

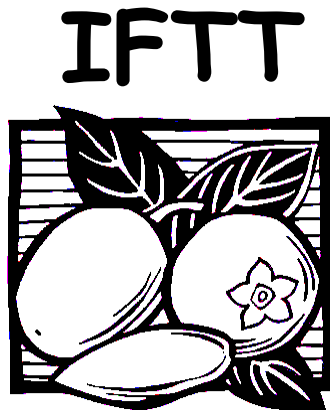


**National Agricultural Support Services Programme (NASSP)**

**Proceedings of the  
2<sup>nd</sup> National Indigenous Fruit Stakeholders  
Workshop**

**Tsumeb, 8 - 9 May 2003**

NASSP Workshop Report No. 1/2003



**Ministry of Agriculture, Water and Rural Development  
P.O. Box 86743  
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## **Disclaimer**

Although this report was prepared under EDF funding, the EC bears no responsibility for, nor is in any way committed to, the views and recommendations expressed herein.

## Abbreviations and acronyms

CBNRM	Community-based Natural Resource Management
CBO	Community-based Organisation
CIRAD	Centre for International Research in Agronomy for Development (France)
COSDEC	Community Skills Development Centre
CRIAA SA-DC	Centre for Research-Information-Action, Southern Africa Development and Consulting
CSIR	Council for Scientific and Industrial Research
DART	Directorate of Agricultural Research and Training
DEES	Directorate of Extension and Engineering Services
DFID	Department for International Development (UK)
DoF	Department of Forestry
DRFN	Desert Research Foundation of Namibia
EAD	Ekoka Activation Drive
EDF	European Development Fund
E-XOTIC	<i>Ximenia</i> Oil Trial Intake and Commercialisation
FAO	Food and Agriculture Organisation
GRN	Government of the Republic of Namibia
GTRC	Gobabeb Training and Research Centre
ICRAF	International Centre for Research in Agroforestry
IFTT	Indigenous Fruit Task Team
IPBC	Indigenous People's Business Council
IPTT	Indigenous Plants Task Team
KMS	Kalahari Melon Seed
MADI	Mashare Agricultural Development Institute
MET	Ministry of Environment and Tourism
MHETEC	Ministry of Higher Education, Training and Employment Creation
MJP <sup>3</sup>	Marula Juice and Pulp Pilot Project
MTI	Ministry of Trade and Industry
MWACW	Ministry of Women Affairs and Child Welfare
NAB	Namibian Agronomic Board
NACSO	Namibian Association of CBNRM Support Organisations
NASSP	National Agricultural Support Services Programme

NBRI	National Botanical Research Institute
NCCI	Namibian Chamber of Commerce and Industry
NCRs	North-Central Regions (Oshana, Omusati, Ohangwena & Oshikoto)
NDT	Namibian Development Trust
NEPRU	Namibian Economic Policy Research Unit
NFRC	National Forestry Research Centre
NGO	Non-governmental Organisation
NHI	National Horticultural Initiative
NNF	Namibia Nature Foundation
NPC	National Planning Commission
PIF	Promoting Indigenous Fruit in Namibia
SABONET	Southern African Botanical Network
SANProTA	Southern African Natural Products Trade Association
SIDA	Swedish International Development Agency
SME	Small- and Medium Enterprises
TIDP	Trade and Industry Development Programme
UNAM	University of Namibia
VTC	Vocational Training Centre
WAD	Women's Action for Development
WIMSA	Working Group of Indigenous Minorities in Southern Africa

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## Summary of key findings and recommendations

1. At the 1<sup>st</sup> Promotion of Indigenous Fruit (PIF) workshop, held in April 2000, the Minister of Agriculture, Water and Rural Development, Hon. Helmut Angula, asked the workshop to “develop a co-ordinated approach and strategy for the implementation of an economically sustainable promotion of indigenous fruits in Namibia.”
2. At the 2<sup>nd</sup> National Workshop, Mr Ben Bennett reported back on the Indigenous Fruit Task Team (IFTT) activities since the 1<sup>st</sup> PIF workshop. The major output of that workshop was the creation of the IFTT, with the objective of promoting the sustainable use of indigenous Namibian fruit plants for greater household food security; agricultural diversification; income, employment and livelihood opportunities; and agro-industrial development. The IFTT identified a need to broaden its mandate to include non-fruiting plants and non-fruit products, but decided to leave a decision to the 2<sup>nd</sup> National Workshop.
3. Mr S.A. Ipinge opened the 2<sup>nd</sup> National Indigenous Fruit Workshop, thanking all participants for their efforts to date, and urging them to focus on the important goals of the IFTT. The main task of the IFTT is to coordinate the implementation of a national strategy for the promotion of indigenous fruit plants. With this in mind, the 2<sup>nd</sup> National Indigenous Fruit Workshop was organised, with its objectives being to:
  - a) create awareness of, and report back upon, progress to date with the MAWRD Promotion of Indigenous Fruit project and other indigenous fruit activities;
  - b) prioritise activities for the next phase of national actions to promote the commercial use of indigenous plants; and
  - c) agree on suitable ownership arrangements for indigenous plants businesses initiated/supported with public funds.
4. Mr Pierre du Plessis made a presentation on “Promoting Indigenous Fruit in Namibia (PIF) Summary Report on Phase 1” in which he outlined the activities of the PIF project, the rationale behind the “pipeline approach”, and the main achievements to date. In a separate presentation, he outlined the IFTT’s recommendations for PIF Phase II. These are:
  - a) The work aimed at establishing a formal marula pulp industry should be continued. In collaboration with the Centre for International Research in Agronomy for Development (France) (CIRAD), a detailed plan of action should be developed, and all logistical requirements should be in place to start processing early in January 2004.
  - b) The research results regarding manketti’s potential market appeal have been extremely positive. Even though the cost of production and the income manketti will generate are not yet known, demand is almost certain to increase, and work has already been done on processing technology. Proactive measures should therefore be undertaken with a view to accessing an international market for manketti.
  - c) Support to market and trade development of Kalahari melon seed and Kalahari Melon Seed (KMS) oil should be continued.

- d) The potential of *Ximenia* as a commercial resource should be more closely assessed. An in-depth study of resource sustainability will have to be made.
- e) The “pipeline” approach should be maintained for resources that cannot yet be spun off as separate projects. A project similar to PIF I should be designed, with reorganised priorities.
- f) A feasibility study and business plan should be developed with a view to establishing a private sector commercial entity that can leverage public funds to incubate viable natural product enterprises.

5. Mr Bennett also reported back on the European Union-funded National Agricultural Support Services Programme (NASSP) indigenous plants consultancy, and the recommendations that ensued from it. Amongst these are that the NASSP:

- a) “promotes the creation of an Indigenous Plant Task Team”
- b) “encourages and supports the establishment of (eco-)regional satellite centres which can serve as local foci for indigenous plant promotion”;
- c) “supports a systematic investigation into technologically and environmentally appropriate cultivation of devil’s claw”;
- d) “supports a systematic consultation among stakeholders (including foreign buyers) aimed at improving marketing and/or local value-adding of devil’s claw”;
- e) “provides funding to the National Botanical Research Institute (NBRI) for the continuation and expansion of its *Hoodia* and indigenous succulent programme”;
- f) “supports the establishment of an indigenous vegetables programme at NBRI”;
- g) “supports the emergency dissemination of sustainable devil’s claw harvesting guidelines”, and ensures that “the Devil’s Claw Working Group (DCWG) continues to operate as a separate and distinct institution”;
- h) “sponsors an internship programme to the Centre for Research-Information-Action, Southern Africa Development and Consulting (CRIA SA-DC)”;
- i) “convenes a meeting between LuxDev, Mashare Agricultural Development Institute (MADI) management, relevant MAWRD and Department of Forestry (DoF) staff members and the PIF project coordinator to clarify the opportunities and constraints around a *manketti* pilot processing project at MADI”; and
- j) “supports community outreach efforts by the national programme to promote indigenous plants use.”

6. Further presentations were made by Ms Esther Lusepani-Kamwi (Domestication and genetic improvement of some selected indigenous fruit tree species in Namibia); Mr Steve Carr (Background to the *Hoodia* and succulent propagation initiative); and Ms Herta Kolberg (Conservation and evaluation of genetic resources of indigenous leafy vegetables).

7. Four working groups, constituted on the basis of participants’ focus on wild harvesting, cultivation, processing or marketing, addressed a range of issues and made recommendations to a plenary session of the workshop.



8. There was broad agreement that the IFTT should be reconstituted as the Indigenous Plants Task Team (IPTT), with the proviso that care should be taken not to spread capacity too thinly, and to avoid including crops that are already cultivated in Namibia.

9. Recommendations were made regarding what species should be evaluated for commercial potential, and what institutions would be suitable partners in initiatives arising from the identification of commercially viable species. It was recommended that NASSP fund an initiative to evaluate the commercial viability of *Hoodia* and other succulents, and of leafy vegetables, to be based at the NBRI. The immediate priorities of the IFTT/IPTT were also evaluated, as were the problems and bottlenecks that need to be addressed. The recommendations of the working groups are reported in full in the main body of the report.

10. Dr Kate Schreckenbergr made a presentation on “Ownership models for enterprises based on natural products”. She outlined the roles that must be played in bringing products to the formal market place and various organisational structures for performing these tasks, and highlighted salient lessons to be learned from the experiences of other institutions which have transferred ownership of commercial enterprises to individuals or groups in southern Africa and elsewhere.

11. Two working groups were formed to evaluate when business opportunities should be transferred, to whom they should be transferred, and what ongoing support from public funds might still be needed. Regarding when business opportunities should be transferred, it was recommended that the enterprise should be judged to be viable, the prospective recipients should demonstrate a willingness to contribute and should have a sound business plan and access to adequate managerial and technical skills, producers and harvesters should be fully involved, the enterprise should be proven to be environmentally sustainable, and there is a proven market. Intellectual property rights should not be transferred, but should be retained and licensed out.

12. Regarding to whom enterprises should be transferred, it was recommended that the recipients should be people or groups involved in the production process, that established organisations should enjoy preference over newly constituted ones, that the recipients should show a willingness to trade fairly, and that the likelihood of the recipient organisation or individual succeeding should weigh more heavily than other considerations.

13. Regarding ongoing support for the recipient structure from public funds, it was recommended that any support given should comply with the Ministry of Trade and Industry (MTI) Small and Medium Enterprise (SME) criteria, that the production and marketing functions should be separated, with support being given in the areas of marketing and generic promotion and technology development, and that business incubation support should be given with a view to the ultimate independence of the recipient enterprise. It was further also recommended that consideration should be given to creating a “one-stop shop” that could coordinate assistance, including the expedition of permit applications, for a range of enterprises.

14. The workshop participants consequently resolved that the IFTT would next meet on 5 June 2003, in order to:
- a) confirm the change of the IFTT to the IPTT, and to establish terms of reference for the IPTT;
  - b) clarify the situation regarding intellectual property rights (cultural knowledge, product development, patents etc.);
  - c) clarify the circumstances under which information of potential economic value may be made publicly available;
  - d) confirm the recommendations of PIF Phase I;
  - e) confirm the recommendations of the 2<sup>nd</sup> National IFTT Workshop; and
  - f) discuss the interim report of Dr Kate Schreckenber.
15. It was also resolved that IPTT stakeholder meetings are to be held biennially.

## **Reportback on IFTT activities since the PIF workshop (Ben Bennett)**

16. The Promotion of Indigenous Fruit project is half of a MAWRD-sponsored project to promote the use of indigenous Namibian resources. (The other half deals with mahangu and sorghum.) At the First Promotion of Indigenous Fruit workshop, held in April 2000, Minister Helmut Angula asked the workshop to:

develop a co-ordinated approach and strategy for the implementation of an economically sustainable promotion of indigenous fruits in Namibia.

17. The major output of the workshop was the creation of the Indigenous Fruit Task Team (IFTT), with the objective of promoting the sustainable use of indigenous Namibian fruit plants for:

- a) greater household food security;
- b) agricultural diversification;
- c) income, employment and livelihood opportunities; and
- d) agro-industrial development.

18. The main task of the IFTT is to co-ordinate the implementation of a national strategy for the promotion of indigenous fruit plants. The IFTT's terms of reference (which have been approved by Permanent Secretaries) are inter alia to:

- a) facilitate a consultative process involving as wide a range of stakeholders as possible;
- b) ensure that the PIF strategy is compatible with existing national policies on agriculture, forestry, food security, wildlife, science and technology etc.;
- c) provide input for the formulation of a national policy;
- d) promote the integration of the PIF in research, development, marketing, training and other extension work of ministries and other organisations;
- e) receive, scrutinise, circulate, comment on and endorse research proposals related to the PIF;
- f) mobilise human and financial resources and prioritise the use of such resources;
- g) act as a national contact point for donors interested in supporting the PIF;
- h) organise regular meetings of and communication between stakeholders;
- i) establish a central national information-sharing system and database on indigenous fruit plants with economic potential to:
  - identify and address gaps in knowledge;
  - research and gather information internationally, e.g. scientific and technological developments, market intelligence;
  - collect information on what is done by whom in Namibia and the results achieved; and
  - disseminate information to stakeholders; and
- j) draft and periodically review the national PIF strategy and its own terms of reference.

