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**GAGAR COMMUNITY FOREST MANAGEMENT  
PLAN  
1<sup>st</sup> REVISION**



**Plan period: (2023-2033)**

**Chiwog: Gagar**

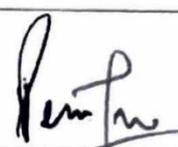
**Gewog: Nubi**

**Dzongkhag: Trongsa**

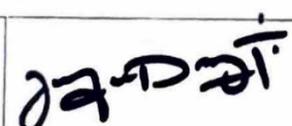
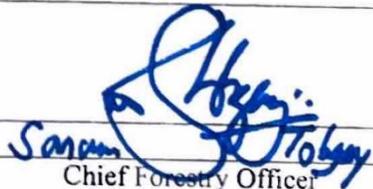
APPROVAL SHEET

Name of Community Forest	Gagar
Village	Gagar Pam and Gagar Trong
Chiwog	Gagar_Karshong
Gewog	Nubi
Dzongkhag	Trongsa
Production Area (Hectare/Acre)	58.71/145.08
Protection Area (Hectare/Acre)	11.21/27.69
Total Community Forest Area (Hectare/Acre)	69.92/172.77
Total CFMG member (No. of HH)	14

**Prepared and Submitted for Approval**

	Community Forest Management Group	Forestry Representative (CFMP Facilitators)	Gewog Administration	Social Forestry Section	Divisional/ Park Office
Signature					
Name	Ngawang Tshering	Tashi	Pema Lhamo	Karma Dorji	Pankey Dukpa
Title	Chairperson	Sr. Forest Ranger-I	Gup	Head	Chief Forestry Officer

**Reviewed and Submitted for Approval**

Signature		
Name	Ishelton Dooji	Sanam
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(C)/2022-2023/1186 on dated June 13, 2023*

## 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
FNCRR, 2017:	Forest and Nature Conservation Rules and Regulations, 2017
FRDD:	Forest Resources Development Division
GBCL:	Green Bhutan Corporation Limited
Gup:	Locally elected leader
ha.:	Hectares
m <sup>3</sup> :	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
TCB:	Tourism Council of Bhutan
Tshogpa:	Representative of the CFMG in CF management committee

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### ***Executive Summary***

*This is the second term management plan of Gagar Community Forest. CFMG decided to carry on management of their forest for next ten year during the consultation meeting conducted by Range Officer of Trongsa Range. The CF shall be managed by **14 households** with Gung and Thram. CF area was extended in Demlaya block.*

*CF has two blocks namely Pralipang and Demlaya. The net production area is **22.28 acres in Pralipang and 122.80 acres in Demlaya block. Cool broadleaved** is the forest type with sporadic coverage by young bluepine stand. Farm road and stream networks are buffered and identified as protection area in this management plan.*

*The Annual Allowable Cut in terms of 'number of trees' combined from two blocks are **8 drashings, 12 chams, 25 tsims, 9 dangchung and 54 firewood trees**. CFMG have to depend for timber requirements from SRFL (Nubi, Chendebji or Bumthang areas) especially for new construction and renovation of their houses. CFMG faces annual timber deficit of 4 drashings, 14 chams, and 30 tsims with no demand for dangchung. On the contrary, CFMG have 26 number of excess trees suitable for firewood which they can sell to generate income for the group.*

*CF developmental activities such as cleaning, thinning, plantation maintenances, plantations, CF boundary clearing, development of eco-trails and improvement of Terdrom holy water shall be carried out as annual activities over the entire plan period.*

*CFMG shall harvest firewood and timber and share on equitable basis. CFMG shall open up loaning CF fund in future to the needy households. Protection of forest is priority objective during this plan period.*

*CFMG office bearer needs refreshers training on record and book keeping as some are changed during this plan period.*

*The revision of this plan was technically supported and facilitated by Bumthang Forest Division and Trongsa Range Office. Desktop planning such as assignment of regular plots for quantitative resource assessment was done using QGIS (version 3.18.0).*

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## PART I: MANAGEMENT PLAN

### Introduction

Gagar CF is located between geocoordinates of 27.536°N to 27.552°N and 90.450°E to 90.480°E that falls North West of Trongsa town. Gagar village falls under Nubi Gewog, Trongsa dzongkhag. The village is connected with farm roads that runs through the CF parallel. Gagar Pam and Gagar Trong villages formed CFMG in 2012 and proposed to carry forward the management for its second term based on the consultation meeting conducted by Range Officer, Trongsa during the month of November 2022.

Gagar CFMG consists of 14 members which has decreased by one household compared to the first management term. CF has two blocks namely Demlaya and Pralipang consisting production area of 122.80 acres and 22.28 acres respectively. The CF area was extended in Demlaya block that has resulted double the area of the first management term due to its eligibility of 5 hectares area ceiling. Tigers movement is evident in Demlaya block and also has religious significant area known as *Terdrom Ney* and holy water as well.

Cool broad-leaved is the forest type of CF with *Alnus nepalensis* and Oak species as dominant species. It also contains young bluepine stand distributed sparsely over both the blocks. CFMG has carried out plantation in Demlaya block on cost sharing basis, plantation materials (fence and seedlings) provided by GBCL in 2017-2018 financial year. The species such as *Cupressus corneyana* and *Pinus wallichiana* plantations were planted and today it has attained height of more than 1.5 meters.

Annual Allowable Cut is presented in number of trees for convenience that was converted from the volume of trees/poles in standing forms using conversion factor adapted from progress reporting on the supply of timber, FRDD, 2004. Single tree selection system shall be followed as Silviculture system in the CF.

Forest cleaning, boundary clearing, plantation maintenance, development of *Terdrom Ney*, development of eco-trails to witness Tiger evidences and conducting general meetings of CFMG are major activities that will be implemented over next 10 years. Following are the forest management objectives;

- *To protect existing forest from illegal activities by the outsiders and improve its conditions*
- *To ensure equitable distribution product through sustainable utilization*
- *To protect catchment areas or water resources on case by case basis*
- *To generate income by selling firewood and tourism products*

Part I of this management plan describes the management aspect of CF including technical prescriptions and Part II contains CFMG by-laws.

### **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 and sale of firewood in Trongsa dratshang. The details of the fund status of CFMG is indicated in the following table;

<b>Total capital (Nu.)</b>	<b>Cash in hand (Nu.)</b>	<b>Bank balance (Nu.)</b>
112940.29	1400	111540.29

#### *Activities carried out*

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

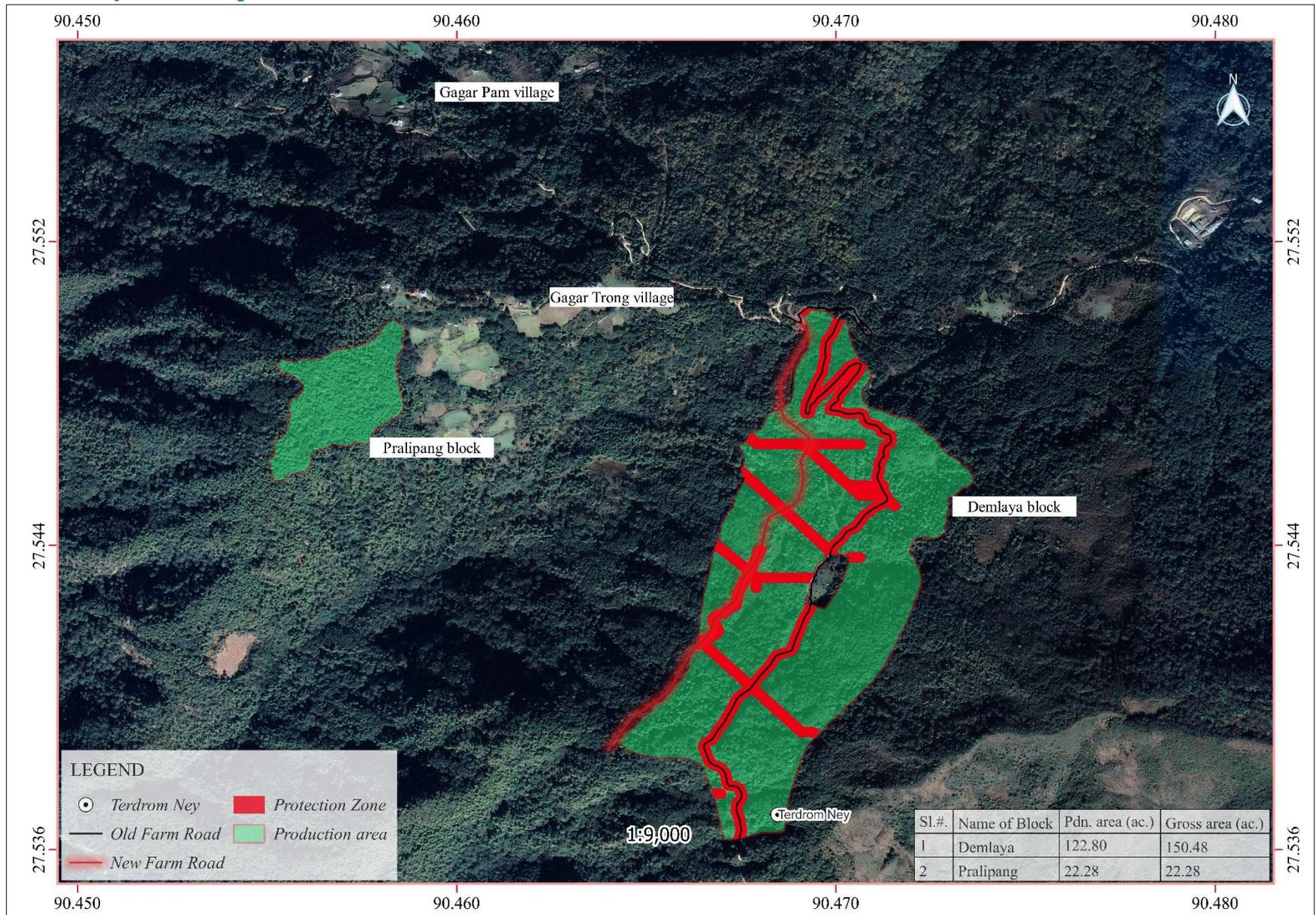
- Plantation of 25 acres by GBCL in 2017
- Boundary clearing of CF
- Cleaning of the forest 1 acre
- Conducted 10 annual meetings

