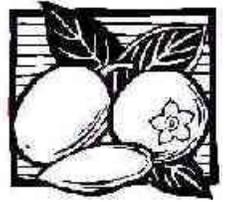




**INDIGENOUS PLANT TASK TEAM (IPTT)**  
Promoting the Sustainable Utilisation of Namibia's Indigenous Plant Resources



Proceedings of the  
**Third National Workshop on**  
**PROMOTING INDIGENOUS PLANT PRODUCTS**



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## **Abbreviations and acronyms**

CBNRM	community-based natural resource management
CRIAA SA-DC	Centre For Research Information Action in Africa – Southern Africa Development and Consulting
EWC	Eudafano Women’s Cooperative
FT	Fair Trade
HWG	Hoodia Working Group
ICEMA	Integrated Community-based Ecosystem Management project
IPTT	Indigenous Plant Task Team
IRDNC	Integrated Rural Development and Nature Conservation
KMS	Kalahari melon seed
MAWF	Ministry of Agriculture, Water and Forestry
MCA	Millennium Challenge Account
MCC	Millennium Challenge Corporation
MET	Ministry of Environment and Tourism
NAB	Namibian Agronomic Board
PIF	Promoting Indigenous Fruits
PTA	PhytoTrade Africa
RPRP	Rural Poverty Reduction Programme
SAHGA	South African Hoodia Growers’ Association
VIVA	Vigorous Indigenous Vegetables for Africa

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## **1 Welcome and opening remarks**

### **Chris Brock (Namibian Agronomic Board (NAB) / Plant Sector Development Forum)**

Chris Brock welcomed all participants to the Third National Workshop on Promoting Indigenous Plants. Not so long ago, it was widely assumed that there was little scope for economic development in the indigenous plants sector. Now, however, it is recognised as one of the cornerstones of agronomic development in Namibia, and opportunities are emerging in areas where none were anticipated in the past, such as sustainable harvesting and cultivation. Progress being made in the sector has not gone unnoticed, and Namibia is now seen as a regional leader in the sector, and amongst the best in the world. As global warming takes hold, the importance of non-conventional indigenous crops for Namibia is set to increase, and they could indeed become an essential coping mechanism for the future. The next few years should see exciting developments and challenges that the wider stakeholder group will have to rise to meet. The Millennium Challenge Account (MCA) is on the verge of making a due diligence assessment on a major project, and there are also likely to be opportunities for the sector within the Rural Poverty Reduction Programme (RPRP), to which Namibia's European Union (EU) development partners are responding positively.

The programme for the workshop promises to cover important and interesting topics, including participatory options, national branding and fair trade. Thanks are due to the Ministry of Agriculture, Water and Forestry (MAWF) for funding some functions of the Indigenous Plant Task Team (IPTT); likewise, the funding provided by the EU through the National Agricultural Support Services Programme (NASSP) till about a year ago is much appreciated. It is to be hoped that the Ministry of Environment and Tourism (MET) will rise to the challenge and come on board with some financial support.

Mr Brock wished all workshop participants fruitful deliberations. He called on them to focus on the issues at hand, as far as possible to achieve consensus, and to get a clear idea of the tasks that lie ahead.

## **2 Useful plants, commercialisation and sustainable harvesting**

### **Dr Tony Cunningham (Darwin University / Ethno-Ecology Services)**

The IPTT is a unique coordinating body, and Namibia is leading the way in the commercialisation of plants in Africa. The key to successful commercialisation is sustainable use, with a view to enhancing livelihoods and bringing about just benefit-sharing arrangements, while minimising the ecological costs. In Namibia there is a close link between communities, communal forests and the natural products trade. Increasingly, there are marketing opportunities for clean "green" products. It is therefore crucial to assess the extent of plant resources and to establish what quantities can be harvested while guaranteeing the sustainability of supplies, and the steps that must be taken to achieve this state.

Sustainability is important for a number of reasons. Firstly, in the interests of the livelihoods of local communities, it is essential to avoid undermining local-level self-sufficiency. Secondly, the market for natural plant products must be protected. This requires a sustainable supply chain to gain a market share, and certification to obtain a price premium. Thirdly, sustainability of harvesting is crucial for ecological and conservation reasons. And fourthly, there are cultural reasons, as certain plants can be seen as cultural keystone species.

There are six simple messages that are relevant to sustainable harvesting for commercial purposes:

- 1) Make strategic choices of plants to be harvested. For example, the IPTT and PhytoTrade Africa have done this with marula and mopane. Ideally, there should be a substantial resource of a plant that requires a low-impact harvest. Plants that are slow-growing and require destructive harvesting (e.g. *Protea galidii*) are not suitable. The most suitable plants also have single rather than multiple uses, grow in level areas and require only infrequent harvesting. Ideally, they will be invasive species, such as *Terminalia sericea* (which has cosmetic uses) and *Dichrostachys cinerea* (for its anti-inflammatory properties).
- 2) Minimise the costs and complexity of management systems: maintain “event books” (e.g. on animal – plant conflicts) and perform local-level monitoring.
- 3) Focus on indicator species (e.g. *Pachypodium namaquanum*), the presence of which suggests that other species are also present. With ecological keystone species, the loss of one species can have a cascade effect on other species. Examples are the sycamore fig (*omukuyu*, *Ficus sycomorus*) and the shepherd’s tree (*omunghudi*, *witgat*, *Boscia albitrunca*). The camelthorn (*omumbonde*, *Acacia erioloba*) is also important, as it fixes nitrogen and is a valuable food resource, as is the !nara (*omungaraha*, *Acanthosicyos horridus*). Cultural keystone species occupy important positions in the traditions of local communities. They typically have multiple uses and are important for local livelihoods. Prime examples are marula (*omungongo*, *Sclerocarya birrea*) and makalani (*omulunga*, *Hyphaene petersiana*).
- 4) Use appropriate methods, for example comparison of fixed-point photographs where dated photographs of identifiable sites are available. These can capture subtleties that are missed by event books, e.g. marginal growth over several decades. Community-based monitoring can be an important tool for measuring e.g. harvested amounts. Use can also be made of permanent plots and aerial photographs.
- 5) Inadequate monitoring can have disastrous results, so do the job properly: “The results of inadequate monitoring [methods] can be both misleading and dangerous not only because of their inability to detect ecologically significant changes, but also because they create the illusion that something useful has been done.”<sup>1</sup>

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<sup>1</sup> Legg, C J & L Nagy. 2006. Why most conservation monitoring is, but need not be, a waste of time. Journal of Environmental Management 78:194–199

6) Use appropriate precision. For example, random plots don't make sense at a local rural level, whereas transects do. It is possible to put practical measurements systems in place to measure and record e.g. bark damage and root harvests.

It makes sense to sustain natural product production. The three mutually reinforcing foundations of sustainability are building the capacity of individuals and institutions; priority setting, adaptive management plans and baseline assessments; and implementation (monitoring and adjusting harvests).

### **3 Brief history of the IPTT and stakeholder map Pierre du Plessis (CRIAA SA-DC)**

Before looking into the history of the IPTT, it should be recognised that the IPTT follows on many millennia of traditional knowledge. There is evidence, for example, that !nara plants have been used for at least the last 8 000 years. More recently, devil's claw has been exported since the 1960s, and the first marula oil project was initiated following a 1994 study into women's needs. The Centre for Research Information Action in Africa – Southern African Development and Consulting (CRIAA SA-DC) did some early work on manketti, devil's claw and melon seed oil, and in 1999, the Promoting Indigenous Fruits (PIF) project was launched with funding secured by Hon. Helmut Angula, then Minister of Agriculture. This led in 2000 to the formation of the Indigenous Fruit Task Team, subsequently renamed and expanded in focus to the IPTT in 2003.

Because there was initially inadequate understanding of the commercial potential of individual species, a "light and wide" assessment was made, with initial primary focus on five species (marula, melon seed, manketti, makalani and !nara) and secondary focus on a further four (*eembe*, baobab, ximenia and jackal berry). It was deemed strategically advisable to exclude some species (e.g. hoodia) and not to venture into the Caprivi Region.

The long-term impacts of the first phase of the PIF have included the Kalahari melon seed (KMS) trade, the dissemination of small marula juice and oil presses and the IPTT becoming a member of PhytoTrade Africa. An indigenous plants component was also included in NASSP, and the marula juice and pulp pilot project was launched.

Since the establishment of the IPTT in 2003, the pace of development has picked up, with projects including: devil's claw cultivation and sustainable harvesting of *H. zeyheri*; the Useful Plants database; development of a business plan for a commercial entity ("Newco" – see Section 15.2 below); marula juice and pulp pilot-scale production; continued support to KMS oil trade development; the establishment of eco-regional satellite centres; Kalahari truffle and KMS cultivation trials; continuation with the "pipeline" approach; the hoodia and indigenous succulent programme; manketti oil pilot processing; the Vigorous Indigenous Vegetables for Africa (VIVA) programme; and the development of the Indigenous Plants Internship Programme (IPIP).

Significant opportunities for the immediate future are to increase the supply of KMS oil, and to work on extracting the marula flavour component. Other priorities include fostering links with the community-based natural resource management (CBNRM) movement; constituting a Primary Producers Trust (PPT) for benefit-sharing and ownership; strengthening collaboration with private-sector partners; investing in value-adding capacity; and obtaining adequate funding for the continued existence of the IPTT.