19. The IFTT consists of duly nominated persons representing:

- a) Ministry of Agriculture Water and Rural Development
  - Directorate of Agricultural Research and Training
  - National Botanical Research Institute
  - Directorate of Extension and Engineering Services
  - Directorate of Planning
- b) Ministry of Environment and Tourism
  - Directorate of Forestry
  - Directorate of Environmental Affairs
- c) Ministry of Higher Education, Training and Employment Creation
  - Directorate of Research Science and Technology
- d) Ministry of Trade and Industry
  - Division of Industrial Development
  - Directorate of International Trade
- e) Polytechnic of Namibia
- f) University of Namibia
- g) CRIAA SA-DC
- h) Desert Research Foundation of Namibia
- i) Namibia National Farmers Union

20. The IFTT can co-opt additional members, and as far as possible makes decisions by consensus. After its launch, the IFTT developed its own terms of reference and commissioned an artist to design a logo. The IFTT requested the NBRI to develop a list of all fruiting species in Namibia, then paid a consultant to compile a list of vernacular names. This will form part of the useful plants database which is still under development.

21. The IFTT coordinated compilation and publication of a Strategy and Action Plan for Promoting Indigenous Fruit in Namibia, based on workshop deliberations. On the basis of the Strategy and Action Plan, the IFTT (through the Namibian Agronomic Board (NAB)) contracted CRIAA SA-DC to implement PIF Phase 1 (reported separately) with a budget of N\$714 495.

22. The IFTT endorsed a “pipeline” approach in which many resources are assessed lightly (through trial purchases, trial processing and trial marketing) and more promising resources are prioritised once a clearer view of their commercial potential emerges. Initially, the IFTT selected marula, melon seed, manketti, makalani and !nara as top priorities, with *Berchemia discolor* (eembe, bird plum), *Ximenia* spp. (sour plum, eemheke), *Diospyros mespiliformis* (jackal berry, eenyandi) and *Adansonia digitata* (baobab, omakwa) as second priorities.

23. With support from French Cooperation, the IFTT entered into a partnership with CIRAD of France to investigate marula fruit processing:

- a) two CIRAD staff members visited Namibia in 2000 to propose possible areas of collaboration around indigenous fruits and indigenous grains;

- b) two batches of fruit and a researcher from the University of Namibia (UNAM) were sent to CIRAD in 2002 for preliminary processing trials; and
  - c) in 2003 Dr Yves Lozano from CIRAD visited Namibia to consult on future research collaboration. A report is being prepared for implementation starting in 2004.
24. In 2003, the IFTT also funded the Marula Juice and Pulp Pilot Project (MJP<sup>3</sup>), which was housed at the Community Skills Development Centre (COSDEC) in Ondangwa and implemented by CRIAA SA-DC. About 10 tons of marula fruit was processed into around 2 500 kg of pulp for commercial samples. Data is still being analysed, and the 2<sup>nd</sup> phase is envisaged for the 2004 season.
25. The IFTT provided the Topnaar Community Foundation with N\$26 000 to capitalise community-controlled trade in !nara seed to traditional markets in Cape Town. In the first year, many problems were experienced; thereafter no further reports were received at all. Cold-pressed !nara oil was produced for the first time (by KAP) and packaged for local marketing. Samples of the oil were also sent to potential product research and development partners.
26. The IFTT joined the Southern African Natural Products Trade Association (SANProTA), opening up additional opportunities and sources of funding, especially for market and product development research and development.
27. Indigenous fruit trees and their relationship with traditional knowledge about land units was the topic of the 11<sup>th</sup> Summer Desertification Programme run by the Desert Research Foundation of Namibia (DRFN) at the end of 2002.
28. Before his untimely death at the end of 2001, Dr Erastus Keya of the UNAM Department of Food Science and Technology developed a marula jam and a marula wine for the IFTT with a budget N\$32 250, but the commercial feasibility of these products remains unclear.
29. The IFTT requested and secured assistance from the Trade and Industry Development Programme (TIDP) programme in MTI for a consultancy on ownership models for indigenous plant enterprises supported with public funds (reported separately.)
30. IFTT members contributed to the initial design of the NASSP project and helped to secure the inclusion of indigenous plants in the workplan (details reported separately.)
31. IFTT supported the editing of a book produced by various DRFN researchers on !nara to the tune of N\$15 000 (in print).
32. IFTT was obliged to consider commercial agreements as they relate to product development in partnership with foreign concerns; as a result, it also contributed to the national debate on access and benefit-sharing around indigenous genetic resources. One outcome was the inclusion of *Hoodia* reportbacks as a regular item on the agenda. IFTT members participated in exploratory talks with the Council for Scientific and Industrial Research (CSIR) and Oxford Natural Products around *Hoodia*.

33. The IFTT identified a need to broaden its mandate to include non-fruiting plants and non-fruit products, but decided to leave a decision to the second national workshop.

34. As part of its coordinating role, the IFTT received reports on many related initiatives, such as melon seed cultivation and selection trials performed by Herta Kolberg of NBRI, and a DoF/Food and Agriculture Organisation (FAO) domestication of indigenous fruit trees project.

35. IFTT met on average eight times a year over three years (24 meetings have been held to date.)

## **Discussion**

36. Mr Dausab: Regarding representation on the IFTT, how are members designated, and what roles are played by government institutions and ministries, and by Non-governmental Organisations (NGOs)?

37. Mr Bennett: The question of representation must be addressed during the course of the workshop. At some point, the possibility of establishing regional IFTTs should be investigated as a means of devolving representation and decision-making to the regions.

38. Mr van Haften: What is the state of IFTT documentation?

39. Mr Bennett: Documentation is located in the NBRI Library. A report on the activities of the PIF project is being prepared, and members of the workshop will be provided with electronic versions on request. There are many areas in which policy is formulated, for example regarding forestry, the use of water for people, animals and crops, community rights and the ownership and management of community-based businesses, and micro-finance. Institutions involved in the formulation of policy, for example Agricultural Extension Services, Ministry of Environment and Tourism (MET), MAWRD, MTI, and UNAM, should be informed by the same guiding principles, so that the various policies converge. Sometimes policies are not harmonised, and there is a need for evaluation of existing policies. For these reasons, the IFTT's role in contributing to a "national policy" is potentially very important.

## **Promoting Indigenous Fruit in Namibia (PIF) Summary Report on Phase 1 (Pierre du Plessis)**

40. The Strategy and Action Plan for Promoting Indigenous Fruit in Namibia was based on deliberations of 1<sup>st</sup> PIF workshop (April 2000). IFTT (through NAB) contracted CRIAA SA-DC to implement PIF Phase 1 (budget N\$714 495) to start implementation of Action Plan.

41. Phase 1 started in March 2001 and the Draft Final Report was circulated November 2002.

### **Promotion strategy: “product development pipeline”**

42. The following steps are involved:

- a) Identify resources with potential (literature, market developments)
- b) Assess supply (ecological and socio-economic)
- c) Trial purchases (costs, availability, logistics)
- d) Trial processing (samples)
- e) Market assessment (potential, “right-sized”)
- f) Product development partnerships
- g) Scale up if and when successful (as appropriate for each resource)

43. This work is on-going (clients cannot wait for project budgets to become available); a dynamic process (priorities change and require flexibility); and slow (it takes at least five years to bring new cosmetic ingredients to the market.)

44. PIF Phase 1 had three main components: trial purchases; trial processing; and trial marketing.

45. The PIF 1 priority species are:

- a) marula
- b) manketti
- c) melon seed
- d) makalani
- e) !nara

46. The “second team” species are:

- a) *Berchemia discolor* (eembe, bird plum)
- b) *Ximenia spp.* (sour plum, eemheke)
- c) *Diospyros mespiliformis* (jackal berry, eenyandi)
- d) *Adansonia digitata* (baobab, omakwa)

47. In addition, a “light and wide” initial assessment was made of other resources.

## **Main achievements**

### **48. Kalahari Melon Seed (KMS) exports to UK for use by The Body Shop:**

- a) Procurement, cleaning (which included designing and building a mechanical cleaner), packaging and export of KMS from the North-Central Regions (Oshana, Omusati, Ohangwena & Oshikoto) (NCRs) to the UK
- b) More than 44 tons in 2001 (turning over N\$352 000 of which N\$95 000 (27.25%) was paid out in cash to primary producers)
- c) Around 50 tonnes in 2002 (despite the drought)
- d) Further orders for 2003
- e) Processing and refining by a specialist oil processor in UK
- f) Formulated into a skin lotion and launched in international markets (48 countries) as Melon Seed Body Butter
- g) Additional products launched by The Body Shop
- h) Serious commercial interest from other buyers
- i) Order for a few tons of KMS oil landed by a private-sector processor in Ondangwa (Yetu Cosmetics/Oontanga Oil Factory) on the back of these Community Trade exports
- j) Formal market for about 150 tonnes of KMS a year (at N\$2/kg worth N\$300 000 to farmers) which is expected to grow rapidly over the next few years

### **49. Small marula presses (juice and oil):**

- a) 10 small hydraulic presses (designed and manufactured at KAP) disseminated in NCRs (cost about N\$4 000 each, plus N\$1 200 for optional oil pressing equipment)
- b) Presses far exceeded expectations under field conditions (up to 200 litres a day)
- c) Only minor technical problems, rectified in improved design (2003)
- d) Inspired RDC (Ongwediva) to develop an alternative design for such a press
- e) Provided access to enough fruit, press is a viable SME technology
- f) Further growth depends on extent of local and national informal markets for marula cider (omaongo)
- g) 12 such presses used for larger processing trial in March/April 2003
- h) Solar batch pasteuriser (developed for PIF by Rolf Behringer of the Solar Stove Project at Valombola Vocational Training Centre (VTC)) used to prove the principle of solar pasteurisation of marula juice
- i) Combined with the small juice press, theoretically capable of producing around 50 litres of pasteurised marula juice a day, so producers can sell omaongo in local or national markets at any time of the year.

### **50. *Ximenia* oil production:**

- a) Production of *Ximenia* oil in Namibia was systematically studied for the first time (initially under the Swedish International Development Agency



(SIDA)/Namibia Nature Foundation (NNF)-funded X-OTIC project, continued under PIF).

- b) Samples of this unusual oil were made available to research and commercial partners for evaluation.
- c) There is no formal export market yet, but there is serious interest. *Ximenia* oil extraction is, however, technically difficult.
- d) Using a rotary seed roaster designed at KAP, oil yield was increased from less than 10% to around 25%.
- e) Improving the technology depends on feedback not yet provided by the research partner.
- f) There is a need for better understanding of the distribution and potential production of *Ximenia* in Namibia.

51. **Manketti oil promotion continued:**

- a) Promotion of manketti oil begun by CRIAA SA-DC in 1997
- b) Funding to continue provided by PIF 1
- c) Fresh oil samples produced and supplied to research partners
- d) Active R&D interest in manketti oil
- e) Not yet translated into substantial market demand
- f) Also SANProTA focal species
- g) Eventually large high-value market niches

52. **!Nara oil production:**

- a) Cold-pressed !nara oil was produced for the first time (by KAP) and packaged for local marketing.
- b) It remains unclear whether the !nara resource is big enough to interest export markets.
- c) Local oil processing could add significant additional value for harvesters.
- d) The community-owned oil pressing enterprise will face considerable management challenges and might not attain the necessary economies of scale.
- e) It is advisable to out-source processing services at least until a bigger market has been secured.

