
***KHALONG KUENPHELING COMMUNITY
FOREST MANAGEMENT PLAN
(1ST REVISION)***



Narang Gewog, Mongar Dzongkhag


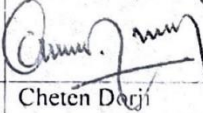
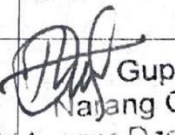
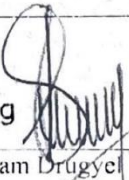

Divisional Forest Office, Mongar

Plan Period: 2023 –2033

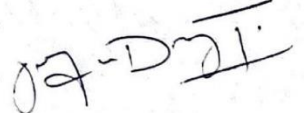

APPROVAL SHEET FOR COMMUNITY FOREST MANAGEMENT PLAN

Name of Community Forest	Khalong kuenpheling
Village	Khalong, Thrinangphu and Narang
Chiwog	Khalong
Gewog	Narang
Dzongkhag	Mongar
Production area (Hectare/Acre)	347 Hectares
Protection area (Hectare/Acre)	26 Hectares
Total Community Forest Area (Hectare/Acre)	389
Total CFMG Member (No. of HH)	78

Prepared and Submitted for Approval

	Community Forest Management Group	Forestry Representative (CFMP facilitator)	Gewog Administration	Social Forestry Section	Divisional/ Park Office
Signature			 Gup Narang Gewog Mongar Dzongkhag		
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Title	Chairperson	Sr. Forest Ranger	Gup	Section Head	Chief Forestry Officer

REVIEWED and RECOMMENDED FOR APPROVAL

Signature		
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Title	Forestry Officer (Focal)	Chief Forestry Officer
DIVISION	Forest Resources Planning and Implementation Section	Forest Resources Planning and Management Division

APPROVED BY:



DIRECTOR

DEPARTMENT OF FORESTS AND PARK SERVICES

Approved vide Notesheet No. DoFPS/FRPMD/FRPIS/CF_1(C)/2022-2023/1186 on dated June 13, 2023

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1. ACRONYMS

CF	Community Forest
CFMP	Community Forest Management Plan
CFMC	Community Forest Management Committee
CFMG	Community Forest Management Group
ECR	Extended Class Room
ORC	Out Reach Clinic
CFO	Chief Forest Officer
SRFL	State Reserve Forest Land
DFO	Divisional Forests Office
NWFP	Non-Wood Forest Products
AHL	Annual Harvesting Limit
GT	Gewog Tshogdey
Ha	Hectare
Hh	Household
DoFPS	Department of Forest and Park Services
SRFL	State Reserve Forest Land
FNCRR	Forest and Nature Conservation Rules & Regulations

2. EXECUTIVE SUMMARY

Khalong Kuenpheling Community Forest falls in Narang Geog under Mongar Dzongkhag Administration. At present the management group has reduced to 78 households from Thrinangphu, Nagtshangthung and Narang out of 94 members in the past management plan. The CF area is extended from 329 ha to 389 hectares with increased of 60 hectares. A total of 22 hectares is set aside as river buffer. Thus, the actual production area is 347 hectares. The vegetation type of the Community Forest (CF) is cool broad-leaved forest and mainly comprises of *Quercus lamellosa*, Dhomshing, etc. The Non-Wood Forest Product's (NWFP) include *Daphne*, ferns, *Rubia*, *Paris*, mushroom, thatching bamboo, etc.

The forest condition is moderate and the overall canopy density of the forest is < 70%. The forest consists both matured and pole stage stand. The villagers depend on firewood, flag poles, fencing post & poles, timbers and NWFP's from the forest. Trees that are used as firewood are in excess. It will be harvested and sold for cash income. The Community Forest Management Group (CFMG) will carry out plantation in harvested and degraded areas. Thinning, cleaning and protection of forest resources will be the mandate of the CFMG in the CF. Supply of bamboo may have to depend on SRFL as there is no bamboo available in the CF.

The average basal area of the CF area is 12.61 m²/ha (T-Trees) and 49.11 m²/ha (N-Trees) indicating that the CFMG members can meet their demand for timber and other forest produces. The analysis from the resource assessment derived from stand stock table sheet 2: average volume per hectare revealed that, the CF has sufficient timber with Annual Allowable Cut (AAC) of 230.16 m³. The AAC of N-Trees for firewood, flagpoles and fencing post is 459.36m³. The main Objective of establishing the community forest is as follows:

- *To sustainably utilize and manage adjacent forest and its resources for the benefit of present and future generation*
- *To protect the forest from illegal extraction of timber by both outsiders and CFMG members by strictly enforcing Community Forest Management Plan By-laws*
- *To protect the water source that exists in community forest area*
- *To generate cash income from the sale of Community Forest resources*
- *To plant the seedlings in blank areas and enrich the forest resources*

For the smooth functioning of the CF, committee members consisting of 3 members are elected and 5 members as resoop (Forest watcher) shall be appointed on rotational basis for patrolling. The revised management plan is for period of 10 years and will be implemented as per the management plan and By-laws framed.

PART A: MANAGEMENT PLAN

3. INTRODUCTION

The name of the Community Forest is Khalong Kuenpheling Community Forest located at Khalong village under Narang Geog, Mongar Dzongkhag. The CFMG has 78 membership households from Khalong, Thrinangphu and Narang villages. It lies to the north west of Narang Geog centre where a farm road connects the village from the Geog centre. The community forest (CF) is located adjacent to Khalong village. The total area of the CF is 389 hectares. When the river buffer of 44.31 hectares is deducted, the actual production area stands at 284.69 hectares where as in the past management plan 329 hectares were managed by 99 members. The CF members have reduced to 78 as members from Pangkhang and Chema village has withdrawn from membership.

The AAC is been set at of 230.16m³. The AAC of N-Trees for firewood, flagpoles and fencing post is 459.36m³. This AAC is set after deducting 35% of the AAC derived from Stand and Stock table considering site accessibility and error in data collection as adopted in FMU AAC derivation.

The community forest consists mainly of broad-leaved species. Prior to establishing CF, there was increasing pressure on the forest by people from Drametse Geog had caused threats of resource depletion. Community had confidence that establishment of CF can result protection of resources within their traditional boundary and manage resources on sustainable basis to ensure perpetuity. Moreover, the community has a fear for the shortage of resources due to increasing pressure from outsiders as the village is accessible with farm road.

After discussion several times in *Gewog Tshogdey* the establishment of CF was endorsed in 12th session of GYT. Thus the establishment of CF is solely based on the interest of the community.

4. REVIEW OF PAST PLAN ACTIVITIES

Khalong Kuenphelling community forestry under Narang Gewog in Mongar Dzongkhag was established in 2012 and the 1st management plan expired in November, 2022. The CF area of 329 hectares was being managed by 99 members from Khalong, Thrinangphu, Pangkang, Gomchu, Chema and Narang villages. Later members from Pangkang, Gomchu, Chema and some from Narang village withdrawn from membership as they are from CF area. The forest also serves as communal grazing land for Khalong community. The CF management plan was finally evaluated in the month of September, 2022.



Figure 1: Final CF plan evaluation meeting

4.1 Resource Utilization

During the ten years of management the CFMG members have harvested 375 numbers of Drashing for rural house construction and repairs. 16 new house, 10 kitchens and 1 major repair were completed so far. There are still 7 new house and 13 major house repairs under construction. While checking the CF



Figure 2: New house constructed with CF timber

resources harvested data till date against Annual Harvest Limit the CFMG has harvested very conservatively within the AHL as per the management plan prescription. Beside the CFMG also harvested and sold 543 Kgs of *Rubia coridfolia* and 149.5 kgs *Daphne* bark in line with management plan prescription.

Table 1: Timber utilized from the CF

	Drashing	Cham	Tsim	Dangchung	Flag Poles	Fire Wood	Fencing Post
Utilized by CFMG members	375	2	366	388	395	503	181
Timber sold	-	-	-	-	328	-	-

Donated	-	-	-	-	-	3	-
Total timber harvested	375	2	366	388	328	506	181

4.2 Financial Status

As of now Khalong Kunephelling CF has generated income of **Nu.283,210.00 (Two lakh eighty-three two hundred ten)** only (see table 2) and utilized amount of **Nu.195,226.00 (one lakh ninety-five thousand two hundred twenty-six)** only by the CFMG.

Table.2 Income statement

Sl. No.	Source of fund	Amount generated	Remarks
1	Forest produce fees collected from members	51390.00	
2	Membership fees	64800.00	
3	Illegal timber harvest	40800.00	
4	Fine for absentees in meeting & works	4455.00	
5	Sale of NWFPs (<i>Daphne & Rubia</i>)	23805.00	
6	Sale of firewood	80000.00	
7	Loan interest	17960.00	
	Total =	283210.00	

Some fund was utilized for plantation, CF management, revision, payment of incentives to the executive members (see table 3). Currently as of December, 2022 the CFMG has total fund balance of Nu.113302.77. A sum of **Nu.43,000/- (forty-three thousand)** only was loaned and benefitted three members.

Table. 3 Expenditure Statements

Sl. No.	Purpose of expense	Amount Spent	Remarks
1	Plantation	17600.00	Cost of seedlings and transportation charges
2	CF office furniture	14226.00	Making charge and cost of materials for making chair and tables.
3	Executive members incentives	33000.00	Paid to Chairperson, Secretary & Treasurer
4	Transportation charge and labour payment for sale of firewood	76800.00	
5	Payment for Rubia collectors	20040.00	

6	Others	3620.00	Seal, rubber stamp, signboard transportation, binding, and photocopy charges
7	Reward for illegal reporter	1000.00	Risup
8	CF revision	28940.00	
	Total =	195226.00	

4.3 CFMG Activities

The CFMG members has been engaged in CF development activities and undertaken cleaning/weeding/thinning (tending operation) to improve quality of timber as well as to promote natural regeneration. The members also carried out total of 5 acres plantation in three sites (Phakpa lospa, Mangka Chema, Yudangzor). The members participated in CFMG meeting for 10 times during the plan period and provided 698 mandays labour contribution for plantation creation and tending operation of natural stand. The CFMG also constantly patrol their CF area to check illegal activities, five members each are engaged in patrolling on rotational basis for one month duration and they hand over to the next team after submitting report to the Chairperson. The activities undertaken were all relvenat and inline with CF objectives. Through the labour contribution and participation in the meeting showed that the CFMG members are committed towards their community forest.



