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PANGZUR PHUENSUM TSHOGPA COMMUNITY FOREST MANAGEMENT PLAN

1st REVISION



Plan period: (2023-2033)

Chiwog: Baling

Gewog: Langthil

Dzongkhag: Trongsa



APPROVAL SHEET

Name of Community Forest	Pangzur Phuensum Tshogpa
Village	Pangzur
Chiwog	Baling
Gewog	Langthil
Dzongkhag	Trongsa
Production Area (Hectare/Acre)	103.33/255.32
Protection Area (Hectare/Acre)	52.53/129.80
Total Community Forest Area (Hectare/Acre)	155.86/385.13
Total CFMG member (No. of HH)	28

Prepared and Submitted for Approval

	Community Forest Management Group	Forestry Representative (CFMP Facilitators)	Gewog Administration	Social Forestry Section	Divisional/ Park Office
Signature					
Name	Pema Tshering	Tashi	Rinzin Wangchuk	Karma Dorji	Pankey Dukpa
Title	Chairperson	Sr. Forest Ranger-I	LANGTHIL GEWOG Trongsa : Bhutan	Head	Chief Forestry Officer

Reviewed and Submitted for Approval

Signature		
Name	Bhehaim Dorji	Sonam Tobgay
Title	Focal Officer	Chief Forestry Officer
Division	Forest Resource Planning Management Division	Forest Resource Planning Management Division

APPROVED BY:



DIRECTOR

DEPARTMENT OF FORESTS AND PARK SERVICES

Approved vide Notesheet No.DoFPS/FRPMD/FRPIS/CF_1(b)/2022-2023/1184on dated June 13, 2023

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Acronyms

ac.:	Acres
AAC:	Annual Allowable Cut
BDBL:	Bhutan Development Bank Limited
CC:	Gewog Community Center
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
DOR:	Department of Road
FIRMS:	Forest Information and Resources Management System
FNCRR, 2017:	Forest and Nature Conservation Rules and Regulations, 2017
FRDD:	Forest Resources Development Division
GBCL:	Green Bhutan Corporation Limited
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

QGIS: Quantum Geographic Information System
SRFL: State Reserved Forest Land
Tshogpa: Representative of the CFMG in CF management committee

Executive Summary

Pangzur Phuensum Tshogpa Community Forest is located in Pangzur village, above Zhemgang-Trongsa National Highway under Langthil Gewog, Trongsa dzongkhag. The CF was established in 2012 by 28 households comprising of 78.40 hectares. The CFMG proposed to manage CF for its second term management during the consultation meeting conducted by Forest Range Officer, Trongsa. During this second term management, two households had to compulsorily resign as they could not produce Gung and ultimately will be managed by 28 households comprising net production area of 103.33 hectares. CF area has been extended in Kranchan and Pangzur Chorten with additional gross area of 76.82 hectares.

CF constitutes of two areas namely Kranchan and Pangzur Chorten with net operable area of 97.79 and 5.12 hectares respectively and gross area of 150.10 and 5.12 hectares respectively. An area of 52.31 hectares was identified as protection area as road and stream buffers. The forest is predominantly covered with warm broadleaved forest mixed with Chirpine. CFMG prefers Chirpine as prime timber tree in the area.

The Annual Allowable Cut of whole CF is 23 drashings, 75 Chams, 137 Tsims, 75 Dangchungs and 66 firewood (drashing+Cham sized). However, there are deficits of 2 drashings, 88 tsims which may be allotted from SRFL. On the contrary, there are 38 number of firewood trees excess from the CF where CFMG may explore selling it to generate income. CFMG planted bamboos that have grown up and attained adequate size for utilization. This is also another area that the CFMG can explore to generate income. CFMG's plantation under the financial support of GBCL have totally failed during its first term management.

CFMG shall carry out CF developmental activities such as CF boundary clearing, plantation of bamboo rhizomes, plantation maintenance, cleaning and thinning and regular patrolling. CF records and book keeping refreshers' training is required urgently from the beginning of the year.

CFMG shall explore to generate income and benefit members by providing loans. Monitoring and evaluations will be done Divisional Forest Office, Bumthang OR Range Office, Trongsa Range.

PART I: MANAGEMENT PLAN

I. Introduction

Pangzur Phuensum Tshogpa Community Forest is located in south of the settlement and above Trongsa-Zhemgang national highway under Langthil Gewog. This is the second term management plan which will be managed by 28 households. During this management term, two households had to compulsorily resign for not fulfilling the eligibility criteria to have *Thram* and *Gung* as per section 78(1) of Forest and Nature Conservation (Amendment) Rules and Regulations of Bhutan, 2021. CFMG members consists of various ethnolinguistic groups such as Mangdep, Sharchop, Kurtoeb and Ngalop.

The total area of CF is 385.13 acres (155.86 ha) which includes two block of the CF and has increased 191.40 acres from the previous area of 193.73 acres. The forest type is mixed broadleaved Chirpine forest that consists of tree species such as *Pinus roxburghii*, *Castanopsis spp.*, *Quercus lanata*, *Quercus griffithii*, *Quercus glauca*, and *Rhus spp.* are present in the CF and species like *Indigofera dosua* and *Lyonia spp.* are common understory shrubs.

During the first term management, CFMG have carried out developmental activities such as plantation of trees and bamboo, cleaning of forests, and forest fire line constructions. CFMG generated income through sale of bamboo culms, collection fees, and fines and penalties. CFMG created plantation area of 34.56 acres under the financial support of Green Bhutan Corporation Limited in 2018-2019. The budget balance of CFMG as of December 2022 was 0.198 Million. CFMG have disbursed loan to 5 members and cash balance was Nu.0.030 Million was in the CFMG account.

The Annual Allowable Cut of CF is 23 drashing, 75 Chams, 137 Tsims, 75 dangchung and 66 firewood in terms of number of trees/poles which is equivalent to **3248 cfts** of timber trees and **1666 cfts** of non-timber trees/firewood. There is resource deficit of 2 drashings, and 88 tsims. Due to use of electrical appliances in the household, use of firewood has drastically reduced and CF have the potential to sell 38 numbers of firewood in future.

The objectives of CFMG management are;

- *To improve forest condition and protect forest for future generation*
- *Ensure equitable distribution of forest resources among the CFMG members and ensure sustainable utilization*
- *To generate income*

The resource assessment was carried out applying regular plots designed in QGIS 3.18 and assigned 70 plots with plot to plot distance of 146 m X 146 m. Community Forest Map

II. Review report of past management plan

The monitoring and evaluation of CF for the last ten years was carried out by Range Office, Trongsa and following are the summary of report.

Financial status

Community Forest Management Group built their fund from collection of annual fees, fines from the absentees, interest from loans and sale of bamboos planted by the CFMG. CFMG provided loans to the CFMG for renovation and construction of houses. The details of the fund status of CFMG is indicated in the following table;

Total capital	Loans	Cash in hand	Bank balance
164489.10	140000	1650	22839.10

Activities carried out

CFMG carried out the following activities during for better development of CF;

- Plantation of 34.56 acres by GBCL in 2018
- Plantation of 3 acres of bamboo (*Bambusa nutans*)
- Boundary clearing of CF
- Cleaning of the forest 1 acre
- Conducted 10 annual meetings

Number of timber trees and other resources extracted

CFMG have extracted the following forest resources from their CF during the management term;

- 65 drashings,
- 180 numbers of trees for firewood and
- 100 numbers of bamboos

Other benefits

CFMG were benefitted from the loan facility particularly in terms of renovating their houses and few new constructions.