A strength of the IPTT has been its ability to be responsive and flexible. Within the southern African region, Namibia has been able to move quickly as needs and opportunities have become clear. The challenge now is to scale up activities, so that indigenous plants can make a meaningful contribution to poverty alleviation. This task cannot be achieved by a single coordinator – increased human and financial resources are essential. On the investment side, the needs are not only financial, but relate also to skills, vision and experience.

#### **4 An international perspective on Namibia's indigenous natural products programme**

**Cyril Lombard (PhytoTrade Africa, London Office)**

PhytoTrade Africa is a non-profit trade association with 58 members (e.g. SMEs, producer groups, NGOs, research institutions) from eight southern African countries. Its objective is to develop income streams for rural producer communities from the sustainable utilisation of indigenous plants, typically employing wild harvesting and traditional farming systems, with a pro-poor focus. Rather than supplying markets for already-established plant products, PhytoTrade Africa aims to develop new products.

The total budget for 2007 amounts to US\$ 1.6 million. This budget covers supply chain development (25%); product research and development (28%); market development (29%); and institutional development (18%). Products fall into the categories of fruit pulps, botanical extracts, lipid oils and new product groups, such as gums/hydrocolloids and essential oils.

The Namibian members are Oontanga Oil Producers (KMS oil, ximenia oil); Eudafano Women's Co-operative (marula oil, KMS oil, marula fruit products); Ecoso Dynamics (devil's claw); and CRIAA SA-DC and the IPTT (support to all products, including the pipeline approach).

Namibia is recognised as a leader throughout the region, particularly with ximenia, KMS and marula, in which markets it has the lion's share, and with devil's claw. It has a good reputation with stakeholders, and is able to supply larger quantities than some other countries with larger resources. Namibian partners have also shown themselves to be responsive and adaptable, and able to respond to PhytoTrade Africa's requests and make use of commercial opportunities. Progress is now also being made with organic and fair trade certification. Largely because of this solid reputation, there is now talk of investments being made in the Namibian plant products sector.

The IPTT serves as a single entity that can be contacted regarding a broad range of issues. The pipeline approach, which distinguishes between 1<sup>st</sup> and 2<sup>nd</sup> tiers of products, has proven to be highly successful, as it allows for initial research without excessive commitment and more intensive investment in more promising areas, and is able to respond to market opportunities.

The indigenous plant product sector's capacity to be responsive and to adapt is crucial for international clients. Other strengths are an effective CBNRM movement, which over the last ten years has moved from a near-exclusive focus on tourism and conservation to include natural plant products, and the Integrated Community-based Ecosystem Management (ICEMA) Programme. There is healthy donor interest and support, and understanding of public versus private sector obligations. Mainly because of devil's claw and hoodia, Namibia also already has an international profile for natural products. Namibia is thus seen as a site of efficiency and progress, and Namibian partners play a key role in PhytoTrade Africa.

Nevertheless, there are some challenges that must be faced. The expectations of rural producers regarding the scale and rate of market growth and value-adding opportunities are high. However, markets often develop slowly, and realism is required. For example, adding value within the region has proven to be problematical, for example with devil's claw, and similar problems might be experienced with other products. It is important to assess whether or not the right strategy has been employed. Funding requirements will also increase, and public-versus private-sector issues will become more complex. There is also a need for improvement in research and development capabilities.

Namibia has benefited through developing partnerships, for example with The Body Shop. As a result of a focus on long-term benefits and an exclusive agreement, benefits are now being derived (e.g. the stable and strong demand for KMS). The lesson to be learnt is that despite temporary difficulties that may be experienced, it is worth fostering and maintaining long-term commercial partnerships.

Namibia should also maintain its focus on sustainability. For many stakeholders (e.g. the MET) and in many markets, this will increasingly be seen as a non-negotiable requirement. Likewise, certification that secures a market advantage for Namibian producers should be continued and strengthened.

In Namibia, there are different stakeholders with different requirements. Collectively, they have the capacity to bring in partners and investors, so that a commercial entity can be established to make use of value-adding opportunities locally, even though no single product or stakeholder would be able to attract such an investment. It might be advisable to start on a relatively small scale, and to convince potential investors of the viability of the venture. Thereafter, operations could be scaled up.

The IPTT has proven itself to be an invaluable asset to the sector, and it should be boosted. The private sector should be more closely involved, as commercial challenges and funding requirements are set to become more complex. It might be worthwhile to hold a seminar with a view to discussing economic potential and initiating a fund. Finally, it is to be hoped that Namibian stakeholders will continue and strengthen their relationship with PhytoTrade Africa.

## **5 Devil's claw: a mature natural product with some unresolved issues** **Ben Bennett (Natural Resources Institute, University of Greenwich)**

*Harpagophytum procumbens* and *H. zeyheri* are both devil's claw species that are used in the treatment of arthritic conditions. A study in the southern African region ("Fair Trade or Foul: Power and Governance in the Devil's Claw Value Chain") suggests that there are governance issues in the value chain that require attention.

Some time ago, the demand for devil's claw went up, and production also rose. There was sudden attention on the devil's claw resource, and given the concern about the dangers of over-harvesting, devil's claw became a regulated product. Recently, the price has collapsed. We should therefore investigate whether there is a better production and marketing model to put in place.

As matters stand, one can refer to a "value chain spaghetti" – the value chain is highly complex, and may be characterised as being both long and wide (see Annex?? for PowerPoint presentation.) The main market is for herbal remedies. The costs involved in trying to bypass the main players in this market would be too high, and following the path of least resistance is the only sensible approach. However, there may be some scope for bypassing market stages in the veterinary and tea chains. Stockholding is minimal, contractual rights of producers are weak, payment mechanisms are inadequate, and there is no mechanism for risk mitigation through futures. The risks are borne almost entirely by the primary producers, who are powerless within a "divide and rule" scenario. Joint ownership arrangements are needed to share the risks.

Some 96% of world production comes from Namibia. Total world demand peaked around 2000, and has fluctuated over the last 15 years between 83 and 956 metric tonnes, with an average of 423 mt. Reducing annual output to 400 or even 350 mt would therefore probably have the effect of stimulating the price. Over the period 2004 – 2005, exports from Namibia grew by 14%, to 346 mt, despite a drop of 46% in exports to Germany. Exports to France, which rose by 151%, accounted for much of this increase, but the market is spreading, and more than six countries now import in excess of one container per year.

Unlike the value chain, the market is concentrated and very narrow, with only two Namibian exporters accounting for 84% of exports in 2004, and 70% in 2005. One smaller company expanded its export volumes to 12% of total exports in 2005. In boom times, more companies and countries are involved, with more sales, but smaller average transaction sizes. There is evidence that since the boom, sales to cheaper production countries who are concentrating on dietary supplements and generic products (e.g. Spain) have increased. The boom has caused some traditional exporters to leave the trade. Exports to South Africa have also declined, and only one main buyer remains. What Namibian producers should seek, therefore, is stable arrangements with long-term rather than short-term partners.

The decline in the devil's claw price is a result of poor generic promotion and a lack of coordination between range states. The Devil's Claw Range States Working Group has not yet matured to the stage where it is able to lobby governments and

combat the power asymmetry in the value chain. The reality that devil's claw is not the only effective product must also be recognised. In the UK today, devil's claw is found for sale almost only in remainder sections. It is being sold off cheaply because it is no longer seen as a high value product. Improved information to consumers is therefore important. The regulatory environment also makes marketing difficult, as no explicit claims may be made regarding devil's claw's efficacy in treating rheumatism. Devil's Claw's proposed listing on CITES Appendix II, even though it eventually did not happen, has brought about the belief in some quarters that the resource is threatened, when actually it is not. The way the world sees devil's claw is not managed by growers or local people. The consequence of unimaginative marketing is that Devil's Claw is not perceived as an emblematic plant for Namibia.

Discounting and the emergence of own brands for chain stores and supermarkets have also been driving prices down. With their massive leverage and control of the retail end of the supply chain, supermarkets insist on the same contents for less money.

The vast majority of the value of devil's claw is captured outside of Namibia, after export. Whereas exports amount to €1.4 million, the value following extraction amounts to €13.24 million, and retail value to €38 million. At the bottom of the pile, harvesters receive only 1.4% of the total devil's claw industry value. There is therefore no question of devil's claw being fairly traded. There is also no current plan to establish Fair Trade standards, and no fast track available in this regard. Furthermore, no Fair Trade or organic certification is allowed on the final labelling for pharmaceutical products. Such certification is in any event of greater concern to younger people, whereas the people who buy devil's claw are generally older.

Regulatory requirements are lowest for cosmetics, and highest for drugs, where human and animal testing is required. The regulatory environment is set to become more stringent for devil's claw in the future. The onus is on the industry to prove the safety and efficacy of devil's claw. Full traceability will be required – where it was harvested, and who handled it throughout the chain. A history of safe use carries some weight, but developmental issues are not seen as being relevant. As responsibility for attesting to regulatory compliance and product safety is increasingly being expected from producing country officials, the capacity of local authorities to do so may need to be increased.

Market research indicates significant potential for growth in the devil's claw market. As new market opportunities emerge, generic support and marketing will be required. Range states could cooperate and agree to annual quotas.