#### *Number of timber trees and other resources extracted*

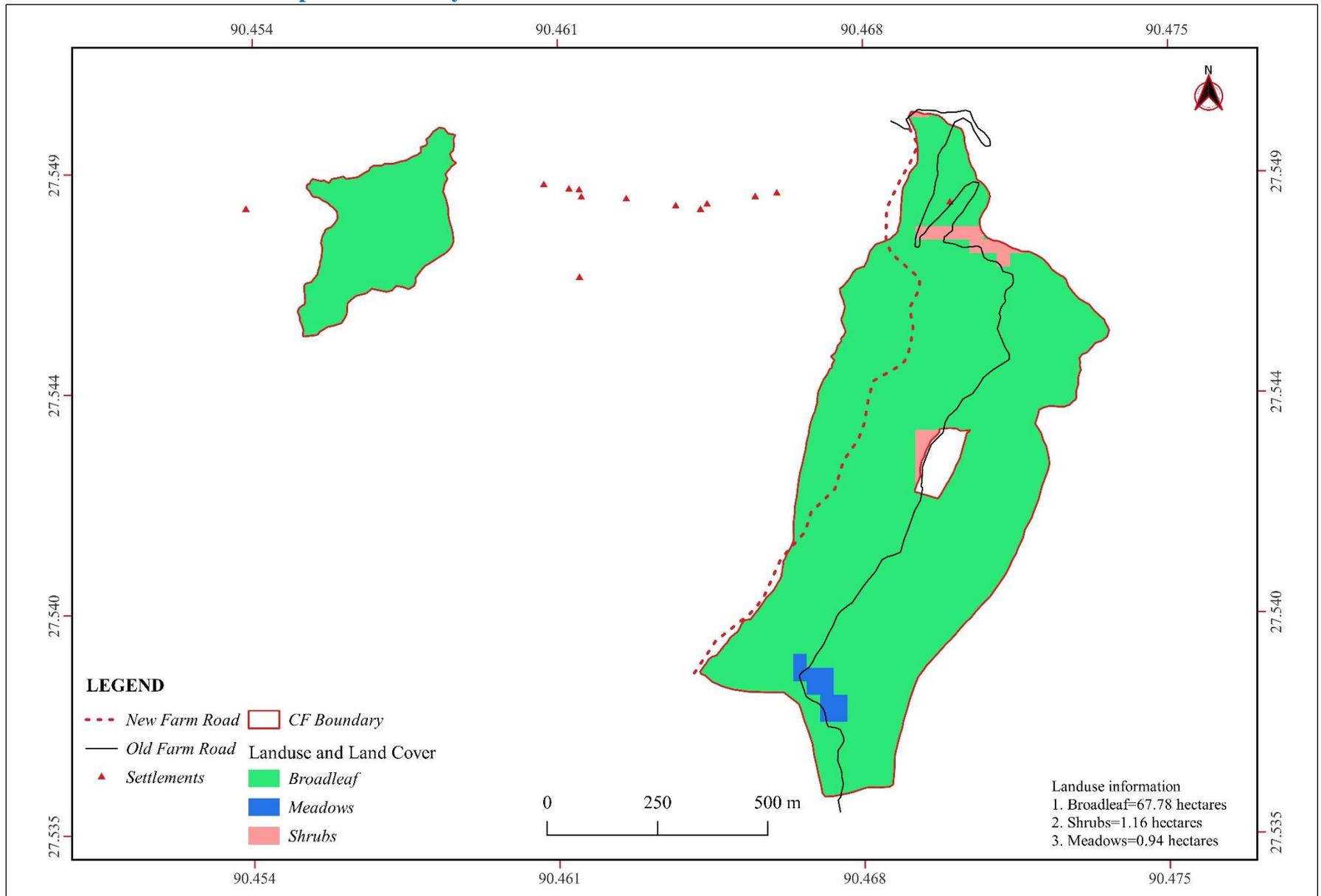
CFMG have extracted the following forest resources from their CF during the management term;

- 64 numbers of firewood trees
- 102 poles

# Community Forest Map



## Landuse and Land Cover Map of Community Forest



## Community Forest boundaries

Boundaries	Features
West	Pralipang
East	Mertsi Tang
South	Terdrom
North	Mani Tagpa

## Planning Process

Date	Activities
20/12/2022?	
9-10/01/2023	Quantitative CF resource assessment in Demlaya and Pralipang blocks
11-13/01/2023	CF management plan and By-laws revision

## Social information

Name of the villages	Gagar Trong, Gagar Pam
Ethnic groups with CFMG	Mangdep, Sharchop
Basic amenities	Electricity, Lhaxhang, Farm roads, Mobile tower (Tashi Cell and B-mobile),
Total households (HH) number of CFMG	14
Population of CFMG	56
% male and % female	45% & 55%
Main source of income	Chilli, Local Rice, dairy products, local beverages, vegetables
Cattle population of the CFMG	191
Main crops	Paddy, wheat, maize, potato,
Cropping pattern	Potato>Chilli nursery>Maize>Paddy transplantation>vegetables> Barley > wheat

## Forest Information

CF is divided into two blocks viz. Pralipang and Demlaya. Demlaya block is extended towards south whereas Pralipang block is as it was during the previous management plan. The average basal area of whole CF is 19 m<sup>2</sup>/ha (24m<sup>2</sup>/ha in Pralipang and 14m<sup>2</sup>/ha in Demlaya block).

### *Pralipang Block*

Format 1. Preliminary Forest Resource Assessment Format			
Name of Community Forest	Gagar		
Date of Assessment	10/01/2023		
Name of block	Pralipang		
Block area	9.02 hectares/22.28 acres		
Name of recorder	Chandra Singh Subha		
a. Forest & Habitat Type (tick all those present)			
Forest <input checked="" type="checkbox"/>	Thicket/pole stage <input checked="" 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 type="checkbox"/>	Blue pine forest	<input checked="" type="checkbox"/>
Cool broadleaved forest	<input checked="" type="checkbox"/>	Mixed conifer forest	<input type="checkbox"/>	Fir forest	<input type="checkbox"/>	Other	<input type="checkbox"/>

b. Forest Condition (complete if the block is mainly forest)	
Write the names of the 3 main tree species	
Local name	Scientific name
Dokseng	<i>Pinus wallichiana</i>
Kashey	<i>Quercus semicarpifolia</i>
Gumseng	<i>Quercus glauca</i>
<b>(i) Plantation</b>	
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"/>

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

(iii) Forest Condition - Canopy density (main canopy)		
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

(iv) Forest Condition – Regeneration (including coppice regrowth)		
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 wallichiana</i>	2) <i>Quercus semicarpifolia</i>	3) <i>Benthamidia capitata</i>
Regeneration: Seedlings > 30cm and < 1.3m height		