III. Community Forest Maps

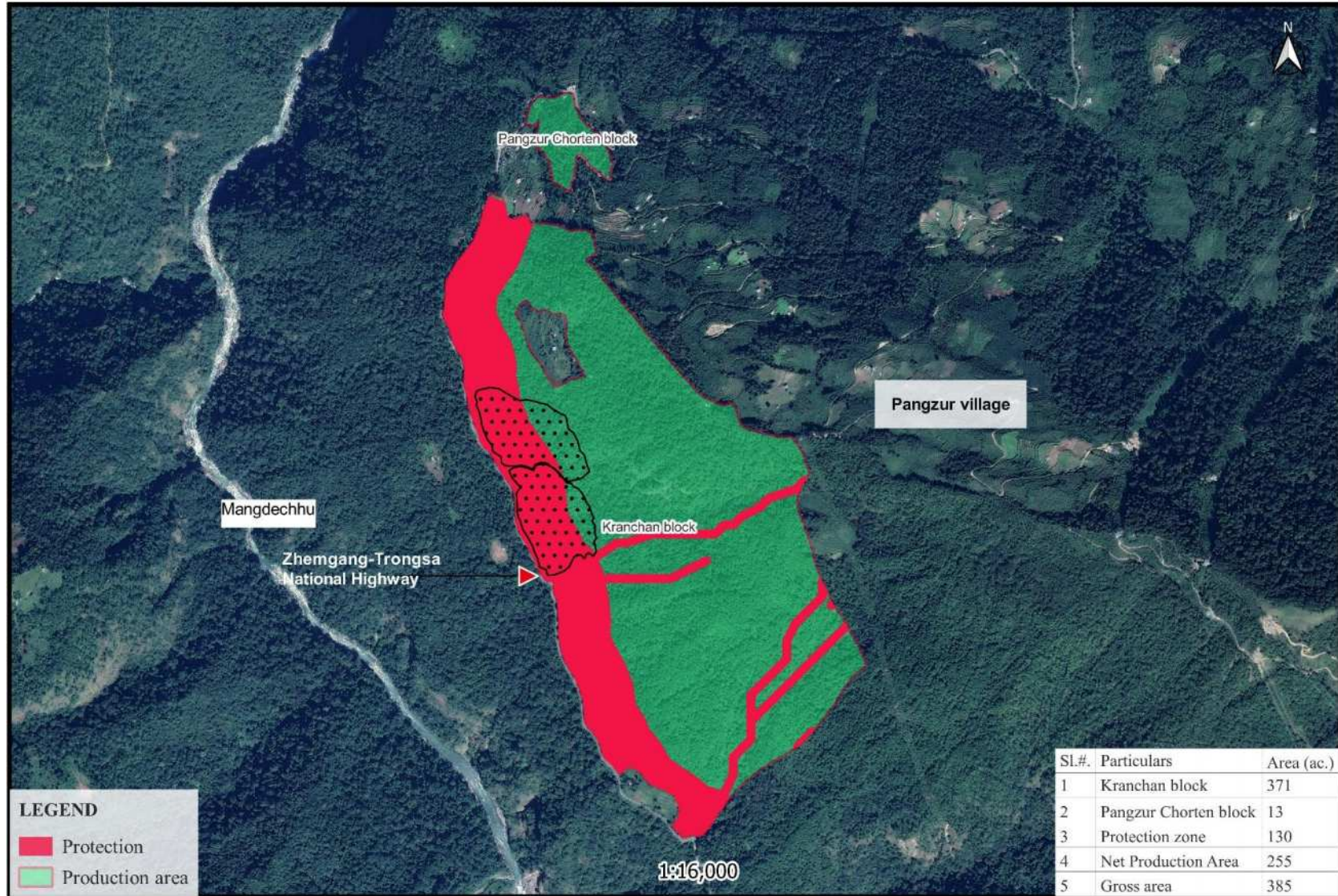


Figure 1: Map of Community Forest boundary

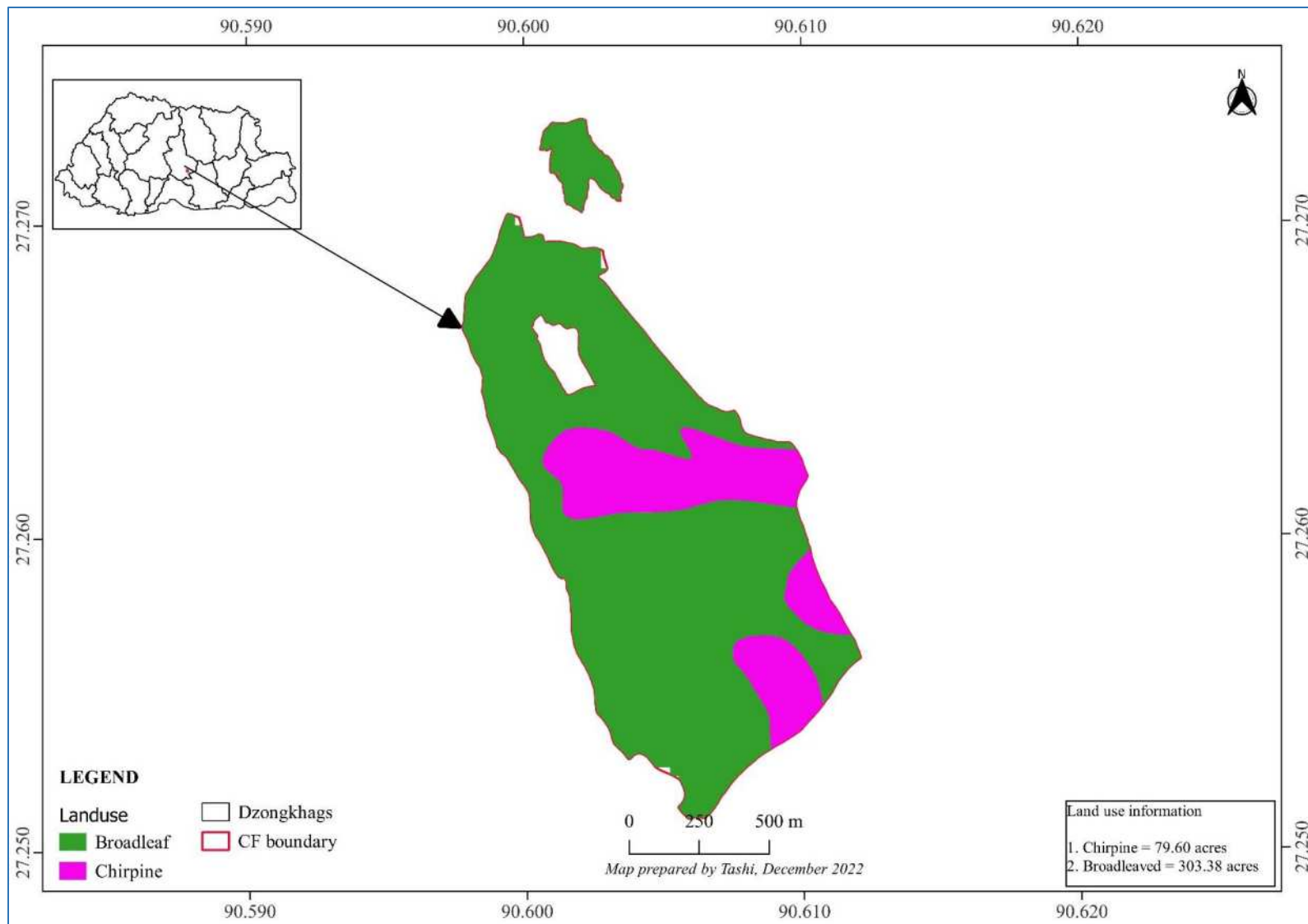


Figure 2: Land Use Land Cover Map of Pangzur Phuensum Tshogpa Community Forest

IV. Community Forest boundaries

Boundaries	Features
West	Tsutpii (National Highway)
East	Jalakpee
South	Gangjay Phok
North	Pangzur Chorten

V. Planning Process

Date	Activities
4/11/2022	Consultation meeting conducted by Range Officer, Trongsa Range
20/12/2022	Public meeting conducted by the Focal Officer of Division Office
21-22/12/2022	Forest resource assessment by staffs of Trongsa Range, Tashiling Beat, Nubi Beat and Langthil Beat
23-25/12/2022	Management planning and by-laws revision.

