Marketing Study for Non-Timber Forest Products for the North Eastern Regions of Namibia

(Eastern Caprivi & Eastern Kavango)

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APPENDICIES

I. Resource ranking results
II. List of species
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IV. Field trip itineraries
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ACRONYMS

NFFP	Namibia-Finland Forestry Programme
DED	German Development Service
MAWRD	Ministry of Agriculture Water and Rural Development
DoF	Directorate of Forestry
MET	Ministry of Environment and Tourism
STEAR	Supporting the Transition of Extension and Research
NASSP	National Agricultural Support Services Programme
PIF	Promotion of Indigenous Fruits project
IFTT	Indigenous Fruit Task Team
CRIAA SA-DC	The Centre for Research Information and Action in Africa, Southern Africa Development and Consulting
IRDNC	Integrated Rural Development and Nature Conservation
NTFP	Non-Timber Forest Product
SANProTA	Southern African Natural Products Trade Association
FAO	Food and Agriculture Organisation
NBRI	Namibian Botanical Research Institute
UPDP	Useful Plants Development Programme
NDCWG	Namibian Devil's Claw Working Group

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1. INTRODUCTION and BACKGROUND

Worldwide the trade in botanical resources and Non-Timber Forest Products (NTFP) has increased significantly over the last decade and is continuing to do so. The sale of herbal remedies alone in Europe was valued at U$ 7 billion in 2002. This has created opportunities for rural producers of these products to increase and diversify their sources of income.

In Namibia too there has been an increase in the trade of NTFP as well as the emphasis on and resources committed to the identification and development of these products. In comparison to Namibia's limited agricultural potential it possess an abundant and diverse wealth of indigenous natural resources which presents a unique opportunity to generate cash income and improve the livelihoods of a large majority of the rural inhabitants of Namibia.

In Namibia various programmes, such as the development of conservancies, community forest management areas and other projects that focus on natural resource utilisation have been initiated. These have in most cases realised significant benefits to participating local communities, although there is a need to expand and diversify income generating opportunities for rural inhabitants in other areas. The Caprivi and Kavango regions are no exception.

One of these programmes is the Namibia-Finland Forestry Programme (NFFP) which is focussed on addressing various aspects related to the forestry sector in Namibia. One of the activities of the NFFP has been to set up three pilot community forest management areas in the Caprivi and Kavango regions. In line with the activities of Participatory Integrated Forest Management (PIFM) an urgent need to identify potential income generating opportunities from local NTFP for local inhabitants was recognised.

To this end the NFFP commissioned a Marketing Study for Non-Timber Forest Products for the North Eastern Regions of Namibia.

2. STUDY OBJECTIVE

The main objective of this study is to identify potential Non-Timber Forest Products (NTFP) for commercialisation at both local and export market levels from the Caprivi and Kavango regions of Namibia, to identify potential markets and assess the economic viability of the marketing of NTFP.

3. SOCIO-ECOLOGICAL CHARACTERISTICS

To a large extent the socio-ecological characteristics of any particular area provide the basis for any development and determine the way in which peoples livelihoods are

organised. The two regions, Caprivi and Kavango, that were focussed on in this study are found to the north-east of Namibia and in general receive the highest average rainfall are bordered by rivers, are part of the Kalahari Basin and are endowed with a rich diversity of natural resources. The following is an overview of the main socio-ecological characteristics of the two regions.

3.1 CAPRIVI REGION

The Caprivi region borders on Angola, Zambia, and Botswana and to some extent on Zimbabwe. It covers a total area of approximately 20 000 km² of which 8 770 km² is state controlled comprising of game parks, state forests and agricultural land and 11 239 km² is communal land. The population is estimated to be in the region of 110 000. The population is largely concentrated along the rivers, main roads, the town of Katima Mulilo and the Zambezi floodplain area in the east.

The annual average rainfall for the area ranges between 500mm and 750mm but this is highly variable from year to year and from place to place which can significantly affect agricultural production and crop failures result.

The Caprivi is part of the Kalahari Basin characterised by sandy and clay soils. Six major land types can be described, rivers, floodplains, Riverine woodlands, Mopane woodlands, Kalahari woodlands and Impalila woodlands. Within this region 36 distinct vegetation types have been identified.

The livelihoods of the inhabitants of the area are based on crop production, livestock, natural resource utilisation and some informal small-scale industries. 59 % of all the inhabitants depend on subsistence agriculture. The average expenditure per household, based on the 93/94 Income and Expenditure Survey, is estimated to be between N$ 1 500-00 and N$ 4 000-00 per annum.

An important additional source of revenue for the area is derived from tourism and in 1996 about 30 – 35 thousand tourists were estimated to have visited the area although this industry subsequently suffered a major set back as a result of conflict in the area.

3.2 KAVANGO REGION

The Kavango region receives an annual average rainfall in the range of between 348mm and 871mm. This average reflects the range of rainfall that can be expected 90 % of the time. This highly variable and erratic rainfall pattern has a considerable impact on the productivity of the area in terms of both crop and livestock production and natural resources.

The area is characterised by a slightly undulating surface situated on the Kalahari dune system interspersed by depressions, usually in the form of Omaurambas. Aeolian Kalahari sands that have a low water retention capacity cover most of the area. The vegetation can be described as Tree Savannah and Woodland.

The inhabitants of the area derive their livelihood from four major forms of subsistence: cropping, livestock husbandry, natural resource harvesting and small-scale industries, such as shops and brewing alcohol. The informal sector plays an important role in the socio-economic make-up of the area. Income generation is to a large extent directly related and dependent on natural resources. Salaries to teachers, some headmen, clinic/hospital staff and pensions constitute the other sources of cash.

4. METHODOLOGY

The character of the methods applied in the course of the study were based on the two assumptions: First, the knowledge and perspectives enshrined in the community (and others where consensual knowledge and decision making structures characterise the community) is manifested as a reality consisting of a community of views, values and aspirations or what is termed in the literature as a "multiple reality". Second, the manifest realities are extremely dynamic through time.

Hence these assumptions have led to the adoption of an "approach" rather than methods to elicit knowledge, values and perspectives from the community. This approach, in contrast to more "objective" or "quantifiable" method based forms of rural appraisal, has attempted to capture the range of community perspectives. Hence, by default, a number of ambiguous views at community level were elicited. The rigor in the approach is apparent in its ability to identify the "multiple reality" rather the "objective reality" that prevails in these areas.

In line with the Terms of Reference for this study a wide geographic area in both regions was covered in order to include the different ecological zones or vegetation types. Information was gathered from key local informants (government, NGO, CBO and community representatives) regarding NTFP currently utilised and the constraints of resource availability and marketing.

The study focussed on NTFP with established export markets, such as Devil's Claw and on emerging markets such as Marula oil and Kalahari melon seed oil. Other NTFP with potential and currently being researched such as Terminalia root bark, Manketti and the fruit of the Sausage Tree that have already been identified through programmes such as the Promotion of Indigenous Fruit and other research and market information were also targeted. The rationale behind this was to investigate the availability and current utilisation of these resources with the view of prioritising these for immediate development so as to expedite benefits to local producers. In addition to covering different ecological zones,

areas with established local organisational structures such as conservancies and community forest management areas were also targeted.

The information contained in this report was obtained from the following activities :

1. Literature review
2. Resource ranking
3. Key informant interviews

With respect to the resource ranking exercise and key informant interviews these were carried out during two field visits to the study areas in February and March 2003.

4.1 LITERATURE REVIEW

The literature review consisted of gathering information relevant to this study from existing documents. (See list of references)

4.2 RESOURCE RANKING

At the beginning of the meetings a brief overview of the purpose of the study was presented. Initially information of a general nature, the area and its people, was sought. At each of the selected villages a resource ranking exercise was conducted. The exercise entailed community members initially listing the natural resources in their area which they made use of. Participants were then asked to rank these resources according to the following three categories.

