
Druk Balamna Community Forest Management Plan (1st Revision)



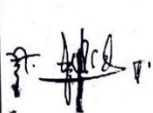


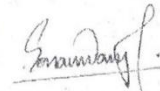

**SAMAR GEWOG
HAA DZONGKHAG**

(PLAN PERIOD: 2022-2032)

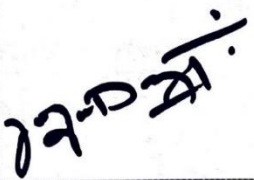

APPROVAL SHEET

Name of Community Forest	Druk Balamna
Village	Balamna
Chiwog	Balamna
Gewog	Samar
Dzongkhag	Haa
Production area (Hectare)	152.98
Protection area (Hectare)	15.67
Non Production area (Hectare)	1.25
Total Community Forest Area (Hectare)	169.91
Total CFMG Member(No. of HH)	51

PREPARED AND SUBMITTED FOR APPROVAL

Community Forest Management Group		Forestry Representative (CFMP facilitator)	Gewog Administration	Range Office Haa Range Office	Division/Park Office
Signature					
Name	Dorji	Sonam Dorji	Namgay Tenzin	Sonam Wangdi	Namgay
Title	Chairperson	Haa Range	Gup	Range Officer	Chief Forestry Officer

REVIEWED AND RECOMMENDED FOR APPROVAL

Signature		
Title	Focal Officer	Chief Forestry Officer
Division	Forest Resource Planning Management Division	Forest Resource Planning Management Division

APPROVED BY:



**DIRECTOR/DIRECTOR GENERAL
DEPARTMENT OF FORESTS AND PARK SERVICES**

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

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1 Acronyms

AAC.....	Annual Allowable Cut
AWP.....	Annual Work Plan
BC.....	Bhutanese Calendar
CF.....	Community Forest
CFMG	Community Forest Management Group
DBH.....	Diameter at Breast Height
CFO.....	Chief Forest Officer
DoFPS	Department of Forest & Park Services
SFED	Social Forestry & Extension Division
FNCRR.....	Forest and Nature Conservation Rules & Regulations

2 Executive Summary

Druk Balamna Community Forest (CF) fall under Sama Geog in Haa Dzongkhag. It is located 20 kilometres away from Haa town at an elevation of 2400-3700 masl. It was initiated in the year 2011 with 32 Community Forest Management Members (CFMG). With time, community members who were initially not members of the CFMG developed interest in the CF increasing the number of CFMG. This management plan the number of CF members drastically increased and consists of 51 members. With their vision of preserving, protecting and conserving the forest of the village, the CF members identified in the vicinity of the village covering an area of 169.91 hectares including the protected areas within the CF.

The CF was initiated with objectives to conserve and preserve the natural resources with better management schemes for the younger generations. Department of Forest and Park Services (DoFPS) financially and technically supported the establishment of the CF. However, the financial cost of revising the Management Plan is boned by CF fund with technical assistance from DoFPS.

The spruce forest dominates and is followed by Blue pine and Oak compositions. The forest resources for rural purpose can be easily be accessed from CF with relevant documents. Due to the infestation of timbers inside CF, sanitation has been carried out by CFMG and the excess timbers from the infested sites were commercialized for generating CFMG fund in last 10 years. The similar activities may be proceeded following the due procedures if such infestation occurs in the future to stop further infestation.

The revised management plan is focused on the management, protection and conservation of the CF through the application of good governance principles. Economic advancement referring to gender equity promotion, environment sustainability, and poverty reduction are included within the mission, vision and objectives of the CF. Achievement of transparency and accountability through the participation of the community in any kind of activities are also to be checked.

3 Review of Past Activities

In the last 10 years of management by CFMG, it has benefited the community in various ways. Since the initiation of the CF in 2011, conservation of natural resources including wildlife has been enhanced to great heights.

Availing service has been eased especially when it comes to RHBT. In last 10 years, the CFMG has utilized 140 trees by the genuine recipients for various construction purposes for the benefit of the local residents.

Parts of the CF was infested with bark-beetle which causes damage to the forest stand. Thus, it caused of great concern to the CFMG if the spread continues to other parts of CF area. With technical support from DoFPS, sanitation operation was carried out inside the CF. Those trees infested with the beetles were harvested and allotted for RHBT purposes and also the excess were commercialized.

Thus, around Nu. 1,900,000.00 has been generated from removal of **49000.00** cft of bark beetle affected trees as an income excluding the expenses incurred during the sanitation operations. The earned amount funded the activities of the CF, financial support to community development activities. Partial amount has been sanctioned as loan to the individuals with interest.

To regain the forest, plantation activities have been carried out inside CF with the support of seedlings from Dzongkhag Forestry Office and labor force from Community. The plantation was focused in barren areas. There is a successful survival of the seedlings and now it has attained 3-4meters in height.

The CFMG has minimized the loss of timbers from CF through illegal activities (illegal harvesting of timbers and natural resources) to the outsiders. The successful protection of the CF was a result of combined efforts from the CFMG; 51 % of women and 49% of men were has participated in CF

protection and management activities. The smooth running and benefits associated with the CF aroused interest in non-members to take the opportunity of becoming members from the next management plan.

The CFMG has gained experiences in implementing the management plan. They understood the conditions of the local forest and its management on sustainable basis. There is a sense of ownership, and maintaining transparency amongst the CFMG is prioritized. The CFMG considers CF fund management, preparation of annual work plan, implementation and decision making in CFMG meeting and CF committee meeting not only familiar but also essential.

As the management of CF requires constant and continuous technical support from forestry offices, lapses in record keeping has occurred in various activities performed. It has happened because of the shortage in forestry officials in the forestry offices for continuous assistance to the community. With the revision of the expired management plan, the community desires to improve all the shortcomings from the past.

4 Vision, Mission, Mandates and Objectives

Vision:

“Sustaining Druk Balamna Community Forest Resources & biodiversity for the present and future generations”

Mission:

“Conserve and manage community’s forest resources to ensure social, economic and environmental sustainability”

Mandates:

Conservation, protection, sustainable management and utilization of community forests including forest soil, water resources and biodiversity through the application of good governance principle.

Ensure rules governing CFMG such as FNCRR, FNCA and any other Acts/Rules are adhered through participation, facilitation and enactment of enabling policies, legislations, strategies, plans, and programs.

Druk Balamna Community Forest Objectives.

1. To protect from outsiders collecting harvesting/extracting of forest produce from their community forest.
2. To protect the local water sources from degradation and drying up.
3. To improve the stand stock of the forest.
4. To protect the forest from disease infection and forest fire
5. Enhance the management and literacy of Community Forest and members.
6. To maintain Clean Environment within Community Forest area.

