

RAIDANGRA COMMUNITY FOREST MANAGEMENT PLAN

(1st Revision)



Villages: Pelrithang Khatay & Khamey

Geog: Gelephu

Dungkhag: Gelephu

Dzongkhag: Sarpang

Plan period: 2023- 2033

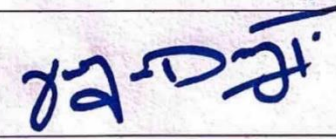



ANNEX 3: APPROVAL SHEET

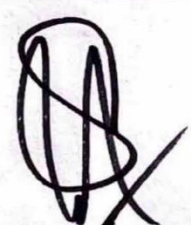
Name of Community Forest	Raidangra Community Forest
Village	Pelrithang Khatoed and Khamed
Chiwog	Pelrithang Khatoed and Khamed
Gewog	Gelephu
Dzongkhag	Sarpang
Total Community Forest Area (Ha)	91.35 ha
Total CFMG Members (No. of HH)	34

Agencies	Community Forestry Management Group	Forestry Representative (CFMP facilitator)	Gewog administration	Social Forestry Section	Divisional/Park office
Signature					
Name	Col. Tshulthrim Dorji (Retired)	Wangdi	Prem Chelad Katel	Sonam Dorji	Chief Forestry Officer Divisional Forest Office Phuntsholing : Bhutan
Title	CF Chairman	Forestry officer	Gup	Head (SFR-I)	Chief — Forestry Officer

Reviewed and Recommended for Approval

Signature		
Name	Mr. Tsheltrim Dorji	Mr. Sonam Tobgay
Title	Focal Officer (Forestry Officer)	Chief Forestry Officer
Division/Section	Forest Resources Planning and Implementation Section	Forest Resources Planning and Management Division

Approved By:



Director/Director General
Department of Forests and Park Services

Table of Contents

Executive Summary.....	1
Part I: Management Plan	2
1. Introduction.....	2
2. Traditional Forest Management and Responsibilities	4
3. Major Community Forest Planning Steps	4
4. Social Information.....	5
5. Forest Information.....	6
6.1 Block wise Forest Information:	7
6.1.1. Amaladangra Block.....	7
6.1.2. Passangchhu Block.....	12
6. Forest Management.....	16
7.1. Forest Management and procedure.....	17
7.2. Silvicultural Options & System.....	18
7.3. Forest Produce Demand Assessment.....	18
7.4. Annual Allowable Cut.....	19
7.4. Annual Allowable Cut and Demand Comparison	19
8. Participatory Environment assessment.....	20
9. Climate hazard matrix	21
10. Forest Produces Prioritization and Species Ranking Matrix.....	23
11. Species preferences and availability	21
12. Monitoring plans (Forest Resources monitoring plan (Social & Institutional monitoring plans).....	23
13. Waste Management.....	23
14. Annual Work Plan.....	24
Part II: By-Laws	25
1. Membership Arrangement.....	25
3. Terms of References for Chairman	27
4. Terms of References for Secretary	27
5. Terms of References for Accountant.....	27
6. Roles and responsibility of CFMG.....	27
7. Royalty & Fees.....	28
8. Fines and Penalties	28
9. Managing CFMG Fund	29
10. Benefits Sharing Mechanism	29
11. Meetings.....	30
12. Conflict Management.....	30
13. Amendments of CFMP and bylaws	30
14. Power of Department	30

Acronyms

AHL	Annual Harvesting Limit
BHU	Basic Health Unit
CF	Community Forest
CFMG	Community Forest Management Group
CFMP	Community Forest Management Plan
CFO	Chief Forestry Officer
CIC	Community Information Centre
DFO	<i>erstwhile</i> Divisional Forest Office
DoFPS	Department of Forest and Park Services
DzFO	<i>erstwhile</i> Dzongkhag Forestry Officer
DzFS	<i>erstwhile</i> Dzongkhag Forestry Sector
FNCR	Forest and Nature Conservation Rules
GAO	Geog Administrative Officer
GFEO	Geog Forestry Extension Officer
GRF	Government Reserve Forest
GT	Geog Tshogdey
Ha	Hectare
HH	Household
Km	Kilometer
Masl	Meter above sea level
NWFP	Non-Wood Forest Products
PES	Payment for Environmental Services
PRA	Participatory Rural Appraisal
RGoB	Royal Government of Bhutan
RHBT	Rural House Building Timber
RNR	Renewable Natural Resources
RRA	Rapid Rural Appraisal
SFED	Social Forestry and Extension Division
ToR	Terms of References
WMD	<i>Erstwhile</i> Watershed Management Division

Executive Summary

Raidangra Community Forest is located approximately 12 km from the Dungkhag Administration, Gelephu. The community forest area is covered mostly with subtropical forest. It was formed in 2013 by 49 interested households, consisting of a mix of re-settlers and old inhabitants from Pelrithang Khatey and Khamey villages under Gelephu gewog. Currently, the CF has 34 members. The CFMG aspires to meet the present and future needs of forest resources. Spanning 235.615 acres (91.35ha), the CF predominantly consists of subtropical species such as *Bombex ceiba*, *Schima wallichii*, and *Amoora wallichii* etc. The CF also serves as a source of drinking water for Pelrithang Khatey and Khamey villages.

Raidangra CF is divided into two blocks: Amaladangra and Pasangchu. The CFMG cultivates small-scale food crops due to the poor soil fertility and limited irrigation. The primary sources of income for the community are the sale of limited rain-fed cereal crops and off-farm labour. The revision of the community forest management plan was done in December 2022.

The Community Forest has the following objectives:

- 1. Enhancing forest stock to address timber scarcity.*
- 2. Providing sustainable access to essential forest resources.*
- 3. Protecting and managing watersheds to ensure a consistent water supply.*
- 4. Generating income by selling timber suitable for plywood manufacturing.*

Average basal area of the CF is 13.385 m²/ha with AAC 278.92 m³ (9851.43 cft).

Part I: Management Plan

1. Introduction

Raidangra Community Forest, situated upstream of Gelephu town in Gelephu Gewog, covers a total area of 235.615 acres (91.35ha) and includes high forest, barren areas, and degraded forests. Recognizing the importance of a Community Forest (CF), the villagers took the initiative to establish it in 2013. The CF aims to meet the timber demand, addressing previous shortages, and foster a sense of ownership while fulfilling the basic requirements.

