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འཆར་བཞི།



འཆར་གཞི་དུས་ཡུན་ ༢༠༢༣ ལས་ ༢༠༣༣ ཚུན།  
སྤྱི་གསལ་སྤྱི་སྤྱོད་ལྗོངས་སྤྱི་སྤྱོད་སྤྱོད་ལྗོངས་  
གྲོང་གསུལ་རྫོང་ཁག།

## **BJEE COMMUNITY FOREST MANAGEMENT PLAN (1<sup>st</sup> Revision)**



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

**Chiwog:** Bjee-Semjee

**Gewog:** Nubi

**Dzongkhag:** Trongsa



རྒྱལ་ཁབ་འབྲུག་གཞི་རིམ་  
 རྒྱལ་ཁབ་དང་རང་བཞིན་ཐོན་སྐྱེད་ལག་ཁྱུར་ཚན་པ་དང་གླིང་ཁྱེད་ལས་ཁྲིམས་ལུང་སྒྲུབ་  
 རྒྱལ་ཁབ་ཐོན་སྐྱེད་འཆར་གཞི་དང་འཛིན་སྲུང་གྲུབ་  
 ROYAL GOVERNMENT OF BHUTAN  
 MINISTRY OF ENERGY & NATURAL RESOURCES  
 DEPARTMENT OF FORESTS & PARK SERVICES  
**FOREST RESOURCES PLANNING AND MANAGEMENT DIVISION**



No. DoFPS/FRPMD/FRPIS/CF\_1(b)/2022-2023/12983

July 06, 2023

**NOTE SHEET**

**Sub: Approval of Revised Community Forest Management Plans (CFMPs)**

Following community forests (Annexure 1) upon completion of its 10-year management plan period have been revised and submitted for review and approval from the department. The community forest management plans (CFMPs) have been developed by respective field offices (detailed table 1) in collaboration with Community Forest Management Groups.

Sl.No	Name of CF	Gewog	Office	Area(ha)	CFMG	AAC (M3)	Plan-Period
1	Bjee	Nubi	BFD	76	14	94.02	2023-2033
2	Gatsholing	Khebisa	Dagana	219.77	47	363.06	2023-2033

CFMPs adhere to guidelines and requirements set under Forest and Nature Conservation Code of Best Management Practices of Bhutan, Volume III Sustainable Forest Management and Forest and Nature Conservation Rules and Regulation, 2017 (FNCRR, 2017).

The revised CFMPs reflect the priorities and needs of the CFMG while also considering environmental and social safeguards. Stakeholder engagement ensured transparency and collaboration with a commitment to accountability, transparency, and long-term success.

The revised CFMPs include vision, objectives, strategies, proposed activities and framed by laws. It also includes detailed information on forest inventories, biodiversity conservation measures, resource utilization plans, benefit-sharing mechanisms, and community capacity building strategies.

Technical assessment and review conducted by Forest Resources Planning and Implementation Section, FRPMD, DoFPS. The revised CFMP's emphasize community participation, to promote conservation, sustainable resource utilization, community development, and the integration of traditional knowledge with modern scientific practices.

Therefore, the CFO and the Director jointly approved the revised Community Forest Management Plans (CFMP) after thorough review and discussion. They acknowledged its importance in fostering sustainable forest management practices, preserving biodiversity, and ensuring the well-being of the local community.

  
 (Sonam Tobgay)  
**Chief Forestry Officer**

  
 (Director)  
**Department of Forest and Park Services**

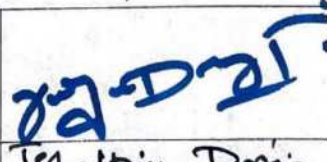

### APPROVAL SHEET

<b>Name of Community Forest</b>	Bjee
<b>Village</b>	Bjee Trong
<b>Chiwog</b>	Bjee-Semjee
<b>Gewog</b>	Nubi
<b>Dzongkhag</b>	Trongsa
<b>Production area (Hectare/Acre)</b>	68.74/169.85
<b>Protection area (Hectare/Acre)</b>	7.26/17.93
<b>Total Community Forest Area (Hectare/Acre)</b>	76/187.79
<b>Total CFMG member (No. of HH)</b>	14

#### Prepared and Submitted for Approval

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

#### Reviewed and Submitted for Approval

<b>Signature</b>		
<b>Name</b>	Tsheltrim Dorji	Sonam Tobssay
<b>Title</b>	Focal Officer	Chief Forestry Officer
<b>Division</b>	Forest Information and Management Division	Forest Information and Management Division

APPROVED BY:

  
DIRECTOR

DEPARTMENT OF FORESTS AND PARK SERVICE

## Table of Contents

Acronyms.....	1
I. Executive Summary .....	2
PART A: MANAGEMENT PLAN .....	3
II. Introduction .....	3
III. Review of past management plan.....	4
Financial status.....	4
Activities carried out.....	4
Number of timber trees and other resources extracted.....	4
Other benefits.....	4
IV. Community Forest Map .....	5
V. Land Use and Land Cover Map of Community Forest .....	6
VI. Community Forest boundaries .....	7
VII. Planning Process .....	7
VIII. Social information.....	7
IX. Forest Information.....	7
Zurtog Block .....	8
Format 1. Preliminary Forest Resource Assessment Format .....	8
Kapiban Block .....	12
Format 1. Preliminary Forest Resource Assessment Format .....	12
Tabgang Block.....	16
Format 1. Preliminary Forest Resource Assessment Format .....	16
Objectives of Forest Management .....	20
X. Forest Management Procedures .....	21
Zurtog block.....	21
Kapiban Block .....	22
Tabgang Block.....	24
XI. Demand Assessment .....	26
XII. Comparision of demand and supply.....	26
XIII. Annual Allowablle Cut .....	27
XIV. Forest stock .....	27
XV. Participatory Environmental Assessment .....	27
XVI. Forest Produce Ranking.....	28
XVII. Monitoring plans-participatory forest resource impact monitoring .....	28
XVIII. Monitoring plans- Participatory social and institutional impact monitoring .....	30
XIX. Monitoring plans- Participatory environmental impact monitoring .....	30
XX. Annual Work Plan.....	31
XXI. Evaluation of management plan.....	31
PART B: COMMUNITY FOREST BY-LAWS .....	32
XXII. Name of the Community Forest.....	32
XXIII. Membership Arrangements.....	32
New membership .....	32
Resignation from the membership .....	32
XXIV. Formation of management committee .....	32
Tenure of management committee.....	32
Resignation of committee members.....	32
Roles and responsibilities of Chairperson.....	32

Roles and responsibilities of Secretary .....	33
Roles and responsibilities of Treasurer .....	33
Roles and responsibilities of Marking Representative .....	33
Incentives for the committee members .....	33
CFMG management committee members .....	33
XXV. Fees .....	34
XXVI. Fines and Penalties.....	34
XXVII. Management of CF Fund and Credit.....	34
Procedures for disbursing loans to the CFMG members .....	35
XXVIII. Benefit Sharing Mechanisms .....	35
XXIX. Meetings.....	36
General meeting .....	36
Committee meeting.....	36
XXX. Conflict management .....	36
XXXI. Amendment of CFM plan .....	36
XXXII. Power of the Department .....	36
XXXIII. ANNEXES .....	38
Annex 1: CF application and the members .....	38
Annex 2: CF boundary with GPS coordinates .....	40
Annex 3: CF Sample plots coordinates.....	41
Annex 4: Compilation sheets (T-trees) .....	42
Compilation sheets (N-trees) .....	52

## Acronyms

ac.:	Acres
AAC:	Annual Allowable Cut
BDBL:	Bhutan Development Bank Limited
CC:	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 Resource Management System
FNCRR, 2017:	Forest and Nature Conservation Rules and Regulations, 2017
FRDD:	Forest Resources Development Division
Gup:	Locally elected leader
G2C:	Government to Citizen Service
ha.:	Hectares
m <sup>3</sup> :	Cubic meter (Volume measurement)
LULC:	Land Use Land Cover, 2016
NRPC:	Natural Resources Pricing Committee
SRFL:	State Reserved Forest Land
PES:	Payment for ecosystem Services
Tshogpa:	Representative of the CFMG in CF management committee

## **I. Executive Summary**

*This plan is 1<sup>st</sup> revised Bjee Community Forest Management Plan which will be managed by 14 households. Bjee Community Forest will be remained same as the first term management. One household resigned due to Guntong issue. The gross area of CF is 76 hectares and production area are 68.74 hectares. There are three blocks namely Zurto, Kapiban and Tabgang.*

*Forest type of the CF is warm broadleaved forest dominated by oak species. The quantitative resource assessment was done using circular plot method by assigning 72 plots systematically.*

*The AAC of the CF is 4 drashings, 24 chams, 40 tsims, 25 dangchungs and 125 (drashing & Cham sized) numbers of trees equivalent to 666 cfts of timber trees and 2655 cfts of firewood (drashing and cham category). CFMG faces deficits of drashing and cham sized timbers for new construction and renovation purposes which may be allotted from SRFL of Chendebji or Bumthang areas.*

*CF boundary clearing, thinning, firewood/poles harvesting, and plantations are some of the activities that CFMG shall implement during this management plan period. Loaning will be initiated as well from the CF fund.*

*CFMG requires record and booking keeping refresher's training urgently as most of the books are left unutilized during the first term management. Technical support by the forestry officials shall be continued.*

*Mr. Tashi, Sr. Forest Ranger I working in Bumthang Division Headquarter facilitated for revision of this management plan.*

## PART A: MANAGEMENT PLAN

### II. Introduction

Bjee Community Forest was established in 2012 with an objective to protect the surrounding forest from degradation and deforestation with privileges to fulfill their demand for firewood and poles. Similarly, the CFMG proposed to continue the forest management with similar objective for next term management and area has been extended in two blocks of Zurtog and Tabgang. CF have three blocks (Zurtog, Kapiban and Tabgang) during this management term that will be managed by 14 households of Bjee Trong village, Nubi Gewog, Trongsa dzongkhag.

CF consists of production area of 68.74 hectares equivalent to 169.85 acres of warm broadleaved forest. *Quercus lanata* is common stand in Kapiban block with few blue pine stands. There are also *Quercus griffithii* which is used for collection of leaf litters for livestock bedding. *Alnus nepalensis* is also present in the forest which is used to compensate the timber requirement in some cases. The average basal area of the three blocks is 27.46m<sup>2</sup>/ha.