VI. Social information

Name of the villages	Rewtala, Pangzur, Bartsa, Pandee, Thratpong, Pisipong, Numphong
Ethic groups with CFMG	Sharchop, Mangdip, Ngalong
Basic amenities	Farm road, irrigation and drinking water, terrace development, ORC, rural electrification, electric fencing
Total households (HH) number of CFMG	28
Population of CFMG	128 (male 61 and female 67)
% male and % female	48% & 52%
Main source of income	Sale of Chilli, off-farm business by male
Cattle population of the CFMG	127
Main crops	Maize, Chilli, paddy, wheat, sweet buckwheat, Bitter buckwheat
Cropping pattern	Land preparation>Maize>Chilli>Paddy nursery preparation>Irrigation of paddy field, Transplantation of Chilli, Bitter buckwheat>Mustard>Wheat>harvest Chilli>harvest maize>harvest paddy>harvest bitter buckwheat
Any other information	There is problem of crop raiding by monkey, deer, Sambar, porcupine, wild pig.

VII. Forest Information

Mixed broadleaved and patches of Chirpine Forest is the forest type of the CF. Chirpine is mixed with broadleaved forest sporadically through entire area of **Kranchan and Pangzur Chorten** area. The CF is kept as one block as the forest type and management aspect is same in both the areas. The average basal area of the entire area is **21m²/ha**. The dominant species are *Pinus roxburghii*, *Quercus spp.*, *Castanopsis spp.*, and *Rhus spp.* The forest contains rocks and boulders especially in the Kranchan area. The plantation was carried out in 2018 with support from GBCL, Trongsa.

The survival percent of the plantation is poor for which CFMG has planned to replace it by planting bamboos. CFMG have also planted bamboo in Pangzur Chorten area and sold bamboo culms worth Nu. 10,000/- and CFMG will continue planting bamboo in the area.

Kranchan Block

Format 1. Forest Resource Assessment Format	
Name of Community Forest	Pangzur Phuensum Tshogpa
Date of Assessment	20/12/2022
Name of block	Kranchan
Block area	150 hectares~371 acres
Name of recorder	Tshering Wangdi, Langthil Beat Office.

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

Forest Condition (Tree species)				
Local name			Scientific name	
Tsagshing			<i>Pinus roxburghii</i>	
Pang			<i>Quercus griffithii</i>	
Jan Sang			<i>Schima wallichii</i>	
Plantation				
Is there any plantation?	Yes	<input checked="" type="checkbox"/>	Approximate height of planted trees (m) 0.5meters	
	No	<input type="checkbox"/>		
Year planted	2018-2019		Is the plantation?	Under stocked <input checked="" type="checkbox"/>
				Stocked <input type="checkbox"/>
				Overstocked <input type="checkbox"/>

Forest Condition –Age			
Mature <input checked="" type="checkbox"/> Main canopy of mature trees	Pole stage <input checked="" type="checkbox"/> Main canopy of pole-stage trees	Shrubland <input type="checkbox"/> Main canopy of shrubs, young trees or regeneration	Any <input type="checkbox"/> No continuous canopy. Isolated trees only
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
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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>Pinus roxburghii</i>	2. <i>Schima wallichii</i>	3. <i>Castanopsis hystrix</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 checked="" type="checkbox"/> 10 – 50 seed trees per ha	Low <input 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 checked="" type="checkbox"/>	Good <input 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		Very good
		Scattered/few		Good
	Open	Abundant		Good
		Scattered/few		Average
Pole stage forest	Dense	Abundant		Good
		Scattered/few		Average
	Open	Abundant		Average
		Scattered/few		Poor
Shrubland and young growth	Dense		Moderate or High	Average
	Dense		Low	Average
	Open		Low	Poor
Any	Very open	None		Poor
Open spaces				
Approximate total open space area (ha)			0.40	
Dominant vegetation type in the open space			<i>Artemesia spp.</i> and lemon grass	
Cause of open space e.g. grazing, fire, harvesting, etc.			Grazing	
Grazing and fodder				

Grassland type			
Natural <input 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

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 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 type="checkbox"/>	Moderately critical <input checked="" 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	Moderate or high	Less critical
		Low	Moderately critical
	Erosive	Moderate or high	Moderately critical

Steep		Low	Highly critical
	Non erosive	Moderate or high	Moderately critical
		Low	Highly critical

Fauna	
Local Name	Scientific name
Tag	<i>Panthera tigris tigris</i>
Kasha	<i>Muntiacus muntjak</i>
Shaw	<i>Cervus unicolor</i>
Phag	<i>Sus scrofa</i>
Wam	<i>Ursus thibetanus</i>
Dhole	<i>Cuon alpinus</i>
Green-backed Tit	<i>Parus monticolus</i>
Large-billed Crow	<i>Corvus macrohynchos</i>
White-throated Laughingthrush	<i>Garrulax albogularis</i>
Yellow-breasted Greenfinch	<i>Carduelis spinoides</i>
Ashy Drongo	<i>Dicrurus leucophaeus</i>
Oriental Turtle Dove	<i>Streptopelia orientalis</i>
White-crested Laughingthrush	<i>Garrulax leucolophus</i>
Straited Laughingthrush	<i>Garrulax striatus</i>

Biotic Pressures			
Fire	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Grazing	Heavy <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Fodder collection (<i>Ficus spp.</i> , and <i>Castanopsis spp.</i>)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
NWFP collection (list the main products including bamboo & cane)	Common <input checked="" type="checkbox"/> Mushroom	Limited <input 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 type="checkbox"/>	Absent <input checked="" 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 checked="" type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input type="checkbox"/>
Hunting	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Potential Management Options (list any potential management options for the CF/block)			
1	Improve existing stand by thinning and cleaning of Chirpine stand		
2	Improve plantation area through bamboo plantation		
3	Plantation in barren area (Approximately 1 acre)		

Pangzur Chorten Block

Format 1. Forest Resource Assessment Format	
Name of Community Forest	Pangzur Phuensum Tshogpa
Date of Assessment	21/12/2022
Name of block	Pangzur Chorten
Block area	5 hectares~13 acres
Name of recorder	Gyem Lhamo, Trongsa Range Office.

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

Forest Condition (Tree species)			
Local name		Scientific name	
Tsagshing		<i>Pinus roxburghii</i>	
Sorbaling			
Pashang		<i>Quercus griffithii</i>	
Plantation			
Is there any plantation?	Yes <input type="checkbox"/>	Approximate height of planted trees (m)	
	No <input checked="" type="checkbox"/>		
Year planted	2018-2019	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 mature trees	Pole stage <input checked="" type="checkbox"/> Main canopy of pole-stage trees	Shrubland <input type="checkbox"/> Main canopy of shrubs, young trees or regeneration	Any <input type="checkbox"/> No continuous canopy. Isolated trees only
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"/>	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>Pinus roxburghii</i>	2. <i>Schima wallichii</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 checked="" type="checkbox"/>	Average <input type="checkbox"/>	Good <input 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		Very good
		Scattered/few		Good
	Open	Abundant		Good
		Scattered/few		Average
Pole stage forest	Dense	Abundant		Good
		Scattered/few		Average
	Open	Abundant		Average
		Scattered/few		Poor
Shrubland and young growth	Dense		Moderate or High	Average
	Dense		Low	Average
	Open		Low	Poor
Any	Very open	None		Poor
Open spaces				
Approximate total open space area (ha)				
Dominant vegetation type in the open space				
Cause of open space e.g., grazing, fire, harvesting, etc.				
Grazing and fodder				
Grassland type				
Natural <input type="checkbox"/>	Man-made <input type="checkbox"/>	Mixture <input type="checkbox"/>	Predominantly forest <input checked="" type="checkbox"/>	

Main fodder species being used (<i>list 3 only</i>)	
Local name	Scientific name
Tsipshing	
Krupla	
Tsang	

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 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 checked="" type="checkbox"/>
25 – 50% of the soils are covered by vegetation	moderate <input 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	Moderate or high	Less critical
		Low	Moderately critical
Steep	Erosive	Moderate or high	Moderately critical
		Low	Highly critical