The objectives of the Community Forest are outlined as follows:

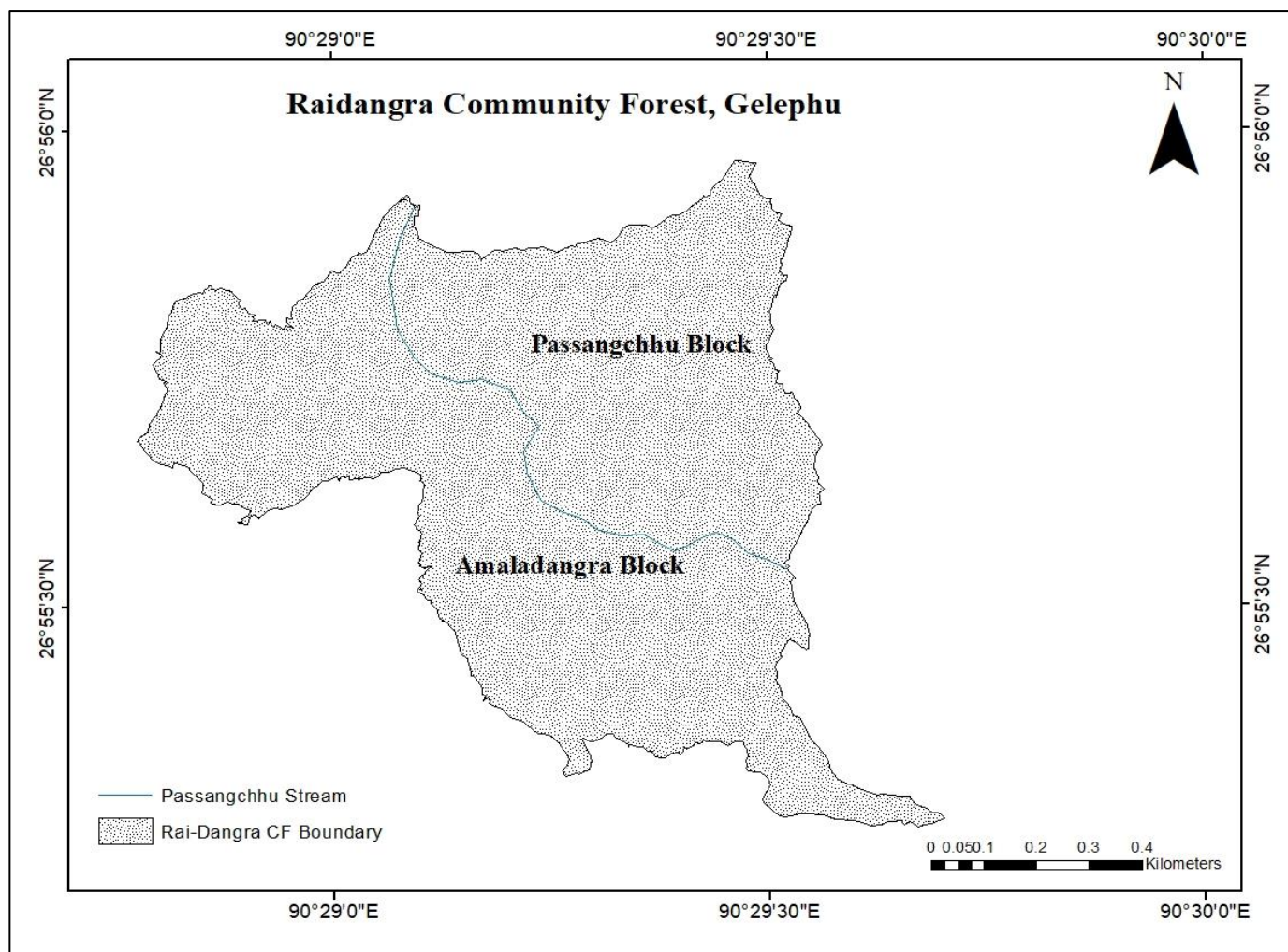
1. Enhancing the forest stock to address the scarcity of timber.
2. Providing sustainable access to essential forest resources.
3. Protecting and managing watersheds to ensure a continuous water supply.
4. Generating income through the sale of timber suitable for plywood manufacturing.

The management plan is prepared by the CFMG with full support from the Divisional Forest Office, Sarpang. It is a 10-year plan focused on participatory forest management. Part A of the management plan contains technical information collected during the forest resource assessment. Part B of the plan is focused on the social aspects of the management modality to ensure the smooth functioning of the CFMG. The management plan is prepared by the CFMG with full support from the Divisional Forest Office, Sarpang.

Community Forest Map

Raidangra CF is divided into two blocks, namely Amaladara and Pasangchu, with respective areas of 145.5451 acres (58.90 ha) and 80.19 acres (32.45 ha). Situated at the top of the catchment area for Gelephu town, the CF plays a crucial role in protecting this catchment. Without interventions, it is highly susceptible to landslides and other related disasters, posing risks both presently and in the future.

Figure No: 1: Map of CF showing both the Block



Land-use and Landcover details

Net production/operable area	Area (Ha)
Stream/Drainage Buffer	7
Roads Buffer	2
Total Protection area	9
Total CF area	91.35
Total operable areas= [Total CF area- (Protection areas + built up areas)]	82.35

Community Forest Boundary

Boundaries	Permanent features
East	Royal Bhutan Army Colony
West	Raidangra Village

Raidangra Community Forest Management Plan (1st Revision)

South	Pelrithang village
North	Hot-spring

2. Traditional Forest Management and Responsibilities

Regarding the prevalence of traditional management, the table below provides detailed information about the conventional forest management systems that existed before the establishment of the CF.

Products/Services	Rights	Responsibilities	Traditional Management system
Timber	No right to collect/utilize unless holding a permit, especially for timber harvesting	Community	Lack of appropriate management systems, as most members were resettled and only parts of CFMG are original inhabitants
NWFP (Non-Wood Forest Products)	Community	Community	Lack of proper management. Harvesting based on "first come first serve" system
Grazing	Free, including outsiders	Community	Lack of regulation for grazing
Fodder	Free, including outsiders	Community	Lack of proper management. Harvesting based on "first come first serve" system
Water	Free	Community	No free access to people from other gewogs

3. Major Community Forest Planning Steps

Raidangra Community Forest Management Group (CFMG) prepared the management plan in 2013 with full support and guidance from the erstwhile Dzongkhag Forestry Sector (DzFS). The erstwhile DzFS played a key role in assisting with site identification, survey, boundary demarcation, and the overall preparation of the management plan. However, the revised plan is prepared by the CFMG with full support from the Divisional Forest Office, Sarpang. The major planning process and steps are as follows:

Major Steps in Planning Process

Step	Date	Activities	Collaborator
1	November, 2012	Awareness on CF establishment procedure and FNCR, 2006	<i>Erstwhile</i> , DzFS/GFEO
2	December, 2012	CF Site identification	<i>Erstwhile</i> , DzFS/GFEO/Geog Adm.
3	January, 2013	PRA and RRA exercises	<i>Erstwhile</i> , DzFS/GFEO/

Raidangra Community Forest Management Plan (1st Revision)

		Formation of CFMG Preparation of CF boundary map Participatory forest use mapping Blocking, forest product prioritization & forest product demand assessment By-Laws framing	
4	January, 2013	Field survey Boundary demarcation Preliminary forest resources assessment	<i>Erstwhile, DzFS, GAO</i>
5	February, 2013	Preparation of draft CF Management Plan (CFMP)	<i>Erstwhile, DzFS, CFMG</i>
6	February 2013	Review of draft CF management with CFMG and DFO	<i>Erstwhile, DzFS</i>
7	March 2013	Submission of CF management plan to Dzongkhag Forestry Office for correction	<i>Erstwhile, DzFS</i>
8	April 2013	Edition of draft management plan	<i>Erstwhile, DzFS</i>
9	April 2013	Submission of CF management to DoFPS for final approval	DoFPS
10	December 2022	Revision of CF Management Plan (CFMP)	CFMG, DFO, Sarpang

4. Social Information

Pelrithang Khatey and Khamey Chiwog have 95 registered households, with the majority being re-settlers. The main sources of income for the community are off-farm labour, the sale of agricultural and livestock products, and for the original inhabitants, the sale of oranges. The table below presents demographic and socio-economic information about both CFMG and non-CFMG members in Pelrithang Khatey and Khamey village.