Figure 3: Weeding seedlings in enrichment plantation site



Figure 4: Cypress plantation at Mangka Chema



Figure 5: Photo of Annual CFMG meeting



Figure 6: Patrolling CF area

5. TOTAL COMMUNITY FOREST AREA

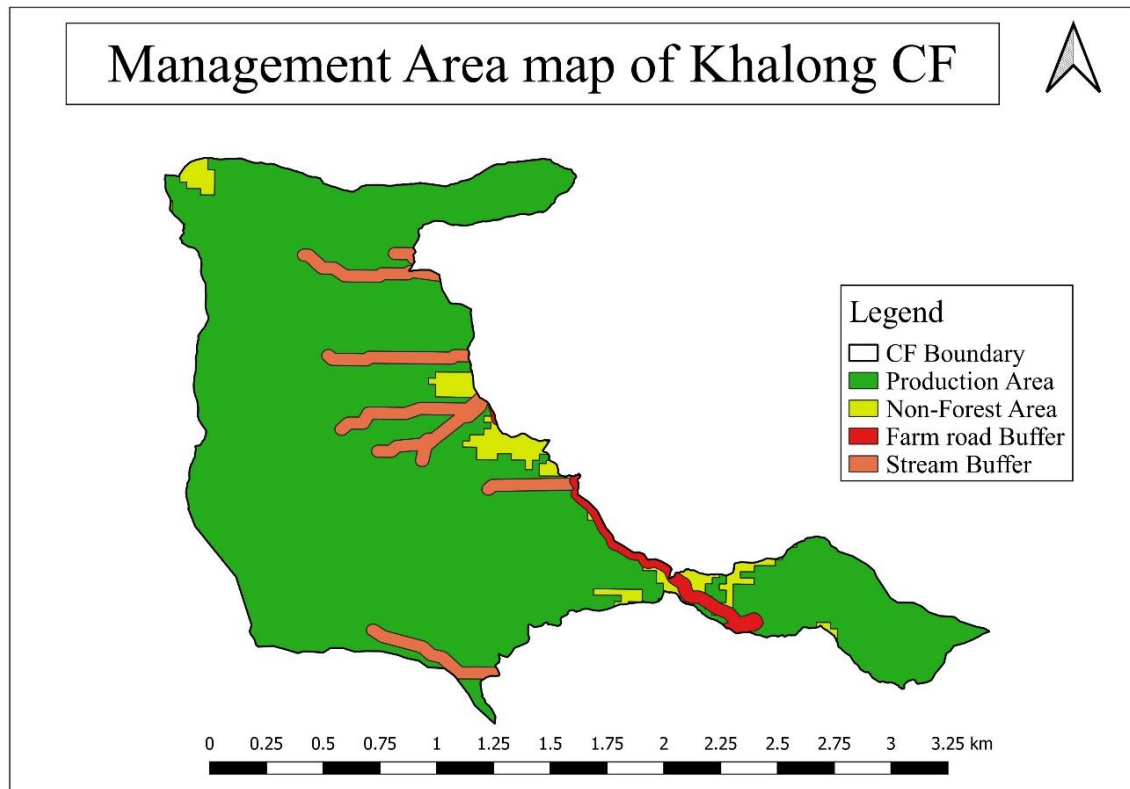
Khalong Kuenpheling CF has a total area of 389 hectare (960.83 acres). The details of the area designated are given in the following table 4.

Table 4: Details of the CF Area

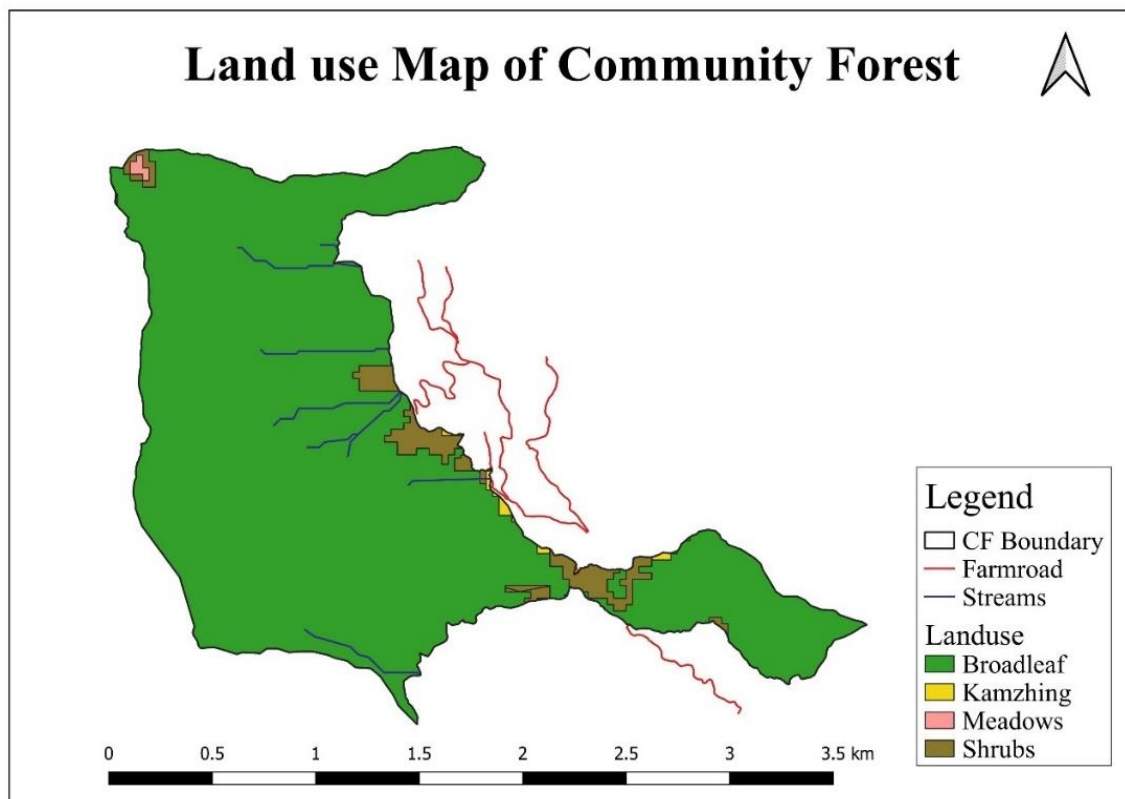
Sl#	Block	Area(Ha)	Remarks
1	Production (Timber) area	347	Net Operable area
2	Non-forest area	14	Private land and settlement
3	Farm road Buffer	6	
4	River/stream Buffer	22	
	Total Area =	389.00	

6. COMMUNITY FOREST MAP

6.1 CF Area Ma



6.2. Land Use Map



6.3. Google Map of CF Area



7. COMMUNITY FOREST BOUNDARIES

Table 5: CF boundary details

<i>Boundaries</i>	<i>Describe the permanent features</i>
West	Tsugtay
East	Lungzor
South	Barnadanglamtoe
North	Shidazazor

8. SOCIAL INFORMATION

	<i>Descriptions by points</i>
Name of the villages:	Khalong and Thrinangphu
Ethenic groups with CFMG:	Sharchokp
Basic amenities	RNRC, 1 ORC, ECCD, Primary School, BHU- Gr-II, farm road, RWSS and access to mobile and electricity facilities
Total Household (HH) number of CFMG:	164 active household and 14 hh gungtong
Population of CFMG	1667
Male% and female%	M:856 & F:811
Cattle population of the CF area:	587
Main source of income	Vegetables (Chillies and potatoes), labour contract works
Main crops:	Maize, chillies and potatotoes
Cropping pattern:	Mixed cropping
Average annual income:	Nu.75000/year
If any add:	

9. FOREST INFORMATION (WHOLE FOREST)

Khalong Kuenphelling CF lies in cool-broad leaved zone, and the vegetation is purely broad-leaved forest with dominant species of *Quercus lamellosa*, *Prunus* spp, *Persea* spp associated with other species like *Castanopsis*, *Rhododendron*, *Cinnamomum*, *Acer*, *Belschmedia*, *Betula*, and very few *Michelia* spp. In the middle storey the species composition are *Daphniphyllum* spp and *Symplocos* spp. Few Bhutan pine trees can be found in lower areas in association with *Gaultheria* spp. There are also Non-Wood Forest Products like, *Daphne*, *Rubia*, *Satuwa*, bamboo, ferns, mushrooms. *Daphne* can be found throughout the CF area with good regeneration.

The slope is gentle to moderate whereas in Wagombra area it is somewhat steep and the soil type is loamy soil. Maximum forest area in the CF is depleted due to heavy extraction of timber by the whole Narang and some community of Dramitse Gewog before establishment of CF due as the timber for reconstruction of houses due to damage by earthquake in 2009.

The regeneration of preferred timber species is very poor over the whole CF area whereas, it has abundant regeneration of non-timber species like *Symplocos* and *Daphniphyllum* spp. The canopy cover has matured trees with canopy density of less than 70% indicating that it is open and the overall condition of the CF is average. The Cypress and Oak plantations raised by the CFMG since 2017 have attained height between 3-6 meter. Wild animals like deer, monkey, sambar, wild pig, kalij pheasant, hill partridge wild dog, bear, etc. are found in the CF area. As per the resource assessment done in 73 random sample plots (circular-12.62m²) revealed the average basal area of the CF area as 12.61 m²/ha (T-Trees) and 49.11 m²/ha (N-Trees). The AAC is been set at of 230.16m³. The AAC of N-Trees for firewood, flagpoles and fencing post is 459.36m³. This AAC is set after deducting 35% of the AAC derived from Stand and Stock table considering site accessibility and error in data collection as adopted in FMU AAC derivation.

There are numerous perennial streams and the drinking water of Narang community, Primary school, BHU, RNREC is tapped from Wagombra within CF area and Khalong community use Omshangre and Phakpalospa re.

9.1. History of the Forests.

The forest has been only the area for the extraction of timber and other forest products for the local communities. However, the forest was depleted due to extraction of timber for construction of School, BHU, RNR and Dratshang before the establishment of Community Forest. Since there is no alternative potential area, people have realized and established for the future benefits of the community. In the past the area had been found used as *tsamdro*. At present there are few areas used for grazing. The area was once under the conflict as it was claimed by the public of Balam Geog. Later the Mongar District Court declared the ownership of the forest to the people of Narang Geog. However, over the years the forest stands have improved which gain its potential to supply basic requirement for the CFMGs through extraction of matured, dead, diseased, deform and fallen trees.

