# PEREKEZI FOREST RESERVE

# CO-MANAGEMENT PLAN FOR CHIPUNGU BLOCK

# M'MBELWA DISTRICT COUNCIL



Prepared by: GVH Chinjoka Chirwa and Wider Community,

Forestry Department and Mzuzu University

Supported by: GoM/EU Improved Forest Management for

Sustainable Livelihoods Programme (IFMSLP)



January, 2014

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# **Acronyms**

ADC Area Development Committee
BMC Block Management Committee
CBO Community Based Organisation

DFO District Forestry Office
DoF Director of Forestry

Find and Plantage Plantage And

EPA Extension Planning Area

EU European Union
FD Forestry Department
FMU Forest Management Unit

FLS Front Line Staff
FR Forest Reserve

GoM Government of Malawi GVH Group Village Headman

HH Household

IFMSLP Improved Forest Management for Sustainable Livelihoods

Programme

LFMB Local Forest Management Board

LFO Local Forestry Organisation
PCU Programme Coordination Unit
PIU Programme Implementation Unit

PFMP Participatory Forestry Management Plan

PMU Programme Management Unit SFAP Strategic Forest Area Plan

TA Traditional Authority

VDC Village Development Committee

VFA Village Forest Area
VH Village Headman

VNRMC Village Natural Resources Management Committee

# **Acknowledgements**

GVH Chinjoka Chirwa and wider communities would like to thank the Improved Forest Management for Sustainable Livelihoods Programme (IFMSLP) for funding development of the co-management plan for Chipungu Block. We also thank students of Department of Forestry at Mzuzu University and staff of Mzimba District Forestry Office (DFO) for the facilitation and technical input into all processes leading to the development of this plan.

Lastly, the commitment and untiring efforts by the Chipungu Block Management Committee are also acknowledged throughout the development of the Plan.

### CHAPTER 1. INTRODUCTION

Perekezi forest reserve was established in 1933 for protection of water catchment to sustain domestic and agricultural activities, preservation and conservation of biological diversity. Present benefits and management approaches of the forest reserve have become insufficient to meet the increasing demands of people and institutions. Co-management is viewed as a viable option for managing the forest reserve in order to engage and meet the expected demands of many users. This requires that management objectives of the reserve are defined and a management plan developed in line with the prevailing National Forest Policy.

The Forestry Department (FD) with funding from European Union (EU/GoM) is supporting a co-management process for implementation of Improved Forest Management for Sustainable Livelihood Programme (IFMSLP). The Programme aims at contributing to the reduction of poverty and the conservation of forests in Malawi. The purpose of the Programme is to improve the livelihoods of forest dependent communities through participatory management of forests both in forest reserves and on customary land by implementation of the National Forestry Programme (NFP). In Mzimba, the Programme is implemented in Perekezi and Mtangatanga Impact Areas. The Strategic Forest Area Plan (SFAP) for Perekezi Impact Area is a long-term plan with a broad perspective to bring about sustainable management of forest goods and services in and around Perekezi forest reserve for improved and equitable livelihoods of the surrounding communities. The SFAP provides the vision, set of management objectives and strategic actions carefully developed and defined with regard to the reserve's wider environmental significance rather than the demand for products and services it might yield.

The main objectives of Perekezi SFAP (under which Chipungu Block falls) are:

- To increase forest cover on customary land adjacent to the forest reserve.
- To engage communities in sustainable land use management on customary land adjacent to the forest reserve.
- To manage the forest resource in Perekezi for catchment and biodiversity protection and sustainable utilisation.
- To increase the economic contribution of the forest products to sustainable livelihood for forest dependent communities.
- To regularise access to and extraction of forest products from Perekezi forest reserve.

The strategic plan divides the forest reserve into twelve blocks for co-managing the reserve. The Blocks follow natural features, mostly water courses and ridges, and are further linked to particular GVH areas for ease of administration. The Chipungu Block co-management plan is administered by Chinjoka GVH. It is based on objectives 3, 4 and 5 of the Perekezi Strategic Forest Area Plan.

### CHAPTER 2. CHIPUNGU BLOCK FOREST AREA

## 2.1 Location/Boundary

Chipungu Block 10 is located on the edge of the south-eastern boundary of Perekezi forest reserve (Figure 1). It is bordered by block 9 along the tributaries of South Rukuru river to the north, Mzuzu – Kasungu M1 road to the west, customary land to the south and east. Chipungu has an area of 1,700 hectares situated in Kazomba and Mbawa Extension Planning Areas (EPAs) within Traditional Authority Mzikubola in Mzimba District.

#### 2.2 Tenure

Perekezi forest reserve is a government forest reserve declared a protected forest area. It was gazetted in 1933 with an objective of protecting water catchment. Both trees and land resources within Chipungu Block owned by the government of Malawi through Forestry Department.

# 2.3 Forest Description

The forest within the Block is classified as *miombo* woodland, similar to the rest of Perekezi forest reserve. It is composed of various tree species of different ages and size classes. Dominant tree species in the Block are *Brachystegia*, *Faurea*, *Jubernardia globiflora* and *Uapaca kirkiana*. *Syzygium cordatum* and *Bridelia micrantha* are more visible along the riverbanks. The peripherals of the Block are almost composed of a secondary forest as a result of illegal tree cutting (conversion into charcoal, firewood, poles and timber). Other important forest resources include mushrooms, wild orchids (*Chinaka*) and thatch grasses.

The soil characteristics vary from one place to another within the Block. These soils range from humic ferallitic, ferrisols, acrisols to nitosols with pronounced kaolinite clay and quartz. River banks have alluvial clay soils while deep and highly weathered sandy-clays dominate on ridges.

The climate is classified as humid subtropical with dry winter and hot summer. The wet season falls between November and May. Mean annual rainfall ranges from 760 mm to 1270 mm with the rainy season typically beginning in October, peaking in January and ending in April. Maximum daily temperatures rarely exceed 28 °C in October with minimum daily temperatures of about 8 °C in July with mean annual temperature ranging from 19 to 23 °C.