	Descriptions by points
Name of the villages	Pelrithang Khatey and Khamey
History of the Villages	90 % abandoned village in early 1990s. Only few old Thram holders and 95% re-settlers with an average land holding 5 acres per household.

Raidangra Community Forest Management Plan (1st Revision)

Ethnic groups with CFMG:	Khengpas, Sharchops, Ngalops, Kurteps, Bumthaps, Lhotshamps and Mangdeps
Infrastructures	Tap water, Electricity supply, Farm Road, Non-Formal Education Centre, Higher Secondary School, Gup Office, Community Information Centre (CIC), Milk Processing unit, Royal Bhutan Army, RNR Office and Monastery, Mobile Network, Ice Cream Unit, Shivalaya Mandir, Royal Guest House, Chiwog Centre, Private School.
Total household number	Around 90
Total human population of CF area	Around 500
Gender Status (Male and Female)	Around 200 males & 300 females
Main crops	Maize, Millet, Mustard, dal, Beans, Ginger, Turmeric and Paddy
Cropping pattern	Mixed farming
Criteria for well-being & livelihood	Concrete House, machineries, annual income
Average annual income	Nu. 60,000- 120,000.

5. Forest Information

The Raidangra CF is situated adjacent to the Rai village. "Rai" refers to a social group of Southern Bhutanese, and "Dara" means a hill. The name of the CF was proposed after a general discussion with the members. The area within the CF Boundary covered by wide range of species. However, the quantity and quality of the trees, particularly for desired species is very poor. The species composition of the area consists of many unfavourable species, resulting in a limited timber stock for construction purposes. It is evident that the CF will not be able to meet all the demands of the CFMG. They need to rely on government reserved forests. Nonetheless, the proposed Community Forest aims to provide the CFMG with a significant portion of non-wood forest products (NWFPs) and other resources.

The CF area consist of several barren patches, which have been planted with *Terminalia ciliata*, *Tectona grandis*, *Michela champaca*, Bamboo and Broom species. Conserving this area will improve the quality of the water source, which is crucial for the livelihood of those living downstream in Pelrithang and the entire Gelephu town. Therefore, there is a need to develop a watershed management plan, which holds great potential for "Payment for Ecosystem Services" in the future. The forest type in the area is sub-tropical and dominated by broadleaved species such as *Schima wallichii*, *Bombax*

Raidangra Community Forest Management Plan (1st Revision)

ceiba, and *Castanopsis indica*, etc. along with valuable undergrowth species like *Piper spp* and *Adhatoda spp*. The CF area has potential for *Pipla spp* and *Adhatoda spp*.

During the survey, signs, dung and footprints of wild animals are found indicating that the CF area also serves as a habitat for various species such as wild pigs, barking deer, hornbills, peacocks, pythons, tortoises, bears, hares, martens, and vipers. The CF also includes degraded forests infested with unwanted weeds and entangled with climbers, which hinder the growth of desired tree species, further exacerbated by grazing.

The Pasangchu block is steeper than the Amaladangra block, resulting in higher soil erosion, which could lead to denudation in most parts of the Pasangchu block.

6.1 Block wise Forest Information:

6.1.1. Amaladangra Block

Format 1. Forest Resource Assessment Format	
Name of Community Forest	Raidangra Community Forest
Date of Assessment	34/12/2022
Name of block	Amaladangra
Block area	58.9 hectares
Name of recorder	

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

Definitions	
Broadleaf forest	75% or more of the tree species present are hardwoods
Conifer forest	75% or more of the tree species present are coniferous
Mixed forest	All other combinations of tree species
Mature Forest	Vegetation dominated by mature trees (trees > 40 cm dbh)
Thicket/pole stage	Vegetation > 3m in height consisting of young trees usually < 40cm dbh

Raidangra Community Forest Management Plan (1st Revision)

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

Forest Condition			
Write the names of main tree species			
Local name	Scientific name		
Champ	<i>Michelia champaca</i>		
Lampatey	<i>Durbanga grandifolia</i>		
Toona	<i>Toona chinensis</i>		
Chilauney	<i>Schima wallichii</i>		
Maina	<i>Tetrameles nudiflora</i>		
Plantation			
Is there any plantation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Approximate height of planted trees (m)
Year planted	2014	Is the plantation?	Under stocked <input checked="" type="checkbox"/> Stocked <input type="checkbox"/> Overstocked <input type="checkbox"/>

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

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

Forest Condition – Regeneration		
Abundant <input checked="" type="checkbox"/>	Scattered/few <input type="checkbox"/>	None <input type="checkbox"/>

Raidangra Community Forest Management Plan (1st Revision)

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>Alnus nepalensis</i>	2) <i>Pterospermum acerifolium</i>	3) <i>Toona Ciliata</i>
Regeneration: Seedlings > 30cm and < 1.3m height		

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

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

Forest Condition Class Box				
Age	Canopy density	Regeneration & coppice	Seed tree class	Condition
Mature forest	Dense	Abundant		Average
		Scattered/few	Scattered/few	
	Open	Abundant		
		Scattered/few		
Pole stage forest	Dense	Abundant	Abundant	Very good
		Scattered/few		
	Open	Abundant		
		Scattered/few		
Shrubland and young growth	Dense		Moderate or High	
	Dense	Dense	Low	Good
	Open		Low	
Any	Very open	None		

Open spaces	
Approximate total open space area (ha)	2-3 acres
Dominant vegetation type in the open space	<i>Alnus</i> and primary regeneration like grass and shrubs
Cause of open space e.g., grazing, fire, harvesting, etc.	Landslides

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

Main fodder species being used (<i>list 3 only</i>)

Raidangra Community Forest Management Plan (1st Revision)

Local name	Scientific name
Asare	<i>Woodfordia floribunda</i>
Bar	<i>Ficus bengalensis</i>
Dar	<i>Boehmeria purpurea</i>

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

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

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 checked="" type="checkbox"/> disperses and/or breaks up in water easily	Non-erosive <input type="checkbox"/> 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 type="checkbox"/> Highly critical <input checked="" type="checkbox"/>

Raidangra Community Forest Management Plan (1st Revision)

