N≠a Jaqna Community Forest

"Sustainable Natural Resource Management"

FOREST MANAGEMENT PLAN

July 2015

N≠a Jaqna Community Forest Management Committee with assistance Community Forestry in Namibia-CFN and DoF

Compiled by:

Sir. Clarence-Nocky Kaapehi

Edited By:
Dr. Mench
Mr. Theo Kaambu
Mr. S.A Amunjela
Mr. Amathila

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ABBREVIATIONS AND ACRONYMS

FMC	Forest Management Committee
MAWF	Ministry of Agriculture, Water and Forestry
MET	Ministry of Environment and Tourism
DoF	Directorate of Forestry
DEES	Directorate of Engineering and Extension Services
NMS	Namibia Meteorological Services
IFMP	Integrated Forest Management Plan
NFI	National Forest Inventory
FPC	Forest Protection and Conservation
FMPU	Forest Management Planning Unit

1. Summary and Background

The communities of the N≠a Jaqna Conservancy in Otjozondjupa Region have applied for the right to sustainably manage and use the Forest produce of their area, by establishing a Community Forest (CF) accordingly to the Forest Act, 2001 Section 15.

The overall goals of the Community Forest shall be the

- **Contribution to the communities' livelihoods** and the
- **Maintenance of the forest resources.**

The strong will to manage the Community's Forest Resources under this goals are in full accordance with the fundamental strategic objectives of the Namibian Republic, given by the:

Constitution of Namibia *(Article 95, Promotion of the Welfare of the People):*

"The State shall actively promote and maintain the welfare of the people by adopting, inter alia*, policies aimed at the following: … (l) maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future"*

Vision 2030, *Sub-Vision Forestry (5.2.2, page 146 ff.):*

"Namibia's diverse natural woodlands, savannahs and many resources they provide, are managed in a participatory and sustainable manner to help support rural livelihoods, enhance socio-economic development, and ensure environmental stability."

Third National Development Plan *(NDP3, Vol. I, Executive Summary, 5a., p12 ff. and 5b., p16 ff.):*

Sustainable Utilisation of Natural Resources: "The focus of the forestry sub-sector during the NDP3 is on the sustainable management and utilisation of forest resources. The sub-sector strategies cover (i) the involvement of communities and other stakeholders in the sustainable management and utilisation of forest resources; … (iii) conducting forest resources assessment; (iv) improving law enforcement to control illegal harvesting; and (v) strengthening the capacities of actors in the sub-sector."

Environmental Sustainability: "The NDP3 Goal under the Sub-KRA is to ensure environmental sustainability by strengthening the management of natural resources and bio-diversity. … The targets include: (i) increasing the area … under community forestry from 1.19 million hectares to 1.8 million hectares"

Ministry of Agriculture, Water and Forestry *(Mission):*

"To promote and manage the sustainable utilisation and development of agricultural, water and forest resources for a prosperous Namibia through stakeholder partnerships."

Millennium Development Goals *(MDGs United Nations Millennium Declaration 2000):*

Strong links to the goals: To eradicate extreme poverty and hunger; to promote gender equality and empower women; to ensure environmental stability; to develop a global partnership for development".

The declared N≠a Jaqna Community Forest will help to do a big step towards the achievement of Namibia's 2010 MDG target of 2'500'000 ha Community Forest area!

The Management Plan for N≠a Jaqna Community Forest (CF) has been designed to enable the community to utilize their forest resources sustainable, and to become gazetted as a Community Forest. The CF area of 834250 ha excluding M'Kata CF, includes settlements of approximately 6'000 inhabitants. The area consists of different savannah types, mainly tree savannahs (woodland) in patchwork with bush- land open area. Some current activities in the area includes, game habitat, tourism, collection of forest produce for domestic use and around the western settlements – fields and livestock grazing and commercial use of forest resources.

This Management Plan for the N≠a Jaqna Community Forest shall have a period of 10 years. It starts on the 1st of April 2015 - but not before the N≠a Jaqna Community Forest is legally declared in the Government Gazette - and ends on the 30th March 2025. The figures for removals, utilisation and investments planned are calculated for the period given.

The development of the FMP plan was facilitated by the Community Forestry in Namibia Programme (CFN). To design the Forest Management Plan for N≠a Jaqna Community Forest methods and activities were used as follows: Information was collected by a socio-economic assessment (PRA) in February/March 2009 and by Participatory Community Forest Inventory (PCFI) in 2010. The PCFI date is correlated to the vegetation types of the vegetation maps from 1994 (Swedish Space Corporation) to extrapolate the PCFI data on non-inventoried areas. The community representatives and the Management Committee for the CF (FMB) participated in the development of this management plan and defined the management objectives and measures to be implemented.

The objectives and goals for the N≠a Jaqna CF were identified by the community, in the course of the 2009 socioeconomic assessment (PRA), conducted by CFN. The land-use-zonation was done by the Conservancy with assistance from National Remote Sensing Center (NRSC) in 2005. The sustainable yield was determined with the Formula recommended from the Directorate of Forestry in the Task Team Forest Inventory in 2008 based on the PCFI data collected in 2010

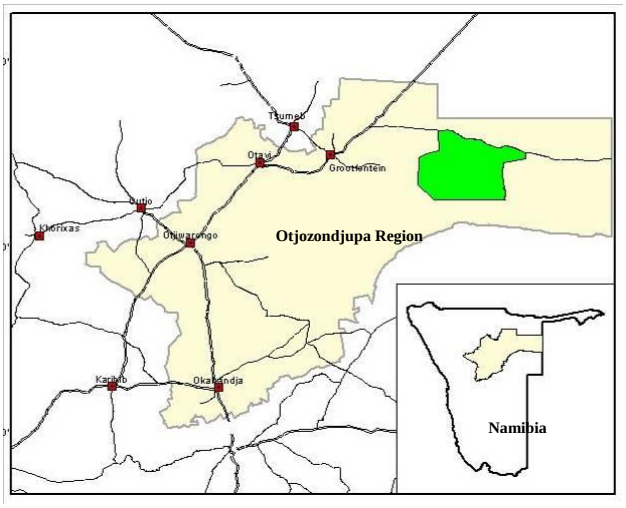
Guiding principles for the determination of the sustainable yield and for the design of the sustainable forest management are: i) structure and stock of forest trees (produce) shall be optimal; ii) to use is only the increase of natural growth; iii) the less quality is to use first, the better quality is to keep for reproduction; iv) the autochthon populations of the species are seen the best adapted ones and should been given preference and should been promoted.

Aim of the Forest Management Plan for the N≠a Jaqna Community Forest is to be a useful and easy to handle tool for the forest managers to perform a sustainable forest management. The FMP tries to be simple, using an understandable language and containing all necessary information in an easy-to-handle structure.

The management of the N≠a Jaqna CF should be implemented by the Management body of the N≠a Jaqna Conservancy Community Forest (NJCCF).

2. Area Description

Location



The N≠a Jaqna Community Forest (CF) is located in the Communal Area of the Otjozondjupa Region, Tsumkwe Constituency, under !Kung traditional Authority.

1. The Southern Boundary of the Community Forest is the 20th parallel Cordon fence.
2. The Eastern boundary of the Community Forest is a common boundary shared with the Nyae-Nyae Community Forest.

3. The Northern boundary of the Community Forest is the Kavango West.
4. The Western Boundary of the Community Forest is the Red Line Cordon fence.
5. The Community Forest boundaries stated above enclose 834250 ha. (Excluding M'kata 86750 ha)

Figure 1: Location of the N≠a Jaqna Community Forest in the Otjozondjupa Region, Namibia

2.1 Physiogeography

The area is situated in the Kalahari sandveld system, with palaeo dunes and pans. In a west-east transect the Omatako omuraba is dominating the very west of the area with its fossil river beds. Towards east it is followed by a huge ridge with sand dunes. In the east and south plains with seasonal pans dominate. The height of the area is between 1100-1200 m above see level, some peaks of the dunes go up to 1250 m.

Climate

2.2 Temperatures

The average temperature ranges between 20-21 degree Celcius for the main part of the area. A small strip in the north, in a line from Rooidaghek to the game-water point (borehole no. WW7791) the average temperature is 21-22 degree Celcius.

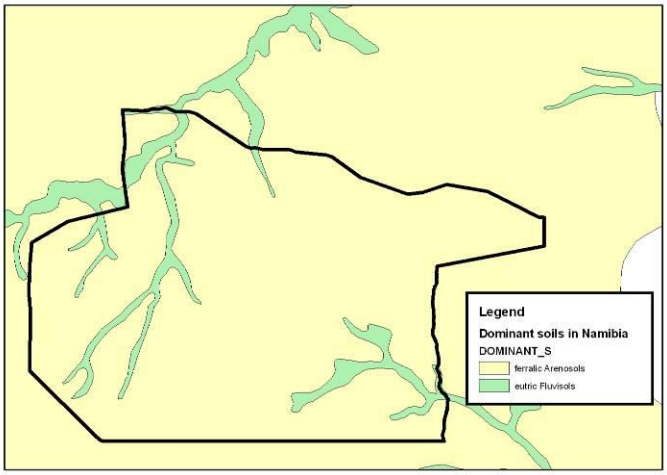
The average number of frost days varies from 5-10 per year.