CFMG shall manage forest to achieve the following management objectives;

- *To protect the forest from illicit extraction of forest products by outsiders and neighboring villages*
- *To develop existing forest condition and hand over to younger generation for sustainable utilization*
- *To ensure equitable distribution of forest products and generate income.*

The AAC of the CF inclusive of all the blocks is 4 *drashings*, 24 *chams*, 40 *tsims*, 25 *dangchungs* and 125 (*drashing* + *Cham* sized) numbers of trees equivalent to 666 cfts of timber trees and 2655 cfts of firewood (*drashing* and *cham* category). CFMG faces shortages of 21 numbers of *drashing*-sized timber for construction and renovation of houses annually which they will have to be allotted from SRFL of Chendebji or Bumthang area. On the contrary, CFMG have excess of 111 number of trees to be used as firewood where they can continue to sell it to Trongsa dratshang so that CFMG fund is secured and income generated. The shortages of 4 numbers of *Cham* category trees to be used for electric fencing shall be met from the *tsim* category trees. There is no demand for the *dangchung* sized timber.

CF boundary clearing, cleaning and thinning, plantations, patrolling and sale excess firewood are some of the annual activities that CFMG shall implement. CFMG office bearers are required to be backed up for building their capacity in terms of booking keep and management.

### III. Review 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, sale of firewood. The details of the fund status of CFMG are indicated in the following table;

<b>Total capital (Nu.)</b>	<b>Cash in hand (Nu.)</b>	<b>Bank balance (Nu.)</b>
98543.25	1600.00	96943.25

#### *Activities carried out*

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

- Plantation of 12 acres by CFMG in 2015
- Boundary clearing of CF
- Cleaning of the forest 1.5 acres (300 saplings)
- Conducted 10 annual meetings
- Conducted patrolling on bi-monthly basis for last 10 years.

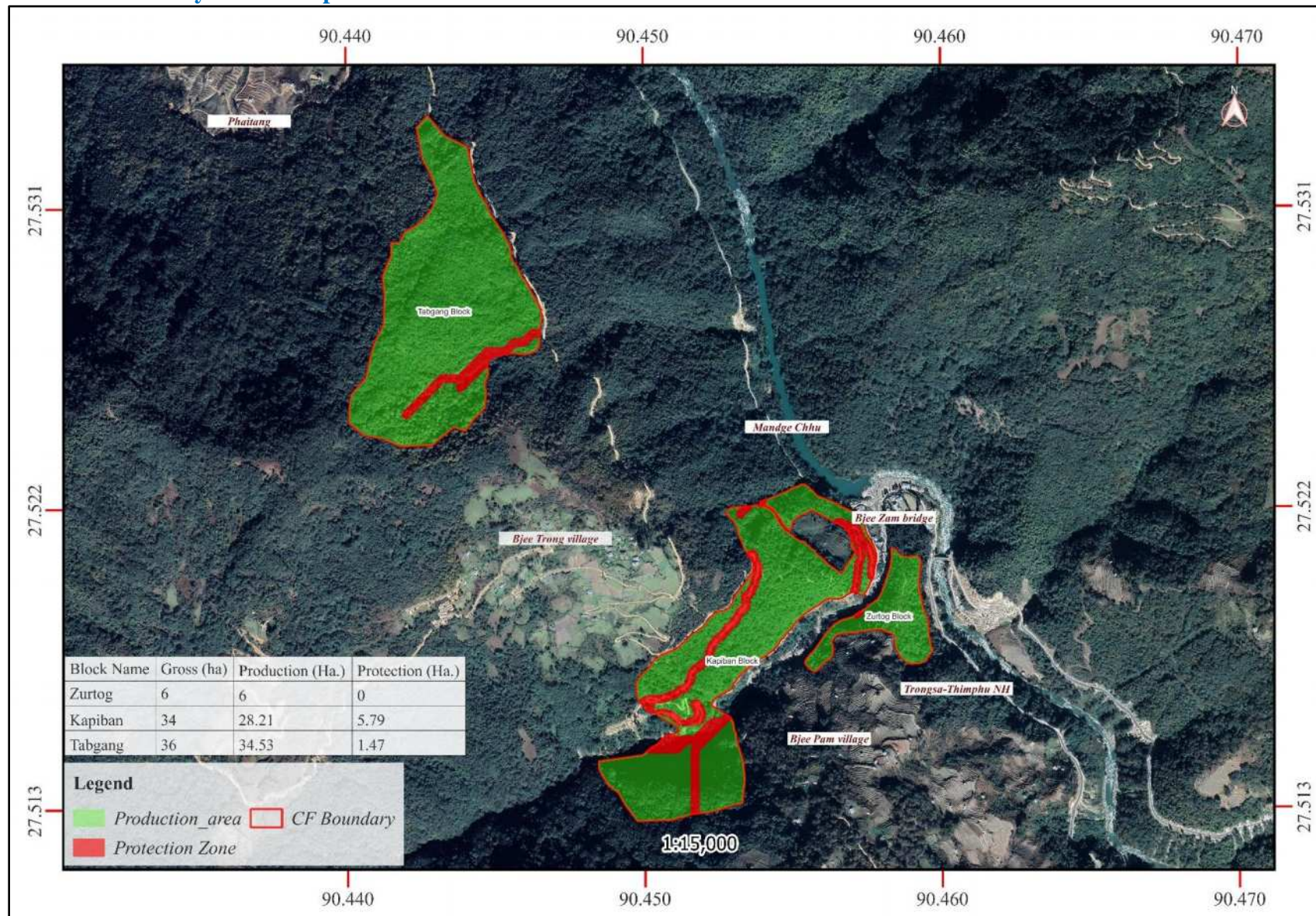
#### *Number of timber trees and other resources extracted*

CFMG have extracted 30 numbers of trees for firewood and sold to Trongsa dratsang.

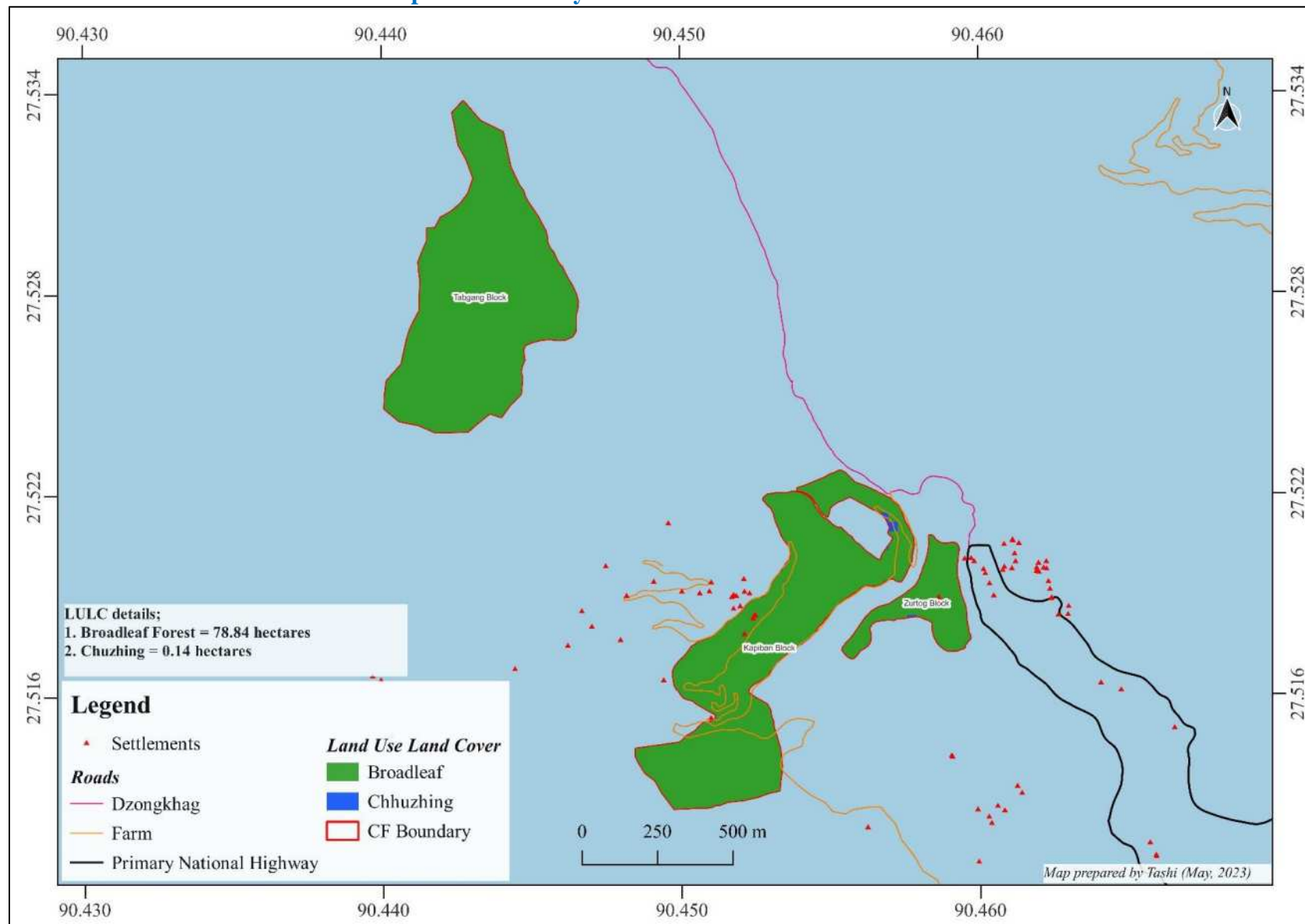
#### *Other benefits*

CFMG were extracted lops and tops including dried firewood for their domestic

#### IV. Community Forest Map



## V. Land Use and Land Cover Map of Community Forest



## VI. Community Forest boundaries

Boundaries	Features
West	Kamaleynang
East	Zurtog
South	Nayumbi Bung
North	Tabgang

## VII. Planning Process

Date	Activities
8-9/9/2022	Consultation meeting for revision of CF management plans by Range Officer, Trongsa.
25-27/01/2023	CF preliminary and quantitative resource assessment
24-30/01/2023	CF management Planning and revision of CF by-laws

## VIII. Social information

Name of the villages	Bjee Trong and Bjee Zam
Ethnic groups with CFMG	Mangdep, Ngalop, Sharchop,
Basic amenities	Electricity, drinking water, farm road, Community School, Lhakhang, ORC
Total households (HH) number of CFMG	14
Population of CFMG	49
% male and % female	44 & 56 respectively
Main source of income	Dairy products, Carpentry works, off-farm business, Vegetables, Rice
Cattle population of the CFMG	103
Main crops	Paddy, Maize, buckwheat
Cropping pattern	Potato>paddy nursery>vegetables>Maize>buckwheat>Paddy transplantation>harvest potato>harvest maize>harvest paddy
Any other information	Electric fence is common in the village they demand for the Cham sized trees to ensure its durability. There is also Phaitang Eco-Agro Farm (50 acres) located next to the Bjee Trong village

## IX. Forest Information

Warm broad-leaved forest is the forest type in the Community Forest dominated by oak forest (*Quercus lanata*, *Quercus glauca* and *Quercus griffithii*). There is plantation of Bluepine stand in Kapiban block and few are natural stand protected by CFMG for future use during their first management term.