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

Fauna			
Local Name		Scientific name	
Wild pig		<i>Sus scrofa</i>	
Barking deer		<i>Muntiacus muntjac</i>	
Pea fowl		<i>Pavo cristatus</i>	
Jungle fowl		<i>Gallus lafayetii</i>	
Common langur		<i>Semnopithecus entellus</i>	
Macaque		<i>Macaca mulatta</i>	
Cuckoo		<i>Cuculus canorus</i>	
Great Hornbill		<i>Busceros bicomis</i>	
Hog deer		<i>Hyelaphus porcinus</i>	
Biotic Pressures			
Fire	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Grazing	Heavy <input checked="" type="checkbox"/>	Limited <input 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"/> Mushroom & Bamboo	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 checked="" type="checkbox"/>	Absent <input 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 checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Hunting	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Others	There are evidences of illegal felling of tree in CF without prior approvals		

Potential Management Options (*list any potential management options for the CF/block*)

Raidangra Community Forest Management Plan (1st Revision)

1	Production of woods for plywood manufacturing.
2	Protection in certain areas to protect water source.

6.1.2. Passangchhu Block

Format 1. Forest Resource Assessment Format	
Name of Community Forest	Raidangra Community Forest
Date of Assessment	24/12/2022
Name of block	Passangchhu
Block area	32.65
Name of recorder	

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

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

Forest Condition

Raidangra Community Forest Management Plan (1st Revision)

Write the names of main tree species	
Local name	Scientific name
Lali	<i>Amoora wallichii</i>
Gokul	<i>Ailanthus grandis</i>
Katus	<i>Castanopsis tribuloides</i>
Plantation	
Is there any Yes <input type="checkbox"/> plantation? No <input checked="" type="checkbox"/>	Approximate height of planted trees (m)
Year planted	Is the plantation? Under stocked <input type="checkbox"/> Stocked <input type="checkbox"/> Overstocked <input type="checkbox"/>

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

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

Forest Condition – Regeneration		
Abundant <input checked="" type="checkbox"/> Regeneration easy to find in most places	Scattered/few <input 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) Amoora rohituk	2) Alnus nepalensis	3) Pterospermum acerifolium
Regeneration: Seedlings > 30cm and < 1.3m height		

Forest Condition – Approximate density of seed trees		
High <input checked="" type="checkbox"/> > 50 seed trees per ha	Moderate <input 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 checked="" type="checkbox"/>
Does the main forest canopy consist of large, mature trees?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Raidangra Community Forest Management Plan (1st Revision)

Forest Condition Class Box				
Age	Canopy density	Regeneration & coppice	Seed tree class	Condition
Mature forest	Dense	Abundant	Abundant	Very good
		Scattered/few		
	Open	Abundant		
		Scattered/few		
Pole stage forest	Dense	Abundant	Abundant	Good
		Scattered/few		
	Open	Abundant		
		Scattered/few		
Shrubland and young growth	Dense		Moderate or High	
	Dense	Dense	Low	Good
	Open		Low	
Any	Very open	None		

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

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

Main fodder species being used (<i>list 3 only</i>)		
Local name		Scientific name
Chuletro		<i>Brassiopsis hainla</i>
Khamari		<i>Gmelina arborea</i>
Mawa		<i>Engelhardia spicata</i>
Katus		<i>Castanopsis spp</i>
Pasture quality (list the 3 dominant species in the grassland)		
Local name	Scientific name	Palatable/unpalatable
Use pattern	Seasonal <input type="checkbox"/>	All year <input checked="" type="checkbox"/>

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"/>	Non-erosive <input checked="" type="checkbox"/>	
disperses and/or breaks up in water easily	stable to water flow	

Raidangra Community Forest Management Plan (1st Revision)

(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 type="checkbox"/>
		Highly critical	<input checked="" type="checkbox"/>

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

Fauna			
Local Name		Scientific name	
Wild pig		<i>Sus scrofa</i>	
Barking deer		<i>Muntiacus muntjac</i>	
Pea fowl		<i>Pavo cristatus</i>	
Jungle fowl		<i>Gallus lafayetii</i>	
Common langur		<i>Semnopithecus entellus</i>	
Macaque		<i>Macaca mulatta</i>	
Cuckoo		<i>Cuculus canorus</i>	
Great Hornbill		<i>Busceros bicomis</i>	
Hog deer		<i>Hyelaphus porcinus</i>	
Leopard cat		<i>Prionailurus bengalensis</i>	
Biotic Pressures			
Fire	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Grazing	Heavy <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Fodder collection (list main species used)	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>
NWFP collection	Common <input type="checkbox"/>	Limited <input checked="" type="checkbox"/>	Absent <input type="checkbox"/>

Raidangra Community Forest Management Plan (1st Revision)

(list the main products including bamboo & cane)	Mushroom & Bamboo		
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 checked="" type="checkbox"/>	Absent <input type="checkbox"/>
Hunting	Common <input type="checkbox"/>	Occasional <input type="checkbox"/>	Absent <input checked="" type="checkbox"/>
Others	There are evidences of illegal felling of tree in CF without prior approvals		

Potential Management Options (list any potential management options for the CF/block)	
1	Recommended for protection as the block falls in steep slopes and watershed areas
2	

6. Forest Management

Block I: Amaladangra				
1	Produces /Services	Drashing	Firewood	NWFP
2	Main Species	<i>Bombax ceiba</i> <i>Toona ciliata</i> <i>Schima wallichii</i> <i>Tetrameles nudiflora</i>	<i>Schima wallichii</i> <i>Castanopsis spp.</i>	<i>Pipla- Piper longum</i> <i>Thysanolaena latifolia</i>
3	Problems	Inaccessible, Poor-Quality species	Inaccessible, Less usage	Lesser quantity
4	Opportunity	Plantation of preferred tree species		
5	Management Objective (reflecting problems and or opportunities)	To manage forest for sustainable utilization of timber and NWFP		
6	Activities to achieve the objective	High	High	Medium
7	Procedures	Harvesting of surplus bombax ceiba tree for plywood manufacturing	Thinning and Cleaning operations	Collect only for domestic consumption.
8	Responsibilities	CFMG members	CFMG members	CFMG members

Block II: Passangchhu				
1	Produces /Services	Drashing	Firewood	NWFP
2	Main Species	<i>Bombax ceiba</i> <i>Toona ciliata</i> <i>Schima wallichii</i> <i>Tetrameles nudiflora</i>	<i>Castanopsis spp.</i> <i>Schima wallichii</i>	<i>Pipla- Piper longum</i> <i>Thysanolaena maxima</i>
3	Problems	Inaccessibility, poor quality timbers	Inaccessibility, less preferred species	Less quantity

Raidangra Community Forest Management Plan (1st Revision)

4	Opportunity	Conservation of area as critical water catchment area as this block falls in Important water source areas		For domestic consumptions only
5	Management Objective (reflecting problems and or opportunities)	To manage forest for sustainable utilization of timber and NWFP.		
6	Activities to achieve the objective (mark s H, M or L)	High	High	Medium
7	Procedures	Harvesting of surplus bombax ceiba tree for plywood manufacturing	Thinning and Cleaning operations	Collect only for domestic consumption.
8	Responsibilities	CFMG members	CFMG members	CFMG members