1. General importance to local household use
2. Contribution to income generation
3. Availability

An important aspect of this ranking exercise was to gain an understanding into the process whereby the participants reached certain decisions. It should be noted that just because a resource was not listed it should be considered unimportant. Resource ranking exercises only offer a guideline and identify further work or issues that need to be investigated.

4.3 KEY INFORMANT INTERVIEWS

In addition to the informal discussions held with people of the area, the consultant visited number of key informants to brief them about the study and to gather more specific information, especially with regards to key decision makers. The list of key informants is attached as Appendix V.

5. STUDY AREAS

The identification of specific focus villages or areas for further in-depth investigation was based in both regions on an initial scoping visit, which was extensive in nature covering a broad range of geographical and ecological areas. The following details the areas visited in both regions during the initial visit.

5.1 EASTERN CAPRIVI

1. CONSERVANCY AREAS	Salambala and Kongola
2. COMMUNITY FOREST MANAGEMENT AREAS	Sikanyabuka and Ziliteni
3. VILLAGES	Area 1 - Ngoma, Mutikitila, Ibbu, Ngala, Muyako Area 2 - Kalumba, Mbozi, Malundu, Linyanti, Sibinda Area 3 - Kasheshe, Sachinga, Masida Area 4 - Bakalu, Sifuha, Isize, Kalembeza, Mpola, Lisikili

5.2 EASTERN KAVANGO

This area is considerably larger in size compared to the eastern Caprivi and therefore less area was covered. In addition, a significant amount of work with regards to NTFP has been undertaken in this area in the past. The following two main areas were covered.

1. The Omaramba southwards to Taratara (Hans Kayinge) village and community forest area to Ncaute.

2. Mile 30 and the DED Community forest area.

5.3 STUDY FOCUS AREAS

Based on the information obtained from discussions with local inhabitants during these visits the following areas were identified for further investigation and were selected using the following additional criteria.

1. Areas with resources with existing export markets and resources with potential for development

2. Areas with resources with local market potential

3. Areas with existing local organisational structures

5.3.1 EASTERN CAPRIVI

AREA	NOTES
Sikanyabuka & Ziliteni	Community Forest area within Salambala conservancy
Ibbu & Ngala	Villages within Salambala conservancy
Kongola	Conservancy
Sachinga	Village

5.3.2 EASTERN KAVANGO

AREA	NOTES
Hans Kayinge village & community forest	Community forest area (NFFP – Phase II)
Mile 30 Community forest	Community forest area (DED)

6. RESULTS

While crops and animal husbandry are the dominant forms of land-use in these regions, the importance of the contribution of natural resources to livelihood security is significant. Natural resources provide a wide range of the basic needs for the majority of the people and in particular the poor. The utilisable indigenous botanical resources of these two regions are vast compared to other resources and the rest of Namibia and exhibits a high degree of biodiversity.

These resources are important but are affected not only by a loss of habitat, land clearing for agricultural crops, fires and livestock but also by factors with regards to access and utilisation rights, over-utilisation, weakening traditional authority structures and conflict. Environmental factors such as rainfall also have a significant impact.

It should be noted that the study took place at a particular time with certain circumstances. While every effort was made to verify the information contained in this report, it is quite possible that other information will come to light.

6.1 RESOURCE RANKING

It should be noted that during the study period people in these villages were fully engaged in weeding their crop fields and thus fewer people attended the meetings.

The results of the resource ranking exercises in the specific focus villages are summarised in the tables below.

6.1.1 EASTERN CAPRIVI

In the eastern Caprivi natural resource ranking exercises were conducted in 4 villages. The details of each village resource ranking exercise are attached as Appendix I. A summary table is provided below. To calculate this summary table the first three resources ranked in each category for each area were ranked to provide an overall ranking result for each category.

The results indicate that for all villages thatching grass is the most important across all ranking categories, followed by reeds and palm leaves although some resources such as Devil's Claw not included in this summary are important for the Kwando conservancy area.

RESOURCE RANKING SUMMARY TABLE		
Household	**Income**	**Availability**
1. Thatching grass 2. Reeds 3. Palm leaves 4. Building poles	1. Thatching grass 2. Palm leaves 3. Devil's Claw 4. Reeds 5. Firewood 6. Building poles 7. Berchemia fruits	1. Thatching grass 2. Reeds 3. Palm leaves 4. Berchemia fruits 5. Firewood 6. Devil's Claw

6.1.2 EASTERN KAVANGO

In the western Kavango natural resource ranking exercises were conducted in 2 villages. The details of each village resource ranking exercise are attached as Appendix I. The results indicate that thatching grass is the most important across all ranking categories, followed by Devil's Claw and Manketti fruit.

RESOURCE RANKING SUMMARY TABLE		
Household	**Income**	**Availability**
1. Thatching grass 2. Devil's Claw 3. Manketti fruit 4. Monkey orange 5. Timber	1. Thatching grass 2. Devil's Claw 3. Manketti fruit 4. Timber 5. Monkey orange	1. Manketti fruit 2. Thatching grass 3. Monkey orange

6.2 CURRENT MARKETING OF NATURAL RESOURCES

The following is an overview of the current marketing situation of NTFP from these two regions with respect to both export and local markets.

6.2.1 EXPORT MARKET

At present a limited number of NTFP of any significant amounts are exported out of the area. The income generated from and quantities of these products are difficult to quantify at present because they are to a large extent sold in an ad hoc manner. Nevertheless, the following NTFP can be identified.

NTFP	NOTES
Thatching grass	Some thatching grass being sold from Kavango, mainly along the main road into Rundu, purchasing discontinued in Caprivi due to conflict and also prohibitive transport costs. Price paid varies between 55 and 75 cents per bundle. (35 cm circumference)
Devil's Claw	Significant quantities are being harvested in both regions, but is characterised largely by unsustainable harvesting practices and exploitation of harvesters.
Baskets	Mainly from the Caprivi region being marketed through Mud Hut Trading (Rossing Foundation) in significant quantities but the market appears to be saturated.
Monkey Orange	Some being sold for the production of Namibian liqueur but exact quantities unknown.
Crafts	Limited amount of crafts made from NTFP being marketed to mainly tourists. Most common craft products from timber in the form of carvings.
Manketti fruit	Some fruit is sold to Grootfontein and Tsumeb for the production of Kashipembe, a locally distilled alcohol. N$ 30-00 per 50 kg bag.

6.2.2 LOCAL MARKETING

In terms of the local marketing of NTFP almost all in different quantities are traded in some way or another but the marketing is largely on an Ad Hoc basis, for instance in some years some people will sell surplus products and in other years not. What products are available depends on seasonality (see point 6.4.5 Seasonal Calendar). Local marketing can be described to take place through the following main mechanisms :

- Local informal markets (Katima Mulilo & Rundu markets and others)
- Along the main roads
- Village based

6.2.2.1 Katima Mulilo open market

Below is a list and sale prices for NTFP found at the market

PRODUCT	NOTES
Mats (reeds)	N$ 40-00 each (2 days to make and sell about 1 per week)
Mats (papyrus)	N$ 30-00
Wild Spinach (dried)	Buy at 50 centsSell at N$ 1-00 per cup Buy at N$ 1-00 Sell at N$ 1-50 per cup
Wild Spinach (fresh)	Sell at N$ 1-00 bunch
Pumpkin leaves	Sell at N$ 1-00 bunch
Marrows	Sell at N$ 1-00 each
Sugar Cane	Sell at N$ 1-00 each
Water Melon	N$ 5-00 – N$ 8-00 (size)
Berchemia (Fresh & Dried)	N$ 1-00 per cup (250ml)
Grewia berries	N$ 1-00 per cup (250ml)
Mealies (green)	Buy at N$ 1-00 Sell at N$ 2-00

A rate of N$ 2-50 per day is charged for an informal stand (this was felt to be too much) and N$ 50-00 per month for a fixed structure.