	Non erosive	Moderate or high	Moderately critical
		Low	Highly critical

Fauna	
Local Name	Scientific name
Kasha	<i>Muntiacus muntjak</i>
Shaw	<i>Cervus unicolor</i>
Phag	<i>Sus scrofa</i>
Wam	<i>Ursus thibetanus</i>
Dhole	<i>Cuon alpinus</i>
Large-billed Crow	<i>Corvus macrohynchos</i>
White-throated Laughingthrush	<i>Garrulax albogularis</i>
Yellow-breasted Greenfinch	<i>Carduelis spinoides</i>
Oriental Turtle Dove	<i>Streptopelia orientalis</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 (<i>Castanopsis spp.</i>)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
NWFP	Common <input checked="" type="checkbox"/> Mushroom	Limited <input type="checkbox"/>	Absent <input type="checkbox"/>
Leaf litter collection	Common <input type="checkbox"/>	Limited <input type="checkbox"/>	Absent <input checked="" 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 checked="" type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input type="checkbox"/>
Hunting	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Potential Management Options (list any potential management options for the CF/block)			
1	Improve existing Chirpine stand by thinning and cleaning of undergrowth and dead branches		
2	Extend existing bamboo plantation		

VIII. Forest Management

CFMG shall follow the management procedures as depicted in the table below;

1	Produces/services	Timber (Drashing/Cham /Tsim)	Firewood	Poles	Bamboo
2	Main species	<i>Pinus roxburghii</i> and <i>Schima wallichii</i>	<i>Castanopsis hystrix</i> <i>Quercus lanata</i> <i>Quercus glauca</i> <i>Quercus griffithii</i> <i>Other broadleaved</i>	<i>Castanopsis hystrix</i> <i>Quercus griffithii</i> <i>Pinus roxburghii</i>	<i>Zhushing, Mon, Gu</i>
3	Problems	<ul style="list-style-type: none"> • Shortage of timber • Availability of small sized timber 	<ul style="list-style-type: none"> • Inaccessible for extraction from the upper side of the CF 	<ul style="list-style-type: none"> • Insufficient poles 	<ul style="list-style-type: none"> • Damages by wild animals • Insufficient rhizomes
4	Opportunities	<ul style="list-style-type: none"> • Allocate timber from SRFL • Plant desirable trees • Allocate timber on need basis 	<ul style="list-style-type: none"> • Mechanized extraction of firewood from the inaccessible area • Sale excess firewood 	<ul style="list-style-type: none"> • Allocate from SRFL 	<ul style="list-style-type: none"> • Extract rhizomes from existing plantations in Pangzur Chorten block and nearby forest
5	Management objectives	<ul style="list-style-type: none"> • Improve current forest condition and Ensure equitable distribution of forest resources among the CFMG members and ensure sustainable utilization 	<ul style="list-style-type: none"> • Generate income 	<ul style="list-style-type: none"> • Ensure equitable distribution of forest resources among the CFMG members and ensure sustainable utilization 	<ul style="list-style-type: none"> • To improve forest condition and protect forest for future generation
6	Activities	<ul style="list-style-type: none"> • Forest cleaning and thinning • Plantation of desirable species • Allocate timber to needy households 	<ul style="list-style-type: none"> • Collect demand from schools and institutions under Langthil Gewog • Conduct CFMG Management Committee meeting for taking decisions to sell firewood 	<ul style="list-style-type: none"> • Collect annual demand of the poles 	<ul style="list-style-type: none"> • Collection of bamboo rhizomes • Plantation in Surbaibung, Pangzur Chorten and near DOR camp.

	Produces/services	Timber (Drashing/Cham/Tsim)	Firewood	Poles	Bamboo
7	Procedures	<ul style="list-style-type: none"> • Issue collection permit during the month of September and October • Carry out marking in the month of November • Extract timber from the forest within 2 years from the date of marking the timber • The allotment of timber from SRFL will be prioritized for the households of Rewtala due to its far location from the CF and process through CC after authentication from CF Chairperson and Beat Officer 	<ul style="list-style-type: none"> • Assess the demand of CFMG members • Issue collection permit during the month of September and October • Carry out marking in the month of November • Extract timber from the forest within 3 months from the date of marking. 	<ul style="list-style-type: none"> • Issue collection permit during the month of September and October • Carry out marking in the month of November • Extract timber from the forest within 3 months from the date of marking. 	<ul style="list-style-type: none"> • Harvest matured culms and allot to either CFMG members and sell to the potential buyers
8	Responsibility	<ul style="list-style-type: none"> • Beat Officer, CFMG Chairperson 	<ul style="list-style-type: none"> • Chairperson, Beat Officer and Committee Members 	<ul style="list-style-type: none"> • Chairperson, Beat Officer and Committee Members 	<ul style="list-style-type: none"> • CFMG Chairperson and members

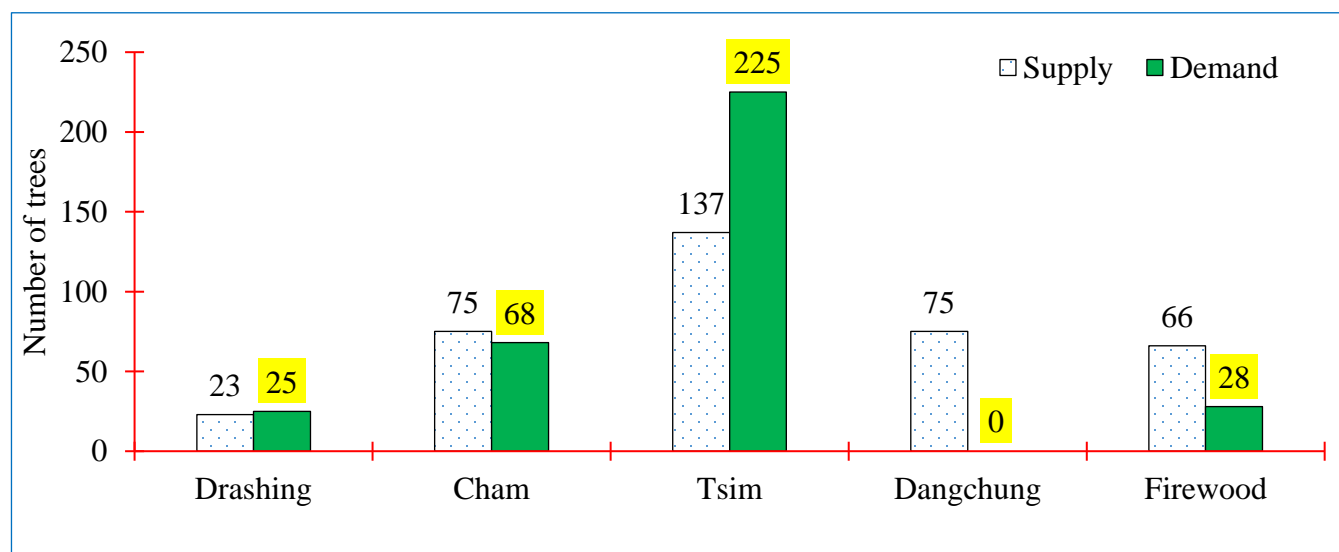
IX. Demand assessment

Demand for forest resources was assessed through participatory approach on the basis of number of trees required for new constructions, renovations, firewood and poles. The details of forest resource assessment are depicted in table below.