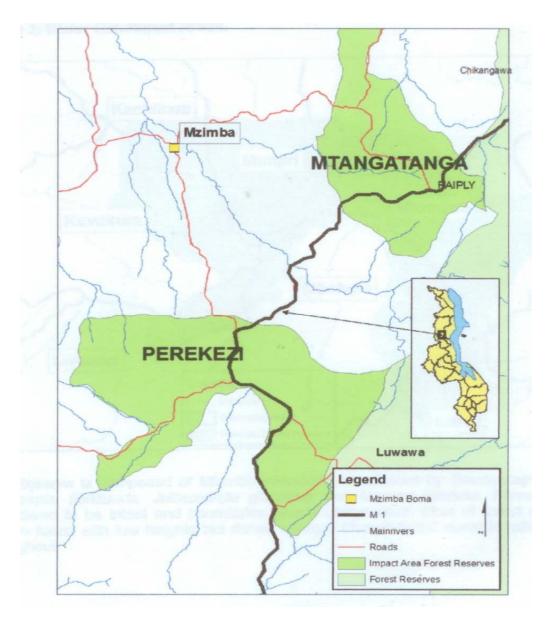


Figure 1. Location of Perekezi forest reserve in relation to Mzimba Boma.

#### 2.4 Forest Users and Uses

The primary users of Chipungu Block come from GVH Chinjoka Chirwa. Specifically, the users come from the villages of Mgonalimo Chirwa, Mzoma Mithi, Alifeyo Mithi, Adamson Banda, Amon Mhlanga, Mlasabondo Chirwa, Kanthonga Chirwa, Chilindira Chirwa, John Jere, Bwanali Banda, Zengolimo Masankhula, Julius Chirwa, Chimkonda Masankhula and Peter Chirwa. These users constitute about 248 households from GVH Chinjoka Chirwa. Other communities outside GVH Chinjoka Chirwa, private and government institutions around Mzimba Boma also use forest resources from the Block.

Major woody products collected from the Block are firewood and poles. Non-Wood Forest Products (NWFP) such as medicine, fruits, mushrooms, honey, caterpillars, game meat, wild orchids (chinaka) and thatch grass are also gathered from the Block. Domestic animals from the surrounding villages also graze from the Block. Charcoal production, hunting of wild game, pit-sawing and firewood sales are the common illegal activities prevalent in the area. Under good management practices all users are supposed to have authority from the Block Management Committee (BMC) to collect/harvest or gain access to forest products and services from this Block.

#### 2.5 Social and economic description

The main ethnic groups surrounding the Block are Tumbuka and Ngoni. Minority ethnic groups are Chewa and Tonga. These groups fall under the administration of TA Mzikubola. The main sources of income in the area are largely agricultural and forestry based. Major food crops grown are maize, millet and pulses. Commercial crops include tobacco, soya and vegetables. Livestock (cattle, goats and chickens) keeping is practiced at small-scale in few households. Sale of forest products (wood and non-wood), small scale businesses and piece work (ganyu) are also practiced by GVH Chinjoka Chirwa communities. Both men and women are engaged in these economic activities to earn their living.

Sustainable Livelihood Analysis survey carried out in the area indicated that the majority belong to a poor category with 53% of the total households, seconded by average group of 22%, while 14% is third which is very poor and lastly better of which is only 11%.

## CHAPTER 3. CHIPUNGU BLOCK CO-MANAGEMENT PLAN

#### 3.1 General Objective

The general objective of the plan is to enable sustainable co-management and utilisation of forest resources for improved ecological health and increased socio-economic benefits of the present and future generations of GVH Chinjoka Chirwa communities.

# 3.2 Specific Objectives

The specific objectives for Chipungu forest block plan are to enable:

- 1. Sustainable management and utilisation of forest resources such as firewood, poles and timber trees for domestic and commercial purposes.
- 2. Institutional capacity building for surrounding communities in protection and conservation of the Chipungu Block.
- 3. Increased availability of Non-Wood Forest Products such as honey, mushrooms and fruits.
- 4. Promotion of tree planting and natural regeneration in Chipungu Block.

# CHAPTER 4. FOREST ASSESSMENT PROCEDURES

The materials used in forest resource assessments included a 50 m linear tape, calliper, Geographical Positioning System (GPS), phanga knife and pegs. A linear tape was used for determining linear distances; a calliper for assessing the diameters at breast or stump height; a GPS for determining spatial information and general traversing in the Block; a knife for cutting the pegs which were used for marking the plot boundaries. Inventory data were recorded on data sheets.

Four square sample plots of  $20 \text{ m} \times 20 \text{ m}$  were created on target distances of more than 100 m based on variations in the forest resources in the Block. The variables assessed in a plot included tree species identification, counts, diameters, value and use according to size. Assessments were limited to regenerants of less than 5 cm stump diameter.

#### CHAPTER 5. FOREST MANAGEMENT UNITS FOR CHIPUNGU BLOCK

# 5.1 Forest management units

There are five different Forest Management Units (FMUs) in Chipungu Block, whose total area is 1,700 hectares. These forest management units are based on the objectives of the Chipungu forest management plan. FMU A is approximately 200 ha, FMU B is 500 ha, FMU C is 800 ha, FMU D 180 ha and FMU E is 20 ha as shown in Figure 2.

- FMU A: **Protection, Conservation** and **Regeneration**: The northern part of Chipungu Block is set aside for protection and conservation. The management unit is a source of South Rukuru river. It also harbours an old graveyard for the GVH Chinjoka Chirwa community. The southern unit requires natural regeneration and enrichment planting. This part of the *miombo* area has heavily been clear-cut to illegal commercial firewood and charcoal production activities.
- FMU B: **Firewood collection**: This unit lies along the Mzuzu Kasungu M1 road. It is designated for collection of dead wood for domestic use by the wider communities of GVH Chinjoka Chirwa. The FMU lies closer to the beneficiary villages.
- FMU C: **General use**: This management unit will offer various types of forest products such as poles, medicines, timber, mushrooms, fruits and wood for implements.
- FMU D: **Bee-keeping**: The unit is reserved for honey production. This area is close to Luviri river and other rivulets which will enable bees to access drinking water. The area has a denser tree canopy and hence will simplify hanging of beehives (Ming'oma).
- FMU E: **Grazing** and **browse**: This unit mostly lies along the South Rukuru and Luviri rivers and other rivulets in the Block. It is designated for grazing and browsing of livestock found in Chipungu Block.