5 Part A: Management Plan

Introduction

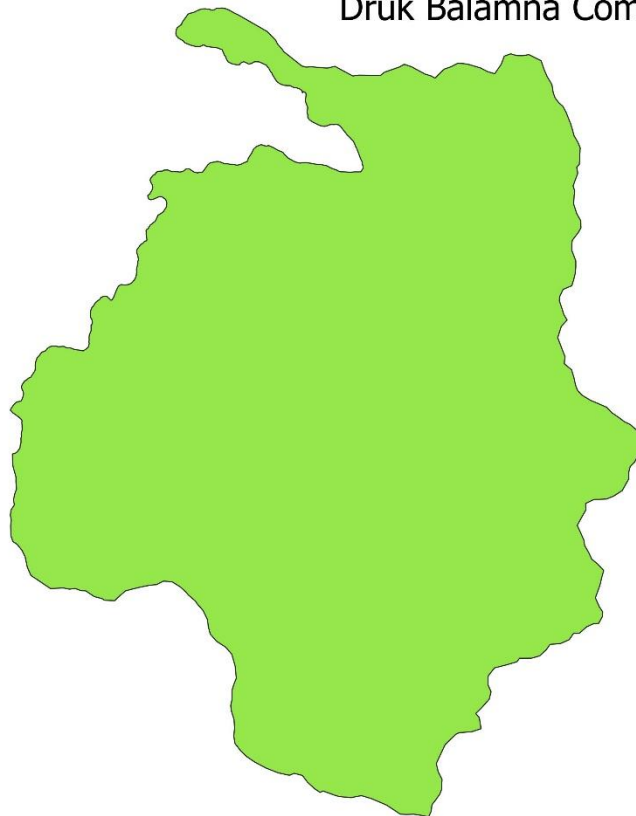
The people of Balamna village have known the deteriorating conditions of their forest after NRDCL intervening in their traditionally utilizing forest area and has decided to take the charge of the forest through CFMG. Further, upon expiry of the CFMP (2011-2021), the villagers decided to continue to protect, preserve and conserve it by renewing the Management Plan for next 10 years.

Thus, Territorial Range office, Haa has supported technically to support its revision for next CFMP. During CFMP revision, final evaluation was carried out and identified the best practices and lapses during last ten years' management. The lapses of poor record keeping were identified where they need to have access to trainings. The range office appreciates the management of CF for managing forest for 10 years by the illiterate CFMG. Thus, revision of the same is recommended and also the areas to uplift the better management in future. To extent the trend of protecting the forest in the vicinity of the communities, the communities are revising the Management Plan with the help Territorial Forest Division, DoFPS.

CF Map: Location and Boundary Description

<i>Boundaries</i>	<i>Describe the permanent features</i>
West	Balam Village
East	Nagotop logging road
South	Shari CF boundary
North	Stream-North to Balamna Village

Druk Balamna Community Forests



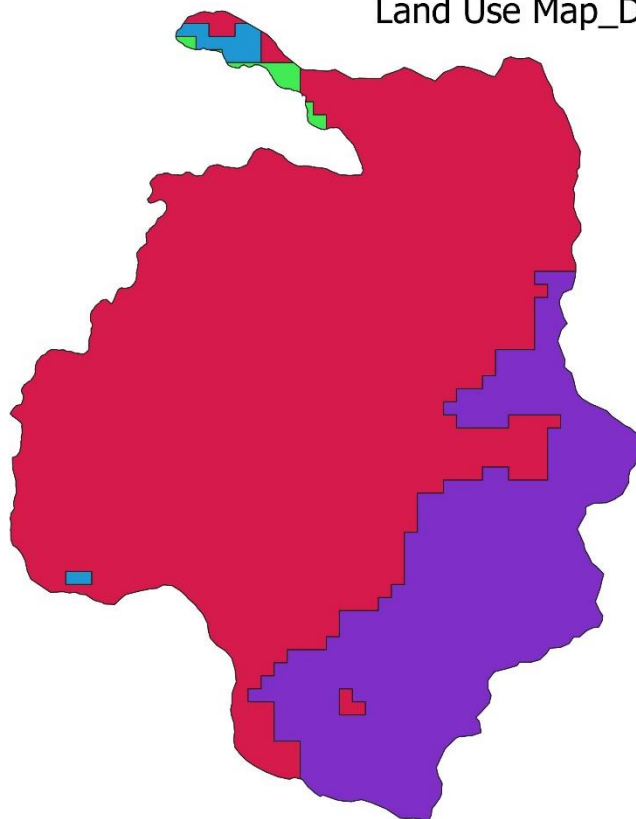
LEGEND

Balamna_CF

1:9,567.023948

0 250 500 m

Land Use Map_Druk Balamna



LEGEND

LULC2016_CF_Balam

Bluepine

Kamzhing

Mixed conifer

Shrubs

1:9,567.023948

0 250 500 m

Traditional Rights and Responsibilities

Services/ Products	Rights	Responsibilities	Traditional Management system
Timber	Every household from the Community Forest registered as member has the right over the timbers for rural use provided the CF has AAC	CF Chairman and Secreatry issues permit as per Management Plan and timbers are marked by Foresrty Officials involving Re-Soop	Traditional Rights over management of Forest as Commuity Forest.
Firewood	Everyone registered as CF member has the rights provided individual holds a valid permit.	CF Chairman and Secreatry issues permit as per Management Plan and timbers are marked by Foresrty Officials involving Re-Soop	Traditional Rights over management of Forest as Commuity Forest.
Fodder	Community members have free access to fodder collection but outsiders are not allowed	Community does not have to obtain forest permit when collected as back loads or head loads.	Community members themselves have access to the fodder resources, which is usually collected on the basis of first-come-first serve
Leaf litters	CF members have rights on leaf litters and its collection.	Free access for community members.	Collection of leaf litter is traditionally controlled by the community itself, which does not allow any outsider to collect litter from the forest.
Stone (Boulder)	CF members have rights over the stone/boulders and its collection for rural use	CF Chairman and Secreatry issues permit as per Management Plan and after site visit to the site.	Collection of stones from the area manually.

Area information	
Name of the Area	Area (Ha)
Total community Forest Area (Ha)	169.91
Non-Production Area (Ha)	15.67
Protection Area (Ha)	1.25
Production Area (Ha)	152.98

Social Information

Information	Description
Name of the villages	Druk Balamna CF
Ethenic groups with CFMG	Balams
Basic amenities	Highway, Farm road, Electricity, Mobile network connection,RWSS and RNR-EC.

Total Household number of CFMG	51
Population of CFMG	386
% Male and % Female	52% and 48%
Main source of income	Sale of livestock dairy products, potato, vegetables, apple, trade and business
Cattle population of the CFMG	296
Main crops	Wheat, Buckwheat and Potato
Cropping pattern	Mixed cropping & crop rotation
Any other information	

Forest Information

Druk Balamna Community Forest is a mixed conifer forest, dominated by Spruce and Blue pine. In some areas the forest vegetation is composed of Oak, Hemlock, Taxus, Betula and Fir species with thick undergrowth consisting of Pyrus species. Throughout the forest, good regeneration of Blue pine is observed, followed by Spruce.

The forest area possesses gentle slopes of 7-10 % slopes with few steep slopes of more than 45% slope gradient. The soil in general appears to be loamy; there is little or no potential of erosion. The Catchment areas are in moderate conditions and majority falls in gentle slopes.

Erosion is negligible within the Community Forest due to the good forest canopy. However, there is a need for plantation assessment in the areas of salvage operations area. The availability of resources like timbers, fodder, leaf litter, and firewood are limited, and there also exist potential grazing areas. The condition of the CF in an average can be described as Average. The main forest canopy consists of Spruce followed by Blue pine. Tree population and species composition varies, although it is observed that there are more young trees than that of mature trees. Healthy trees capable of producing good seeds are also available in the community forest.