Most vendors reported that they sold most of their goods in 1 day. People living closer to Katima Mulilo can sell fresh produce, such as indigenous vegetables but transport to the market is essential.

6.2.2.2 Other products (marketed through other mechanisms)

PRODUCT	NOTES
Thatching grass	A person can produce about 1000 to 2000 bundles per year and sell at N$ 10-00 for a bundle about 45 cm in circumference. Most of this is sold from the village
Monkey orange	Along roadside (Rundu area) Small 50 cents – N$ 1-00 Large N$ 2-50 – N$ 3-00
Manketti fruit	About N$ 30-00 per 50 kg bag
Poles	General price about N$ 7-00 to N$ 10-00 per pole
Water lilies	Sold both fresh and cooked (50 cents per fruit)
Firewood	Along roadside N$ 5-00 – N$ 10-00 per bundle. Those selling firewood closer to the main centres are more successful in marketing
Palm leaves	Both of these are traded locally especially in Caprivi with people involved in basket production. It appears that transport costs for those who are purchasing is the main cost rather than the product
Natural dyes	

6.3 POTENTIAL RESOURCES

Without a doubt both of these regions have a large number of useful natural resources of which the inhabitants possess a great deal of knowledge. Most of them are utilised to varying degrees.

In a study carried out by Marianne Strohbach for CRIAA SA-DC in 1998, 336 useful plant species occurring in Kavango region were identified. Of these plants 160 had medicinal properties, 85 were edible and 91 were both edible and had medicinal properties. It can be assumed that most of these species will also be found in the Caprivi region.

Based on the results of the resource ranking exercise, the availability of the resource, current and potential markets and the existence of local community organisational structures, the following resources with market potential have been identified. It should be noted that a considerable amount of work at all levels of the production and supply chain will still be necessary to be able to successfully market any of these natural resources.

In order to facilitate further work and to identify priorities, these resources have been listed in three categories namely :

1. Resources with established export markets
2. Resources with export market potential
3. Resources with local market potential

The following is an overview of the current and potential market situation for the natural resource products listed in the three categories above. To some extent some of the resources overlap in all three categories but are dealt with once in the most appropriate category although if pertinent are mentioned in each.

6.3.1 RESOURCES WITH ESTABLISHED EXPORT MARKETS

A number of NTFP supplied from other regions in Namibia are currently exported. A potential supply of these products from these two regions has been identified and therefore the possibility to link with these established markets exists. The following is a list of currently exported products.

1. Kalahari Melon

Botanical name : *Citrullus lanatus*
Common name(s) : Kalahari melon, tsama melon, watermelon
Products : Seed, seed oil

To date significant quantities of seed from the north-central regions of Namibia have been exported to the United Kingdom for oil extraction. Kalahari melon seed oil has a market in the cosmetics industry where it is used for its superior emollient properties. This property is derived from a specific fatty acid composition. Recently a market has developed for the inclusion of this oil in products manufactured and marketed by The Body Shop International.

There are numerous other interested clients of significance. The overall demand for this oil is very high. At present the demand is for some 20-30 tonnes of oil per annum, and an acceptable price to industry is about £6.00 / kg including insurance and freight to the EU[1]. However, it is conceivable that following recent promotional activities by SANProTA a demand for a total of around 100 tonnes of oil per annum may be possible.

Present production in Namibia does not meet market demand and this offers an immediate opportunity to other organised producers / enterprises that can supply this product. In the absence of being able to produce the oil, there is a market for the seed as oil processors

[1] For refined oil ready for product manufacture

would buy the seed for processing. Price indications for contract processors are in the range of £0.20 - £0.30 / kg, delivered in Windhoek.

Some field trials to investigate the different varieties for oil production have been carried out by NBRI in north-central Namibia. Initial results indicate that a variety from the Caprivi region had one of the better oil yields.

While the Kalahari wild melon is known and utilised to some extent in these regions, no significant oil extraction for local use takes place. Samples of seeds from the villages visited were requested so that an analysis of the oil content can be carried out.

2. Devil's Claw

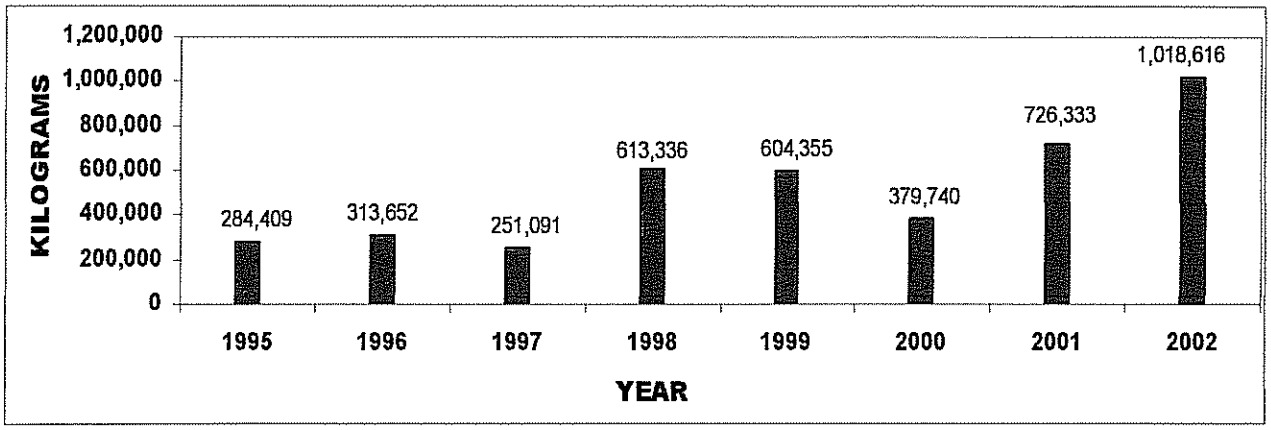
Botanical name : *Harpagophytum spp.*
Common name(s) : Devil's Claw
Products : Tubers

Harpagophytum, or Devil's Claw, comprises two species, *H. procumbens* (with two sub-species, *procumbens* and *transvaalensis*) and *H. zeyheri* (with three sub-species, *zeyheri, sublobatum* and *schijffii)*. It is a perennial prostrate vine that grows mainly in deep Kalahari sands, and has a strong taproot with a number of secondary storage tubers growing laterally off the taproot. The tubers of the species *procumbens* (Burch. DC. Ex Meisnner 1840) have been listed in the European Pharmacopoeia for the treatment of rheumatism and arthritic ailments for some time while *H. zeyheri* was added to the definition in January 2003 to cover all products.

The demand for Devil's Claw on the international market has increased considerably over the last decade. Namibia is by far the largest producer of Devil's Claw in the world. The only other producers are South Africa and Botswana, although significant quantities of Devil's Claw originating from Angola into Namibia have been reported.

Namibia's exports have increased from about 180 tonnes in 1975 to over 1000 tonnes in 2002. Income generated from Devil's Claw exports is significant at both national and local levels. The income generated from sales in 2002 could be worth as much as N$ 30 million (Based on an average price of N$ 30-00 per kg in 2002 with total exports totalling 1000 tons)

Total Namibian Devil's Claw Exports by year (1995 – 2001)



Over the period 1995 to 2002 there have been 17 Namibian exporters that have exported two tonnes or more of dried Devil's Claw in total. In addition, there have been many others who have exported very small quantities. Over this same period there were nine exporters that exported 100 tonnes or more. The number of exporters does fluctuate from year to year, although there has been an increase in their numbers over the last few years.

In Namibia, the main responsibility for Devil's Claw falls under the Directorate of Special Support Services (DSSS) in the Ministry of Environment and Tourism (MET). Other key governmental institutions include the Phytosanitary Section, which issues phyto-sanitary certificates for the export of Devil's Claw, and the National Botanical Research Institute (NBRI), which is responsible for species collection and identification and also maintains a seed bank in the Ministry of Agriculture, Water and Rural Development (MAWRD). In addition, the Namibian Devil's Claw Working Group (NDCWG) was established in January 2000 to improve information dissemination and to coordinate research and other efforts at a national level.