53. **Active participation in SANProTA:**

- a) 1<sup>st</sup> workshop stressed need for regional cooperation
- b) Participation in SANProTA initially supported from PIF funds
- c) Has opened additional opportunities and sources of funding
- d) R&D grant of US\$12 000 secured by CRIAA SA-DC to further investigate processing of melon seed and manketti; DoF National Forestry Research Centre (NFRC) granted US\$2 000 to collect samples
- e) Potential for opening up market channels through which to commercialise Namibia's limited baobab and *Kigelia* resources through cooperation with other SANProTA members

54. **Marula oil product launch by The Body Shop:**

- a) Not part of the PIF project as such, but a major result from earlier national efforts to promote indigenous fruit commercialisation
- b) First consumer products containing Namibian marula oil (produced by Eudafano Women's Cooperative)
- c) Took six years to bring this new natural product to formal markets

**Inconclusive advances**

55. **Formulating liqueurs based on indigenous fruits**

- a) Using marula, *Strychnos (omauni)* and *Berchemia (eembe)*
- b) System needed to deal with seasonal and regional variations in fruit quality
- c) On the basis of initial results, would be worthwhile spending additional money on product development and packaging design
- d) Need for more systematic investigation of private sector partnerships

56. **Formal markets for marula juice/pulp:**

- a) Serious formal-market interest in marula pulp (from European cosmetics sector and South African juice manufacturers)
- b) Practicalities of larger-scale marula processing investigated in 2003 (MJP<sup>3</sup>, continuation of PIF)
- c) Enough information to design practical production system, but fruit supply might be problematic
- d) Further cooperative research being planned with CIRAD of France and other Namibian partners

57. **Jams, chutneys etc. from various fruits:**

- a) Processing trial results have been inconclusive.
- b) Some of the products are good enough to find acceptance in formal markets, BUT it is not clear that any such enterprise beyond SME scale would be economically viable under Namibian market conditions.
- c) It is hard for such products to break into regional markets, and almost impossible for them to penetrate developed-country markets.
- d) A major constraint on development of SMEs of this type is the difficulty experienced in obtaining suitable bottles and labels.
- e) On a cost-recovery basis, KAP has started stocking and selling two different types of jam jars (complete with lids and already packed into cardboard boxes of 24 to ease transportation and marketing.) This needs promotion and expansion.

58. **Manketti nut processing:**

- a) It has been demonstrated on very small scale that manketti nuts can be manually removed from their hard pericarps in an economically viable manner.

- b) This has to be done under supervision (for quality control and health reasons) at a central location.
- c) Samples produced so far have been too small to allow for market testing.
- d) Whole nuts as snacks can create many additional employment opportunities and diversify the manketti product range.
- e) Further work on this – which should include trials of improved manual technologies – should be designed into an integrated manketti processing pilot project.
- f) Two models of an improved spring steel blade for manketti decortication were designed and field-tested (under the Ekoka Activation Drive (EAD) project funded by the SIDA/NNF Swedish Local Environment Small Grants programme).
- g) Thirty copies of the preferred model have been manufactured for dissemination in manketti-producing areas.

**59. Mopane seed essential oil:**

- a) Small sample produced through laboratory-scale steam distillation
- b) Additional analyses needed to determine if it is sufficiently unique to warrant further production efforts
- c) A large and unutilised resource
- d) Further work justified to establish whether large-scale collection and processing would be an economic proposition

**60. Strengthening Community-based Organisation (CBOs):**

- a) Trial and commercial-scale purchases strengthen community interest in indigenous natural resources.
- b) Income opportunities have contributed significantly to strengthening CBOs.
- c) There is a need for much more support to such emerging groups, especially in the form of organisational and business training.

**61. Truffle preservation:**

- a) Promising results from preservation trials with Kalahari truffles
- b) Highly seasonal (rainfall-dependent) resource
- c) CRIAA SA-DC collaborating with Israeli researchers to study co-cultivation of truffles with melons

**Other issues and activities**

**62. Other issues and activities are the following:**

- a) The PIF project has contributed to the national debate around access and benefit-sharing related to genetic resources – this is a matter that must be carried forward by a national institutional Government of the Republic of Namibia (GRN) stakeholder as a matter of urgency.

- b) The PIF project excluded all non-fruiting plants and non-fruit products from indigenous plants, which made it hard to respond to market enquiries for these products (and alternative natural products from non-indigenous plants that can be marketed through the same channels).

## **Constraints and problems**

63. Constraints and problems experienced are the following:
- a) It has not been possible to secure more active, enthusiastic and effective participation by UNAM.
  - b) With a few exceptions, distillation trials have yielded rather disappointing results – further work is recommended in this regard.
  - c) There have been very limited opportunities for detailed resource surveys. This is not regarded as a serious short-term obstacle, but it should be addressed in future, preferably by involving DoF/MAWRD fieldworkers in the compilation of a more detailed national description of the distribution and density of various species of commercial interest.

## **Other species in the pipeline**

64. Other species being investigated are:
- a) *Adansonia digitata* (baobab)
  - b) *Kigelia africana* (sausage tree)
  - c) *Hyphaene petersiana* (makalani palm, omulunga)
  - d) *Berchemia discolor* (eembe, bird plum)
  - e) *Strychnos spp.* (omauni, maguni)
  - f) *Diospyros mespiliformis* (eenyandi, jackal berry)
  - g) *Vangueria infausta* (wild medlar, eembu)
  - h) *Grewia spp.* (eeshe)
  - i) *Ziziphus mucronata* (omukekete, buffalo thorn)
  - j) *Tylosema esculentum* (morama bean)
  - k) *Cucumis metuliferus* (African horned cucumber, eenoshwa)
  - l) *Dialium englerianum* (nonsimba, thimba, Kalahari pod-berry)
  - m) *Guibourtia coleosperma* (nonsivi, copalwood, false mopane)
  - n) *Ochna pulchra* (makopa)
  - o) *Croton gratissimus* (lavender croton)
  - p) *Peschuel-Loeschea leubnitziae* (bitterbush)
  - q) *Terminalia sericea* (Silver-leaf Terminalia)

## Discussion

65. Mr Bruhns: How has the term ‘indigenous’ been interpreted?
66. Mr du Plessis: It has been understood in the conventional sense to refer to fruits that have historically been present in Namibia, as opposed to those that have been introduced from elsewhere. *Prosopis*, for example, is not indigenous.
67. Mr Sihova: Mr du Plessis suggested that marula oil cannot compete with sunflower oil, but in the Kavango, for example, it is held in high regard.
68. Mr du Plessis: Marula oil could secure a specialist niche market as a condiment, but for general household purposes, the resource is far too small to compete with sunflower oil, which is mass-produced in monoculture environments.
69. Mr Langenhoven: Is a license required for the distillation of liqueurs from indigenous fruits? And can all fruits, including marula, be used for making liqueurs, just as they are for producing mampoer in South Africa?
70. Mr du Plessis: Individuals may well set up stills and make liqueurs, and as long as no-one complains, the practice will continue. Nevertheless, a license (issued by the MTI) is required for distilling alcohol. Furthermore, excise taxes and VAT apply once the product is marketed. The PIF now has a better still, and this should render commercial distillation more viable and aid marketing. Marula is not, however, traditionally regarded as the best fruit for distillation purposes, due to its relatively low sugar content. Eembe is preferred for this purpose.
71. Mr du Plessis (continued.): It is not the case that there is no market for locally produced marula oil (ondjove) as opposed to cold-pressed marula oil that might attract an international market. This local informal market is already well accessed by local producers, and the PIF specifically does not want to get involved in projects where their intervention might have the effect of disrupting an informal system that is in place, and functioning well. Furthermore, a Department for International Development (UK) (DFID) study (“Winners and Losers in NTFP commercialisation”) concluded that the local ondjove trade is not profitable in labour return terms, and that the cost of the kernels and the time required would not allow for formal commercialisation. Informal production, which is widespread, continues largely because a surplus of kernel is available, and there are no other ways in which people can use their time to generate at least some income. While in context this is a viable informal industry, an initiative aimed at the development of a formal industry might well itself fail to realise meaningful benefits, while at the same time compromising an existing means of support for impoverished rural producers.
72. Mr Dausab: The project run in collaboration with the DRFN to develop a !nara industry – which has been running for twelve years – has not met with success. For the past four or five years, this lack of progress has been actively addressed, and numerous workshops have been held. The project is nevertheless still bedevilled by infighting and an absence of cooperative vision, with all potential stakeholders seeking maximum personal benefit at the expense of a sustainable and stable community industry. A likely cause of this is that the !nara resource is insufficient to meet the anticipated commercial demand.

## Recommendations for PIF Phase II (Pierre du Plessis)

73. Mr du Plessis noted that the issue of ownership of enterprises could not be conclusively dealt with by the IFTT, and that the MTI had been approached to help attain clarity on this through the consultancy of Dr Schreckenbergh, who would report back later in the workshop. Some of the PIF Phase II recommendations have implications for the debate on ownership (and vice versa).

74. The recommendations are the following:

- a) There are sufficient research results to be able to state fairly confidently that a formal marula pulp industry is technologically viable, but an adequate fruit supply has not yet been demonstrated conclusively. The work aimed at establishing such an industry should be continued. In collaboration with CIRAD, a detailed plan of action should be developed, and all logistical requirements should be in place to start processing early in January 2004.
- b) The research results regarding manketti's potential market appeal have been extremely positive: it is a rich source of Vitamin E, and of conjugated linoleic acids (CLAs), which have known phyto-pharmaceutical markets. Natural sources of CLAs are limited, and Zambian stakeholders are keen to move into production, even though Namibian manketti resources are probably substantially greater than those to be found in Zambia. One problem is that neither the cost of production nor the anticipated income is clear, so that it is not yet known under which scenarios manketti processing will be profitable. Demand for manketti is almost certain to increase, however, and work has already been done on processing technology. Proactive measures should therefore be undertaken with a view to accessing an international market for manketti.
- c) (Addition) Support to market and trade development of Kalahari melon seed and KMS oil should be continued.
- d) The potential of *Ximenia* as a commercial resource should be more closely assessed. Preliminary assessments indicate that there are substantial resources in the north, and research results have been promising, but the total level of biological and socio-economic availability remains unclear. An in-depth study of resource sustainability will have to be made.
- e) The "pipeline" approach should be maintained for resources that cannot yet be spun off as separate projects. A project similar to PIF I should be designed, with reorganised priorities. Contact with and the participation of local communities will be of paramount importance.
- f) A feasibility study and business plan should be developed with a view to establishing a private sector commercial entity that can leverage public funds to incubate viable natural product enterprises.

## Discussion

75. Mr Bruhns: The pipeline approach is desirable, particularly because it allows for close contact with rural communities. The emergence of large-scale cultivators must be addressed, however, as it might pose a threat to these communities.

76. Mr du Plessis: It is important to look at ways of protecting current resource holders. Resources that are difficult to cultivate are more secure from the point of view of these communities. Manketti, for example, only fruits after some 30 years, but as an annual, melon seed is more likely to be cultivated, particularly if high-yielding strains are identified. Efforts should be made to assist communities in protecting their trade interests. Nevertheless, niche markets will remain for “green” produce, and cultivators will by and large be unable to supply these markets.

77. Mr Ipinge: While it is true that one objective of public sector and donor funding is to promote private enterprise, care must be taken, because conflicts of interest could easily arise.

78. Dr Schreckenber: These issues will be addressed in my subsequent presentation.

79. Mr Bennett: Available technical capacity is currently being well used, but if the pipeline is broadened too much, this capacity might be over-extended. The pipeline should be kept narrow enough to avoid this.

80. Dr Maggs-Kölling: Re *Ximenia*, the Tree Atlas due for publication at the end of the year should provide useful information regarding the resource.

81. Mr du Plessis: This is true, but the Atlas is unlikely to provide much information on distribution densities, and on where *Ximenia* is found near to rural populations, where it can be physically accessed. Furthermore, only one of the four sub-species is likely to be commercially viable.

82. Mr Mallet: Further research should be undertaken regarding melon seed oil, and the possibility of redistilling traditional alcohol to render it more acceptable to the formal market.

83. Mr du Plessis: Redistillation is in the pipeline (figuratively and literally), and Ms Kolberg is continuing with research into melon seed cultivation. Further support to market and trade development should be included in the PIF recommendations (see above). Nara seed remains in the pipeline, but the limited – and indeed shrinking – resource must give rise to misgivings regarding sustainability.

## **Reportback on NASSP indigenous plants consultancy (Mr Ben Bennett)**

### **Indigenous plants development strategy review**

84. The National Agricultural Support Services Programme (NASSP) has received funding from the European Union and the Namibian Government, for a period of three years. Its objective is to enhance livelihoods for smallholder households in Namibia.

85. NASSP's components are Grain Management, Livestock, Crop Diversification, Micro-finance and Enterprise, and Indigenous Plant Resources. The all aim at achieving institutional capacity-building.

86. The objectives of the Indigenous Plant Resources Review were to:

- a) consult widely with stakeholders (members of IFTT, DCWG and others) to ascertain the nature of support required from NASSP;
- b) review the existing Strategy and Action Plans for Indigenous Fruit and Devil's Claw and suggest elements that might be supported by NASSP;
- c) assess the usefulness of the Indigenous Fruit Task Team and Devil's Claw Working Group and suggest improvements;
- d) make recommendations of the scope of activities in this component (i.e., should it include all plants and plant products or should it focus on a few?);
- e) draw up a programme of activities, including indicative costs;
- f) recommend training and capacity building support;
- g) since progress towards the achievement of objectives for each NASSP sub-component must be monitored and evaluated, for each intervention proposed recommend how NASSP will assess impact; and suggest at most two suitable indicators of achievement and how these can be verified. This should be compiled in a sub-component monitoring and evaluation plan; and
- h) complete these tasks with sensitivity to gender issues, paying particular attention to the way NASSP can empower women through its interventions.