### Zurtog Block

Format 1. Preliminary Forest Resource Assessment Format	
Complete this format for each block	
Name of Community Forest	Bjee
Date of Assessment	25/01/2023
Name of block	Zurtog
Block area	6 hectares (Gross area)
Name of recorder	Tshering Wangdi, Sr. Forester, Langthil Beat Office

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

b. Forest Condition (complete if the block is mainly forest)	
Write the names of the 3 main tree species	
Local name	Scientific name
Sisi	<i>Quercus griffithii</i>
Lenshing	<i>Lyonia spp.</i>
Dokseng	<i>Pinus wallichiana</i>
(i) Plantation	
Is there any plantation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Approximate height of planted trees (m)
Year planted	Is the plantation? Under stocked <input type="checkbox"/> Stocked <input type="checkbox"/> Overstocked <input type="checkbox"/>

(ii) Forest Condition -Age			
Mature <input type="checkbox"/>	Pole stage <input 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 type="checkbox"/>	Very open <input checked="" type="checkbox"/>

Canopy density > 70%	Canopy density < 70%	No real canopy. Isolated trees only
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(iv) Forest Condition – Regeneration ( <i>including coppice regrowth</i> )		
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) Bluepine	2) Oak	3)
Regeneration: Seedlings > 30cm and < 1.3m height		

(v) 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 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)	1
Dominant vegetation type in the open space	<i>Artemesia spp.</i> and unwanted <i>Rubus spp.</i>
Cause of open space e.g., grazing, fire, harvesting, etc.	Grazing and illegal harvesting

<b>d. Grazing and fodder (complete if the forest block is used for grazing or fodder)</b>			
Grassland type			
Natural <input checked="" type="checkbox"/>	Man-made <input type="checkbox"/>	Mixture <input type="checkbox"/>	Predominantly forest <input type="checkbox"/>
Main fodder species being used ( <i>list 3 only</i> )			
Local name		Scientific name	
Taishing		<i>Ficus sp.</i>	
Pasture quality (list the 3 dominant species in the grassland)			
Local name	Scientific name	Palatable/unpalatable	
Not relevant			
Use pattern	Seasonal <input type="checkbox"/>	All year <input checked="" type="checkbox"/>	
Type of user	Migratory <input type="checkbox"/>	Local <input checked="" type="checkbox"/>	Both <input type="checkbox"/>
<b>e. Catchment Condition</b>			
(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 checked="" type="checkbox"/>	Non-erosive <input 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 checked="" type="checkbox"/>	
10° – 30°	Moderate	<input 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
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
Phag	<i>Sus Scrofa</i>
Kasha	<i>Muntiacus Muntjac</i>
Zig	<i>Panthera pardus</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"/>
Fodder collection (List main species used)	Common <input checked="" type="checkbox"/>	Limited <input type="checkbox"/>	Absent <input type="checkbox"/>
NWFP collection (Fern)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Leaf litter collection	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Encroachment	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Pole harvesting	Common <input checked="" type="checkbox"/>	Occasional <input 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 type="checkbox"/>	Absent <input checked="" 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 of area to encourage growth of the desired species such as young bluepine stand
2	Boundary clearing to inform public about the existence of Community Forest
3	Carryout plantation in the area

### Kapiban Block

Format 1. Preliminary Forest Resource Assessment Format	
Complete this format for each block	
Name of Community Forest	Bjee
Date of Assessment	25/01/2023
Name of block	Kapiban
Block area	34 hectares (Gross area)
Name of recorder	Tshering Wangdi, Sr. Forester, Langthil Beat Office

a. Forest & Habitat Type (tick all those present)				
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 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"/>	

b. Forest Condition (complete if the block is mainly forest)	
Write the names of the 3 main tree species	
Local name	Scientific name
Guma	<i>Quercus lanata</i>
Thobshing	<i>Quercus glauca</i>
Gamashing	<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): 6
Year planted 2012	Is the plantation? Under stocked <input type="checkbox"/> Stocked <input checked="" type="checkbox"/> Overstocked <input type="checkbox"/>

(ii) Forest Condition -Age			
Mature <input checked="" type="checkbox"/>	Pole stage <input 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
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(iii) Forest Condition - Canopy density ( <i>main canopy</i> )		
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

(iv) Forest Condition – Regeneration ( <i>including coppice regrowth</i> )		
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>Alnus nepalensis</i>	2) <i>Quercus lanata</i>	3)
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 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 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 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)	NO OPEN SPACE
Dominant vegetation type in the open space	
Cause of open space e.g. grazing, fire, harvesting, etc.	

d. Grazing and fodder (complete if the forest block is used for grazing or 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
Taishing	<i>Ficus spp.</i>
Gamashing	<i>Alnus nepalensis</i>

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

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	
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

f. Fauna (List any animal or bird species seen or which are known from the block)	
Local Name	Scientific name
Taag	<i>Panthera tigris</i>
Wam	<i>Ursus thibetanus</i>
Phag	<i>Sus scrofa</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 checked="" type="checkbox"/>	Moderate <input type="checkbox"/>	Absent <input type="checkbox"/>
Fodder collection ( <i>Ficus spp.</i> )	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
NWFP collection (Mushroom and fern)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Leaf litter collection	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Encroachment	Common <input type="checkbox"/>	Occasional <input 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 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	Plantation maintenance
2	Cleaning and thinning of shrubs layer to enhance growth of desired species
3	Block boundary clearing

*Tabgang Block*

Format 1. Preliminary Forest Resource Assessment Format	
Complete this format for each block	
Name of Community Forest	Bjee
Date of Assessment	26/01/2023
Name of block	Tabgang
Block area	36 hectares (Gross area)
Name of recorder	Tshering Chopel, Sr. Forester, Nubi Beat Office

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

b. Forest Condition (complete if the block is mainly forest)	
Write the names of the 3 main tree species	
Local name	Scientific name
Guma	<i>Quercus lanata</i>
	<i>Quercus griffithii</i>
Doseng	<i>Pinus wallichiana</i>
(i) Plantation	
Is there any plantation?	Approximate height of planted trees (m)
Yes <input type="checkbox"/>	
No <input checked="" type="checkbox"/>	
Year planted	Is the plantation? Under stocked <input type="checkbox"/> Stocked <input type="checkbox"/> Overstocked <input type="checkbox"/>

(ii) Forest Condition -Age			
Mature <input checked="" type="checkbox"/>	Pole stage <input 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
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(iv) Forest Condition – Regeneration ( <i>including coppice regrowth</i> )		
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) Quercus lanata	2) Bluepine	3)
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 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 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)	NONE
Dominant vegetation type in the open space	
Cause of open space e.g., grazing, fire, harvesting, etc.	

<b>d. Grazing and fodder (complete if the forest block is used for grazing or fodder)</b>			
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	
<b>Fodder not collected</b>			
Pasture quality (list the 3 dominant species in the grassland)			
Local name	Scientific name	Palatable/unpalatable	
<b>Not relevant</b>			
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"/>
<b>e. Catchment Condition</b>			
(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> (color, 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 type="checkbox"/>	
> 30°	Steep	<input checked="" 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
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
Taag	<i>Panthera tigris</i>
Wam	<i>Ursus thibetanus</i>
Phag	<i>Sus scrofa</i>
Zhig	<i>Panthera pardus</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 type="checkbox"/>	Absent <input checked="" 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 type="checkbox"/>	Absent <input checked="" type="checkbox"/>
NWFP collection (Mushroom and fern)	Common <input type="checkbox"/>	Limited <input checked="" 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 type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Pole harvesting	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Fuelwood harvesting	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Timber harvesting	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" 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 and thinning
2	Harvest firewood and fencing posts
3	Boundary clearing

### *Objectives of Forest Management*

The CFMG agreed to fulfill the following objectives during this management period;

- To protect the forest from illicit extraction of forest products by outsiders and neighboring villages
- To develop existing forest condition and hand over to younger generation for sustainable utilization
- To ensure equitable distribution of forest products and generate income

## X. Forest Management Procedures

The forest management procedures for each block are presented in the following tables;

### Zurtog block

1	Produces/services	Timber (Drashing/Cham /Tsim)	Leaf litters
2	Main species	<i>Bluepine</i>	<i>Quercus griffithii</i> in the previous Sokshing areas
3	Problems	<ul style="list-style-type: none"> <li>• Illegal extraction</li> <li>• Small-sized desired timber species</li> </ul>	<ul style="list-style-type: none"> <li>• No desired poles available in the block</li> <li>• Occasionally leaf litters are collected by claiming right over Sokshing</li> </ul>
4	Opportunities	<ul style="list-style-type: none"> <li>• Erection of signage to make aware to the general public that the area is CF</li> <li>• Plantation</li> </ul>	<ul style="list-style-type: none"> <li>• Collection of leaf litters</li> </ul>
5	Management objectives	<ul style="list-style-type: none"> <li>• To develop existing forest condition and hand over to younger generation for sustainable utilization</li> </ul>	<ul style="list-style-type: none"> <li>• To protect the forest from illicit extraction of forest products by outsiders and neighboring villages</li> </ul>
6	Activities	<ul style="list-style-type: none"> <li>• Boundary clearing</li> <li>• Cleaning and pruning</li> <li>• Patrolling</li> <li>• Carry out bluepine plantation</li> </ul>	<ul style="list-style-type: none"> <li>• Patrolling</li> </ul>
7	Procedures	<ul style="list-style-type: none"> <li>• CFMG members shall decide when to clear the boundary</li> <li>• Request Gewog administration for support to supply of bluepine seedlings and barbed wire fencing for plantation.</li> <li>• Schedule patrol team on rotation basis by deploying members from Bjee pam to Bjee Trong and vice-versa</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct meeting on who will be permitted to collect leaf litters from the area (previous sokshing) and what conditions will be imposed to the collectors.</li> <li>• Explore if fencing posts could be extracted from the area especially those overmatured <i>Quercus griffithii</i> trees. If feasible, allot and mark trees during electric fencing establishment or renovation.</li> </ul>
8	Responsibility	<ul style="list-style-type: none"> <li>• Chairperson, CFMG members and Nubi Beat</li> </ul>	<ul style="list-style-type: none"> <li>• Chairperson, CFMG members and Nubi Beat</li> </ul>