The current permit systems are not traceable, not functioning and not sustainable. Some success has been achieved with the Sustainable Devil's Claw Harvesting Project, but it has not expanded as predicted, because there is no real demand for the organic product, and no economies of scale have been achieved. A proposal is therefore put forward for a Devil's Claw stewardship system, which would involve private entities. The stewardship agreement would be entered into between the trader/exporter, the traditional authority and a harvesting agent. An

arbitration agent would settle disputes, and the government would monitor compliance and issue stewardships and permits. The potential advantages of the stewardship system would be that by moving from an open- to a closed-access system, long term sustainability would be assured. It would focus on self-regulation, and there would be potential for future value addition, for example through drying. New products could be added in the future, and it would assist with traceability. More value would be captured, as it would reduce the steps in the chain between the harvesting community and the exporter.

In conclusion, the devil's claw industry is highly complicated and fragmented, and market access is threatened by a number of regulatory issues. Fair trade is not currently possible, even though it is needed, and in-country value addition is constrained by intellectual property rules.

Nevertheless, market growth is possible in several areas. To achieve this, the current devil's claw supply structure (and indeed those of other wild-harvested products) must be changed – we need to “think outside of the box.” Generic marketing will be absolutely essential for future commercial success. Minor commodities such as devil's claw products require non-tariff market access, and this must be brought to the attention of negotiators.

## **6 Commiphora resin: an endemic with strong traditional knowledge**

**Karen Nott (IRDNC)**

A year ago a report was delivered to the IPTT on the Commiphora Resin Project in two conservancies. Since then the project has been extended to a further four conservancies, all in Kunene Region. In such a sparsely populated area, meeting with nomadic inhabitants, mostly of the Himba cultural group, has proved to be quite challenging.

The IRDNC first became interested in commiphora resin 10 to 15 years ago, as it was known that some commiphora resins were used for cosmetic purposes, but at the time there were no institutions at ground level to manage a project. The current project has come about because conservancies have been established, and they recognise the need to diversify beyond wildlife and tourism. Of the six conservancies, five are registered.

The project began by looking at all commiphora species, but *C. wildii* has proven to be the most important, followed by *C. virgata*. Most of the *C. wildii* resource is found in conservancies, which is an advantage from a management point of view. *C. wildii* has bright green leaves and different growth patterns, from crawling to upright.

A lot of emphasis was placed on meetings with conservancy members and the exchange of information. Resin samples were collected, and participatory rapid assessments were conducted with women in the conservancies. There were also questionnaire surveys and plant surveys. Maps were made of resources, resin was

harvested, and permanent monitoring sites were established. Community meetings were held wherever possible – under trees, most often – as generally no built infrastructure was available. There were various forms of feedback, and Dr Tony Cunningham assisted by producing a promotional DVD.

The conclusion was reached that *C. wildii* is the most important species for the Himba. The project mapped the extent of the resource within the conservancies. Information obtained from the women about the resource proved to be very accurate. Sites were identified, as were times for harvesting (before the main rains). The decision was taken not to include the Torra conservancy in the study, as no traditional knowledge of commiphora resin could be detected in the area. The project results therefore relate to the remaining five conservancies. Traditionally, Himba people would have a container made from cattle horn, into which they would place a fat and ochre mixture, together with *C. wildii* resin, which has the important function of rendering the mixture sweet-smelling. Other uses of *C. wildii* resin are for eating, cleaning teeth, washing clothes, tanning leather, and use as glue, medicine and dye. The species used for specific purposes depends largely on what's available. The most important source of edible gum in the area is *Terminalia prunoides*.

Harvesting of resin is non-invasive, as the plants exude the resin naturally. The resource far exceeds local needs, which are easily supplied. The supply peaks in the dry season, and more than one harvest per season is possible. Hot years are good for resin production, which is stress-related, and more abundant in older, more mature trees, especially shortly before they die. The resin is collected in a cloth or stone, and lasts for two to three years. It is given to friends and relatives in areas without resin. It is not known exactly how much is produced by each tree, or how long it takes to harvest.

Rights over and ownership of the resource are vested in the conservancy (even though this is technically not the case in law.) The conservancy committee is the relevant authority regarding the resource. There is limited trade, but it is not well established. Almost all conservancy members indicated the desire to sell resin. Resource density is highest in Marienfluss, and lowest in the Torra area. It requires a gradient to grow successfully. A map showing gradients in excess of >10% was prepared for each conservancy, indicating the percentage of the conservancy suitable for *Commiphora*. The total number of plants in a conservancy was estimated by excluding the areas which are not suitable, and multiplying the remaining suitable area with a value for plant density.

For the 2005 harvest, a group of ladies was transported to the trees. The ladies themselves selected which trees to harvest. In all, 100 litres of resin was collected from 1 182 trees; this took 396 people-hours. For the 2006/7 harvest, 20 trees were marked for harvesting at each of 10 sites. The ladies were asked to collect only from these trees, and to return to them every two weeks. Part of the challenge lay in convincing the ladies that from a research point of view, empty tins indicating a lack of harvesting success were also valuable. This resulted in a significantly lower production than the previous season, with only 2% of plants producing more than 60 grams of resin, and 58% of plants producing none at all.

In all probability, the season was inherently less productive, as there had been very little rain. However, the fact that in the previous season the women had themselves selected the plants for harvesting probably also played a role.

On the basis of the research results, it was estimated that the annual resin harvest amounts to 24 tonnes in Marienfluss; 20 tonnes in Puros; 10 tonnes in Orupembe; and 2 tons in Sanitatas. There are also at least another six conservancies with the *C. wildii* resource.

Four permanent monitoring sites of one hectare each have been established (two in Orupembe and two in Puros).

The conclusions can be drawn that the commiphora resource can be sustainably harvested and that local institutions are in place, but that sufficient harvesters might not always be available. Additionally, markets would have to be found.

## **7 Kalahari melon seed: a commercial success with supply-side constraints**

**Michel Mallet (CRIAA SA-DC)**

Kalahari Melon Seed oil is a cosmetic ingredient for the skin care niche market. It benefits rural women (the Eudafano Women's Cooperative (EWC) is the "Community Trade" supplier of The Body Shop) and is ethically traded and environmentally safe. The lead time to commercialisation has been five years, which is relatively quick. KMS is drought-resistant and traditionally intercropped with mahangu. It provides a cash return for even small amounts sold through the EWC, and is a good example of collaboration and partnership between the EWC, the Namibian Government, CRIAA and The Body Shop.

Over the first five years (leading up to 2006) approximately 250 tonnes of KMS, delivering about 36 tonnes of KMS oil, was marketed, with a total export value of N\$1.5 million. The EWC installed a processing factory in Ondangwa in 2005, and now accounts for about 21.5% of total production. The first KMS expeller machine, with a capacity of about 50 tonnes annually, was installed in 2006, and a second is to be commissioned in 2007. This will provide sufficient processing capacity.

The seed content of KMS is low: to obtain a kilogramme of seeds requires about 25 – 30 kg of melons. The current problem is not one of inadequate demand, but of inadequate supply. The Body Shop needs 12 tonnes of KMS oil annually, and total demand could easily grow to about 25 tonnes of oil. The supply of KMS from King Nehale Conservancy has collapsed, however, and local supply of oil from EWC has fallen to about 1.5 tonnes annually. This should be alleviated by regional farmers' co-ops in the north-central regions entering the supply chain.

Over and above agro-ecological limitations such as inappropriate soils for KMS production, possible causes of the inadequate supply of KMS are the labour-intensive nature of production and the low prices paid; the lack of promotion of a new "cash crop" opportunity; difficult market access for individual producers with

small quantities; the undeveloped supply chain and market structure; low profit margins for intermediaries; and weak management.

A solution may lie in an integrated programme of action, linking production, marketing, processing and export. Research, promotion, extension, training and capacity-building are also required, and it might be advisable to extend the supply chain to other regions (e.g. Kavango Region and Caprivi Region). Ultimately, a body to regulate the KMS industry may be needed.

A challenge that must be met is to maintain and develop quality credentials and certification (Fair Trade and organic). There is also a need to improve pricing along the value chain, while maintaining the competitiveness of the end product. Raw materials constitute the major cost, and increasing the price paid for KMS will thus directly affect the price of oil for export, as production is not yet sufficient to achieve economies of scale.

There are potential financial returns linked to improved KMS supply and marketing. In the medium term, an annual target of about 25 tonnes of KMS oil (about 200 tonnes of KMS) is realistic. In the longer term, output could be raised to at least 50, and perhaps as much as 100 tonnes of KMS oil. Although the current financial turnover is modest, there are other important benefits: income generation may be relatively small, but it is spread over many thousands. There are also interesting synergies with other products, such as mahangu. A further advantage of developing rural capacity lies in the fact that the development can be extended to other products. The KMS industry also supports the development of diversified alternative drought resistant crops in Namibia, and will present further local value-adding opportunities in the future.

**Ex plenary:**

The KMS growing project developed out of a previous NBRI project. Six lines of *Citrillus lanatus* were identified, some being hardier than others. These lines have now been crossed, and the first crossings will have been assessed by the end of May 2007. The seeds will be pressed and the oil analysed. Thus far, it appears that the hardier lines have germinated less.

**8 The “pipeline approach”: an update  
Pierre du Plessis (CRIA SA-DC)**

In Kavango Region alone, there are some 325 documented potentially useful plants. The “pipeline approach” therefore makes sense in Namibia. Essentially, a wide range of plants is preliminarily investigated, with increasing attention being given to those species that show the most promise. The IPTT is involved in the early and middle stages, from early identification of commercial potential to trial commercialisation, leading to self-supporting commercialisation. The private sector enters the picture where private investment is required, and follows through into commercial maturity.