Produce	Annual estimated requirement		No. of hh requiring annually (C)	Total requirement of the produce annually		Total requirement of produce in 10 years	
	Number (A)	Vo. In cft (B)		Number	Vol. in cft	Number	Vol. in cft
1. New construction							
Drashing	15	1059.30	1	15	1059.30	150	10593
Cham	50	706	1	50	706	500	7060
2. Renovation							
Drashing	6	423.72	1.2	7.2	508.46	72	5084.60
Cham	15	211.80	1.2	18	254.16	180	2541.60
3. Fencing Posts (Tsim)	15	52.95	15	225	794.25	2250	7942.50
4. Cattle shed construction (drashing)	1	70.62	3	3	211.86	30	2118.60
5. Firewood (drashing)	2	141.24	14	28	1977.36	280	19773.60
Note: Conversion factor based on FRDD, 2004 (10.2)							

X. AAC and Demand Comparison

CFMG prefers Chirpine tree as timber for house construction and renovation. There are shortages of Drashing and Tsim where CFMG should be allotted from SRFL especially to the households living in Rewtala village. However, there are accessibility issues for extraction of timbers. There are excess Cham and firewood. CFMG shall explore to sell excess firewood to the potential buyers (schools and other institutions).



XI. Participatory Environmental Assessment

Activity proposed in Pangzur Phuensum Tshogpa CF	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 produce
Timber harvesting	-	-	-	-	0	0	++	++
CF forest patrolling	++	+	+	+++	0	0	0	+++
Thinning	+++	0	0	+++	0	0	+	+++
CF boundary clearing	0	0	0	+++	0	0	0	0
Plantation maintenance and new creation	++	++	+	++	0	+	+	++
Bamboo plantation	++	0	0	0	0	0	++	+++

+++ Positive effect - - - Negative effects 0 – No effect

Procedures to address potential negative effects

Activity	Procedure
Timber harvesting/thinning/sanitation works	Felling directions should be considered so that regenerations and surrounding stands are not damaged. Silviculture considerations must be taken during tree marking. Avoid felling within 15 meters of streams and water sources and 30 meters uphill and 30 meters downhill of the farm road.

XII. Forest Produce Ranking Matrix

	Timber	Firewood	Poles	Bamboo
Timber		Timber	Timber	Timber
Firewood			Firewood	Firewood
Poles				Poles
Bamboo				
Timber=3, Firewood=2, Poles=1, Bamboo=0				

Timber is ranked as top priority followed by firewood and least with bamboos. Bamboo is introduced in the forest through plantations. CFMG might realize its importance after the bamboo gets commercialized in future.

XIII. Monitoring plans- Participatory forest resource impact monitoring

Activity	Indicator	How it will be monitored	Responsibility	Comments
Bamboo Plantations	<ul style="list-style-type: none"> • Area planted • Number of bamboo rhizomes planted 	<ul style="list-style-type: none"> • Physical monitoring and annual CF monitoring • Report survival percent and provide technical recommendation for maintenance and appropriate species 	CFMG, Beat Officer and Range Officer Langthil Beat Office shall provide on-site technical assistance and report survival percent.	
Patrolling	<ul style="list-style-type: none"> • Number of patrolling conducted and offenders apprehended 	<ul style="list-style-type: none"> • Regular patrolling 	CFMG Secretary will make schedule of members on rotation basis	The patrol team will cover whole forest area
Tree harvesting	<ul style="list-style-type: none"> • Number of trees harvested and allotted to the applicants 	<ul style="list-style-type: none"> • Permit book and annual monitoring report 	Secretary and Treasurer shall keep proper report and provide accordingly	
Thinning and cleaning	<ul style="list-style-type: none"> • Area thinned and quantity of cleaning works carried out. 	<ul style="list-style-type: none"> • Physical monitoring from DFO and Range Office 	DFO Bumthang & Trongsa Forest Range Office in collaboration with CF Executive Committee. Langthil Beat Office	
CF boundary clearing	<ul style="list-style-type: none"> • Length of boundary cleared 	<ul style="list-style-type: none"> • Physical verification and labor contribution by the CFMG members 	CF committee management and Langthil Beat Office	Trongsa Forest Range to provide technical advises

XIV. Monitoring plans- Participatory social and institutional impact monitoring

Activity	Indicator	How it will be monitored	Responsibility	Comments
CFMG general meeting	• Number of participants in the meeting	• Minutes of meeting record book	CFMG executive and Trongsa Forest Range	Invite CFO & GT Chairperson during 5 th year and 9 th year monitoring and evaluation.
Book Keeping training	• Number of trainings conducted. • Crosschecking books of accounts	• Books of accounts	DFO Bumthang	Involve Trongsa Forest Range for monitoring
Resource sharing on equity basis	• Resources allocated to needy member	• CF record books	CFMG management committee	The deficit timber will be allotted SRFL
CF Management Committee Meeting	• Number of women attended the committee meetings	• CFMG record books	CFMG and Beat Office	

XV. Annual Work Plan

Location	Activity	Year										Responsibility
		1	2	3	4	5	6	7	8	9	10	
Khranchan & Pangzur Chorten	Cleaning and thinning											Chairman, Secretary and CFMG
Khranchan (Surbaibung)	Plantation maintenance											Chairman, Secretary and CFMG
Whole CF	Annual Timber Allotment											CFMG committee
Khranchan	Sell of excess Firewood											Management committee
Khranchan & Pangzur Chorten	Bamboo rhizomes Plantation											CFMG
Khranchan & Pangzur Chorten	CF boundary clearing (2m width)											Chairperson & CFMG
Khranchan & Pangzur Chorten	Conduct patrolling											Patrolling group
	Conduct annual Meeting											CFMG
	Record keeping & Silviculture training											Forestry staffs
	Submission of Annual work plan											Secretary

PART II: BY-LAWS

I. CF information

Pangzur Phuensum Tshogpa Community Forest shall be remained as the name of CF and shall be managed by 28 households holding valid *Thram* and *Gung*.

II. Membership Arrangements

Eligibility

Any households from Pangzur and Rewtala villages holding *Thram* and *Gung* shall be eligible to become member of the Community Forest Management Group.

Procedures to become New Membership

- Any eligible households wishing to become new member shall put up a written application to Chairperson of the CFMG who will further discuss with management committee and CFMG for considerations or rejections.
- The new member should pay 50% of the individual household labor contribution till date and payment shall be based on the current National Wage Rate.
- Special considerations shall be granted to the two households who had to resign for not fulfilling the requirement of FNCRR, 2017 (Amendment, 2021) to pay only 50% of the labor contribution made during its second term management only.

Procedures for withdrawal/resignation from CFMG

- Members wishing to resign should put up written application to Chairperson mentioning reasons for his/her resignations.
- Any member leaving CFMG under unavoidable circumstances shall be given 100% of the individual share.
- Any member leaving the CFMG due to lack of interest shall be accepted without any benefits. However, he/she can rejoin the group and procedures for becoming new membership shall apply.

III. Management Committee Formation

Election of committee members

The committee members shall be elected in presence of all members and election will be done through participatory voting. The following members are elected as CFMG members.

Sl.#.	Name	Designation	Contact number
1	Pema Tshering	Chairperson	17492948
2	Jigme	Secretary	77361764
3	Ugyen	Treasurer	17470295
4	Samdrup	Tshogpa	17746008
5	Tsheringla	Tshogpa	17875455

The committee members are being elected in the interest of the CFMG members. Committee members should ensure welfare of the CF and management group.

Tenure of Executive Committee Members

The executive committee members shall serve for five years.

Procedures for resignation of committee members

- Any members shall be considered to resign on unavoidable circumstances and certain rewards shall be given upon the decision of committee members.
- If any member misuses power and fund of CFMG, he/she shall be terminated immediately and he/she should refund the fund misused into group account. However, the terminated member will remain as CFMG member.

Responsibilities and terms of reference for CFMG committee members

Sl.#.	Designation	Terms of References/Responsibility
1	Chairperson	<ul style="list-style-type: none">• Conduct meetings with the CFMG members• Issue collection permits to the needy members based on Annual Allowable Cut.• Resolve conflicts among the CFMG members• Network good relations with the relevant agencies and departments.
2	Secretary	<ul style="list-style-type: none">• Maintain minutes of meetings• Prepare and submit annual works plans and progress report• Officiate Chairperson• Maintain records of labor contributions
3	Treasurer	<ul style="list-style-type: none">• Maintain records of CF funds• Deposit CFMG fund and withdrawal of fund• Submit financial records to the CFMG members during annual meetings
4	Tshogpa	<ul style="list-style-type: none">• Assist Forestry Officials during annual tree marking• Monitor illegal activities and report to Chairperson• Act as member of the CF management committee
5	CFMG members	<ul style="list-style-type: none">• Contribute labor in CF development activities• Attend meetings when Chairperson initiates meetings• Remain vigilant to forest fire and illegal activities by patrolling the entire area on rotation basis.• Carryout auditing of the Committee members if felt deemed.