Forest Conditions:

Use the forest condition class box below to get the average condition for the CF					
Poor	<input type="checkbox"/>	Average	<input type="checkbox"/>	Good	<input checked="" type="checkbox"/>
Mature <input type="checkbox"/>		Pole stage <input checked="" type="checkbox"/>		Shrub land <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	
Does the main forest canopy consist of large, mature trees?				Yes	<input type="checkbox"/>
				No	<input checked="" type="checkbox"/>
Overall the forest condition is in good category with 50% of forest coverage. The main forest cover consists of pole stage with 41.67% by age. However, the matured tree also extends to 40% and it can conclude to equal distribution of matured and poles.					

Fauna

Local Name	English/Common name	Zoological name
Shaw	Sambar Deer	<i>Cervus unicolor</i>
Kasha	Barking Deer	<i>Muntiacus muntjak</i>
Ripha	Wild pig	<i>Sus scrofa</i>
Leko	Kalij Pheasant	<i>Lophura leucomelanos</i>
Dhom	Himalayan black bear	<i>Ursus thibetanus</i>
Zheem	Blood Pheasant	<i>Ithaginis cruentus</i>
Jee-dha	Monal Pheasant	<i>Lophophorus impejanus</i>
Lha-chum	Musk deer	<i>Moschus moschiferus</i>
Jichu	Birds	
Zee	Common Leopard	<i>Panthera species</i>
Cha-ka	Hanuman Langur/Grey Langur	<i>Presbytini Semnopithecus</i>

List of Forest Products, Who Collects from Forest

List of products and services	Who collect from forest		Collection by Outdiers
	Male (M)	Female (F)	
Mushroom	M	F	Nil
Timber	M		
Fire wood	M	F	
Fodder	M	F	
Leaf litter		F	

Forest Type or Vegetation Type:

Forest Types	Tick (✓)	Remarks, if any
Mixed conifer forest	✓	It consist of blue pine, spruce, hemlock & oak with inclusive of average stand.

Main timber Species

Local Name	English Name	Botanical names
Tongphu	Bluepine	<i>Pinus wallachina</i>
Seyshing	Spruce	<i>Percea spinulosa</i>
Bji shing	Oak	<i>Quercus semicarpifolia</i>

Forest Condition- Canopy Density (main canopy)

Dense	<input type="checkbox"/>	Open	<input checked="" type="checkbox"/>	Very open	<input type="checkbox"/>
Canopy density > 70%		Canopy density < 70%		No real canopy. Isolated trees only	
Accessing the CF by its canopy density, it is Open by 36.67% followed by Dense with 33.33% of main canopy cover.					

Forest Condition-Regeneration

Abundant	<input checked="" type="checkbox"/>	Scattered/few	<input 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)Blue pine	2) Spruce	3) Oak
Regeneration: Seedlings > 30cm and < 1.3m height		
<i>The CF indicates good regeneration status with Abundant regeneration. 45% of the plots accessed shows regeneration being found in most of the places.</i>		

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

Catchment Condition

Soil cover		Soil cover class	
> 50% of the soils are covered by vegetation	High	<input type="checkbox"/>	
25 - 50% of the soils are covered by vegetation	Moderate	<input checked="" type="checkbox"/>	
< 25% of the soils are covered by vegetation	Low	<input type="checkbox"/>	
<i>Catchment Condition of the CF falls at Moderate with 83% of the soil being covered by the vegetation, followed by 10% of the soil with high vegetation cover over the soil.</i>			
Slope gradient			
Slope (degrees)	Slope steepness class		
<10°	Gentle	<input type="checkbox"/>	
10° – 30°	Moderate	<input checked="" type="checkbox"/>	
> 30°	Steep	<input type="checkbox"/>	
<i>The slope gradient of CF falls at 10° – 30° which is Moderate category of Slope Steepness class.</i>			

Catchment Condition-Summary

Less critical	<input type="checkbox"/>	Moderately critical	<input checked="" type="checkbox"/>	Highly critical	<input type="checkbox"/>
<i>With moderate vegetation cover over the soil, the catchment condition is moderately critical where it requires reasonable protection.</i>					

Biotic Pressure Indications

Indication	Present	Limited	Absent
Fire			<input checked="" type="checkbox"/>
Grazing		<input checked="" type="checkbox"/>	

NWFP collection (list the main products including bamboo & MUSHROOM)		✓	
Encroachment			✓
Hunting			✓
Others (describe) Bark beetle affecting the stand	✓		

6 CF Resource and Participatory Resource Assessment

PRODUCTS	FUEL WOOD	HOUSE BUILDING TIMBER	LEAF LITTERS	FODDER
Main Species	Oak & Spruce	Blue Pine & Spruce	Blue pine	Oak
Supply	No oak trees available, lops & tops and fallen trees	Insufficient timber size trees	Sufficient trees for leaf litter collection	Sufficient trees for fodders
Problems	Limited hard wood	Availability of Drashing-size timber is very less	Unfair distribution of leaf litters	Heavy over-logging of oak trees for fodder
Opportunity	Deformed, diseased, dead, and lops and tops	Average numbers of matured trees	Sufficient trees for leaf litters	Sufficient trees for fodder
Management Objectives	To supply the Firewood on sustainable basis	Preserve and protect matured seed trees and sustainable harvesting	Fair & equal distribution of leaf litters	Supply of fodder on sustainable basis
Strategies	To thin out all the matured trees leaving seed trees. Carry out sanitation.	Utilize AHL strategy and thin out for improved stand.	Fixation of collection time	Avoid excessive logging of oak trees
Activities	No marking of standing trees for firewood. Allot only fallen, lops and tops	Thinning and sanitation operation. Strict to AHL	Thinning activities and timely collection	Monitoring and implementation of management practices

7 Forest Product Demand Assessment

Products	Number of HH that require product annually	Requirement of the product (Annual)	Requirement in 10 years
New construction	02		
	Drashing	36	360

Renovation	04		
	Drashing	12	120
Cattle shed	03		
	Drashing	8	80
Flag post	01		
	Poles	108	1800
Fuel wood	14		
	Lops and tops	25TL	250TL
Fencing post	5x10 nos. per HH		
	Poles	50nos.	500nos.

8 Operation Inventory analysis and Annual Allowable Cut

Operation Inventory Analysis		
: Average Volume per Ha (m3/ha)	190.98	
: Average Basal Area per Ha (m2/ha)	21.93	
: Average Number of Trees per Ha	239.12	
Annual Allowable Cut		
Annual Allowable Cut-Calculation	Net ProArea*Volume/Ha/Rotation age	
Net Production Area in Ha	152.98	
Average Vol/Ha	190.98	
	Conifer (Vol(m3/ha)	Brl (Vol(m3/ha)
Average Vol/Ha	173.08	2.73
AAC for Confi	220.65	3.80
AAC for Brl		
Total AAC in m3	224.45	
Total AAC in Cft	7,927.43	

9 AAC vs. Demand

Limit/Demand/timber	Dangchung	Tsim	Cham	Drashing
Annual harvesting limit	45	24	134	30
Annual demand	50	0	0	50

The annual demand for drashing is 50 number but to manage it scientifically, only 19 drashings can be allotted for rural house building timber including renovation and cow shed construction. The demand for dangchung required for fencing post is 50 numbers but can harvest only 18 numbers. So to the harvesting can be done from thinning areas if available. Firewood demand is very high as compare to the availability but it can be met from lops and tops from RHBT harvesting timbers, dead dying, wind fallen and those unsound timbers that cannot be converted to prime timbers.