*Kapiban Block*

1	Produces/services	Timber (Drashing/Cham /Tsim)	Firewood	Leaf litters	Poles/flagpoles
2	Main species	Bluepine, <i>Alnus nepalensis</i> , <i>Betula spp.</i>	<i>Alnus nepalensis</i> , <i>Quercus griffithii</i> , <i>Rhododendron</i>	<i>Quercus lanata</i> & <i>Quercus griffithii</i>	<i>Alnus nepalensis</i> and <i>Betula spp.</i>
3	Problems	<ul style="list-style-type: none"> <li>• Illegal extraction</li> <li>• Small-sized desired timber species</li> <li>• Rugged terrain</li> </ul>	<ul style="list-style-type: none"> <li>• No problem</li> </ul>	<ul style="list-style-type: none"> <li>• Claiming right over the forest by previous owners</li> </ul>	<ul style="list-style-type: none"> <li>• Lack desired poles</li> </ul>
4	Opportunities	<ul style="list-style-type: none"> <li>• Put up signage to make aware on the existence of Community Forest</li> <li>• Implement plantation maintenance</li> <li>• Promote natural regenerations</li> </ul>	<ul style="list-style-type: none"> <li>• Sell excess firewood in <i>Moelam Chenmo</i></li> </ul>	<ul style="list-style-type: none"> <li>• Extract fencing poles from the matured stand</li> </ul>	<ul style="list-style-type: none"> <li>• Improve stand by pruning and cleaning</li> </ul>
5	Management objectives	<ul style="list-style-type: none"> <li>• To develop existing forest condition and hand over to younger generation for sustainable utilization</li> <li>• To ensure equitable distribution of forest products and generate income</li> </ul>	<ul style="list-style-type: none"> <li>• To ensure equitable distribution of forest products and generate income</li> </ul>	<ul style="list-style-type: none"> <li>• To ensure equitable distribution of forest products and generate income</li> </ul>	<ul style="list-style-type: none"> <li>• To ensure equitable distribution of forest products and generate income</li> </ul>
6	Activities	<ul style="list-style-type: none"> <li>• Boundary clearing</li> <li>• Cleaning and pruning</li> <li>• Patrolling</li> </ul>	<ul style="list-style-type: none"> <li>• Identify matured trees and marking</li> </ul>	<ul style="list-style-type: none"> <li>• Marking matured trees</li> </ul>	<ul style="list-style-type: none"> <li>• Pruning, cleaning poles</li> </ul>
7	Procedures	<ul style="list-style-type: none"> <li>• CFMG members shall decide when to clear the boundary</li> <li>• Schedule patrol team on rotation basis by deploying members from Bjee Pam to Bjee Trong and vice-versa</li> </ul>	Issue collection permit in November and carryout marking in December.	<ul style="list-style-type: none"> <li>• Conduct meeting on who will be permitted to collect leaf litters from the area (previous sokshing) and what</li> </ul>	<ul style="list-style-type: none"> <li>• Approve poles during emergency cases especially</li> </ul>

		<ul style="list-style-type: none"> <li>• Issue collection permit in November and carryout marking in December.</li> <li>• Issue permits for Cham, drashing for fencing posts and cattle-shed constructions.</li> </ul>		<p>conditions will be imposed to the collectors.</p> <ul style="list-style-type: none"> <li>• Explore if fencing posts could be extracted from the area especially those over matured <i>Quercus griffithii</i> trees. If feasible, allot and mark trees during electric fencing establishment or renovation.</li> </ul>	during death cases
8	Responsibility	<ul style="list-style-type: none"> <li>• Forest Officials, Chairperson, CFMG members</li> </ul>	<ul style="list-style-type: none"> <li>• CFMG Office bearers and Forest Officials</li> </ul>	<ul style="list-style-type: none"> <li>• Chairperson and the previous Sokshing owners.</li> </ul>	<ul style="list-style-type: none"> <li>• Chairperson</li> </ul>

*Tabgang Block*

1	Produces/services	Timber (Drashing/Cham /Tsim)	Firewood	Poles
2	Main species	<i>Bluepine, Alnus nepalensis, Betula spp.</i>	<i>Alnus nepalensis, Quercus griffithii, Rhododendron</i>	<i>Quercus semicarpifolia</i>
3	Problems	<ul style="list-style-type: none"> <li>• Illegal extraction</li> <li>• Inaccessibility</li> </ul>	<ul style="list-style-type: none"> <li>• No problems</li> </ul>	<ul style="list-style-type: none"> <li>• Illegal extractions</li> </ul>
4	Opportunities	<ul style="list-style-type: none"> <li>• Place signage to convince the outsiders about CF in the area</li> <li>• Promote natural regenerations</li> </ul>	<ul style="list-style-type: none"> <li>• Sell excess firewood in <i>Moelam Chenmo</i></li> </ul>	<ul style="list-style-type: none"> <li>• Put up increment of desired species</li> </ul>
5	Management objectives	<ul style="list-style-type: none"> <li>• To develop existing forest condition and hand over to younger generation for sustainable utilization</li> <li>• To ensure equitable distribution of forest products and generate income</li> <li>• To protect the forest from illicit extraction of forest products by outsiders and neighboring villages</li> </ul>	<ul style="list-style-type: none"> <li>• To ensure equitable distribution of forest products and generate income</li> <li>• To protect the forest from illicit extraction of forest products by outsiders and neighboring villages</li> </ul>	<ul style="list-style-type: none"> <li>• To ensure equitable distribution of forest products and generate income</li> <li>• To protect the forest from illicit extraction of forest products by outsiders and neighboring villages</li> </ul>
6	Activities	<ul style="list-style-type: none"> <li>• Boundary clearing</li> <li>• Cleaning and pruning</li> <li>• Patrolling</li> </ul>	<ul style="list-style-type: none"> <li>• Identify matured trees and marking</li> </ul>	<ul style="list-style-type: none"> <li>• Cleaning and thinning</li> </ul>
7	Procedures	<ul style="list-style-type: none"> <li>• CFMG members shall decide when to clear the boundary</li> <li>• Schedule patrol team on rotation basis by deploying members from Bjee pam to Bjee Trong and vice-versa</li> <li>• Issue permit during the month of November and execute marking in December</li> </ul>	<ul style="list-style-type: none"> <li>• If CFMG members opt to extract firewood, allot from the block</li> <li>• Use the block for commercial purpose especially selling firewood</li> <li>• Mark the trees on case-by-case basis.</li> </ul>	<ul style="list-style-type: none"> <li>• Allot to the CFMG members during emergencies (death cases for instance).</li> </ul>

8	Responsibility	<ul style="list-style-type: none"> <li>• Forest Officials, Chairperson, CFMG members</li> </ul>	<ul style="list-style-type: none"> <li>• Chairperson, Secretary, Treasurer and Forest Officials</li> </ul>	<ul style="list-style-type: none"> <li>• Chairperson and Forest Officials</li> </ul>
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## XI. Demand Assessment

The demand assessment was carried out in a participatory approach with the CFMG during the meeting. The demand was based on the actual requirement of timber or firewood by the household in their village. The conversion factor was used from the extract of Royalty Rates on Forestry Produce adopted by FRDD in 2004. The timber requirement for new and renovation of house shall be allotted from the coniferous zones of Chendebji or Bumthang area. CFMG requires 21 drashings timber for these purposes. However, one drashing requirement for cattle-shed construction and other three drashing shall be met from the CF only.

The demand for Cham sized timber is for conversion of electric fencing posts and it shall be met from CF only. As per the experience of CFMG, allotment of *Quercus griffithii* is preferred due to its durability.

There is no demand for Tsim and Dangchung timbers. The demand for firewood can be met from CF.

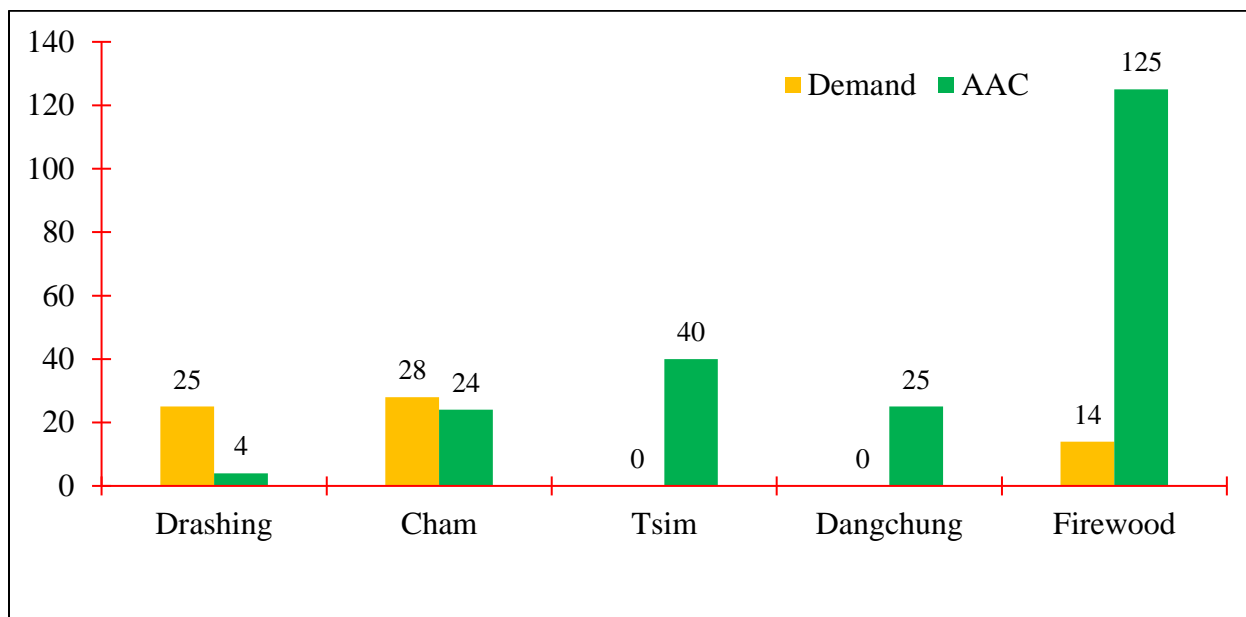
Conversion of volume from the number of trees is rounded off to two single whole number.