(v) Forest Condition – Approximate density of seed trees		
High <input type="checkbox"/>	Moderate <input checked="" type="checkbox"/>	Low <input 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 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

c. Open spaces (complete if there are significant open spaces in the block)	
Approximate total open space area (ha)	Nil
Dominant vegetation type in the open space	Nil
Cause of open space e.g. grazing, fire, harvesting, etc.	Nil

d. Grazing and fodder (complete if the forest block is used for grazing or 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
Kasey	<i>Quercus semicarpifolia</i>
Gumseng	<i>Quercus glauca</i>

Pasture quality (list the 3 dominant species in the grassland)		
Local name	Scientific name	Palatable/unpalatable
<b>Not relevant</b>		

Use pattern	Seasonal	<input checked="" type="checkbox"/>	All year	<input type="checkbox"/>
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Type of user	Migratory	<input type="checkbox"/>	Local	<input checked="" type="checkbox"/>	Both	<input type="checkbox"/>
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e. 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"/>
<b>(ii) Catchment Condition - Soil type and erosivity</b>		
<b>Soil type</b> (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	
<b>(iii) Catchment Condition - Slope</b>		
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

f. Fauna (List any animal or bird species seen or which are known from the block)	
Local Name	Scientific name
Tag	<i>Panthera tigris</i>
Dom	<i>Ursus thibetanus laniger</i>
Phab	<i>Sus scrofa</i>
Shaw	<i>Cervus unicolor</i>
Large-billed Crow	<i>Corvus macrorhynchos</i>
Straited Yuhina	<i>Staphida castaniceps</i>
Whiskered Yuhina	<i>Yuhina flavicollis</i>
Brownish-flanked Bush Warbler	<i>Horornis fortipes</i>
Spotted Nutcracker	<i>Nucifraga caryocatactes</i>
Blue Whistling Thrush	<i>Myophonus orientalis</i>

g. Biotic Pressures (tick those present)			
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"/>
Shrub layer	Dense <input type="checkbox"/>	Moderate <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>

<b>g. Biotic Pressures (tick those present)</b>			
Fodder collection (list main species used)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/> <i>Quercus semicarpifolia</i>	Absent <input type="checkbox"/>
NWFP collection (list the main products including bamboo & cane)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/> <i>Mushroom &amp; Fern</i>	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"/>
Fuel wood harvesting	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" 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"/>

**h. Management Options (list any potential management options (activities) for the block)**

1	Cleaning unwanted shrubs
2	Thinning <i>Quercus spp.</i> For firewood purposes

<b>Definitions</b>	
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 regrowth of naturally occurring tree species that are less than 1.3 metres tall but greater than 30 cm 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

Demlaya Block

Format 1. Preliminary Forest Resource Assessment Format	
Name of Community Forest	Gagar
Date of Assessment	9/1/2023
Name of block	Demlaya
Block area	60.90 hectares/148.26 acres (gross area)
Name of recorder	Tashi and Jigme Tshering

**a. Forest & Habitat Type (tick all those present)**

Forest <input type="checkbox"/>	Thicket/pole stage <input checked="" 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 type="checkbox"/>	Warm broadleaved forest <input type="checkbox"/>	Blue pine forest <input checked="" type="checkbox"/>
Cool broadleaved forest <input checked="" type="checkbox"/>	Mixed conifer forest <input type="checkbox"/>	Fir forest <input type="checkbox"/>	Other <input type="checkbox"/>

**b. Forest Condition (complete if the block is mainly forest)**

Write the names of the 3 main tree species

Local name	Scientific name
Dokseng	<i>Pinus wallichiana</i>
Kasey	<i>Quercus semicarpifolia</i>
Guma	<i>Alnus nepalensis</i>

**(i) Plantation**

Is there any plantation? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Approximate height of planted trees (m) <i>1.5 meters</i>
Year planted 2018	Is the plantation? Under stocked <input type="checkbox"/> Stocked <input checked="" type="checkbox"/> Overstocked <input type="checkbox"/>

**(ii) Forest Condition -Age**

Mature Main canopy of mature trees <input type="checkbox"/>	Pole stage Main canopy of pole-stage trees <input checked="" type="checkbox"/>	Shrubland Main canopy of shrubs, young trees or regeneration <input type="checkbox"/>	Any No continuous canopy. Isolated trees only <input type="checkbox"/>
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**(iii) Forest Condition - Canopy density (main canopy)**

Dense Canopy density > 70% <input type="checkbox"/>	Open Canopy density < 70% <input checked="" type="checkbox"/>	Very open No real canopy. Isolated trees only <input type="checkbox"/>
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**(iv) Forest Condition – Regeneration (including coppice regrowth)**

Abundant Regeneration easy to find in most places <input type="checkbox"/>	Scattered/few Regeneration only in some places and hard to find <input checked="" type="checkbox"/>	None No regeneration <input type="checkbox"/>
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Write the names of the 3 main tree species in the regeneration

1) <i>Pinus wallichiana</i>	2) <i>Quercus semicarpifolia</i>	3) <i>Alnus nepalensis</i>
Regeneration: Seedlings > 30cm and < 1.3m height		

(v) 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 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 type="checkbox"/>	No <input checked="" 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

c. Open spaces (complete if there are significant open spaces in the block)	
Approximate total open space area (ha)	Non
Dominant vegetation type in the open space	Non
Cause of open space e.g. grazing, fire, harvesting, etc.	Non

d. Grazing and fodder (complete if the forest block is used for grazing or 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
Kasey	<i>Quercus semicarpifolia</i>

Pasture quality (list the 3 dominant species in the grassland)		
Local name	Scientific name	Palatable/unpalatable
<b>NOT RELEVANT</b>		

Use pattern	Seasonal <input checked="" type="checkbox"/>	All year <input type="checkbox"/>
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Type of user	Migratory <input type="checkbox"/>	Local <input checked="" type="checkbox"/>	Both <input type="checkbox"/>
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e. 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		
<b>Soil type</b> (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 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

f. Fauna (List any animal or bird species seen or which are known from the block)	
Local Name	Scientific name
Tag	<i>Panthera tigris</i>
Dom	<i>Ursus thibetanus laniger</i>
Phab	<i>Sus scrofa</i>
Shaw	<i>Cervus unicolor</i>
Large-billed Crow	<i>Corvus macrorhynchos</i>
Straited Yuhina	<i>Staphida castaniceps</i>
Whiskered Yuhina	<i>Yuhina flavicolis</i>
Brownish-flanked Bush Warbler	<i>Horornis fortipes</i>
Spotted Nutcracker	<i>Nucifraga caryocatactes</i>
Blue Whistling Thrush	<i>Myophonus orientalis</i>
Oriental Turtle Dove	<i>Streptopelia orientalis</i>
Wild Dog	<i>Cuon alpinus</i>

<b>g. Biotic Pressures (tick those present)</b>			
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"/>
Shrub layer	Dense <input checked="" type="checkbox"/>	Moderate <input type="checkbox"/>	Absent <input type="checkbox"/>
Fodder collection (list main species used)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/> <i>Quercus semicarpifolia</i>	Absent <input type="checkbox"/>
NWFP collection (list the main products including bamboo & cane)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/> Mushroom	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 type="checkbox"/>	Occasional <input checked="" 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"/>

<b>h. Management Options (list any potential management options (activities) for the block)</b>	
1	Cleaning unwanted undergrowth
2	Plantation maintenances (refilling)

<b>Definitions</b>	
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 regrowth of naturally occurring tree species that are less than 1.3 metres 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