10 Problem and Opportunities

Problems	Opportunities	Management objectives	Activities for management of the forest
The timbers cannot be extracted as desired as no access to road at the northern part.	Can harvest those matured trees through sawning at site and can also conserve from illegal harvest	1. Protection 2. Sustainable utilization and management 3. Utilization of Forest Product 4. Improvement of the forest	1. Sanitation Operation 2. Plantation 3. Thinning 4. Singling 5. Cleaning activities.

11 Silvicultural Options and Systems

Utilization	Improvement	Protection	Silviculture system	Comments
Drashing and Cham will be utilized for RHBT on sustainable basis.	Sanitation operation, Inducing regeneration, Plantation, Cleaning & thinning.	Protection from the illegal activities. Protection of natural regeneration and thinning	Single tree selection system for RHBT and clear felling at Sanitation with adherence to Guidelines	Pole stage trees with quality species and mother trees shall be retained.

12 Forest Product Preference Ranking Matrix

Forest product 	Timber	Fire wood	Fodder	Grazing	Water	Leaf litters	Fencing post
Timber	X						
Fire wood	Timber	X					
Fodder	Timber	Fodder	X				
Grazing	Timber	Fire wood	Fodder	X			
Water source	Water source	Water source	Water source	Water source	X		
Leaf litters	Timber	Fire wood	fodder	Leaf litter	Water source	X	
Fencing post	Timber	Fire wood	fodder	Fencing post	Water	Leaf litters	X
Total	5	3	4	0	6	2	1

** Water source is a highly preferred natural resource and grazing is the lowest preferred in their matrix ranking

13 Participatory Environment Assessment

+++ = Positive Effects ---- = Negative Effects 0 = No Effect

Activity proposed	Potential Environmental Effects				Potential Socio-Economic Effects			
	Soil	Water	Wild animals	Plants	Traditional forest use	Cultural & religious values	Local employment	Local benefits from produce
Fire wood harvesting	-	-	-	-	0	0	0	+++
Timber harvesting	--	--	--	---	+	+	++	++
Harvesting of poles types	-	-	-	-	+	+++	0	++
Plantation	+++	+++	++	++	--	++	--	0
Forest fire control	++	++	+++	+++	0	0	0	+
Forest protection	+	+++	+++	+++	++	+	0	--
Collection NWFP	-	-	0	-	0	++	+	+++
Grazing control	++	++	++	++	-	0	0	--
Thinning	-	-	-	-	0	0	+	+++

13.1 Addressing Potential Negative Effects

Activity	Procedure
Timber Harvesting	- No felling and dragging of logs will be permitted on the steep slopes and marking & felling in the catchment area will not be permitted. Avoid felling in Wildlife habitats - tree felling within the distance of 600 feet up hills and 300 feet down hills will be prohibited.
Collection of leaf litters	- collection of leaf litters will be controlled in the area which required shed and mulching for the seedlings and trees
Fodder collection	- Over lopping of trees for fodder will not be permitted
Fuel wood & Pole harvest	-Supply and issuance of fuel wood will be made on need basis.
Forest Fire prevention	-No temporary make shifts will have allowed in the Community Forest and CFMG create fire lines in sensitive areas

13.2 Monitoring Plan

<ul style="list-style-type: none"> • Timely monitoring of regular CF activities by CFMG and T-Range. • Should monitor growing stock, forest condition, harvesting limit and income generation. • Benefit sharing, decision making and financial management. • The T-Range will provide technical assistance as and when required. • Submission of annual report to the T-Range pertaining to CF activities. • T-Range have to submit annual report to TD, and copy to SFED. • The joint report will be submitted to the DoFPS regarding activities related to CF management plan if any.

13.3 Forest Resource Monitoring Plan

Objective	Indicator	Monitoring procedure	Responsibility	Comments
To increase fuel wood production on a sustainable basis	The lops and tops utilization and woods left unattended to be allotted.	Checking/patrolling after timber is being lifted/ checking from the record of CFMG	CFMG committee & members	T-Range staff will assist
To increase and improve regeneration	Status of regeneration in sanitation area assessment	Regeneration survey in sanitation area and effort plantation if required.	CFMG committee & members	T-Range staff will assist
To preserve and protect pole size timbers	Status of trees	No harvesting of timbers besides AHL except for sanitation operation.	CFMG committee & members	T-Range staff will assist
To ensure equitable distribution of leaf litter	Nos. of back load collected	From the records of CFMG	CFMG committee & members	T-Range staff will assist

13.4 Social and Institutional Monitoring Plan

Objective	Indicator	Monitoring procedure	Responsibility	Comments
Traditional forest use	Increased forest stocks in edge of villages	Sighting of felling near villages	CFMG	T-Range will assist
Local benefits from forest produce	Having equal share from forest produce	Collection permit & CFMG records	T-Range & CFMG	TD & T-Range will assist

13.5 Environmental Monitoring Plan

Potential negative impact	Indicator	Monitoring procedure	Responsibility	Comments
Soil	Landslide	Look for eroded area	CFMG	TD & T-Range will assist
Water	Detection of new stream or drying up of streams in CF area	Check for drying up of streams and no marking and felling of trees at water source.	T-Range & CFMG	TD & T-Range will assist

Wild animals	New species arrival	Sighting	T-Range & CFMG	TD & TR will assist
Plants	Occurrences of new species	Sighting	CFMG	TR will assist
Protection (forest fire)	Fire incidence	From CFMG record	CFMG	Committee members and T-Range
Affect of bark beetle inside CF	Dying of trees due to beetle infestation	Sanitation operation and eliminating the new infestation	CFMG and T-Range	CFMG propose and T-Range process
Damage of natural regeneration	Rolling of timbers at extraction site	Resop and CFMG will monitor in loss of regeneration	CFMG and T-Range	CFMG verify the destruction

Annual monitoring of CF and CFMG should be carried out by concerned forestry office jointly with CFMC.

13.6 Management Activities in Community Forest

13.6.1 Sanitation Operation

Since the CF area is being infested by Bark Beetles in the previous period and still there is chances of infestation is getting to young stand, the identification and detection before it spreads to other areas, the monitoring by CFMG should be the first priority to protect the whole CF area from infestation from insect.

Activity:

1. If there is detection of the infestation, should immediately process for approval and dispose it as per guidelines, rules and regulations

Procedure:

1. CFMG to approach the nearest forest office and submit detail report. The forestry office to verify and assist technically.
2. Range Office to assist technically and process for separate approval for Sanitation work. Upon receipt of approval, the CFMG to carryout sanitation work as per Guidelines.