Devil's Claw is listed as a protected species under the Nature Conservation Ordinance of 1975 and in terms of this ordinance harvesting, trading and exporting permits are required.

The prices paid by exporters in Namibia based on 2002 figures vary considerably but can be summarised as follows. The average prices paid for *Harpagophytum procumbens* was N$ 20-00 per kg and for *Zeyheri* N$ 8-00 to N$ 14-00 per kg. These prices are paid on delivery to the exporter. The average price paid by European buyers was N$ 30-00 per kg.

3. Monkey Orange

Botanical name : *Strychnos cocculoides*
Common name(s) : Monkey orange
Products : Fruit

At present a market for Monkey Oranges, mainly supplied from the Kavango, does exist and there is potential for this demand to increase. Successful marketing will have to centre on an efficient locally organised producer group in order to gain access to this market.

4. Marula

Botanical name : *Sclerocarya birrea* subsp. *caffra*
Common name(s) : Marula
Products : Kernel, kernel oil

Marula oil has recently been commercialised in Namibia, Botswana, South Africa and Zimbabwe. Marula oil has been shown to have good moisturising properties and, if processed correctly, to have an exceptional resistance to oxidation. Other useful properties for cosmetic applications have also been demonstrated, and a good body of scientific and technical literature is available for market development.

A recent high-profile customer for marula oil is The Body Shop International. They purchase marula oil from Eudafano Women's Co-operative[2] under fair trade arrangements.

During 2002 and the first half of 2003 there have been a number of other products coming onto the market that contain marula oil. Most new products are for cosmetic applications although there is also some small-scale use as speciality food products.

Marula oil is currently subject to a major promotional effort by a French company specialising in the development of speciality lipids for cosmetic application. It is expected that this, and other activities underway in Southern Africa, are likely to expand the present limited market for marula oil. Marula oil has strong marketing appeal for the cosmetics market and this can be exploited to the benefit of local producers.

Recent research indicates that an overall market for marula oil is presently some 9 -15 tonnes per annum. This is based on the quality standards presently achieved by existing producers and processors, and the present rather high selling price of the oil – which is some £10.00 / kg Cost, including insurance and freight to an EU Port.

[2] Contract processed in Namibia by CRIAA SA-DC / KAP

Research also strongly indicates that the market for the oil can be significantly increased in the near future if production improvements could realise a reduction in the selling price. An international selling price of some 25-35% lower could increase the overall market demand to between 20 – 100 tonnes per annum.

Although Marula does exist in these regions the quantity of the resource is limited. In addition, no culture of oil extraction is present and therefore the skills required for extracting the kernel are also limited. Entry into the market is not recommended due to limited resource availability and significant extension and training that would be required to extract the kernel.

5. Thatching grass

There is a significant demand for thatching grass locally, nationally and perhaps also in the sub-region. At present it is estimated that there are about 13 companies involved in thatching in Namibia. Two major companies in Namibia currently use approximately 500 thousand bundles each per year. Although purchase prices vary it appears that an average price of 65 cents per bundle with a circumference of about 34cm is paid by purchasers. This would mean that the income generated for harvesters from these two companies would be approximately N$ 650 000-00 per annum.

There are 3 main types of thatching grass available from these two regions and according to the companies spoken to these types are of a very good quality. At present thatching grass is sourced only from the Kavango. It used to be sourced from the Caprivi but this was discontinued due to conflict in the area. The company J&L Thatching are at present sourcing all their thatching grass from South Africa citing, quality, efficient and reliable supply and price competitiveness as the major reasons for this. Potential markets in South Africa for Namibian thatching grass are also being investigated.

A number of constraints were raised regarding sourcing Namibian thatching grass and these included :

- High transport costs, especially with respect to the Caprivi
- Inconsistent producer prices
- Inconsistent size of bundles
- The system of quarantine is problematic. The grass from the Kavango and Caprivi has to be quarantined for 30 days because of the Veterinarian disease control fence.
- The use of tree bark to tie bundles

However, potential exists to market thatching grass from these two regions although the issues listed above will have to be addressed.

6. Reeds and Papyrus

No significant market outside of these regions exists at present although a concerted and well targeted marketing effort could open up markets. At present small amounts are used by the thatching companies.

7. Baskets

One of the major craft productions are baskets from Palm leaf, especially in the Caprivi. A significant increase in production resulted from good marketing opportunities, however at present it appears that this market is over supplied and is in competition with basket producers in neighbouring countries. Basket producers noted that they were not selling all the baskets that they produced and that purchases had become infrequent.

Local production is estimated to be between 8 and 14 baskets per individual in 4 months. The Rossing Foundation has been active in conducting training on basket design and production. The majority of baskets are bought and marketed by Mud Hut Trading. The purchase price is determined by size although design is also important. At the village of Ngala the following purchase prices for baskets was obtained from a handout.

GRADE	AA	A	B	C
SIZE				
22 – 24 cm	27-00	16-00	12-00	8-00
43 – 45 cm	56-00	46-00	40-00	26-00
61 – 63 cm	92-00	71-00	66-00	43-00

Producers reported that only the AA and A grade baskets were sold. Caution with respect to increasing basket production would be advised.

6.3.2 RESOURCES WITH EXPORT MARKET POTENTIAL

The following natural resource products are at various levels of development but represent an important potential marketing opportunity. Only the resources that are considered likely to produce meaningful results are reported on below.

1. *Terminalia sericea*

Common name(s) : Silver leaf terminalia
Products : Root bark, root bark extract

There is a potentially interesting market opportunity for sustainably harvested *Terminalia sericea* root bark in the botanical extract industry. The root bark contains biologically active components of interest to the cosmetic, herbal medicine and pharmaceuticals sectors. Constituents of the bark include saponins (sericoside) and triterpenes.

In the late 1970's extracts from this species was subject to intensive research. In 1978 a patent was filed covering novel terpenes derived from *T. sericea*. There are presently several patents held by companies active in the herbal medicine, cosmetic and pharmaceutical industries that cover the use of components derived from this species.

There are some high profile cosmetics companies, such as Lancome that already market consumer products containing *T. sericea* extracts as an active ingredient. *T. sericea* belongs to the same genus as the well-known Ayurvedic medicinal plant *Terminalia arjuna*. This species has a significant market in India, Asia and in Western markets.

SANProTA is engaged in discussion with companies with actual and potential interest in supplies of *Terminalia sericea* root bark, and indications are that a potential exists for organised suppliers to supply this market now and in the future. From the perspective of potential small-scale enterprise opportunities in the Kavango and Caprivi regions, the product of trade could be sustainably harvested dried root bark of this species, possibly milled to customer specifications. At this stage there are only limited indications regarding possible volumes required by industry, and clear and reliable prices would require negotiation with industry.

2. *Adansonia digitata*

Common name(s) : Baobab
Products : Seed, seed oil, fruit pulp

Baobab seed and seed oil

There is an existing market for oil produced from baobab seed in the cosmetic sector. According to some industry sources this market is at present limited in scale and scope due to a lack of significant supply, weak supply chains and poorly defined product specification (and quality). Other factors that contribute to the limitation of the present market opportunity include the high cost of the oil caused by, amongst other factors, low oil content of the seed, inefficient processing technologies and business strategies of the existing small-scale suppliers in producing countries.

Baobab seed oil contains interesting fatty acids of potential interest to industry. The baobab tree is highly recognisable to consumers, providing massive marketing appeal to cosmetic formulators and marketers. Possible products of trade that small-scale enterprises in North East Namibia may be able to access markets for could include seeds (to an oil processor), or the processed crude oil.