9.2. Block Information

Format 1. Forest Resource Assessment Format (Complete this format for each block)	
Name of Community Forest	Khalong Kuenphelling
Date of Assessment	17/11/2022
Name of block	Khalong
Block area	389 hectares

Name of recorder	Cheten Dorji (Sr.FR-II), Sonam Jamtsho & Binod Kumar Subba
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Forest & Habitat Type (<i>tick all those present, Refer definition below</i>)			
Forest <input checked="" type="checkbox"/>	Thicket/pole stage <input type="checkbox"/>	Shrub land <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 broad leaved forest <input type="checkbox"/>	Blue pine forest <input type="checkbox"/>
Cool Broad leaved Forest <input checked="" type="checkbox"/>	Mixed <input type="checkbox"/>	Fir forest <input type="checkbox"/>	Other <input type="checkbox"/>

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

Forest Condition (<i>complete if the block is mainly forest</i>)	
Write the names of main tree species	
Local name	Scientific name
Phugalengshing	<i>Prunus spp</i>
Phawangmashing	<i>Quercus lamellose</i>
Serlagashing	<i>Quercus spp</i>
Plantation	
Is there any Plantation?	Approximate height Of planted trees (m) – 4 meters
Yes <input checked="" type="checkbox"/>	
No <input type="checkbox"/>	

Year planted:	Is the plantation? Under stocked <input type="checkbox"/>		
	Stocked <input checked="" type="checkbox"/>		
	Overstocked <input type="checkbox"/>		
Forest Condition – Age			
Mature <input checked="" type="checkbox"/>	Pole stage <input type="checkbox"/>	Shrub land <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

Forest Condition – Canopy density (tick 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

Forest Condition – Regeneration (including coppice re growth)		
Abundant <input type="checkbox"/>	Scattered/few <input checked="" type="checkbox"/>	None <input type="checkbox"/>
Regeneration easy to find in most places	Regeneration only in some places and hard to find	No regeneration
Write the names of the 3 main tree species in the regeneration		
1) <i>Symplocos</i> spp	2) Shingtsashing	3) Serchimashing
Regeneration: Seedlings > 30cm and < 1.3m height		

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

Block Condition – Summary				
(Use the forest condition class box below to get an average condition for the block)				
Poor <input type="checkbox"/>	Average <input checked="" type="checkbox"/>	Good <input type="checkbox"/>	Very Good <input type="checkbox"/>	
Does the main forest canopy consist of large, mature trees?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Forest Condition Class Box				
Age	Canopy density	Regeneration	Seed tree class	Condition
<u>Mature forest</u>	Dense	Abundant		Very good
		Scattered/few		Good
	<u>Open</u>	Abundant		Good
		<u>Scattered/fe</u>		<u>Average</u>
Pole stage forest	Dense	Abundant		Good
		Scattered/few		Average

	Open	Abundant		Average
		Scattered/few		Poor
Shrub land and young growth	Dense		Moderate or High	Average
	Dense		Low	Average
	Open		Low	Poor
Any	Very open	None		Poor

Open spaces (complete if there are significant open spaces in the block)

Approximate total open space area (ha)	14
Dominant vegetation type in the open space	Shrubs
Cause of open space e.g. grazing, fire, harvesting, etc.	Harvesting and grazing

Grazing and fodder (complete if the forest block is used for grazing or fodder)

Grass land 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
Zulagashing	<i>Brasiopsis</i> spp
Nushing	<i>Ficus</i> spp
Lackshing	<i>Ficus</i> spp
Zangro/Nangshing	<i>Bhomeria</i>

Pasture quality (list the 3 dominant species in the grassland)		
Local name	Scientific name	Palatable/unpalatable
<i>Eupatorium</i>		Unpalatable
Zocha (nettle plant)	<i>Urtica</i>	Palatable
Ferns	<i>Pteridium</i> spp	Unpalatable

Use pattern <input type="checkbox"/>	Seasonal <input type="checkbox"/>	All year <input checked="" 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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Catchment Condition (use catchment condition class box below)

(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"/>	Non-erosive <input checked="" type="checkbox"/>
Disperses and/or breaks up in water easily	Stable to water flow
(i) 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
<u>Moderate</u>	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	<u>Non erosive</u>	<u>Moderate or high</u>	<u>Less critical</u>
		Low	Moderately critical
Steep	Erosive	Moderate or high	Moderately critical
		Low	Highly critical
	Non erosive	Moderate or high	Moderately critical
		Low	Highly critical

Fauna (List any animal or bird species seen or which are known from the block)

Local Name	Scientific name
Zala	<i>Macaca asseamensis</i>
Phakpa	<i>Sus scrofa</i>
Shawa	<i>Cervus unicolor</i>
Gasha	<i>Muntiacus mutajak</i>
Repkha	<i>Kalij pheasant</i>
Khamkha	<i>Hill patriadge</i>
Pharwa	<i>Cuon alpines</i>
Roksha	<i>Trachypithecus pileatus</i>
Omsha	<i>Himalayan black bear Ursus</i>

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"/>
Fodder collection (list main species used)	Common <input checked="" type="checkbox"/>	Limited <input type="checkbox"/>	Absent <input type="checkbox"/>

NWFP collection (list the main products including bamboo & cane)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Leaf litter collection	Common <input checked="" type="checkbox"/>	Limited <input type="checkbox"/>	Absent <input type="checkbox"/>
Encroachment	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Pole harvesting	Common <input type="checkbox"/>	Occasional <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Fuel wood harvesting	Common <input checked="" type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input type="checkbox"/>
Timber harvesting	Common <input checked="" type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input type="checkbox"/>
Hunting	Common <input checked="" type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input type="checkbox"/>
Others(describe)			

Potential Management Options (list any potential management options for the CF/block)	
1	Carryout thinning to improve the stand
2	Harvest and utilize timbers, poles and firewood for domestic purpose
3	Reduce forest fuel and to enhance regeneration through sanitation and cleaning
4	Generate income through valuable native tree and bamboo plantation

9.3. Annual Allowable Cut for Timber

Annual Allowable Cut (AAC)	Dangchung m ³	Tsim m ³	Cham m ³	Drashing m ³	Firewood m ³	Flag poles m ³	Fencing Posts m ³
Khalong block	1.70 m ³	8.73 m ³	29.65 m ³	190.07 m ³	391.41 m ³	50.77 m ³	16.50 m ³

10. NON WOOD FOREST PRODUCT MANAGEMENT

10.1 Non-Wood Forest Product- Daphne

The CF area has good growth of *Daphne* plants. It has been estimated that around 316975 numbers of daphne plant is available within the area of 315 hectares. These numbers are irrespective of the size of the daphne plants.

The daphne will be harvested as per the procedure laid in the Interim Framework for Collection and management of Non-Wood Forest Products, 2011. The CF area has been divided into six blocks for daphne harvesting (see map3). The other guidelines will be based as per the harvesting guidelines mentioned in the Interim Framework.

Harvesting Guidelines:

- Harvesting time: March to June

- Cut the plant at 10cm above ground level (the left stump will regenerate in the following growing season)
- Cut only the stems that are more than 3cms in diameter
- Do not damage the remaining young stands and seedlings
- Do not fell surrounding trees in order to clear the area to ease harvesting
- Harvesting is rotated over six blocks so that harvesting takes place only one block per year
- Only bark is used for traditional Bhutanese paper

Rubia

There is sparse distribution of *Rubia* in CF area. As such, the CFMG would collect and market the resource. The harvesting will be done as per the interim framework for collection and management of NWFP.

Harvesting guidelines:

- Harvesting time: February to April
- Use sharp scissors for the collection of the upper part of the plant
- Cut the plant at 5cm above ground level
- Leave at least 10% of the plants without collecting or harvesting any raw materials from them (these plants shall act as seed plants for natural regeneration)
- Do not collect roots
- Do not uproot entire plants