The main strength of the approach is that it allows resources to be moved to where they're most needed. The entire project does not grind to a halt if one aspect isn't working out – the overall programme can continue. This renders the overall programme cost-effective. A pipeline containing a variety of products will also ultimately result in a diversified and resilient sector with a basket of products. It furthermore supports sustainability, as harvesting impacts are spread over a number of resources.

The species with the most mature commercial profile is devil's claw, although there are still some concerns about unsustainable harvesting practices and the lack of local value-adding operations. The strategic objective is to achieve a sustainable harvest of over 100 tonnes that also meets Fair Trade standards. Success has also been achieved with marula oil for cosmetic purposes, and it is now used in over 140 Body Shop products. The EWC factory in Ondangwa produces marula oil, and there is a partnership agreement between local producer communities and Aldivia S.A. of France. Marula is still exported as a crude cold-pressed oil, and there is potential for further local value-adding. There are, however, concerns about local capacity to satisfy demand.

Marula is an important traditional food source in Namibia, but this has not yet been commercialised. Fruit supply to formal-market processing trials has been problematic, although fermented juice is popular on the informal market, where the low marketing costs allow for high profit margins. The introduction of mechanical presses has brought about a substantial increase in the local production of marula juice and pulp, and attention is now falling on extracting marula flavour from the peels. Support is being given to cultivation, with a view to increasing supply and extending the harvesting season by focussing on early- and late-fruited strains.

Kalahari melon seed has proven to be highly successful in The Body Shop's Community Trade Programme. Current demand is about 25 tonnes of KMS oil annually, but this could easily double. IPTT intervention has mainly been on the supply side. The market can easily be grown if the supply increases.

There have been some problems with ximenia. About 22 tonnes of nuts were sold in 2007. Namibia is currently the only commercial producer, but competition from e.g. Swaziland will surely arrive at some stage.

Hoodia has been very much in the news of late. There is uncertainty about exactly how the market is developing. The IPTT support has been in the area of regulatory policy development and bringing small producers into the value chain. Despite the uncertainties, it is likely that there will be a niche market for fair trade community-produced hoodia.

Small quantities of manketti oil (less than two tonnes) have been produced and sold, but as yet there are no large markets. It is used in hair care products in Zambia, and it is likely that if a market reactivates, there will be significant competition from other southern African countries.

The baobab resource in Namibia is limited so other SADC countries set the prices of baobab pulp. It is hoped that an organic certification project at Uukolonkhadi will deliver some niche-market value, but baobab will never be a major resource in Namibia.

There is a wealth of OvaHimba traditional knowledge regarding the use of commiphora resin as a perfume. A commercial partner will be needed to take the project forward.

There is some commercial interest in mopane essential oil, but the results so far have been inconclusive. A study of fruiting behaviour is underway, and the IPTT is funding a larger sample production project in 2007. There has been good overlap with CBNRM groups.

Samples of terminalia rootbark have been sent to a potential buyer, who claimed that one sample was not from a terminalia species. Guidelines for sustainable harvesting must be developed. Extraction from the root bark is a complex process, and is protected by patents. Despite the hesitance of other partners to become involved, further work should be undertaken, as it overlaps well with bush clearing operations.

The !nara oil resource is small, as the !nara plant occurs mainly in the Kuiseb delta. There are resource management problems, as traditional systems have broken down and there have been unsustainable practices in the !nara fields. Nevertheless, there is some interest from small cosmetic producers and suppliers of niche market delicacy foods. As !nara is a Namibian endemic, there would be no competition, but the small resource base does not favour investment for commercialisation.

Species that are currently “on hold” include Strychnos (poison problems); Berchemia (too expensive, no interested partners); jackal berry (use limited to alcohol distillation and crafts); Makalani (too expensive, and use limited to alcohol distillation); and Kalahari truffles (an outbreak species that would require a rapid response supply chain to get to the market.)

Many other species are known to have traditional uses, and are thus potential candidates for commercialisation. The fact that bio-prospecting without reference to traditional knowledge is not well developed is a limiting factor. Instead of a species-by-species approach, a thematic approach might be advisable (perfume plants, gums and resins, medicinals, etc.)

There is a need to speed up the flow. Collaborating with commercial partners entails high transaction costs, often slow progress and inadequate start-up supplies. The proposed multi-purpose extraction and quality-control facility proposed for MCA support would be invaluable in this regard.

## **9 Fair Trade certification of indigenous plant products**

### **Jonathan Landrey (PhytoTrade Africa)**

The objective of PhytoTrade Africa (PTA) is obtain supplementary income for rural producers in southern Africa derived from their indigenous plant resources. Fair Trade (FT) certification can play an important role in achieving this objective.

Currently, 30% of the content of a product must be produced in accordance with Fair Trade standards for the product to be labelled as a Fair Trade product, but this is to be increased to about 60%. PTA is interested in getting its oils listed as FT products by the Fair Trade Labelling Organisation. First a category must be selected. The choice is between plantation standards and small farmer organisation standards. As no standards are yet available specifically for wild harvested products, PTA selected the small farmer organisation standards.

The basic requirement for the organisation requesting FT certification is: “The producer organisation can demonstrate that FairTrade revenues will promote social and economical development of small farmers, and that the benefits of FairTrade (including the Premium) are shared based on a democratic decision taken by the beneficiaries.” An acceptable organisational structure must be in place (e.g. AGMs, members with voting rights, a Board and a General Assembly, an annual report and accounts, etc.)

Social and economic improvement must be transparent and demonstrable. For example, the organisation must be able to show how much extra is going to the producer because of the FT certification, and demonstrate that there is a market for the product. Environmental and labour standards must be complied with, and members should understand the business process and value chain.

Environmental development entails an Environmental Impact Assessment, planning and monitoring; control of the use of agrochemicals and waste; improving soil fertility and water management; and reducing the fire risk.

For wild harvesting, the focus is on activities related to harvesting (e.g. assessing how pathways impact upon the environment.) Maps are needed that indicate where wild plants are to be harvested, so that verification is possible. Harvesting should further be done in a manner that: maintains the viability of the species and allows it to continue to perpetuate itself; is moderated to ensure that the product is still available to other species in the ecosystem that depend on it; and ensures that the subsequent harvest cycles will provide a comparable quantity.

New FT products require a rationale paper and a pricing proposal. As there is substantial variation between different household’s production, perception of the value of their labour and the product, and collection and delivery methods, determining the cost of production is at best an imperfect averaging. The Namibian FT gate price of marula kernels, for example, is €2.30/kg (cf. €1.90 for Malawi, and €6.11 for South Africa; the anticipated FT price for the SADC region will be in the order of €2.70.)

Following consultation with harvester groups, the pricing proposal is submitted to the FT Labelling Organisation. If approved, the species will be listed, and

certification of harvester organisations can begin. The preparatory costs can be high – for an organisation with over 1 000 members, about €3 400. Full yearly verification would cost €2 712, and surveillance verification €1 575. The cost of verifying an additional product from the same species is only €200. One therefore needs to achieve a threshold turnover to cover costs.

In deciding whether or not to go through the process of acquiring FT certification, some essential questions must be answered:

- Does the organisational structure exist?
- Is there demand for the Fair Trade product?
- Is there capacity to match the above demand? and
- Will the volume cover the costs of long-term certification?

Only if all these questions can be answered in the affirmative should FT certification be sought.

## **10 Reaching out to supply chains: Eco-Regional Satellite Centres, CBNRM and the ICEMA High-Value Plant Species project** **Pierre du Plessis (CRIAA SA-DC)**

Some IPTT members are from implementing agency backgrounds, while others come from other fields. What they have in common, however, is that they are overworked and cannot do everything themselves. Under NASSP, eco-regional satellite centres were established in Ongwediva, Eenhana, Rundu and the Ben-Hur Development Centre. They are intended to act as eco-regional focal points, and are in a position to deliver better results than could be delivered by volunteers who are expected to perform other functions as well. In the MCA proposal, provision is made for 12 such centres, each with a fulltime employee.

In Namibia, there are emerging and registered conservancies and CBNRM groups, but not all producers fall into these categories. Different rules apply to e.g. wildlife and forest products, and against the background of differing sets of regulations, indigenous plant products can be easily be forgotten. It is therefore important to ensure that one works with all groupings.

The ICEMA project is bringing commercialisation to conservancies. There is a workplan and a budget to bring people into the supply chain. It must be noted that activities are constrained by the World Bank linkage, as this organisation is not renowned for its flexibility. One of the reasons for establishing the eco-regional outreach system was to move the first line of processing to where the resource is found. This has the effect of reducing transport costs, and also ensuring that tangible benefits accrue to local communities.

## 11 Hoodia cultivation and marketing Bianca Braun (Farm Jena)

Plans are in place on Farm Jena to plant 10 ha at 60 000 hoodia plants/ha, which should allow for annual hoodia production of about 12 tonnes of dry material. Hoodia is a problematical crop, as the CSIR patents, MET and CITES permits, and benefit-sharing agreements must be borne in mind. Regarding the latter, hoodia is likely to be a test case. In the Farm Jena area, the benefit-sharing concept is altogether new.

The South African Hoodia Growers' Association is trying to corner the market for certification of authentic raw hoodia. This is likely to cause some upheaval, as Namibian growers are not involved, and large South African concerns such as Afriplex are likely to suppress the hoodia market price. Current cultivation in South Africa covers large areas, and it is likely that small producers will be excluded from contracts with larger companies. Namibia does not have enough water available for such large projects. Still, farmers in the south are looking for ways to diversify, and so are considering hoodia despite the complications.