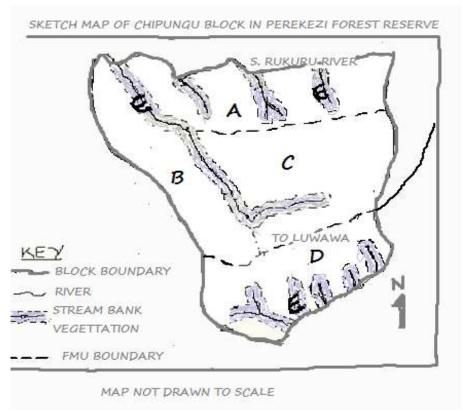


Figure 2. Sketch map of Chipungu block showing the different FMUs

#### **5.2 Resource Rules**

The resource rules have been developed in a participatory manner with the community to manage Chipungu block. These rules relate to resource protection, management and utilisation. Table 1 below displays the rules to be applied in the implementation of co-management of the block.

Table 1: Resource rules

	· Kesonice Inles	1
No.	Resource Rule	Penalty/Sanction
1	No illegal cutting of trees	Anyone found guilty of cutting trees illegally shall pay a fine of K50, 000.00 or 10 years imprisonment. The tree(s) shall be confiscated by the BMC.
2	No illegal sawing of timber	Anyone found guilty of sawing timber illegally shall pay a fine of K50, 000.00 or 10 years imprisonment. The timber shall be confiscated by the BMC.
3	No charcoal burning	Anyone found guilty of burning charcoal shall pay a fine of K100, 000.00 or 10 years imprisonment. The charcoal shall be

		confiscated by the BMC.
4	No illegal fuel wood collection	Anyone found guilty of collecting fuel wood without permission shall pay a fine of K50, 000.00. The fuel wood shall be confiscated by the BMC.
5	No setting of bush fires	Anyone found guilty of setting bush fires shall pay a fine of K50, 000.00.
6	No illegal Grazing of livestock.	Anyone found guilty shall pay a fine of K50,000.00. With permit K400.00 per cattle per year
7	Everyone shall participate in forestry activities as agreed in the Activity Plan.	Anyone found guilty of absconding forestry activities without valid reasons shall pay a fine of K1, 000.00 per working day.
8	Thatch grass cutting is allowed freely to community members only upon permission by BMC.	Non-members found cutting grass shall pay a fine of K150.00 per bundle.
9	No one shall possess or traffic forest products obtained from the block without valid license or permit.	Anyone found in possession or trafficking in forest produce without valid licenses or permit shall pay a fine of K5,000.00. The produce shall be confiscated by the BMC.
10	No illegal hanging of bee hives in the block	Anyone found guilty of hanging bee hives in the Block without permission from the BMC shall pay a fine of K2, 000.00 per bee hive and confiscated.
11	Mushroom collection is allowed freely to community members only	Non-members found collecting mushroom from the block shall pay a fine of K3, 000.00.  • K500.00 basket  • K250.00 pail  • K50.00 small basin

12	Collection of medicine by community members is free. Non members are not allowed to collect medicine.	Non members found shall pay a fine of K15, 000.00.
13	free but felling of trees	Anyone found guilty of felling trees for fruit collection shall pay a fine of K50, 000.00. The tree (s) and fruits shall be confiscated by BMC.

#### 5.3 Harvestable Area

Chipungu block is a miombo woodland which takes many years for coppices to grow and reach maturity. Therefore, harvesting shall not be done by clear-felling. Selective felling would be suitable, although the area would not be easily measured.

#### 5.4 Annual Estimated Available Forest Resources

All the results that will be presented in this section were obtained from the four sample plots where inventory was executed. The data collected from these four plots will represent the entire Chipungu Block.

## 5.4.1 Species Composition and Regeneration

In Chipungu Block, 50 species were observed and this indicates the diversity of the forest. These different species represent different types of forest products and values in the forest. In addition to the species recorded in the forest area (Chipungu Block) some showed to be more abundant than others. Table 2 shows the dominant species. It is clearly indicated that Msuku is the most dominant species where as Mpapa and Chiyele are the second and third abundant species respectively. Among these dominant species, Mkalakati, Chifukwa, Kaumbu, Mchokochani, Mzgozgo, Phatwe and Kapale are the least abundant species.

Table 2: Species composition

Species	Quantity per species	Mean diameter (m)	Small trees (Regeneran	Uses		
		, ,	ts)			
Msefu	2	15.65	1	Mzati, Mphanda		
Мрара	20	14.85	9	Nsanamira, mphanda and nkhuni		
Msuku	26	11.12	19	Fruits, Mphanda		
Phatwe	1	9.00	1	Phanda, nkhuni and		

				medicine
Mkalakati	1	12.00	N/A	Nsanamira, matabwa, phanda & medicine
Chiyele	4	18.88	8	Timber, nkhuni
Mchokoch ani	1	7.6	1	Zipatso, uta, zakudya za mbuzi
Msankhany a	N/A	N/A	8	Masache,
Mtondo	7	14.54	1	Mphanda nkhuni
Mbula	5	13.2	N/A	Fruits, mzati and mphanda
Mzinda wa nguluwe	N/A	N/A	11	Tsache
Mswamino	N/A	N/A	1	Mphanda, wazgolo wa nkhokwe
Matongo yakalulu	N/A	N/A	2	Fruits and medicine
Kabinkhami no	N/A	N/A	5	Fruits and medicine
Chirwembe /	5	21.34	1	Mpini and nkhuni
Thung'und a				
Muhana	7	22.66	N/A	Nkhuni and Mnyozi (luzi)
Mbwabwa	1	4.4	3	Nkhuni
Mzgozgo	1	31.1	1	Timber
Kaumbu	1	14.6	N/A	Nkhuni
Kapale	2	13.5	1	Nkhuni and wazgalo
Kalama	N/A	N/A	3	Nkhuni
Chifuwa	N/A	N/A	1	Nkhuni

Table 2 above shows that Msuku has a lot of regenerants (19) followed by Mzinda wa nguluwe (11) Mpapa (9), Chiyele and Msankhanya (8). However, the fewest number of regenerants range from, Mphatwe, Mchokochani, Mtondo, Mswamino, Chirwembe/Thung'unda, Mzgozgo, Kapale and Chifuwu.