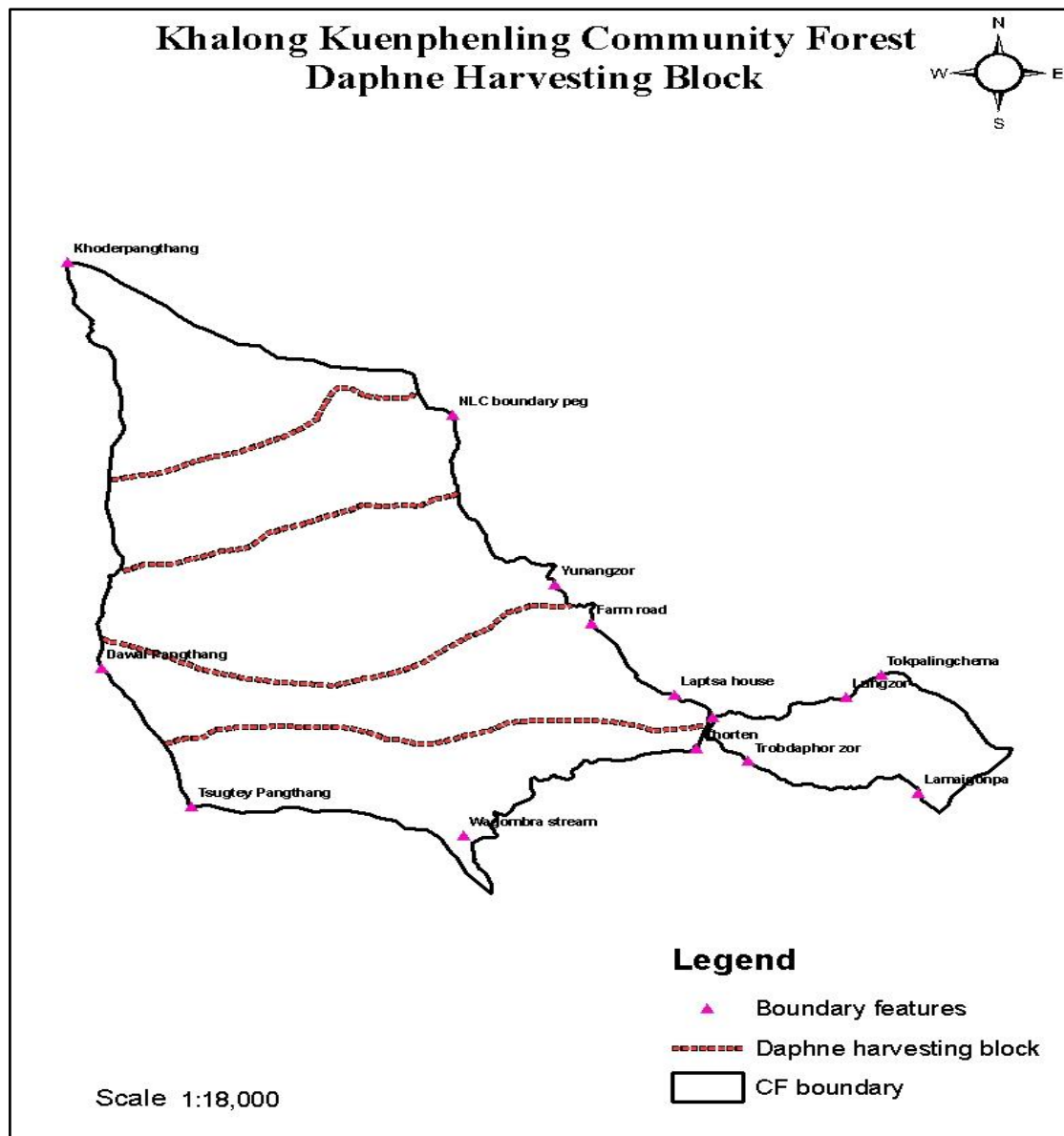


Figure 7: Daphne resource harvesting map

11. FOREST MANAGEMENT

11.1 Block Wise Management Procedures

Table 4: Block Wise Management Procedures

Produce/services	Timber (Drashing, Cham, Tsim & D/chung)	Firewood & flag post	NWFPs
Main species	Champ, <i>Cinamomum</i> , <i>Betula</i> , <i>Prunus</i> , Pipli, <i>Schima</i> spp and Bhutan pine	<i>Quercus</i> <i>Oxoyodon</i> , Serlamshing, <i>Q. lamilosa</i> & <i>Quercus grifithii</i>	<i>Rubia</i> , <i>Daphne</i> , Satuwa and Bamboo
Problems	Limited timber species	Far away from village	Drying and processing
Opportunities	Plantation of valuable timber tree species	Harvesting matured trees and selling	Income generation
Management objectives (reflecting problems and/or opportunities)	Forest improvement (H)	1.1. Plant native preferred firewood species in nearby CF area (M) 1.2 generate cash income from the sale of matured firewood trees, lops and tops	Improve post-harvest technology to generate cash income from the sale of NWFPs (H)
Activities to achieve the objective (mark as H, M or L)	1.1 Cleaning forest floor for inducing regeneration.	Site selection and clearance, materials arrangement	Explore market for <i>Rubia</i> and <i>Daphne</i>
	1.2 Plantation will be carried out every year CFMG to enrich the forest stand	Fencing and planting	Collection and marketing
Procedures	Site must be selected by CFMG in consultation with forestry staff		
Responsibilities	CFMG & Forestry staff		

11.2. Forest Management Objectives (Whole CF)

- *To sustainably utilize and manage adjacent forest and its resources for the benefit of present and future generation.*
- *To protect the forest from illegal extraction of timber by both outsiders and CFMG members by strictly enforcing Community Forest Management Plan By-laws*
- *To protect the water source that exists in community forest area.*
- *To generate cash income from the sale of Community Forest resources.*
- *To plant the seedlings in blank areas and enrich crop stand*

12. FOREST PRODUCT DEMAND OF THE CFMG

Produce	Annual household requirement (estimated)		Number of households using the produce (if all then write “all”)	Total requirement (over 10 years)	
	No. of trees	Volume (cft)		No. of trees	Volume (cft)
New House Construction/Reconstruction					
Drashing	18	1112.22	1	180	11122.2
Cham	0	0	-	-	-
Tsim	0	0	-	-	-
Dangchung	0	0	-	-	-
House Repair and Other Construction					
Drashing	3	185.37	5	150	9268.5
Other Forest Produce					
Firewood	2		78 Hhs	1560	
Flag Poles	10	35.3	18 Hhs	10000	3530
Fencing Posts (convert from Drashing size N trees)	78	17.6	78 Hhs	780	1390.4
NWFPs (bamboo)					

13. COMPARIAON OF AAC AND DEMAND

Table 6: Comparison of AAC and demand for timber

Produce	Total AAC		Total Annual Demand		Difference		Comments
	No. of trees	Volume (either in m ³)	No. of trees	Volume (either in m ³)	No. of trees	Volume (either in m ³)	
Drashing	95	190.07	33.00	57.73	+62	+132.34	Fallen, dead, diseased and uprooted trees can be sold. Standing Drashing will not be sold

Cham	74	29.65	-	-	+74	+29.65	As it is extracted from Drashing the cham size trees can be retained to attain Drashing
Tsim	87	8.73	0	0	+87	+8.73	Can be used for flag poles and cattle shed construction
Dangchung	34	1.7	0	0	+34	+1.7	Cane be used as fencing post and for cattle shed construction
Firewood	263	391.41	158	234.78	+105	+156.63	Excess firewood can be harvested and sold and planted desirable timber tree species in the extraction site
Flag poles	508	50.77	100	9.99	+408	+40.78	Dangchung size <i>Symplocas</i> sp. Can be used for Flag pole
Fencing Post	331	16.5	79	3.94	+252	+12.56	
NWFPs (<i>list all NWFPs</i>)							

14. PARTICIPATORY ENVIRONMENTAL ASSESSMENT

Example of a Completed Participatory Environmental Assessment Chart								
Activity proposed in CFMP	Potential Environmental Effects				Potential Socio-Economic Effects			
	Soil	Water	Wild animals	Plants	Traditional forest use	Cultural and religious values	Local employment	Local benefits from forest produce
Plantation establishment	+++	++	++	0	+++	+++	+++	+++
Thinning	--	---	--	+++	0	0	0	+++
Cleaning	---	--	--	+++	0	0	0	++
Harvesting of <i>Daphne</i> and <i>Rubia</i>	--	--	--	0	0	++	+++	+++
Timber harvesting	---	---	-	-				
Firewood harvesting								

Flag poles and fencing post harvesting								
Grazing control	+	+	-	+++	0	0	0	0
Establishment of nursery	++	0	0	+	0	0	+	+

Procedures to Address Potential Negative Environmental Effects	
Activity	Procedure
Thinning	To minimise the negative effects on environment light thinning will be done based on the thinning techniques
Cleaning	
Timber harvesting	Shall be done as per the silviculture system and not exceed the Annual Allowable Cut
Firewood harvesting	Shall be done as per the silviculture system and not exceed the Annual Allowable Cut
Harvesting and sale of <i>Daphne</i> spp	Shall be done as per the harvesting guide lines

15. FOREST PRODUCT AND SPECIES PREFERENCES

Species Local name ↓	Uses →	Drashing	Flag poles	Dangchung	Fire wood	Fencing post
Champeyshing (<i>Michelia doltsopha</i>)	Preference	xxx	-	x	x	x
	Availability	*	-	*	*	*
Karshing	Preference	xx	-	x	x	x
	Availability	*	-	*	*	*
Kheyshing (<i>Juglans regia</i>)	Preference	xxx	-	-	-	-
	Availability	**	-	-	**	-
Serchema	Preference	xxx	-	-	-	-
	Availability	**	-	-	-	-
Phugalengshing (<i>Prunus spp</i>)	Preference	xxx	-	-	-	
	Availability	***	-	-	*	
Kheserbushing	Preference	xxx	-	-	xx	-
	Availability	*	-	-	*	-
Charshing (<i>Betula alnoides</i>)	Preference	x	-	-	xx	-
	Availability	*	-	-	*	-
Dhombushing (<i>Symplocos lucida</i>)	Preference		xxx	xxx	x	x
	Availability	*	***	***	***	***

Serkalingshing (<i>Acer campbellii</i>)	Preference	-	-	-	X	-
	Availability	**	-	-	**	-
Phawongma shing (<i>Quercus lamellosa</i>)	Preference	-	-	-	XXX	-
	Availability	-	-	-	***	-
Namdarishing	Preference	-	-	-	XXX	-
	Availability	xxx	*	-	***	-
Tshai-shing (<i>Castanopsis spp</i>)	Preference	xx	-	-	XX	XXX
	Availability	**	-	-	X	**
Lemshing (<i>Bucklandia populnea</i>)	Preference	xxx	-	-	-	-
	Availability	*	-	-	-	-
Shingtsashing (<i>Cinnamomum spp</i>)	Preference	x	-	-	-	-
	Availability	**	-	-	-	-

Note: xxx - Highly preferred xx - Moderately Preferred x - Little Preferred
 *** - Highly Abundant ** - Moderately Abundant * - Little Available
 - Not preferred/not available

16. MONITORING PLAN BY THE CFMG

Forest Resources Monitoring				
Activities (as per AWP)	Indicator	How it will be monitored	Responsibility	Comments
Timber and firewood harvesting	No. of trees marked in a year Evidence of illegal felling	Check approval and permits issued and utilization record	CFMC and Division	
Plantation creation	No of seedling planted, total area and species planted, survival rate.	Check plantation register, assess survival of seedlings planted	CFMG & CFMC	Provide technical assistance from Forestry staff
Cleaning, thinning and weeding	Location, size of thinning and weeding completed	Conduct visual inspection	CFMC & CFMG members	GFES to report on forest fire
Patrolling in CF area	No of patrolling conducted, evidence of illegal activities and culprit apprehended	Weekly monitoring by the turnover Resoops	CFMC will keep record of patrolling conducted and name list.	
Environmental Monitoring Plan				
Potential impact (negative)	Indicator	How it will be monitored	Responsibility	Comments
Waste managemnt	Qty.lops and tops left in CF areas	Visual inspection and sanitation report	CFMC	Concern Forestry field office shall support in
Wild life conservation	Presence of wildlife and no of illect poaching	Visual inspection report and offences records	CFMC	

				maintaining proper records
Social & Institutional Monitoring Plan				
CFMG general and CFMC meeting	No of meeting conducted	Check minutes of meeting	CFMC	Concern Forestry office shall support in maintaining proper record.
CFMG capacity development	Training, workshops, seminars, study tour attended and received by CFMG & CFMC members	Record books maintained with CFMG & Division	CFCM	

17. ANNUAL WORK PLAN

Year					
Management objective	Activity	Block or location	Quantity	Unit	Month
Income generation	Collection of Rubia and marketing	Mankachema /Zhudangzor/ Chematoed/ Zumphigang/ Roptangshing	900	Kgs	Nov to Feb (2023-2026 in 1 st 3 blocks) & from 2027-2030 in 2 last blocks)
Protection of CF from unlawful activities	Monitoring of CF activities and patrolling	Whole CF area	3	Times/month	
Sustainable & equitable utilization of forest resources	Allotment of timber & firewood and marking	Khalong			From Oct
	Plantation	Zumphigang & Zhudangzor	4.5	Acres	April – May (2026-2028)
	Repair of fencing and refilling	Mangka Chema	2.61		2024-2025
Participatory management for improvement of forest condition	CFMG general meeting	Khalong	1	Time	December
	Construction of CFMG meeting hall	Laptsa			2024 to 2025
	Cleaning and thinning	Way to past bamboo collection sites	3	Acre	3 times during the plan period

PART B: BY-LAWS

18. MEMBERSHIP ARRANGEMENT

- The members shall be from Khalong, Thrinangphu, and Narang
- The households interested and willing to join as a new CFMG member should have valid gung house and tharm number registered in above mentioned villages.
- The new member joining the CFMG should submit an application to the Chairperson and the CFMC shall discuss and consider as member of the CFMG only after agreeing by the CFMC members.
- The newly member joining as new member shall pay Nu.300/- per day to compensate the number of labour contributed by rest of the members for the CF activities or works implemented.
- Any members willing to withdraw from CFMG membership shall be allowed but he/she shall not receive any benefits although he/she has contributed in CF
- The member after leaving the CFMG membership shall not be accepted as a member again if he/she wishes to join the CFMG membership.