### **Consultancy recommendations**

87. The report recommended that NASSP:

- a) "promotes the creation of an Indigenous Plant Task Team":
  - funds the forthcoming national workshop in May;
  - styles this meeting as a national workshop on indigenous plants promotion;
  - promotes and supports a decision at this workshop to transform the IFTT into the Indigenous Plants Task Team (IPTT);
  - helps the task team to secure high-level endorsement of an appropriately expanded mandate and terms of reference;



- b) “encourages and supports the establishment of (eco-)regional satellite centres which can serve as local foci for indigenous plant promotion”:
  - bases these at GRN experimental farms or ADCs;
  - aims to make indigenous plant promotion part of the on-going work of such centres;
- c) “supports a systematic investigation into technologically and environmentally appropriate cultivation of devil’s claw”:
  - supports a consultant to develop cultivation programme;
  - encourages local research initiatives;
- d) “supports a systematic consultation among stakeholders (including foreign buyers) aimed at improving marketing and/or local value-adding of devil’s claw”:
  - encourages consultation;
  - develops proposals for institutional change;
- e) “provides funding to NBRI for the continuation and expansion of its *Hoodia* and indigenous succulent programme”:
  - supports a project coordinator;
- f) “supports the establishment of an indigenous vegetables programme at NBRI”:
  - focus initially on leafy vegetables;
- g) “supports the emergency dissemination of sustainable devil’s claw harvesting guidelines”:
  - assists with printing of materials;
  - assists with dissemination;
  - assists with funding of radio broadcasts;
  - ensures that “the Devil’s Claw Working Group (DCWG) continues to operate as a separate and distinct institution”;
  - encourages the DCWG to coordinate more closely with the new Indigenous Plants Task Team;
- h) “convenes a meeting between LuxDev, MADI management, relevant MAWRD and DoF staff members and the PIF project coordinator to clarify the opportunities and constraints around a manketti pilot processing project at MADI”;
- i) “sponsors an internship programme at CRIAA SA-DC”:
  - four students per year;
  - six month renewable contracts;
- j) “supports community outreach efforts by the national programme to promote indigenous plants use”:
  - financially supports IPTT representation; and
  - funds grassroots work with stakeholders.

## Discussion

88. Mr Horn: Might the expansion of the IFTT to include non-fruiting species not have the effect of straining the capacity of the team? Would non-fruiting species be included at the expense of fruiting species?

89. Mr Bennett: The expansion of the mandate of the IFTT to include non-fruiting plants might be detrimental to the fruit component, because the IFTT may not have the capacity to accommodate such an expansion. On the other hand, contrary views such as Mr du Plessis's – that a pragmatic approach should be adopted, and where an opportunity to create employment arises, it should be taken – do have some validity. Perhaps some additions to the pipeline should be contemplated, but care should be taken not to spread resources too thinly.

90. Mr Dausab: What is the role of government ministries in research and development? Do they have any practical function?

91. Mr Bennett: Government ministries do indeed play a role, notably in interfacing with communities and providing services.

92. Mr Dausab: Including non-fruiting plants in the mandate of the IFTT could stretch its capacity. Perhaps institutions with unutilised capacity such as UNAM should also be involved.

93. Mr Kruger: Institutions will be more likely to make a contribution if there is some tangible benefit that they will derive.

94. Mr Horn: What is the relationship between NASSP and the IFTT?

95. Mr Bennett: The NASSP's budget allowed for the contracting of a consultant to advise on activities to be undertaken. The brief given to the consultant was to provide a complementary service by avoiding rolling over existing research, and rather focusing on the gaps.

96. Mr du Plessis: Regarding reservations expressed about the role of government ministries, on the contrary, the relationship between the government and NGOs can be productive. The PIF project was initiated by the MAWRD, and CRIAA SA-DC was contracted to implement the project. Throughout, there has been positive participation on the part of government ministries and departments (e.g. MET, MAWRD, Ministry of Higher Education, Training and Employment Creation (MHETEC), DoF); the government has not merely been a rubberstamp. As a result, whereas three years ago little was being done at national level to access indigenous fruit resources, several projects are now coming on line. Regarding the possible expansion of the IFTT's role to include non-fruiting plants, the expansion would not extend to resources that are already being exploited (e.g. timber, grains and devil's claw), but would be restricted to potentially valuable resources that are not currently being accessed to their full potential.

97. Mr Ipinge: The participation of all stakeholders should be obtained in making any decision regarding the extension of the IFTT's mandate.

98. Mr Mallet: The extension of the mandate is desirable because the alternative would be to create a separate mandate to deal with non-fruiting plants, but essentially the same people would be involved in carrying out the tasks envisaged within such a mandate.

99. Mr Matanyaire: It would be useful to have more comprehensive information on the extent and location of technical capacity. It is known that the government does not itself have the required capacity (hence the contracting of CRIAA SA-DC to implement the PIF project), but a better picture of what technical capacity is spread across various institutions in Namibia is required.

100. Mr du Plessis: There is high-quality technical capacity to be found in Namibia, but it is vested in limited numbers of people. This can be ascribed to factors such as the small population of the country, and the colonial history of non-development of human resources. The overall technical capacity also fluctuates, and gets taken up in specific fields that render it practically unavailable elsewhere. The original strategic plan called for the development of technical capacity, but a realistic approach is required in this regard.

101. Mr Bennett: On the basis of my short experience in Namibia, I feel that people expect the government to provide in all things. Hopefully, the IFTT presents an alternative model of cooperation that might be emulated in other contexts.

## **Domestication and genetic improvement of some selected indigenous fruit tree species in Namibia (Esther Lusepani-Kamwi)**

102. The project (TCP/NAM/0167 (A)) is funded by an FAO contribution of US\$327 000. It was initiated in February 2002, and is due to be completed in December 2003.

### **Evolution of the Indigenous Fruit Tree Project**

103. The project was an initiative of the Forest Research Division with the initial aim of strengthening research in terms of indigenous fruit tree improvement and domestication. It also evolved as a parallel process to the national and regional project on indigenous fruit trees. It is therefore supposed to serve as a supporting phase for the national and regional project. Initially, the project was supposed to address research needs in the area of fruit tree utilisation and domestication. It later became a community development project, with the aim of addressing food security in rural areas through improvement and marketing of indigenous fruit trees.

### **Background and justification**

104. Namibia is rich in indigenous fruit trees. The custodians of these fruit trees are the local rural communities. Indigenous fruit plays a role in alleviating poverty in times of drought and can also be converted into much needed cash. The fruit species are traded at informal markets but have not made their way to formal markets.

105. The Directorate of Forestry has an important role to play in supporting communities in the sustainable utilisation of woody resources. The genetic improvement of indigenous fruit trees will ensure the production of quality fruit, thereby paving their way into the formal market.

### **Objectives of the assistance**

106. The general objective is to provide direct support to a limited number of communities in domestication, processing and marketing, with a view to demonstrating the economic return of the sustainable use of indigenous fruit trees. The immediate objectives are:

- a) Fruit tree species utilisation and promotion strategy: extension/promotion, marketing information and infrastructure; and
- b) Training: professional staff and community members trained in tree selection, planting and management and in fruit collection, storage, processing and marketing.

### **Expected outputs**

107. Three important indigenous fruit tree species for domestication and evaluation are to be identified by stakeholders through a survey.

- a) The survey will be carried out in conjunction with CRIAA SA-DC.

- b) It will target five northern regions (Caprivi, Kavango, Ohangwena and Omusati).
- c) Training of Forest extension workers on the methodology for carrying out the survey is currently underway.

108. Phenotypically superior candidates for the three selected species are being identified. Germplasm of these species in the form of seeds and vegetative propagules is being collected.

- a) This work was carried out with the assistance of the wild fruit tree improvement specialist.
- b) It has been carried in all five regions for marula and *Berchemia discolor*.
- c) Further work will be carried out for *Strychnos cocculoides* during its fruiting season.

109. Professional foresters/scientists will learn about recent developments in indigenous fruit tree species research, especially propagation.

- a) One study tour for Namibians foresters to the International Centre for Research in Agroforestry (ICRAF) centre in Kenya is being arranged.
- b) One Namibian forester will attend a tree-breeding course in South Africa.

110. Appropriate propagation methods will be developed and tested for the three species. They will be properly documented and reported.

- a) Work on propagation will not be completed during this phase of the project due to the limited time available.
- b) Nevertheless, germplasm for the selected species will be assembled and a plan of action for further work on propagation will be documented.

111. Marketing, processing and utilisation of at least one indigenous fruit will be developed and promoted.

- a) The marketing work will be carried out by CRIAA SA-DC in conjunction with an international consultant.
- b) The Food Science Department of the University of Namibia will handle the fruit processing and transformation.

### **Current status of the project**

112. The inception workshop was held in October 2002. Since January 2003, the process of recruiting key consultants for the project has been underway.

## Discussion

113. Ms Lusepani-Kamwi: The project was initiated in February 2002, but is still in the process of being implemented in all its ramifications. Currently, only seed collection is taking place, but the collection of cuttings will take place in future.

114. Mr Mallet: Is it a short-term project, or is the aim that it will be ongoing?

115. Ms Lusepani-Kamwi: The project itself is intended to be of finite duration, but certain activities will continue within the ministry.

116. Mr Dausab: What criteria were applied in deciding what areas to cover? Why is only the north of the country being covered?

117. Ms Lusepani-Kamwi: The project is limited in scope, and is not in a position to cover the whole country. Only three species have so far been investigated, and because of the season, at the moment only one is being collected.

118. Mr Horn: Is any work being done on appropriate technology?

119. Ms Lusepani-Kamwi: Not at present, but the project will look into this at the household level.

120. Mr Horn: What is the preliminary list of species being collected?

121. Ms Lusepani-Kamwi: Marula, *Strychnos* and eembe, with the focus thus far on marula.

## ***Hoodia* and succulents**

### **Background to the *Hoodia* and succulent propagation initiative (Steve Carr)**

122. This presentation gives some background on the *Hoodia* and succulent propagation activities occurring at the NBRI, and on the envisaged expansion of the project's activities over the next few years.

123. *Hoodia* is a stem succulent endemic to the drier regions of southern Africa. Ten taxa occur in Namibia. The genus has recognised appetite suppressant properties. The indigenous people of southern Africa have used it for this purpose for generations. In the 1970's the CSIR in South Africa began to investigate the plant and identified and isolated the active compound, which they then patented. In recent years they, along with Phytopharm and Pfizer, have begun to focus on the potential commercialisation of the product as an anti-obesity drug for the USA and European markets. They are confident that it can become a mega drug generating mega sales internationally. Negotiations between Namibia and the CSIR to develop a memorandum of understanding are underway. It is not clear at this point what agreement there is regarding *Hoodia*.

124. The demand for *Hoodia* plant material has been on the increase, as has public awareness of its potential due to media articles. Should the market for the product become as large and lucrative as anticipated one can foresee an increase in the demand for plant material. It is feared that this will lead to wild harvesting of the plants in an unsustainable and uncontrolled manner, as, for example, has been the case with devil's claw. Unlike devil's claw, however, *Hoodia* is comparatively rare and slow-growing, and would have low sustainable harvest rates under natural conditions. Such a scenario will have a negative impact on the populations and may result in the plant's existence becoming endangered in areas. On the other hand, Namibia can benefit from the sale of *Hoodia* and other succulents and therefore, needs to develop an independent capacity to propagate and cultivate the plant.

125. In order to be in a position to do so it is essential that steps be taken to ensure that there is sufficient plant material available, minimising the need for and impact of wild and uncontrolled harvesting of the plants. An increasing number of *Hoodia* is currently being propagated in South Africa. We in Namibia must move rapidly on propagation to be in a position in three to five years to be able to link into the *Hoodia* market. We must also examine ways of making plant material available in the short term to establish a supply to the market.

### **The current initiative being undertaken at the NBRI**

126. A trial project to propagate *Hoodia* was started at the NBRI in August 2002. The purpose of the trial was to establish the germination and growing requirements of the plant. After an initial start-up phase in which a small number of plants were propagated, the project was expanded. A seed collection trip was undertaken to southern Namibia where seeds were collected from 4 separate populations on 4 different farms. Propagation was expanded with the target of 5000 seedlings by the end of summer 2003 (May). To date over 8 000 seeds have been planted and there are

currently about 4 000 *Hoodia* seedlings at the NBRI, some in seed trays and some planted out into individual pots and hardened off.

