 3 years. He/she can serve for another successive years if his/her services are found satisfactory. However, if he/she is not possible to manage the activities related to CF well, anyone from CFMG would be nominated by CFMG on majority vote. The CFMG Committee member will be elected through the CFMG meeting.

4. Responsibilities of chairman

1. Chair the meeting
2. Coordinate with other stakeholders related CF activities.
3. Sanction forest products as per management plan
4. Joint signatory for CF fund transaction.
5. Coordinate/preparation of work plan
6. Preparation of annual work plan with members
7. Monitoring, evaluation, and implementation of CF plan
8. Conflict/dispute management.
9. CF fund management
10. Coordinate meeting as and when required

5. Responsibilities of Secretary

1. Chair the meeting in absence of Chairman
2. Assist Chairman in related to CF activities
3. Maintain the minutes of the meetings
4. Assist in CF fund management
5. Joint signatory for CF fund transaction.
6. Record keeping in all CF related activities.
7. Conflict/dispute management.
8. Prepare and present the CF status to the CFMG biannually.

6. Responsibility of Treasurer

1. Maintain financial records
2. Collect the community fund & deposit in Bank within three months for the date of collection.
3. Joint signatory for CF fund transaction.
4. Maintenance of stock register
5. Prepare and present the financial status biannually to the CFMG.

7. Responsibility of Auditor

1. To observe whether CF activities are implemented in aligned to CFMP.
2. To audit CF fund management.
3. Submit audit report to management committee annually.
4. Present audit report to CFMG annually or as and when required.
- 5.

8. Responsibilities of Resoops

1. To patrol CF area once in a month.
2. To submit report to chairman in written.

9. Responsibilities of messenger (Tshogpa)

1. To inform CF members on any CF related activities

10. Responsibilities of CFMG members

1. Attend general meeting.
2. Report any illegal activities to management committee.
3. Attend and contribute labor during the implementation of CF activities.
4. Participate in election of management committee.
5. Follow the rules and procedures of CFMP and by-laws.

11. Incentives

Nu. 600/day will be paid to any CF members who carry out CF related activities at Gelephu and beyond. For any CF related activities at Jigmecholing (Suray), sum of nu. 200/day will be paid. However, if CFMG members attend official meetings and trainings, the above incentives are not applicable.

Invitation of any officials related to CF will be provided with full three meals per day and will arrange accommodation for guest for any duration. However, if the activities are supported by RGoB or other projects, the above norms will not be applicable.

Resoops or anyone who report and apprehend offenders will be rewarded 50% of the fines and penalties levied.

12. Royalty and fees

The royalty for any forest products will be realized as per the Forest and Nature Conservation Rules and Regulation of Bhutan (FNCRR 2017) and its amendment 2020.

13. Fines & Penalties

All member and non-members found guilty of an offence and involved in any illegal activities shall be dealt as per the provision of Forest and Nature Conservation Rule 2017 and its amendment, 2020.

CF members absent for meetings as well as during works related to CF will be imposed fine of Nu. 215/day. He/she will be fined Nu. 300/day if found absent for second time consecutively. However, members will be waived off of fines if the reasons are genuine.

The offenders causing forest fires inside the CF area will be imposed fines as per the F&NCRR, 2017 and its amendment, 2020.

Illegal/poaching inside CF will be dealt as per the F&NCRR, 2017 and its amendment, 2020.

14. Cattle grazing.

CFMP members are allowed to let cattle graze inside CF area. No cattle will be allowed inside restricted identified areas such as plantation, nursery, and water source areas. No outsider's cattle will be allowed to graze inside CF area. If cattle are found inside restricted area, fines of Nu. 50/seedlings will be imposed and for outsider, fine of Nu. 500/cattle will be imposed.

No sheep and goats will be allowed for grazing inside the CF area. Nu. 300/head will be imposed as penalties for CF members and Nu. 1000/head will be levied for outside if sheep/goats were seen inside the CF area.

15. Financial Arrangement/loan

1. Source of fund

- ✓ Annual membership fee collections
- ✓ Royalty/fee collection
- ✓ Collection of fines for illegal activities within CF
- ✓ Sale of surplus timber and NWFPs

2. CF fund management

- ✓ Seedling procurement for valuable timber species
- ✓ Procurement of office stationeries
- ✓ Expenditure for any activities related to CF
- ✓

3. Loan

- ✓ CFMG committee member will study and prioritize before loaning to the members.
- ✓ 2% interest per month will be levied to the loanee.
- ✓ Loan will be applicable only for the CFMG members.
- ✓ The loan amount shall not be less than Nu. 10000.00 and shall not exceed nu.30000.00.
- ✓ Agreement will be drawn between the CFMG committee members and the loanee.
- ✓ The validity for the loan shall be one year only after which the loanee shall renew.
- ✓ Any disputes related to loan shall be resolved as per the case dispute procedures of this CFM plan book.

16. Benefit Sharing mechanism

- ✓ The harvesting of timber for new construction or repairing and firewood (not dry firewood) shall be done as per seasonal calendar of CFMP.
- ✓ The allotment of the timbers and firewood to the members will be carried out after prioritizing members' need and their eligibility. If allotted members cannot harvest or extract, he or she should inform the committee members and accordingly committee members can allot to next eligible member.
- ✓ The timber/firewood/fencing post extraction will be carried out as per the silviculture system.
- ✓ The trees felled inside CF due to developmental activities along the highway can be availed by the CF members or the surplus can be sold by committee members.
- ✓ CF committee will allot permission to any interested CFMG member for sale of any NWFP from CF area after paying prescribed royalty. The allotment will be after inclusive decision by committee members.
- ✓ If CFMG member after availing timbers from CF and completion of his/her house

construction/renovation, he or she can sell the surplus timber to needy CFMG members upon consultation with the CF committee members.