19. MANAGEMENT COMMITTEE FORMATION

- All the committee members of Khalong Kuenpheling Community Forest will be elected in CFMG general meeting by the CFMG members.
- He/she shall be re-elected in next three (3) years, if he/she is found dedicated and capable.
- Representation of male/female in the executive committee shall be based on criteria and anyone can become executive committee irrespective of social and gender.
- The Chairperson, Secretary, Treasurer and Tshogpas shall be terminated if they are found not carrying out their roles by the CFMG members and new persons will be elected
- Except, Chairperson, Secretary and Treasurer the Tshogpas will not get any compensation. From this plan period annually, Chairperson will be paid Nu. **2500/-**, Secretary and Treasurer Nu.**2000/-** each for their services contributed as decided by the CFMG members.

20. TERMS OF REFERENCE FOR CFMG MANAGEMENT COMMITTEE

- The management committee will comprise of six members Chairperson, Secretary, Treasurer and 3 Tshogpa (one each for Khalong, Thrinangphu and Narang villages) and 5hh. Resoop for the surveillance/patrolling based on name list.
- Any CFMG members is eligible for CFMC member irrespective of gender class if he/she is literate, have good communication skills, capable of shouldering responsibilities and have good personnel relationship.
- The CFMG Management Committee members will be elected unanimously by the CFMG members through majority vote.
- Chairperson, Secretary and Treasurer shall serve for a period of three years. And the Tshogpas will serve for the period of one year on rotational basis
- If any management committee members have genuine domestic problems, he/she can leave the committee only after acceptance by the other committee members.

20.1 TOR of Chairperson

- 1) He/she shall initiate the activities as per the plan
- 2) Coordinate with other stake holders
- 3) Issue permit for harvesting of forest products
- 4) Penalise the offender
- 5) Calls meeting whenever necessary and chair the meeting
- 6) Approve applications for forest products jointly with Secretary
- 7) He/she shall explore market for *Daphne* and *Rubia cordifolia* and accordingly, inform the CFMG members on market information
- 8) Countersign payment authorisation with Treasurer
- 9) Monitor and review the plan activities
- 10) Attend trainings, meetings and workshop on community forest whenever called
- 11) Report to the CFO on development of community forest through concern field Ranger forestry staff.

20.2 TOR of Secretary

- 1) Assists the Chairperson as and when required
- 2) Approve applications for forest products jointly with the Chairperson
- 3) Issue permit for the forest products after approval

- 4) He/she shall mark the tree jointly with Chairperson and Treasurer
- 5) He/she shall maintain the attendance of the members attending the work and meeting.
- 6) Keep minutes of the meetings
- 7) Manage the correspondence for the CFMG
- 8) Maintain records of all CF related products and activities
- 9) Countersign with Chairperson for withdrawal of group fund from saving account
- 10) Participate in marketing of *Daphne* spp, *Rubia* spp and firewood with the CFMG Chairperson
- 11) Prepare annual progress report jointly with other Management Committee members

20.3 TOR of Treasurer

- 1) Look after any financial transactions on behalf of the CFMG
- 2) Keep the accounts of expenditures related to the community forest and present the fund status at every CFMG meeting (or as required)
- 3) Collect the annual membership fee from the CFMG members
- 4) He/she shall deposit CF fund generated in the CFMG saving account
- 5) Maintain the sales record for firewood, *Daphne* and *Rubia cordifolia*
- 6) Jointly with the Chairperson and Treasurer will deduct certain agreed % of the total sale value of the *Daphne*, *Rubia* and firewood and deposit
- 7) Prepare the annual financial report with the assistance of Chairperson and Secretary for submitting to CFO through concern field Ranger
- 8) Countersign payment authorisation with Chairperson
- 9) Make payment to the members for the income generated from sale of *Daphne* spp and *Rubia* spp.

20.4 TOR of Tshogpas

- 1) Inform the CFMG members of their village about the meeting date, time, venue and purpose as per the instruction of Chairperson
- 2) Attend and actively participate in Community Forest Management Committee meeting.
- 3) Inform the members of their turn for Resoop

20.5 TOR of Resoops

- 1) To carryout patrolling on rotational basis thrice in a month
- 2) To look after illegal activities

- 3) Report illegal activities to the Chairperson
- 4) To keep vigilance of forest fire

20.6 Roles and Responsibility of CFMG and CFMG Members

- Have equal rights over the use of the forest resources and the CFMG fund generated through the sale of resources
- CFMG members have rights to terminate the Management Committee members, if any of the members are not performing their duties as per the set responsibilities and doing works that affect the sustainability of the CF.
- Any members not satisfied and guilty has right to audit the CFMG fund management at any time
- Contribute labor in carrying out planned activities as and when informed by the CFMC.
- Report any illegal activities in the community forest area to management committee
- Cooperate with management committee members and actively participate in implementation of all community forest related activities.
- Protect the flora and fauna found in the CF area.

21. FEES

Sl. No	Forest Products/ Membership fees	Procedures	Fees (Nu)
1	Membership fee	The membership fee will be collected annually during the issuance of firewood permit within august month.	100/ annually
2	Drashing	While obtaining the permit the permit fee shall be paid to the Treasurer	60/tree
3	Dangchung & flag poles		10/tree
4	Firewood	Will allot 2 trees in a year	30/tree
Non CFMG Members			
1	Darshing/flag poles		25/ pole
2	Firewood	Felling, crosscutting, splitting and carriage to the road site will be done by the CFMG members. Except loading will be done by the buyer.	10000/TL

22. FINES AND PENALTIES

Timber Products	CFMG members		Non CFMG members	
	Fines/penalty	Products	Fines/penalty	Products
Drashing	Nu.100/- per cft	Release	As per FNCRR	Seize
Firewood	As per FNCRR	Release	As per FNCRR	Seize
Flag poles & fencing post	As per FNCRR	Release	As per FNCRR	Seize
<i>Daphne</i>	As per FNCRR	Release	As per FNCRR	Seize
Cattle entry in plantation and damage	Have to repair the damage fencing and replant seedlings if it is damage		Nu.100/cattle for 1 st time, Nu.200/- cattle for 2 nd time and Nu.300/cattle for 3 rd time	
Absentees during meetings	Nu.100/ for the 1 st time and			
Absentees during work implementation	Nu.200/day for 1 st and 2 nd time and chuck out from 3 rd time onwards			
Non-payment of membership fee	Give chance for two times and chuck out if is not paid in from 3 rd times onwards			

23. MANAGING CFMG FUND AND CREDIT

- The CFMG shall generate fund from annual membership fee, royalties for forest products, cash payments from sale of *Daphne*, *Rubia cordifolia* and firewood, fines and penalties, contributions and donations
- The CFMG shall continue to maintain group saving account in the name of Khalong Kuenphelng Community Forest, it will be maintained in Bhutan Development Finance Corporation Limited Geog field office at Drametse.
- The Chairperson, Secretary and Treasurer will be responsible to manage the fund and ensure to sign the cheque during withdrawals
- The cash received and expenses made will be recorded in cash book and the records on cash withdrawals and deposits will be maintained
- The CFMC shall keep minimum cash of Nu.3000/- in hand for making needy expenses during the implementation of CF activities

- Any expenses will be discussed during the CFMG meeting and need to be endorsed atleast by 75% of the total members
- For this management plan period loan is banned/stoped
- The fund will be used for community development

24. BENEFIT SHARING MECHANISM

Arrangment to benefit low level livelihood

- a) If the CFMG members contribute equal labour contribution for the development of CF all the CFMG members shall have right to get equal share of forest products, such as; timber, firewood, flag poles, fencing post/poles, etc. But, must comply with the procedures set under forest management proceudres and Annual Harvesting Limit (AHL)
- b) All the CFMG members shall have equal access to collect the ferns, damroo, mushroom and leaf litter freely during the season if required
- c) Flag poles shall be allotted freely to the member during death case.

Other Benefit sharing arrangment

- a) The low level livelihood will be identified by the managent committee and put for approval during CFMG meeting and amount of Nu.3000/- will be given as donation from CFMG members once in a management plan period.
- b) A loan at lower interest rate will be given for business will be given as per the business plan 7% for the members and 10% for outsiders.

25. MEETING

- The whole CFMG will meet twice in a year on half yearly basis to prepare the annul work plan in the first meeting and to report the progress in 2nd meeting
- The first meeting will commence in the month of July and the 2nd meeting in January every year
- Atleast 75% of total CFMG member shall be present to take the decision
- The CFMC will meet based on need beside the CFMG meeting to discuss on fund releated issues, implementation of CF activities, fine collection, identification of low level livelihood, disbursement of loan, etc

26. CONFLICT MANAGEMENT

To maintain cooperation among the CFMG members is a key to success of the CF and the CFMG. In any case if conflict arises within the CFMG members shall be resolved by the CFMC chaired by Chairperson and if in case it is not being able to resolve it shall be dealt as per the following procedures:

- It shall be forwarded to the Gup, Geog Administration through the Chiwog Tshogpa.
- If the case has been not able resolve by the Geog Administration it shall be forwarded to the higher authority

27. AMEDMENT OF CFMP AND BY- LAWS

- In case if there is minor genuine need to make some changes to the CFMP it can be done during the annual CFMG general meeting and should be enroled and the meeting resolution should be submitted as per the FNCRR to the DFO through Range Office.
- The the mid term review and evaluation shall be carried out at the end of 5th year of the plan period in consultation with Forest Beat Office, Dramitse and if required some changes in work plan and By-laws will be made for smooth functioning and implementation of the plan.
- The CF plan evaluation will be conducted towards the end of ninth year in collaboration with the Divisional Forests Office and the recommendations and findings will be integrated in the revised management plan based on the evaluation report

28. POWER OF THE DEPARTMENT

Although the CFMG has an approved management plan, the DoFPS still reserves right for Cancellation/Suspension of Community Forest Certificate as stated in FNCRR, 2017 as:

- As per section 102 in the event the members of the CFMG decide to cancel CF certificate in accordance with this Rules, the Community Forest Certificate shall be cancelled with effect from the date of notification of the decision to the CFO. The CFMG shall then surrender the Certificate to the Department.
- As per section 102 the CFO shall have the right to enquire about the reason for such cancellation to ensure that no offence has been committed, as outlined under this Rules.