14 Waste Management inside CF

Activities	Responsibility	Action
Littering/Disposal of any waste inside CF and vicinity of the same is an offence.	If anyone is found littering or disposing the waste in CF/SFRL, he/she shall be apprehended and handed over to CFMC	The CFMC shall impose fine and penalties in consultation with relevant agencies. Gewog/Forest/Dzongkhag/Environment)
Monitoring and waste collection by CFMG	Whenever there is cleaning program at the village/community level through the relevant agencies, the cleaning shall be done inclusive of CF area.	CFMC will engage a group to CF area for waste cleaning.
No applicant shall leave or litter in CF during timber extraction or any	Resoop shall inspect waste disposal by the timber harvesters and report	The CFMC shall deal the case with relevant agencies.

other works inside CF	to CFMC in the event of waste disposal/leaving waste inside CF	
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15 Annual Work Plan (AWP)

Objective	Activities	Time
Cleaning CF boundaries	Removing bushes all along the boundaries	Once in two years
Monitoring CF area.	Patrolling & inspection of illegal activities	Monthly and as and when required.
Fire line	Creating fire breakers in prone areas	Once in two years
Allotment of RHBT timbers	Issuing permit, Marking and Passing.	Every year
Loaning of community funding	Distribution of loan to community members	Every October month
Waste Management in CF	Collection of waste inside and along the CF boundary	During monthly/yearly cleaning campaign at community
Record Keeping training	Train the CFMC on record keeping mechanism.	Once in 10 years
Sanitation Operation	if disease outbreak is detected, the operation shall be carried out as per rule.	-

16 Evaluation of CMF Plan

The community forestry activities will be evaluated annually. At end of the 5th year, midterm review will be conducted. Before the expiry of CFMP, a new management plan will be drafted for ten years. Assistance in evaluating the CF after 5 years and in the preparation of the subsequent plan will be sought from the Forestry office.

17 Calamity Intervention

During unforeseen events, such as forest fire, windstorm, flood, pest & diseases inside the community forest, upon verification and reports submitted by the Haa Range, Paro Forest Division may intervene or seek further instructions from the Department.

The timbers from any unforeseen events shall be utilized by genuine beneficiaries for domestic use. The utilization monitoring will be done as per the rules and regulations inline with Department of Forest and Park Services. The timber will be sold only if it is found in excess.

In times of any calamities in CF, all members should come to assist and intervene to combat the disaster.

18 Part B: By-Laws

18.1 Membership Arrangements

The membership shall be only the one who has census, house no. Thram no. and native of the particular village.

a) New membership: *Insiders-*

- The insider who has settled in the village and is willing to participate as a member has to pay Nu. **3000.00** as an entry fee.
- A person settled in the village after purchasing can join as CF member after payment of membership fee of Nu **6000.00**
- Members willing to avail timbers and other benefits from the Community Forest, should utilize the benefits within **Balamna** vicinity and on the land that is recorded to this CFMP.

b) Leaving the membership.

- Person can leave the group without any benefits from the CF if he/she has not availed any timbers and loan benefits from CF.
- A person leaving the management group should refund the cost of timbers availed from CF and should clear the loan availed.
- If a person has not constructed house and found the timbers being stacked for construction and planning to leave the group, the timbers shall be forfeited.
- A person from the group shall be terminated if he/she doesn't comply the terms and conditions of the Management Plan shall be dealt as per guidelines 2018 of DoFPS

c) Expenses for Expenditure incurred

- Expenses incurring for the official works shall be borned from CFMG management fund
- Involvement of government officials: as per eligible mileage for the person who gets involved.
- Boundary demarcation: DSA and transportation
- Expenses for foodings (Lunch and Refreshment) incurred for any CFMG meeting shall be from CFMG fund.
- Expenses for CF Management Plan shall be borned from CFMG fund.

d) Management Committee Formation

The CF shall have three management committee members

- a) Chairperson: - Dorji
- b) Secretary: - Sonam Dorji
- c) Treasurer: - Sanagy Chedup

e) Payment/Incentives for CF officials and TERMS (years)

No monthly incentives for Chairman and Treasurer unless they perform duties involving transportation of officials and accompanying with officials for the purpose of CF. Nu. 1500.00 per day/occasion shall be paid for the person/vehicle involved.

TREASURER is paid with Nu. 10,000.00 annually as an incentive for documentation and taking charge of CF officials works. Official terms shall be based on the availability and willingness. Prior handing taking should be done before to resignation of official.

Resoop shall be eligible for Nu.50/per tree from the permit holder while he accompanies with the marking officer and applicant.

He shall be eligible for Nu. 1000.00/day for patrolling and CF related works. The work progress should be detailed to CFMC prior to payment.

Royalty Rates for allotment of RHBT from CF

The royalty for the timber allotment for RHBT shall be as per FNCRR-2017- 2022, amendments and rules that has been enacted to the latest

18.2 Terms of Reference for CF Management Committee

<ul style="list-style-type: none"> • TOR for Chairperson <ul style="list-style-type: none"> • Change the ownership of bank account as and when there is a change in Committee members. • Heads the CFMG and shall lead the meetings. • Calls meetings whenever necessary and informs concerned persons about date, time and place and the reasons for the meeting. • Chairs and facilitates meetings and makes sure each person is allowed to speak, thereby giving everyone a fair chance to speak and raise issues • Approves applications for forest products (with Secretary). • Countersigns financial transaction and authorization to draw cash from the bank account (with Treasurer). • He/She shall keep relation with other organizations to take up the CF related works. • Chairperson shall initiate to receive guest related to CF works and take up the matter with relevant agencies. • He/She should lead any project that benefits the CFMG and take up for completing the project in accordance to rules and regulations.
<ul style="list-style-type: none"> • TOR for Secretary <ul style="list-style-type: none"> • Assists the Chairperson and officiate him/her during his/her absence. • Manages the correspondence (writing of letters and minutes of meetings) for the CFMG. • Maintain the files of the CFMG. • Maintains the list of CFMG members. • Approves applications for forest products (with Chairperson) in line with CFMP. • Keeps minutes of CFMG meetings. • Prepares Annual Progress Report (with other CF Management Committee members). • He/she shall keep the records of the activities and provide it to relevant agencies whenever asked for presentation.
<ul style="list-style-type: none"> • TOR for Treasurer <ul style="list-style-type: none"> • Looks after any financial transactions on behalf of the CFMG. • Keeps records of expenditure and labor contribution during CF activities • Keep the detail forest produce allotment and also verify the eligibility of Forest produce in line with Mgt Plan and Forestry rules and regulations and recommend to Chairman and Secretary. • Gives a detailed account of how much money or labor has been contributed, how much has been spent and how much is still left, at every CFMG meeting (or as required) • Prepares the Annual Financial Report for the CFO (with the assistance of other CF Management Committee members). • Countersigns financial transaction and authorization to draw cash from the bank account (with Chairperson).
<ul style="list-style-type: none"> • TOR for Ressop <ul style="list-style-type: none"> • Verify the timber marking • Patrolling and keeping information on illegal timber extraction. Nu.1000/day shall be distributed to resoop for carrying out patrolling. However, the

- concerned resoop shall submit report to Secretary and Chairman before receiving the wage.
- Ressop will be identified every year on rotational or willingness of the person in general meeting.