Table 3. Species composition per plot

Number	Species	Number of trees				Total	Average
		Plot 1	Plot 2	Plot 3	Plot 4		
1	Msefu	2	0	0	1	3	1
2	Мрара	17	13	1	0	31	8
3	Msuku	25	12	0	9	46	12
4	Phatwe	1	0	0	1	2	1
5	Mkalakati	1	0	0	0	1	1
6	Chiyele	3	5	2	2	12	3
7	Mchokochani	1	0	1	0	2	1
8	Msankhanya	2	4	0	2	8	2
9	Mtondo	0	8	0	0	8	2
10	Mbula	0	7	0	0	7	2
11	Mzinda wanguluwe	0	5	1	4	10	3
12	Mswamino	0	1	0	0	1	1
13	Matongo ya kalulu	0	2	0	0	2	1
14	Kabinkhamino	0	5	0	0	5	1
15	Chirwembe/thung'unda	0	1	4	0	5	1
16	Muhana	0	0	7	0	7	2
17	M'bwabwa	0	0	4	0	4	1
18	Mzgozgo	0	0	2	0	2	1
19	Mlama	0	0	1	1	2	1
20	Kapale	0	0	2	1	3	1
	TOTAL	52	63	25	21	161	

In table 3 above, plot 2 is more diverse in terms of species composition. It has a total of eleven species within it. Plot 1 is the least diverse in terms of species composition with eight species in it.

#### **5.4.2 Diameter Classes**

All the data collected were summarised by species and grouped into 3 diameter classes of 1-10, 11-20 and more than 21 cm (Small, medium and large respectively) as shown in Table 4 below.

Table 4: Diameter classes

Plot number	Diameter class (cm)	Total trees
1	1 to 10 (small)	23
	11 to 20 (Medium)	25
	21 and above (large)	4
2	1 to 10 (small)	44
	11 to 20 (medium)	17
	21 and above (large)	3
3	1 to 10 (small)	10
	11 to 20 (medium)	9
	21 and above (large)	7
4	1 to 10 (small)	19
	11 to 20 (medium)	4
	21 and above (large)	0

Table 4 above shows that in all plots, trees with diameters ranging from 1 to 10 cm dominate the plots seconded by trees with diameter ranging from 11 to 20 cm. Trees with diameter greater than 21 cm are few in all the sample plots. Plot 2 has more trees seconded by plot 1 then plot 3. Plot 4 has few trees compared to all plots

because of careless cutting of trees for charcoal. This area is also close to people's villages, so it a source of fire wood.

# **5.5 Domestic Forest Product Requirements**

The total number of households represented by the block management committee is 385.

Table 5 below calculates the annual domestic forest product requirements of these 385 households.

Table 5: Domestic Forest Product Requirements

Products	Use	Usage/household/yr (on average)	Projected Annual requirement (for all 385 households)	
Mapaso (small rafters)	Construction of houses and fences	46	17,710	
Mathabwa (timber)	Construction	13	5,005	
Mithyangala (Tobacco sticks)	Racking tobacco	43	16,555	
Mgololo (Support pole)	Construction	1	385	
Sito	Weaving granaries	8 headloads	3,080 headloads	
Vyaka (hoe and axe handles)	Making hoes and axes	7 handles	2,695	
Mithiko	Cooking	3	1,155	
Mphanda(Mzati)	Construction	N/A	N/A	
Minkhwala	Medicine	N/A.	N/A	
Nkhuni (Fuelwood)	Cooking	156 headloads	60,060 headloads	
Nkhowani (Mushroom)	Relish	12 basins (vidunga)	4,620 basins	
Uteka (Grass)	Thatching	168 headloads	64,680 headloads	
Bow trees	Making bows	1	385	

# 5.6 Permit Fees

The Block Management Committee (BMC) will issue permits for different products at different rates. Estimated permit fees are shown in Table 6.

Table 6: Permit Fees for Products and Services

Product	Usage/Househ old	Commercial Fee (Mk)	Domestic Fee (MK)	Demand For The Product
Firewood	3 Head loads/week	400/head load	100/head load	High
Mushroom	1 basin/week	2500/pail	N/A	Low
		500/basin		
Mapaso	46/house/year	100/pole	50/pole	Very Low
Mzati	N/A	300/pole	150/pole	Very Low
Mgololo	N/A	1000/pole	500/pole	Very Low
Chinaka	N/A	4000/pail 250/plate	N/A	Vey High
Uteka(that ching grass)	30 head loads/week	200/small head load 300/big head load	100/small head load 250/big head load	High
Honey	N/A	100/spoon	50/spoon	High

Mapala (matondo)	N/A	100/plate	N/A	High
Matabwa	13 planks/house	1000/board	800/board	Low
Sito	8 headloads every 5 years	500/bundle	250/bundle	High
Vyaka	7 handles/house	200/hoe-handle	150/hoe- handle	Low
	hold	100/axe-handle	100/axe-handle	
Mithiko	N/A	200 each	K150 each	Low
Mathuli	3/household	5000 (big)	3000 big	Low
		1500 (big)	1000 small	
Masuku	N/A	600/pail	N/A	Low
Diesel boom	N/A	1500 each	N/A	Low
Bow tress	1/year	100	100	Low

# **5.7 Projected Annual Income**

According to agreements made by the community through its natural resources management committee, revenue will mainly come from permit fees that the committee will be collecting from community members for extraction of different products. These permits have been categorized into two depending on whether the products to be collected will be used domestically or will be for commercial purposes (sale). Table 7 below shows projected annual income that the committee can generate with respect to the number of households under Group Village Headman Chinjoka Chirwa.