Baobab seed oil is a priority product of SANProTA and is subject to a programme of research and development, and a partnership agreement has been developed with a specialist French lipid oil processing and marketing company. This company is engaged in a worldwide promotional strategy to develop a market for baobab seed oil produced by SANProTA members.

At this stage it is difficult to determine the present scale of the market. However, it is envisaged that, pending development of appropriate supply chains, quality standards, and prices, this market could become very significant and could warrant Namibian producers' investigation of this opportunity.

Baobab fruit pulp

There is at present a small but interesting market for baobab fruit pulp. Due to the high nutritional composition, ease of processing in a rural setting, and marketing appeal to consumers and product formulators in the nutritional and natural food and drinks sector, the demand appears to be very significant. There is a large body of high quality scientific and technical literature that supports high-value uses of this product. This literature dates back several decades, and is continually re-enforced by new publications[3]. Important international multi-nationals have already shown interest.

[3] For example, in late 2002 a paper was published in Acta Phytotherapeutica in which the powerful antioxidant properties of baobab fruit pulp were demonstrated

However, the real scale and scope of the market opportunity for this product is presently, according to recent investigations by SANProTA, also constrained by a lack of significant supply, weak supply chains and poorly defined product specification (and quality) and associated investment in basic research and development and market understanding. Baobab fruit pulp is a priority product of SANProTA and has contracted Leatherhead Food International[4] to carry out research and development aimed at addressing this situation. It is expected that an important increase in the market demand for baobab fruit pulp will be realised in a short timeframe (before the end of 2003).

International companies already formulate baobab fruit pulp into cosmetic products where the ingredient is used for exfoliating properties. It is interesting to note that there is a patent on the production and cosmetic application of a product derived from the leaves of the baobab tree.

3 *Kigelia africana*

Common name(s) : Sausage tree
Products : Fruits

There is an enormous body of scientific and technical literature supporting the use of products extracted from *Kigelia africana*. The possible applications of such products range from the prevention and treatment of skin cancer through to uses including anti-inflammatory, anti-bacterial and antioxidant. There is already a small market for Kigelia extracts for small-scale producers of skin creams and lotions. Recently, French companies working in the field of cosmetic active ingredients have patented an extract of *Kigelia africana* for use as a bust-firmer[5]. Interestingly, the origin of the idea is based on traditional knowledge both in Southern and West Africa.

Kigelia is a priority species of SANProTA and they have commissioned an experienced phyto-chemist to advise on the commercial development of products derived from this species. Major players in the "nutraceutical" and "cosmeceutical" industries have expressed keen interest in participating in the development of products derived from the fruit pulp, and it is expect that this research and development will result in a market for the fruit pulp in the range of 5 - 20 tonnes within the next 2 years.

Markets are also likely to develop for Kigelia leaves, bark and root-bark[6].

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[4] Leatherhead Food International (LFI) is an Internationally respected research and development institution providing expert services in the development of new and novel nutritional ingredients and products and has particular understanding of the rapidly developing "nutraceutical" and "functional food" industries (amongst other fields and markets)
[5] The product is called "Kigeline"
[6] For ecological reasons SANProTA at this stage suggests a focus on fruit pulp products as the harvesting hereof is likely to be more easily managed than bark products

4. *Schinziophyton rautanenii*

Common name(s) : Manketti, mongongo
Products : Nuts, nut oil

Manketti nuts have an acceptable taste and it is possible that a consumer market can be developed, although several areas of food safety and consumer preferences would still need to be fully researched.

Manketti nut oil is at present traded in small quantities. It is interesting to the market because of its good taste, has 25-30% eleostearic acid and a useful content of tocoperols (Vitamin E). At least three important international commercial operations are researching industrial product applications of manketti nut oil, mainly based on eleostearic acid content. This fatty acid is interesting to industry because of its polymerisation properties. More recently there is growing interest in this fatty acid as a feed ingredient for animals, as new scientific literature shows that inclusion in the diet of animals results in an increase in CLA[7] content of their flesh (or, in the case of chicken, their eggs).

This is a potentially massive economic opportunity if the processing of the nuts and oil can meet with industry's quality, quantity and economic criteria. Indications from industry are that, subject to successful conclusion of their research and development, a demand for around 600 tonnes of oil per annum could be developed within the next 2-3 years. Initial results of ongoing research by SANProTA indicate that a market price of some £3-£5.00 / kg FOB would meet market requirements.

5. Other SANProTA species

SANProTA is actively researching and developing market opportunities for several other lipid products derived from species that occur in North Eastern Namibia. These include :

- *Ximenia americana, X. caffra* - Sour plum, blue sour plum
- *Parinari curatellifolia* - Mobola, mpundu
- *Trichilia emetica* - Natal mahogany, Mafura
- *Sterculia Africana* - African star chestnut

The oils from the above species are all interesting to industry because of their unusual fatty acid compositions. These fatty acids, including long chain and conjugated fatty acids, are likely to find applications in the cosmetics, nutritional foods, pharmaceutical and other industries, such as paints and polymers.

[7] Conjugated Linoleic Acid – a fatty acid with a growing body of supportive scientific literature promoting its uses for anti-cancer and weight loss products

Preliminary indications from this research are that markets for all these oils are likely to be developed within the next 2 years, and that demand is likely to reach 5 – 20 tonnes per annum for each species, provided quality and economic (especially pricing) criteria can be met.

6.3.3 RESOURCES WITH LOCAL MARKET POTENTIAL

To a large extent almost all NTFP are currently marketed in some way or another. All NTFP are also used by almost all households and thus contribute significantly livelihood food security. In this regard therefore due consideration must be given to the potential impact increased marketing may have. In most cases NTFP that are marketed represent a surplus over and above that which is needed for subsistence but might also be sold to generate much needed cash income at a household level.

In terms of local increased marketing of NTFP the following have been identified and should be approached on a trial basis. However, in order to increase local marketing a number of constraints will have to be addressed to make it economically viable, these include, transport costs, distance to markets and other institutional arrangements.

1. Firewood

Local demand for firewood is greatest in the main urban areas in both these regions and successful marketing will depend on being able to sell it in these areas. Furthermore, successful increased marketing will depend also on this activity being organised on a group basis that will to some extent offset, transport and other marketing costs.

The Katima Mulilo town council does not allow firewood to be sold at the open market because of the waste material generated by chopping, however, initial discussions with town council representatives indicated that an alternative arrangement for marketing firewood within the town council jurisdiction might be possible.

The collection and sale of firewood requires a permit from DoF which stipulates that only dry or dead wood may be utilised. Increased marketing will have to be mindful of this and put in place mechanisms that ensure this.

The potential of marketing firewood in Windhoek was also considered and general enquiries were made in order to assess the potential. Considering the present availability of firewood in Windhoek the possibility of capturing niche market for firewood from the Leadwood tree (*Combretum imberbe)* was considered. Those spoken to were hesitant due to concerns regarding sustainability and cost. At present 1 kg of Camelthorn (*Acacia Eriloba*) firewood is supplied to retailers in Windhoek for approximately N$ 8-50. Considering the present sufficient supply of firewood in Windhoek and the possibility of the

firewood from these regions being more expensive due to transport costs the marketing of firewood is not considered to be viable at this stage.

2. Thatching grass, building poles and reeds

There is also a significant local demand for thatching grass, building poles and reeds for local house construction, especially in areas where these resources are not available.

The greatest local demand for these products is in the period August to October when crop related activities have been completed and house construction or repair before the oncoming rainy season is undertaken.

3. Other products

Due to the fact that many other NTFP are marketed locally the potential to increase the marketing or improve current marketing of these products is possible. It has however not been possible in the short period of this study to make any concrete suggestions in this regard. Nevertheless, local marketing mechanisms for palm leaves, natural dyes, manketti fruit and monkey orange might be feasible and worth investigating further.