- As per section 103 In the event the number of member household in the CFMG fall below five or the group otherwise ceases to meet the requirements under this Rules; the CFO shall notify the CFMG that its certificate shall be cancelled.
- As per section 104 the Department shall suspend the rights and privileges of the CFMG to control, manage and utilize the CF upon the recommendation of the CFO, in the event of the following:
 1. The CFMG is unable to manage the Community Forest according to its management plan or otherwise fails to meet their responsibilities; and
 2. The CFMG has engaged in any activity in contravention of the provisions of the Act, Rules, by-laws or the management plan.
 - As per section 105 the period of suspension shall be for a minimum period of 3 years. During the suspension period, the CFMG members shall not be eligible for any forest produce from the SRF

29. ANNEXURES

29.1 List of CFMG the CFMG members

Sl. No.	Name	Village	CID No.	House No.	Thram No.
1	Tshering Chezom	Khalong	10705001680	2	89
2	Kelzang	Khalong	10705001691	3	662
3	Yeshe Pelmo	Khalong	10705001686	Nil/05	24
4	Tashi	Khalong	10705001708	5	80
5	Chimi Lhamo	Khalong	10705001718	6	79
6	Tshering Chedon	Khalong	10705001741	8	701
7	Pema Lhaden	Khalong	10705001747	9	84
8	Sangay Chozom	Khalong	10705001758	10	90
9	Choney Dema	Khalong	10705001172	11	81
10	Yeshe Yangzom	Khalong	10705001780	12	81
11	Tshewang Dema	Khalong	10705001790	13	77
12	Jangchuk	Khalong	10705001797	14	77
13	Dechen Dema	Khalong	10705001809	15	78
14	Sangay Chezom	Khalong	10705001821	16	695
15	Chimi	Khalong	10705001842	17	696
16	Wangdi Gyeltshen	Khalong	10705001843	17	218
17	Norbu Zangmo	Khalong	10705001853	18	86
18	Tshewang Gyelmo	Khalong	10705001854	19	85
19	Ugyen Delma	Khalong	10705001868	Ja-4-20	89
20	Kinzang Lhamo	Khalong	10705001879	21	702
21	Sonam Delkar	Khalong	10705001887	22	91
22	Tashi	Khalong	10705001895	23	92/222
23	Dechen	Khalong	10705001903	24	767
24	Chimi Zangmo	Khalong	10705001914	25	505
25	Tshering Tobgay	Khalong	10705001927	26	89
26	Ugyen Lhamo	Khalong	10705001932	27	690
27	Karchung	Khalong	10705001938	28	87
28	Sanga	Khalong	10705001951	29	79
29	Yeshe Rinzin	Khalong	10705001956	30	98
30	Yeshe Lhamo	Khalong	10705001961	31	704

31	Tashi Gyelmo	Gomchu	10705001490	50	614/544
32	Wangmo	Narang Dengsor	10705002347	Ja-17-79	673/713
33	Ugyen Palden	Narang	10705002228	92	335
34	Dawa	Narang Wangyer	10705002608	99	338
35	Sonam Tobgay	Narang	10705002071	101	678
36	Kencho Wangdi	Thongkhar	10705002542	105	196
37	Tshomo	Thongkhar	10705002554	106	767
38	Tenzin Wangmo	Thrinangphu	10705003797	151	358
39	Tshewang	Thrinangphu	10705003800	152	745
40	Kinzang	Thrinangphusizor	10705003768	154	333
41	Sangay Wangmo	Thrinangphu	10705003831	158	736
42	Dema	Thrinangphu	10705003836	159	330
43	Choki	Thrinangphu	10705003854	160	615
44	Tshewang Gyelmo	Thrinangphu	10705003860	161	328
45	Palden	Thrinangphu	10705003868	162	329
46	Changlu	Thrinangphu	10705003877	163	723
47	Chona	Thrinangphu	10705003883	164	722
48	Tshelthrim Dorji	Thrinangphu	10705003889	165	460
49	Pema Chezom	Thrinangphu	10705003899	166	326
50	Ugyen Gyelmo	Thrinangphu	10705003911	169	384
51	Tshewang Gyelmo	Thrinangphu	10705003922	170	383
52	Tashi Yangzom	Thrinangphu	10705003930	Ja-17-171	728
53	Pema Chezom	Thrinangphu	10705003936	172	727
54	Tshewang Lhamo	Thrinangphu	10705003951	173	381
55	Pema Lhadon	Thrinangphu	10705003957	174	379
56	Phanku	Thrinangphu	10705003971	176	802
57	Tshewang Zangmo	Thrinangphu	10705003828	177	380
58	Sangay Wangmo	Thrinangphu	10705003964	175	379
59	Pema Jungney	Thrinangphu	10705003993	178	782
60	Norbu Chogyal	Thrinangphu	10705003997	179	374
61	kumo	Naktsangthung	10705004003	180	373
62	Pema chezom	Thrinangphu	10705004013	181	472
63	Tenpa	Khalong	10705001968	182	97
64	Deki Wangmo	Khalong	10705001975	183	78/214

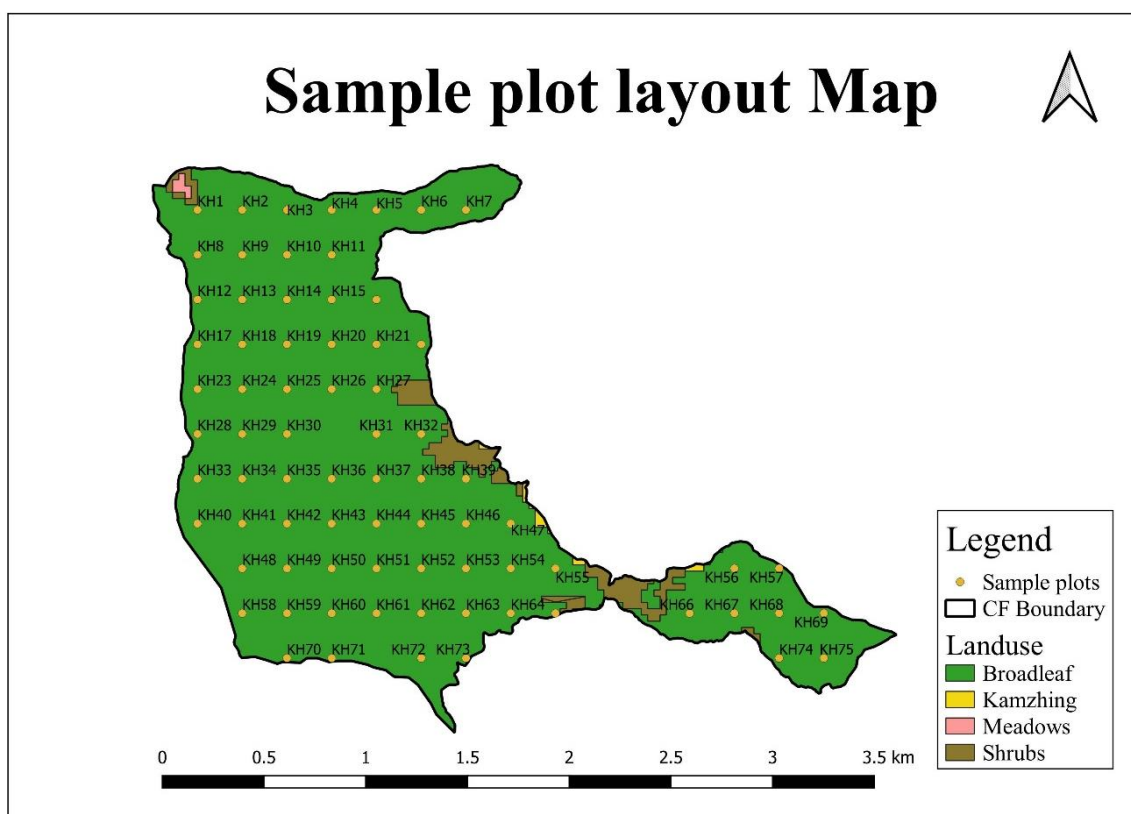
65	Sonam wangmo	Khalong	10705001979	184	435
66	Ugyen Wangdi	Narang	10705002604	186	335
67	Chimi Dema	Thrinangphu	10705004029	188	328
68	Yeshi Palden	Babsharang	10705004378	190	482
69	Jangchuk Dema	Khalong	10705001682	199	20
70	Pema Jigme	Khalong	10705001941	207	206
71	Jurmi	Khalong	10705001692	212	428
72	Dema	Draktang	10705002198	213	378
73	Dorji Gyeltshen	Khalong	10705001915	214	202
74	Dechen wangmo	Narang	10705002123	215	441
75	Chedon	Khalong	10705001817	218	78
76	Chimi Kelzang	Khalong	10705001728	224	521
77	Wangmo	Thrinangphu	10705004012	228	468
78	Sonam Tshomo	Khalong	10705001753	Joined as CF member from initiation period without gung number	

29.2 CF Sample Plot GPS Coordinates

Plot No	Longitude	Latitude	Plot No	Longitude	Latitude
KH1	91.4287215510	27.3642816870	KH38	91.4396826250	27.3522588830
KH2	91.4309445820	27.3642589160	KH39	91.4419054040	27.3522359470
KH3	91.4331676090	27.3642361090	KH40	91.4285432200	27.3503882580
KH4	91.4353906340	27.3642132670	KH41	91.4307659730	27.3503655010
KH5	91.4376136570	27.3641903900	KH42	91.4329887230	27.3503427070
KH6	91.4398366760	27.3641674770	KH43	91.4352114710	27.3503198790
KH7	91.4420596930	27.3641445290	KH44	91.4374342160	27.3502970150
KH8	91.4286960680	27.3622969140	KH45	91.4396569590	27.3502741160
KH9	91.4309190580	27.3622741440	KH46	91.4418796990	27.3502511810
KH10	91.4331420460	27.3622513390	KH47	91.4441024360	27.3502282110
KH11	91.4353650320	27.3622284990	KH48	91.4307404680	27.3483807250
KH12	91.4286705860	27.3603121390	KH49	91.4329631790	27.3483579330
KH13	91.4308935370	27.3602893720	KH50	91.4351858870	27.3483351070
KH14	91.4331164860	27.3602665690	KH51	91.4374085930	27.3483122450
KH15	91.4353394320	27.3602437310	KH52	91.4396312950	27.3482893470
KH16	91.4375623750	27.3602208570	KH53	91.4418539960	27.3482664150
KH17	91.4286451080	27.3583273640	KH54	91.4440766930	27.3482434470
KH18	91.4308680190	27.3583045990	KH55	91.4462993880	27.3482204430
KH19	91.4330909280	27.3582817980	KH56	91.4551901420	27.3481280760
KH20	91.4353138340	27.3582589610	KH57	91.4574128240	27.3481048960
KH21	91.4375367380	27.3582360900	KH58	91.4307149660	27.3463959480