Table 7: Projected Annual Income

Source of income (product)	Timeframe (season)	Domestic price (MK)	Extraction/househo Id	Income/hous ehold/week (MK)	Annual income/ho usehold (MK)	Total annual income for all (385) households (MK)
Firewood	Throughout the year	100	3 head loads/week	300	15,600	6,006,000
Thatch grass	March-October	175	6 head loads/week	1050	29,400	11,319,000
Honey	Throughout the year	50	Once/week	50	2,600	1,001,000
Hoe-handles	Throughout the year	150	Seven/year	N/A	1,050	404,250
Mapala/maton do	March-October	100	Once/day	700	19,600	7,546,000
Masuku	October- December	N/A	N/A	N/A	N/A	N/A
Thuli/Mtondo	Throughout the year	1840	Once/year	N/A	1,840	708,400
Muthiko	Throughout the year	150	Once/year	N/A	150	57,750
Sito (wooden sticks)	Throughout the year	250	8 head loads/ 5 years	N/A	400	154,000

Timber/Thabw a	Throughout the year	800	13 planks /5 years	N/A	2080	800,800
Chinaka	May-August	N/A	N/A	N/A	N/A	N/A
Mgololo (truss)	Throughout the year	500	Once/ 5 years	N/A	100	38,500
Mzati (pole)	Throughout the year	150	Once/5 years	N/A	30	11,550
Mapaso (small poles)	Throughout the year	50	46/year	N/A	460	177,100
Mushroom	November-March	N/A	N/A	N/A	N/A	N/A
Bow trees	Throughout the year	100	1/year	N/A	100	38,500
Medicine	Throughout the year	N/A	N/A	N/A	N/A	N/A
Total						28,262,850

Table 8 Projected annual value

		No. of		
No	Species	trees	Rate	Annual value
1	Msefu	42500	MWK 500.00	MWK 21,250,000.00
2	Мрара	340000	MWK 500.00	MWK 170,000,000.00
3	Msuku	510000	MWK 500.00	MWK 2,550,000,000.00
4	Phatwe	42500	MWK 600.00	MWK 25,500,000.00
5	Mkalakati	42500	MWK 1,000.00	MWK 42,500,000.00
6	Chiyele	127500	MWK 800.00	MWK 102,000,000.00
7	Mchokochani	42500	MWK 100.00	MWK 4,250,000.00
8	Msankhanya	85000	MWK 50.00	MWK 4,250,000.00
9	Mtondo	85000	MWK 750.00	MWK 63,750,000.00
10	Mbula	85000	MWK 750.00	MWK 63,750,000.00
11	Mzinda wanguluwe	127500	MWK 50.00	MWK 6,375,000.00
12	Mswamino	42500	MWK 100.00	MWK 4,250,000.00
13	Matongo ya kalulu	42500	MWK 500.00	MWK 21,250,000.00
14	Kabinkhamino	42500	MWK 100.00	MWK 4,250,000.00
15	Chirwembe/thun g'unda	42500	MWK 100.00	MWK 425,000.00
16	Muhana	85000	MWK 750.00	MWK 63,750,000.00
17	M'bwabwa	42500	MWK 750.00	MWK 31,875,000.00
18	Mzgozgo	42500	MWK 800.00	MWK 34,000,000.00
19	Mlama	42500	MWK 750.00	MWK 31,875,000.00
20	Kapale	42500	MWK 800.00	MWK 34,000,000.00
	TOTALS	1955000		MWK 3,279,300,000.00

As per the findings, Msuku can generate high annual values of MWK 2,550,000,000.00 seconded by Mpapa which can generate MWK 170,000,000.00. Chirwembe can generate low annual values of MWK 425,000.00 seconded by Kabinkhamino which can generate MWK 4,250,000.00. The total annual value of the forest is MWK 3,279,300,000.00.

# **5.8 Estimated Forest Management Costs**

Table 9 below shows estimated costs that will be accrued by the committee in its management of the block. These costs will come from activities such as fire break

construction, enrichment planting in areas which have been degraded. Other costs will also come from necessary activities that will be done to ensure that the forest continues to supply these resources to the present as well as future generations. These costs will normally be paid out as cash and have been used to generate the annual cash flow.

Table 9: Estimated Forest Management Costs

Task	Cost (MK)
Firebreak construction	15,000
Patrolling	20,500
Enrichment planting	20,000
Boundary maintenance	14,000
Weeding and slashing	11,000
Total cost	80,500

#### 5.9 Estimated Annual Cash Flow

Table 10 below shows a cash flow for the management of Chipungu block and it has been generated using the estimated annual management costs (Table 8) which have been offset against the estimated annual income (Table 7). The estimated annual cash flow gives an indication of how much resources the committee can benefit in monetary terms. Having an idea of benefits the community can get from the block can also help shape the committee's management activities and the number of permits it can issue within a year.

Table 10: Estimated Annual Cash Flow for Chipungu Block

Chipungu block Account	Amount (MK)	Percentage (%)
Domestic Income	28,262,850	74.60
Commercial Income	9,625,000	25.40
Total Income	37,887,850	100
Annual Forest Management Costs	80,500	
Net income	37,807,350	

#### 5.10 Management Plans for Each Use (Product)

Chipungu forest block has a number of forest products, key to these are the following; timber, firewood and poles. Apart from timber products, there are also non – timber forest products such as honey.

#### 5.10.1Management plan for Firewood

a. Forest Product: Firewood

b. **Key Species:** Mpapa ,kapale, kaumbu, kalema, thun'gunda, phatwe

and Mtondo

c. **Demand:** High

d. **Problems/issues:** Theft, wild fires

### e. Management practice

- Fuel wood is any wood that is not suitable for timber, medicinal or pole use.
- Harvesting of fuel wood shall take place in the FMU for general use (FMU C).
- Areas will be selected on an annual basis upon agreement by the community and clearly marked as harvested.
- Harvesting shall take place all year round.
- All fuel wood for sale shall be cut and stacked in mendles before it is brought to market.
- Trees will be cut below 30 cm above the ground. Waste shall be properly disposed away from stumps.
- All trees capable of producing seed and edible fruits shall be left standing.
- In the first 3 years after harvesting, the area harvested shall be protected from fires to allow for regenerations. Controlled early burning will be done at the beginning of the first dry season after harvesting.
- No harvesting of trees for firewood shall take place in the harvested area in the next 10 years to allow for regeneration.

#### g. Allowable area per year

Allowable area is the area that is designated for harvesting. The allowable area is 100 haper year based on a 5 year rotation of the total harvestable area of 1700 ha.

#### h. Permits

All villagers are entitled to collect firewood as long as permission has been obtained from the Block Management Committee.