At Farm Jena, the aim is to directly access niche medicinal markets, and possibly also to market hoodia within Namibia.

Production is founded on the native populations of *Hoodia gordonii* and *H. officinalis*. All plants found on the farm have been documented and entered on a database that records the plants size, location (GPS coordinates) and photographs. There is a large variation in the natural population, which is good for sustainability of the species in the wild, but may be problematic for cultivation, as it will be necessary to establish which strains are the most appropriate. Protective structures have been placed over plants, and they are irrigated to stimulate flowering. Seed collection occurs once the seed pods are ripe and burst open. The pods are covered with material to keep the seeds together. This is very labour-intensive work. The Ministry of Environment and Tourism (MET) is informed of all seed collected. If seed is to be stored, about 5°C is optimal.

Threats to the natural population include poaching, the snout beetle, which lays its egg in the base of the plant, resulting in the whole plant rotting. For every live plant found, one that has died as a result of snout beetle has also been found. In hot weather, the short stem of the seedpod results in a sterile plant. Beetles on the seedpods suck out the moisture, and rodents, game (steenbuck and kudu) and livestock feed on the plants.

Shade-net nurseries have been built, with plants being spaced at 5 x 5 cm. Good drainage is required; while gravel aids drainage, it can become too hot, and at 38°C, it kills the plants. The soil must not dry out during germination. If one waters the seeds five times daily, germination takes about five days. Germination can be achieved in winter with plastic tunnels. Over 90% of seeds germinate.

As the seedlings develop, irrigation can be reduced. The beds should be weeded on a weekly basis, and fertilisation (organic, delivered through the irrigation system) should occur twice weekly. No inorganic fertiliser should be applied.

Plants should be transplanted when they are 5 – 8 cm tall. No fertilisation is required in virgin soils. Plants should be planted at least 30 cm apart, with two rows per drip-line. Regular weeding is still important after transplantation. After two to three years, one can expect about two kilograms of wet mass per plant, and it is suggested that wild plants attain a weight of up to 75 kg after 20 years.

Hoodia cultivation requires a high degree of motivation. It is labour-intensive work, and a great deal of energy must be dedicated to keeping threats at bay. Significant start-up investment is also required, and attention must be given to the development of appropriate skills amongst the local population. Production guidelines are currently scant, and the entrepreneur must do basic research. Clearly, there is a need for more research and publication of research results.

The Hoodia Working Group (HWG) is chaired by MET and resides under the IPTT, and it is up to the IPTT to ensure that growers are represented on the HWG. Attention should be given to benefit-sharing agreements, and the market should be allowed to develop without unnecessary restrictions. Assistance with production techniques is urgently required, and there is a need for standards and quality control systems.

### **Ex plenary**

It would appear that hoodia is the only potential crop for small-scale commercial operations in southern Namibia. Furthermore, with hoodia there is no pressure to harvest, as the plant persists. Even in times of drought, it will not be necessary to irrigate established plants, as they will survive. There is risk attached to the initial investment, but thereafter the risk is actually minimal.

Farmers in the south are prepared to take the risk of investing in hoodia cultivation because there is a pressing need to diversify. In the Farm Jena area, apart from hoodia, sheep farming is the only option – tourism is not a viable alternative in all situations. Consequently, farmers are investing in the hope of deriving a long-term benefit.

## **12 Indigenous Green Leafy Vegetables** **Pierre du Plessis (CRIAA SA-DC)**

Indigenous green leafy vegetables are very important in Namibia as sources of nutrients like vitamins and minerals, especially for poor rural people. They grow as weeds, and after being harvested are dried and stored as small cakes. The IPTT wished to see if they could be cultivated as a cash crop in Namibian conditions, as they are in Kenya. The VIVA project included a cultivation component which established that *Amaranthus* is the most viable species, but that it would not warrant investing in irrigation. If close enough to the urban market, however, it might deliver income of about N\$4 000 to N\$5 000 per hectare.

The best method of processing is blanching and freezing, but this is difficult with an extended supply chain. Bottling is not successful, as it degrades the food value,

and there is the danger of botulism. African restaurants have expressed the desire for a reliable source of dried spinach cakes.

The project was set back by the consultant who had been appointed failing to make clear recommendations on a commercial way forward. This might be an issue for the current workshop to address.

Indigenous green leafy vegetables are important for rural livelihoods, and there would seem to be at least some potential for further commercialisation.

### **13 Integrating indigenous natural products into Namibian farming systems**

**Pierre du Plessis (CRIAA SA-DC)**

It is already the case that indigenous natural products are incorporated into Namibian farming systems, as they are tied in with traditional cultures and have been adapted over centuries. Today, however, there is a need to change the mindset of farmers which has been established through centuries of peasantry. This is no easy task: Namibian farmers, especially communal farmers, are not accustomed to maximising profit; rather, they minimise risks.

From the viewpoint of the pipeline approach, one can envisage that indigenous plants will continue to play their traditional roles, but with increased emphasis over and above the traditional uses. Perennial crops are not as dependent on consistent rainfall patterns. Given that with climate change, Namibia's rainfall is likely to become even more variable, it will be important for farmers to adapt their farming systems to accommodate the expected changes. One way of doing this will be to focus more on domestication and cultivation of perennial indigenous plants.

The emphasis with indigenous plants till now has been on wild harvesting. As we now have a better idea of growth realities and market demands, we are in a stronger position to develop a value chain that keeps a place open for the small-scale farmer (the former "traditional farmer"). Such farmers will need to cultivate more than one, two or even three crop species. For example, one can plant six marula trees per hectare of cropland and double total output without diminishing total crop yields. There is also interest in ximenia cultivation, as amongst other things, it is good for fencing.

We need to look at the functions of plants in traditional farming systems, and to develop relevant packages of information for traditional farmers. This is something that has not yet been done anywhere in southern Africa. The diversification of farming systems in the context of climate change will not be simple, but it is extremely important, as it is one of the few practical ways in which we can respond. Prudence and restraint may be virtues, but they should not be allowed to hold back development of farming systems that incorporate traditional plants. In some cases, no matter how much we produce, we will still not be able to satisfy market demand.

## **14 Plenary Day 1**

### **Dryland tubers**

In the past, consideration was given to including tubers in the study of dryland farming alternatives, but this did not happen as the decision was taken to concentrate on leafy vegetables. Bulbs are very important in dryland farming areas, however, as they are adapted to survive drought. In a world that is set to become hotter and drier with global warming, their drought resistance will become even more important. Tubers are underrepresented in collections of useful plants, despite the fact that they are generally easy to collect and transport. In situ collections of edible bulbs could be established. This would assist with the collection of seed and the identification of superior strains. Informal commercialisation of some small sedge tubers in the north-central regions has taken place. These are pleasant tasting, if somewhat sandy.

### **Options for the IPTT**

Regarding the IPTT's strategic planning, a choice must be made between spreading resources thinly over a wide field or pressing ahead on fewer fronts. In this regard, one should bear in mind the need to capitalise on advances that have been made, for example with lipid oils. These benefits can be actualised across the sector. To benefit from economies of scale, knowledge gleaned in a variety of contexts should be collated and brought together in an encompassing strategic plan that allows for both small and larger-scale production.

### **Intellectual property rights**

A further issue requiring attention is the need for a structure within the IPTT to manage and protect intellectual property rights (IPR). It is worth noting that commercial concerns begin by securing IPR, and only then proceeding with product and market development. However, the question of IPR management is fraught, as it is expensive to create the IPR that form the basis of patents and subsequently to register and protect such patents. In the case of the hoodia patent, the CSIR has made some legal threats, but has not as yet sued anyone for being in breach of patent law. It is nevertheless true that international partners require secure IPR before they become involved. This became clear in the early phases of the marula oil project, and the Maruline® patent was secured in order to create a firm foundation for international cooperation rather than to generate any profit through licensing fees. The rounds of consultations through the SADC region that CRIAA staff and other stakeholders went on in this context were partly responsible for the formation of PhytoTrade Africa.

The registration of a patent can bring about immediate benefits for some local growers, while others may be allowed into the value chain down the line, as was the case with hoodia growers in South Africa. Bringing benefits to primary growers is complex and requires exhausting negotiations and compromise. A partnership between a primary producers' trust and commercial entities may be the best option, even though it would still be vulnerable when dealing with a cross-border resource. An issue to be faced is who is to benefit. In the case of hoodia in South

Africa, some farmers made a deal with some San groups, and then presented this as the only authoritative benefit-sharing arrangement, with which all stakeholders must of necessity comply, even though it takes no account of the fact that the Nama, for example, should also have their related traditional knowledge recognised and recompensed. Ideally, there would be some cross-border SADC-level mechanism for dealing with issues such as these, but this is unlikely to come about in the foreseeable future.

Given the costliness of registering patents, the public at large and private commercial concerns in particular should be made aware of their importance for ultimately generating profits. The approach taken by PhytoTrade Africa is to work proactively with commercial partners and convince them to accept certain benefit-sharing conditions. With such an agreement in place, it is easier to approach national stakeholders to obtain their buy-in. For benefit-sharing purposes, the emphasis in South Africa is shifting from genetic to biological resources. An overview of developments relating to benefit sharing in South Africa can be accessed on the GTZ website, which also covers legal issues and hosts a discussion forum.