KH22	91.4397596390	27.3582131830	KH59	91.4329376370	27.3463731590
KH23	91.4286196320	27.3563425890	KH60	91.4351603050	27.3463503340
KH24	91.4308425040	27.3563198250	KH61	91.4373829710	27.3463274740
KH25	91.4330653730	27.3562970260	KH62	91.4396056350	27.3463045790
KH26	91.4352882400	27.3562741920	KH63	91.4418282950	27.3462816480
KH27	91.4375111040	27.3562513220	KH64	91.4440509530	27.3462586820
KH28	91.4285941590	27.3543578130	KH65	91.4462736090	27.3462356800
KH29	91.4308169910	27.3543350510	KH66	91.4529415590	27.3461664640
KH30	91.4330398210	27.3543122540	KH67	91.4551642040	27.3461433210
KH31	91.4374854720	27.3542665540	KH68	91.4573868460	27.3461201430
KH32	91.4397082940	27.3542436500	KH69	91.4596094860	27.3460969290
KH33	91.4285686880	27.3523730360	KH70	91.4329120970	27.3443883830
KH34	91.4307914810	27.3523502760	KH71	91.4351347260	27.3443655610
KH35	91.4330142710	27.3523274810	KH72	91.4395799770	27.3443198090
KH36	91.4352370580	27.3523046500	KH73	91.4418025980	27.3442968800
KH37	91.4374598430	27.3522817850	KH74	91.4573608720	27.3441353890
			KH75	91.4595834710	27.3441121770

29.3 Sample Plot Map



29.4 Compilation Sheet

29.4.1 Acer (T trees)

Format 4: Forest Resource Assessment: Compilation Sheet								
1. CF Name: Khalong Kuenphelling			4. Block Area: 347 Ha					
2. Block name: Khalong			5. Compiling date:					
3. Number of plots: 73			6. Species group: <i>Acer</i> (T Trees)					
<i>col1</i>	<i>col2</i>	<i>col3</i> (3 decimals)	<i>col4</i> (3 decimals)	<i>col5</i> (3 decimals)	<i>col6</i> (0 decimals)	<i>col7</i> (2 decimals)	<i>col8</i> (2 decimals)	<i>col9</i> (2 decimals)
dbh class (cm)	basal area (m ²)	class volume (m ³)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m ² /ha)	volha (m ³ /ha)
10-19	0.017	0.113	0.050	0.274	0	0.00	0.00	0.00
20-29	0.047	0.334	0.050	0.274	2	0.55	0.03	0.18
30-39	0.093	0.691	0.050	0.274	14	3.84	0.36	2.65
40-49	0.156	1.190	0.050	0.274	7	1.92	0.30	2.28
50-59	0.233	1.839	0.050	0.274	8	2.19	0.51	4.03
60-69	0.327	2.642	0.050	0.274	1	0.27	0.09	0.72
70-79	0.436	3.605	0.050	0.274	2	0.55	0.24	1.98
80-89	0.561	4.730	0.050	0.274	0	0.00	0.00	0.00
90-99	0.701	6.026	0.050	0.274	0	0.00	0.00	0.00
100-109	0.858	7.491	0.050	0.274	3	0.82	0.71	6.16
sum for all dbh classes						10.14	2.23	18.00

29.4.2 Betula (T trees)

Format 4: Forest Resource Assessment: Compilation Sheet								
1. CF Name: Khalong Kuenphelling			4. Block Area: 347 Ha					
2. Block name: Khalong			5. Compiling date:					
3. Number of plots: 73			6. Species group: <i>Betula</i> (T Trees)					
<i>col1</i>	<i>col2</i>	<i>col3</i> (3 decimals)	<i>col4</i> (3 decimals)	<i>col5</i> (3 decimals)	<i>col6</i> (0 decimals)	<i>col7</i> (2 decimals)	<i>col8</i> (2 decimals)	<i>col9</i> (2 decimals)
dbh class (cm)	basal area (m ²)	class volume (m ³)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m ² /ha)	volha (m ³ /ha)
10-19	0.017	0.096	0.050	0.274	2	0.55	0.01	0.05
20-29	0.047	0.335	0.050	0.274	3	0.82	0.04	0.28
30-39	0.093	0.773	0.050	0.274	4	1.10	0.10	0.85
40-49	0.156	1.449	0.050	0.274	2	0.55	0.09	0.79
50-59	0.233	2.396	0.050	0.274	0	0.00	0.00	0.00
60-69	0.327	3.643	0.050	0.274	2	0.55	0.18	2.00
70-79	0.436	5.218	0.050	0.274	0	0.00	0.00	0.00
80-89	0.561	7.145	0.050	0.274	0	0.00	0.00	0.00
90-99	0.701	9.448						
sum for all dbh classes						3.56	0.41	3.97

29.4.3 Cinnamomum (T trees)

Format 4: Forest Resource Assessment: Compilation Sheet								
1. CF Name: Khalong Kuenphelling			4. Block Area: 347 Ha					
2. Block name: Khalong			5. Compiling date:					
3. Number of plots: 73			6. Species group: <i>Cinnamomum</i> (T Trees)					
<i>col1</i>	<i>col2</i>	<i>col3</i> (3 decimals)	<i>col4</i> (3 decimals)	<i>col5</i> (3 decimals)	<i>col6</i> (0 decimals)	<i>col7</i> (2 decimals)	<i>col8</i> (2 decimals)	<i>col9</i> (2 decimals)
dbh class (cm)	basal area (m ²)	class volume (m ³)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m ² /ha)	volha (m ³ /ha)
10-19	0.017	0.086	0.050	0.274	7	1.92	0.03	0.16
20-29	0.047	0.305	0.050	0.274	23	6.30	0.30	1.92
30-39	0.093	0.714	0.050	0.274	13	3.56	0.33	2.54
40-49	0.156	1.352	0.050	0.274	8	2.19	0.34	2.96
50-59	0.233	2.253	0.050	0.274	2	0.55	0.13	1.23
60-69	0.327	3.449	0.050	0.274	2	0.55	0.18	1.89
70-79	0.436	4.968	0.050	0.274	0	0.00	0.00	0.00
80-89	0.561	6.837	0.050	0.274	0	0.00	0.00	0.00
90-99	0.701	9.081	0.050	0.274	1	0.27	0.19	2.49
100-109								
sum for all dbh classes						15.34	1.50	13.20

29.4.4 Michelia (T trees)

Format 4: Forest Resource Assessment: Compilation Sheet								
1. CF Name: Khalong Kuenphelling			4. Block Area: 347 Ha					
2. Block name: Khalong			5. Compiling date:					
3. Number of plots: 73			6. Species group: <i>Michelia</i> (T Trees)					
<i>col1</i>	<i>col2</i>	<i>col3</i> (3 decimals)	<i>col4</i> (3 decimals)	<i>col5</i> (3 decimals)	<i>col6</i> (0 decimals)	<i>col7</i> (2 decimals)	<i>col8</i> (2 decimals)	<i>col9</i> (2 decimals)
dbh class (cm)	basal area (m ²)	class volume (m ³)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m ² /ha)	volha (m ³ /ha)
10-19	0.017	0.086	0.050	0.274	0	0.00	0.00	0.00
20-29	0.047	0.297	0.050	0.274	0	0.00	0.00	0.00
30-39	0.093	0.678	0.050	0.274	1	0.27	0.03	0.19
40-49	0.156	1.259	0.050	0.274	0	0.00	0.00	0.00
50-59	0.233	2.065	0.050	0.274	1	0.27	0.06	0.57
60-69	0.327	2.851	0.050	0.274	0	0.00	0.00	0.00
70-79	0.436	4.447	0.050	0.274	0	0.00	0.00	0.00
80-89	0.561							
90-99	0.701							
sum for all dbh classes						0.55	0.09	0.75

29.4.5 Persea (T trees)

Format 4: Forest Resource Assessment: Compilation Sheet								
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1. CF Name: Khalong Kuenphelling					4. Block Area: 347 Ha			
2. Block name: Khalong					5. Compiling date:			
3. Number of plots: 73					6. Species group: <i>Persea</i> (T Trees)			
<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)	basal area (m ²)	class volume (m ³)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m ² /ha)	volha (m ³ /ha)
10-19	0.017	0.086	0.050	0.274	4	1.10	0.02	0.09
20-29	0.047	0.295	0.050	0.274	8	2.19	0.10	0.65
30-39	0.093	0.673	0.050	0.274	26	7.12	0.66	4.79
40-49	0.156	1.250	0.050	0.274	34	9.32	1.45	11.64
50-59	0.233	2.051	0.050	0.274	16	4.38	1.02	8.99
60-69	0.327	3.099	0.050	0.274	8	2.19	0.72	6.79
70-79	0.436	4.414	0.050	0.274	2	0.55	0.24	2.42
80-89	0.561	6.016	0.050	0.274	3	0.82	0.46	4.94
90-99	0.701	7.921	0.050	0.274	3	0.82	0.58	6.51
100-109	0.858							
sum for all dbh classes						28.49	5.25	46.84

29.4.5 Other BL (T trees)

Format 4: Forest Resource Assessment: Compilation Sheet								
1. CF Name: Khalong Kuenphelling					4. Block Area: 347 Ha			
2. Block name: Khalong					5. Compiling date:			
3. Number of plots: 73					6. Species group: Other BL (T Trees)			
<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)	basal area (m ²)	class volume (m ³)	plot size (ha)	expansion factor	tally	nrha (stems/ha)	basha (m ² /ha)	volha (m ³ /ha)
10-19	0.017	0.073	0.050	0.274	26	7.12	0.12	0.52
20-29	0.047	0.265	0.050	0.274	17	4.66	0.22	1.23
30-39	0.093	0.628	0.050	0.274	20	5.48	0.51	3.44
40-49	0.156	1.202	0.050	0.274	5	1.37	0.21	1.65
50-59	0.233	2.021	0.050	0.274	7	1.92	0.45	3.88
60-69	0.327	3.116	0.050	0.274	3	0.82	0.27	2.56
70-79	0.436	4.518	0.050	0.274	0	0.00	0.00	0.00
80-89	0.561	6.252	0.050	0.274	2	0.55	0.31	3.43
90-99	0.701	8.346	0.050	0.274	3	0.82	0.58	6.86
100-109	0.858	10.824	0.050	0.274	2	0.55	0.47	5.93
110-119	1.030	13.709						
sum for all dbh classes						23.29	3.13	29.49