# i. Fees and royalties

- Head load of dry firewood for sale shall be collected at a cost of K 400.00 per load
- Bicycle load of firewood shall attract a fee of K100.00

## 5.10.2 Management plan for Timber

a. Forest Product : Timber

b. **Key Species** : Chiyere, Mkalakati, Mzgozgo

c. **Demand** : Low

d. Problems/issues : Theft, wild fires

#### e. Management practice

- Areas will be selected on an annual basis upon agreement by the community and clearly marked as harvested
- Harvesting of timber (for sale) shall take place in the FMU for general use (FMU C)
- Area of harvest is limited to 50 ha per year. The basis for this is a rotation period of 5
  years.
- Harvesting shall take place from January December each year. Harvesting of timber tree species shall be done selectively.
- Trees will be cut below 30 cm above the ground. Waste shall be properly disposed
  off from stumps. All trees capable of producing seed and edible fruits shall be left
  standing.
- In the first 3 years after harvesting, the area shall be protected from fires to allow for regenerations. Controlled early burning will be done at the beginning of the first dry season after harvesting.
- No harvesting of trees for timber shall take place in the harvested site for the following 10 years.

#### g. Allowable area per year

The allowable area is 50 ha per year based on a 5 year rotation of the total harvestable area of 1700 ha.

## h. Permits

Block committee will issue a permit to saw timber upon payment of permit fee of K1000.00 per board

#### i. Fees and royalties

 Timber trees (regardless of tree species and sizes) shall attract a fee of K3, 000 per tree.

### 5.10.3 Management plan for Poles

a. Forest Product : Poles

b. **Key Species** : Mbula, Msefu, Mpapa

c. **Demand** : Very Low

d. **Problems/issues** : Theft, wild fires

#### e. Management practice

A pole is any wood that is not suitable for timber and medicine.

All poles for sale shall be cut and stacked before it is brought to the market

- Harvesting of poles (for sale) shall be in demarcated areas only
- Area of harvest is limited to 100 ha year. The basis for this is a rotation period of 5
  years.
- Areas will be selected on an annual basis upon agreement by the community and clearly marked as harvested
- Harvesting shall take place from January–December each year. A minimum of 25 trees in each 2 ha shall be left standing for each key product such as poles.
- Trees will be cut below 30 cm above the ground. Waste shall be piled away from stumps. All trees capable of producing seed and edible fruits shall be left standing in a coupe.
- In the first 3 years after harvesting, the area shall be protected from fires to allow for regenerations. Controlled early burning will be done at the beginning of the first dry season after harvesting.
- No harvesting of trees for poles shall take place in the harvested area for the following 10 years.

### g. Allowable area per year

The allowable area is 100 ha per year based on a 5 year rotation of harvestable area of 1700 ha.

#### h. Permits

• All villagers are entitled to collect poles, as long as permission has been obtained from the Block Management Committee.

#### i. Fees and royalties

Poles shall attract a fee of K150.00

 No harvesting of trees for poles shall take place in the harvested area for the following 10 years.

## 5.10.4 Management Plan for Bee Keeping Products

a. Forest Product : Honeyb. Demand : High

c. Problems/issues : - Lack of bee – keeping equipment

- Lack of expertise

# d. Management practices

• Every person should obtain a permit from BMC before engaging him/herself into honey production enterprise

- Use of traditional methods to keep bees i.e. use of tree barks as hives is prohibited.
- Bee hives can be hanged anywhere in the forest. However, the owners should follow rules of forest management e.g. fire protection

# 5.11 Activity Plan

The activity plan for Chipungu Block outlines the type of work to be undertaken, its time frame and responsible individuals. It also outlines the requirements/resources needed to undertake each activity as shown in table 9 below.

Table 9: Activity Plan for Chipungu Block

Number	Activity	Responsible Person	Resources	Time frame
1	Fire break making	Community members  Village head man  Committee members	Hoes Axes Food	May - August
2	Tree planting	Community members  Village head man  Committee members	Spade Holes Slasher Ropes/tape Rakes Tubes	Early December- February

			Seeds	
3	Monitoring	Committee members  Police community  Selected community members	Holes Gum boots Buckets Helmets	All year round Once every week
4	Site identification	Committee members and Local Leaders	-	May
5	Marking	Committee members	Strings Holes	
6	Pitting	Committee members and wider community	Holes Ropes	November
7	Filling	Community members  Village head man  Committee members	Polythene tubes Holes shovels	December- April
8	Weeding	Community members  Village head man  Committee members	Holes Rakes Wheel barrow	April – May
9	Seed procurement	Committee members  Community members  Forestry department	Containers Hooking sticks	December- May
11	Conduct meetings	Committee members	Ball pens	Twice a month

			Note books Food Pental markers Flip charts	
12	Patrolling	Committee members  Community members  Community police	Panga knifes Identification cards	January- December
13	Collection of Non wood forest products	Committee members Community members	Tins Baskets Gumboots	January- December

### **CHAPTER SIX: IMPLEMENTATION ARRANGEMENTS**

# 6.1 Management Authority and Time Frame

The forest resources of Chipungu Block in Perekezi Forest Reserve shall be managed by the Block Management Committee (BMC), together with Forestry Department Staff, for GVH Chinjoka Chirwa villages, which fall under Traditional Authority Mzikubola.

The management plan of Chipungu Block starts when it has been endorsed by the Government of Malawi and will be monitored monthly. Reviewing period will be after 5 years.

# **6.2 Financial Management**

Any payment made to the Block Management Committee shall be used as per the constitution of the Block Management Committee.

# CHAPTER SEVEN: FORESTRY CO- MANAGEMENT AGREEMENT

(Forestry Act. 1997 Section 25)

This agreement is made on the..........day of ........between the Director of Forestry, Ministry of Environment and Climate Change Management hereinafter referred to as the Government and local residents of GVH Chinjoka Chirwa of Traditional Authority Mzikubola in Mzimba District represented by Chipungu Management Committee as the Local Forest Organization (here with described as LFO) and known also as Block Management Committee.

The Government hereby wishes to make an agreement with the Block Management Committee to provide for co-management, in partnership with the Department of Forestry, of the forest resources of Perkezi Forest Reserve, in order to promote sustainable forest management and the enhancement of the livelihoods of the forest adjacent communities.