### **Fair Trade and organic certification, and national branding**

While Fair Trade (FT) and organic certification might raise the value of products, there is also the danger that in time the public comes generally to expect such certification. If this were to happen, what was formerly a marketing plus would come to be a cumbersome and costly production requirement that no longer confers a comparative advantage. However, with marula oil, for example, there is sufficient variation in market demand that it is unlikely that FT certification will come to be required across the board. It will in any event not be possible for all producers to bear the costs of FT certification.

One should also not make too many assumptions about what is actually guaranteed by FT certification. Some grapes produced in South are FT-certified, despite the notoriously low wages being paid to labourers in the South African grape industry. What one needs to demonstrate is that the product is ecologically responsible, is contributing to meaningful betterment for growers and producers, is assisting with gender empowerment, and so on. It is not always possible to capture all such characteristics through one certification, but competitiveness can be enhanced through the development of a generic Namibian brand and reputation.

There is a desire on the part of communities in areas like Caprivi Region to be more involved in national branding and certification initiatives. In addition to “Fair Trade”, an “ethical biotrade” system could be considered. This is structured like a ladder, allowing producers to enter at the lowest, most cost-effective rung (or a higher one, if they are in a position to do so) and work towards the highest level of certification over time.

An issue with systems such as Fair Trade is that as one moves from harvesting towards cultivation, the market-side demands change quickly, as growing standards and quality issues come to the fore. However, where the quality of a

crop is traditionally a matter of pride, as is the case with marula kernels, for example, this has not proved to be a significant problem. It is easy enough to disseminate and obtain buy-in for basic principles – only storing marula kernels in clean bags, spraying DDT against malaria only in accordance with official guidelines, and for devil's claw, only cutting the tubers with a stainless steel knife, and lifting the harvested material off the ground as soon as possible.

The issue of quality is a complex one. The standard assumption is that as suppliers, we must comply with standards set by outside agencies and be able to guarantee maximum levels of certain substances and minimum levels of others. On the other hand, in some cases driving up standards has to be a locally driven undertaking. With devil's claw, for example, the main international buyer has no interest in improving standards. From his point of view, the current situation, designed as it is around relatively low quality, is ideal, as it suppresses prices. Maintaining and improving standards is therefore first and foremost up to producers. Doing so is in any event the best possible way of preventing inferior quality produce from reaching the market, where it would have the effect of encouraging a low-quality, low-cost ethos. The MET could be the appropriate ministry for establishing production standards and quotas, as it is the line ministry for CBNRM ventures.

Organic certification for the European Union can be obtained, as for example with KMS and devil's claw. Control systems would be needed for certifying organic wild harvesting. Obtaining organic certification for the EU is an expensive process. Initial cost currently amount to about US\$ 15 000 – US\$ 20 000.

### **Cooperation and competition**

In order to avoid counter-productive competition between suppliers in a developing market, one should not rush to the market with too much, too soon, as this has the effect of driving prices down before economies of scale have been achieved. If the market develops, there will be benefits for all. From a development intervention perspective, it should in principle be desirable for competition to develop naturally over time.

First, though, Namibian producers need to act collectively to compete with producers elsewhere. A primary ximenia producers' trust, for example, could act on behalf of all ximenia producers and negotiate a better deal. The individual concern could still proceed independently if it so wished. The challenge is to become competitive in world markets. Marula oil is currently imported into South Africa from France and the USA. What amounts to unnecessary shipping costs for importers should be turned into a benefit for local primary producers.

The aim of a PPT would not be to compete with small processors, but to add value at a higher level. In the event of greater competition for products, market principles would drive up prices. Nevertheless, a PPT would be advantaged by some public funding, and consideration will have to be given to the terms on which it would compete with private enterprise.

## **Day 2**

### **15 Capturing downstream value for poverty alleviation: MCA proposal, Primary Producers Trust, enterprise formation**

#### **15.1 Background Eileen van der Linden (MCA)**

The Millennium Challenge Account proposal covers sectors such as tourism, cash crops, livestock marketing and rural access roads. The Green Scheme as originally covered, but it has fallen away. There have also been reductions elsewhere, so that the proposed budget now stands at N\$320 million.

Due diligence inspections involving MCA staff and Millennium Challenge Corporation (MCC) consultants are currently being performed. Independent consultants are also currently in Namibia. Transparency in the process is essential, and they are in no way constrained in their investigations regarding where they go and to whom they speak.

A primary premise of the proposal is that it is best as far as possible to work with existing programmes and institutions. Programmes with good potential that aren't functioning properly should also be involved. Linkages of programmes with other existing sector programmes should also be encouraged. There are seven staff in the Windhoek MCA office, who work with institutions such as CRIAA, the IPTT and veterinary services. MCA Namibia is just a facilitating agency; the actual work will take place at sectoral level.

Approximately US\$ 9 – 10 million has been earmarked for the plants sector, which is a relatively small amount within the overall MCA proposal. The plant sector proposal should have good spin-offs into other fields like community-based tourism. Although there is still much work to be done, the plant sector proposal has some advantages relative to other others. The new MCA website is up and running, and documents relating to the proposal can be obtained in smaller chunks, rather than the full 5 MB. The website will report on the outcome of the due diligence missions and other relevant developments.

It is hoped that the programme might be able to start in 2008. An open international tender system will apply, with no preference given to either Namibian or American concerns. There are good and bad aspects to this: generally, open tenders are to be welcomed, but it may prove to be difficult to involve local SME providers. Procurement actions will also be available on the website for tendering purposes.

#### **15.2 The MCA plant sector proposal Pierre du Plessis (CRIAA SA-DC)**

The proposal is the outcome of many years of work aimed at getting benefits to local communities. The MCA team was involved in negotiations with the Plant Sector Development Forum chaired by the Namibian Agronomic Board, and Pierre

du Plessis of CRIAA offered to write the proposal. The IPTT had already invested in a business plan exercise, so a good deal of information was already available. However, due to time constraints the actual details contained in the document have not yet been discussed with stakeholders, which is why it is presented for the consideration of the current IPTT workshop.

The overall MCA objective is “Transformative development”. In the case of Namibia, this is to be achieved through “Poverty alleviation through economic growth”. The donor criteria require sizeable investments that are likely to have significant impact on household and business incomes. The current proposal is the smallest in the Namibian fold, but it is still large enough to be considered. Proposed initiatives should already be conceptualised and have sufficient data for economic analysis. In the case of Namibia, the national indigenous plant sector programme has been running for seven years, and a business plan is in place. Successful existing initiatives should be fast-tracked and scaled up, and although MCC generally does not invest in equity, it might do so if ventures are community-owned. The proposed Primary Producers’ Trust (PPT) will be the equity holding body, which is consistent with the criteria.

The “Newco” concept that is adduced in the proposal stems from the need, identified at the 1<sup>st</sup> IPTT workshop, to develop “bankable business plans”. This raised the question of who would own the plans, and how to achieve viable scale economies, as an institution must be big enough for certain initiatives to make sense. The 2<sup>nd</sup> IPTT workshop called for a feasibility study and business plan for a private-sector commercial entity to incubate, operate and sell viable natural product enterprises. “Newco” is this proposed entity.

The business planning was co-funded by the IPTT, CRIAA SA-DC and Arbor Ventures Ltd, and was developed in close consultation with existing private-sector partners and potential financiers. There was a high degree of confidence that by the time of actual development, the business venture would be fundable.

### **Newco cornerstones**

- Secure, cost-effective, long-term and loyal raw material supply chain based on significant primary producer equity and profit-sharing (ideally through CBNRM)

Newco should be a secure, cost-effective, long-term and loyal raw material supply chain based on significant primary producer equity and profit-sharing (ideally through CBNRM). All indigenous plant products are harvested in small quantities by thousands of people. This can be difficult to organize and keep functional. The idea here is to secure long-term supply – to make the suppliers owners of a share of the downstream value.

The capacity to innovate will be essential; rather than putting all one’s eggs into one basket, one should be able to work with a range of products and develop them in parallel. Multi-purpose equipment will therefore be acquired. In a sense, this is a “spread-betting” strategy.

If we are to meet market expectations from within Namibia, as enjoined to do by Vision 2030, it will not be feasible in the long-term to continue exporting unprocessed low-value materials – value must be added locally.

It must be absolutely clear that Newco cannot be run like a club, or an NGO, or a feel-good co-operative: it must be an efficient, even ruthless business venture, run by people with business acumen, who are determined to protect their own investments.

The PPT is intended to hold “proxy equity”. This is because of the prohibitive costs associated with having thousands of very small shareholders. It would be a trust **for** primary producers, though not **of** them. This is to avoid conflicts of interest and in-fighting. The PPT’s decision-making powers would rest with individuals with experience, and of good standing in society, who would be constrained in their actions by a deed of trust.

The PPT would have to pay 80% of income directly to primary producers, on a pro rata basis to the sources from which the profit was generated. So for example, if there were the same numbers of marula, ximenia and KMS producers, but marula accounted for 50% of the total profit, ximenia for 30% and KMS for 20%, then 80% of the profit would be split between them in the ratios of 50 : 30 : 20. The remaining 20% would be used to cover investment expenses, to support IPTT work and invest in further development of the natural products industry.

The PPT would use public investments to leverage partnerships with appropriately skilled private-sector investors, aiming for at least 50% initial equity ownership, or the right to acquire 50% over time. It would be sleeping partner, and would rely on the business acumen of the private sector investor(s).

The proposed MCA investment would in effect be made on behalf of local communities, and for the public good. By replicating elements of the original 12-point strategy of the IPTT (e.g. supply chain development, ensuring sustainability, bringing producers into long-term benefit-sharing relationships) it will open up opportunities. With the MCA investment, the number of eco-regional satellite centres will rise from the current six, to 12. It will also be an investment in infrastructure, e.g. storage facilities.