29.4 Stand and Stock Table

29.4.1 Number of Trees (T Trees)

STAND & STOCK TABLE SHEET 1 - NUMBER OF TREES														
1. Name of CF		: Khalong Kuenphelling												
2. Block Name/No		: Khalong												
3. No. of Sample Plots		: 73												
4. Estimated parameter		: Average Number of Trees per Ha (report all values to 2 decimals)												
Dbh class (cm)														
Species group	Suitability	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	total	%
	T													
Total conifer														
Acer	T		0.55	3.84	1.92	2.19	0.27	0.55			0.82		10.14	12.46%
Betula	T	0.55	0.82	1.10	0.55		0.55						3.56	4.38%
Cinnamomum	T	1.92	6.30	3.56	2.19	0.55	0.55			0.27			15.34	18.86%
Michelia	T			0.27		0.27							0.55	0.67%
Persea	T	1.10	2.19	7.12	9.32	4.38	2.19	0.55	0.82	0.82			28.49	35.02%
Other BL	T	7.12	4.66	5.48	1.37	1.92	0.82		0.55	0.82	0.55		23.29	28.62%
Total broadleaf	T	10.68	14.52	21.37	15.34	9.32	4.38	1.10	1.37	1.92	1.37		81.37	100.00%
Total all species	T	10.68	14.52	21.37	15.34	9.32	4.38	1.10	1.37	1.92	1.37		81.37	
%		0.13	0.18	0.26	0.19	0.11	0.05	0.01	0.02	0.02	0.02		100.00%	

29.4.2 Basal Area (T Trees)

STAND & STOCK TABLE SHEET 2 - BASAL AREA														
1. Name of CF		: Khalong Kunephelling												
2. Block Name/No		: Khalong												
3. No. of Sample Plots		: 73												
4. Estimated parameter		: Average Basal Area per Ha (m²/ha) <div>(report all values to 2 decimals)</div>												
Dbh class (cm)														
Species group	Suitability	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	total	%
	T													
Total conifer														
Acer	T		0.03	0.36	0.30	0.51	0.09	0.24			0.71		2.23	17.65%
Betula	T	0.01	0.04	0.10	0.09		0.18						0.41	3.29%
Cinnamomum	T	0.03	0.30	0.33	0.34	0.13	0.18			0.19			1.50	11.90%
Michelia	T			0.03		0.06							0.09	0.71%
Persea	T	0.02	0.10	0.66	1.45	1.02	0.72	0.24	0.46	0.58			5.25	41.63%
Other BL	T	0.12	0.22	0.51	0.21	0.45	0.27		0.31	0.58	0.47		3.13	24.83%
Total broadleaf		0.18	0.68	1.99	2.39	2.17	1.43	0.48	0.77	1.34	1.18		12.61	100.00%
Total all species		0.18	0.68	1.99	2.39	2.17	1.43	0.48	0.77	1.34	1.18		12.61	100.00%
%		0.01	0.05	0.16	0.19	0.17	0.11	0.04	0.06	0.11	0.09		100.00%	

29.4.3 Volume (T Trees)

STAND & STOCK TABLE SHEET 2 - VOLUME														
1. Name of CF		: Khalong Kuenphelling												
2. Block Name/No		: Khalong												
3. No. of Sample Plots		: 73												
4. Estimated parameter		: Average Volume per Ha (m³/ha) <div>(report all values to 2 decimals)</div>												
Dbh class (cm)														
Species group	Suitability	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	total	%
	T													
Total conifer														
Acer	T		0.18	2.65	2.28	4.03	0.72	1.98			6.16		18.00	16.04%
Betula	T	0.05	0.28	0.85	0.79		2.00						3.97	3.53%
Cinnamomum	T	0.16	1.92	2.54	2.96	1.23	1.89			2.49			13.20	11.76%
Michelia	T			0.19		0.57							0.75	0.67%
Persea	T	0.09	0.65	4.79	11.64	8.99	6.79	2.42	4.94	6.51			46.84	41.72%
Other BL	T	0.52	1.23	3.44	1.65	3.88	2.56		3.43	6.86	5.93		29.49	26.27%
Total broadleaf		0.83	4.26	14.46	19.33	18.70	13.96	4.39	8.37	15.86	12.09		112.25	100.00%
Total all species		0.83	4.26	14.46	19.33	18.70	13.96	4.39	8.37	15.86	12.09		112.25	100.00%
%		0.01	0.04	0.13	0.17	0.17	0.12	0.04	0.07	0.14	0.11		100.00%	

29.4.4 Number of Trees (N-Tree)

STAND & STOCK TABLE SHEET 1 - NUMBER OF TREES															
1. Name of CF		: Khalong Kuenphelling													
2. Block Name/No		: Khalong													
3. No. of Sample Plots		: 73													
4. Estimated parameter		: Average Number of Trees per Ha (report all values to 2 decimals)													
Dbh class (cm)															
Species group	Suitability	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120+	total	%
Taxus	N				0.27	1.04	0.41	0.48						2.20	0.74%
Total conifer					0.27	1.04	0.41	0.48						2.20	0.74%
Acer	N			0.27			0.27							0.55	0.18%
Bels	N	0.27	0.27	0.27										0.82	0.28%
Betula	N	0.55	1.10	1.64			0.27							3.56	1.20%
Cinna	N	0.55	0.27	2.19	0.82	0.27	0.55	0.27						4.93	1.66%
Michelia	N			0.27	0.27									0.55	0.18%
Other BL	N	105.48	86.03	13.70	7.12	5.21	3.56	2.47	2.47	0.27	2.47			228.77	77.17%
Persea	N	0.55	1.92	2.19	2.19	0.55	0.27	0.27						7.95	2.68%
Quercus	N	1.92	0.55	2.47	6.03	5.21	3.01		0.55	0.82	1.10			21.64	7.30%
Rhodo	N	0.82	2.74	2.19	2.19	16.16	0.82			0.27				25.21	8.50%
Schima	N				0.27									0.27	0.09%
Total broadleaf		110.14	92.88	25.21	18.90	27.40	8.77	3.01	3.01	1.37	3.56			294.25	99.26%
Total all species		110.14	92.88	25.21	19.18	28.44	9.18	3.49	3.01	1.37	3.56			296.45	100.00%
%		0.37	0.31	0.09	0.06	0.10	0.03	0.01	0.01	0.00	0.01			100.00%	

29.4.5 Basal Area (N Trees)

STAND & STOCK TABLE SHEET 2 - BASAL AREA															
1. Name of CF		: Khalong Kunephelling													
2. Block Name/No		: Khalong													
3. No. of Sample Plots		: 73													
4. Estimated parameter		: Average Basal Area per Ha (m²/ha) (report all values to 2 decimals)													
Dbh class (cm)															
Species group	Suitability	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120+	total	%
Taxus	T				0.04	0.24	0.14	0.21						0.63	1.29%
Total conifer					0.04	0.24	0.14	0.21						0.63	1.29%
Acer	N			0.03			0.09							0.12	0.23%
Bels	N	0.00	0.01	0.03										0.04	0.09%
Betula	N	0.01	0.05	0.15			0.09							0.30	0.62%
Cinna	N	0.01	0.01	0.20	0.13	0.06	0.18	0.12						0.72	1.46%
Michelia	N			0.03	0.04									0.07	0.14%
Other Bl	N	1.79	4.04	1.27	1.11	1.21	1.16	1.08	1.38	0.19	2.12			15.37	31.28%
Persea	N	0.01	0.09	0.20	0.34	0.13	0.09	0.12						0.98	2.00%
Quercus	N	0.03	0.03	0.23	0.94	1.21	0.99		0.31	0.58	0.94			5.25	10.69%
Rhododendron	N	0.01	0.13	0.20	0.34	3.77	0.27			0.19		20.68		25.60	52.11%
Schima	N				0.04									0.04	0.09%
Total broadleaf		1.87	4.37	2.34	2.95	6.38	2.87	1.31	1.69	0.96	3.06	20.68		48.48	98.62%
Total all species		1.87	4.37	2.34	2.99	6.62	3.01	1.52	1.69	0.96	3.06	20.68		49.11	99.91%
%		0.04	0.09	0.05	0.06	0.13	0.06	0.03	0.03	0.02	0.06	0.42		100.00%	

29.4.6 Volume (T Trees)

STAND & STOCK TABLE SHEET 2 - VOLUME															
1. Name of CF		: Khalong Kuenphelling													
2. Block Name/No		: Khalong													
3. No. of Sample Plots		: 73													
4. Estimated parameter		: Average Volume per Ha (m³/ha) (report all values to 2 decimals)													
Dbh class (cm)															
Species group	Suitability	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120+	total	%
Taxus	T				0.32									0.32	0.14%
Total conifer					0.32									0.32	0.14%
Acer	N			0.19			0.72							0.91	0.41%
Belsch	N	0.02	0.08	0.20										0.30	0.14%
Betula	N	0.05	0.37	1.27			1.00							2.69	1.20%
Cinnam	N	0.05	0.08	1.56	1.11	0.62	1.89	1.36						6.67	2.98%
Michelia	N			0.19	0.34									0.53	0.24%
Other BL	N	7.65	22.80	8.60	8.56	10.52	11.10	11.14	15.42	2.29	26.69			124.76	55.69%
Persea	N	0.05	0.57	1.48	2.74	1.12	0.85	1.21						8.01	3.58%
Quercus	N	0.17	0.17	1.77	8.13	11.63	10.25		3.67	7.27				43.06	19.22%
Rhodo	N	0.06	0.70	1.27	2.35	28.37	2.17			1.84				36.77	16.41%
Schima	N				0.39									0.39	0.17%
Total broadleaf		8.05	24.77	16.52	23.24	52.26	27.99	13.71	19.08	11.41	26.69			223.71	99.86%
Total all species		8.05	24.77	16.52	23.56	52.26	27.99	13.71	19.08	11.41	26.69			224.03	100.00%
%		0.04	0.11	0.07	0.11	0.23	0.12	0.06	0.09	0.05	0.12			100.00%	