2.3 Rainfall

The annual rainfall ranges from 400 -500 mm with a considerable variation (30-40%) from year to year. The rainy season usually starts in October-November and lasts up to March-April with the peak of rainfall in January.

2.4 Geology, Hydrology and Soils[1]

The geology is belongs to the group of Kalahari and Namib Sands, with the rock-types sands and calcrete. All area belongs to the Omatako groundwater basin.



The composition of soils is shown on the map on the left.

The soils of the main part area (in the map yellowish) belong to the group of arenosols, with the soil type ferralic Arenosols.

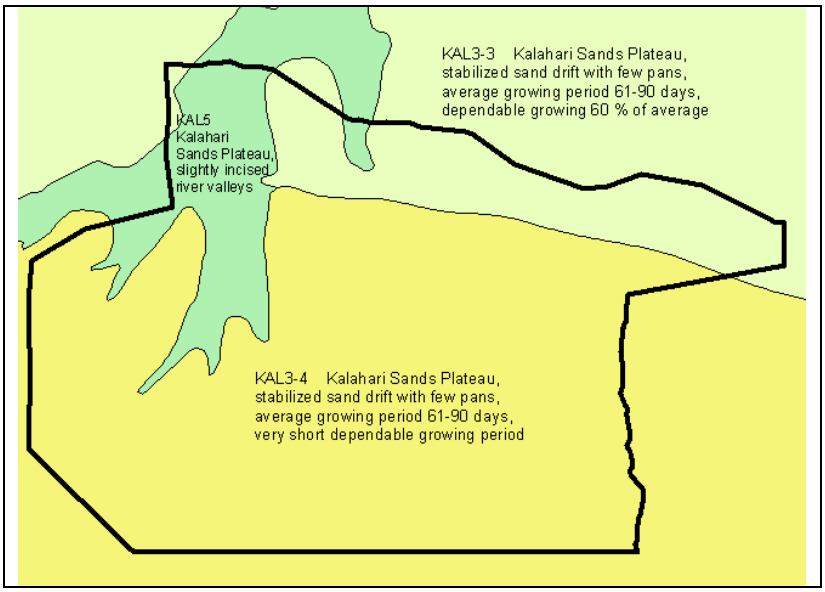
In the omurambas (in the map greenish) the soil belongs to the group of fluvisols with the soil type eutric Fluvisols.

Both groups of soils are considered as not enough fertile for cultivation.

[1] Source: Atlas of Namibia

Plant growing conditions for the area are described with the Agro-Ecological Zones. The map on the right shows the preliminary Agro-Ecological Zones for the area.

KAL-5 and KAL3-3: The zones are seen as unsuitable for crop production due to a low dependable growing period combined with sandy soils. The southern part of the CF, KAL 3-4, is ranked as even more unsuitable for cropping.



2.5 Vegetation

According to the classification of Giess (1971) the N≠a Jaqna area belongs to the "Forest Savannah & Woodlands"[2]. On ground the vegetation is highly variable, reflecting the different side patterns. It is characterized by a mosaic of patches in the broad range from pans to grasslands over shrub savannahs to tree savannahs and, on the deeper sand parts, woodlands.

It is reported that the area was covered with a dense forest, especially on the sandy areas. In the few decades since the C44 road was build huge quantities of timber tees, especially Kiaat (*Pterorocarpus angolensis*), were logged. The so opened areas were quickly conquered by grass and the frequent fires, a cultural habit of the newly introduced dwellers, increased the openings by killing the remaining live trees and also the new tree, esp. the Kiaat regeneration. Today only some surviving low quality trees and some few younger trees from stump-shoots witness from the former dense forest in the now open savannah area. An observing visitor can imagine the former forest cover by the shape of the remaining high trees with a small, trumped-shaped crown, which tress develop under high competition by other trees in the same size. Today every fire is reducing the remaining trees.

The most common tree species are Terminalia sericea, Burkea africana , Philenoptera nelsii (old: Lonchocarpus nelsii), Combretum spec., looted Accacia eriolba, looted Pterorocarpus angolensis. Other important species are Acacia melifera subspec. Detinens, Mangetti (Ricinodendron rautanenii). Monkey orange Strychnos spinosa. There was a high potential for timber extraction, now bigger trees are found far from the road.

2.6 Biodiversity

The area is rich in biodiversity of plants, to name is the devil's claw (*Harpagophtyum procumbens)*, predators, insects, rodents, birds and reptiles. The number of game is smaller than in the neighbouring Nyae Nayae area. Species are: elephant, leopard, eland, duiker, steenbock, gemsbock, kudu, giraffe, jackal, cheetah, warthog, and hyena. Since natural water is only provided by seasonal pans, the area served as a seasonal migration area for big mammals. Now the Conservancy runs game water points to maintain these populations.

2.6 Infrastructure

The N≠a Jaqna Community Forest is organised in 3 Districts: District 1 comprises the village of Pespeca, District 2 comprises the villages of Mangetti Duine, Luhebo, Kukurushe, Kankuti, Medulethu, Nxurube, M'Kata, Mparara, District 3 comprises the villages of Omatako, Bobi Pos, Kandu, Kameelwoud, Rest Camp and the southern part of Rooidag.

[2] The Atlas of Namibia names the vegetation biome "Savannah", the vegetaton unit "Tree savannah and woodlands", the vegetation type "Northern Kalahari", the vegetation structure "Shrubland-Woodland mosaic".

The infrastructure given in District No. 1: Primary School at Aasvoelnes, Boreholes with diesel pump at Pespeka and Aasvoelness. In District No. 2: Primary School at Mangetti Dune, M'Kata and Kukurushe, Hospital at Mangetti Dune, Borehole at Luhebo, Mangetti, Kukurushe, Danger, Soweto, Kankuti, Nxurube, Diesel- Pumps 9, Electricity at Mangetti Dune, and Workshops-Garage: Stefanus Cae. In District No. 3: Primary School at Omatako and Rooidak hek, Clinic at Omatako, Borehole at Boebie pos, Kamelwoud, Restcamp, Kandu, Omatako, Swarttak and Rooidag hek, Diesel- Pumps are 7, Electricity at Omatako.

There is no electricity in the villages available, only in Omatako, Roidag and Mangetti Duine. The aprox. 100 km remote Tsumkwe offers some basic services like clinic, Line Ministry's offices, Secondary School up to grade 10, Court of Justice. The area is accessed by the gravel C44 road that pass to Botswana border . From this C44 gavelled roads branch to Omatako, M'Kata and Mangetti Duine. A gravel road to Rundu (Hamoie) is started to build by cutting the bigger Camelthorn trees along the prospected road. The different villages are connected by sand roads.

In Omatako, Roidag and Mangetti Duine are holders of private owned vehicles to find.

2.7 Population and Livelihoods

A socio-economic survey was conducted in 2009. 533 households were counted (District 1: 18, District 2: 251, District 3: 264). The dominant ethnic groups are !Kung and Ju/'hoan san. In the Omatako omurabas and around Mangetti Duine many immigrated settlers and government employees from other tribes are to find. The pressure of immigrating livestock keeper is high.

In the past the waterless area was only used from San groups in their seasonal migration between Tsumeb and Tsumkwe. They lived traditionally from harvesting wild plants (veld food) and hunting. Under the apartheid regime the South African Army transferred san people form areas given to other tribes to the so called Bushman land. Some of them were hired as tracker for defence purpose. Resettlement support was and is provided around the army bases. Since approx 10 years many non-San establish new farms around the existing villages.

The current San inhabitants try to maintain a n!ore system[3] for the settlements (villages) of the area, but it seems not really respected from the people living in the area.

2.8 Other stakeholders

Aside of the Government agencies and Traditional Authority the Conservancy seems to be the most leading organisation. Some organisations (NNDF, CFN, Nam Parks,) assists the Conservancy in various aspects.

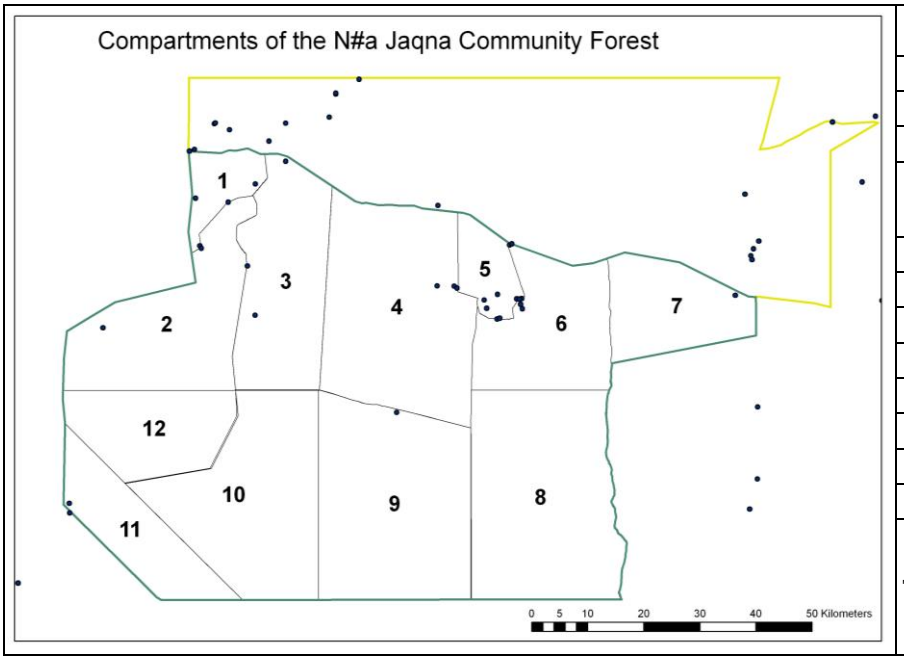
In the CF area are also some churches active: Especially the NGK church delivers development assistance.