IV. Fees

CFMG member shall contribute Nu. 200/- as membership fees annually. Permit fees of Nu. 10/- shall be realized per occasion. Following collection fees shall be applied during this management term.

Sl.#.	Type of Forest Product	Fees (Nu.)	Remarks
1	Drashing	50/- per tree	
2	Cham	30/- per tree	
3	Tsim. Dangchung and falgpoles	20/- per tree	
4	Firewood	40/- per tree	
5	Bamboo culm	50/- per culm	The selling price shall be fixed by management committee if sold out of CF.
6	Agriculture tools	30/- per tree	

V. Fines and Penalties

Any person found guilty of an offence inside CF shall be liable for fines and penalties as follows;

Sl.#.	Type of offence	Fines	Compensations
1	Illegal extraction of timber from CF	Nu.100/- per cft as per section 416 (1) of Forest and Nature Conservation Rules and Regulations, 2017	Existing NRPC
2	Occurrence of forest fire	As per the provision of FNCRR, 2017 and its amendments	As per FNCRR, 2017
3	Illegal taking of agriculture tools	Nu. 100/- per tool taken	Nu. 300/- per tool
4	Causing damages to existing plantations	Nu. 200/- per seedlings	Offender shall replant seedlings
5	Absent from the meeting	Nu. 250/- per day	Not applicable
6	Absent from the CF work	Nu. 500/- per day	Not applicable
7	Misuse of power by CFMG committee	Shall reimburse the amount misused and terminate immediately	Not applicable
8	Killing wildlife	As per FNCRR, 2017	
9	Unlisted activities	Shall be dealt as per FNCRR, 2017 and its amendments and any other relevant laws	

VI. CF fund management

Sources of fund

- Entry fee from the CFMG members
- Forest resource collection fees
- Fines and penalties
- Contribution from the visitors
- Payment for Environmental Services-water services
- Sale of bamboo and excess firewood

Possible expenditure

- Refreshments during annual meetings and physical works for CF development
- Procurement of seeds and seedlings
- Transportations
- TA and DSA for the executive members
- Printings
- Office stationeries

Fund management mechanisms

The treasurer and committee members shall be responsible for the management of CF fund. The fund collected from Community Forest shall be deposited to the CFMG account maintained with BDBL, Langthil. The joint signatory shall be mandatory for withdrawal of the fund to maintain transparency. The records of the funds will be maintained properly by treasurer on income and expenditure made.

CF Loans

CFMG shall utilize 50% of the CF fund shall be disbursed as loans to the CFMG for following purposes;

- New construction and renovation of house
- Demise cases

- Health treatment and medical expenses
- Supporting school going children

To avail loans, applicant must put up application to CF Chairperson who will make decisions with committee members. The loan shall be sanctioned to applicants by the committee members with following terms and conditions;

- No mortgages shall be required for approving loans
- Loan ceiling shall be up to Nu. 20,000/- or less
- 3% interest shall be realized on monthly basis
- Repayment should be made both the principal and interest within one year.

VII. Benefit Sharing

Procedures for getting forest products from the CF

- Approval of any forest products to the applicant shall be done according to genuine need basis
- The approval of forest products shall be determined according to AAC illustrated in terms of volume and standing tree basis.
- The firewood shall be sold in truckload or DCM load basis for which price shall be fixed by Management Committee.
- Any forest products shall be shared on equitable basis irrespective of social status (rich or poor).
- The allotment of timber shall be given priority to needy household meaning that the household is prepared to construct house. The allotment shall be given on number of trees basis.
- The bamboos shall be allotted to members as well as the sold to outsiders.

VIII. Meetings

CFMG shall conduct two types of meetings, viz, general and executive committee meetings.

General meetings

CFMG shall convene one time meeting during the month of October. During the meeting the following points shall be discussed in presence of all the members;

- Accounts and CFMG fund presentation by Treasurer
- CF developmental works
- Issue collection permits
- Collect fines and penalties from the
- Collect annual membership fees
- Resolve any conflicts among the members if any
- Prepare annual work plan and progress reports

Committee meeting

CF Management Committee shall meet at least twice a year or more based on the requirement of their meeting. The meeting shall be conducted for ad-hoc fund withdrawal, decide on the loan disbursement to needy applicant(s), any conflicts within or outsiders and other purposes that requires their attention.

IX. Conflict Management

CFMG shall ensure to build cooperation, promote inclusiveness, and being transparent. However, if conflict arises, following steps and series of authorized offices to solve the conflict shall be followed;

1. Conflict>>2. CF Chairperson and Committee>>3. Gewog Administration>>4. CFO>>5. Dzongkhag Court of Law.

X. Amendment of CFMP and by-laws or revision of CFMP

If CFMG requires any amendment of management plan or by-laws, it should be routed through Range Office in the form of written application addressed to CFO. The amendments shall be done upon approval of application by CFO possibly during 5th year. CF area extension shall not be entertained during mid-term but shall be done during the last quarter of the 9th year if found feasible/eligible.

XI. Annual monitoring and evaluations

CFMG shall support and provide data to the Forestry Officials who are on annual monitoring and evaluations by the end of year (December or January).

Power of Department of Forests and Park Services

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)).

Annexes

Annex 1: CF application and member list

Annexure VI: Application to Establish Community Forest

ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF AGRICULTURE & FORESTS

Department of Forests & Park Services

APPLICATION TO ESTABLISH COMMUNITY FOREST

PART A (To be filled by the applicant)

The Gup,

In accordance with the Forest and Nature Conservation Rules and Regulations, 2017,
I Pema Tshesing the Chairman of Community Forest
Management Group of Pangzok village(s) consisting of 3028 household
would like to submit this application for establishment of Community Forest. (Map attached)

a) Gewog: Langthel

b) Description of the State Forest land proposed for establishment of Community Forest

(i) Name of Forests: Tsatay.

(ii) Boundary Description:

North: NWF Labour Camp / Settlement.
South: Phayulab
East: Settlement and Transmission line
West: Trongsa - Gelephu Highway

(iii) Estimated Areas: 371 Acres

(iv) Forest Type: Chirpine forest - with Mixed Broad Leaved Forest.

Signature:

Pema Tshesing






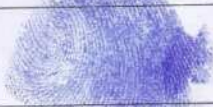







Name of the CFMG Chairman:


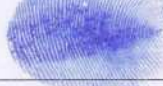








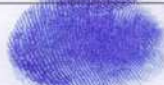




Pema Tshesing

Date:

04/11/2022

CFMG Member Lists

Sl.#.	Name	Gung No.	Thram No.	Thumb Impression
1	UgyenTshomo	TSA-3-270	286	
2	PhurpaLham	TSA-3-376	639	
3	Kinley Pem	TSA-3-382	272	
4	Phurpa Mo	TSA-3-271	285	
5	TashiLhamo	TSA-3-136	644	
6	Lawa	TSA-3-279	3	
7	Lemo	TSA-3-378	640	
8	SangayDema	TSA-3-275	26	
9	Tshering Wangmo	TSA-3-265	277	
10	Ngosengla	TSA-3-273	657	
11	Choki Mo	TSA-3-264	681	
12	Yeshi Mo	TSA-3-267	666	
13	SangayDema	TSA-3-263	279	