## Community Forest Management Procedures

### *Pralipang block*

1	Produces/services	Timber (Drashing/Cham /Tsim)`	Firewood
2	Main species	<i>Pinus wallichiana</i>	<i>Quercus semicarpifolia, Quercus lanata, Quercus glauca, Quercus griffithii</i>
3	Problems	<ul style="list-style-type: none"> <li>• Insufficient supply of timber</li> <li>• No road access and located below village</li> <li>• Far from road head and village (Gagar Pam)</li> </ul>	<ul style="list-style-type: none"> <li>• Inaccessible for transportation</li> </ul>
4	Opportunities	<ul style="list-style-type: none"> <li>• Allot timber shortages from SRFL</li> <li>• Explore for farm road construction to benefit one households plus for easy extraction of timber</li> </ul>	<ul style="list-style-type: none"> <li>• Construction of farm road</li> <li>• Excess firewood</li> </ul>
5	Management objectives	<ul style="list-style-type: none"> <li>• Improve existing forest conditions for sustainable forest management</li> <li>• Equitable distribution of forest resource</li> </ul>	<ul style="list-style-type: none"> <li>• To generate income</li> </ul>
6	Activities	<ul style="list-style-type: none"> <li>• Cleaning and thinning (M)</li> <li>• CF boundary clearing (H)</li> <li>• Process for farm road construction to ease transportation of firewood and construction timber (H)</li> </ul>	<ul style="list-style-type: none"> <li>• Harvest trees annually applying ‘single tree’ Silviculture system (L)</li> <li>• Market excess firewood (M)</li> </ul>
7	Procedures	<ul style="list-style-type: none"> <li>• CFMG shall contribute two days labor for cleaning in potential areas of Pralipang</li> <li>• CF boundary clearing shall be done simultaneously</li> <li>• Issue collection permit to the CFMG during 9<sup>th</sup> Month of Bhutanese Calendar for timber (1 drashing and 3 chams)</li> <li>• Execute tree marking during 10<sup>th</sup> Bhutanese Calendar by informing Beat Incharge of Nubi</li> <li>• Collect timber from forest within 2 years from the date of marking</li> <li>• CF Chairperson shall initiate to inform Forest Range Officer with the quantity of resource deficit in writing. Applicant details should be submitted along with the recommendation letter of the CF Chairperson</li> </ul>	<ul style="list-style-type: none"> <li>• Issue collection permit to the CFMG during 9<sup>th</sup> Month of Bhutanese Calendar</li> <li>• Execute tree marking during 10<sup>th</sup> Bhutanese Calendar by informing Beat Incharge of Nubi</li> <li>• Collect timber from forest within 3 months from the date of marking</li> </ul>
8	Responsibility	<ul style="list-style-type: none"> <li>• CF Chairperson, Applicant and Beat Office</li> </ul>	<ul style="list-style-type: none"> <li>• CF Chairperson, CFMG members and Beat Office</li> </ul>

Demlaya block

1	Produces/services	Timber (Drashing/Cham/Tsim)	Firewood	Poles	Water
2	Main species	<i>Pinus wallichiana</i> and <i>Betula</i>	<i>Quercus semicarpifolia</i> , <i>Quercus lanata</i> , <i>Quercus glauca</i> , <i>Alnus nepalensis</i> , <i>Quercus griffithii</i>	<i>Oaks</i> , <i>Rhus spp.</i> , <i>Symplocus spp.</i> , <i>Lyonia spp.</i>	Terdrom Drupchu
3	Problems	<ul style="list-style-type: none"> <li>• Insufficient supply of timber</li> <li>• Far from road head and village (Gagar Pam)</li> </ul>	<ul style="list-style-type: none"> <li>• Over-crowded firewood species</li> </ul>	<ul style="list-style-type: none"> <li>• Insufficient poles</li> </ul>	<ul style="list-style-type: none"> <li>• Unmanaged holy water</li> </ul>
4	Opportunities	<ul style="list-style-type: none"> <li>• Allot timber shortages from SRFL (potential area in Nubi or else from Bumthang area)</li> <li>• Maintain existing plantations inside CF</li> </ul>	<ul style="list-style-type: none"> <li>• Explore to sell excess firewood to the residents of Trongsa town or Dratshang</li> </ul>	<ul style="list-style-type: none"> <li>• Carryout plantation</li> <li>• Explore allotment of <i>Quercus griffithii</i> from SRFL if there are resource deficit (Applicants shall extract poles after sawing).</li> </ul>	<ul style="list-style-type: none"> <li>• Explore commercialization of water and the holy place (NEY)</li> <li>• Tourist products</li> </ul>
5	Management objectives	<ul style="list-style-type: none"> <li>• Improve existing forest conditions for sustainable forest management</li> <li>• Equitable distribution of forest resource</li> </ul>	<ul style="list-style-type: none"> <li>• To generate income</li> <li>• To protect existing forest from illegal activities by the outsiders and improve its conditions</li> </ul>	<ul style="list-style-type: none"> <li>• To ensure equitable distribution product through sustainable utilization</li> </ul>	<ul style="list-style-type: none"> <li>• To generate income</li> <li>• To protect catchment areas or water resources on case by case basis</li> </ul>
6	Activities	<ul style="list-style-type: none"> <li>• Cleaning and thinning</li> <li>• Maintenance of existing plantation</li> <li>• Refill casualties</li> <li>• CF boundary clearing</li> </ul>	<ul style="list-style-type: none"> <li>• Harvest firewood</li> <li>• Market excess firewood</li> <li>• Thin and clean by removing unwanted trees and shrubs</li> </ul>	<ul style="list-style-type: none"> <li>• Thinning and cleaning</li> <li>• Maintenance of plantations to solve poles shortages</li> </ul>	<ul style="list-style-type: none"> <li>• Project proposals</li> <li>• Signage</li> <li>• Cleaning and erect prayer flags in Terdrom Ney and</li> <li>• Construct eco-trails for watching Tiger evidences</li> </ul>

7	Procedures	<ul style="list-style-type: none"> <li>• CFMG shall contribute two days labor for cleaning in potential areas (Phasu, Dozam Bje, Demlayla).</li> <li>• Issue collection permit to the CFMG during 9<sup>th</sup> Month of Bhutanese Calendar (7 drashings and 19 chams)</li> <li>• Execute tree marking during 10<sup>th</sup> Bhutanese Calendar by informing Beat Incharge of Nubi</li> <li>• Collect timber from forest within 2 years from the date of marking</li> <li>• CF Chairperson shall initiate to inform Forest Range Officer with the quantity of resource deficit in writing. Applicant details should be submitted along with his recommendation letter of CF Chairperson.</li> </ul>	<ul style="list-style-type: none"> <li>• Issue collection permit to the CFMG during 9<sup>th</sup> Month of Bhutanese Calendar</li> <li>• Execute tree marking during 10<sup>th</sup> Bhutanese Calendar by informing Beat In-charge of Nubi</li> <li>• Collect firewood from forest within 3 months from the date of marking</li> <li>• Explore marketing surplus firewood by the CFMG executive committee</li> </ul>	<ul style="list-style-type: none"> <li>• Issue collection permit to the CFMG during 9<sup>th</sup> Month of Bhutanese Calendar</li> <li>• Execute tree marking during 10<sup>th</sup> Bhutanese Calendar by informing Beat Incharge of Nubi</li> </ul>	<ul style="list-style-type: none"> <li>• Cordon area to protect avoid contaminations</li> <li>• Seek technical support from Trongsa Range to develop project proposals on eco-trails</li> <li>• Seek support to link with TCB to encourage tourist to visit CF</li> </ul>
8	Responsibility	CF Chairperson, applicants and Beat In-Charge	CF Chairperson, Executive, applicants and Beat Incharge	CF executive and Beat Incharge	Chairperson & CFMG members

## Annual Allowable Cut

The AAC in terms of standing volume is indicated in the following table;

Sl.#.	Name of the block	Timber tree volume (Cfts)	Firewood volume (Cfts)
1	Demlaya	808	1510
2	Pralipang	155	639
	<b>Total</b>	<b>963</b>	<b>2149</b>

AAC in terms of number of trees was converted based on the conversion factors reflected in Royalty on Forest Produce, 2006 compiled by Forest Information management section, Department of Forest, Page no. 10 and presented in the following table;

Sl. #.	Name of the block	Type	AAC (Number of trees)			
			Drashing	Cham	Tsim	Dangchung
1	Demlaya	Timber	7	19	23	8
		Non-timber	8	30	118	191
2	Pralipang	Timber	1	3	2	1
		Non-timber	3	13	37	24