7.1. Forest Management and procedure

Objective	Block	Activities	Priority (High, Medium, Low)	Procedures	Responsibilities
To improve forest stock to overcome scarcity of good quality timber.	Block I & II	Thinning, Singling & cleaning in Amaladangra (sanitation)	Medium	Depending upon the forest condition apply silviculture techniques.	CFMG
		Cutting of climbers	High	Identify entangled trees and remove climbers	
		Sustainable Land management	High	Follow Bio-engineering techniques	
		Plantation	High	Plantation of Preferred tree species and bamboos	CFMG
To supply basic forest resources sustainably	Block I- Preferably	Allot as per Annual harvesting limit	High	Allot timber as per annual harvesting limit. Identify suitable areas, Plant preferred species	CFMG
	Block – II – Inaccessible in most parts	Enrichment plantation (Amaladangra)	High		

Raidangra Community Forest Management Plan (1st Revision)

To generate income through sale of timber viable for plywood manufacturing.	Block I & II	Harvesting of surplus bombax ceiba tree for plywood manufacturing	Medium	Identify areas with significant bombax trees, Plan, fell and extract trees as per scientific methods.	CFMG
To protect and manage watersheds for maintaining continuous water supply.	Block I & II	Fencing of water sources Restrict felling of trees and grazing around water sources	Medium	Identify critical water source. Fence and restrict felling around these areas	CFMG

7.2. Silvicultural Options & System

Utilization	Improvement	Protection	Silvicultural System	Comments
Timber	Thinning and singling	NA	Single tree Selection	
Firewood	Thinning and singling		Single tree Selection	
NFTP operation	For domestic consumptions only			

7.3. Forest Produce Demand Assessment

Produce	Annul requirement estimated)		No of Households that require produce annually (C)	Total requirement of the produce (annually)		Total requirement of produce in 10yers	
	Number (A)	Volume in cft or m³ (B)		Number (A*C) =D	Volume (in cft or m³) (B*C) =E	Number (D*10)	Volume (in cft or m³) (E*10)
For new Construction							
Drashing		1000 cft	10		10,000 cft		100,000 cft
For Renovation							
Drashing		400 cft	25		10,000 cft		10,000 cft
For Other constructions (Kitchen, Toilet, Cowshed, etc)							
Drashing		300 cft	15		4500 cft		45,000cft
Firewood	2		10	20		200	

Raidangra Community Forest Management Plan (1st Revision)

Fencing post	15		5	75		750	
Flag poles	2		35	70		700	

7.4. Annual Allowable Cut

The table below illustrates the Annual Allowable Cut (AAC) derived from the analysis of data compiled during the forest resources assessment conducted within Raidangra CF. The CF possesses a limited timber supply that may not fully meet the demands of the CF members:

Annual Allowable cut table								
Block	Annual Allowable cut table (AAC)	dangchung	Tsim	Cham	Drashing	Firewood	Flag post	Fencing Post
Passsangchhu	Stand and stock data	8.00	44.00	62.00	246.00	298.00	2.00	26.00
	(Volume M3)	1.54	8.49	11.96	47.46	57.49	0.39	5.02
	in cft	54.51	299.83	422.49	1676.33	2030.68	13.63	177.17
Amaladangra	Stand and stock data	10.91	18.18	32.73	198.18	87.88	36.36	69.43
	(Volume M3)	3.80	6.33	11.39	68.98	25.45	10.53	20.10
	in cft	134.12	223.49	402.35	2436.22	898.73	371.84	710.04
Whole CF	(Volume M3)	5.34	14.82	23.35	116.44	82.94	10.91	25.12
	in cft	188.63	523.32	824.84	4112.55	2929.40	385.47	887.22

7.4. Annual Allowable Cut and Demand Comparison

Annual Allowable Cut and Demand Format							
Produce	Total ACC		Total Annual Demand		Difference		Comments
	No of trees	Volume (in cft)	No of trees	Volume (in cft)	No of trees	Volume (cft)	
Drashing	123	5649.34	534	24, 500	-411	-18850.66	Shortage of Timber Trees
Cham							
Tsim							
Dangchung							
Firewood	64	2929.4	32	1500	32	1429.4	Surplus
Fencing posts	312	385.473	70	86.534	242	298.939	Surplus
Flag poles	534	887.216	75	124.503	459	762.713	Surplus trees shall be retained to attain maturity
NWFPs (List all NWFPs)	For Domestic consumption only						

8. Participatory Environment assessment

The CFMG conducted a participatory environmental assessment to evaluate the potential impact on the environment, recognizing that some negative effects are unavoidable. However, it is anticipated that the positive impact of establishing the CF will outweigh the negative impact, resulting in significant improvements in both the environment and the socio-economic conditions of the CFMG members. The assessment of the CF is based on two main aspects: potential environmental effects and potential socio-economic effects. These effects will be evaluated at the end of the management plan period, as outlined in the table below. The assessment process will adhere to the principles of participatory environmental assessment, ensuring that it is useful, participatory, simple, flexible, and realistic.

Participatory Environment assessment								
Activities proposed in CFMP	Potential Environmental Effects				Potential Socio-Economic Effects			
	Soil	Water	Wild animals	Plants	Traditional forest use	Cultural & religious values	Local employment	Local benefits from forest produce
Thinning, Singling & cleaning in Amaladagra (sanitation)	+++	--	--	+++	++	-	+	+++
Cutting of entangled climbers	++	+	+	+++	++	+	++	+++
Sustainable Land management	+++	++ +	++	+++	++	++	+++	+++
Plantation	+++	++ +	++ +	+++	+++	+++	+++	+++
Allot as per Annual harvesting limit	+++	++	++ +	+++	+++	+++	+	+
Harvesting of surplus bombax ceiba tree for plywood manufacturing	-	-	-	+	-	-	+	+
Fencing of water sources	+++	++ +	-	++	+++	+++	+++	+++
Restrict Grazing around water sources	+++	++ +	++ +	+++	++	++	+++	+++

Raidangra Community Forest Management Plan (1st Revision)

Plantation around water sources	+++	++ +	++ +	+++	++	+++	+++	+++
Restrict felling of trees around water sources	+++	++ +	++ +	+	+	+++	-	+

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

Procedure to address potential negative impacts

Timber extraction will have direct inevitable negative impact to soil, water and biodiversity.

Nevertheless, CFMG has decided to address those negative impacts through following means:

Activity	Procedure
Sanitation felling (Thinning, cleaning & Singling)	Felling will be done in patch wise.
	Felling shall be prohibited on both side of the streams
Harvesting of surplus bombax ceiba tree for plywood manufacturing	Replacement of felled trees with valuable tree species

7. Climate hazard matrix

	Land slide	Flood	Drought	Forest Fire	Animal diseases	Reduced crop yields
Land slide		Flood	Drought	Landslide	Animal Disease	Reduced crop yields
Flood			Flood	Flood	Animal Disease	Reduced crop yields
Drought				Drought	Animal Disease	Reduced crop yields
Forest Fire					Animal Disease	Reduced crop yields
Animal diseases						Animal Disease
Reduced crop yields						

Result: Animal Disease- 6, Reduced crop yields-5, Flood -4, Drought- 3, Landslide-2.