Because traceability is so important, a significant investment would be made in organic certification, which although not without some limitations, can still sometimes bring about a four- to fivefold increase in market price. In any event, quite apart from any price benefits associated with organic certification, traceability will be soon be a non-negotiable requirement, and organic certification is amongst the best means of ensuring traceability.

Current indications are that demand for indigenous plant products for 2008 through 2010 will exceed Namibia’s capacity to produce them. Demand coming through depends on the raw material being available – one must anticipate demand, rather than wait for it before installing capacity. The proposed Multi-Purpose Extraction, Quality Control and Product Development Facility would serve as both a factory and a laboratory. It would enable Newco to conduct trade,

produce plant-based products and perform quality control to the desired levels. It would also bring about the capacity to innovate, without having to send samples to other countries and wait for the results to come back. It will furthermore enable the PPT to bypass “functional market intermediaries”, as middlemen are sometimes rather generously referred to. Some potential winners have already been identified, but it is virtually a certainty that an investment in the proposed facility will open up other as yet unknown opportunities.

The aim will be to turn partnerships into brand recognition in the market – this lies at the heart of the matter. A good example of a successful partnership is that with The Body Shop, which is characterised by mutual commitment. Without a willingness to endure a three-year period during which there were no tangible returns, nothing would have been possible. It was by no means smooth sailing all the way, but the partnership has worked, and has unlocked potential that would otherwise not have been accessed.

### **15.3 Proposed budget**

#### **Product Specific Actions (US\$ 4.5 million)**

1)	Expanding wild silk production through capital investment and training	US\$ 0.6 million
2)	Domestication and cultivation of hoodia	US\$ 0.8 million
3)	Kalahari melon seed	US\$ 0.6 million
4)	Devil’s claw propagation and enrichment planting	US\$ 0.1 million
5)	Selection and increased cultivation of superior marula genotypes	US\$ 0.1 million
6)	Multi-purpose Extraction, Quality Control and Product Development Facility	US\$ 2.3 million

#### **National-level Supportive Actions (US\$ 2.9 million)**

7)	Management intervention	US\$ 0.3 million
8)	Traceability and certification	US\$ 0.9 million
9)	Eco-Regional Satellite Centre (ERSC) networks for regional outreach	US\$ 0.7 million
10)	Additional first-level oil extraction capacity	US\$ 0.2 million
11)	Developing commercial (marketing and brand-building) partnerships	US\$ 0.7 million

## **Notes**

- 1) All the proposed investments would be made over a five-year period, starting in 2008. Wild silk is not included in the proposal as it is not an IPTT initiative, and a relevant RPRP proposal has been made. Nevertheless, an additional MCA investment in wild silk would show a positive return. There is enough degummed silk for 300 spinners; it would not require a large investment.
- 2) Hoodia may be double-funded, as the EU will fund hoodia development to about N\$ 10 million for 300 growers, and also through the Namibian Development Trust for 100 growers. The MCA proposal is for an additional 120 growers.
- 3) The proposed KMS assistance is aimed at addressing the problems raised earlier in the workshop (see Section 7: Kalahari melon seed: a commercial success with supply-side constraints). Funding is urgently required for breeding: US\$ 30000 by August, otherwise we will miss the growing season. The current demand is high, but production is dismal, and back-up melon seed is being sourced from Pakistan.
- 4) Devil's claw: The IPTT and NASSP have funded research on a DC cultivation methodology that works. Strategies are in place for enrichment planting in depleted areas nearby to settlements, so that 25 kilometre walks to and from harvesting grounds are not needed. The aim is to become more efficient.
- 5) Marula: The budget is to supplement the existing MAWF budget, with the aim of getting early- and late-fruited trees to extend the season, perhaps by as much as a month before and a month after the main season.
- 6) The Multi-purpose Extraction, Quality Control and Product Development Facility: half of the budget is for the building; around US\$ 200 000 is for processing equipment, and an additional S\$ 200 000 is for analytical equipment. After about three years, the facility should break even and begin to make a profit.
- 7) The IPTT cannot go on with only one ad hoc coordinator.
- 8) US\$ 900 000 is based on lessons learned from the pilot scheme in Omusati, and assuming an additional 6 000 producers are certified, with some savings, more people could be reached.
- 9) Eco-regional centres: This is to raise the number of centres to 12, provide them with basic equipment and employ full-time coordinators for five years.
- 10) To be spent as soon as possible.
- 11) To be spent over five years, but mainly towards the beginning.

General: The overall budget is not entirely accurate, as the figures have been influenced by exchange rate fluctuations and conversions made at different times. It is intended to give an approximate estimate, and is probably about US\$ 0.4 million short.

## **Discussion and clarification**

It is envisaged that two first-level oil extraction facilities will be expanded, and a further two new ones will be established. There are currently no genetic analysis facilities planned, but as there is limited capacity for this in Namibia, it might be advisable to plan for such facilities, as they would not add significantly to the required budget.

The IPTT has always seen the value of being willing to adapt and change as required, of being flexible regarding which options to follow and which to discard. This flexibility is a cornerstone of the PPT and the Multi-Purpose Extraction, Quality Control and Product Development Facility proposal.

Negotiations were held with Aldivia and the GTZ regarding the funding of a public-private partnership oil processing facility, but these were inconclusive. The original MCA proposal included a separate component for this, but in the end it was rolled into the proposal for the Multi-Purpose Extraction, Quality Control and Product Development Facility. It would not have unlimited through-put capacity, but additional capacity could be added as required for given lines. The initial operating capacity was estimated on the basis of IPTT partners' market projections and the demand for similar products. The envisaged pilot facility could process up to a tonne of raw material a day, which should be enough to get on with.

The PPT will be overseen by a Board of Trustees. Harvesters will be registered, which will ensure traceability. Payments to suppliers will be made annually in arrears. The Board members should be knowledgeable about the natural products industry but not be direct players in the industry. Private investors have not yet been identified, but would be sought via an open international tender.

It would not be accurate to describe the MCA proposal as being tailor-made for CRIAA. The MCA proposal would in no way be a "CRIAA initiative". At the "Newco" level, enterprises associated with CRIAA would – like any other enterprises – be free to get involved. The private investor could be any established player in the natural products industry, but for reasons of confidentiality, potential partners cannot be discussed at this point. The fact that the tender would be "international" would in no way exclude Namibian concerns. The tender specifications would be set by the sector itself, with inputs from the MCA. Although the tender would be open, one would assume that certain players would be involved. For example, given their existing investments and patent rights, it would be difficult to conceive of a lipids sector partnership without Aldivia. The tender requirements would therefore of necessity be such that Aldivia would be well placed to apply. It should be emphasised, however, that any appropriately qualified enterprise would be free to apply, and would be given even-handed consideration.

It is not the intention to enforce single-channel marketing, to compete with any enterprise in the Namibian business sector or to disadvantage Namibian SMEs by competing directly at the primary level – doing so would be like using a sports car to do farm work. On the contrary, the aim is to add to the overall value of the sector, not least by allowing for rational development. It is ultimately

counterproductive, for example, if a group of single-crop producers at a specific site convinces a well-intentioned but ill-informed donor organisation that they need a larger production facility. The market size for the crop in question is likely to be limited, and the sudden expansion in capacity will easily result in over-supply and collapse of the market price, to the detriment of the intended beneficiaries of the donor aid. The flexible capacity envisaged in the MCA proposal could also benefit other industries, for example through ISO-certified analytical capacity that could also be out-sourced to the food industry. The currently limited local capacity constrains access to international markets, and results in value-adding opportunities being taken elsewhere rather than locally. From the perspective of bodies like PhytoTrade Africa, the region needs a configuration of commercial activities of sufficient scale to bring value-adding technologies to the region.

In the MCA-funded production components, no mention is made of colloids. The reason for this is that the quality control equipment will have spare capacity, and colloids could therefore be dealt with as an opportunity. Additional laboratory capacity is needed because the existing laboratory capacity in Namibia is limited, to the extent, for example, that no-one can perform a fatty acid profile, even though it is not a particularly sophisticated procedure. The main problem is that existing laboratories cannot retain the technicians required to service the equipment. This problem should not apply to the MCA proposal, however.

The complete version of the MCA proposal can be accessed at:  
<http://www.npc.gov.na/mca/documents.jsp>

## **16 Feedback from working groups**

### **16.1 Primary producers**

Information is needed on how a trust should be structured, and the issue of trustee's remuneration should be clarified. It is essential that there be open communication channels between trustees and producers. Small-scale primary producers should enjoy protection against competition from large-scale commercial producers, and a producers' forum should be formed.

Concern was expressed that communal suppliers groups might be hard-pressed to compete in delivering desired quantities and quality, and the mechanism by which they are to be represented. It is problematical having a trust to represent the interests of primary producers, but in the constitution of which primary producers do not feature prominently. It is not clear what decision-making power primary producers will have. Saying that they have the freedom to follow other channels might not be realistic, as because of public funding, the PPT would not have to make out-of-pocket investments. The playing field would not be level.

It might also be problematical to have a single trust to represent the interests of primary producers who are actually in competition with each other. A solution might be additionally to have an external entity to lobby on their behalf.

## **16.2 Processors**

Clarity is required regarding ownership, membership, benefits and the composition of the PPT. It is not yet clear what the profile of a trustee would be, and what would be expected of trustees. A partnership between service providers and primary producers is needed.