3. Forest Resources and Their Use

Forest Organisation

For the sake of operational forest management the CF area is structured in sub areas (compartments). The map on the right side shows the location of the 12 compartments. Mostly the compartments are delaminated by roads. The area per compartment is given in the table below.

[3] "A n!nore system in the past was an area of land providing enough game, bushfood and water to support a band of 30-50 people. Rights of residence in a n!nore were inherited from both parents, and individuals also gained rights in other n!ore through marriage " Cite from: Biesele. M. and Jones, B.T.B. (1991): Human Rights and Democratisation in Namibia: Some Grassroots Political Perspectives. Paper prepared for the Annual Meeting of the African Studies Association. Toronto, Ontario. Quoted in: Brian T. B. Jones (1996), page 12.



Comp. No.	District	Area [ha]	Perimeter [km]
1	3	13’277	55.678
2	3	58’219	121.793
3	3	55’282	108.825
4	2 and 3, M’Kata CF	86’561	125.544
5	2	14’239	52.594
6	2	46’109	100.877
7	1	34’749	77.139
8	2	88’775	124.690
9	2 and 3	85’700	119.294
10	3	74’459	121.799
11	3	33’324	94.560
12	3	37’399	79.148
Total CF		628’093	1’181.941

3.1 Forest Resource Assessment

Assessment of the Forest Resources: Participative CF Inventory (PCFI)

A Participative Community Forest Inventory (PCFI) was conducted for the N≠a Jaqna CF in 2010.

The aim of NJCF PCFI was to provide the basic information for the sustainable management of natural resources by and for the communities of NJCF. As the whole area is huge with 6,280 km², only the close to the main road compartments, with would be easier accessible for measures. The area of the M’Kata CF was not assessed in this session, but it is intended to do it later.

A sampling method designed with a fixed sampling plots was used. The method is described in the PCFI methodology defined in the 2008 CFN PCFI manual. It is a forest inventory with a uniform systematic sampling plot design. This method was developed for high timber potential areas. High timber potential areas are considered with the following species: Baikia plurijuga, Pterocarpus angolensis, Spirostachys africana, Guibortia coleosperma. As for the NJCF the grazing potential is an important resource, grazing parameters were also assessed during the PCFI data collection.

For the measurements in the field community people were identified and trained.

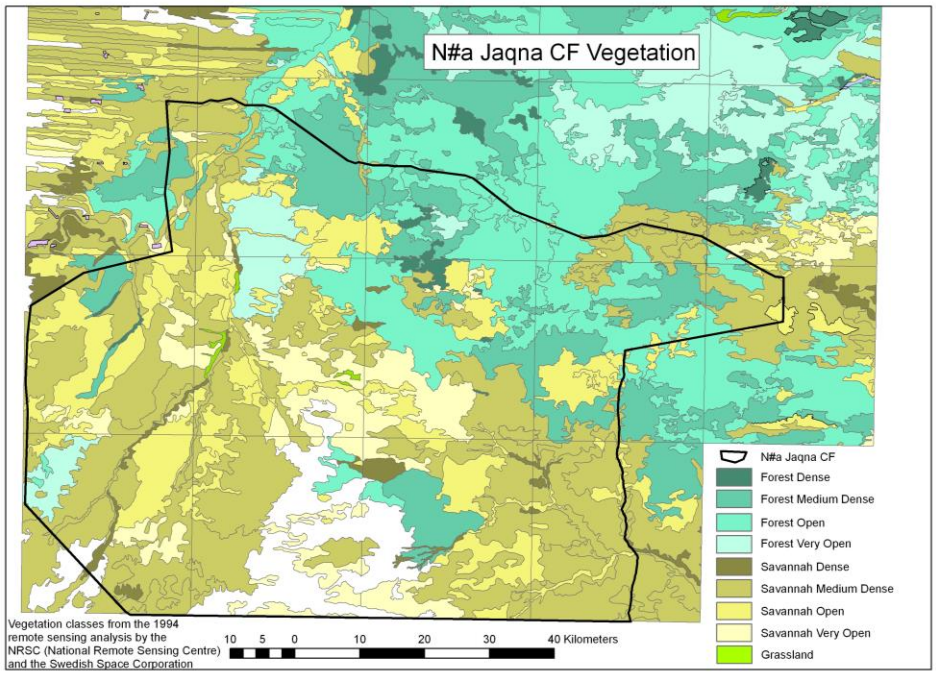
Each sampling plot (SP) consists of two concentric plots of different radius: 10 m for saplings, shrubs and tree regeneration, 30 m for trees with circumference over 31.4 cm (DBH >15 cm). More qualitative information was collected from the visible area. Grid size for the SP was 1 x 2 km, in total 1021 SP were measured in the compartments 1, 2, 3, 5, 6 and 7 with an area of 95’098 ha. Thus, one plot represents an area of 0.28274 hectares; the sampling rate was 0.30% of the area. The Inventory results were calculated by the National Forest Inventory department of the Directorate of Forestry (NFI) with the 2010 PCFI software. The overall standard error of the mean is 10 %.

Comp.	No. of SP
1	65
2	269
3	248
4	0
5	64
6	210
7	165
Total	**1’021**

3.2 Vegetation types identified in the Community Forest

Vegetation map

The map below shows the vegetation classes from the 1994 remote sensing analysis by the NRSC (National Remote Sensing Centre) and the Swedish Space Corporation. The blank areas seem to be not classified in the 1994 map.



Definitions for the 1994 Vegetation Map			
Woody plant height:	F = Forest/Woodland > 5m	**Woody plant density:**	d = Dense canopy cover > 70%
	S = Savannah < 5m		m = Medium dense canopy cover 40-70%
	2 = High shrub/savannah 2-5m		o = Open canopy cover 10-40%
	1 = Low shrub/savannah < 2m		v = Very open canopy cover 2-10%

Vegetation types for forest management

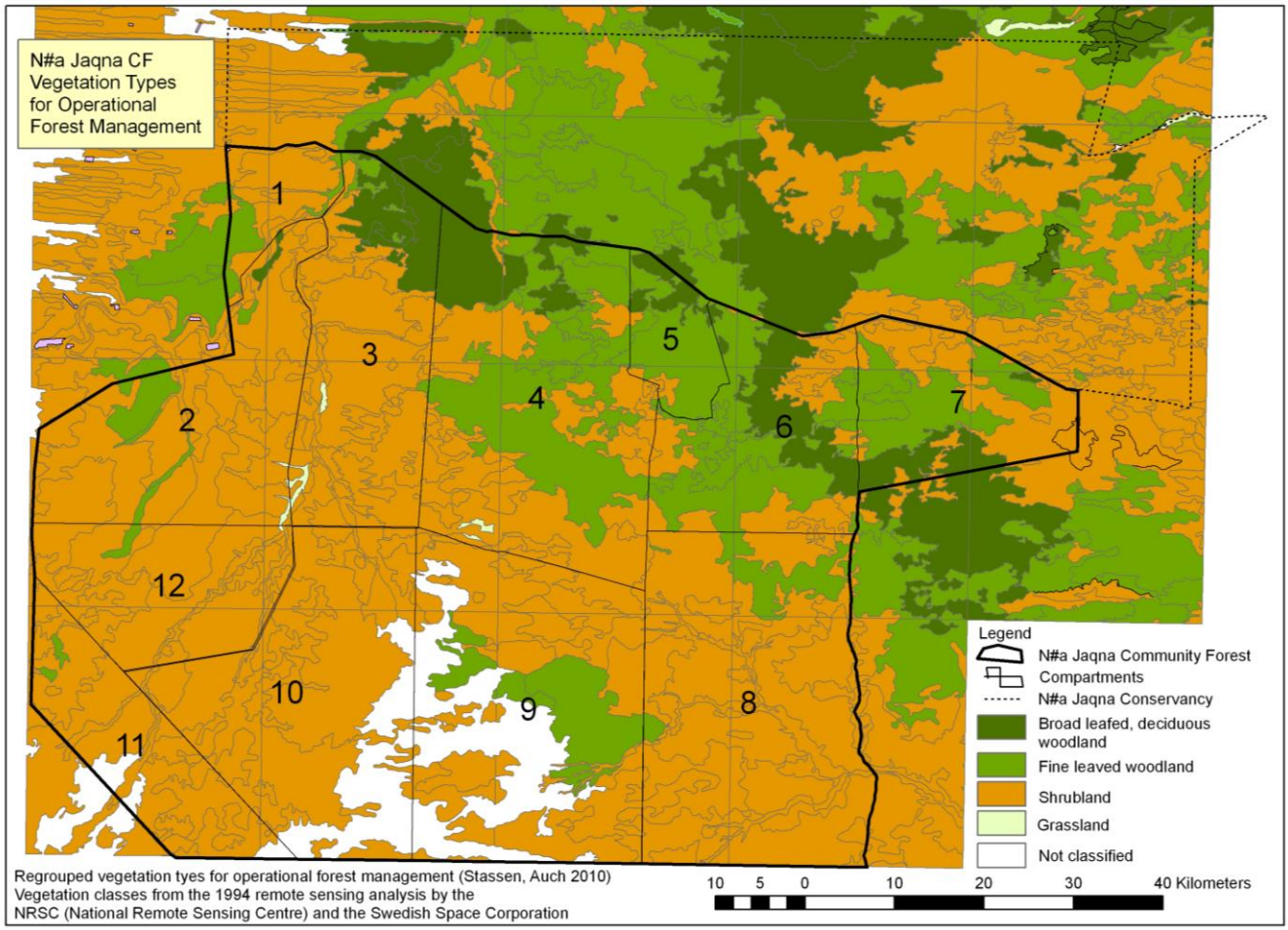
The vegetation types of the 1994 vegetation map were regrouped for forest management. Since the woody vegetation is composed by grass, shrubs and trees the management is to understand as an integrated savannah-ecosystem management.