18.3 Roles and Responsibility of CFMG

- To follow the procedures and rules of the CFMG as outlined in the CFMP and By-laws.
- Participation in CFMG planning and decision-making.
- Election of CF Management Committee members.
- Participation in drafting of the CF management plan and CFMG by-laws.
- Participation in CFMG meetings.
- Co-operation with the CF Management Committee in carrying forest management and other management operations especially by contributing labor if required.
- Co-operation with the CF Management Committee regulating forest use by other CFMG members and by outsiders
- Become involved in other CFMG activities as planned
- Report any illegal activities including poaching inside CF.
- They have the rights to eliminate the management committees from their roles if necessary.
- They also have the right to do auditing.

19 Membership fee and fees collection

Sl No	Forest Products/ Membership fees	Procedures	Fees(Nu)
1.	Membership fees	Collection shall be done upon receipt of application by the treasurer & deposit in the CFMG account.	As per Membership Arrangement Clause.
2.	Timber: Drashing Cham Tsim Dangchung F/wood (hard & soft)	Chairperson and Secretary will collect the fees/fines and Gewog Forest or T-Range will assist. **In view of many trees to be felled, one drashing will be allotted in lieu of 40 tsim and 50 dangchungs for cattle shed construction**	As per FNCRR-2017-2022, amendments and rules that has been enacted to the latest.
3.	NWFP Stone and Boulders		

20 Offences and Penalties

Timber Products	CFMG members		Non CFMG members	
	Fines/Penalty	Products	Fines/penalty	Products
Timbers, including firewood	The fines and compensations or penalties for both member and non-member shall be calculated based on volume and shall be imposed fine and compensation as per FNCRR-2017-2022, amendments and rules that has been enacted to the latest and deposit in CFMG Account.			

Leaf litter	Anyone from the household can collect leaf litter provided they collect within the period framed by CFMG. The collection date is fixed at 1 st day of every 10 th month Bhutanese Calendar. Failure to comply the time would be fined with Nu. 1000/ per bag. Nu. 2000/bag -will be levied for non-members and seized the leaf litters.
Construction of temporary camping sites	Illegal construction of structures or temporary camping sites inside CF shall be liable for fine Nu.5000.00 per incident and such structures shall be removed immediately.
Forest Fire	As per FNCRR-2017- 2022, amendments and rules that has been enacted to the latest.
Labour & meeting	A fine Nu. 500/- will be imposed to the absentee members and no aged, infant and disabled person will be entertained during working hours. Subsequent absentee will be subject to fine for Nu. 1000/- and if he/she fails to attend meeting for 3 rd time, he/she shall be terminated as per the rule. Substitute for meeting should be within the community.
Stone	Illegal stone collection from CF is not allowed. However, genuine applicants can avail stones for rural house building as per quantity that is eligible as per FNCRR. Only manual surface collection is allowed.
Consideration	Sympathetic consideration will be given to those members with genuine reasons (death/illness).
CFMG fund	All CF members have right to know the details of fund management of CFMG. If there is any mismanagement of fund by CFMG, the matter shall be informed to CFMC and resolve it. If the fund is mismanaged by CFMC, the matter shall be informed in written form to relevant agencies without hesitating, provided the information made is true.
Informant	Any information made to CFMC or any other relevant agencies, the informant shall be kept confidential and shall protected. The information made by informant should be true and reliable for investigation by CFMC and relevant agencies. Reward would be paid as per FNCRR 2017.
Miss use of power by CFMC and others	CFMG will resolve the case within CFMC and then immediate information to Forestry Office if not resolved. Immediately terminate the person from CFMC and further be dealt as per the rules and regulations. The case shall be dealt through Gewog office by CFMG and Forestry Office.
Labor contribution for CF related works	If fails to attend CF works like plantation, border clearing and community work, (task that requires everyone's engagement) he/she is liable for fine for Nu. 1000.00

21 CFMG Fund Management

<p>Possible source of fund:</p> <ul style="list-style-type: none"> • Every cash collected as membership fees, forest product fees, penalties, compensation etc, will be regarded as community forest fund. • Cash generated from the sale of surplus timber or any timbers harvested through open auction/allotment. • Any reward or donations received in the name of CFMG shall be considered as CFMG fund. • Any financial transaction from CFMG fund for any purpose should be done jointly by Chairman, a member from CFMG and Secretary <p>Fund management:</p>

- CF should have bank account with any financial institutions.
- The account shall be operated under the joint signatory nominated personal by CFMG.
- Money receipts should be issued for all payments received.
- Contingency fund of Nu. 5,000 may be kept with the Secretary/Treasurer.
- Amount up to over Nu. 5,000 (five thousand only) should be deposited within 10 days. Failure to deposit on time, the Treasurer shall be liable to pay the interest rate and deposit in the CF account.
- All money received should be recorded in the Cash Book by the Secretary.
- The Treasurer collects all contributions, fees, fines, donations and maintain records
- The Treasurer shall present the schedule of collections to the CFMG at least annually.
- There should not be any over-writing, use of correction of fluid, tearing of pages, etc. in the record keeping books and money receipts including permit books.
- All financial records should be made available to authorized auditing team/inspection team anytime.

Expected expenditures/benefit sharing:

Areas of fund use	Limit %
CF development activities (CF review, nursery creation, plantation, thinning, cleaning, salvage operation, sanitation, boundary demarcation, fire line creation, etc.)	Not less than 25
CFMG enhancement (Loan, capacity building, study visits, meeting, workshops, networking, visitors in CF, income generation and enterprises development, etc.).	Not more than 50% of the total fund
Reserve fund in the Bank (security)	Not less than 5%
Others (to be decided by the CFMG members on e.g. incentives to victims of natural calamities, incentives to disadvantaged members/households, contribution to community <i>Lhakhangs</i> , water supply, farm road, etc.)	Not more than 20%

Disbursement Procedure:

- Any expenditure up to Nu. 10,000 shall be decided by the CF Management Committee and beyond that amount the decision shall be made by the 2/3rd majority of the CFMG members.
- The Treasurer shall maintain all detail expenditure records (receipts, vouchers, bills, including minutes of meetings, etc.). All such expenses shall be immediately recorded in the cash book.
- The Treasurer shall present the details of expenditure to the CFMG members and concerned inspection team(s).
- The concerned Forestry Officer shall ensure the compliance of above provisions.

CFMG fund for loan

Every CFMG member shall be given opportunity to avail loan from their respective CFMG fund with dully filled the annexure form (I) to CFMG. The loan interest and term shall be decided by CFMG; however, any due loan should have liquefied before expiry of the CFMP or whichever comes in rule (*term/CFMP duration*):

- Loan from CFMG fund shall not be given to non CFMG members.
- The borrower must be of 18 years and above.
- Only one member from the household is eligible for loan at a time.
- Should not have any outstanding loan in the CFMG.
- The borrower should have his/her census in a household who is member of the CF.

- Need of mortgage or guarantor shall be decided by the CFMG.

Eligibility and Mortgage

- No mortgage is required for getting loan from CFMG.
- Loan distribution shall be done only once in a year.
- Amount to be loaned and the interest shall be decided by CFMG before annual loan distributed.