Service providers should not be members of the PPT, or suppliers to it. They should have business background, but no vested interests in the natural plant products sector. The PPT should have a mandate to recruit them, but the power to endorse their appointment should lie with the IPTT. Transparency in this process will be essential. It would be ideal to have committed volunteers serving as trustees, but in practice, if one wants quality service, it will work better to recompense them.

If a quota system is put in place, all processors should have a chance to be awarded a quota. An agreement is needed regarding quality and standards, and the supply and production chains should be developed. Management capacity should be improved through access to finance, with a view to long-term independence. The main consideration of the working group is that primary producers be given a fair chance to stay in the business, and not be sidelined.

All those involved in the Multi-Purpose Extraction, Quality Control and Product Development Facility would be service providers. They would form partnerships and perform outreach functions, and should not be in competition with small primary producers. It may be difficult to obtain MCA funding for entities that do not qualify as CBNRM enterprises, so private sector investment should be sought.

It will be necessary to offer the private sector some incentives. Options would include offering investors short-term grants to offer training. Improving access to finance and granting tax incentives and exemptions would also be useful in the nascent industry, but the present stakeholder group does not have the authority to make any offers in this regard, or even to exert significant influence.

It should be borne in mind, however, that the PPT is not actually meant to be a decision-making body. Rather, it should be seen as a sleeping body that supports private sector initiatives. It is advisable to avoid becoming locked into a mechanism that selects members of the public who are essentially unqualified for the work at hand. Apart from anything else, the opportunity for corrupt practices to take hold would be very real. The IPTT should insist on individuals who have a proven track record of accountability and competence in dealing with trust funds. Close attention will also have to be given to existing legal requirements and regulations that apply to trusts.

### **16.3 Marketing**

An issue to be addressed is whether the PPT is to be product- or market-driven. In principle, there could be tension between what is produced, and what the market actually wants. The ability to innovate and analyse is a significant advantage, and it should not be sacrificed for commercial considerations.

Clarity is also required regarding the level at which strategic decisions are made about markets and partnerships at regional, national and international levels. Discussions should be held with different potential partners about the Multi-Purpose Extraction, Quality Control and Product Development Facility, as there could be conflicting understandings of its functions from corporate and marketing perspectives. The design and initial choice of equipment for the Multi-Purpose Extraction, Quality Control and Product Development Facility should also be assessed with a view to avoiding redundancy. Furthermore, potential conflicts should be anticipated, for example those that might arise when one partner is already making use of the facility and a new partner enters the picture, with conflicting requirements regarding the use of facilities and the overall direction to be taken. Conflict might be unlikely while only 20%, say, of total capacity is being used, but one cannot simply assume that this will always be the case.

It is possible to conceive of the Multi-Purpose Extraction, Quality Control and Product Development Facility not as a building with specific facilities, but as an entity that can access skills and capacity elsewhere. Its structure could be similar to that of the CSIR, and it could license out functions and coordinate research.

Tight management and control of the PPT will be essential. The assessment of potential partners will have to be performed with reference to certain standards:

- the ability of the potential partner to perform to international standards;
- the right balance between value and volume;
- willingness to invest;
- technological advancement;
- a reputation for maintaining high ethical standards;
- a track record of success;
- the intention to be long-term investor and partner; and
- having already attained a critical size and capability.

Because products can spend a long time in the supply and development chain, with implications for capital requirements and cash flow, working capital will be needed. The proposal therefore makes allowance for two years of working capital. If it became apparent after a few years that it would be commercially justifiable to expand a particular line, additional cash could be raised for that specific purpose.

## **16.4 Institutional framework**

It is worth considering the basic principles that apply to any family-level grocery shop: there is an ongoing balancing act that must be performed between taking home food resources so that the family can eat, on the one hand, and maintaining stock levels, on the other. With the PPT, a similar balancing will be required between the needs of primary producers and “Newco”.<sup>2</sup> The less efficient the Newco ventures are, the less there will be available for primary producers. But how can primary producers ensure that the Newco ventures are indeed efficient? It is not realistic to say that they can simply go elsewhere, as other processing entities are unlikely to enjoy the benefit of a subsidy.

Even with a 50:50 relationship in equity holding, there would be potential for conflict, for example relating to the need for new machinery or other investments. The same applies to the proposed profit sharing arrangement, in terms of which 80% of the PPT’s 50% share in overall profits must be paid directly to the primary producers. The actual amounts available would still be influenced by the need – or decision – to reinvest rather than to maximise profit. There may be no simple answers to these questions, but it is important to recognise that the PPT and Newco ventures would not be spared these tensions. The proposed financial arrangements could also cause the PPT’s equity holding to stagnate.

Regarding the issue of whether a PPT that is supposed to represent the interests of primary producers should not perhaps be comprised of primary producers, an option to consider would be empowering primary producers to have some observers in place, or to nominate some of the trustees. It would remain open to debate, however, how representative such arrangements would be. Perhaps there is a need for a broadly based producers’ forum. In theory, the PPT might be an equity-holding entity that is not directly involved in day-to-day business issues, but in practice it might not be quite such a “sleeping partner”. Again, without wishing to be overly focussed on potential tensions and conflicts, it is preferable to anticipate problems that might arise, and not to go blindly into the unknown.

Private partners should report to the IPTT, which would facilitate relations between primary producers and the Newco ventures. It might be advisable to have one person acting for the PPT and the IPTT. The IPTT could negotiate with private partners in this regard. The MCA will be involved for the duration of its involvement in Namibia. An important aspect of control and accountability occurs through the annual audit, and it may be worth obtaining the services of an accredited accounting firm, and to include a social management audit component along with the financial component. During the five years of the MCA’s involvement, there will be numerous cycles, with subsequent funding being contingent upon adequate performance. This too should provide a measure of assurance. The trust itself would not be involved except as a holder of equity. The IPTT would assess the credibility and ethical standing of potential partners and would have decision-making powers regarding partnerships that are entered into,

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<sup>2</sup> The term “Newco” is coined here to refer collectively to joint ventures between the PPT and the private sector, in which the private sector contributes skills and capital. They can be simple partnership agreements, rather than large companies.

the auditors would check that proper accounts are kept, and commercial concerns would make the day-to-day make business decisions.

Involving the IPTT as envisaged would be consistent with the MCA's policy of making use of existing structures rather than creating new ones. The IPTT has a constitution and members, some ex officio, who have voting rights. Members are required by constitution to attend meetings, with persistent failure to do so resulting in loss of membership. While the MCA's sector programme manager might be able to give the IPTT good advice, his/her agenda would ultimately be that of the MCA, not the IPTT/Newco. Consequently, someone with the appropriate business acumen should be sought from the private sector to advise Newco. This would probably have to be a fulltime employee, who would additionally have to manage the PPT. Under the heading of National-level Supportive Actions, the proposed PPT budget includes US\$ 0.3 million for management intervention. An alternative to engaging the services of such a fulltime employee, however, would be for the IPTT to have an advisory committee to draw on as needed.

Marketing channels in the natural products sector have the reputation of being somewhat narrow. It is important to realise, then, that the MCA proposal is in no way intended to enforce given marketing channels. On the contrary, a single channel marketing system could be extremely counterproductive, as was the case in the past with the Grain Marketing Board.

There would be no change from the buyers' point of view – they should continue to obtain material from whatever source they feel to be the best. In principle, however, they should benefit through being able to obtain a higher quality product. Producers could register exclusively with the PPT, and in fact, the PPT should insist on such exclusive arrangements. Should companies that have branded products want to raise them to the next level with the assistance of the programme – an improved, more “natural” body lotion, for example, produced in greater volumes – the PPT would have to consider the benefits on offer to its members, and make a decision based on business principles. Nevertheless, one should not lose sight of the fact that the overarching goal is the transformation of the entire sector, rather than individual successful ventures.

Concern was expressed that local enterprises that are not partners in the scheme would be forced out of business, as they have loan repayments and overheads to deal with, whereas the PPT would be in part publicly funded. The focus of the PPT, however, would be on adding value by bringing crude semi-processed products up to ready-for-production status – a step in the value chain that no existing Namibian enterprise could afford by itself.

On the one hand, what is being considered is an incubation outfit focussed on research and development, while on the other it is a group of running businesses, focussed on real production. Some structural differentiation might be needed between these functions. Although the risks associated with research and development are high, the potential profits are substantial. Estimates of the annual value of the hoodia patent range from N\$20 million to N\$60 million.

Indications are that private sector investment would be forthcoming for an incubation company.

Most companies work on the basis of disbursing a relatively low percentage of turnover to shareholders. Given the nature of the proposed business, however, this will not be possible. Nevertheless, in the absence of profit, it will not be possible to make any payouts, even though expectations will have been created. It might not be advisable to commit from the start to paying out a given percentage of profits – the extent of payout should be determined through negotiation with the investor. The overriding consideration is that the venture is successful in the long run. Downstream benefits for PPT members should also be borne in mind.

## **17 Conference resolution**

It was resolved that an IPTT sub-committee be formed to revisit and adapt the PPT proposal in the light of the inputs of conference delegates. This committee will meet prior to the IPTT's next meeting, which is scheduled for 12 April 2007. The following IPTT members shall serve on the sub-committee:

Mr S.I. Ipinge; Ms S. Kaulinge; Mr M. Mallet; Mr P. du Plessis; and Mr F. Mwazi. Mr B. Bennett and Mr C. Lombard will advise the committee in their personal capacities.