## Demand assessment for forest resources

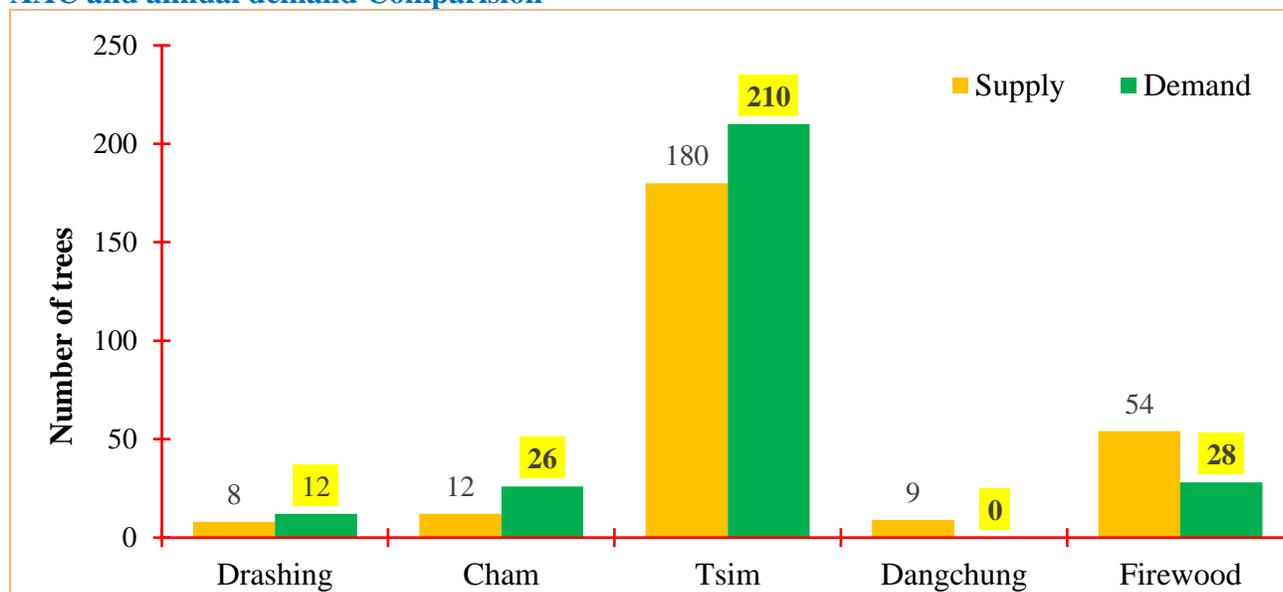
The demand assessment was done through participatory approach and found that 4 household plans to construct new house and 4 household will go for renovations during this plan period. Annual number of households requirement in decimal number is calculated by dividing total households by 10 years.

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
<b>New constructions</b>							
Drashing (Conifer)	12	847	0.4	4.8	339	48	3390
Cham (Conifer)	30	424	0.4	12	169	120	1694
<b>Renovation</b>							
Drashing (Conifer)	6	424	0.4	2.4	169	24	1695
Cham (Conifer)	15	212	0.4	6	85	60	847
<b>Fencing Posts</b> (Tsim-sized-Non-timber trees) BL	15	53	14	210	741	2100	7413
<b>Cattle shed construction</b>							
Drashing (BL)	2	124	2	4	247	40	2471
Cham (BL)	4	42	2	8	85	80	847
<b>Firewood (BL)</b>	2	124	14	28	1730	280	17301
Note: Conversion factor based on FRDD, 2004 (10.2)							

## Allotment of other forest produce

CFMG Executive Management Committee shall allot 108 numbers of flag poles and one truckload firewood during death cases.

## AAC and annual demand Comparison



CFMG faces timber deficits for new constructions and renovation of houses. Range Office will have to source timber from SRFL (Nubi, Chendebji or Bumthang areas) for these purposes. However, CFMG shall meet the timber requirement for cattle shed construction from the CF area only. The supply of *Tsim* is inclusive of both the timber and non-timber and still have shortage of 30 numbers. CFMG shall adjust either from non-timber of *Dangchung* class or allot one number of *Quercus griffithii* from SRFL to each household that will be more durable and save all those *Tsim* sized timber in future. The fencing post is required for maintenances of electric fencing in their village.

## Participatory Environment Assessment

Activity proposed in Gagar 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 patrolling	++	+	+	++	0	0	0	+++
Thinning	+++	0	0	+++	0	0	+	+++
CF boundary and bush clearing	0	0	0	+++	0	0	0	0
Cleaning of <i>Terdrom Drupchu</i>	0	++	+	0	0	+++	0	++
Plantation maintenance	++	++	+	++	0	+	+	++

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

## Procedures to address potential negative effects

Activity	Procedure
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Timber harvesting/thinning/cleaning	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 15 meters uphill and 15 meters downhill of the farm road.
Extraction of stones through surface collection mode	No excavation works will be allowed. No blasting will be carried out.

### Forest Produce Ranking

	Timber	Firewood	Poles	Water
Timber		Timber	Timber	Water
Firewood			Firewood	Firewood
Poles				Poles
Water				

Scores details: Timber (2), Firewood (2), Water (1) and Poles (1)

### Monitoring plans- Participatory forest resource impact monitoring

Activity	Indicator	How it will be monitored	Responsibility	Comments
Plantations maintenance	<ul style="list-style-type: none"> <li>Area weeded</li> <li>Number of seedlings planted</li> </ul>	<ul style="list-style-type: none"> <li>Physical monitoring and annual CF monitoring</li> </ul>	CFMG, RO of Trongsa Range. Nubi Beat Office shall provide on-site technical assistance	
Patrolling	Number of patrols conducted and offenders apprehended	<ul style="list-style-type: none"> <li>Regular patrolling</li> </ul>	CFMG Secretary will make schedule of members on rotation basis	The patrol team will cover whole forest area
Thinning and cleaning	<ul style="list-style-type: none"> <li>Area thinned and quantity of cleaning works carried out.</li> </ul>	<ul style="list-style-type: none"> <li>Physical monitoring from DFO and Range Office</li> </ul>	DFO Bumthang & Trongsa Forest Range Office in collaboration with CF Executive Committee. Nubi Beat Office	
CF boundary clearing (2 meters)	Length of boundary cleared	Physical verification and labor contribution made by the CFMG members	CFMG Committee and Nubi Beat Office	Trongsa Forest Range to provide technical advises

### Monitoring plans- Participatory social and institutional impact monitoring

Activity	Indicator	How it will be monitored	Responsibility	Comments
CFMG general meeting	<ul style="list-style-type: none"> <li>• Number of participants in the meeting</li> </ul>	<ul style="list-style-type: none"> <li>• Review and CF record books</li> </ul>	CFMG executive and Trongsa Forest Range	Invite CFO & GT Chairperson during 5 <sup>th</sup> year and 9 <sup>th</sup> year monitoring and evaluation.
Book Keeping training	<ul style="list-style-type: none"> <li>• Number of trainings conducted.</li> <li>• Crosschecking books of accounts</li> </ul>	<ul style="list-style-type: none"> <li>• Books of accounts</li> </ul>	DFO Bumthang	Involve Trongsa Forest Range for monitoring
Resource sharing on equity basis	<ul style="list-style-type: none"> <li>• Resources allocated to needy member</li> </ul>	<ul style="list-style-type: none"> <li>• CF record books</li> </ul>	CFMG management committee	The deficit timber shall be allotted from Bumthang area
CF Management Committee Meeting	<ul style="list-style-type: none"> <li>• Number of committee meetings conducted</li> </ul>	<ul style="list-style-type: none"> <li>• CFMG record books</li> </ul>	CFMG	

## Annual Work Plan

Location	Activity	Year										Responsibility
		1	2	3	4	5	6	7	8	9	10	
Demlaya & Pralipang	Cleaning and thinning											CFMG
Demlaya	Plantation maintenance (refilling)											CFMG
Demlaya	CF boundary clearance (2m)											Beat Incharge and CFMG
Pralipang	CF boundary clearance (2m)											Beat Incharge and CFMG
Demlaya & Pralipang	Timber harvesting											Chairperson, applicant and Beat Incharge
Demlaya & Pralipang	Firewood harvesting											Chairperson, applicant and Beat Incharge
Demlaya	Cleaning of <i>Terdrom Drupchu</i> , development of signage and erection of prayer flags											CFMG
Demlaya (Terdrom)	Develop eco-trail for tourists to witness evidences of Tiger and Musk deer.											
	General meeting											
	Book keeping training											
	Silviculture training											

## Evaluation and Revision of Management Plan

Gagar Community Forest Management Plan shall be evaluated jointly by a team from Divisional Forest Office, Bumthang during last quarter of **the 5<sup>th</sup> year if required**. However, final evaluation shall be done during the **last quarter of 9<sup>th</sup> year** of the approved plan period and **if satisfied with the evaluation report**, revision of management plan shall be initiated accordingly.

## PART II: CF BY-LAWS

### Article 1: Name of Community Forest

The Community Forest shall be named as “Gagar Community Forest”.

### Article 2: Membership Arrangements

Any household native to **Gagar Pam** and **Gagar Trong** villages with *Gung* and *Thram* shall be eligible to become member of Gagar CFMG.

#### Article 2.1: New membership

He/she should produce *Gung* and *Thram* to become new member. During the time of his/her entry, he/she should compensate the total labor contributed calculated on the basis of prevailing national wage rate.