#### Now it is hereby agreed as follows:

- 1. The Government shall upon being satisfied with transactional arrangements, recognize the joint authority LFO to protect, manage, control and utilize sustainably the forest resource for the benefit of the local community of GVH Chinjoka Chirwa.
- 2. The Block committee accepts and undertakes to protect, manage, control and utilize sustainably the forest resource in accordance with the terms and conditions stipulated in this agreement and the Co-management plan.

#### LOCAL FOREST ORGANISATION (Block committee) OBLIGATION

- 3. In particular the Government gives authority to the Block committee subject to the following conditions:
  - (a) Forest resources shall be properly maintained and managed according to approved management techniques as set out in the Co- management plan
  - (b) The Block committee shall enforce the powers that have been developed to them by the Government in the forest rules 2001-PART III Village forest areas and as agreed in the Block committee Registration Agreement.

- (c) The Block committee shall protect, manage, control and utilize in a manner that maintain productivity, the forest resources within there jurisdiction and to issue permits and licenses for the benefit of the local community forest resource-rights holders of the aforementioned village as set out in the annexed management plan.
- (d) To assist the District Forest Officer with the issuing of conveyance certificate, the Local Forest Organization may provide the necessary supporting documentation to verify source and ownership of wood products under its control. It may also assist Local Private Individuals with wood products in there locality verify ownership for applying for a conveyance certificate from the District Forest Officer.
- (e) Benefits accruing form the forest resource shall be equitably utilized by the community in accordance with the benefit sharing arrangements set out in the annexed plan.
- (f) Revenue accruing from the forest resource shall be equitably utilized by the community in accordance with the Block committee constitution.
- (g) 10% of the share of revenue accruing from the issue of commercial harvesting permits and licenses (i.e. those permits and licenses not issued for domestic or subsistence purposes) shall be deposited into the account of the Local Forest Management Board of Perekezi Forest Reserve, with transfers being made on a quarterly basis
- (h) 30% of the share of revenue accruing from the issue of commercial harvesting permits and licenses (i.e. those permits and licenses not issued for domestic or subsistence purposes) shall be deposited into the Forest Development Fund Account Number 1 with such transfers being made on a quarterly basis.
- (i) It is expected that 60% of the funds available to the LFO after sharing the proportions specified in (g) and (h) will be utilized by the LFO as per benefit sharing arrangement (Annex 4). This includes utilisation of the funds inside and outside the area of the co-management block.
- (j) The local forest organization shall make accessible records of accounts and licenses issued to the Director of Forestry or his/her representative, The District Commissioner or his/her representative upon receiving notification form the Director of Forestry or District Commissioner.
- (k) The Block committee shall represent and accountable to the community and operate in accordance with the agreed constitution.

## **DISTRICT COUNCIL OBLIGATIONS**

- 4. In particular the District Council, represented by the District Forest Officer, shall provide:
  - (a) Technical expertise to support the implementation of the attached management plan.
  - (b) Advise and assist with monitoring local accountability mechanisms including, conduct of meetings, elections, by-elections, record keeping and reporting.
  - (c) Assist the coordination of forest law enforcement activities between the organization, traditional leaders, Local community policing forum, local police officers and the District Magistrate in accordance with annexed management plan.
  - (d) With the local forest organization jointly monitor the Block 1 demarcated in the management plan to ensure management is in accordance with this agreement and in accordance with standard and guidelines for participatory forest in Malawi.
  - (e) In line with licensing procedures issue conveyance certificates against verified documentation to ensure legal transportation of forest products.

#### FOREST DEPARTMENT OBLIGATIONS

- 5. In particular the Forestry Department shall:
  - (a) Provide technical expertise in collaboration with other partners, including assistance revision of management plans jointly with the Block committee.
  - (b) Provide in collaboration with other partners, legal, organizational, marketing and other forms of support to the Block committee as appropriate.
  - (c) Organize in collaboration with other partners, relevant training courses to enhance organizational, technical and management capacity of local forest organization, traditional authorities and other members of the community.
  - (d) Recognize and actively support the protection and policing measures taken by the local forest organization and the community in accordance with the forest ACT, 1997, Forest rules 2001, and Local Forest Organization Registration Agreement.
  - (e) With the Local Forest Organization jointly monitor the Block 1 demarcated in the management plan to ensure management is in accordance with this Agreement and in accordance with Standard and Guidelines for participatory forestry in Malawi.

(f) Take stapes to monitor jointly with the Local Forest Organization to ensure that the Block 1 is managed in accordance with this Agreement and Comanagement plan.

#### **COMMENCEMENT DURATION AND TERMINATION**

- 6. This Agreement shall come into effect when signed by the Director of Forestry, Representatives of the parties and shall be binding indefinitely subject to clauses7 and 10 below
- 7. The Director of Forestry shall have right to terminate this Agreement and revoke authority to protect, manage, control and utilize forest resources, in any of the following events;
  - Negligence or failure to protect, manage, control the forest area.
  - If the Board committee commits any serious breach of this agreement.
- 8. The powers stipulated in clause7 above, shall not be exercised unless the Director of Forestry has tried all effort to resolve or correct the situation amicably.
- 9. In cautioning the local community the Director of Forestry shall cite the shortcomings and remedies giving the period within which they should be addressed.
- 10. The Block committee may terminate this agreement at any time by giving notice of not less than 8 weeks, in any of the following events.
  - If there is serious breach of this agreement.
  - If for any reason the community finds itself unable or unwilling to continue with the activities of the designated forest areas.
- 11. In the event of notice of termination, Block committee shall be under obligation to ensure that the forest area is protected until a care-Taker committee or Government has assumed authority over the block..

#### **DEMARCATION AND BOUNDARY**

Division or delineation of forest areas shall be as displayed on the map contained the Block Co-management plan.

## **DISPUTES**

13. In the event of any dispute arising under the forestry Management Agreement, the matter shall be referred to the Minister of Environment and Climate Change Management.

If any party is dissatisfied with the decision passed by the Minister he/she may apply for a judicial review to the High Court.