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
New constructions							
Drashing	20	1412	0.3	6	424	60	4237
Renovation							
Drashing	9	636	2	18	1271	180	12712
Fencing Posts (Cham-sized)	2	21	14	28	85	280	2965
Cattle-shed construction (pole-sized)							
Drashing	1	62	1	1	62	10	620
Firewood (drashing-sized)	1	62	14	14	868	140	8680

**Note:** Conversion factor-based Royalty Rate on Forestry Produce adopted by FRDD, 2004 (10.2)

## XII. Comparision of demand and supply

There is deficit of *drashing* and *cham* timbers. CFMG shall request allotment of timber for new and renovation of their house from SRFL. However, CFMG shall adjust the requirement of *drashing* for cattle-shed construction and demand for *cham* for fencing purposes from the CF only. The AAC is represented in 'number of trees' basis which is equivalent of 666 cfts of timber trees and 4229 cfts of non-timber trees. There is excess supply of firewood for which CFMG shall continue to sell to Trongsa Rabdey and generate income. There is no demand for the *tsim* and *dangchung* timber. However, CFMG shall allot flag poles on ad-hoc basis from these categories of timbers.



### XIII. Annual Allowable Cut

The AAC for firewood accounts only *drashing* and *cham* sized trees. The AAC for individual blocks is depicted in the following table;

Block Name	Type	Drashing	Cham	Tsim	Dangchung
Zurtog	T-trees	0	1	4	0
	N-trees	1	4	18	43
Kapiban	T-trees	2	18	20	8
	N-trees	9	46	144	102
Tabgang	T-trees	2	5	16	17
	N-trees	16	49	158	173
<b>Total</b>	T-trees	<b>4</b>	<b>24</b>	<b>40</b>	<b>25</b>
	N-trees	<b>26</b>	<b>99</b>	<b>320</b>	<b>318</b>

### XIV. Forest stock

The forest stocks represented in ‘number of trees’ is presented in the following table;

Block Name	Type	Drashing	Cham	Tsim	Dangchung
Zurtog	T-trees	0	30	151	15
	N-trees	121	166	648	2427
Kapiban	T-trees	331	1054	905	606
	N-trees	2126	2535	6420	10938
Tabgang	T-trees	111	131	262	281
	N-trees	1536	2323	6145	9966

### XV. Participatory Environmental Assessment

Activity proposed in Bjee 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 and cleaning	+++	0	0	+++	0	0	+	+++
CF boundary and bush clearing	0	0	0	++	0	0	0	0
Plantation	+++	++	++	++	-	0	+	+++

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

### Procedures to address potential negative effects

Activity	Procedure
Timber harvesting	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.
Plantation	Plantation of native species should be given priority. Encourage local people to plant fodder grass and trees to make fodder resources available in the village. Avoid plantation along the traditional footpath and any other site that might affect the traditional use of the forest

### XVI. Forest Produce Ranking

	Timber	Firewood	Poles	Leaf litter
Timber		Firewood	Timber	Timber
Firewood			Firewood	Firewood
Poles				Leaf litter
Leaf litter				

**Score details:** Firewood (3), Timber (2), Leaf litter (1) and Poles (0)

### XVII. Monitoring plans-participatory forest resource impact monitoring

Activity	Indicator	How it will be monitored	Responsibility	Comments
Patrolling	<ul style="list-style-type: none"> <li>Number of patrolling conducted and offenders apprehended</li> </ul>	<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>	Trongsa Forest Range Office in collaboration with CF Executive Committee	It includes pruning as well
Timber harvesting	<ul style="list-style-type: none"> <li>• Number of trees, poles and firewood harvested</li> </ul>	<ul style="list-style-type: none"> <li>• Collection permits</li> <li>• Forest utilization register</li> </ul>	Nubi Beat Office and CFMG	
Firewood harvesting	<ul style="list-style-type: none"> <li>• Number of firewood trees harvested and sold</li> </ul>	<ul style="list-style-type: none"> <li>• Collection permits and books of accounts</li> </ul>	CFMG, firewood buyers	Seek approval from the Department if cable crane installation of required
CF boundary clearing	<ul style="list-style-type: none"> <li>• Length of boundary cleared</li> </ul>	<ul style="list-style-type: none"> <li>• Physical verification and labor contribution by the CFMG members</li> </ul>	CF committee management and Nubi Beat Office	Trongsa Forest Range to provide technical advises
Plantations	<ul style="list-style-type: none"> <li>• Area planted</li> <li>• Number of seedlings planted</li> </ul>	<ul style="list-style-type: none"> <li>• Physical verification</li> </ul>	DFO Bumthang	
Plantation maintenance	<ul style="list-style-type: none"> <li>• Number of casualties replaced</li> </ul>	<ul style="list-style-type: none"> <li>• Physical verification and annual monitoring reports</li> </ul>	CF management committee and Forestry Officials	DFO, Bumthang may carry out the technical plantation monitoring

### **XVIII. 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>• Cross checking books of accounts</li> </ul>	<ul style="list-style-type: none"> <li>• Books of accounts</li> </ul>	Trongsa Range Office	Involve Trongsa Forest Range for monitoring
Resource sharing on equity basis	<ul style="list-style-type: none"> <li>• Resources allocated to the members (timber, firewood, poles)</li> </ul>	<ul style="list-style-type: none"> <li>• CF record books</li> </ul>	CFMG management committee	The deficit timber will be allotted from Chendebji or Bumthang area
CF Management Committee Meeting	<ul style="list-style-type: none"> <li>• Number of women attended the committee meetings</li> </ul>	<ul style="list-style-type: none"> <li>• CFMG record books</li> </ul>	Chairperson	

### **XIX. Monitoring plans- Participatory environmental impact monitoring**

Possible negative impact	Indicator	How it will be monitored	Responsibility	Comments
Over exploitations of resources creating vast openings	<ul style="list-style-type: none"> <li>• Increased openings of forest</li> <li>• Status of regenerations</li> </ul>	<ul style="list-style-type: none"> <li>• Regeneration surveys should be conducted</li> </ul>	DFO, Site In-Charge and CFMG members	

## XX. Annual Work Plan

Location	Activity	Year										Responsibility
		1	2	3	4	5	6	7	8	9	10	
Zurtog	CF boundary clearing (2 meters width)											Chairperson, CFMG members and Beat Officer
Tabgang	CF boundary clearing (2 meters width)											
Kapiban	Carry out plantations											
Tabgang and Kapiban	Harvest timber and firewood/fencing posts											
Zurtog	Cleaning and thinning											
Kapiban	Cleaning and thinning											
Tabgang	Cleaning and thinning											
Whole CF	Conduct patrolling											
	Conduct general meeting and committee meeting											
	Book keeping training											
	Silviculture training											
	Submission annual work plan and progress report to Range Officer through Beat Officer, Nubi											
	Conduct annual monitoring of CF											

## XXI. Evaluation of management plan

Bjee CF management plan shall be evaluated jointly by a team from Divisional Forest Office and Trongsa Range Office during **last quarter of the 5<sup>th</sup> year** of the plan period and final evaluation and revision shall be done at the **last quarter of the 9<sup>th</sup> year** of the plan period.

Annual monitoring reports shall be conducted by Trongsa Range and Nubi Beat Office and submitted to Division for compilation and record. The usual entry into FIRMS shall be done by the Beat Office.

## **PART B: COMMUNITY FOREST BY-LAWS**

### **XXII. Name of the Community Forest**

CFMG unanimously agreed to retain the previous name of the CF as Bjee Community Forest

### **XXIII. Membership Arrangements**

The resident of Bjee Trong community will be eligible to become the member of CF.

#### *New membership*

- The native household of Bjee Trong holding valid *Gung* and *Thram* shall be eligible to become new member.
- The applicant should be 18 years old or above while joining the membership.
- He/she shall contribute a lumpsum amount of Nu. 5000/- as a compensation against the works executed by the old members.

#### *Resignation from the membership*

- Any members wishing to resign from the membership shall submit letter to the CF Chairperson who in turn shall put up in the committee for discussion and approval
- Members resigning due to loss of interest shall be approved without any benefits from the group
- Members resigning due to unavoidable reasons (old-aged, disability issues, single headed households, etc) may be approved with equal share of the CF fund available at the time of his/her resignation.
- The members once resigned shall not have the right to rejoin the group.

### **XXIV. Formation of management committee**

CFMG committee shall comprise of four members who will be the highest decision-making body of the CFMG. The members are Chairperson, Secretary, Treasurer and the Marking Representative. The members should have good personal relationship with the community, relevant government agencies, be literate, innovative, forward looking for the welfare of CFMG and cooperative. The following are terms of references of the management committee;

- Function smoothly for the welfare and development of the CFMG
- Supervise, coordinate and monitor CF activities
- Ensure proper utilization and management of CF fund
- Lead in planning, implementing and evaluating CF activities
- Solve disputes among CFMG members and outsiders

#### *Tenure of management committee*

The tenure of committee is for five years and CFMG shall decide whether to continue their membership or change the members after completion of their tenure.

#### *Resignation of committee members*

Any members wishing to resign shall put up the resignation to the committee and shall be decided in a general meeting of the CFMG and elect new member simultaneously.

#### *Roles and responsibilities of Chairperson*

- Chair any type of CF meetings
- Maintain good relationship with government and relevant agencies
- Countersign on the withdrawal of CF fund

- Explore markets for selling forest produce
- Seek technical backstopping from forestry officials for the development of CF
- Accord final approval for permits to collect forest produce
- Resolve inters and intra conflicts if arises in consultation with the committee members

#### *Roles and responsibilities of Secretary*

- Officiate Chairperson in absence of Chairperson
- Maintain minutes of meetings
- Maintain labor attendance register
- Prepare collection permits and get the approval from Chairperson and issue it to the applicants
- Countersign on the withdrawal of CF fund
- Attend any correspondences of the CFMG

#### *Roles and responsibilities of Treasurer*

- Maintain any financial records of income, expenses and balances
- Present financial status of the CFMG during annual meeting
- Countersign during the withdrawal of CF fund
- Collect entry fees, annual fees, collection fees, fines and penalties and deposit in the CF account

#### *Roles and responsibilities of Marking Representative*

- Assist forest officials for tree marking
- Arrange any logistics required during annual marking of trees

#### *Incentives for the committee members*

Any committee members on tour outside of the dzongkhag shall be incentivized with an amount of Nu. 700/- per day.