To create an easy to understand and to handle tool for the operational forest management measures the vegetation is grouped in the following types[4]:

Vegetation Types for operational forest management	
Description	**Definition**
Broad leafed, deciduous woodland = Fd, Fm, Fo + Bu, Ba, Mo, Pt	Broad-leafed refers to the leaves or leaflets of the dominant woody species being larger than about 20 mm (major axis). Deciduous means that the majority (> 70%) of all tree and shrub leaves are lost for at least three months. Woodlands are having a tree cover greater than 10%. *Burkea africana* (Sandveld Seringa) and *Pterocarpus angolensis* (Kiaat or Dolf) are the key tree species on unconsolidated, deep and sandy soils. These trees are usually between 10 and 20 m tall and often grow single and widely spaced. Usually, they branch some distance above the ground. Grasses generally dominate the herbaceous stratum and the shrub layer can be quite divers in this ecotone. Less common tree species are Mangetti trees (*Schinziophyton rautanenii*), which could replace *Burkea africana* on top of the dunes and form together with *Pterocarpus angolensis* and *Commiphora tenuipetiolata* the characteristic tree species in this habitat.
Fine leaved woodland = Fd, Fm, Fo + Ts, Mx, Tp, Ac	Leaves, or more precise the pinnule of the dominant fine-leafed woody species are smaller than 20 mm, and usually less than 2 mm wide. Evergreen means that more than 70% of tree leafs are retained year round, and semi-deciduous is in between evergreen and deciduous. The characteristic element is *A. erioloba*, a tree with a typical umbrella-shaped crown usually between 10 and 25 m tall. Other Acacia species, such as *A. fleckii, A. hebeclada, A. mellifera* and *A. luederitzii* are frequent as well but rather multi-stemmed shrubs or small trees. Some broad-leafed, deciduous tree and shrub species (e.g., *Lonchocarpus capassa*, *Terminalia sericea* and Combretrum species) are also widespread woody elements in this structure and can in some parts exceed the land cover of the acacias. Fine leaved evergreen/semi-deciduous woodland is most common along the drainage lines (omiramba), i.e. on more clayey than on deep sandy soils. Pans, small seasonally waterlogged depressions occur mostly in these areas and support miniature grass- and sedgelands.
Shrubland = Fv, Sd, Sm,	Shrublands are defined as having few tree species > 5 m tall and a tree canopy cover of less than 10% but a cover by multi-stemmed woody plants usually shorter than 3 m (shrubs) occupying more than 10% of the area. Common species are *Acacia mellifera, Bauhinia petersiana, Combretum collinum, C. hereroense, C. zeyheri, Grewia flava,*

[4] The design is based on a classification from Karsten Feuerriegel (2006 Inventory Prototype for a Woodland Management Scheme in Tsumkwe-West) and was further developed by Eckhard Auch and Michael Stassen in 2010

Vegetation Types for operational forest management	
Description	**Definition**
So, Sv + all species	*G. flavescens, Ochna pulcha* but the key and most abundant species is usually *Terminalia sericea.*
Grassland	Classified by having a cover by trees of less than 10% and/or a cover by shrubs of likewise less than 10%. Common grass species are *Stipagrostis uniplumis, S. ciliaris, Eragrostis lehmaniana, Schmidtia kalahariensis*. The interpreters of the 1994 map identified only few areas of Grassland. In the 2010 reality there are more patches of grassland. This could be caused by the fires in the meantime, and/or by the interpretation reference used from the aerial photo interpreters.
Pan and marshland	The area contains some smaller pans, but they are not assed as a separate feature.



3.3 Diversity of the Community Forest's Woody Plants

3.3.1 Live and death trees

Tree species found in the forest inventory assessment:

!Kung	Jul'hoansi	Afrikaans	English	Scientific
II'ooh	II'ooh	Appelblaar Kalahari Appelblaar	Apple-leaf	Philenoptera nelsii (old: Lonchocarpus nelsii)
Zagn	Zagn	Wit gat boom	Shepherds tree	Boscia albitrunca
!Ai	N/ana	Kamel doring boom	Camelthorn tree	Acacia erioloba
G!un	G!ùn	Kokker boom	False umbrella trorn	Acacia luderitzii (inedeiitzii)
G!uan	G!uan	Hacki, Wag-bietjie boom	Black Thorn	Acacia melifera subspec. detinens
N#hang	N#hang	Dolf hout	Kiaat	Pterocarpus angolensis
!Ku	!Ku		Wild seringa	Burkea africana
G#oa	G#oa	Harde kolboom	Combretum / Bicoloured Bushpillow	Combretum collinum subsp. gazense
G#oa	G#oa	Harde kolboom	Combretum / Weeping Bushpillow	Combretum collinum subsp. suluense

!Kung	Jul'hoansi	Afrikaans	English	Scientific
Zcro	Zcro	Geel boom	Silver terminalia, Yellow wood	Terminalia sericea
Gllkaa	Gllkaa	Mangetti boom	Mangetti tree	Schinziophyton rautanenii
!Ai	Glòà	Skilferboswilg	Silver combretum / Peeling twig combreeting / Peeling bushpillow	Combretum psidioites subsp. dinteri
!Ai	Glòà	Skilferboswilg	Silver combretum / Peeling twig combreeting / Peeling bushpillow	Combretum psidioites subsp. psidioides
	Nllabè		Large-fruited combretum	Combretum zeyheri
	≠'ò	Hardekool	Leadwood	Combretum imberbe
	Tah		Spine-leaved	Strychnos pungens
	Nloh		Corky monkey orange	Strychnos coculoides
	!àì	Lekkerbreek		Ochna pulchra
	Baràtatà	Harpuisboom	Common reisin tree / Reisin tree	Ozoroa paniculosa (schinzii?)
	Lùí	Grootfalsemopanie	Large False Mopane	Guibourtia coleosperma
	Glòà		Zambezi Teak / Zambezi-kiaat	Baikiaea plurijuga
	N≠aqng	Sandveld acacia / Bladedoring	Blade Thorn	Acacia fleckii
	Laqrì	Haak-en-steek	Umbrella Thorn	Acacia tortilis
	N≠oaqnáhàn	Laventelkoorsbessie	Lavender Bush	Croton gratissimus subsp. gratissimus
	Tcòètcòèhà	Krinkhout	Violet Tree	Securidaca longepeduncuata
	Glàítsàò	Huilboom	African-wattle	Peltophorum africanum
	Máqíh / Máqín	Kringboom	Bead Maerua / Ringwood Bead-bean	Maerua schinzii