14. SIGNED:	DIRECTOR OF FORESTRY 2814 -02- 1 4
DIRECTOR OF FORESTRY (C	P.O. BOX 30048 LILONGWE 3 TEU: 01 771 0))

AND

CHAIRPERSON LOCAL FOREST ORGANIZATION

Dated 21 st feb 2014

WITNESSES

Jerupher Mitonga

VILLAGE HEADMAN/WOMAN

Dated 21/2/14

DISTRICT COMMISSIONER

Dated 2/02/2014

TRADITIONAL AUTHORITY

Dated 21st feb. 2014

T. Gausi-CHARPERSON

LOCAL FOREST MANAGEMENT

BOARS

Dated: 21/02/2014

# ANNEX 1: NAMES OF MEMBERS OF CHIPUNGU BLOCK MANAGEMENT COMMITTEE

**Chairperson**: Jeremiah Nyirenda

**Vice Chairperson**: James Mithi

**Secretary** : Jennifer Mtonga

Vice Secretary : Lillian Zimba

**Treasurer** : Ronance Shaba

**Members** : Emily Mkandawire

Timothy Shaba

Angel Gondwe

Clean Mskanga

Angel Jere

Bellings Moyo

#### ANNEX 2: THE CONSTITUTION FOR CHIPUNGU FOREST BLOCK

Name: Chipungu Block

Address: Mapanjira FP School

P O Box 247

Mzimba

# **Purpose and Objective**

> To empower the committee and the communities to protect, manage and control the utilization of natural resources

> To get the benefits from the resources

# **Functions of Management committees**

- > to guide the community's sustainable management of the natural resources
- Issues permits of forest products from the block
- > To cooperate with development committees in the area
- > To propose management plans and present them to the community
- > To promote and create I.G.As or F.B.Es

## Eligibility

- All citizens of G.V.H Chinjoka Chirwa (Chipungu) are eligible to be members
- > People from outside but who have stayed in the area for more than five (5) years

#### **Period for Term of Office**

A period of three (3) years and two (2) terms is the maximum

#### Disqualification of the Office Bearers

- Any office bearer shall be discharged from his/her office upon failure to discharge his/her duties. This will be done upon warning him/her three times
- > The community shall have the powers to remove an office bearer from his or her office upon the approval by the committee
- > Any committee member found destroying the resources from the reserve shall automatically be discharged from his /her duties

#### Submission of an Appeal after removal from Office

Any person upon removal from his/her office is not allowed to make an appeal through the committee to the community

#### Leaving the Office before expiry date

Any person who tends to leave the office before his/her expiry date due to unforeseeable circumstances shall do so but he/she shall be requested to give three (3) months notice.

#### Dissolution of the committee

Upon failure to discharge or perfume duties of the wider community, the village headman converges a meeting with full facts to dissolve the committee and elect new office bearers (The office bearer on the wrong side shall have the right to defend himself/herself with facts)

#### **Election process**

Office bearers shall be elected through the voting process

#### **Meetings**

Meetings shall be conducted at the bock site once every month

#### Quorum

Meetings shall be conducted when more than half of the members are present

#### **Penalties**

Any office bearer who fails to attend to a meeting without a proper reason shall pay K200

#### **Record keeping**

- > Any sale of forest produce shall be accompanied by a receipt (no receipt-no sales)
- The committee shall permit sales of forest products from the block and the treasure shall issue the receipt
- > The secretary shall take and keep minutes of every meeting
- > The treasure shall keep up to date financial records in a transparency manner

### **Benefit sharing**

All benefits accrued from the forest reserve shall be used to manage the block itself. The money collected shall be kept in a bank account. Among the beneficiaries will be the members of the block and the vulnerable groups. The benefit sharing will relate to the daily individual input as indicated in the daily attendance register.

#### Sources of Income

The main sources of income are

- Piece works
- > Sales of firewood from the block
- > Sales of the Non Timber forest products (N.T.F.P) to outsiders.

**ANNEX 3: AGREED ROLES AND RESPONSIBILITIES** 

Stakeholder	Roles and responsibility
Village headman	<ul> <li>Calling for community gathering on developmental issues</li> <li>Making village meetings</li> <li>Solving village cases</li> <li>Receiving village developments</li> <li>Receiving and keeping strangers</li> </ul>
Chipungu Block Management Committee	<ul> <li>Managing the block according to management plan</li> <li>Making village nurseries</li> <li>Maintaining Block boundaries</li> <li>Receiving forestry visitors</li> <li>Patrolling in the village forest area</li> <li>Coordinating forestry matters to the village people</li> </ul>
Chairperson	<ul> <li>Calling meetings</li> <li>Making committee meetings</li> <li>Opening and closing meetings</li> <li>Representing the village head in his absence</li> <li>Looking after nurseries</li> </ul>
Secretary	<ul> <li>Recording meeting minutes and reading them</li> <li>Keeping records of meetings items</li> <li>Writing letters to where they are supposed to.</li> <li>Writing what is coming in and going out</li> </ul>
Treasurer	<ul> <li>Keeping funds raised and items</li> <li>Record keeping</li> <li>Recording cash coming in and outKeeping records of whatever they are having</li> </ul>
Committee member	<ul> <li>Helping in all committee discussions</li> <li>Intermediator between the committee and the community</li> <li>Doing all the work which may be there together with the committee and the community</li> </ul>
Community	<ul> <li>Planting trees</li> <li>Maintaining Chipungu block boundary</li> <li>Helping in fire fighting</li> <li>Committee election</li> </ul>
TA	<ul><li>Welcoming developmental issues</li><li>Making rules of the village</li></ul>

#### **ANNEX 4. BENEFIT SHARING ARRANGEMENTS**

A Community Development Fund shall be established for sharing the benefits (accruing from the Reserve) within the eight (8) villages. Details of the benefit sharing arrangements are described below;

- a) **7%** will be a contribution to community developments initiatives like schools, bridges etc.
- b) **14%** will be for supporting orphans, the elderly, people with disabilities, widows/widowers, and other disadvantaged groups
- c) **43%** will be a contribution to towards the Green Belt Initiatives to support food security.
- d) 14% will be for a Revolving Programme to be agreed. Households will be identified and supported with a start-up package. Proceeds will then be passed on to other Households until all benefit under the programme.
- e) 10% will be operational costs to enable the BMC and Community Members perform their functions under the Co-Management Agreement, constitution and Registration Agreement.
- f) 10% will be allocated to buy livestock ie chickens as a pass on programme.
- g) 2% shall be retained in the BMC Bank Account.