127. The main focus at the beginning of the project was on conservation. It was seen as necessary to build up a reserve of seedlings at the NBRI in order to be in a position to contribute to initiatives to cultivate the plants to discourage wild harvesting and to provide plant material to meet the demand. Initial funding was obtained through the Southern African Botanical Network's (SABONET) Threatened Plants Programme. The aim was to propagate seedlings, thus building up a substantial number of *Hoodia* plants and to use them in the decentralisation of propagation and cultivation activities with conservancies in southern Namibia, as a potential means of generating income and alleviating poverty, and for conservation purposes. Approaches in this regard have already been made to the Namibia Development Trust and an attempt to enter into discussions with two conservancies in southern Namibia (one registered, the other in the process of registering) is being made.

128. Although *Hoodia* would form the backbone of such a decentralisation initiative, the project is being expanded to incorporate other succulent plants with commercial potential. As with *Hoodia*, the seedlings of other succulents are now being propagated at the NBRI and will provide the bulk of the start up material for these conservancy nurseries. Other succulents targeted include aloes and mesembs. This list will expand as propagation material (seeds) becomes available.

129. Co-operation between the Polytechnic of Namibia and the NBRI with *Hoodia* propagation has recently been initiated. This will allow for an expansion of the propagation facilities and hence more *Hoodia* seedlings. It will also afford the opportunity for research into the plant, including harvesting trials on "wild" plants and training for student in their propagation and cultivation.

### **The way ahead: expansion of the project**

130. The propagation and cultivation of these plants has to be viewed as an ongoing, long-term activity. Species are propagated and grow to a saleable size building up the volume and diversity of the available plants over time. In many cases plants will take 3 to 5 years to realise their optimal marketable value. Faster growing succulents, such as certain mesembs, are to be targeted during the start up phase, while with *Hoodia*, some plant material could be sourced from research activities and limited "wild" harvesting. This would allow for an earlier entry into the market, as the demand already exists and it is not clear how long it will take for the plants to grow from seedlings to a suitable size for harvesting. It must be emphasised though that "wild" harvesting is:

- a) an experiment to establish sustainability guidelines; and
- b) a way to make samples available to research partners.

131. Wild harvesting to supply commercial demand is not to be encouraged or permitted until sustainability is well known, except under government-supervised research.

132. Thus, any planning or funding would need to take a medium- to long-term view of such a project. Progress in the first few years will be measured in the



development of the nursery facilities, research, training, planting and initial marketing, and not so much in monetary returns.

### **Nursery facility and cultivation expansion**

133. The project must see expansion, and in the case of *Hoodia* this needs to be a significant and rapid expansion. There is little point in small cultivation exercises that may or may not provide a reliable and adequate supply of material to the market. In the case of *Hoodia*, one or two large, central cultivation points or nurseries should be established to guarantee supply at a reasonable volume. Nursery infrastructure/facility development should reflect this approach. A suitably sized area needs to be identified in southern Namibia for the development of such a facility. Smaller producers, for example conservancies, are an important component of the project and should not be left behind, but should rather be seen as a complimentary source of *Hoodia* plant material. Their market benefit would be derived from a reliable and stable production process of the plant and “semi-wild” harvesting from enrichment plantings, as well as their participation in the specialised succulent market.

134. Failure to establish confidence in Namibia’s ability to supply material in a controlled and sustainable way according to any agreements, especially in the case of *Hoodia*, would seriously undermine the ability of all involved to realise maximum benefits from such a potentially lucrative market.

135. Linked to facility and cultivation expansion of the project will be activities such as marketing, training, screening and research.

### **Marketing**

136. The marketing of the *Hoodia* and the other succulents is as important as the availability of plant material. Strategies to promote the plants need to be developed. There is already a market for ornamental succulent plants, ranging from those suitable for general gardening and landscaping to ornamentals and those for specialised collections. This market is international, and although there are a number of large-scale producers around the world, Namibia has interesting and in some cases very unusual or unique plants to offer. *Hoodia* has appeal as an ornamental, but the market we would aim at is that of pharmaceutical applications. In fact there are two markets for *Hoodia*. One is for the approved drug, while the other is for phyto-pharmaceutical products based on the plant extract. There is little overlap between these two markets.

137. The marketing and advertising strategies needing development will fall very much to those organisations with expertise in that field, such as CRIAA SA-DC. They would be ideally positioned to actively promote both general succulents and *Hoodia* for the producers/growers. They would also need to examine cost-effective and suitable ways to transport the plants.

### **Plant movement and permits**

138. Succulents sold by conservancies will target tourists, amateur collectors, commercial nurseries and landscaping companies, both in Namibia and the broader region. In order to facilitate the trade in these plants, the legal regulations and procedures for selling and exporting need to be clarified and modified. Such

procedures must be simple and easy to control and regulate. This is essential if all interested buyers and sellers are to be encouraged to work within the legal framework. The process must not be cumbersome or confusing, as we want to draw people into the legitimate channels rather than encourage illegal activities by having a complicated or unworkable documentation procedure.

### **Screening (bio-prospecting)**

139. With its focus on potential natural plant sources for commercial applications, the project will offer an opportunity for the systematic screening of a range of plants to establish whether they contain any compounds suitable for further investigation/commercialisation. It is worth noting that many endemics must be cultivated if they are ever to be available in large enough quantities to be sources of phyto-extracts.

140. Of course, such an initiative will not be the only way in which plant material can be accessed for screening, but no matter how much screening is done, the establishment of this initiative will facilitate the exploitation of any potential plants in Namibia in the future by helping to creating a clear channel for such exploitation. There have been discussions with companies specialising in such screening. CRIAA SA-DC has been instrumental in seeking out such opportunities and this presents us with a useful opportunity.

### **Benefit sharing/income distribution**

141. The cultivation of succulents must strive for commercial viability. The core activity of plant cultivation and sale must not be impeded by government or NGO participation/involvement, but only assisted. There is a significant funding role in cultivation for the government and/or NGOs during the project start-up period of some five years. There may be a reduction in this after a period, should there be a move towards commercial viability, although funding for activities such as on-going research, training and marketing may continue. Conservancies cultivating succulents and *Hoodia* will have income distribution mechanisms for the sales they make. Where the income from plants cultivated in the large nurseries would go and who benefits needs to be determined. Should a large nursery be established within a conservancy, income could directly benefit that conservancy and other conservancies as well, for example through a succulent protection fund or some similar mechanism.

### **Research and extension work**

142. The project's expansion will afford a number of research and extension work opportunities for senior researchers, students and government workers.

143. Immediate research requirements or opportunities include:

- a) the impact of harvesting on "wild" populations to determine take-off amounts and regeneration rates;
- b) on-going horticultural requirements under cultivation, for example the impact of irrigation and feeding, pest and disease control, plant growth rates; and
- c) the identification of vigorous genetic strains.

## **Training**

144. Training opportunities can be found in cultivation, horticulture, marketing and in-service training for government staff and students.

## **Employment**

145. It can be anticipated that any expansion of the project into a large-scale nursery facility and/or conservancies will require staff to carry out cultivation and horticultural activities. In the case of conservancies, two or three members will need to be identified and trained to grow and manage the plants on a daily basis. A large-scale nursery will require an as yet undetermined number of staff (depending on the scale of the nursery).

## **Collaborators**

146. The current initiative falls within the ambit of the IFTT and the Ad Hoc *Hoodia* Working Group. This group includes the MET, MAWRD (National Botanical Research Institute and Sub-division Agronomy and Horticulture), Ministry of Higher Education, Training and Employment Creation, the NGOs CRIAA SA-DC and the Working Group of Indigenous Minorities in Southern Africa (WIMSA), and UNAM.

147. The NBRI and the Polytechnic of Namibia are to collaborate with the expansion of cultivation activities and training/research opportunities for students.

## **Funding**

148. There is a need for funding in order to expand the project to increase production (volume), develop cultivation facilities, both for large-scale cultivation and in conservancies, for training and for a project coordinator/horticulturist.

## Outline of the next five years

149. The table below outlines proposed activities for the next five years:

	2003	2004	2005	2006	2007	2008
Propagation and cultivation activities	X	X	X	X	X	X
Diversification of available species	X	X	X	X	X	
Establishment of cultivation facilities in conservancies	X	X	X			
Central nursery development	X	X	X			
Research into sustainability	X	X	X	X		
Marketing of species			X	X	X	X
Training		X	X	X	X	
Permit facilitation	X	X				

## Discussion

150. Mr Brock: Is there any reason for limiting cultivation? Why not simply encourage commercial farmers to cultivate *Hoodia* on a large scale?

151. Mr Carr: There is no obvious reason for this. The project is only making a start.

152. Mr Brock: Perhaps government institutions and researchers should play a facilitating role, and others should cultivate.

153. Mr du Plessis: This might open the door to wildcat harvesting and other abuses. There is a need to maintain control.

154. Mr Tjitekulu: What soil and other conditions are required for *Hoodia* cultivation?

155. Mr Carr: The primary requirement is that the soil is very well drained. The soil type might also be important.

156. Mr Tjitekulu: Could cultivation take place in the Namib?

157. Mr Carr: This falls within their range, and they could be cultivated there. A limiting factor, however, is that cultivated *Hoodia* must be watered.
158. Mr Bruhns: Succulents, including some *Hoodia*, are successfully cultivated in the USA. Since *Hoodia* is not a particularly protected plant, why not go ahead with cultivation?
159. Mr Carr: There is a misconception regarding how easy it is to cultivate *Hoodia*. For example, pests and diseases can cause problems.
160. Mr Langenhoven: Given that *Hoodia* is being cultivated in South Africa, and that there is no legislation preventing cultivation in Namibia, we should go ahead with planting.
161. Mr Horn: *Hoodia* is in fact protected in Namibia. Furthermore, sufficient propagation material is needed for planting to take place.
162. Mr du Plessis: One must distinguish between cultivation and trade. It may be legal to breed lions on your farm, but a permit is still required to sell them.
163. Mr Horn: Does a market already exist for *Hoodia*? And is vegetative propagation of *Hoodia* a viable option?
164. Mr Carr: Vegetative propagation of *Hoodia* is possible, but it is very slow, and losses are high. A market for *Hoodia* already exists, but is believed not to have reached its full potential. The concern is that if it does take off, the existing populations of *Hoodia* will come under severe pressure. However, the size of the market has not been quantified.
165. Mr Bennett: The South African CSIR holds a worldwide patent, now licensed to Pfizer, which prevents any enterprise from marketing a product containing *Hoodia* for appetite suppression.
166. Mr du Plessis: What the CSIR did was to identify the “P 57 molecule” in *Hoodia*. The worldwide market potential for appetite-suppressing products is estimated at US\$ 3 billion annually, while that for appetite-suppressing products containing a natural extract is estimated at US\$ 1 billion annually.
167. Mr Bruhns: What is the current state of affairs regarding the supply of seeds, and permits for this purpose, and regarding the status of *Hoodia* from the point of view of the IFTT?
168. Ms Kolberg: No permit applications have been made.
169. Mr Bennett: No phytosanitary certificates have been issued for *Hoodia* exports. Regarding the IFTT’s *Hoodia*-related activities, the *Hoodia* committee has been established because of the enormous economic potential of the plant. The role of the committee is to provide a focal point for agreements aimed at accessing this potential, to prevent it being cornered by South African interests.
170. Mr Tjitekulu: How does one recognise and harvest the plant?

171. Mr Carr: It has a number of spiny stems growing vertically. Harvesting merely entails cutting off the stems, though there is a preference for younger growth. The stems are peeled before being eaten.

172. Mr Burger: There seems to be a contradiction in the fact that there is huge market potential, but only one company can access it. How can anyone patent *Hoodia*?

173. Mr du Plessis: What has been patented is the right to market *Hoodia* in whole or extracted form for appetite suppression. Whether or not this is morally or legally defensible, there are practical implications to suing the world's largest pharmaceutical concern. Pfizer has enormous financial resources, and would be prepared to use them to protect what it claims to be its legitimate interests. Any legal action would have to be based on the traditional knowledge of indigenous people regarding *Hoodia*'s appetite-suppressing qualities. There is nothing preventing anyone from simply selling *Hoodia*, without making any claims regarding these qualities, however. Selling *Hoodia* as a food supplement rather than a drug would also side-step stringent US laws pertaining to drugs. This is done with many herbal medicines, for example St John's Wort.

174. Mr Kosina: Is there only one species of *Hoodia*, and is there any variation in the concentration of the active ingredient?

175. Mr Carr: It is not known what research might have been undertaken regarding variation in efficacy, but this is something that warrants investigation. Ten *Hoodia* species are described. *H. gordonii* seems to be preferred, and is the only one currently being investigated. It occurs from southern Angola down along the western areas of Namibia to the south.

176. Ms Halweendo: In the past, *Hoodia* has been associated with disadvantaged rural communities. There is a need to consider the implications for these communities if commercial farmers begin to cultivate *Hoodia* on a large scale.