Sl.#.	Name	Gung No.	Thram No.	Thumb Impression
14	Sonam Wangmo	TSA-3-383	8	
15	Nalemo	TSA-3-276	28	
16	Nalemo	TSA-3-377	680	
17	Tshewang Zangmo	TSA-3-353	504	
18	Pema Choki	TSA-3-133	42	
19	Nala	TSA-3-381	281	
20	Pema Lhamo	TSA-3-379	560	
21	Sangay Mo	TSA-3-266	281	
22	Lemo (Reutala)	TSA-3-267	280	
23	Phurpa Lhamo	TSA-3-380	26	
24	Chezangmo	TSA-3-243	934	
25	Lhendup	TSA-3-339	842	
26	Rinzin Wangchuk	TSA-3-278	656	
27	Chonigmo	TSA-3-274	224	
28	Dorji Dema	TSA-3-277	225	

Sl.No.	Name of Household Representative	CID Card No	House No.	Thram No. (If applicable)	Signature
18	Lemo	11703002404	3-267	250	
19	Pema Choki	11703002342	3-131	288	
20	Nala	11703002383	3-381	281	
21	Pema Lhamo	11703002327	3-379	360	
22	Phurpa Lhamo	11703002474	3-366	380	
23	Choeangmo	11703000551	3-243	934	
24	Lhuenidup La	11703000416	3-39	842	
25	Rinzin Wangchuk	11703002506	3-278	656	
26	Sanjay Mo	11703002379	3-266	281	
27	Choney Mo	11703002462	3-274	224	
28	Rinzin Mo	11703002342	3-271	682	
29	Boji Dema	11703002498	3-277	225	
30	Nima Dema	11703002352	3-377	680	

Annexure VI (continued)

I have reviewed the application and hereby recommend for the formation of CF in the proposed area.

Name and Signature of Gup: Rinzin Wangchuk

Gewog: Langthul

Date: 4/11/22

Rinzin Wangchuk
GUP
LANGTHIL GEWOG
Trongsa : Bhutan

PART B (To be certified by Range Officer)

We have evaluated the area applied for and the qualifications of the group to manage it according to the criteria established in the Forest and Nature Conservation Rules and Regulations of Bhutan, 2017. We recommend/do not recommend, the application for establishment of the Community Forest.

Justification for approval/rejection:

The Forest Range Office has reviewed the CF Management Plan and found that the validity of the Management Plan has expired. Accordingly conducted forest functional mapping of the CF extension area and verification of current CFMG member status and found it feasible for the CF revision. The Revision of the CF area is based on the permissible ceiling for the CF area. Therefore, Range Office hereby recommended for 1st Edition/Revision of the Pangzur Pheunsum Tshogpa Community Forest Management Plan.

Signature:

Name:

Name of Range:

Date:


Forest Range Officer
Forest Range Office
Trongsa: Bhutan
7-11-2022

PART C (To be certified by the CFO)

I have reviewed the application and I am satisfied/not satisfied, with the details provided in the application and the area is suitable/unsuitable for Community Forest Management. I accept/do not accept the application for establishment of Community Forest.

Justification:

1:


2:

Signature:

Name of CFO:

Division/Park:

Date:


Chankay Drukpa
Bumthang
2/4/2023

Annex 2: CF boundary GPS coordinates

Boundaries	Features	Northing	Easting
West	Tsutpii (National Highway)	27.259743°	90.600375°
East	Jalakpee	27.260438°	90.610077°
South	Gangjay Phok	27.252102°	90.605325°
North	Pangzur Chorten	27.273349°	90.602110°

Annex3: Sample plot coordinates

Plot ID	Northing	Easting		Plot ID	Northing	Easting
1	27.26900	90.60073		43	27.25844	90.60510
2	27.26899	90.60221		44	27.25843	90.60657
3	27.26768	90.60073		45	27.25843	90.60805
4	27.26768	90.60220		46	27.25842	90.60952
5	27.26901	90.59926		47	27.25714	90.60214
6	27.26769	90.59925		48	27.25713	90.60362
7	27.26637	90.59924		49	27.25712	90.60509
8	27.26636	90.60219		50	27.25712	90.60657
9	27.26635	90.60367		51	27.25711	90.60804
10	27.26505	90.59924		52	27.25710	90.60952
11	27.26505	90.60071		53	27.25710	90.61099
12	27.26504	90.60366		54	27.25582	90.60214
13	27.26503	90.60514		55	27.25581	90.60361
14	27.26374	90.59923		56	27.25581	90.60509
15	27.26373	90.60071		57	27.25580	90.60656
16	27.26372	90.60218		58	27.25579	90.60803
17	27.26372	90.60365		59	27.25579	90.60951
18	27.26371	90.60513		60	27.25578	90.61098
19	27.26371	90.60660		61	27.25450	90.60360
20	27.26241	90.60070		62	27.25449	90.60508
21	27.26241	90.60217		63	27.25448	90.60655
22	27.26240	90.60365		64	27.25448	90.60803
23	27.26239	90.60512		65	27.25447	90.60950
24	27.26239	90.60660		66	27.25318	90.60360
25	27.26238	90.60807		67	27.25317	90.60507
26	27.26237	90.60954		68	27.25316	90.60655
27	27.26110	90.60069		69	27.25316	90.60802
28	27.26109	90.60217		70	27.25185	90.60654
29	27.26108	90.60364				
30	27.26108	90.60511				
31	27.26107	90.60659				
32	27.26106	90.60806				

33	27.26106	90.60954	
34	27.25978	90.60068	
35	27.25977	90.60216	
36	27.25977	90.60363	
37	27.25976	90.60511	
38	27.25975	90.60658	
39	27.25975	90.60806	
40	27.25974	90.60953	
41	27.25845	90.60215	
42	27.25845	90.60363	

Timber Trees

OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)								
1. CF Name		Pangzur Phuensum Tshogpa CF			4. Block Area		150.08	Hectares
2. Block Name		Pangzur			5. Compiling date		2022-12-21	
3. No of plots		70			6. Species group		Chirpine	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>	<i>col8</i>	<i>col9</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)	(2 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m2/ha)	volha (m3/ha)
10-19	0.017	0.055	0.050	0.286	130	37.14	0.63	2.04
20-29	0.047	0.233	0.050	0.286	176	50.29	2.36	11.72
30-39	0.093	0.610	0.050	0.286	168	48.00	4.46	29.26
40-49	0.156	1.256	0.050	0.286	91	26.00	4.06	32.64
50-59	0.233	2.241	0.050	0.286	15	4.29	1.00	9.60
60-69	0.327	3.632	0.050	0.286	6	1.71	0.56	6.23
70-79	0.436	5.494	0.050	0.286	0	0.00	0.00	0.00
80-89	0.561	7.892	0.050	0.286	0	0.00	0.00	0.00
90-99	0.701	10.891	0.050	0.286	0	0.00	0.00	0.00
100-109	0.857	14.553	0.050	0.286	0	0.00	0.00	0.00

OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)								
1. CF Name		Pangzur Phuensum Tshogpa CF			4. Block Area		150.08	Hectares
2. Block Name		Pangzur			5. Compiling date		2022-12-21	
3. No of plots		70			6. Species group		Oak Spp. (central)	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>	<i>col8</i>	<i>col9</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)	(2 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m2/ha)	volha (m3/ha)
10-19	0.017	0.096	0.050	0.286	24	6.86	0.12	0.65
20-29	0.047	0.341	0.050	0.286	25	7.14	0.34	2.43
30-39	0.093	0.796	0.050	0.286	4	1.14	0.11	0.91
40-49	0.156	1.506	0.050	0.286	4	1.14	0.18	1.72
50-59	0.233	2.508	0.050	0.286	1	0.29	0.07	0.72
60-69	0.327	3.838	0.050	0.286	0	0.00	0.00	0.00
70-79	0.436	5.526	0.050	0.286	0	0.00	0.00	0.00
80-89	0.561	7.603	0.050	0.286	0	0.00	0.00	0.00
90-99	0.701	10.097	0.050	0.286	0	0.00	0.00	0.00
100-109	0.857	13.033	0.050	0.286	0	0.00	0.00	0.00

OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)								
1. CF Name		Pangzur Phuensum Tshogpa CF			4. Block Area		150.08	Hectares
2. Block Name		Pangzur			5. Compiling date		2022-12-21	
3. No of plots		70			6. Species group		Other BL (Central)	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>	<i>col8</i>	<i>col9</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)	(2 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m2/ha)	volha (m3/ha)
10-19	0.017	0.078	0.050	0.286	4	1.14	0.02	0.09
20-29	0.047	0.287	0.050	0.286	3	0.86	0.04	0.25
30-39	0.093	0.687	0.050	0.286	8	2.29	0.21	1.57
40-49	0.156	1.323	0.050	0.286	0	0.00	0.00	0.00
50-59	0.233	2.236	0.050	0.286	0	0.00	0.00	0.00
60-69	0.327	3.462	0.050	0.286	0	0.00	0.00	0.00
70-79	0.436	5.037	0.050	0.286	0	0.00	0.00	0.00
80-89	0.561	6.993	0.050	0.286	0	0.00	0.00	0.00
90-99	0.701	9.361	0.050	0.286	0	0.00	0.00	0.00
100-109	0.857	12.171	0.050	0.286	0	0.00	0.00	0.00

OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)								
1. CF Name		Pangzur Phuensum Tshogpa CF			4. Block Area		150.08	Hectares
2. Block Name		Pangzur			5. Compiling date		2022-12-21	
3. No of plots		70			6. Species group		Schima spp.	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>	<i>col8</i>	<i>col9</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)	(2 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m2/ha)	volha (m3/ha)
10-19	0.017	0.089	0.050	0.286	11	3.14	0.05	0.28
20-29	0.047	0.319	0.050	0.286	5	1.43	0.07	0.46
30-39	0.093	0.750	0.050	0.286	0	0.00	0.00	0.00
40-49	0.156	1.425	0.050	0.286	0	0.00	0.00	0.00
50-59	0.233	2.381	0.050	0.286	0	0.00	0.00	0.00
60-69	0.327	3.653	0.050	0.286	0	0.00	0.00	0.00
70-79	0.436	5.273	0.050	0.286	0	0.00	0.00	0.00
80-89	0.561	7.270	0.050	0.286	0	0.00	0.00	0.00
90-99	0.701	9.671	0.050	0.286	0	0.00	0.00	0.00
100-109	0.857	12.504	0.050	0.286	0	0.00	0.00	0.00

Non-timber Trees

OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)								
1. CF Name		Pangzur Phuensum Tshogpa CF			4. Block Area		150.08	Hectares
2. Block Name		Pangzur			5. Compiling date		2022-12-21	
3. No of plots		70			6. Species group		Chirpine	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>	<i>col8</i>	<i>col9</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)	(2 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m2/ha)	volha (m3/ha)
10-19	0.017	0.055	0.050	0.286	5	1.43	0.02	0.08
20-29	0.047	0.233	0.050	0.286	2	0.57	0.03	0.13
30-39	0.093	0.610	0.050	0.286	2	0.57	0.05	0.35
40-49	0.156	1.256	0.050	0.286	0	0.00	0.00	0.00
50-59	0.233	2.241	0.050	0.286	0	0.00	0.00	0.00
60-69	0.327	3.632	0.050	0.286	0	0.00	0.00	0.00
70-79	0.436	5.494	0.050	0.286	0	0.00	0.00	0.00
80-89	0.561	7.892	0.050	0.286	0	0.00	0.00	0.00
90-99	0.701	10.891	0.050	0.286	0	0.00	0.00	0.00
100-109	0.857	14.553	0.050	0.286	0	0.00	0.00	0.00

OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)								
1. CF Name		Pangzur Phuensum Tshogpa CF			4. Block Area		150.08	Hectares
2. Block Name		Pangzur			5. Compiling date		2022-12-21	
3. No of plots		70			6. Species group		Other BL (Central)	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>	<i>col8</i>	<i>col9</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)	(2 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m2/ha)	volha (m3/ha)
10-19	0.017	0.078	0.050	0.286	230	65.71	1.12	5.13
20-29	0.047	0.287	0.050	0.286	57	16.29	0.77	4.67
30-39	0.093	0.687	0.050	0.286	18	5.14	0.48	3.53
40-49	0.156	1.323	0.050	0.286	10	2.86	0.45	3.78
50-59	0.233	2.236	0.050	0.286	2	0.57	0.13	1.28
60-69	0.327	3.462	0.050	0.286	1	0.29	0.09	0.99
70-79	0.436	5.037	0.050	0.286	0	0.00	0.00	0.00
80-89	0.561	6.993	0.050	0.286	2	0.57	0.32	4.00
90-99	0.701	9.361	0.050	0.286	0	0.00	0.00	0.00
100-109	0.857	12.171	0.050	0.286	0	0.00	0.00	0.00

OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)								
1. CF Name		Pangzur Phuensum Tshogpa CF			4. Block Area		150.08	Hectares
2. Block Name		Pangzur			5. Compiling date		2022-12-21	
3. No of plots		70			6. Species group		Oak Spp. (central)	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>	<i>col8</i>	<i>col9</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)	(2 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m2/ha)	volha (m3/ha)
10-19	0.017	0.096	0.050	0.286	69	19.71	0.34	1.88
20-29	0.047	0.341	0.050	0.286	57	16.29	0.77	5.55
30-39	0.093	0.796	0.050	0.286	24	6.86	0.64	5.46
40-49	0.156	1.506	0.050	0.286	9	2.57	0.40	3.87
50-59	0.233	2.508	0.050	0.286	6	1.71	0.40	4.30
60-69	0.327	3.838	0.050	0.286	2	0.57	0.19	2.19
70-79	0.436	5.526	0.050	0.286	2	0.57	0.25	3.16
80-89	0.561	7.603	0.050	0.286	1	0.29	0.16	2.17
90-99	0.701	10.097	0.050	0.286	0	0.00	0.00	0.00
100-109	0.857	13.033	0.050	0.286	0	0.00	0.00	0.00

OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)								
1. CF Name		Pangzur Phuensum Tshogpa CF			4. Block Area		150.08	Hectares
2.Block Name		Pangzur			5. Compiling date		2022-12-21	
3. No of plots		70			6. Species group		Schima spp.	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>	<i>col8</i>	<i>col9</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)	(2 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m2/ha)	volha (m3/ha)
10-19	0.017	0.089	0.050	0.286	35	10.00	0.17	0.89
20-29	0.047	0.319	0.050	0.286	12	3.43	0.16	1.09
30-39	0.093	0.750	0.050	0.286	7	2.00	0.19	1.50
40-49	0.156	1.425	0.050	0.286	3	0.86	0.13	1.22
50-59	0.233	2.381	0.050	0.286	2	0.57	0.13	1.36
60-69	0.327	3.653	0.050	0.286	1	0.29	0.09	1.04
70-79	0.436	5.273	0.050	0.286	0	0.00	0.00	0.00
80-89	0.561	7.270	0.050	0.286	0	0.00	0.00	0.00
90-99	0.701	9.671	0.050	0.286	0	0.00	0.00	0.00
100-109	0.857	12.504	0.050	0.286	0	0.00	0.00	0.00

OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)								
1. CF Name		Pangzur Phuensum Tshogpa CF			4. Block Area		150.08	Hectares
2.Block Name		Pangzur			5. Compiling date		2022-12-21	
3. No of plots		70			6. Species group		Rhododendron Spp.	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>	<i>col8</i>	<i>col9</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)	(2 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m2/ha)	volha (m3/ha)
10-19	0.017	0.075	0.050	0.286	13	3.71	0.06	0.28
20-29	0.047	0.255	0.050	0.286	5	1.43	0.07	0.36
30-39	0.093	0.579	0.050	0.286	0	0.00	0.00	0.00
40-49	0.156	1.072	0.050	0.286	0	0.00	0.00	0.00
50-59	0.233	1.755	0.050	0.286	0	0.00	0.00	0.00
60-69	0.327	2.646	0.050	0.286	0	0.00	0.00	0.00