Loan Review

At the end of each year, the CF Management Committee shall review all the loans and repayments. The same should be submitted to Range Office for review and comments. The information shall be shared during the CFMG general meetings/assemblies.

22 Meetings

General meeting shall be done twice in a year on 12th day of 7th month for reviewing (Bhutanese calendar). And the other meetings shall conduct as and when required.

23 Conflict Management

The Management Committee Members shall first attempt to resolve any conflicts arising among the CFMG members.

- In case of failure to resolve the conflict, the matter shall be forwarded to the Forestry office.
- If this also fails to resolve the conflict, it will be forwarded to the Gup.
- For those cases still remaining unresolved, it shall be forwarded to the Dzongkhag Court.

24 Amendment of CFM Plan

- Whole CFMG members shall jointly make minor changes in the CF plan if necessary and submit the proposal to Forest Range Office for information and enacting as amendment.
- Should there be any major changes CFMG will seek approval from Department otherwise, it shall be done only after plan period i.e. 10 years.

25 Illegal activities from CF

Any timbers/forest products extracted and transported from CF should be accompanied by CF collection permit and other forestry related documents like Approval, COSTDMO, ITMO or IMO. Failure to produce the documents shall be an offence or an attempt to commit an offence either by CFMG or outsiders.

Therefore, fine and penalties shall be levied to the offender. The Compensation and Fines shall be deposited to CFMG account upon settlement of the cases. Secretary shall follow up on the case with relevant agency. As per FNCRR 2017 and amendments, the informer or the detector shall be eligible for reward of 25% from the fines levied.

Similarly, any offence related to wildlife, the offender shall be handed over to the relevant agencies according to the offence/crime committed. CF shall not handle the case of wildlife poaching.

26 Power of the Department

- The Department of Forests and Park Services has the right to all wildlife, parts of wildlife, stones and minerals as per prevailing Forest Act/Rules.
- All Forest products for sale within and outside the Community Forest shall be inspected.
- The Department will assist in apprehending illegal cases jointly, upon applied by the CFMG, if the case becomes serious.
- The department has the authority to cancel the CF Certificate if the activities were inconsistent with the management plan.

27 Annexure: I. CFMG member list

No.	Household Representative	Citizen ID No	Male Nos	Female Nos	Total Cattles	House No.	Tram No.
1	Gembo Tshering	10504000075	1	4	0	Cha-4-229	561
2	Rinchen	10504000236	8	3	14	Cha-4-32	4
3	Dorji	10504000029	4	5	7	Cha-4-243	326
4	Geltshen	10504000117	3	0	9	Cha-452	34
5	Yeshey Dorji	10504001309	4	5	10	Cha-4-266	224
6	Tshering Bidha	10504000091	10	5	16	Cha-4-50	220
7	Kinley Bidha	10504000212	2	2	0	Cha-4-309	329
8	Tshering Dorji	10504000240	2	3	7	Cha-4-233	54
9	Gembo Tshering	10504000014	5	6	4	Cha-4-238	9
10	Wangmo(B)	10504000217	6	2	9	Cha-4-60	3
11	Wangmo (A)	10504000264	2	3	10	Cha-4-64	24
12	Nob Tshering	10504000048	1	0	0	Cha-4-262	Nill
13	Zangmo	10504000009	4	4	7	Cha-4-237	276
14	Tshering	10504000210	3	5	8	Cha-4-59	2
15	Nono	10504000002	4	2	12	Cha-4-235	253
16	Tshering Pemo	10504000276	3	4	3	Cha-4-66	13
17	Ugyen Dema	10504000269	9	4	5	Cha-4-65	223
18	Tshering Yangzom	10504000165	3	10	4	Cha-4-307	268
19	Passang Dema	10504000123	4	9	9	Cha-4-53	5

20	Ugyen Pelden	10504000200	1	5	9	Cha-4-315	353
21	Pem Bidha	10504000295	8	5	7	Cha-4-68	265
22	Bidha (A)	10504000247	5	8	5	Cha-4-63	12
23	Bobo	10504000172	4	3	6	Cha-4-56	10
24	Wangdi	10504000157	4	5	4	Cha-4-55	251
25	Kunzang Dolma	10504000041	5	5	4	Cha-4-261	25
26	Am Kaka	10504000281	7	5	7	Cha-4-67	60
27	Yangka Lhamo	10504002284	1	1	6	Cha-4-275	318
28	Sonam Choden	10504000184	6	4	9	Cha-4-57	15
29	Tshering Nidup	10504000135	5	3	9	Cha-4-54	14
30	Lhab Tshering	10504000138	1	1	4	Cha-4-314	317
31	Bhokha Dukpa	10504000038	4	3	0	Cha-4-234	18
32	Lhada Bidha	10504000038	2	4	10	Cha-4-244	18
33	Chencho Lhamo	10504000188	5	7	10	Cha-4-58	1
34	Rinchen Bidha	10504000071	5	3	10	Cha-4-52	9
35	Guzi	10504000071	7	4	5	Cha-4-49	6
36	Nim Tshering	10504000074	3	2	8	Cha-4-336	536
37	Passang Wangmo	10504000108	3	2	0	Cha-4-51	7
38	Namgay Dorji	10504000053	2	2	9	Cha-4-263	125
39	Namgay	10504000088	4	1	0	Cha-4-324	322
40	Tshering Dorji	10504000220	3	6	1	Cha-4-17	
41	Lethro	10504001440	6	7	2	Cha-4-222	419
42	Tshering Wangdi	10504000077	3	3	3	Cha-4-49	6
43	Yangzom	10504000024	5	2	7	Cha-4-24	311
44	Rinzin Bidha	10504000226	8	4	7	Cha-4-08	252
45	Namgay Bidha	10504000196	2	3	2	Cha-4-337	6
46	Rinzin	10504000136	3	2	7	Cha-4-Nill	233

47	Gyeltshen	10504000266	2	3	5	Cha-4-329	319
48	Ugyen Wangmo	10504000689	4	4	4	Cha-4-Nill	420
49	Bidha (B)	10504000272	3	2	2	Cha-4-Nill	17
50	Passang Wangmo(D)	10504000278	0	1	0	Cha-4-66	Nill
51	Samdrup Norbu	10504000065	1	0	0	Cha-4-261	Nill

28 Annexure II- Operational Compilation Sheets

OPERATIONAL INVENTORY: COMPILATION SHEET (FIXED-SIZE PLOT)								
1. inventory area	:Druk Balamna CF							
2. stratum	:MC/BP/Brl							
3. nr of plots	:91	5. local volume table : Volume table of Bhutan					6. table class	
<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	class	plot					
class	basal area	volume	size	expansion	tally	nrha	basha	volha
(cm)	(m2)	(m3)	(ha)	factor		(stems/ha)	(m2/ha)	(m3/ha)
Species group	Blue pine							
10-19	0.017	0.0955	0.05	0.22	245	53.85	0.92	5.14
20-29	0.047	0.349	0.05	0.22	108	23.74	1.12	8.28
30-39	0.093	0.8275	0.05	0.22	45	9.89	0.92	8.18
40-49	0.156	1.583	0.05	0.22	45	9.89	1.54	15.66
50-59	0.233	2.66	0.05	0.22	20	4.40	1.02	11.69
60-69	0.327	4.09	0.05	0.22	7	1.54	0.50	6.29
70-79	0.436	5.94	0.05	0.22	7	1.54	0.67	9.14
80-89	0.561	8.23	0.05	0.22	3	0.66	0.37	5.43
sum for all dbh classes						105.49	7.06	69.82
Species group	Spruce							
10-19	0.017	0.105	0.05	0.22	120	26.37	0.45	2.78
20-29	0.047	0.375	0.05	0.22	46	10.11	0.48	3.79
30-39	0.093	0.875	0.05	0.22	45	9.89	0.92	8.66
40-49	0.156	1.655	0.05	0.22	28	6.15	0.96	10.19
50-59	0.233	2.756	0.05	0.22	18	3.96	0.92	10.90