#### Article 2.2: Resignation from the membership

- Any member(s) who decides to resign from the membership shall submit written application with reasons for the resignation to the Chairperson of the CF.
- Upon review by CF management committee, if the member resigns due to unavoidable reasons, he/she shall be compensated with 50% share of the CF fund.
- Member(s) resigning due to loss of interest shall be considered without any benefits.
- Member(s) resigning at the end of this plan period shall be compensated 50% share of the CF fund.
- Any resigned member willing to rejoin the group shall be considered and the new membership requirements shall apply.

### Article 3: Membership Fees

CFMG member shall contribute Nu. 100/- per household on annual basis.

### Article 4: CF Management Committee formation

CF management committee shall comprise of 3 Office bearers and one messenger/Tshogpa. They shall serve for **Five** years and after completion of their tenure, CFMG shall decide whether to change or continue based on their performances. If committee member misuses fund, CFMG shall terminate immediately and re-elect potential person. The committee members shall abide by the following terms of references. Following are the executive members for next five years;

Sl.#.	Name	Village	Designation	Contact number
1	Ngawang Tshering	Gagar Pam	Chairperson	77358152
2	Nidup Dorji	Gagar Pam	Secretary	17577469
3	Rinchen Wangdi	Gagar Pam	Treasurer	77719019
4	Choeda Wangdi	Gagar Pam	Messenger	77305906

#### Article 4.1: Terms of References of Committee Members

- Function smoothly for the welfare of CFMG and development of CF
- Supervise, coordinate and monitor the CF activities
- Ensure proper utilization and management of CF funds
- Solve disputes within CFMG level
- Seek technical support from the stakeholders when required.
- Ensure equitable distribution of forest resources to the members

- Prepare annual work plan and progress reports to CFO or Range Officer

*Article 4.2: Terms of Reference for Chairperson*

- Chair any type of CF meeting
- Supervise all CF activities as per the CF Management Plan
- Maintain good relationship with the staffs of government and other related agencies
- Attend to the visit of forest officials and outsiders.
- Explore markets to sell excess firewood from the CF
- Countersign for withdrawal of CF fund
- Resolves internal conflicts
- Organize CF patrolling on rotation basis
- Countersigns on the issuance of collection permits

*Article 4.3: Terms of References for Secretary*

- Officiate CF during the absence of Chairperson
- Coordinate and maintain labor register during the CF developmental activities
- Prepare and maintain minutes of meeting
- Countersigns for withdrawal of CF fund
- Attend any official correspondences related to CF
- Maintain records of the CF activities carried out by CFMG
- Maintain list of CFMG members with detailed information
- Maintain files of CFMG

*Article 4.4: Terms of References for Treasurer*

- Maintain all financial records of expenditure and income
- Present financial status to the CFMG during general meeting
- Countersigns for withdrawal of CF fund
- Prepares annual financial report for submission to Chief Forestry Officer
- Collect membership fees, collection fees and fines and penalties.

*Article 4.5: Terms of References for Messenger*

- In absence of Chairperson and Secretary, shall monitor and supervise the CF activities.
- Coordinate to patrol CF area with two persons identified on rotational basis and submit patrol report to Chairperson.

*Article 4.6: Incentives to CFMG committee members*

No incentives shall be paid to the Committee members during this management plan period.

*Article 4.7: Rights, Roles and responsibilities of CFMG*

- Shall have right to terminate or appoint committee members if found guilty on misuse of fund and power.
- Shall have right to interfere or conduct auditing of CF fund
- Shall have right to protect CF resources from the illegal activities inside CF
- Shall have right to seek clarification on utilization of CF resources.
- Shall have right to inform Chairperson and Forest Officials about outbreak of forest fire inside CF.
- CFMG shall inform committee members on the illegal activities inside CF.

- CFMG member shall contribute labors when required for developmental activities in the CF
- CFMG member should actively attend during the outbreak of forest fire.
- CFMG member should attend meetings when asked by CFMG committee or Forestry Officials.

#### Article 5: Collection Fees

Collection fees for the forest resource shall be collected as indicated in the following table;

Type of Forest Product	Rate (Nu.)	Remarks
Drashing	100/- per tree	
Cham	50/- per tree	
Tsim	20/- per tree	
Dangchung	20/- per dangchung	
Fencing post	20/- per tree	
Firewood	100/- per tree	
Bamboo ( <i>Arundanaria racemosa</i> )	10/- per pair	CFMG shall request <i>Borinda grossa</i> from SRFL

#### Article 6: Fines and Penalties

CFMG shall create awareness with the neighboring villages (Semjee & Karshong) on the by-laws. The penalties for illegal activities shall be dealt as per following conditions (fines and compensations).

Sl.#.	Type of offence	Fines	Compensations	Remarks
1	Illegal felling of trees in the CF	As per section 416 (1) of FNCRR, 2017	As per section 416 (1) of FNCRR, 2017	CFMG shall report the offence to Nubi Beat Office
2	Illegal collection of bamboo	Nu. 20/- per pair	Nu. 15/- per pair	
3	Setting fire in the CF	As per FNCRR, 2017		
4	Poaching/hunting	As per FNCRR, 2017		CFMG should report to Forestry Officials
5	Illegal collection of sand and stones	As per FNCRR, 2017		
6	Developmental activity inside CF		Shall be compensated as per the provision of FNCRR, 2017 and its amendments	
7	Damages on seedlings	Nu.10/- per seedling	Defaulter must replant the seedlings	
8	Damages of barbed wire fencing	Nu. 300/- per occasion	Repair damaged fences by the defaulter	
9	Absent from work	Nu. 600/- per day	NA	
10	Absent from meeting	Nu. 200/- for 2 to 3 hours meeting and Nu. 600/- for whole day meeting.		

## **Article 7: Management of CF fund**

CFMG shall source fund from the following areas;

- Membership entry fees
- Collection fees
- Fines and compensations
- Sale of firewood

CFMG office bearers shall deposit the money in their account maintained with Bhutan Development Bank Limited, Trongsa. Treasurer, Chairperson and Secretary shall update joint signatory for withdrawal of fund in future. Money withdrawal from the bank should have signatures of three office bearers (Chairperson, Secretary and Treasurer).

CFMG shall ensure to utilize fund in the following area;

- 25% for CF development activities (CF review, Thinning, cleaning, salvage operations, boundary clearing and forest fire line creation)
- 50% for CFMG enhancement (loan, networking, meeting and capacity development, roofing CFMG office with CGI sheets)
- 5% as reserve fund in the bank
- 20% for others (*Zhingdrup, Semsoo*, water supply, road constructions, etc)

During disaster, CFMG shall contribute labor to make a temporary living shed to the affected CF member. CFMG shall make decisions if cash is required to help the affected household.

### *Article 7.1: CF loans*

CFMG still have reservation to provide loan to the members owing to less bank balances. However, if CFMG increases bank balances, loan shall be provided based on the following conditions;

- Loaning shall be initiated when fund balance is equal to or more than Nu. 300,000/- (Three Lakhs).
- Principal loan ceiling of Nu. 25,000/- shall be approved by CF committee
- Interest rate @ 5% shall be fixed with the repayment period of one year. The borrower should repay the loan within one with interest and principal amount.
- If the loan is not paid on time, penalty amount of 10% shall be levied.
- Collaterals at par the loan amount may be mortgaged.

## **Article 8: Benefit Sharing**

- All CFMG members shall have right to any forest products available in the CF
- Timber, poles, flagpoles, and firewood shall be allotted on 'number of trees' and also taking into consideration of the standing volume. However, timber deficits for construction and renovation shall be allotted from the nearby potential SRFL or Chendebji areas or Bumthang areas.
- Marked trees shall be felled by experienced chain saw operator and must be sawn at site within the validity period.
- Benefits and resources shall be shared among the CFMG on equitable basis.
- The quantity of timber shall not be exceeding the AAC and shall be allotted based on genuineness of requirement.

- During the calamities such as earthquake, flood, pandemic or any disasters, CFMG shall provide *Semsoo* in the form of timber or cash whichever is convenient. Such decisions shall be made by CFMG committee.
- Loaning of CF fund within members shall be approved upon verification and review by management committee.
- The resource sharing (timber/firewood) shall not be allotted on ‘**quota system**’ rather do so on equity basis.
- CFMG shall not share cash from the accumulated fund unless required under unavoidable circumstances. However, in such cases approval from CFO shall be required.

### **Article 9: Meetings**

CFMG shall conduct two types of meetings;

1. General meeting
2. Committee meeting

#### *Article 9.1: General Meeting*

The meeting is aimed for proper functioning of the CFMG activities. CFMG shall meet once in a year during the 9<sup>th</sup> month of Bhutanese Calendar. During the meeting CFMG shall discuss on the following agenda;

- Functions of CF committee
- Present on progress reports
- Financial status of CF fund
- Annual work plans
- Issue collection permits for firewood, poles and timber
- Collection of annual fees and fines (if any).