3.3.3 Shrubs

!Kung	Jul'hoansi	Afrikaans	English	Scientific
G!oohn	G!oohn		Kalahari rasin	Genia retiervis
Nlang	Nlang		Brandy bush	Gremia slava
Gluurih	Gluurih		Wild medlar	Vangueria infausta
Glloeh	Glloeh		Sourplum	Ximenia caraffa
Zogma	Zogma		Raisn bush	Grewinase llana
Dcaha	Dcaha		Wild orange	
#Ong#oa	#Ong#oa		Bauhnia	
	!Káí	Sekelbos	Sickle-bush	Dichrostachys cinerea
	Nlhòdí	Sandkanniedood	Sand commiphora / Sand Corkwood	Commiphora angolensis
	Nl'hòg!òq	Gifkanniedood	Poison-grub commiphora	Commiphora africana
	Nl'hòg!òq	Grootdoringkanniedood	Tall Firethorn Corkwood	Commiphora glandulosa
	Maqìn		Poison Leaf	Dichapetalum cymosum
	N≠ah		Buffalo Thorn	Ziziphus mucronata
				Baissea wulfhorstii
	G!ù'úrí / N!ù'úrí	Sandkamhout	Sand Camwood	Baphia massaiensis
	Glòà	Koffiebeesklou / Kalahari-beesklou	Kalahari Bauhinia / Coffee Bauhinia	Bauhinia petersiana
	Laun≠qalari / Lá'u≠uìnn≠á'á / ≠anìh	Kleinsandboswilg	Sand Combretum	Combretum engleri
		Kleinblaarghwarrie	Small-leaved Guarri	Euclea undulata
	Zòqmà		Raisin Bush	Grewia avellana
	Kàq'àmàkòq / N!hàma!orò	Witblaarrosyntjie	False Brandy Bush / White-leaved Raisin	Grewia bicolor
	Nlàng	Brandewynbos	Brandy Bush / Velvet Raisin	Grewia flava
	Lorè / Llxaàbeè	Skurwerosyntjie	Sandpaper Raisin	Grewia flavescens
	Glòàhn	Kalahari-rosyntjie	Kalahari Raisin	Grewia retinervis
	!a'è	Kurkbos	Cork Bush	Mundulea sericea
	Baràtatà	Harpuisboom	Common Resin-tree	Ozoroa paniculosa
	N!anà	Dwarf mobola plum	Sand Apple	Parinari capensis
	Glùrúbé	Kurlblaataaibos	Kalahari Currant / Rolled-leaf Currant	Rhus tenuinervis
		Bitterkaree	Bitter Currant	Rhus marlothii
	!órócé		Leather Plum	Salacia lubbertii

!Kung	Jul'hoansi	Afrikaans	English	Scientific
		Doringklapper	Spiny Monkey-orange	Strychnos spinosa

There are plenty non-timber forest products available in NCF, which are normally used for own consumption only. However devils claw is a high valued product which is sold on the market and is one of the main source of income

3.4 Land use

3.4.1 Current land-use

The dominant type of land use along the main roads is: timber tree logging; pole logging, firewood cutting; collection of wild plants and fruits; collections of small animals like tortoises, birds or lizards and hunting/poaching. Closer to the boreholes the area is used for cropping and live stock grazing. There is very high frequency of wild/forest fires, the entire area burns approx every year.

3.4.2 Wood products and marketing

During the socio-economic survey gender specific pattern to use forest products were found. Women collect fuel wood : Men prepare poles and harvest timber, Woman and children collect fruits and other non-wood products.

The most important wood product (except firewood) for self-consumption is cutting poles for fencing and construction. Residents harvest timber trees to make furniture for themselves. A few people have experience in pit-sawing and a carpenter makes furniture for residents. In the past some poles were sold to people in business areas, otherwise no wood products are sold.

3.4.3 Non-wood products and marketing

Non-wood products are collected as a food supply, medicinal purpose or for marketing and producing liquor. Manketti nuts play an important role in the local diet. The nuts are cooked as a soup and oil for cooking is made from the kernels. They are sold locally and liquor (kashipempe) is produced. Furthermore the kernels can be sold in Rundu. Manketti is considered the most important forest product for making money.

There are other common fruit people collect as well as Monkey orange (Strychnos cocculoides / Strychnos pungens) which is abundant in N≠a Jaqna Community Forest. Insects (worms) are found on most part of the forest. In addition to Manketti and devils claw is also an important source of income. The worm called (okarombo) is also use to cooked as chips. Fire and lack of rain are considered the major problems affecting the supply of non-wood products. FMC will explore options of pormoting this products to reach grater marketing heights.

3.4.4 Key Problems and Responses

Key Problems

A key problem is the lack of income generated from forest products. Currently products from the forest are not a major source of cash income for many community members; therefore people do not see the need for proper management techniques i.e. fire control. Hot bush fires late in the dry season that leave considerable areas burned every year have a major negative impact. Many non-wood products are destroyed and regeneration of trees is badly affected. Frequent bush fires increase the mortality rate of trees and make regeneration almost impossible where fire occurs every year. Fire used to clear fields often gets out of control and huge areas burn down. Other issues includes illegal fencing and grazing in the area as well as illegal harversting of forest products (timber and poles).

On the other hand, areas in N≠a Jaqna Community Forest CF are covered with thick thorn bush where fires hardly occur. Currently this vegetation type offers little benefit to people and is limiting the pasture for livestock (bush encroachment).

Future opportunities

In N≠a Jaqna Community Forest CF has a good potential for harvesting and marketing Firewood, poles and timber. There are curently some capentry project active like the one of Luhebo. As N≠a Jaqna Community Forest is able possible to sell firewood in the region. Another option is to sell cut firewood in plastic bags, if the quality standards and the logistics are met. FMC will explore options of pormoting timber and non-timber forest products to reach grater marketing heights.

4. MANAGEMENT OBJECTIVES

- Shared vision

The people of N≠a Jaqna CF community share the vision that the community forest should be managed sustainable according to this management plan (including condition of use) and the residents should generate income through forest management activities.

4.1 N≠a Jaqna primary aims of community forest:

1. The community experiences encroachment by people from outside resulting in the uncontrolled utilization of the grazing resources. The community therefore decides to obtain the control of grazing rights through the declaration of the community forest.

2. The community would like to ensure the continued access to a specific food plant that may be of high value or cultural importance. The management objectives may then include the regulation of use and / or the propagation of the species.

In order to make a feasible plan for resource utilization, objectives for forest management has been defined by the community members. The community set priorities by considering resources in their forest and this has provided the framework for developing forest management strategies. It was clear in this case that the N≠a Jaqna Community aims at developing a forest management plan that considers both wood and non-wood benefits. They have emphasized that they are especially looking at management of forest resources, income generation by harvesting and selling these products, while conserving forests. Therefore, the Community has prioritized possible and available emphasis, which could maximize their benefits as following;

- Create awareness among users and residents of N≠a Jaqna community forest for the sustainable use of forest products.

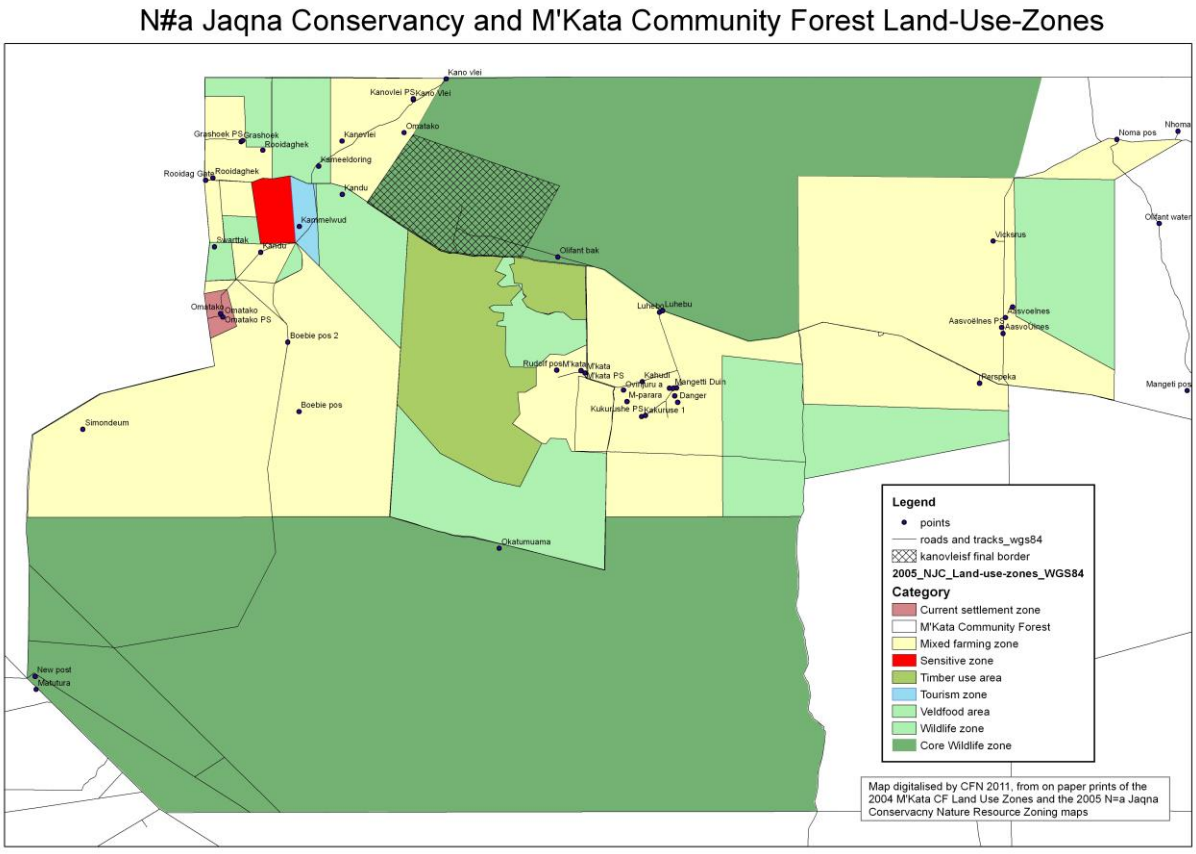
- Harmonize forestry activity with livestock grazing
- Provision of construction materials and fuelwood
- Reduce resource degradation caused by forest fire
- Harvest forest products on a sustainable basis and offer regular supply to customers
- Promote eco-tourism and biodiversity conservation
- Employment creation
- Initiate other income generating activities to reduce pressure on forest resources.