177. Mr Carr: There is no quota system in place at this point. Previously disadvantaged communities could themselves take the initiative in cultivation. Commercial farmers do not necessarily have any advantage, except insofar as they control access to the land.

178. Mr Bennett: The same applies to devil's claw and other wild-crafted products. In addition to the larger and more consistent market, there is also a premium niche-market for wild- and community-produced products, which attract higher prices.

179. Mr Burger: It doesn't help to prevent the development of a cultivation industry on the basis of fear that the interests of rural communities will be compromised. If there is a substantial market, these communities will ultimately benefit.

180. Mr du Plessis: The unfettered cultivation of *Hoodia* might have ecological implications. For example, monocultures are notorious for attracting pests, but no pesticides can be used in the propagation of plants for medicinal purposes, or if the product is to be marketed as organic. It may well be the case that low-intensity planting is more appropriate, in which case communal farmers might have a competitive advantage.

## Conservation and evaluation of genetic resources of indigenous leafy vegetables (Ms Herta Kolberg)

### Background and justification

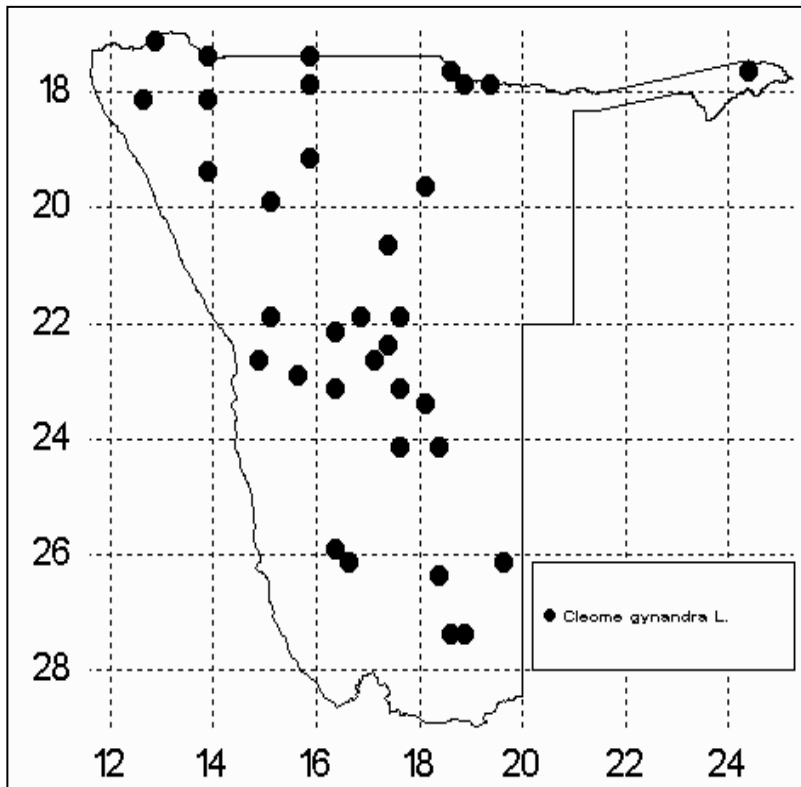
181. The leaves of many different plants are widely used, with *Cleome gynandra* and *Amaranthus* spp. being used most widely by Namibian people. These plants are wild-both harvested and nurtured.



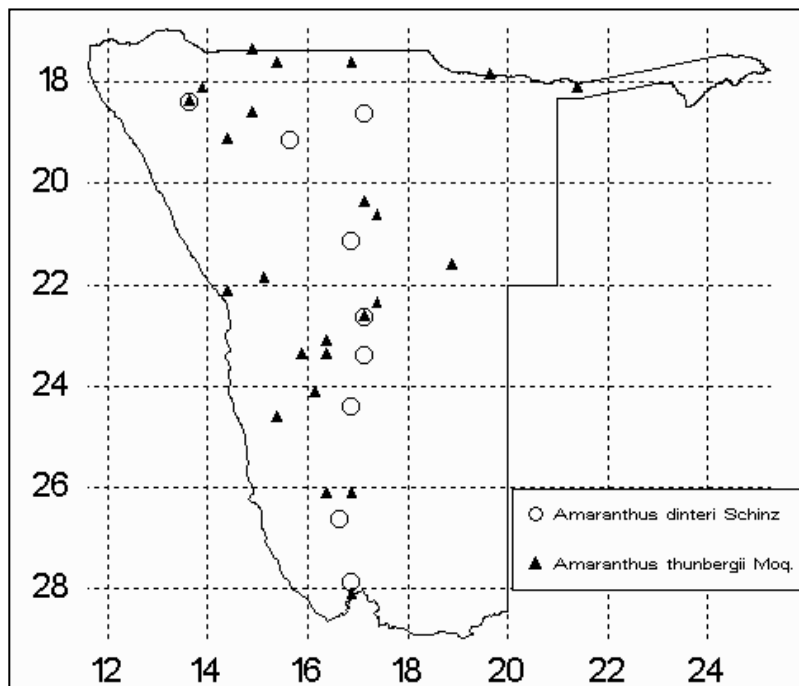
*Cleome gynandra*



*Amaranthus* sp.



*Cleome*



*Amaranthus*



182. Leafy vegetables have high nutritional and economic value, and are also used in other ways. They allow for crop diversification/agri-diversity. Not much research has been conducted into them in Namibia.

### Nutritional value

183. The table below shows the nutritional value of some leafy vegetables:

Vegetable	Vit. A mg/100g	Vit. C mg/100g	Iron mg/100g	Calcium mg/100g	Protein g/100g
<i>C. gynandra</i>	6.7 - 18.9	127 - 484	1 - 18.8	213 - 434	3.1 - 7.7
<i>Amaranthus</i> spp.	5.3 - 8.7	92 - 159	4.1	800	4.0 - 4.3
spinach	2.8 - 7.4	1 - 59	0.8 - 4.5	60 - 595	2.3 - 3.1
cabbage	tr. - 4.8	20 - 220	0.5 - 1.9	30 - 204	1.4 - 3.3
lettuce	0.2 - 7.8	3 - 33	0.5 - 4.0	17 - 107	0.8 - 1.6
pumpkin leaves	2.4 - 5.3	170 - 172	2.1	40	3.1 - 4.2

### General research needs

184. Research should be conducted in the following areas:

- a) conservation, evaluation & selection of genotypes;
- b) ethnobotany;
- c) agronomy;
- d) multi-use crop;
- e) processing & storage; and
- f) marketing.

### Objectives

185. The research objectives are to:

- a) collect and conserve germplasm;
- b) collect indigenous knowledge;
- c) evaluate genotypes; and
- d) investigate cultivation practices.

### Work plan

186. There are five phases in the work plan:

- a) Phase I
  - Literature review (1999)
  - Germplasm and IK collection (2000/2001)

- b) Phase II
  - Germplasm multiplication (2001/2002)
  - Preliminary screening of germplasm (2001/2002)
- c) Phase III
  - Germplasm evaluation (2003 / 2004)
  - Phase IV
  - Selection of promising genotypes (2005)
  - Investigation of cultivation practices (2005 / 2006)
- d) Phase V
  - Dissemination of results (2007)

## **Outputs**

187. The desired outputs are the following:

- a) genetic resources are conserved;
- b) indigenous knowledge is documented;
- c) superior genotypes are identified;
- d) agronomic potential is established;
- e) cultivation practices are identified; and
- f) more information becomes available.

## **Limitations**

188. Factors that might curtail the success of the project are the following:

- a) adoption;
- b) perception as low-status food;
- c) possible absence of need for cultivation;
- d) limited demand; and
- e) many unknowns.

## **Conclusion**

189. Despite potential limitations, the leafy vegetable project should meet with success.

- a) They are suitable for agronomic development over relatively short period.
- b) Their adoption is almost certain.
- c) They will confer improved nutritional status.
- d) They have the potential to improve household income.

## Discussion

190. Mr Bruhns: Has research into indigenous African leafy vegetables been conducted elsewhere?
191. Ms Kolberg: Some research has been conducted, mainly in Kenya. There used to be a Leafy Vegetable Network, though this has probably ceased to function.
192. Dr Schreckenber: In South America, the seeds of some leafy vegetables are used for food purposes, as a snack, or ground up and cooked as a porridge. Is this also the case in Namibia?
193. Ms Kolberg: No, this doesn't seem to be the case here.
194. Ms Halweendo: What constitutes a superior genotype?
195. Ms Kolberg: A superior genotype has a relatively high yield and nutritional value, is easy to grow and resistant to diseases, and is socially accepted for eating purposes. In other countries, indigenous leafy vegetables are considered to be low-class food, as indicated by names such as "pig weed", but this doesn't seem to apply to Namibia.
196. Mr Horn: For how long are these vegetables available?
197. Ms Kolberg: They grow wild for a short period after the first rains, but if grown as a commercial crop, they should be available for a longer period.

## Working groups

198. Four working groups were formed, with workshop participants selecting which group to join on the basis of personal interests. The groups were:

- a) Wild harvesting
- b) Cultivation
- c) Processing
- d) Marketing

199. The groups were asked to address the following issues:

- a) Should the IFTT become the IPTT (Indigenous Plants Task Team)?
- b) If a change to IPTT is recommended, what new products should be included?
- c) Irrespective of the answer to a) above, what should the IFTT's priorities be?
- d) Which institutions should be the partners of the IFTT?
- e) What problems and bottlenecks are hindering development?

## Feedback from working group 1 (Wild harvesting)

200. Arguments in favour of retaining the IFTT were that it is established and functioning well, and is recognised by stakeholders. Extending its mandate to non-fruiting plants might dilute its focus and spread capacity too thinly, at the expense of the quality of output. On the other hand, there is a need to address issues related to non-fruiting plant resources, and if a separate body were to be constituted for this purpose, essentially the same people as those on the current IFTT would be involved. The suggestion was made that the current IFTT be retained, with a mandate to address non-fruiting plant resources as the need arises.

201. *Hoodia* was identified as a priority for the IFTT. It is unique plant with huge market potential for appetite suppression, and initial groundwork for possible cultivation has already been done. An environmental impact assessment would have to be conducted if wild harvesting is to be contemplated. There are, however, a number of problems related to *Hoodia*. The matter of intellectual property rights must be resolved to allow for just benefit-sharing, and the CSIR/Pfizer patent may limit marketing efforts. The resource is also limited, and research, including a baseline study, must be conducted before sustainable off-take levels can be determined. Furthermore, a permitting and monitoring system must be put in place.

202. Partners in a *Hoodia* initiative should include the Ad Hoc *Hoodia* Working Group, the CSIR, enterprises in the natural products industry, conservancies, communities with access to *Hoodia* populations, the Directorate of Extension and Engineering Services (DEES), MET, NBRI, MTI, WIMSA, the Directorate of Agricultural Research and Training (DART), land-users, the Polytechnic of Namibia and CRIAA SA-DC.

203. Another priority is !nara, a quintessentially Namibian plant which has significant cultural importance and is the sole source of income for some

communities. It is, however, unfortunately a threatened species, with diminishing plant populations. There is competition for the limited resource within communities, and with outsiders and wild animals. This results in conflict over ownership of resources and over-exploitation. !Nara is also a dioecious species (i.e. there are separate male and female plants), so not all plants bear fruit.

204. Partners in a !nara initiative should include the Topnaar community, DRFN, Namwater, MET, the Walvis Bay Municipality, CRIAA SA-DC and the Baseline Management Committee.

## **Discussion**

205. There was no discussion of the group's recommendations.

## **Feedback from working group 2 (Cultivation)**

206. The group supported changing the IFTT to the IPTT.

207. The group recommended that attention be given to investigating the commercial potential of *Hoodia* and other succulents, leafy vegetables, thatch grass, truffles and mushrooms, morama beans, wild potatoes (!aidas and ombutu), !nara and *Commiphora* (for gum used in perfumes).

208. The criteria for assessing the economic viability of these species should be seed availability, the ease with which they can be cultivated, their conservation status, their capacity to adapt to areas beyond their natural ranges, potential markets, the time it would take for results to be achieved, and the likelihood of achieving positive gross margins.

209. The priority products were identified as being *Hoodia* and other succulents, leafy vegetables, !nara, morama beans, thatch grass, truffles and mushrooms, and wild potatoes.

210. Potential partners were identified as follows:

- a) *Hoodia* and succulents: NNBG (MAWRD), UNAM, Polytechnic of Namibia, MHETEC, conservancies, MET, NGOs, private-sector nurseries and pharmacies.
- b) Leafy vegetables: NBRI, UNAM, Polytechnic of Namibia, MAWRD, National Horticultural Initiative (NHI) and FAO.
- c) !Nara: the Topnaar Community Foundation, DRFN, Gobabeb Training and Research Centre (GTRC), MET and UNAM.
- d) Morama beans: UNAM.
- e) *Commiphora*: still to be established on the basis of investigation.