CF Treasurer shall present the fund status concerning income and expenditure incurred. Secretary shall present on the status of CF developmental works undertaken by CFMG during the year.

#### *Article 9.2: Committee Meeting*

Committee meeting shall be convened two times in a year during the month of June and December. However, such meeting will be organized based on situation and urgency of work. Committee shall prepare work plans and progress report, approval of collection permits, approve loan applicants and plan activities for the welfare of CFMG.

### **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.

### **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 5<sup>th</sup> year. CF area extension shall not be entertained during mid-term but shall be done during the last quarter of the 9<sup>th</sup> year if found feasible/eligible.

#### **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 Forests**

**ROYAL GOVERNMENT OF BHUTAN  
MINISTRY OF AGRICULTURE & FORESTS  
Department of Forests & Park Services**

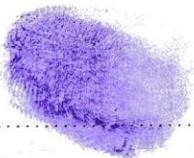
**APPLICATION TO ESTABLISH COMMUNITY FOREST**

**PART A** (To be filled by the applicant)

The Gup,

In accordance with the Forest and Nature Conservation Rules and Regulations, 2017, I, Choeda Wangdi  
the Chairman of the Community Forest Management Group of ... Cragas .....  
villages(s) consisting of ..... 14 ..... households, would like to submit this application for  
establishment of Community Forest. (map attached)

- a) Gewog: Nubi
- b) Description of the State Forest land proposed for establishment of Community Forest:
  - i) Name of the forest: .....
  - ii) Boundary description:
    - N Private land
    - S Rabchipang
    - E Drupchu
    - W Gampamodrag
  - iii) Estimated area: 70 (ha)
  - iv) Forest type: Cool broad leaved forest

Signature:  .....

Name of the CFMG Chairman: .....

Date: .....



**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 Gagar 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 found it feasible for the CF revision. The Revision of the CF area is based on the permissible ceiling for the CF area.

Signature: .....



Name: .....

Forest Range Officer  
Forest Range Office  
Trongsa: Bhutan

Name of Range: .....

Date: .....

4/11/2022

**PART C** (To be certified by the CFO)

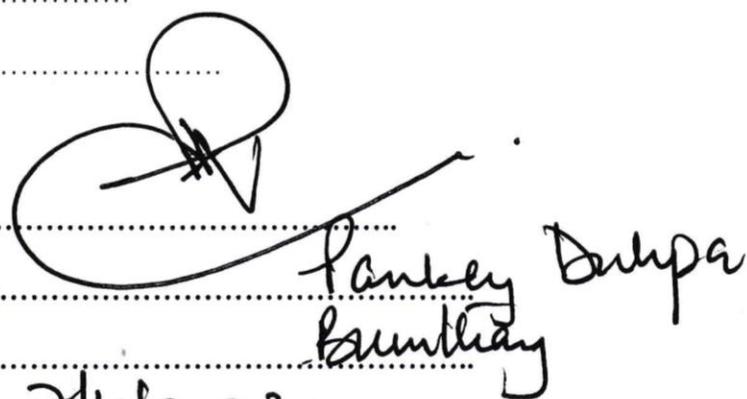
I have reviewed the application and I am satisfied/not satisfied, with the details provided in the application and the area is suitable/unsuitable for Community Forest Management. I accept/do not accept the application for establishment of Community Forest.

Justification:

1: .....

2: .....

Signature: .....



Name of CFO: .....

Division/Park: .....

Date: .....

7/4/2023

*Annex 2: CF boundary GPS coordinates*

<b>Boundaries</b>	<b>Features</b>	<b>Northing</b>	<b>Easting</b>
West	Pralipang	27.548410°N	90.455437°E
East	Mertsi Tang	27.541158°N	90.471544°E
South	Terdrom	27.536442°N	90.468417°E
North	Mani Tagpa	27.550134°N	90.469237°E

*Annex 3: Sample plot coordinates*

Plot ID	Northing	Easting	Plot ID	Northing	Easting	Plot ID	Northing	Easting
1	27.54939	90.45801	31	27.54492	90.47089	43	27.54316	90.47088
2	27.54851	90.45602	32	27.54492	90.47188	44	27.54315	90.47188
3	27.54851	90.45702	33	27.54492	90.47288	45	27.54229	90.46691
4	27.54851	90.45801	34	27.54405	90.46692	46	27.54228	90.46790
5	27.54763	90.45602	35	27.54405	90.46791	47	27.54228	90.46890
6	27.54762	90.45701	36	27.54405	90.46890	49	27.54227	90.47088
7	27.54762	90.45801	37	27.54404	90.46990	50	27.54227	90.47187
8	27.54674	90.45602	38	27.54404	90.47089	51	27.54140	90.46691
9	27.54674	90.45701	39	27.54404	90.47188	52	27.54140	90.46790
10	27.54935	90.46992	40	27.54317	90.46692	53	27.54139	90.46889
11	27.54847	90.46892	41	27.54317	90.46791	54	27.54139	90.46988
12	27.54847	90.46991	42	27.54316	90.46890	55	27.54139	90.47088
13	Not assigned		75	27.53698	90.46788	56	27.54052	90.46690
14	27.54758	90.46892	27	27.54580	90.47288	57	27.54051	90.46790
15	27.54758	90.46991	28	27.54493	90.46792	58	27.54051	90.46889
16	27.54758	90.47090	29	27.54493	90.46891	59	27.54051	90.46988
17	27.54670	90.46792	30	27.54493	90.46990	60	27.54050	90.47087
18	27.54670	90.46892	70	27.53874	90.46888	61	27.53964	90.46591
19	27.54670	90.46991	71	27.53786	90.46689	62	27.53963	90.46690
20	27.54669	90.47090	72	27.53786	90.46789	63	27.53963	90.46789
21	27.54669	90.47189	74	27.53698	90.46689	64	27.53963	90.46889
22	27.54582	90.46792				65	27.53962	90.46988
23	27.54582	90.46891				66	27.53875	90.46491
24	27.54581	90.46990				67	27.53875	90.46591
25	27.54581	90.47090				68	27.53875	90.46690
26	27.54581	90.47189				69	27.53874	90.46789

Annex 4: Compilation sheets

**Timber trees**

<b>OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE)</b>						
1. CF Name		Gagar			4. Block Area	
2. Block Name		Pralipang			5. Compiling date	
3. No of plots		9			6. Species group	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)
10-19	0.017	0.096	0.050	2.222	2	4.44
20-29	0.047	0.349	0.050	2.222	2	4.44
30-39	0.093	0.828	0.050	2.222	8	17.78
40-49	0.156	1.583	0.050	2.222	6	13.33
50-59	0.233	2.660	0.050	2.222	2	4.44
60-69	0.327	4.100	0.050	2.222	0	0.00
70-79	0.436	5.941	0.050	2.222	0	0.00
80-89	0.561	8.218	0.050	2.222	0	0.00
90-99	0.701	10.967	0.050	2.222	0	0.00

<b>OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE)</b>						
1. CF Name		Gagar			4. Block Area	
2. Block Name		Pralipang			5. Compiling date	
3. No of plots		9			6. Species group	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)

10-19	0.017	0.078	0.050	2.222	1	2.22
20-29	0.047	0.287	0.050	2.222	2	4.44
30-39	0.093	0.687	0.050	2.222	1	2.22
40-49	0.156	1.323	0.050	2.222	0	0.00
50-59	0.233	2.236	0.050	2.222	1	2.22
60-69	0.327	3.462	0.050	2.222	0	0.00
70-79	0.436	5.037	0.050	2.222	0	0.00
80-89	0.561	6.993	0.050	2.222	0	0.00
90-99	0.701	9.361	0.050	2.222	0	0.00
100-109	0.857	12.171	0.050	2.222	0	0.00

<b>OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)</b>						
1. CF Name		Gagar		4. Block Area		
2. Block Name		Demlaya		5. Compiling date		
3. No of plots		63		6. Species group		
<i>coll</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)
10-19	0.017	0.096	0.050	0.317	20	6.35
20-29	0.047	0.349	0.050	0.317	23	7.30
30-39	0.093	0.828	0.050	0.317	23	7.30
40-49	0.156	1.583	0.050	0.317	13	4.13
50-59	0.233	2.660	0.050	0.317	5	1.59
60-69	0.327	4.100	0.050	0.317	3	0.95
70-79	0.436	5.941	0.050	0.317	0	0.00
80-89	0.561	8.218	0.050	0.317	0	0.00
90-99	0.701	10.967	0.050	0.317	0	0.00
100-109	0.857		0.050	0.317	0	0.00

**OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE)**

1. CF Name		Gagar			4. Block Area	
2. Block Name		Demlaya			5. Compiling date	
3. No of plots		63			6. Species group	
<b>col1</b>	<b>col2</b>	<b>col3</b>	<b>col4</b>	<b>col5</b>	<b>col6</b>	<b>col7</b>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)
10-19	0.017	0.096	0.050	0.317	3	0.95
20-29	0.047	0.335	0.050	0.317	6	1.90
30-39	0.093	0.773	0.050	0.317	9	2.86
40-49	0.156	1.449	0.050	0.317	5	1.59
50-59	0.233	2.396	0.050	0.317	6	1.90
60-69	0.327	3.643	0.050	0.317	0	0.00
70-79	0.436	5.218	0.050	0.317	0	0.00
80-89	0.561	7.145	0.050	0.317	0	0.00
90-99	0.701	9.448	0.050	0.317	0	0.00
100-109	0.857	12.150	0.050	0.317	0	0.00

**OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE)**

1. CF Name		Gagar			4. Block Area	
2. Block Name		Demlaya			5. Compiling date	
3. No of plots		63			6. Species group	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)
10-19	0.017	0.078	0.050	0.317	7	2.22
20-29	0.047	0.287	0.050	0.317	24	7.62
30-39	0.093	0.687	0.050	0.317	29	9.21
40-49	0.156	1.323	0.050	0.317	10	3.17
50-59	0.233	2.236	0.050	0.317	7	2.22
60-69	0.327	3.462	0.050	0.317	1	0.32
70-79	0.436	5.037	0.050	0.317	0	0.00
80-89	0.561	6.993	0.050	0.317	0	0.00
90-99	0.701	9.361	0.050	0.317	0	0.00
100-109	0.857	12.171	0.050	0.317	0	0.00

**Non-timber trees**

<b>OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE)</b>						
1. CF Name		Gagar		4. Block Area		
2. Block Name		Pralipang		5. Compiling date		
3. No of plots		9		6. Species group		
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)
dbh class (cm)	class basal area (m <sup>2</sup> )	class volume (m <sup>3</sup> )	plot size (ha)	expansion factor	tally	nrha (stems/ha)
10-19	0.017	0.095	0.050	2.222	33	73.33
20-29	0.047	0.340	0.050	2.222	44	97.78
30-39	0.093	0.796	0.050	2.222	25	55.56
40-49	0.156	1.505	0.050	2.222	8	17.78
50-59	0.233	2.508	0.050	2.222	4	8.89
60-69	0.327	3.837	0.050	2.222	1	2.22
70-79	0.436	5.526	0.050	2.222	0	0.00
80-89	0.561	7.603	0.050	2.222	0	0.00
90-99	0.701	10.096	0.050	2.222	1	2.22
100-109	0.857	13.033	0.050	2.222	1	2.22

**OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE)**

1. CF Name		Gagar			4. Block Area	
2. Block Name		Pralipang			5. Compiling date	
3. No of plots		9			6. Species group	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)
10-19	0.017	0.078	0.050	2.222	15	33.33
20-29	0.047	0.287	0.050	2.222	8	17.78
30-39	0.093	0.687	0.050	2.222	1	2.22
40-49	0.156	1.323	0.050	2.222	0	0.00
50-59	0.233	2.236	0.050	2.222	0	0.00
60-69	0.327	3.462	0.050	2.222	0	0.00
70-79	0.436	5.037	0.050	2.222	0	0.00
80-89	0.561	6.993	0.050	2.222	0	0.00
90-99	0.701	9.361	0.050	2.222	0	0.00
100-109	0.857	12.171	0.050	2.222	0	0.00

**OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE)**

1. CF Name		Gagar			4. Block Area	
2. Block Name		Pralipang			5. Compiling date	
3. No of plots		9			6. Species group	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)
dbh class (cm)	class basal area (m <sup>2</sup> )	class volume (m <sup>3</sup> )	plot size (ha)	expansion factor	tally	nrha (stems/ha)
10-19	0.017	0.074	0.050	2.222	13	28.89
20-29	0.047	0.255	0.050	2.222	11	24.44
30-39	0.093	0.579	0.050	2.222	0	0.00
40-49	0.156	1.072	0.050	2.222	4	8.89
50-59	0.233	1.755	0.050	2.222	0	0.00
60-69	0.327	2.646	0.050	2.222	0	0.00
70-79	0.436	3.762	0.050	2.222	0	0.00
80-89	0.561	5.119	0.050	2.222	0	0.00
90-99	0.701	6.731	0.050	2.222	0	0.00

**OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE)**

1. CF Name		Gagar			4. Block Area	
2. Block Name		Demlaya			5. Compiling date	
3. No of plots		63			6. Species group	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)
10-19	0.017	0.095	0.050	0.317	106	33.65
20-29	0.047	0.340	0.050	0.317	103	32.70
30-39	0.093	0.796	0.050	0.317	48	15.24
40-49	0.156	1.505	0.050	0.317	16	5.08
50-59	0.233	2.508	0.050	0.317	10	3.17
60-69	0.327	3.837	0.050	0.317	2	0.63
70-79	0.436	5.526	0.050	0.317	1	0.32
80-89	0.561	7.603	0.050	0.317	1	0.32
90-99	0.701	10.096	0.050	0.317	0	0.00
100-109	0.857	13.033	0.050	0.317	0	0.00

**OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE)**

1. CF Name		Gagar			4. Block Area	
2. Block Name		Demlaya			5. Compiling date	
3. No of plots		63			6. Species group	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)
dbh class (cm)	class basal area (m <sup>2</sup> )	class volume (m <sup>3</sup> )	plot size (ha)	expansion factor	tally	nrha (stems/ha)
10-19	0.017	0.078	0.050	0.317	288	91.43
20-29	0.047	0.287	0.050	0.317	103	32.70
30-39	0.093	0.687	0.050	0.317	24	7.62
40-49	0.156	1.323	0.050	0.317	10	3.17
50-59	0.233	2.236	0.050	0.317	3	0.95
60-69	0.327	3.462	0.050	0.317	1	0.32
70-79	0.436	5.037	0.050	0.317	0	0.00
80-89	0.561	6.993	0.050	0.317	0	0.00
90-99	0.701	9.361	0.050	0.317	0	0.00
100-109	0.857	12.171	0.050	0.317	0	0.00

**OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE)**

1. CF Name		Gagar			4. Block Area	
2. Block Name		Demlaya			5. Compiling date	
3. No of plots		63			6. Species group	
<i>col1</i>	<i>col2</i>	<i>col3</i>	<i>col4</i>	<i>col5</i>	<i>col6</i>	<i>col7</i>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)
10-19	0.017	0.074	0.050	0.317	272	86.35
20-29	0.047	0.255	0.050	0.317	65	20.63
30-39	0.093	0.579	0.050	0.317	9	2.86
40-49	0.156	1.072	0.050	0.317	2	0.63
50-59	0.233	1.755	0.050	0.317	1	0.32
60-69	0.327	2.646	0.050	0.317	0	0.00
70-79	0.436	3.762	0.050	0.317	0	0.00
80-89	0.561	5.119	0.050	0.317	0	0.00
90-99	0.701	6.731	0.050	0.317	0	0.00

**OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE)**

1. CF Name		Gagar			4. Block Area	
2. Block Name		Demlaya			5. Compiling date	
3. No of plots		63			6. Species group	
<b><i>col1</i></b>	<b><i>col2</i></b>	<b><i>col3</i></b>	<b><i>col4</i></b>	<b><i>col5</i></b>	<b><i>col6</i></b>	<b><i>col7</i></b>
		(3 decimals)	(3 decimals)	(3 decimals)	(0 decimals)	(2 decimals)
dbh class (cm)	class basal area (m2)	class volume (m3)	plot size (ha)	expansion factor	tally	nrha (stems/ha)
10-19	0.017	0.113	0.050	0.317	4	1.27
20-29	0.047	0.334	0.050	0.317	3	0.95
30-39	0.093	0.691	0.050	0.317	3	0.95
40-49	0.156	1.190	0.050	0.317	3	0.95
50-59	0.233	1.839	0.050	0.317	0	0.00
60-69	0.327	2.642	0.050	0.317	0	0.00
70-79	0.436	3.605	0.050	0.317	0	0.00
80-89	0.561	4.733	0.050	0.317	0	0.00
90-99	0.701	6.026	0.050	0.317	0	0.00
100-109	0.857	7.491	0.050	0.317	0	0.00