4.2 The main objectives of the Community Forest shall be:

- to enable its members to derive benefits from the sustainable management and the consumptive and non-consumptive utilization of wood and non-wood forest resources within its boundaries;
- to protect, to maintain and to build up a stock of high quality forest produce within the Community Forest;
- to endeavour to conserve habitats and landscapes of the Community Forest for wildlife management and tourism promotion;
- to endeavour to conserve other natural resources within the Community Forest for the sustainable development of its members.

4.3 Established Zonation: Agreed objectives for land-use zones

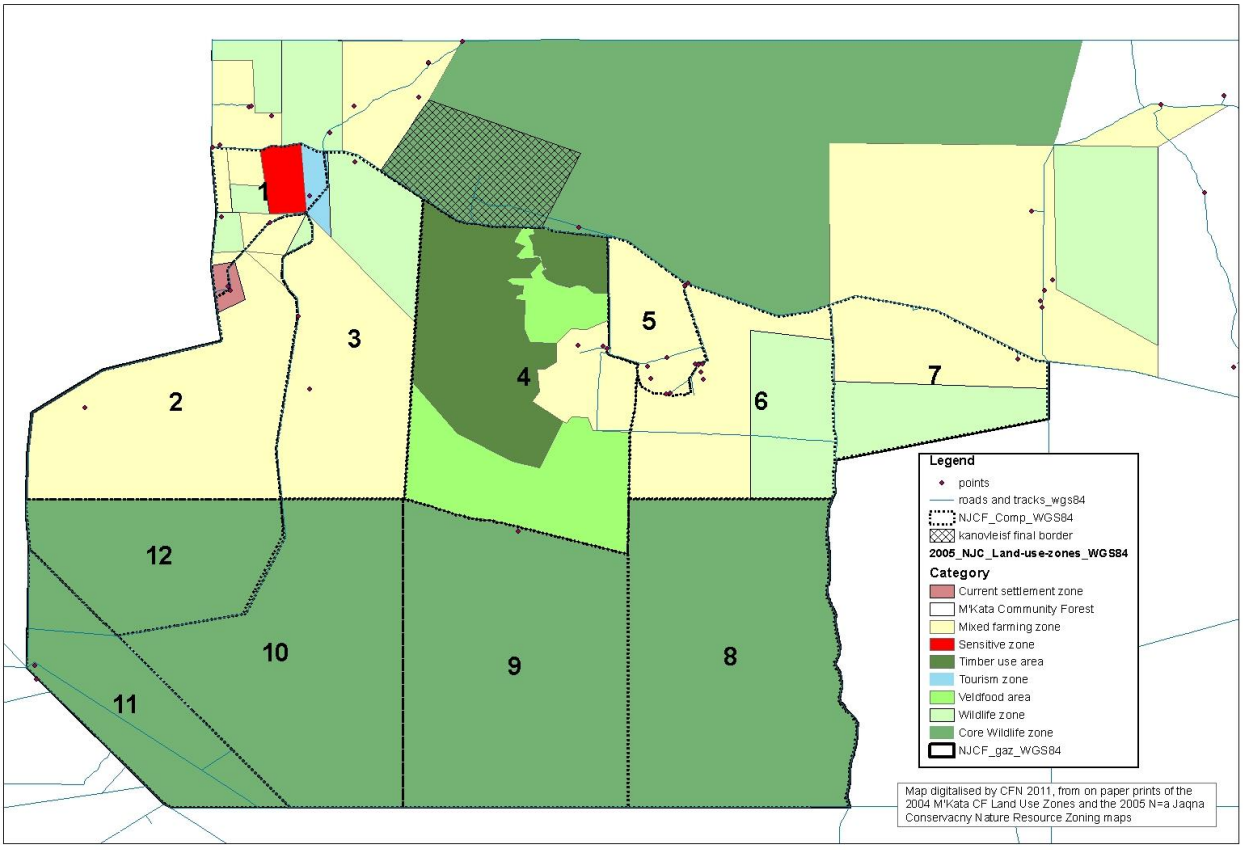
Establishment of land-use zones



4.4 Land-use Zones

The management units include Core and Periphery wildlife Zones, Mixed Farming Zones, Tourism Zones, Current Settlement Zones and a Sensitive Zone. The body of Natural Resource Zoning maps produced by N‡a Jaqna and the Ministry of Environment and Tourism's Remote Censing Unit include a Conservancy-Wide Zoning map as well as individual maps for the different village areas of the Conservancy. The zoning plan was conducted with the membership at the village level and was then adopted by the Conservancy Committee including the Chief of the !Kung Traditional Authority and those representing the TA on the Management Committee in March of 2004. The Conservancy leadership has decided on a control system for the Core Wildlife areas. The zoning plan is viewed as an important tool by the membership in order to safeguard the environment and optimise benefits received by the membership through the Conservancy Structure.[5]

N#a Jaqna Conservancy and M'Kata Community Forest Land-Use-Zones



Land-use-zone	Objective / Description / Definition	Activates that are to be encouraged in these Zones	Activates that are to be discouraged in these Zones
Current Settlement Zones	These areas are those of concentrated settlement. Due to the population density and special needs of the population it has been deemed viable to zone these areas of settlement for administrative and management purposes. Those who will be involved in decisions concerning management of this Zone: ▪ Conservancy Committee and Membership ▪ !Kung Traditional Authority ▪ Ministry of Local Government and Housing ▪ Ministry of Lands, Resettlement and Rehabilitation ▪ Other Line Ministries	▪ Settlement ▪ Subsistence cropping or kraaling of livestock	▪ Hunting ▪ Eco-tourism
Mixed Farming zone	The vegetation of these zones is suitable to both grazing and browsing. Livestock and crop farming is viable in these zones. The zoning of these areas also allows for grazing to take place in areas less affected by the Grift-blaar or poison plant. Livestock farming will receive priority in these areas but control	▪ Livestock farming ▪ Crop farming ▪ Settlement	▪ Illegal hunting ▪ Tourism activates

[5] 2005 N‡a Jaqna Conservancy Management and Utilization Plan

Land-use-zone	Objective / Description / Definition	Activates that are to be encouraged in these Zones	Activates that are to be discouraged in these Zones
	of herds is essential in order to protect adjacent zones. It is possible that legal harvesting or translocation of game in these areas may take place should the need arise to reduce competition between livestock and game for grazing in these zones. Stakeholders who will be involved in decision-making with regard to the management of these zones are: ▪ Conservancy Committee and Members ▪ !Kung Traditional Authority ▪ Legitimate Farmer's Associations ▪ Line Ministries	▪ Collection of bush food and other medicinal plants and small-scale cultivation of Devil's Claw (Subject to MET and TA Permit)	except for cultural tourism activities approved by the Conservancy
Tourism Zone	This zone is an area in which a tourism development is operating, namely the Omatako Valley Rest Camp. The area plays host to a conservancy that run campsite that generates income for the local population employed at the site, and the Conservancy. It is envisioned that as additional tourism sites are developed, additional localized Tourism Zones such as this will be developed.	▪ Tourism activates sanctioned by the Cons. ▪ Collection of bush food a. medicinal plants	▪ Unautho-rized tourism activities ▪ New Settlement ▪ Grazing of Livestock
Sensitive Zone	This zone is located adjacent to the Tourism Zone and is zoned as sensitive due to the bio-diversity of the area and the reliance of the tourism development on this bio-diversity as a tourist attraction. Tourism activates in this area are to remain low-impact and guided by professionals who know the area and can guide the tourists in order to avoid unnecessary damage to the environment. Protection of the natural environment and those species that it supports is a priority in order to protect the environment and maximize the income generated by the campsite development. Stakeholders who will be involved in decision-making with regard to the management of the zone are: ▪ Conservancy Committee and Leadership ▪ !Kung Traditional Authority ▪ Ministry of Environment and Tourism	▪ Conservancy approved Tourism activities ▪ Wildfire prevention activities ▪ Collection of bush food	▪ Unauthorise d tourism activities ▪ Illegal hunting or harvesting of bush products ▪ Settlement ▪ Grazing of livestock
Wildlife zone	These zones are areas that play host to substantial wildlife populations. These areas are theatres for wildlife breeding and migration. They also play host to a number of important species of wildlife and are rich in biodiversity. In addition the scenic nature of these areas and their relative proximity to existing settlements make them ideal locations for cultural tourism developments viewed as an important income generation opportunity for the Conservancy and its members due to the cultural richness and diversity of the membership. The District Committee in which the Zone falls will manage development in these Zones. In order to protect the pristine natural environment and the wildlife that depends on it, and to allow the full cultural tourism potential of these areas to be realized, new settlement in these areas and the grazing of livestock will be strongly discouraged. Local Conservancy staff will monitor the wildlife in these areas and report to the Conservancy Committee and the Management Committee. Stakeholders who will be involved in decision-making with regard to the management of these zones are: ▪ Conservancy Committee and members ▪ !Kung Traditional Authority ▪ Ministry of Environment and Tourism ▪ Other line Ministries	▪ Wildlife actives ▪ Conservancy sanctioned cultural tourism activities ▪ Collection of bush food, Devil's Claw (Subject to MET and TA Permit), other medicinal plants	▪ Illegal Hunting ▪ Poaching ▪ Un-authorized tourism developments ▪ New Settlements ▪ Grazing of livestock
Core Wildlife zone	These areas in the South and North of the Conservancy are the richest area of the Conservancy in terms of wildlife and biodiversity. They are free of permanent settlement and farming in the area to date due to the current lack of permanent water points. The areas are extremely scenic and present substantial opportunities for both non-consumptive and consumptive tourism. Development of these zones requires careful planning in order to prevent irreversible damage to the fragile area and to minimise the social impact of tourism operations in these areas. It is the desire of the Conservancy to keep tourism developments in these areas low-key as these areas are used by wildlife	▪ Wildlife activities, including re-introduction ▪ Conservancy eco-tourism activities ▪ Opening of additional	▪ Illegal Hunting ▪ Poaching ▪ Tourism activities not authorized by the N‡a Jaqna Conservancy