#### *CFMG management committee members*

Sl.#.	Name	Designation	Contact number
1	Wangchuk	Chairperson	77210193
2	Tshering	Secretary	77306326
3	Rinchen	Treasurer	17707026
4	Lotay	Marking Representative	17414077

## **XXV. Fees**

The following fees shall be collected for the following particulars of forest produces. Annual membership shall be collected with Nu. 100/- from each household.

<b>Type of forest produce</b>	<b>Rate (Nu.)</b>	<b>Remarks</b>
Drashing	50/- per tree	Plus, Nu. 10/- for permit fees
Cham	40/- per tree	
Flag poles	50/- per tree	
Firewood	50/- per tree	Dry firewood shall be allowed for collection on free of fees
NWFPs	100/- per occasion	This will apply only for the outsiders

## **XXVI. Fines and Penalties**

CFMG shall impose following fines and penalties for the offences in CF. CFMG can also seek support from the nearest forest office if required.

<b>Sl.#.</b>	<b>Products</b>	<b>Fines (Nu.)</b>	<b>Compensation</b>
1	Illegal harvesting of timber and firewood	Nu. 100/- per cft on log/sawn volume as per the provision of section 416(1) of Forest and Nature Conservation Rules and Regulations, 2017. Any subsequent offence in CF may be dealt as per the provision of FNCRR, 2017, section 401, sub-section 1, 2 and 3.	As per prevailing NRPC rate.
2	Damages to the saplings by children, cattle, horses, etc.	Nu. 10/- per saplings damaged	Replant the number of damaged saplings and take care until five years
3	Forest fire	As per FNCRR	As per FNCRR
4	Hunting and poaching	As per FNCRR	As per FNCRR
5	Absent from CF meetings	Nu. 300/- per day	NA
6	Absent from work	Nu. 500/- per day	NA
7	Conduct developmental activities without the consent of CF Chairperson	Nu. 5000/-	The assessment of damages shall be done and reported to Forest Office for further action

## **XXVII. Management of CF Fund and Credit**

CFMG shall continue to maintain account with BDBL, Trongsa. Treasurer shall have right to keep cash amount not more than Nu. 5000/-. While withdrawing money from the bank, joint signatory of Chairperson and Treasurer shall be mandatory.

CFMG shall develop fund from the following sources;

- Collection CF entry fees and annual fees
- Forest produce collection fees

- Individual contributions from the outsiders
- Sale of excess firewood during Moenlam Chenmo
- Fines and penalties

CFMG shall utilize the fund in following areas;

- Help for disadvantaged group school going children
- Provide refreshments during CF developmental works and meetings
- Incentives to CF committee members while on official tour
- Provide Semsoo to the victims during the disasters (fire, windstorms, earthquake, landslides, etc)
- Provide refreshments to the visitors
- Loans

#### *Procedures for disbursing loans to the CFMG members*

CFMG shall explore opportunities to provide loans to the members from the fund. Loans shall be approved for the following purposes;

- Death cases
- Purchase of agriculture tools
- Purchase of fertilizers
- Supporting school going children

All formalities including the application for loans shall be followed as per forestry field manuals for Bhutan, Community Forest Manual, Third edition, 2018. The following conditions shall apply for approval of loan from the CF fund;

- CFMG shall make sure to maintain the account balance of Nu. 100,000/- for all time
- Loan ceiling of not more than Nu. 20,000/-
- Interest rate of 10% per annum
- Suitable mortgage requirement shall be decided by the management committee
- Loan term not more than one year shall be approved
- Both interest and principal amount shall be repaid to the group after one year and may extend up to not more than 5 years upon the decision of management committee.
- If the repayment is delayed, the borrower must submit justification in writing to the committee member for which considerations without penalty is requested.
- Penalty amount of Nu. 10 per day shall be levied for the borrowers who have not justified sufficiently to the CFMG committee.

#### **XXVIII. Benefit Sharing Mechanisms**

- CFMG shall share forest products and cash based on the equity basis.
- The firewood shall be shared equally among the members on annual basis.
- The deficit timber for new construction and renovation of houses shall be requested from SRFL of Bumthang or Chendebji areas.
- During the disasters, CFMG shall help the victims with *Semsoo* to be secured from the CF fund. They will also make sure to rebuilt temporary shed to the victim.
- The resource sharing (timber/firewood) shall not be allotted on ‘**quota system**’ rather do so on need based to ensure equitable distribution of resources.

- CFMG shall not share cash from the accumulated fund unless required under unavoidable circumstances. However, in such cases approval from CFO will be required.
- Timber allotted to CFMG member shall not be allowed for commercial purposes.
- Contribution for the welfare of disadvantaged member of CFMG shall be made on situation of need and requirement.
- The quantity of timber shall not exceed AAC and shall be allotted based on genuineness of requirement.
- CF fund may be shared through loans

## **XXIX. Meetings**

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

### *General meeting*

The meeting shall be conducted once in a year during the 1<sup>st</sup> month of the Bhutanese Calendar. During the meeting following activities and discussions shall be done;

- Present account of CF fund by treasurer
- Issue collection permits
- Collect annual fees from the members
- Collect absentee fines (meeting and work)
- Prepare annual progress report and work plan for the upcoming year
- Discuss on source fund from the relevant donors or Gewog Administration
- Discuss any issues and problems related to the administration of CFMG

### *Committee meeting*

The committee meetings shall be conducting twice a year in order to approve annual timber/firewood applications. However, the meetings shall be conducted on need basis or urgency of work. The Committee shall discuss on the welfare of CFMG and explore possible solutions to address issues and problems raised by the CFMG members.

## **XXX. Conflict management**

The disputes within the CFMG and outsiders shall be settled by Chairperson. If the case is unable to settle by the Chairperson, it shall be forwarded to Gup and if it escalates, the case shall be forwarded to Range Officer/Chief Forestry Officer and then to District Court for final settlement.

## **XXXI. Amendment of CFM plan**

The CFMG shall seek the approval with written application addressed to CFO, Bumthang Division for the amendment of the CFM plan/by-laws. The proposed amendment of CFM plan/by-laws should be supported by minutes of general meeting of CFMG duly signed thereof.

## **XXXII. Power of the Department**

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

- Take action against violators of the Act, Rules or Management Plan, regardless of whether requested by the CFMG or not.
- 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)).

### XXXIII. ANNEXES

#### Annex 1: CF application and the members

##### 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 Wangchuk the Chairman of Community Forest Management Group of Byee village(s) consisting of 14 household 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 Forests: Byee Forest.

(ii) Boundary Description:

North: Farm Road to Phaitang  
South: Chamdey Gang chu  
East: Gewog Road and mangdech.  
West: Byee troung to Santenchaling

(iii) Estimated Areas: 187.79 Acres

(iv) Forest Type: Broad leaved forest.

Signature:

Name of the CFMG Chairman:

Date:

Wangchuk.

19/01/2022

FOREST AND NATURE CONSERVATION RULES AND REGULATIONS OF BHUTAN, 2017

## Annexure VI (continued)

## COMMUNITY FOREST MANAGEMENT GROUP MEMBERSHIP

Sl.#.	Name of Household Representative	CID Card No	Gung No.	Thram No (If applicable)	Signature
1	Lemo	11704001462	TSA-4-87	10	
2	Tsultrim Zangmo	11704001446	TSA-4-86	09	
3	Phurpa Lhamo	11704001446	TSA-4-88	11	
4	Peldonmo	11704001489	TSA-4-90	13	
5	Namkha Taray	11704001419	TSA-4-84	06	
6	Kinzang Wangmo	11704001403	TSA-4-83	05	
7	Ugyen	11704001560	TSA-4-99	46	
8	Wangmo	11704001520	TSA-4-93	17	
9	Rinchen Lhamo	11704001484	TSA-4-89	12	
10	Choki Wangmo	11704001272	TSA-4-111	23	
11	Lethro	11704001504	TSA-4-91	14	
12	Pema Zangmo	11704001236	TSA-4-106	27	
13	Kinley Bidha	11704001425	TSA-4-417	563	
14	Tshering Mo	11704001382	TSA-4-82	4	

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

Name and Signature of Gup: .....

Gewog: .....

Date: .....

FOREST AND NATURE CONSERVATION RULES AND REGULATIONS OF BHUTAN, 2017

**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 Bjee 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: .....

Name of Range: .....

Date: .....

*[Signature]*  
Forest Range Officer  
Forest Range Office  
Trongsa, Bhutan  
*Trongsa*  
*17/1/2022*

**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: .....

*[Signature]*  
Pantey Dupa  
Bumthang  
*16/6/2023*

FOREST AND NATURE CONSERVATION RULES AND REGULATIONS OF BHUTAN, 2017

*Annex 2: CF boundary with GPS coordinates*

Boundaries	Features	Northing	Easting
West	Kamaleynang	27.524662°	90.440144°
East	Zurtog	27.520481°	90.459261°
South	Nayumbi Bung	27.512661°	90.449873°
North	Tabgang	27.533678°	90.442738°

*Annex 3: CF Sample plots coordinates*

<b>Plot ID</b>	<b>Northing</b>	<b>Easting</b>		<b>Plot ID</b>	<b>Northing</b>	<b>Easting</b>
1	27.53285	90.44282		37	27.51979	90.45840
2	27.53285	90.44386		38	27.51886	90.45736
3	27.53192	90.44386		39	27.51886	90.45840
4	27.53099	90.44385		40	27.51792	90.45944
5	27.53006	90.44281		41	27.52258	90.45529
6	27.53006	90.44385		42	27.52166	90.45320
7	27.53005	90.44489		43	27.52166	90.45424
8	27.52913	90.44176		44	27.52165	90.45633
9	27.52913	90.44280		45	27.52073	90.45424
10	27.52913	90.44385		46	27.52072	90.45528
11	27.52912	90.44489		47	27.51980	90.45423
12	27.52820	90.44176		48	27.51980	90.45528
13	27.52820	90.44280		49	27.51887	90.45319
14	27.52820	90.44384		50	27.51887	90.45423
15	27.52819	90.44489		51	27.51887	90.45527
16	27.52819	90.44593		52	27.51795	90.45214
17	27.52727	90.44175		53	27.51794	90.45318
18	27.52727	90.44280		54	27.51794	90.45423
19	27.52727	90.44384		55	27.51702	90.45005
20	27.52726	90.44488		56	27.51702	90.45110
21	27.52726	90.44592		57	27.51702	90.45214
22	27.52635	90.44175		58	27.51701	90.45318
23	27.52634	90.44279		59	27.51609	90.45005
24	27.52634	90.44384		60	27.51609	90.45109
25	27.52542	90.44070		61	27.51609	90.45213
26	27.52542	90.44175		62	27.51516	90.45109
27	27.52541	90.44279		63	27.51516	90.45213
28	27.52541	90.44383		64	27.51424	90.44900
29	27.52449	90.44070		65	27.51424	90.45004
30	27.52449	90.44174		66	27.51423	90.45108
31	27.52448	90.44279		67	27.51423	90.45213
32	27.52448	90.44383		68	27.51423	90.45317
33	27.52072	90.45737		69	27.51331	90.45004
34	27.52071	90.45841		70	27.51330	90.45108
35	27.51979	90.45632		71	27.51330	90.45212
36	27.51979	90.45736		72	27.51330	90.45317