211. Potential problems were identified as being the time taken for results to be achieved, the availability of propagation materials, the availability of manpower and

expertise (plant scientists such as pathologists, breeders, entomologists and physiologists), the interfacing between research and agricultural extension functions, the lack of an in-depth economic analysis, permit controls, labour constraints and difficulties in attracting private-sector investment.

## **Discussion**

212. Mr Ipinge: Wild potatoes are large and very sweet tubers. They have traditionally been used by children tasked with herding cattle to supplement their diets.

213. Mr Kruger: Existing internal capacity should be used flexibly in order to maximise the benefit obtained. Only where necessary should use be made of consultancies to supplement capacity. For example, the DRFN often has interns whose expertise could be accessed if a list of priorities were available.

214. Mr Bennett: It is necessary to address the question of how many new crops can simultaneously be developed with the full-time attention of available capacity. The number is probably in the order of five, but one must bear in mind that this capacity must also be focussed on existing crops. It is therefore important that a very careful selection of new crops is made.

215. Mr du Plessis: This need not necessarily be so. In the case of *Hoodia*, for example, there are conservancies that could potentially be involved, and the responsibility for developing leafy vegetables and morama beans could also be diverted to other bodies. There is a truffle cultivation project underway in the Omaheke, and some preliminary work on *Commiphora* has already been done. In the case of !nara, however, the socioeconomic realities argue against product development.

216. Mr Kruger: It seems that what is needed is a systematic analysis of existing and potential crops, their respective requirements, and the current state of research into each species.

217. Mr du Plessis: Such an analysis is already being made.

## **Feedback from working group 3 (Processing)**

218. The IFTT should be changed to the IPTT, provided that its terms of reference are clearly spelt out, and areas beyond its mandate (e.g. existing crops) are explicitly excluded.

219. Potential new products were identified as being *Hoodia* and other succulents (aloes), acacia gums, morama beans and leafy vegetables. Existing products that should remain on the priority list are marula, manketti, melon seed, mopane and *Ximenia*.

220. Regional IPTTs should be constituted. These would comprise the relevant stakeholders in the regions. Other partners should be the National Planning Commission (NPC), the Namibian Chamber of Commerce and Industry (NCCI)/Indigenous People's Business Council (IPBC), Namibian Association of CBNRM Support Organisations (NACSO), JCC, NGOs such as Women's Action for Development (WAD), Rössing Foundation and Namibian Development Trust (NDT), CBOs and co-operatives, the Ministry of Women Affairs and Child Welfare (MWACW) and COSDEC.

221. Problems that must be addressed include the current lack of community involvement and awareness, of extension messages to producers, and of identified extension actors. The IFTT should also give attention to networking and information dissemination, and its secretariat should be strengthened. Programmes should be coordinated, while policies should be reviewed in order to bring about improvements and harmonisation. SMEs and community enterprises also lack access to financial and business development services.

222. In addition to the priorities already identified for phase 2, the problems identified above should be addressed.

## **Discussion**

223. Mr Bruhns: What is actually meant by the term 'partners'? Are they members of the IFTT? Are they institutions with relevant expertise that can be asked for assistance as the need arises? The only partner with voting rights on the IFTT should be NACSO.

224. Mr du Plessis: A great deal of time is taken up coordinating IFFT activities and attending to the functions of the secretariat. The possibility of appointing a full-time person to take care of these duties should be investigated.

225. Mr Bruhns: Such a person could still be based in an institution such as the NBRI, but be tasked with these functions.

226. Mr Sihova: If the IFTT becomes the IPTT, it should be clear that its mandate does not extend to existing crops such as mahangu. Only indigenous plants that have not been commercially exploited should be included.

227. Mr du Plessis: It is important that flexibility is retained. For example, a wholesaler in Europe could supply a niche market with whole mahangu grain as a health food. One should also avoid excluding products simply because they are seen to be "crops". Melon seed might be categorised as a crop, but it should not be excluded.

228. Mr Bruhns: In this regard, the current IFTT is more exclusive than the proposed IPTT would be.

## Feedback from working group 4 (Marketing)

229. The group supported a change from IFTT to IPTT, but suggested that there should be specific sub-committees or working groups within the IPTT to report back to the plenary, as this would provide greater focus on specific products.

230. Plants that should be evaluated within the context of the pipeline approach include marula, manketti, melon seed, makalani, !nara, bird plum (eembe), *Strychnos* (omauni), jackal berry (eenyandi), *Ximenia* (eemheke), *Vangueria* (eembu), *Grewia* (eeshe), baobab (omakwa), succulents, devil's claw, *Hoodia*, truffles, leafy vegetables, sausage tree, acacia gum, *Zizphus*, *Tylosema*, *Cucumis* (eenoshwa), mopane, *Nonsivi*, *Ochna*, bitterbush, *Terminalia*, *Combretum*, *Paranari* and *Tribulus terrestris*.

231. The group felt that they lacked the required knowledge and experience to make recommendations as to which products should be prioritised, but suggested that the FAO's MA&D guidelines be used.

232. The following problems were identified:

- a) limited capacity for product research and development;
- b) limited capacity for export and market liaison;
- c) lack of local certification expertise;
- d) insufficient support given to producers;
- e) insufficient market information available;
- f) the need to balance supply and demand;
- g) seasonal variability of supply;
- h) quantifying supply sources;
- i) price setting;
- j) intellectual property rights, and access and benefit sharing;
- k) cash flow and working capital; and
- l) standards and specifications.

233. The group distinguished between permanent and ad hoc partners. Permanent partners should be SANProTA, trade attachés, MTI, JCC, producers' associations and national certifiers. Ad hoc partners should be international NGOs, CIRAD, CSIR, NACSO and standards authorities.

## Discussion

234. Mr du Plessis: It is important that attention is given to identifying and developing local certification capacity. The alternative – to fly in such capacity from time to time – is prohibitively expensive, particularly as a fraction of total costs when the volumes involved are relatively small.

235. Mr Bennett: It is also important to identify not only potential partners, but also those partners who will be able to make a sustained input.



236. Mr Iping: It is probably advisable to follow the route of establishing sub-committees. As to partners, they need not necessarily attend meetings, and they don't have to have voting rights. They are entities from whom one gets useful advice and inputs, whether or not they are officially represented on any committee.

237. Mr Kruger: Ad hoc groups are formed from time to time as the need arises. What is important is that the larger parent body survives.

238. Mr Bruhns: National priorities must be dealt with centrally, while regional issues can be dealt with at a regional level. One should exercise caution in establishing regional sub-committees, however, as they are more difficult to maintain.

239. Mr Brock: Focal groups within an IPTT could give attention to specific issues, while still overlapping with and being informed by broader issues.

**Ownership models for enterprises based on natural products (Dr Kate Schreckenber, Overseas Development Institute, London, with Ms Mourine Matomola, MTI)**

**Background**

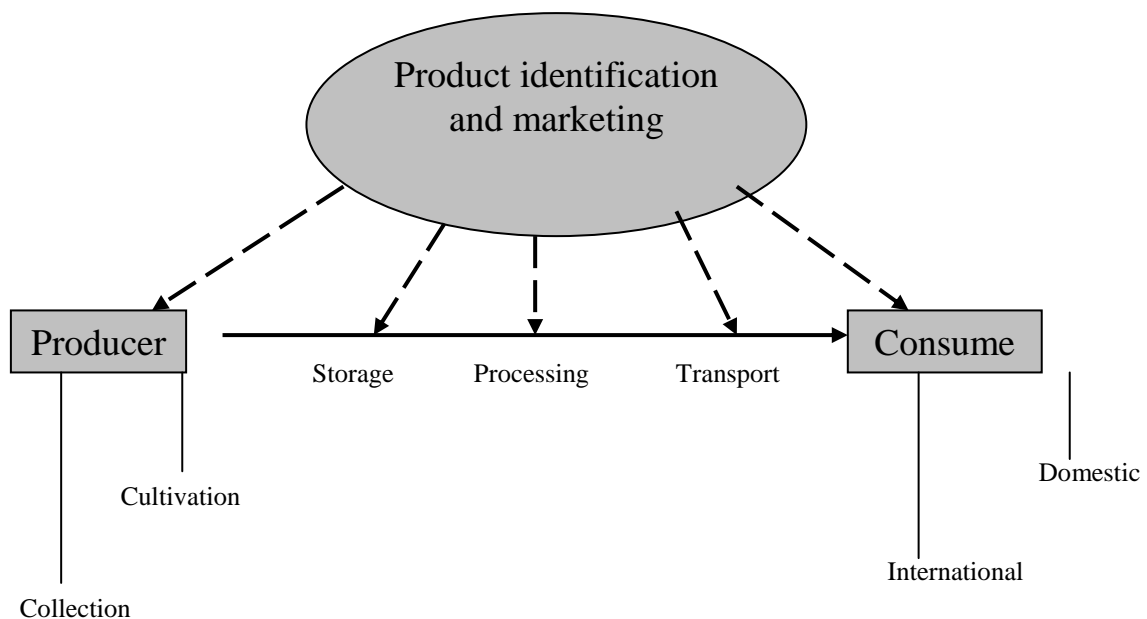
240. The establishment of the IFTT has been a positive start. It is a good coordinating mechanism that takes a holistic approach to product development, and PIF Phase I has been successful in developing “bankable business plans” for a range of products. The question that now arises is how to hand these over, and to whom.

241. My own consultancy has been made possible through TIDP funding. It has involved meetings and field visits in Namibia and a literature review in the UK. The aim of this presentation is to engender an understanding of the process of commercialisation (Section A) and to present a number of case studies (Section B) from which we can draw lessons for the Namibian situation, which may be called a production-to-consumption system, or PCS.

***Section A: Understanding Commercialisation***

**The Production-to-Consumption System (PCS)**

242. The PCS consists of all the functions that occur between the producer and the consumer. The producer is responsible for cultivation and/or wild-harvesting. Depending on the product, storage, processing and transport (in no definite order) must then take place. These steps may be more or less complex depending on whether the final consumer is domestic or international. The critical activities of product identification and marketing must occur, to some degree, at all stages in the process.



## Ownership models

243. Rarely will the whole production-to-consumption system be encompassed within a single enterprise. Instead, there will be a chain or network of different types of enterprise involved in getting the product from the field on to the shelf. The types of enterprise will, to some extent, be determined by two other kinds of “ownership”, namely resource tenure and intellectual property.

### (i) Resource tenure

244. This may be divided into three categories:

- a) **Individual** (melon seed): the buyer may deal directly with individuals, or group them into associations and possibly co-operatives.
- b) **Communal** (manketti?): the buyer deals with (pre-existing) community organisations.
- c) **In between** (marula): the higher value of product may lead to increasing individualisation of tenure, and conflict with customary systems of resource use.

245. If individuals or communities group together, they may be able to command higher prices and secure a better marketing deal (e.g. through community trade).

### (ii) Intellectual property

246. Intellectual property can take one of two forms:

- a) **Idea for the product:** This can take the form of knowledge of the traditional use of the product (which can be rewarded through product purchase as a preferred supplier at a higher price, royalties, employment or partnership in the enterprise), and/or knowledge of potential market demand (which can be rewarded through consultancy fees, commissions or partnership in the enterprise.)
- b) **Technology development:** This involves turning the idea into reality, for example by developing prototype processing technology, and can be rewarded through fees, preferred supplier status, partnership in the enterprise, patent rights etc.

## Enterprise types and ownership

247. Commercialisation can involve many types of enterprises, with some being more appropriate for the different forms of resource or intellectual ownership described above, and some being more common at particular stages in the PCS (e.g. co-operatives at producer level, or private companies at processor and trader level). Namibian law allows for many kinds of enterprise:

- a) **Sole proprietorship:** the owner is personally liable for any debts.

- b) **Partnership:** two - 20 people are jointly liable for debts.
- c) **Public company:** at least seven members, and shares are traded on the stock market.
- d) **Private company (Pty limited):** one - 50 shareholders, shares are traded between members, and only directors are liable.
- e) **Close corporation (cc):** less formal version of Pty ltd for up to 10 members, all of whom are fully liable.
- f) **Association not-for-gain (section 21.1 company):** no dividends are paid, profits are used to promote the purpose of the company. (They are often preferred by donors because they are more formal than trusts and associations, and are able to get tax exemption.)
- g) **Trust:** managed by Board of Trustees with varying liability; taxed as an individual.
- h) **Co-operatives:** these require at least seven members, a business plan, the holding of AGMs, and a supervisory committee to oversee the Board.
- i) **Joint ventures:** any combination of the entities outlined above, with each retaining its own status. They are formed to acquire certain skills or additional capital, or to cope with business expansion.