Land-use-zone	Objective / Description / Definition	Activates that are to be encouraged in these Zones	Activates that are to be discouraged in these Zones
	populations for breeding The tourism actives that may be carried out in these areas will be managed by the Conservancy District Committee responsible for the area in which the development takes place or will be co-managed with an investor under the terms of a contract or memorandum of understanding. Tourism activities such as guided hiking, walking trails, game drives and eventual trophy hunting in the Northern Core Zone, and photographic safaris will take place and tourism accommodation such as simple campsites, and base camps for potential trophy hunting can be established here. Monitoring of the density and distribution of game animals will be carried out on a regular basis. An annual game count by the Ministry of Environment and Tourism will be supplemented and supported by foot and horseback or vehicle patrols carried out by the Community Game Guards and the Conservancy Conservation Officer. Eco-tourism as well as consumptive operations such as trophy hunting will be managed in such a way as to avoid conflict between all enterprises. Stakeholders who will be involved in decision-making in regard to the management of these zones are: ▪ Conservancy Committee and Members ▪ !Kung Traditional Authority ▪ Ministry of Environment and Tourism ▪ Other Line Ministries	water points for game ▪ Collection of bush food, Devil's Claw (Subject to MET and TA Permit), and other medicinal plants	▪ New Settlements and cattle grazing

5. Management prescriptions

5.1 Responsibility for management activities

The FMB **N≠a Jaqna Community Forest** together with community-members and core stakeholders agreed on the following management measures. Further activities might be added in future. The FMB will be responsible for the planning, implementing and supervision of management activities according to this management plan.

Regular reports on management activities and other issues have to be given quarterly to community members, DoF and Traditional Authorities

5.2 Management Prescriptions per Vegetation Type

5.2.1 Broad leafed, deciduous woodland

Burkea africana (Ju/'hoansidveld Seringa) and Pterocarpus angolensis (Kiaat or Dolf) are the key tree species on unconsolidated, deep and Ju/'hoansidy soils. These trees are usually between 10 and 20 m tall and often grow single and widely spaced. Less common tree species are Mangetti trees (Schinziophyton rautanenii), which could replace Burkea africana on top of the dunes and form together with Pterocarpus angolensis and Commiphora tenuipetiolata the characteristic tree species in this habitat. Management measures are protection of the regeneration against fire and browsing.

5.2.2 Fine leaved woodland

Woodlands are having a tree cover greater than 10%. The characteristic element is A. erioloba, a tree with a typical umbrella-shaped crown usually between 10 and 25 m

tall. Other Acacia species, such as A. fleckii, A. hebeclada, A. mellifera and A. luederitzii are frequent as well but rather multi-stemmed shrubs or small trees. Some broad-leafed, deciduous tree and shrub species (e.g., Lonchocarpus capassa, Terminalia sericea and Combretrum species) are also widespread woody elements in this structure and can in some parts exceed the land cover of the acacias. Management measures are protection of the regeneration against fire and browsing.

5.2.3 Shrubland

Shrublands are defined as having few tree species > 5 m tall and a tree canopy cover of less than 10% but a cover by multi-stemmed woody plants usually shorter than 3 m (shrubs) occupying more than 10% of the area. Common species are Acacia mellifera, Bauhinia petersiana, Combretum collinum, C. hereroense, C. zeyheri, Grewia flava, G. flavescens, Ochna pulcha but the key and most abundant species is usually Terminalia sericea. Management measures are protection of the regeneration against fire.

5.2.4 Grassland

In the CF there are patches of grassland. This could be caused by the fires. Management measures are protection of the regeneration against fire and illegal fencing as well as illegal grazing.

5.3 Management Prescriptions per for Crosscutting Objectives

5.3.1 Awareness campaign for community forestry regulations

[The FMB will regularly inform community members and users of the forest about intentions and activities taking place. Special attention is given to awareness creation for fire issues. The FMB will encourage people to control their fires used to clear fields so that no damage is done to the forest resources. The condition of use have to be regularly published at community meetings that users of the community forest are aware about rules and regulations. The FMB will also pursue illegal activities according to the by-laws. It is also the duty of the FMB to call regular community meetings to inform people about income generated and money spent. Community meetings will decide on the benefit distribution for

5.3.2 Maintenance of bush roads, fire breaks and early burning activities

It is planned to maintain the existing bush roads inside the community forest area by clearing the vegetation left and right of the roads. Bush roads could be enlarged to fire breaks.
The priorities for clearing and maintaining cutlines and roads are listed in the work plan.

Maintaining bush roads helps people to get easier access to the resources and enables transport for harvesting operations. FMB and community members will closely monitor usage of bush roads from outsiders for illegal activities.

To protect the forest from uncontrolled bushfire, it is planned to maintain fire-cutlines surrounding the community forest area and carry out early burning. In 2014 a more effective method of strip

burning was used with considerable success, which makes sure that the fire cannot jump over a burned area of at least 30m. Strip burning has to be finished till end of July before the fire season starts in August.

If money from management activities is generated people will realize the value of resources and will be prepared to reinvest in fire prevention measures for their own benefit. New techniques in strip burning (fire is lead with by spray water on the fuel) and early burning (to avoid hot bushfires destroying everything; resulting in a patchwork leaving saplings undamaged) will be discussed with residents. Trials should be done and experiences from other areas can be adapted.

5.3.3 Supervision and Control of the Community Forest Resources

- Each potential user must apply for the use of specific resources for specific products through the FMC and be granted permit of harvesting, transport and marketing. The quantity harvested should be recorded as part of the permit system. The amounts harvested to be recorded and deducted from the anual allowable quota.

5.3.4 Long term Monitoring of the Community Forest Resources

- To ensure sustainability of forest resources in NCF, participatory community forest inventory has to be repeated latest every 10 years. If there is significant decrease of resources noted the annual allowable cut must be reduced respectively.

5.4 ANNUAL ALLOWABLE CUT: SUSTAINED YIELD ESTIMATES FOR WOODY FOREST RESOURCES

The calculation is based on the growth of the trees and the increment of stems from smaller diameter classes into bigger diameter classes. The main assumption in the calculation is that the diameter distribution during the ten year period of implementation of the plan will remain constant. This implies that the structure of forest could remain the same in the future too. A mortality rate of 10 % has been used in the calculation. In practice, a portion of these dead trees can be harvested too. According to the inventory report, the inventory was carried out in 6 compartments of NCF which exclude the eastern part of the NCC. Therefore it implies that the allowable cut is only applicable in the inventoried area. The allowable cut for timber and poles are calculated per compartment and the harvesting should be done as such.

a) <u>Allowable cut as per compartment</u>

Allowable cut for LIVE trees only

Species	Comp 1	Comp 2	Comp 3	Comp 5	Comp 6	Comp 7	Total
Pterocarpus angolensis	32	81	29	49	34	23	248

For timber production, *Pterocarpus angolensis* is the only species considered suitable in N#a Jaqna comunity forest. It is important to note that the harvestable size for timber trees at least 45 cm and above and coded as timber in the use class categories. Therefore, according to the inventory the total allowable cut for live timber trees is 248 per year. The distribution of harvesting should be done in compartments according to the table above.

Allowable cut for DEAD trees only (Timber and Poles)

Species	Comp 1	Comp 2	Comp 3	Comp 5	Comp 6	Comp 7	Total
"Acacia"	73	0	0	0	0	187	260
Acacia erioloba	257	77	39	0	351	75	799
Boscia albitrunca	0	39	0	0	0	0	39
Burkea africana	587	2,392	2287	600	1522	2362	9750
Combretum collinum	0	964	868	80	546	1275	3733
Combretum imberbe	0	887	39	80	273	750	2029
Combretum Psidioides				40			40
Compretum Zeyheri			39				39
Ochna pulchra	0	39		40	39	75	193
Philenoptera nelsii	0	617	237		156	187	1197
Pterocarpus angolensis					507		507
Strychnos pungens					78		78
Schinziophyton rautanenii	0	77					77
Terminalia sericea	0	77	197	280	156	937	1647

Due to the fact that external factors like fire and illegal harvest have a big impact on forest regeneration, the recommendations for the Estimated Sustainable Yield are just given for a period of 10 years maximum. Thereafter a resource re-assessment will have to be conducted.