Annex 4: Compilation sheets (T-trees)

OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)								
1. CF Name		Bjee			4. Block Area		6.03	Hectares
2. Block Name		Zurtog			5. Compiling date		29/01/2023	
3. No of plots		8			6. Species group		Bluepine	
<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	2.500	0	0.00	0.00	0.00
20-29	0.047	0.349	0.050	2.500	6	15.00	0.71	5.24
30-39	0.093	0.828	0.050	2.500	1	2.50	0.23	2.07
40-49	0.156	1.583	0.050	2.500	0	0.00	0.00	0.00
50-59	0.233	2.660	0.050	2.500	0	0.00	0.00	0.00
60-69	0.327	4.100	0.050	2.500	0	0.00	0.00	0.00
70-79	0.436	5.941	0.050	2.500	0	0.00	0.00	0.00
80-89	0.561	8.218	0.050	2.500	0	0.00	0.00	0.00
90-99	0.701	10.967	0.050	2.500	0	0.00	0.00	0.00
100-109	0.857		0.050	2.500	0	0.00	0.00	0.00

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

1. CF Name		Bjee			4. Block Area		6.03	Hectares
2.Block Name		Zurtog			5. Compiling date		29/01/2023	
3. No of plots		8			6. Species group		Other BL	
<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	2.500	1	2.50	0.04	0.20
20-29	0.047	0.287	0.050	2.500	3	7.50	0.35	2.15
30-39	0.093	0.687	0.050	2.500	0	0.00	0.00	0.00
40-49	0.156	1.323	0.050	2.500	0	0.00	0.00	0.00
50-59	0.233	2.236	0.050	2.500	0	0.00	0.00	0.00
60-69	0.327	3.462	0.050	2.500	0	0.00	0.00	0.00
70-79	0.436	5.037	0.050	2.500	0	0.00	0.00	0.00
80-89	0.561	6.993	0.050	2.500	0	0.00	0.00	0.00
90-99	0.701	9.361	0.050	2.500	0	0.00	0.00	0.00
100-109	0.857	12.171	0.050	2.500	0	0.00	0.00	0.00

1. CF Name		Bjee			4. Block Area		6.03	Hectares
2. Block Name		Zurtog			5. Compiling date		29/01/2023	
3. No of plots		8			6. Species group		Betula	
<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	2.500	0	0.00	0.00	0.00
20-29	0.047	0.335	0.050	2.500	1	2.50	0.12	0.84
30-39	0.093	0.773	0.050	2.500	1	2.50	0.23	1.93
40-49	0.156	1.449	0.050	2.500	0	0.00	0.00	0.00
50-59	0.233	2.396	0.050	2.500	0	0.00	0.00	0.00
60-69	0.327	3.643	0.050	2.500	0	0.00	0.00	0.00
70-79	0.436	5.218	0.050	2.500	0	0.00	0.00	0.00
80-89	0.561	7.145	0.050	2.500	0	0.00	0.00	0.00
90-99	0.701	9.448	0.050	2.500	0	0.00	0.00	0.00
100-109	0.857	12.150	0.050	2.500		0.00	0.00	0.00

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

1. CF Name		Bjee			4. Block Area		23.05	Hectares
2.Block Name		Kapiban			5. Compiling date		29/01/2023	
3. No of plots		25			6. Species group		Bluepine	
<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	0.800	20	16.00	0.27	1.53
20-29	0.047	0.349	0.050	0.800	11	8.80	0.41	3.07
30-39	0.093	0.828	0.050	0.800	7	5.60	0.52	4.63
40-49	0.156	1.583	0.050	0.800	3	2.40	0.37	3.80
50-59	0.233	2.660	0.050	0.800	0	0.00	0.00	0.00
60-69	0.327	4.100	0.050	0.800	0	0.00	0.00	0.00
70-79	0.436	5.941	0.050	0.800	0	0.00	0.00	0.00
80-89	0.561	8.218	0.050	0.800	0	0.00	0.00	0.00
90-99	0.701	10.967	0.050	0.800	0	0.00	0.00	0.00
100-109	0.857		0.050	0.800	0	0.00	0.00	0.00

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

1. CF Name	Bjee	4. Block Area	23.05	Hectares
2. Block Name	Kapiban	5. Compiling date	2023-041-29	
3. No of plots	36	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	0.556	0	0.00	0.00	0.00
20-29	0.047	0.287	0.050	0.556	28	15.56	0.73	4.46
30-39	0.093	0.687	0.050	0.556	32	17.78	1.65	12.20
40-49	0.156	1.323	0.050	0.556	10	5.56	0.87	7.35
50-59	0.233	2.236	0.050	0.556	0	0.00	0.00	0.00
60-69	0.327	3.462	0.050	0.556	0	0.00	0.00	0.00
70-79	0.436	5.037	0.050	0.556	0	0.00	0.00	0.00
80-89	0.561	6.993	0.050	0.556	0	0.00	0.00	0.00
90-99	0.701	9.361	0.050	0.556	0	0.00	0.00	0.00
100-109	0.857	12.171	0.050	0.556	0	0.00	0.00	0.00

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

1. CF Name		Bjee			4. Block Area		23.05	Hectares
2.Block Name		Kapiban			5. Compiling date		29/01/2023	
3. No of plots		25			6. Species group		Michelia 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	0.086	0.050	0.800	2	1.60	0.03	0.14
20-29	0.047	0.297	0.050	0.800	1	0.80	0.04	0.24
30-39	0.093	0.678	0.050	0.800	0	0.00	0.00	0.00
40-49	0.156	1.259	0.050	0.800	0	0.00	0.00	0.00
50-59	0.233	2.065	0.050	0.800	0	0.00	0.00	0.00
60-69	0.327	3.121	0.050	0.800	0	0.00	0.00	0.00
70-79	0.436	4.447	0.050	0.800	0	0.00	0.00	0.00
80-89	0.561	6.061	0.050	0.800	0	0.00	0.00	0.00
90-99	0.701	7.983	0.050	0.800	0	0.00	0.00	0.00
100-109	0.857	10.227	0.050	0.800	0	0.00	0.00	0.00

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

1. CF Name	Bjee	4. Block Area	23.05	Hectares
2. Block Name	Kapiban	5. Compiling date	29/01/2023	
3. No of plots	36	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	0.096	0.050	0.556	0	0.00	0.00	0.00
20-29	0.047	0.335	0.050	0.556	2	1.11	0.05	0.37
30-39	0.093	0.773	0.050	0.556	13	7.22	0.67	5.58
40-49	0.156	1.449	0.050	0.556	3	1.67	0.26	2.42
50-59	0.233	2.396	0.050	0.556	0	0.00	0.00	0.00
60-69	0.327	3.643	0.050	0.556	0	0.00	0.00	0.00
70-79	0.436	5.218	0.050	0.556	0	0.00	0.00	0.00
80-89	0.561	7.145	0.050	0.556	0	0.00	0.00	0.00
90-99	0.701	9.448	0.050	0.556	0	0.00	0.00	0.00
100-109	0.857	12.150	0.050	0.556	0	0.00	0.00	0.00

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

1. CF Name		Bjee			4. Block Area		37.66	Hectares
2.Block Name		Tabgang			5. Compiling date		29/01/2023	
3. No of plots		39			6. Species group		Bluepine	
<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	0.513	0	0.00	0.00	0.00
20-29	0.047	0.349	0.050	0.513	1	0.51	0.02	0.18
30-39	0.093	0.828	0.050	0.513	4	2.05	0.19	1.70
40-49	0.156	1.583	0.050	0.513	1	0.51	0.08	0.81
50-59	0.233	2.660	0.050	0.513	3	1.54	0.36	4.09
60-69	0.327	4.100	0.050	0.513	0	0.00	0.00	0.00
70-79	0.436	5.941	0.050	0.513	0	0.00	0.00	0.00
80-89	0.561	8.218	0.050	0.513	0	0.00	0.00	0.00
90-99	0.701	10.967	0.050	0.513	0	0.00	0.00	0.00
100-109	0.857		0.050	0.513	0	0.00	0.00	0.00

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

1. CF Name	Bjee	4. Block Area	37.66	Hectares
2. Block Name	Tabgang	5. Compiling date	29/01/2023	
3. No of plots	39	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	0.513	0	0.00	0.00	0.00
20-29	0.047	0.287	0.050	0.513	13	6.67	0.31	1.91
30-39	0.093	0.687	0.050	0.513	10	5.13	0.48	3.52
40-49	0.156	1.323	0.050	0.513	4	2.05	0.32	2.71
50-59	0.233	2.236	0.050	0.513	0	0.00	0.00	0.00
60-69	0.327	3.462	0.050	0.513	0	0.00	0.00	0.00
70-79	0.436	5.037	0.050	0.513	0	0.00	0.00	0.00
80-89	0.561	6.993	0.050	0.513	0	0.00	0.00	0.00
90-99	0.701	9.361	0.050	0.513	0	0.00	0.00	0.00
100-109	0.857	12.171	0.050	0.513	0	0.00	0.00	0.00

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

1. CF Name		Bjee			4. Block Area		37.66	Hectares
2.Block Name		Tabgang			5. Compiling date		29/01/2023	
3. No of plots		39			6. Species group		Betula	
<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	0.513	0	0.00	0.00	0.00
20-29	0.047	0.335	0.050	0.513	1	0.51	0.02	0.17
30-39	0.093	0.773	0.050	0.513	0	0.00	0.00	0.00
40-49	0.156	1.449	0.050	0.513	2	1.03	0.16	1.49
50-59	0.233	2.396	0.050	0.513	1	0.51	0.12	1.23
60-69	0.327	3.643	0.050	0.513	1	0.51	0.17	1.87
70-79	0.436	5.218	0.050	0.513	1	0.51	0.22	2.68
80-89	0.561	7.145	0.050	0.513	0	0.00	0.00	0.00
90-99	0.701	9.448	0.050	0.513	0	0.00	0.00	0.00
100-109	0.857	12.150	0.050	0.513		0.00	0.00	0.00