4. Local market opportunities

The following local marketing opportunities on which initiatives could be concentrated on have been identified :

- Katima Mulilo open market
  The Katima Mulilo open market is due to be renovated in August / September 2003.
- Rundu open market
- Roadside (limited but firewood / monkey orange / thatch & poles)
- Tourist lodges
- Local supermarkets
- Schools
- Prisons / Army / or other government institutions

6.4 RESOURCE AVAILABILITY

The Terms of Reference did not include conducting specific resource inventories. Therefore in terms of resource availability this is largely reflected in the results of the resource ranking exercises conducted in the selected villages. Additional information regarding availability is based on existing data and personal observations in the study area.

The resources that have been identified for further commercialisation in this study therefore only include those that were found to be available in significant quantities to make it a viable undertaking. In the case of those which are currently not available in significant volumes but where a market exists have also been identified on the basis that production through extension messages can be increased, for example, Kalahari Wild Melon.

As is the case with the utilisation of all natural resources the issue of sustainability is important to recognise. In this respect attention to sustainable harvesting methods and sustainable off-takes will have to be addressed once a decision is made and will have to become a central component of any programme that undertakes to commercialise any of these natural resources.

6.5 SEASONAL CALENDAR

In terms of the supply of NTFP to the market seasonality and time of harvesting will play an important role. In this respect the supply of any NTFP will generally revolve around the agricultural calendar, especially crop production which includes field clearing, ploughing, sowing, weeding, harvesting and threshing and storage activities.

Availability and Harvesting Periods

Resource	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Thatching grass						x	X	x	x			
Palm leaves	X	x	x	x	x	x	X	x	x	x	x	x
Palm fruit			x	x	x	x						
Reeds					x	x	X	x				
Baobab fruit					x	x	X					
Berchemia fruit	X	x	x	x								x
Papyrus	X	x	x	x	x	x						
Watermelon		x	x	x								
Devil's Claw			x	x	x	x	X	x				
Water lilies	X	x	x	x	x	x	X	x	x	x	x	x
Marula	X	x	x									
Manketti fruit		x	x	x	x							
Grewia berries		x	x	x								
Building poles	X	x	x	x	x	x	X	x	x	x	x	x
Monkey Orange					x	x	X	x	x			
Indigenous Vegetables	X	x	x							x	x	x
False Mopane fruit					x	x	X	x				
Agricultural crops	X	X	x	x	x					x	x	x

6.6 MARKETING CONSIDERATIONS

6.6.1 MARKETING ARRANGEMENTS

The specific marketing arrangements will be dependent on product, product source and destination and therefore can only be finalised when further development has taken place, such as, when local production and supply mechanisms, market identification and agreements structures are in place.

Nevertheless the point of departure is that local producers should be organised into local producer groups that are as far possible directly linked to the market therefore avoiding middlemen, although they can also play an important role in the supply chain but do tend to reduce profit margins to the local producer.

Local producers would collect, process and package produce at a household basis which would then be delivered to an appropriate central storage facility for collection by the buyer or transport to the market. As much as possible local organisational requirements for this should be incorporated into existing local organisational structures, such as conservancy management committees.

6.6.2 MARKET CONSTRAINTS

The following issues have been identified as potential constraints to increasing both the export and local markets of NTFP.

1. Distance to the market

For both regions but specifically the Caprivi the distance to potential markets is going to be a major constraining factor for both the export and local market. Two main factors can be identified.

a. Perishability

   This factor is mainly relevant to fresh produce but also the storage of dried products. The appropriate systems to overcome this will depend on the product, market requirements etc. and will have to be dealt with on a case-by-case basis.

b. Transport costs

   This is likely to be the single most important constraint. Transport costs out of these regions are high and will impact on the economic viability of any marketing initiative.

Transport costs of two major transport companies are detailed below.

COMPANY	RATES
Cross Country	N$ 1-79 per kilogram
Trans Namib	Rates vary according to weight • N$ 1-50 (500 kg to 1 ton) • NS 1-30 (1 ton) • N$ 1-20 (2 tons and above)

Other factors that will have to be taken into consideration include :

- Time of demand (thatch & poles for example)
- Consistent supply to meet demand (Within the parameters of when the resource is available)
- Resource availability (impact of drought, fire or other factors)
- The lack of communication (telephones) with producers at village level. The radio is an option but unreliable
- Inaccessibility to some producers during rainy season and floods
- Inadequate local (village) processing and storage facilities
- Market related prices need to be maintained, unless the consumers can be convinced that the product is of a much higher quality for the price. The local market is not concerned about sustainable utilisation but international market is and therefore higher prices may be paid
- Collection and processing conflicting with agricultural activities

6.7 SUPPORT SERVICES / AGENCIES / PROGRAMMES

The following is an assessment of the existing support services, NGO's and programmes that are relevant to the development of NTFP in both regions.

6.7.1 CAPRIVI REGION

Existing organisational / institutional structures and programmes

1. Namibia-Finland Forestry Programme – Phase II
2. Integrated Rural Development and Nature Conservation (IDRNC)
3. WILD Project
4. German Development Service – DED
5. Rossing Foundation

6.7.2 KAVANGO REGION

Existing organisational / institutional structures and programmes

1. Namibia-Finland Forestry Programme – Phase II
2. Integrated Rural Development and Nature Conservation
3. German Development Service – DED
4. Rossing Foundation
5. Lux Development / MADI

6.7.3 GOVERNMENT SUPPORT SERVICES

- **MAWRD** Ministry of Agriculture, Water & Rural Development. (Extension services)
- **NBRI** Namibian Botanical Research Institute
- **MET** Ministry of Environment and Tourism (Conservancy development and resource management.
- **DoF** Directorate of Forestry

6.7.4 NATIONAL AND REGIONAL GOVERNMENT SUPPORT ROGRAMMES

- **NASSP** National Agricultural Support Services Programme. The programme is implemented by MAWRD in conjunction with other partners. Main focus on enhancing livelihoods of smallholder households. It has 5 components, Institutional Support, Rural Enterprise Development & Finance, Livestock development, Crop Diversification and Mahangu development.
- **IFTT** Indigenous Fruit Task Team. Representative stakeholder body set up to co-ordinate activities related to indigenous fruit commercialisation and to deal with general issues relating to utilisation and policy. It is expected to be transformed into the Indigenous Plants Task Team. (IPPT)
- **PIF project** Promotion of Indigenous Fruits. Investigated potential to commercialise various Namibian indigenous fruits, Marula, Manketti, Monkey Orange, Ximenia, Kalahari Wild Melon etc. Ongoing and co-ordinated through IFTT.
- **UPDP** Useful Plants Development Project. Yet to be fully implanted but will provide strategic support to the development of useful plants in Namibia. Falls under the IFTT / IPTT.

- **STEAR** Supporting the Transition of Extension and Research (MAWRD) Assistance to MAWRD to achieve policy goals in the Agricultural Policy NDP2 to strengthen Research and Extension Directorates to use participatory Farming Systems Research and Extension FSRE approach. Implementation at a National and regional level (Caprivi and Kavango)

- **FAO / DoF** An FAO funded project focussing on the domestication of a number of indigenous fruit tree species in Namibia. In the Caprivi the focus will probably be on Berchemia and in Kavango on Monkey Orange.

- **WWF / LIFE** Support to the development of Conservancies.

- **NACSO** Namibian Association for Community Based Natural Resource Management Support Organisations. Comprised of a number of local NGO's to support conservancy development.

- **NACOBTA** Development of community based tourism.

- **CRIAA SA-DC** The Centre for Research Information and Action in Africa – Southern Africa Development and Consulting. Namibian registered non-profit organisation involved in the development and marketing of a number of natural resource products in Namibia.

6.7.5 LOCAL AND REGIONAL NATURAL RESOURCE TRADING ORGANISATIONS

- **Mud Hut Trading** A fair trade organisation set up in Namibia with links to the International Federation for Alternative Trade (IFAT). In Namibia set up by the Rossing Foundation and mainly involved in the marketing of locally produced crafts from all over Namibia.