60-69	0.327	4.214	0.05	0.22	8	1.76	0.57	7.41
70-79	0.436	6.066	0.05	0.22	5	1.10	0.48	6.67
80-89	0.561	8.343	0.05	0.22	5	1.10	0.62	9.17
90-99	0.701	11.076	0.05	0.22	2	0.44	0.31	4.87
sum for all dbh classes						60.88	5.70	64.42
Species group	Hemlock							
10-19	0.017	0.0707	0.05	0.22	66	14.51	0.25	1.02
20-29	0.047	0.2345	0.05	0.22	31	6.81	0.32	1.60
30-39	0.093	0.5226	0.05	0.22	18	3.96	0.37	2.07
40-49	0.156	0.9533	0.05	0.22	12	2.64	0.41	2.51
50-59	0.233	1.5422	0.05	0.22	15	3.30	0.77	5.08
60-69	0.327	2.3027	0.05	0.22	8	1.76	0.57	4.05
70-79	0.436	3.2469	0.05	0.22	7	1.54	0.67	5.00
80-89	0.561	4.3858	0.05	0.22	7	1.54	0.86	6.75
90-99	0.701	5.7295	0.05	0.22	6	1.32	0.92	7.56
100-109	0.858	7.2880	0.05	0.22	2	0.44	0.38	3.20
110-119	1.030		0.05	0.22	4	0.88	0.91	-
sum for all dbh classes						38.68	6.43	38.84
Species group	Other Brl							
(cm)	(m2)	(m3)	(ha)	factor		(stems/ha)	(m2/ha)	(m3/ha)
10-19	0.017	0.081	0.05	0.22	44	9.67	0.16	0.78
20-29	0.047	0.279	0.05	0.22	54	11.87	0.56	3.31
30-39	0.093	0.639	0.05	0.22	22	4.84	0.45	3.09
40-49	0.156	1.191	0.05	0.22	21	4.62	0.72	5.50
50-59	0.233	1.961	0.05	0.22	8	1.76	0.41	3.45
60-69	0.327	1.343	0.05	0.22	6	1.32	0.43	1.77
sum for all dbh classes						34.07	2.73	17.90

29 Annexure III: Stand and Stock Sheet

STAND & STOCK TABLE SHEET														
1. inventory area	:DRUK BALAMNA COMMUNITY FOREST													
2. stratum	:MC/BP/BRL													
3. nr. of sampling units	:91													
estimated parameter	: Average No. of trees per Ha (Nos/ha)											(report all values to 2 decimals)		
Species group	Dbh class (cm)													
	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120+	total	%
Blue pine	53.85	23.74	9.89	9.89	4.40	1.54	1.54	0.66	-	-	-	-	105.49	44.12%
Hemlock	14.51	6.81	3.96	2.64	3.30	1.76	1.54	1.54	1.32	0.44	0.88	-	38.68	16.18%
Spruce	26.37	10.11	9.89	6.15	3.96	1.76	1.10	1.10	0.44	-	-	-	60.88	25.46%
total conifer	94.73	40.66	23.74	18.68	11.65	5.05	4.18	3.30	1.76	0.44	0.88	0.00	205.05	85.75%
Other Brl	9.67	11.87	4.84	4.62	1.76	1.32						-	34.07	14.25%
total broadleaf	9.67	11.87	4.84	4.62	1.76	1.32	0.00	0.00	0.00	0.00	0.00	0.00	34.07	14.25%
total all species	104.40	52.53	28.57	23.30	13.41	6.37	4.18	3.30	1.76	0.44	0.88	0.00	239.12	100.00%
%	0.44	0.22	0.12	0.10	0.06	0.03	0.02	0.01	0.01	0.00	0.00	0.00	100.00%	
estimated parameter	: Average Basal Area per Ha (m2/ha)											(report all values to 2 decimals)		
Species group	Dbh class (cm)													
	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120+	total	%
Blue pine	0.92	1.12	0.92	1.54	1.02	0.50	0.67	0.37	-	-	-	-	7.06	32.20%
Hemlock	0.25	0.32	0.37	0.41	0.77	0.57	0.67	0.86	0.92	0.38	0.91	-	6.43	29.32%
Spruce	0.45	0.48	0.92	0.96	0.92	0.57	0.48	0.62	0.31	-	-	-	5.70	26.01%
total conifer	1.61	1.91	2.21	2.91	2.71	1.65	1.82	1.85	1.23	0.38	0.91	0.00	19.20	87.54%
Other Brl	0.16	0.56	0.45	0.72	0.41	0.43						-	2.73	12.46%
total broadleaf	0.16	0.56	0.45	0.72	0.41	0.43	0.00	0.00	0.00	0.00	0.00	0.00	2.73	12.46%
total all species	1.77	2.47	2.66	3.63	3.12	2.08	1.82	1.85	1.23	0.38	0.91	0.00	21.93	100.00%
%	0.08	0.11	0.12	0.17	0.14	0.10	0.08	0.08	0.06	0.02	0.04	0.00	100.00%	

estimated parameter	: Average Volume per Ha (m3/ha)												(report all values to 2 decimals)	
	Dbh class (cm)													
<i>Species group</i>	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120+	total	%
<i>Blue pine</i>	5.14	8.28	8.18	15.66	11.69	6.29	9.14	5.43	-	-	-	-	69.82	36.56%
<i>Hemlock</i>	1.02	1.60	2.07	2.51	5.08	4.05	5.00	6.75	7.56	3.20	-	-	38.84	20.34%
<i>Spruce</i>	2.78	3.79	8.66	10.19	10.90	7.41	6.67	9.17	4.87	-	-	-	64.42	33.73%
<i>total conifer</i>	8.95	13.67	18.91	28.36	27.68	17.75	20.80	21.34	12.42	3.20	0.00	0.00	173.08	90.63%
<i>Other Brl</i>	0.78	3.31	3.09	5.50	3.45	1.77	-	-	-	-	-	-	17.90	9.37%
<i>total broadleaf</i>	0.78	3.31	3.09	5.50	3.45	1.77	0.00	0.00	0.00	0.00	0.00	0.00	17.90	9.37%
<i>total all species</i>	9.73	16.98	22.00	33.85	31.12	19.52	20.80	21.34	12.42	3.20	0.00	0.00	190.98	100.00%
<i>%</i>	0.05	0.09	0.12	0.18	0.16	0.10	0.11	0.11	0.07	0.02	0.00	0.00	100.00%	