Compilation sheets (N-trees)

OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)								
1. CF Name		Bjee			4. Block Area		6.03	Hectares
2. Block Name		Zurtog			5. Compiling date		29/01/2023	
3. No of plots		8			6. Species group		Other BL (Central)	
col1	col2	col3	col4	col5	col6	col7	col8	col9
		(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	2.500	85	212.50	3.61	16.58
20-29	0.047	0.287	0.050	2.500	17	42.50	2.00	12.20
30-39	0.093	0.687	0.050	2.500	7	17.50	1.63	12.01
40-49	0.156	1.323	0.050	2.500	3	7.50	1.17	9.92
50-59	0.233	2.236	0.050	2.500	1	2.50	0.58	5.59
60-69	0.327	3.462	0.050	2.500	0	0.00	0.00	0.00
70-79	0.436	5.037	0.050	2.500	0	0.00	0.00	0.00
80-89	0.561	6.993	0.050	2.500	0	0.00	0.00	0.00
90-99	0.701	9.361	0.050	2.500	0	0.00	0.00	0.00
100-109	0.857	12.171	0.050	2.500	0	0.00	0.00	0.00

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

1. CF Name	Bjee	4. Block Area	6.03	Hectares
2. Block Name	Zurtog	5. Compiling date	29/01/2023	
3. No of plots	8	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	0.095	0.050	2.500	13	32.50	0.55	3.09
20-29	0.047	0.340	0.050	2.500	16	40.00	1.88	13.60
30-39	0.093	0.796	0.050	2.500	4	10.00	0.93	7.96
40-49	0.156	1.505	0.050	2.500	2	5.00	0.78	7.53
50-59	0.233	2.508	0.050	2.500	2	5.00	1.17	12.54
60-69	0.327	3.837	0.050	2.500	0	0.00	0.00	0.00
70-79	0.436	5.526	0.050	2.500	0	0.00	0.00	0.00
80-89	0.561	7.603	0.050	2.500	0	0.00	0.00	0.00
90-99	0.701	10.096	0.050	2.500	0	0.00	0.00	0.00
100-109	0.857	13.033	0.050	2.500	0	0.00	0.00	0.00

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

1. CF Name		Bjee			4. Block Area		6.03		Hectares	
2.Block Name		Zurtog			5. Compiling date		29/01/2023			
3. No of plots		8			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	0.074	0.050	2.500	63	157.50	2.68	11.66		
20-29	0.047	0.255	0.050	2.500	10	25.00	1.18	6.38		
30-39	0.093	0.579	0.050	2.500	0	0.00	0.00	0.00		
40-49	0.156	1.072	0.050	2.500	0	0.00	0.00	0.00		
50-59	0.233	1.755	0.050	2.500	0	0.00	0.00	0.00		
60-69	0.327	2.646	0.050	2.500	0	0.00	0.00	0.00		
70-79	0.436	3.762	0.050	2.500	0	0.00	0.00	0.00		
80-89	0.561	5.119	0.050	2.500	0	0.00	0.00	0.00		
90-99	0.701	6.731	0.050	2.500	0	0.00	0.00	0.00		

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

1. CF Name	Bjee	4. Block Area	23.05	Hectares
2. Block Name	Kapiban	5. Compiling date	29/01/2023	
3. No of plots	25	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	0.800	173	138.40	2.35	10.80
20-29	0.047	0.287	0.050	0.800	64	51.20	2.41	14.69
30-39	0.093	0.687	0.050	0.800	22	17.60	1.64	12.08
40-49	0.156	1.323	0.050	0.800	4	3.20	0.50	4.23
50-59	0.233	2.236	0.050	0.800	0	0.00	0.00	0.00
60-69	0.327	3.462	0.050	0.800	0	0.00	0.00	0.00
70-79	0.436	5.037	0.050	0.800	0	0.00	0.00	0.00
80-89	0.561	6.993	0.050	0.800	0	0.00	0.00	0.00
90-99	0.701	9.361	0.050	0.800	0	0.00	0.00	0.00
100-109	0.857	12.171	0.050	0.800	0	0.00	0.00	0.00

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

1. CF Name	Bjee	4. Block Area	23.05	Hectares
2. Block Name	Kapiban	5. Compiling date	29/01/2023	
3. No of plots	25	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	0.095	0.050	0.800	112	89.60	1.52	8.51
20-29	0.047	0.340	0.050	0.800	107	85.60	4.02	29.10
30-39	0.093	0.796	0.050	0.800	53	42.40	3.94	33.75
40-49	0.156	1.505	0.050	0.800	24	19.20	3.00	28.90
50-59	0.233	2.508	0.050	0.800	6	4.80	1.12	12.04
60-69	0.327	3.837	0.050	0.800	0	0.00	0.00	0.00
70-79	0.436	5.526	0.050	0.800	1	0.80	0.35	4.42
80-89	0.561	7.603	0.050	0.800	0	0.00	0.00	0.00
90-99	0.701	10.096	0.050	0.800	0	0.00	0.00	0.00
100-109	0.857	13.033	0.050	0.800	1	0.80	0.69	10.43

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

1. CF Name		Bjee			4. Block Area		23.05		Hectares	
2.Block Name		Kapiban			5. Compiling date		29/01/2023			
3. No of plots		25			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	0.074	0.050	0.800	112	89.60	1.52	6.63		
20-29	0.047	0.255	0.050	0.800	62	49.60	2.33	12.65		
30-39	0.093	0.579	0.050	0.800	17	13.60	1.26	7.87		
40-49	0.156	1.072	0.050	0.800	2	1.60	0.25	1.72		
50-59	0.233	1.755	0.050	0.800	0	0.00	0.00	0.00		
60-69	0.327	2.646	0.050	0.800	0	0.00	0.00	0.00		
70-79	0.436	3.762	0.050	0.800	0	0.00	0.00	0.00		
80-89	0.561	5.119	0.050	0.800	0	0.00	0.00	0.00		
90-99	0.701	6.731	0.050	0.800	0	0.00	0.00	0.00		

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

1. CF Name	Bjee	4. Block Area	37.66	Hectares
2. Block Name	Tabgang	5. Compiling date	29/01/2023	
3. No of plots	39	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	0.513	224	114.87	1.95	8.96
20-29	0.047	0.287	0.050	0.513	144	73.85	3.47	21.19
30-39	0.093	0.687	0.050	0.513	50	25.64	2.38	17.60
40-49	0.156	1.323	0.050	0.513	14	7.18	1.12	9.50
50-59	0.233	2.236	0.050	0.513	3	1.54	0.36	3.44
60-69	0.327	3.462	0.050	0.513	0	0.00	0.00	0.00
70-79	0.436	5.037	0.050	0.513	0	0.00	0.00	0.00
80-89	0.561	6.993	0.050	0.513	0	0.00	0.00	0.00
90-99	0.701	9.361	0.050	0.513	0	0.00	0.00	0.00
100-109	0.857	12.171	0.050	0.513	0	0.00	0.00	0.00

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

1. CF Name	Bjee	4. Block Area	37.66	Hectares
2. Block Name	Tabgang	5. Compiling date	29/01/2023	
3. No of plots	39	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	0.095	0.050	0.513	110	56.41	0.96	5.36
20-29	0.047	0.340	0.050	0.513	111	56.92	2.68	19.35
30-39	0.093	0.796	0.050	0.513	66	33.85	3.15	26.94
40-49	0.156	1.505	0.050	0.513	37	18.97	2.96	28.56
50-59	0.233	2.508	0.050	0.513	16	8.21	1.91	20.58
60-69	0.327	3.837	0.050	0.513	8	4.10	1.34	15.74
70-79	0.436	5.526	0.050	0.513	4	2.05	0.89	11.34
80-89	0.561	7.603	0.050	0.513	0	0.00	0.00	0.00
90-99	0.701	10.096	0.050	0.513	0	0.00	0.00	0.00
100-109	0.857	13.033	0.050	0.513	0	0.00	0.00	0.00

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

1. CF Name		Bjee				4. Block Area		37.66	Hectares
2. Block Name		Tabgang				5. Compiling date		29/01/2023	
3. No of plots		39				6. Species group		Rhododendron spp.	
<b>col1</b>	<b>col2</b>	<b>col3</b>	<b>col4</b>	<b>col5</b>	<b>col6</b>	<b>col7</b>	<b>col8</b>	<b>col9</b>	
		(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	0.074	0.050	0.513	186	95.38	1.62	7.06	
20-29	0.047	0.255	0.050	0.513	67	34.36	1.61	8.76	
30-39	0.093	0.579	0.050	0.513	6	3.08	0.29	1.78	
40-49	0.156	1.072	0.050	0.513	0	0.00	0.00	0.00	
50-59	0.233	1.755	0.050	0.513	0	0.00	0.00	0.00	
60-69	0.327	2.646	0.050	0.513	0	0.00	0.00	0.00	
70-79	0.436	3.762	0.050	0.513	0	0.00	0.00	0.00	
80-89	0.561	5.119	0.050	0.513	0	0.00	0.00	0.00	
90-99	0.701	6.731	0.050	0.513	0	0.00	0.00	0.00	

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

1. CF Name		Bjee				4. Block Area		37.66	Hectares
2. Block Name		Tabgang				5. Compiling date		29/01/2023	
3. No of plots		39				6. Species group		Betula	
<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	0.513	12	6.15	0.10	0.59	
20-29	0.047	0.335	0.050	0.513	6	3.08	0.14	1.03	
30-39	0.093	0.773	0.050	0.513	2	1.03	0.10	0.79	
40-49	0.156	1.449	0.050	0.513	0	0.00	0.00	0.00	
50-59	0.233	2.396	0.050	0.513	0	0.00	0.00	0.00	
60-69	0.327	3.643	0.050	0.513	0	0.00	0.00	0.00	
70-79	0.436	5.218	0.050	0.513	0	0.00	0.00	0.00	
80-89	0.561	7.145	0.050	0.513	0	0.00	0.00	0.00	
90-99	0.701	9.448	0.050	0.513	0	0.00	0.00	0.00	
100-109	0.857	12.150	0.050	0.513	0	0.00	0.00	0.00	