- **SANProTA** Southern African Natural Products Trade Association. This has now changed its name to **Phyto Trade Africa**. Membership based association set up to facilitate the interchange between African producers and the global market for natural products and offers various services to its members. It has members in Namibia, Botswana, Zimbabwe, Zambia and Malawi. The head office is located in Zimbabwe and a marketing agent is based in London. CRIAA SA-DC is the Namibian national focal point.

7. CONCLUSIONS AND RECOMMENDATIONS

Overall it can be concluded that the results of this study indicate that there a number of NTFP that could be considered to be viable for both the export and local markets. In addition, there are a number of NTFP that are currently being investigated or are at a product development stage, which if successful could become important for these two regions.

7.1 ENABLING ENVIRONMENT

In order for the long-term success of any NTFP marketing effort a conducive enabling environment must be put in place. Factors that would have to be addressed in this regard would include the following :

- National and regional government support services and enabling policies
- Traditional authority involvement especially with regards to access and management of natural resources but also conventional agricultural practices
- Regional and national support services from NGO sector
- Private sector involvement (regional, national and international)
- Local village or producer organisational structures / institutional arrangements
- Ownership of and access to resources

Although there is an overlap the following aspects related more specifically to practical implementation would be considered essential :

- Secure & reliable market established
- Sustainable utilisation and resource management
- Maximised local value addition
- Quality control and effective supply chain
- Real benefits realised by producers (prevention of exploitation by others)
- Research & product development
- Product certification & fair trade

7.2 ACTION PLAN

Any marketing of NTFP at local or export level must be based on sound business principles. The suggested follow up work from this study to bring NTFP to the market will require concerted efforts that balance supply and demand. Therefore the activities

required to address the issues of supply and demand will have to be undertaken in parallel and will have to compliment each other.

In terms of the results of this study it is recommended that a select few resources be prioritised for immediate action.

7.2.1 EXPORT MARKET

With respect to NTFP that have potential export markets the following resources and actions are recommended.

RESOURCE	AREA	ACTION
Devil's Claw	Kwando conservancy & Taratara	• Identify buyer & prices and costs • Set up local structures & obtain permits • Training - harvesting & processing • Identify supply mechanism
Thatching Grass	Mile 30, Ngala, Ibbu, Katemwa	Engage discussions with potential buyers to assess demand
Kalahari Melon	All villages that participated in this study	Collect seed samples for oil content analysis. Significant extension message required to increase production

7.2.1.1 Market Contacts

1. Devil's Claw

Only the main exporters are listed below

- Mike & Sabine Krafft - Dordabis (062 – 573507)
- Ulricke Fechter - Aris (061- 2352090)
- Irmela Horsthemke - Hochfeld (062 – 549021)
- Piet Mostert - Outjo (067 – 313119)

2. Thatching Grass

- Mr. Engels - J&L Thatching (Windhoek - 061 - 230215)
- Mr. A van Dyk - Prothatch (Okahandja - 062 - 501343)

3. Melon Seed

- Pierre du Plessis - CRIAA SA-DC (maawnk@iafrica.com.na)

4. **SANProTA / Phyto-Trade**

- *Cyril Lombard* - Marketing & product development (cyril.lombard@virgin.net)

7.2.2 LOCAL MARKET

In terms of the marketing of NTFP at a local level it is recommended that a trial purchase and marketing exercise be undertaken with respect to the resources identified. This will allow for the factors of supply and demand and the real costs involved to be identified.

The following resources and actions are recommended.

RESOURCE	AREA	ACTION
Firewood	Sikanjabuka Forest	Trial purchase and sale (Bukalo, Katima Mulilo & Rundu)
Thatching Grass	Ngala, Ibbu, Katemwa	Trial purchase and sale (Bukalo, Katima Mulilo & Rundu)
Building Poles	Sikanjabuka Forest	Trial purchase and sale (Bukalo, Katima Mulilo & Rundu)

7.2.3 FURTHER RESEARCH AND PRODUCT DEVELOPMENT

The following NTFP, notwithstanding those listed in point 6.3.3 above, can be identified for further research and product development, these include :

- Berchemia fruits (especially dried)
- Natural dyes
- Wild honey
- Indigenous vegetables (local market only unless major marketing initiative)

7.3 CONCLUDING REMARKS

In conclusion the increased marketing of NTFP from these two regions presents a number of opportunities and threats. The major factors are detailed below.

a. Opportunities

- Improved resource management at all levels
- Improved local organisational capacity and local producer empowerment
- Increased income generation

b. Threats

- Un-sustainable utilisation of resources
- Exploitation of local producers
- *Market fluctuations*

c. Comments

Clearly, an important series of economic opportunities, based on the sustainable harvesting and processing of NTFP, seems extremely realistic. It would appear prudent for donors and other support organisations to work closely with R&D and market service providers, and with industry, to facilitate the successful uptake of these opportunities by small scale local producers.

Key activities should be directed at :

- Co-ordinating the development of the supply-side with the demand side
- Development of quality and other processing standards to match what buyers (industry) would demand with what producers can achieve
- Enterprise development support to producers
- Environmental good practices
- Domestication support

As already stated any marketing of NTFP must be based on sound business principles. Careful attention to whether the product can be produced for the market price, including significant returns for labour, will have to be paid. In addition, considering that these NTFP are important for local utilisation and livelihood, the impact of increased trade should be monitored. Furthermore, it must be kept in mind that the development of commercialisable NTFP take long periods of time and is a costly process.

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RESOURCE RANKING RESULTS

CAPRIVI REGION

1. Ngala

Household	Income	Availability
1. Thatching grass	1. Palm leaves (Basketry)	1. Thatching grass
2. Palm leaves	2. Thatching grass	2. Palm leaves & *fruits*
3. Reeds	3. Berchemia (Dye & Fruit)	3. Berchemia fruit
4. Baobab	4. Reeds (mats)	4. Baobab fruit
5. Berchemia	5. Papyrus (mats)	5. Reeds
6. Papyrus	6. Baobab (Fibre & Fruit)	6. Papyrus
Also mentioned but not ranked		
• Sugar cane		
• Pumpkins		
• Watermelon		

Approximately 10 village residents participated in the resource ranking exercise.

The village is part of the Salambala Conservancy and as a result received cash payments of N$ 2 000-00 in 2001 and N$ 2 500-00 in 2002. Despite this, participants did not feel that the conservancy could assist with the marketing of NTFP from their village.

2. Malengalenga

Household	Income	Availability
1. Reeds	1. Devil's Claw	1. Reeds
2. Thatching grass	2. Reeds (mats)	2. Thatching grass
3. Papyrus	3. Thatching grass	3. Devil's Claw
4. Devil's Claw	4. Building poles (Terminalia)	4. Building poles
5. Building poles (Terminalia)	5. Papyrus (mats)	5. Berchemia
6. Water lilies	6. Water lilies	6. Water lilies
7. Berchemia	7. Berchemia (fruit)	7. Papyrus
8. Grewia berries	8. Grewia berries	8. Grewia berries
9. Mushrooms	9. Mushrooms	9. Mushrooms

Approximately 10 people participated in the resource ranking exercise.

In terms of NTFP that were marketed outside of the area thatching grass and Devil's Claw were mentioned.

Thatch — They used to sell significant quantities of thatch but have not sold any since 1998 / 99 due to conflict in the area which caused buyers to be unwilling to travel there.

Devil's Claw — They did harvest some Devil's Claw in 2002 but the marketing thereof was problematic and buyers paid low prices. It is still felt that there is a sufficient quantity of Devil's Claw to harvest and market although resource management will play a key role. Assistance with marketing and training on sustainable harvesting methods, processing and quality control would be needed.

This village is part of the Kwando conservancy but members were yet to receive any cash benefits. However, what appeared to be an efficient conservancy management committee and other local organisational mechanisms, such as village development committees, are in place and are likely to play an important role in the production, supply and marketing of NTFP. A separate meeting was held with conservancy management committee was held. It was noted that community resource monitors could assist considerably with resource management.