7. Species preferences and availability

The purpose of conducting species preferences and availability assessment is primarily to determine the preferred species among CF members in relation to their actual availability. This assessment will enable CF members to identify which timber species should be prioritized for planting, protection, or removal based on their specific needs. It will also support the decision-making process for forest management by the CFMG.

Raidangra Community Forest Management Plan (1st Revision)

XXXX=high preferences, ***** = highly available and X=low preferences, * =less available

Species Preferences and availability Table							
Local name	Scientific Name	Uses →	Timber	F/wood	Fencing	Fodder	Agri implements
Chakrasey	<i>Chukrasia tabularis</i>	Preferences	XXXXXX	0	XXX	0	XXX
		Availability	***	0	*	0	***
Champ	<i>Michela champaca</i>	Preferences	XXXXXX	XXXXXX	XXXXXX	0	0
		Availability	*	*	*	0	0
Tooni	<i>Toona ciliate</i>	Preferences	XXXXXX	0	0	0	0
		Availability	*	*	0	0	0
Angari	<i>Phoebe attenuata</i>	Preferences	XXXXXX	X	X	0	0
		Availability	*	*	*	0	0
Puyam	<i>Schima wallichii</i>	Preferences	XXXXXX	XXXXXX	XXXXXX	0	XXXXXX
		Availability	*****	*****	*****	0	*****
Panisaj	<i>Terminalia myriocarpa</i>	Preferences	XXXXXX	XXX	XXXXXX	0	0
		Availability	*	*	*	0	0
Lampatey	<i>Duabanga grandiflora</i>	Preferences	XXXXXX	XXX	XXX	0	0
		Availability	*	*	*	0	0
Gamari	<i>Alnus nepalensis</i>	Preferences	XXXXXX	X	XXXXXX	XXXX X	XXX
		Availability	*	*	*	*	*
Lali	<i>Aglaia spectabilis</i>	Preferences	XXXXXX	XXX	XXXXXX	0	XXX
		Availability	***	***	***	0	***
Shaytey	<i>Altingia excelsa</i>	Preferences	XXXXXX	XXXXXX	XXXXXX	0	XXX
		Availability	*	*	*	0	*
Katus	<i>Castanopsis indica</i>	Preferences	XXXXXX	XXXXXX	XXXXXX	0	0
		Availability	***	***	***	0	0
Hatipalay	<i>Pterospermum acerifolium</i>	Preferences	XXX	XXX	XXX	0	0
		Availability	***	*	*	0	0
Simal	<i>Bombax ceiba</i>	Preferences	X	X	X	0	0
		Availability	*****	*****	*****	0	0
Maina	<i>Tetrameles nudiflora</i>	Preferences	XXX	X	0	0	0
		Availability	***	***	***	0	0

Result: The risk of spreading animal disease is most worrying concern for CFMG members, followed by reduced crop yields at 5 and floods at 4.

8. Forest Produces Prioritization and Species Ranking Matrix

Forest Produces Prioritization Matrix						
	Timber	Firewood	NWFP	Fodder	Water	Grazing
Timber	X	Timber	Timber	Timber	Water	Timber
Firewood		X	NWFP	Firewood	Water	Firewood
NWFP			X	NWFP	Water	NWFP
Fodder				X	Water	Grazing
Water					X	Water
Grazing						X

Note: NWFP- (Ferns, Pipla, Broom, Bamboo, Vasica adatoda, etc)

Results: Water- 5, Timber- 4, NWFP -3, Firewood -2, Grazing -1

9. Monitoring plans (Forest Resources monitoring plan)

Objectives	Indicator	How it will be monitored	Responsibilities	Comments
To improve forest stock to overcome scarcity of timber.	Regeneration status	No. of seedlings will be counted in each year in fix area	CFMG	
To supply basic forest resources sustainably.	Adequate supply of forest resources	Maintenance of records	CFMG	
To protect and manage watersheds for maintaining continuous water supply.	Flow rate of water	Every year water volumes will be measures	CFMG lead by Chairperson	Average information of several days
To generate income through sale of surplus <i>bombax ceiba</i> viable for plywood manufacturing	Financial Records	Auditing and evaluation of financial records	CFMG, DFO	

10. Waste Management

Non-biodegradable waste shall not be permitted for disposal within the CF area. The CFMG members will make every effort to ensure zero waste within the CF area. Any waste found within the CF will be collected and appropriately disposed of. Any individual(s) who fail to comply with

Raidangra Community Forest Management Plan (1st Revision)

waste disposal regulations within the CF will be subject to the provisions outlined in the Waste Prevention and Management Regulation of Bhutan, 2012.

11. Annual Work Plan

CFMG has prepared the 10-year operational plan and the detailed annual work plan for the CF will be prepared every corresponding year.

10 years Operational Plan

Location	Activities	Year of operation										Responsibility
		1	2	3	4	5	6	7	8	9	10	
Block I & II	Thinning, Singling & cleaning in Amaladangra (sanitation)											CFMG
	Cutting of entangled climbers											CFMG
	Sustainable Land management											CFMG
	Plantation											CFMG
	Allot timber as per Annual harvesting limit											CFMG
	Harvesting of surplus <i>bombax ceiba</i> tree for plywood manufacturing											CFMG

Note: CF whole area physical demarcation will be carried out in the 1st year.

CFMG will establish tree seedling nursery in the 1st year.

CFMG must inform to nearest Forest Office prior to execution of prescribed burning.

Annual Work Plan

The annual work plan will be discussed during annual Community Forest Management Group General meeting. The activities reflected in operational plan for 10 years will be broken down and implemented as per the General meeting resolution and convenience.

Part II: By-Laws

1. Membership Arrangement

Raidangra Community Forest is composed of 34 households who have collectively agreed to uphold the following points as the By-laws and pledge to protect them as a symbol of unity and integrity.

CFMG Membership

The 34 households listed in the annexure are recognized as members of Raidangra Community Forest. An entry fee of Nu. 100 will be collected during the initial enrolment of members and will continue until the end of the plan period. Households expressing interest in joining the CF later must contribute an entry fee of Nu. 1000 and also pay the accumulated cost of daily labour contributed by the CFMG, fines, penalties for missed meetings, and labour contributed by existing members as stipulated in the CFMG by-laws. To join the CF, members must possess a valid registered Thram Number and Gung Number and be residents of the area. New members who are siblings of existing CFMG members, resulting from same heritage, can join the group by paying a membership fee of Nu. 100, plus 25% of the accumulated labour contribution and meeting expenses.

Members may leave the CFMG under the following conditions:

Households losing interest in CF management must submit an application to the CF Chairperson, duly countersigned by family members, using the approved membership separation form.

There are two conditions for leaving the CFMG:

- Leaving due to genuine reasons, which include:
- Old age
- Physical disability
- Single-headed households lacking the capability to work.