- ✓ 10 nos of cane shoot (Patsha) for self-consumption per member can be harvested for free after which prescribed royalty will be levied.
- ✓ Any CF member availing timber shall be liable to replace equal number of seedlings in CF area.
- ✓ In any emergency cases and natural disaster, need of resources from the CF can be availed if there are any surplus as per CFMP annual harvesting Limit. The allotment can be as per the committee meeting decision too.

17. Meeting

The committee members of the CFMG will meet four times in a year whereas for CFMG general meetings, members will meet twice a year to conduct committee and general meeting respectively. The meeting will discuss on CF management plans, issues and way forward as per the CF management plan.

18. Conflict Management

Any disputes within the CFMG or outsiders with regard to CF will be sorted out and solved by the Committee members. However, if the case is not able to be resolved, the matter will be forwarded to Divisional Forest Office and if necessary, it will be forwarded to Court accordingly.

19. Amendment of CFMP Plan

The CF management plan is prepared for 10 years and the CFMG is obligatory to implement accordingly. The revision will be done in the ninth year of the plan period with the consultation of the Divisional Forest Office, Sarpang. However, if there are any omissions or genuine requirement for better management of CFMG, the proposal may be put up through general meeting and submit to Division for approval.













20. Power of the Department


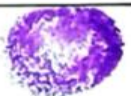
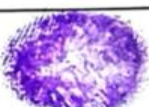

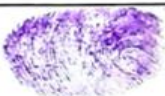
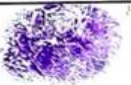
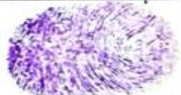


Department is fully empowered to take action with regard to both forestry and other developmental activities in part or whole of the Community Forests. In addition, the Department is specifically empowered to:

- i. Take action against violators of the Act, Rules or Management Plan, regardless of whether requested by the CFMG or not.
- ii. Inspect, monitor, review the records and otherwise supervise the activities of the CFMG, and take action (including cancellation/suspension of the CFMG's certificate, where warranted under these Rules) against the CFMG or any of its members who may be acting in violation of the provisions of the Management Plan or any provisions of the FNCRR, 2017.
- iii. Cancellation/suspension/reinstatement of CF Certificates shall be dealt as per the provisions of FNCRR, 2017 (Section 102, 103, 104, 105(1&2), 106 & 107 (1, 2 &3)).

21. CF Member List

	Name	CID NO	Thram no.	House No.	Signatures
1.	Mani Lal Rai	11308000213	1	Pa-8-135	
2.	Durga Maya Mongar	11314000017	1461	Pa-8-Nil	
3.	Amber Kumar Rai	11308005662	10	Pa-8-142	
4.	Bishnu Bdr. Tamang	11308003325	53	Pa-8-62	
5.	Ran Bdr Subba	11308000288	12	Pa-8-144	
6.	Sukman Tamang	11308003340	1305	Pa-8-64	
7.	Som Moti Rai	11308000203	132 05	Pa-8-132	
8.	Dawa Dorji Tamang	11308003379	1443	Pa-8-559	
9.	Deo Maya Tamang	3138000187	240	Pa-8-60	
10.	Rum Bdr Gurung	11308000273	11	Pa-8-141	
11.	Phurba Tamang	11308003303	60	Pa-8-52	

12	Tej Bdr Gureng	11308003456	60	Pa-8-67	
13	Bhakti Devi Gureng	11308000297	70	Pa-8-145	
14	Chaturman Rai	11308000314	03	Pa-8-147	
15	Gumbir Singh Rai	11308000202	05	Pa-8-132	
16	Mon Bdr Tamang	10101001866	63	Pa-8-Nil	
17	Lhakpa Tsering Tamang	113080005649	Nil	Pa-8-90	
18	Brokha Bdr Rai	11308000221	199	Pa-8-513	
19	Jog Bdr Rai	11807000608	1169	Pa-8-Nil	
20	Aiti Maya Rai	11308000231	08	Pa-8-136	
21	Lal Bdr Rai	11308000188	05	Pa-8-130	
22	Tika Ram Rai	11308000174	02	Pa-8-128	
23	Bhudiman Rai	11308000248	09	Pa-8-138	

24	Durga Bdr Tamang	11308003320	53	Pa-8-Nil	
25	Phul Maya Tamang	11308003273	63	Pa-8-58	
26	Dhan Maya Gurung	11308000296	1036	Pa-8-496	
27	Phul Maya Rai	11308000173	02	Pa-8-Nil	
28	Durga Bdr. Tamang	11308003382	44	Pa-8-67	
29	Laxmi Dolma Tamang	11802000783	1475	Pa-8-612	
30	Ram Bdr Tamang	11308003333	32	Pa-8-63	
31	Lakman Rai	11807000606	1169	Pa-8-Nil	
32	Ph Suk Maya Gurung	11304001403	211	Ga-12-23	
33	Dawa Dawa Dorji Tamang	11308005827	22	Pa-8-308	