3. Ibbu

Household	Income	Availability
1. Thatching grass	1. Thatching grass & Reeds (mats)	1. Thatching grass
2. Reeds	2. Palm leaves (Basketry)	2. Palm leaves
3. Palm leaves	3. Devil's Claw	3. Reeds
4. Palm fruit	4. Marula	4. Berchemia
5. Devil's Claw	5. Berchemia (Dye & fruit)	5. Palm fruit
6. Marula	6. Indigenous vegetables	6. Marula
7. Indigenous vegetables	7. Palm fruit	7. Watermelon
8. Watermelon	8. Clay (Pots)	8. Indigenous vegetables
9. Berchemia	9. Watermelon	9. Devil's Claw
10. Clay		10. Clay

Approximately 40 residents participated in the resource ranking exercise. The meeting was chaired by the headman, Mr. Munihango James.

A PRA exercise carried out in this village by NOLIDEP in 1997 ranked the following natural resources as important, water, thatching grass, trees (construction, firewood, fodder, fruits and medicines), reeds and livestock and wildlife.

The village is also part of the Salambala conservancy and have received the following cash benefits, N$ 3 000-00 in 2000, N$ 2 000-00 in 2001 and N$ 2 500-00 in 2002. It was felt that the conservancy could assist with some aspects relating to NTFP.

4. Katemwa

Household	Income	Availability
1. Thatching grass	1. Thatching grass	1. Thatching grass
2. Palm leaves	2. Firewood (Mopane)	2. Firewood
3. Building poles	3. Building poles	3. Berchemia
4. Firewood (Mopane)	4. Palm leaves (Basketry)	4. Livingstoni
5. Reeds		5. Palm fruits
Also mentioned but not ranked	5. Sweet potato	6. Building poles
• Berchemia	6. Pumpkin	
• Baobab	7. Beans	
• Livingstoni	8. Ground nuts	
• Palm fruits	9. Watermelon	
• Grewia berries		
• Marula		
• Watermelon		
• Indigenous vegetables		

Approximately 8 people attended the meeting including the chairperson and members of the Community Forest Management Committee. (Chairperson - Innocent Matengu)

They are also members of the Salambala conservancy and have received the following cash benefits, N$ 2 000-00 in 2001and N$ 2 500-00 in 2002. They felt that resource management had improved since the establishment of the Community Forest Area (CFA) although this is not yet fully registered. Fire and Elephants are considered to be the major threats to resources both agricultural and natural. Reports of outsiders coming to collect firewood from this area was considered potentially problematic but at the same time presented an opportunity.

WESTERN KAVANGO

1. Taratara (Hans Kayinge)

Household	Income	Availability
1. Devil's Claw	1. Devil's Claw	1. Manketti fruit
2. Thatching grass	2. Timber (planks)	2. Monkey Orange
3. Timber (planks)	3. Thatching grass	3. Thatching grass
4. Chimba (fruit)	4. Manketti fruit	4. Timber (planks)
5. Manketti fruit	5. Flase Mopane fruit	5. Devil's Claw
6. Wild melon	6. Chimba fruit	6. Makweo
Also mentioned but not ranked	7. Grewia berries	7. Grewia berries
• False Mopane fruit	8. Monkey Orange	8. Makopa
• Monkey Orange		
• Grewia berries		
• Building poles		
• Ximenia fruit		
• Ochna pulchra		
• Makopa		
• Makweo		

Approximately 8 people mainly from Forest Management Committee attended the meeting including the senior headman for the area, Mr. Manfred Kanga.

It was reported that some residents had been involved in harvesting and selling of Devil's Claw. The price paid was about N$ 150-00 for a 50kg bag (which amounts to only about 30kg of dried Devil's Claw). Problems were mentioned regarding outsiders harvesting in the area without permission. It was mentioned that assistance with regards marketing, sustainable harvesting, etc. would be needed.

It was also noted that the traditional authority and forest management committee collaborate closely together and that honorary forest officers would play an important role regarding resource management.

2. Mile 30

Household	Income	Availability
1. Thatching grass 2. Manketti fruit 3. Monkey Orange 4. Pod berry (fruit) 5. Makweo 6. False Mopane fruit Also mentioned but not ranked • Ximenia fruit • Grewia berries • Building poles	1. Thatching grass 2. Manketti fruit 3. Monkey Orange 4. Pod berry 5. False Mopane fruit 6. Makweo	1. Thatching grass 2. Manketti fruit 3. Monkey Orange 4. False Mopane fruit

Approximately 15 people attended the meeting including the chairperson of the Community Forest Management committee, Mr. Nftali Starene.

The DED is involved with support to the community forest initiative. Fire is seen as the major threat to natural resources in the area and the community is active in maintaining firebreaks in the forest management area to prevent this.

The need of a local organised marketing structure was mentioned by participants as a means to improve the income generated from various NTFP produced in the area. It was clear that they felt that a combined marketing initiative would be more successful than the present individual initiatives. It was mentioned that perhaps DED could assist them in this *regard*.

LIST OF POTENTIAL SPECIES FOR COMMERCIALISATION CAPRIVI / KAVANGO

SPECIES	COMMON NAME	SILOZI	RUKWANGALI	NOTES
Syzgium guineese	Water Pear	Muntaule		
Berchemia discolor	Brown Ivory	Muzinzela	Umbe	
Kigellia africana	Sausage Tree	Mupolota	Uhvunguhuvungu	
Diospyros mesphiliformis	Jackal Berry	Muchenge	Unyandi	Fruit
Pterocarpus angolensis	Kiaat	Mulombe	Uguva	
Garcinia livingstonei	African mangosteen	Mukononga	N/A	
Combretum imberbe	Leadwood	Mubimba	Munyondo	
Guibouritia coleosperma	Flase Mopane / Copalwood	Muzauli	Usivi	Kavango / Western Caprivi
Grewia spp	Grewia	Momaka	Simaka	Fruit
Terminalia sericea	Silver cluster-leaf	Muhonono	Mugoro	
Colophospermum mopane	Mopane	Mupane	N/A	
Schinziophyton rautanenii	Manketti	Mungongo	Ugongo	

SPECIES	COMMON NAME	SILOZI	RUKWANGALI	NOTES
Adansonia digitata	Baobab	Mubuyu	Euyu	
Sclerocarya birrea	Marula	Mulula	Uwongo	Eastern Caprivi
Hyphaene petersiana	Real Fan Palm	Mukulwane	Sivare	
Dialium engleranum	Kalahari Podberry	N/A	Usimba	Fruit
Ximenia americana	Blue Sourplum Wild Plum		Kakukuru	
Ximenia caffra	Sourplum			
Strychnos cocculoides	Monkey Orange	Mahwahwa	Uguni	Kavango
Strychnos pungens	Monkey Orange	Mahwahwa	Uguni	Eastern Caprivi
Citrullus lanatus	Kalahari Melon	Muchoko	Katjama	
Harpagophytum zeyheri	Devil's Claw	Lilamatwa	Ekakata	
Diospyros chemaethamuus				Shrub – Roots used as dye
Aloe zebrina	Spotted Aloe		Ekundu	

NATURAL DYES		
Berchemia discolor	Brown Ivory	• Natural Dyes have some local market potential especially for the basket industry. A number of areas involved in basket making do not have some of these dyes readily available. • Some dyes might have national or international market potential such as Berchemia in South Africa and Botswana. • Considerably more dyes are expected to be identified. • Issues of sustainable harvesting, processing, product development and marketing will have to be addressed.
Kigellia africana	Sausage Tree	
Syzygium guineense	Water Pear	
Sclerocarya birrea	Marula	
Diospyros chemaethamuus		
Aloe zebrine	Spotted Aloe	
Pennisetum glaucum	Pearl Millet	
Terminalia	Silver leaf	
Wild Onion		