Members leaving due to the above criteria/conditions will be rewarded as follows:

1. Old age: 100% of their own share at the time of resignation.
2. Physical disability: 100% of their own share at the time of resignation, and their name will remain on the membership list.
3. Single-headed households: 100% of their own share at the time of resignation, and their name will remain on the membership list.

A CFMG member who voluntarily leaves the group without acquiring any benefits must pay a penalty deposit of Nu. 1,000, while those who leave after acquiring benefits must deposit Nu. 5,000 as a penalty. Furthermore, such individuals will not be eligible for future membership. Any household resigning from the CFMG must settle all outstanding dues, and the resignation will be discussed in a committee meeting.

Membership Committee formation

The following members are the CFMG committee members elected by the members through majority voting. They will continue as committee members if the CF management activities function well in accordance with the CF Management Plan.

Chairperson: Col. Tshulthrim Dorji (Retried).

Secretary: Mr. Penjor.

Accountant: Mrs. Kesang

Auditor: Mrs. Dorji Yangdon

Resops: Mr. Yonten Norbu.

2. Terms of References for CFMG Management Committee

- Organizing meetings as and when required.
- Coordinating the implementation of CF activities.
- Determining the quantity, quality, and collection schedule for forest products.
- Resolving conflicts that may arise within the CFMG and with outsiders who violate the by-laws of the Community Forest Management Plan.
- Exploring income-generating opportunities for the CFMG.

The CF management committees (excluding Resops) are elected for a period of 5 years. If a committee member is unable to fulfil their duties as specified in the By-laws, they will be promptly removed, and a new member will be elected from the CFMG through a fair and transparent election process. Resops, on the other hand, serve for a duration of one year and are elected annually on a rotational basis within the CFMG.

CFMG committee members serve on a voluntary basis without receiving any payment. They are elected during CFMG meetings. Unless they are traveling outside the gewog on behalf of the CFMG for workshops, training, or other purposes, no form of allowance will be provided to the committee members. However, if the CFMG committee or members are being paid by the concerned agencies, the aforementioned allowances will not be granted. In case of travel outside the Dzongkhag, a sum of Nu. 150 per day per head may be provided from the group account, subject to the conditions mentioned above.

3. Terms of References for Chairman

- Chair all types of meetings for the CFMG and CF purpose
- Coordinate with other relevant stakeholders
- Sanction forest products as per management plan
- Monitor & review the plan activities
- Resolve conflicts and disputes related to CF and CFMG
- Joint signatory for revenue deposit and withdrawal with Secretary and Treasurer
- Present the overall annual progress reports during the annual general meeting
- Develop action plan for accessing funds from the donor agencies and relevant government organization for utilizing in the development of community forest
- Approve timber allotment.

4. Terms of References for Secretary

- Correspondence related to CF and CFMG
- Record keeping
- Chair the meeting in absence of Chairperson
- Assist Chairperson in executing administrative work
- Maintain the minutes of the meetings
- Compilation of all progress and plan activities for general CFMG meeting
- Maintain stock register & inventory of CF properties.
- Inform CF members during meetings/works/other activities related to CF

5. Terms of References for Accountant

- Maintain financial records (cash outflow and inflow)
- Collect the membership fees annually and deposit in Bank
- Maintaining cashbook
- Present the account status & its information during general CFMG meetings
- Collect penalty and fines and deposit in the bank
- Collection of penalties from absentees in CF activities and meetings
- Joint signatory with Chairperson for revenue deposit and withdrawal
- Issue permits to the applicants

TOR of Resops

- To conduct patrolling inside CF
- To give report to Chairperson or Secretary after the patrolling in writings.
- Patrolling will be conducted once a month or whenever necessary.

TOR of Auditor

To carryout auditing of activities related to CF

6. Roles and responsibility of CFMG

- Contribute manpower and fees as and when necessary

Raidangra Community Forest Management Plan (1st Revision)

- Conduct annual audit for the better management of CF
- Abide by the existing and future government rules with regard to CF
- Election/nomination/appointment of CFMG/committee members
- CFMG must recommend/propose any activities needed to be developed
- Implement annual work plan as per the management plan
- Attend capacity-building activities (meeting, training, workshop, seminars, etc.).

7. Royalty & Fees

Royalty rates and fees for forest products shall be as per existing forest rules and regulations.

8. Fines and Penalties

All members and non-members found guilty of an offense and involved in any illegal activities shall be dealt according to the provisions of the amended Forest and Nature Conservation Rules and Regulations, 2022.

The details of fines and penalties given bellow:

Sl. No.	Offences	Penalties
1.	Grazing in natural forest	Cattle grazing in the CF is strictly prohibited. Penalties will be imposed on both CFMG members and outsiders as outlined below: 1 st offense: Nu. 100/- per livestock head 2 nd offense: Nu. 200/- per livestock head 3 rd offense: Nu. 300/- per livestock head For repeated offenses thereafter, a fine of Nu. 2,000/- per livestock head shall be imposed. This penalty applies to horses, cattle, goats, sheep, etc.
2	Grazing in Plantation area	The offender shall replant an equal number of seedlings to those damaged, and they shall be fined in the manner previously mentioned. This will be applicable to both CFMG members and non-members.
3	CFMG members absent during the meetings	The absentees shall be fined Nu. 500/- per head per day
4	CFMG members absent during the development activities/works such as weeding, plantation, thinning, pruning and improvement works	The absentee during the work shall be fined Nu. 500/- per head per day
5	Hunting & poaching of wild animals within the CF	The defaulter shall be dealt with in accordance with the existing Forest and Nature Conservation Act and Rules.
6	Setting forests on fire	The defaulter will be dealt with in accordance with the current Forest and Nature Conservation Act and Rules. Any fines collected will be deposited into the CFMG fund.
7	CFMG members failing to pay fines and penalties on time	The defaulter shall be issued a warning by the Chairperson to pay fines and penalties within a month. If the defaulter fails to pay within the given month, they

Raidangra Community Forest Management Plan (1st Revision)

		shall be required to pay double the amount fined in the second month. In the third month, the fine will be triple the amount, and in addition, they will need to pay the separation fee from the CFMG on a voluntary basis (compulsory separation).
12	Misuse of allotted timber	If any member of the CFMG misuses the allotted timber, he/she shall be penalized at the commercial rate and will be prohibited from receiving timber allotments for a period of 10 years.

9. Managing CFMG Fund

10.1 Source of fund

In order develop transparency and to sustain the fund, Treasurer will be fully responsible for regulating financial aspects and present to all the CFMG members and the management committee. The CF fund account maintained with BDBL, Gelephu. The probable sources of fund raising for the CFMG are:

- Membership fee
- New member entry fees
- Fines and penalty
- Royalty
- Sale of surplus timber
- Donations and contributions
- Eco-tourism (tourists) related incomes

10. Benefits Sharing Mechanism

1. The harvesting of any forest product (including timber for new construction and repairs) shall be conducted once a year
2. The harvesting of forest products will strictly adhere to silvicultural norms.
3. CFMG members are not authorized to sell any forest products provided to them for domestic purposes.
4. Forest produce should be extracted from the forest within 2 years from the date of allotment.
5. The benefits from the Community Forest shall be shared among CFMG members based on the principle of "equity" rather than "equality."
6. The timeframe for timber allotment for new construction and renovation shall comply with forest rules and regulations.