Allowable cut for live trees (>15 cm Poles)

Species	Comp 1	Comp 2	Comp 3	Comp 5	Comp 6	Comp 7	Total
"Acacia"	13		25			13	51
Acacia erioloba	38	58	27		20	113	256
Acacia luderitzii	6		21				27
Acacia melifera			2			2	4
Acacia tortilis		7					7
Boscia albitrunca		50	7				57
Burkea africana	93	272	859	246	395	50	1915
Combretum collinum	19	388	615	5	10	367	1404
Combretum Psidioides			5			5	10
Compretum Zeyheri						5	5
Ochna pulchra			10	5			15
Philenoptera nelsii		509	214	101	99	160	1083
Schinziophyton rautanenii		9					9
Securidaca longepedunculata			14				14
Terminalia sericea	21	20	4	14	34	85	178

For the production of poles the following species are considered suitable. Harvestable trees have to have a diameter at Breast Height of >15 cm and coded as poles in the use class categories.

Fire wood allowable cut as per compartment

Species	Comp 1	Comp 2	Comp 3	Comp 5	Comp 6	Comp 7	Total No. dead trees	Avarage Vol. per tree	Annual Allowable Harvest (m3)	Density	Annual Allowable Harvest (tons)
"Acacia"	73					187	260	0.125664	32.67	1.1	35.94
Acacia erioloba	257	77	39		351	75	799	0.125664	100.41	1.1	110.45
Combretum imberbe	0	887	39	80	273	750	2029	0.19635	398.39	1.2	478.07
Terminalia sericea	0	77	197	280	156	937	1647	0.053014	87.31	0.8	69.85
TOTAL							4735		618.79		694.31

6. IMPLEMENTATION OF MANAGEMENT PLAN

- The Executive members and Forest Management Committee should have the responsibility to implement the management plan.
- The management plan will be implemented over the period of ten (10) years.
- The Directorate of Forestry staff to give technical assistance to the community in the implementation of the management plan.
- The harvesting of firewood and poles in the community forest to be monitored by members of FMC and DoF assists in directing the FMCs.
- The DoF staff should make sure that the FMCs and the communities who are responsible for the implementation of the management plan are well-equipped with all necessary skills which would enable them to run the forest sustainably.

7. COLLABORATION

N≠a Jaqna Community Forest Management Committee needs technical advice as well as other services from the Tsumkwe Forestry District Office (TFDO). They will require assistance in preparation of annual action plan from harvesting of products to marketing. DoF staff will only play advisory, facilitation and supervisory role. The committee will be entirely responsible for the actual implementation of all activities on the ground. Other key stakeholders with whom the FMC will collaborate are Ministry of Agriculture, Water and Forestry's Directorates including, Veterinary Services, Rural Water Supply, Extension and Engineering, Ministry of Environment and Tourism,

Namibian Police, Red Cross, Ministry of Health and Social Services, Ministry of Local Government and Regional Authorities, Ministry Land and Resettlement.

8. MONITORING

The resource use from the community forest should be monitored closely by the Directorate of Forestry. Each potential user must apply for the use of specific resources for specific products through the FMC and be granted permit of harvesting, transport and marketing. The quantity harvested should be recorded as part of the permit system. The amounts harvested to be recorded by reduced on the anual allowable quota, the user and information being provided to the Forest Management Committee. The areas where the resources have been harvested should be clearly marked, so that the Forestry Officials should find it for inspection whenever needed. Also, monitoring would be carried out on any changes in the forest (illegal harvesting, damages by fires, pests, etc.). This should be done by FMCs when patrolling the community forest.

ANNEX A

Table 7. N≠a Jaqna Community Forest Activity Pan

	Activities					
	Firewood collection	**Poles extraction**	**Grazing**	**Income generating projects**	**Fire management**	**Fruit harvesting**
Months						
January	Harvesting Searching for market Selling Administering finance	Harvesting Searching for market Selling Administering finance	Grazing	Wood carving, beekeeping and selling product	Fire Management Unit establishment	
February	Harvesting Searching for market Selling Administering finance	Harvesting Searching for market Selling Administering finance	Grazing	Wood carving, beekeeping and selling product	Training	
March	Harvesting Searching for market Selling Administering finance	Harvesting Searching for market Selling Administering finance	Grazing	Wood carving, beekeeping and selling product	Training	
April	Harvesting Searching for market Selling Administering finance	Harvesting Searching for market Selling Administering finance	Grazing	Wood carving, beekeeping and selling product	Identify areas for clearing cut lines Construction of cut lines, patrolling	
May	Harvesting	Harvesting	Grazing	Wood carving,	Identify areas for	Harvesting

	Searching for market Selling Administering finance	Searching for market Selling Administering finance		beekeeping and selling product	clearing cut lines Construction of cut lines, patrolling Cutlines	and selling
June	Same as above	Harvesting Searching for market Selling Administering finance	Grazing	Wood carving, beekeeping and selling product	Identify areas for clearing cut lines Construction of cut lines, patrolling Cutlines	Harvesting and selling
July	Harvesting Searching for market Selling Administering finance	Harvesting Searching for market Selling Administering finance	Grazing	Wood carving, beekeeping and selling product	Identify areas for clearing cut lines Construction of cut lines, patrolling	Harvesting and selling
August	Harvesting Searching for market Selling Administering finance	Harvesting Searching for market Selling Administering finance	Grazing	Wood carving, beekeeping and selling product	Identify areas for clearing cut lines Construction of cut lines, patrolling	Harvesting and selling
September	Same as above	Harvesting Searching for market Selling Administering finance	Grazing	Wood carving, beekeeping and selling product	Identify areas for clearing cut lines Construction of cut lines, patrolling	Harvesting and selling
October	Harvesting Searching for market Selling Administering finance	Harvesting Searching for market Selling Administering finance	Grazing	Wood carving, beekeeping and selling product	Identify areas for clearing cut lines Construction of cut lines, patrolling	Harvesting and selling
November	Harvesting Searching for market Selling Administering finance	Harvesting Searching for market Selling Administering finance	Grazing	Wood carving, beekeeping and selling product	Identify areas for clearing cut lines Construction of cut lines, patrolling	Harvesting and selling
December	Harvesting Searching for market Selling Administering finance	Harvesting Searching for market Selling Administering finance	Grazing	Wood carving, beekeeping and selling product	Identify areas for clearing cut lines Construction of cut lines, patrolling	Harvesting and selling

Management Authority

Tasks of the **N≠a Jaqna Community Forest** Forest Management Committee

- The N≠a Jaqna Community Forest Community Forest will be managed by the N≠a Jaqna Community Forest Forest Management Committee (FMB) as Forest Management Body on behalf of the N≠a Jaqna Community Forest community.
- Functions of FMB members and election procedures are described in detail in the constitution (Annex 3).
- The FMB N≠a Jaqna Community Forest will ensure equal access and equal use of forest produce by all community members (refer to Forest Act 2001, No. 12, Section 15, Sub-section 2 f).
- The by-laws will be enforced by the FMB (Annex 2).
- The FMB will report at least annually to the N≠a Jaqna Community Forest community and quarterly to the Traditional Authority and the DoF District Forest Officer at … on management activities and revenue generated. The local headman will be regularly informed on community forestry activities.
- The FMB will also ensure the adequate reinvestment of revenue and the equitable distribution of surplus (refer to Forest Act 2001, No. 12, Section 15, Sub-section 2 g). A benefit sharing agreement was elaborated between Traditional Authorities, FMB and community (Annex 4).

Summary of rights granted

- With the approval of this management plan the following rights are granted to N≠a Jaqna Community Forest Community Forest represented by the FMB:
- Establishing of a community based permit system
- Law enforcement according to by-laws
- Harvesting of forest products according to the annual allowable cut (see **Error! Reference source not found.**)
- Rights to control and manage the use of non-timber forest products like thatching grass, collection of fruits (except devils claw that requires a permit from Ministry of Environment and Tourism)
- Additional rights i.e. for commercial timber harvesting can only be granted after the approval of an integrated forest management plan that is based on a resource assessment.

Duration and updating of the plan

This Forest Management Plan for the **N≠a Jaqna Community Forest** has duration of 10 years. It starts on the 1st of August 2015 and ends on the 30th September 2025

Approval

Chairperson FMB Mr. N'ani Richard Kxao	Tresurer FMB Joseph Sagaria	Secretary FMB Indileni Sakaria
Place, date	Place, date	Place, date
!Kung Traditional Authority Chief Ilony Arnold	!Kung Traditional Authority Senior Counsillor Mr. Auho Coma Ngavetene	
Place, date	Place, date	Place, date
District Forestry Officer Mr. Steven A. Amunjela	Chief Forestry Officer Mr. Nathaniel Amathila	Director of Forestry Joseph Hailwa
Place, date	Place, date	Place, date