Special Considerations

In the event of disasters such as earthquakes, fires, landslides, etc., the affected individual(s) will be provided assistance by CFMG members for labour, as determined by the management committee. Immediately, 500 cubic feet of timber will be allocated to the victim(s) within the annual harvesting

limit upon payment of royalty. If there are multiple victims and a limited quantity of timber available, the timber allotment will be distributed equally among them.

12. Meetings

12.1 General meeting (CFMG)

The CFMG general meeting shall convene twice a year. Chairperson has a right to call for general meeting at any time on need basis. Meanwhile, following contents will be focused during the meetings:

- Reviewing of past minutes & resolutions
- Presentation of progress reports & financial information
- Recommendation on management activities base on the past experiences
- Submission & endorsement of annual work plans & proposals
- Other miscellaneous activities

For any decision making & endorsement, there should be a majority of at least three fourth of the members.

12.2 Management Committee meeting

The CFMG committee meeting shall be held on quarterly basis depending upon the need and emergency basis. During the meeting, committee members shall focus on pre-planning of activities prior to implementation in the field. Based on the minutes, members have to mobilize the planned activities. Concurrently, conflicts & issues persist can be addressed accordingly.

11. Conflict Management

Any disputes within the CFMG or outsiders with regard to CF shall be sorted out and solved by the CF Management Committee. However, if the case is beyond the capacity of the management committee, the matter shall be forwarded to Divisional Forest office, with copy to gup and then to Court respectively.

12. Amendments of CFMP and bylaws

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

13. Power of Department

Department is empowered to take action with regards to both forestry and other development activities as a whole. In addition, 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, others wise supervise the activities of the CFMG, and take actions (including revocation of the certificate where warrant under these rules) against the CFMG or any of other members who may be acting in violation of the provision of the Management plan or any other provisions of the FNCR 2006.

Raidangra Community Forest Management Plan (1st Revision)


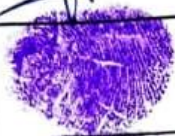

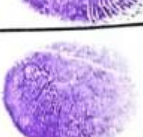
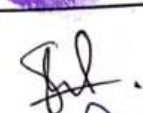




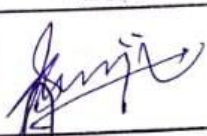

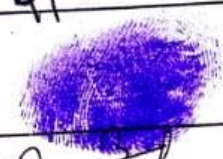

- ✓ Establish record keeping and financial reporting obligations

The Department shall suspend the right and privilege of the CFMG to control, manage and utilize the CF upon the recommendation of the CFO, in the event of the following:




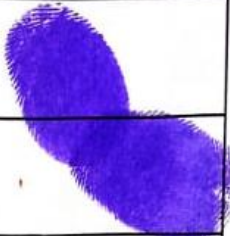

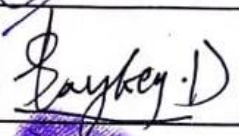

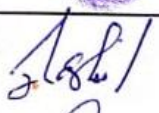

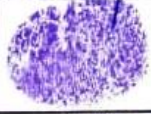
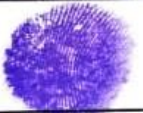


- ✓ The CFMG is unable to manage the community forest according to its management plan or otherwise fails to meet their responsibilities: and
- ✓ The CMFG has engaged in any activity in contravention of the provision of the act, Rules, by-laws or the management plan.

Raidangra Community Forest Management Plan (1st Revision)

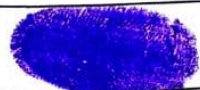
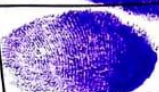
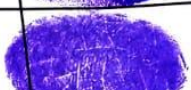


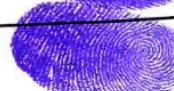
List of CFMG members of Raidara Community Forest, Gelephu gewog

Sl no	Name	CID	House no	Thram no	Village	Signature
1	Lok Nath Pokhrel	11306000861	Pa-6-322	1350	Khatoed	
2	Penjor	10801000180	Pa-6-419	2099	Khatoed	
3	Lham Tshering	10305001753	Pa-6-460	2994	Khatoed	
4	Tashi Tobgey	10715000889	Pa-6-369	2656	Khatoed	
5	Sangay Dorji	10602001518	Pa-6-105	2657	Khatoed	
6	Tashi	11306001258	Pa-6-303	2108	Khatoed	
7	Yonten Norbu	11306000782	Pa-6-221	1014	Khatoed	
8	Thinley Pemo	10101003743	Pa-6-393	1911	Khatoed	
9	Pema Tshewang	11306001198	Pa-6-266	2110	Khatoed	
10	Sonam	11306000894	Pa-6-332	2107	Khatoed	
11	Tshering Dukpa	11306001233	Pa-6-283	1618	Khatoed	
12	Kezang Wangmo	11306000912	Pa-6-173	54	Khatoed	
13	Dina Nath Nepal	11306001085	Pa-6-192	32	Khatoed	

Raidangra Community Forest Management Plan (1st Revision)

14	Shiva Kumar Chhetri	11306000693	Pa-6-204	15	Khatoed	
15	KB Basnet	11306001138	Pa-6-196	85	Khatoed	
16	Monarath Katel	11306001089	Pa-6-540	2397	Khamaed	
17	Tandin Zangmo	11306002379	Pa-6-281	210	Khamaed	
18	Dorji Yangdon		Pa-6-209	1004	Khamaed	
19	Thinley Tenzin	11306001254	Pa-6-nil/145	3575	Khamaed	
20	KN Khatiwara	11306001237	Pa-6-287	1438	Khamaed	
21	Lungten Dema	11306000890	Pa-6-330	2111	Khamaed	
22	Sangay Choden	11306000718	Pa-6-210	1005	Khamaed	
23	Gang Dema	11306000701	Pa-6-207	1001	Khamaed	
24	Sonam Pelden	11306001186	Pa-6-254	2604	Khamaed	
25	Karma Yudon	11306000715	Pa-6-210	1005	Khamaed	
26	Sangay Wangmo	11306000735	Pa-6-213	1008	Khamaed	
27	Rinzin Lhamo	11306000745	Pa-6-215	1010	Khamaed	 

Raidangra Community Forest Management Plan (1st Revision)

28	Rinzin	11306000763	Pa-6-590	3995	Khamaed	
29	Leki Zangmo	11306000545	Pa-6-312	2112	Khamaed	
30	Chitra Bdr Pokwal	11308000635	Pa-6-422	1471	Khamaed	
31	Sonam Dakpa	11306000789	Pa-6-222	1015	Khamaed	
32	Sangay Wangdi	11306000695	Pa-6-206	1001	Khamaed	
33	Deki Lhaden	11306000707	Pa-6-208	1003	Khamaed	
34	Dechen Wangdi		Pa-6-219	1039	Khamaed	