### **Different actors in the PCS: the five “Rs”**

248. Commercialisation involves many different actors/enterprises, from producer to intermediary to consumer, each with a different **role** to play. For commercialisation to work, there must be good **relationships** between the different actors. The actors' roles must be negotiated, and can be split into:

- a) **Rights:** these must be adequate and clear.
- b) **Responsibilities:** these must be achievable and agreed upon.
- c) **Returns:** these must be sufficient to instigate action.

249. To take the case of producers as an example, their 'role' would comprise the following:

250. Possible producer rights:

- a) Credit on good terms or input supply
- b) Bonuses or premiums
- c) Training, building business and technical capacity
- d) Transparent systems of grading and weighing produce
- e) Involvement in decision-making

251. Possible producer responsibilities:

- a) Quantity of produce
- b) Quality of produce
- c) Timing of supply
- d) Membership subscription

252. Possible producer returns:
- a) Price paid
  - b) Guaranteed market
  - c) More sustainable livelihood

### **The many roles of intermediaries**

253. Intermediaries are often wrongly maligned because their roles are not clearly understood. At least three common types of intermediary can be distinguished:

254. **(i) Intermediary trader**

- a) Commonly known as middlemen.
- b) Buys from the primary producer and sells on to processor, exporter, etc.
- c) Can play an essential co-ordinating role in consolidating volumes for export. (Mainstream companies with high stock turnover do not have the time to source from a large number of small marginalised businesses, while the primary producers rarely have the production capacity or the resources to make market links with commercial buyers.)
- d) Important to avoid middlemen who add little or no value but drastically increase the price to reflect their bargaining power.
- e) A co-operative could perform an intermediary consolidating role while maintaining an owner-producer structure.
- f) Traidcraft believes it is a lack of *benevolent* intermediaries, rather than the presence of middlemen per se, which leaves producers open to exploitation.

255. **ii) Export processing service**

- a) Facilitates links between producers and commercial buyers.
- b) Deals with logistics of product transport, contracts between producers and buyers, export formalities, etc.
- c) May provide producers with inputs on credit or payment deducted from the price paid on delivery.

256. **(iii) Intermediary marketing organisation**

- a) Identifies market linkages with appropriate buyers.
- b) Provides various forms of support to producers, including:
  - business counselling;
  - design input;
  - market information service;
  - strategic market analysis for a particular product;
  - arranging meetings with relevant buyers;
  - acting as a convenient contact point for any communications from the buyer.
- c) Brings together producers and buyers on a commission basis.

- d) Producers deal directly with buyer and control export process.
- e) Understand both how the destination market works and the social development needs of the producer businesses.
- f) Tradecraft recognises the need for more such marketing intermediaries and has established them in many partner countries, e.g. Just Exchange in South Africa.
- g) Relationships between actors.

## Relationships between actors

257. Having understood the roles of different actors in the PCS, it is equally important to understand the relationships between them. A checklist from the fair trade movement includes the following criteria for assessing relationships:

### a) Necessary conditions

Shared understanding	Does each partner understand the rationale for the partnership and the issues?
Mutual commitment	Is each partner equally committed to the partnership?
Distinct contribution	To what extent does each partner offer something distinctive?
Shared objectives	Are objectives for the partnership shared?
Trust	Do the partners trust each other?

### b) Processes

Shared time frame	Does each partner understand the different phases of the partnership, especially when it will end?
Participation	Does each partner participate in setting the objectives and framework for the partnership?
Balance of responsibilities	Does one partner bear all the responsibility for the outcome?
Clear boundaries	Is there a clear understanding of what the partnership does and does not cover?
Autonomy of partners	Is each partner fully independent of the other?
Accountability	To what extent is each partner accountable to the other?
Transparency	Is the partnership transparent?

## ***Section B: Learning lessons***

### **Defining successful handover**

258. Before looking at some examples to draw out lessons about factors influencing success, we need to define ‘success’:

- a) Sustainable business
- b) Fair trade:
  - Create market opportunities for producers who would not normally have access to exporting on their own limited resources
  - Ensure that producers are not exposed to exploitation due to their lack of bargaining power
  - Ensure that the increased trade has a beneficial impact on poverty
- c) Empowerment of women
- d) No conflict with customary practices
- e) Many others possible

### **Devil’s claw: lessons learned**

259. Most devil’s claw in Namibia is sold through what Rachel Wynberg calls the “Free Enterprise Model” in which producers sell to a local trader who sells the product (still unprocessed) on to a Namibian exporter. The CRIAA SA-DC devil’s claw initiative, which has been called the ‘Honest Broker Model’, involves the NGO in paying for a community liaison officer, a focus on sustainable management of the resource, bypassing the local trader by groups of producers dealing directly with an exporter, and organic certification leading to higher prices. The case demonstrates the following:

- a) Even when all processing is in the importing country, it is possible to improve the conditions for the producer.
- b) The private sector (exporter) can be convinced to support social benefits if it makes good business sense.
- c) CRIAA SA-DC can play an important role, not as an intermediary trader but as a negotiator of conditions and provider of expertise (e.g. on sustainable harvesting).
- d) CRIAA SA-DC has an eventual exit strategy for the time when the costs of intervention can be shared by the exporter and the harvester communities.
- e) A bottleneck that hinders development is the lack of national certification expertise.

### **Oil presses in Zimbabwe: lessons learned**

260. In 1989, EnterpriseWorks Worldwide began the Zimbabwe Oil Press Project to produce affordable oil. In 1998, it was decided to make the project sustainable by splitting it into three enterprises: (i) RAM Pvt. Ltd. was constituted to make commercial oil presses. This was a joint venture between EnterpriseWorks (56%) and a Zimbabwean entrepreneur (44%); (ii) ZOPP Pvt. Ltd. was constituted to distribute

and market RAM presses, peanut mills and seed (staff were paid on a on commission basis, the gross margin for presses was 35% over factory price); (iii) ATZ was constituted for product innovation and development activities – it was a not-for-profit concern that collapsed in 2001 when donor funding ended. The following lessons were learned:

- a) Complete transfer of the initiative to the private sector may not be possible, or indeed desirable.
- b) Creating an institutional distinction between project activities that can be commercialised (manufacture and distribution) and those that cannot (product innovation) is at the core of the project's success.
- c) Fledgling for-profit companies do better if focused on a clearly defined set of objectives.
- d) The recovery of the investment made by EnterpriseWorks and ATZ in developing the technology and marketing the machines is not expected, as these are “public good” functions.
- e) But what should EnterpriseWorks do with its shareholding in RAM Ltd? Transfer it to the employees, sell it to the public, or retain it and invest the profits in other NGO activities in Zimbabwe?

### **Kalahari wild silk: lessons learned**

261. The original Oxfam/MAWRD project was implemented by CRIAA SA-DC, who were faced with the problem of how to hand over assets and a viable business idea. The solution (still work in progress) is to set up a company in which producers are encouraged to buy shares (payment is possible in cash or kind). The handover of the business to the company is overseen by a Trust, and the company leases the buildings, tools and cashflow. Depending on the extent to which the company eventually works in the interests of the producers, the Trust may sell or donate the assets to the company. The following lessons were learned:

- a) Interesting model of handing over a business developed with public and donor investment.
- b) Objectives must be very clear – business success comes first and social benefits are secondary.
- c) It is a complex process, requiring time (6 years) and funds (for a Trust) during the process of supervision.
- d) There is still uncertainty regarding the desire of producers to become shareholders, as this involves a new kind of “transaction” costs for them in exchange for a say in decision-making.
- e) Even a private business with no producer shareholders could bring community members benefits in the form of employment and a market for their produce.

### **ASOMEX: lessons learned**

262. In Bolivia, MEDA (Mennonite Economic Development Associates) had worked with ASOPROF (National Association of Bean Producers) for nearly 10 years to develop dried beans as a new export crop. In 1993, they jointly established ASOMEX, a company which provided specialised business development services



(BDS) with the aim of increasing the incomes of small-scale urban and rural producers by offering competitive marketing and export services. Set up with an initial capital of \$40,000, ASOMEX shares were owned by ASOPROF 58%; MEDA 17%; and individual shareholders 25%. To meet its clients' needs, ASOMEX diversified to provide three main types of services:

- a) Export processing service: ASOMEX handles details of transferring sale-ready products to their final destinations and is paid on a fee basis.
- b) Intermediary trader service: ASOMEX buys products and re-sells at a higher price.
- c) Brokering service: ASOMEX does market research and brings buyers and sellers together, collecting commission on resulting sales.

263. The following lessons were learned:

- a) ASOMEX filled an important niche: although standard BDS and micro-credit were well catered for in Bolivia, there was no intervention in the area of marketing.
- b) The bottom line of sustainability through profit comes first.
- c) Nevertheless, ASOMEX maintains a concern for the welfare of producers and aims to give them the best price for their products.
- d) The company had a long gestation period. MEDA worked with ASOPROF for seven years before setting up ASOMEX.
- e) Once the company was set up, MEDA changed its role from donor to business partner.
- f) MEDA's exit strategy involves waiting until the company achieves sufficient profitability and stability to attract other investors interested in buying it out.

### **“From Mexico to the World”: government support to the private sector**

264. Even where some activities are handed over to the private sector, there remains a role for government. In Mexico, the Non-Traditional Agricultural Products Trade Promotion Programme is a government-sponsored programme (Ministry of Agriculture, Livestock and Rural Development) aimed at identifying market niches for higher value small-farm agricultural products:

- a) market identification, by means of a National Commercial Intelligence System, which collects information from the internet, commercial information units, and private service bureaus supported by State governments;
- b) creation of an official seal of quality;
- c) promotion of trade fairs for non-traditional products; and
- d) design and implementation of training programmes, state-based and international seminars on non-traditional products.

265. The important issue is that this sort of activity may always require public funds.

## The shea butter counter: more government support

266. Another example of government support is the case of shea in Burkina Faso. Shea kernels are the country's third largest export crop. Women can earn more by processing the kernels into butter locally, and many cosmetics clients prefer this artisan-produced butter. Various donor projects helped to develop appropriate technology and organisation to streamline production, but the issue remained how to link women to buyers. The government (with Canadian support) set up a virtual (internet) trading counter to make the links. Once properly established, this service could be funded out of commissions on sales.

## Summary of lessons learned

267. The lessons learned can be summarised as follows:

- a) Distinguish activities that can be spun off into private enterprises early on.
- b) For these enterprises, focus on a few objectives.
- c) Be aware that participation may not be conducive to effective economic performance.
- d) Consider supporting individually owned enterprises: Technoserve (an NGO focusing on natural product based enterprises) has shifted away from group enterprises as it is often more cost effective to launch and support an enterprise involving a single entrepreneur.
- e) Choose the right groups to support, and evaluate their export-readiness before liberating them.
- f) Design, agree upon and adapt exit strategies from the start (e.g. Traidcraft (a fair-trade NGO) says that suppliers are only truly sustainable when they are capable of selling to other buyers.)
- g) Accept that there may be an important ongoing role for the lead agency even after the project has formally ended, particularly where further external inputs are required in identifying new economic opportunities.
- h) Recognise the crucial role of intermediaries. IFAD concludes that "producers must learn to deal with the traditional intermediaries, not replace them..."
- i) Recognise the need for continual product innovation.
- j) Accept that this may require the services of professional researchers, who have better access than farmers or project staff to information on macroeconomic trends, potential market niches and appropriate technology, and can better carry out the financial analysis required to gauge the profitability of potential activities.
- k) Provide training in marketing, packaging and other processes necessary for sustaining an enterprise (e.g. the skills necessary for reading changes in market trends). These are a more important constraint than start-up capital.
- l) Donors shouldn't expect full cost recovery: many outputs are "public good" functions.
- m) Above all, realise that there are **no quick or easy answers**.

## **Working groups**

268. The working groups will deal with the critical issue of how to hand over the products of publicly funded research and development. It is important to think about what is being handed over (both HARDWARE and SOFTWARE), and what functions should be retained. In the manketti scenario, for example, the products of public investment (through PIF II to MADI and CRIAA SA-DC) may include:

- a) An assessment of resource availability
- b) Assured organisational capacity of producers to supply required quantity
- c) Development of prototype technology
- d) Demonstrated potential for producing a consistent quality and quantity supply
- e) Identification of one or more buyers

## **Working group questions**

269. The government has invested public funds in the research and development of a range of products.

- a) WHEN should the resulting business opportunity be transferred? (criteria)
- b) To WHOM should it be transferred? (criteria)
- c) What ONGOING SUPPORT from public funds might still be needed?

## **Discussion**

270. Mr Bennett: Existing case studies have generally been on larger volumes, but in the case of !nara, the volumes are very small. Indigenous fruits, too, often involve small volumes deriving from threatened species. It would therefore be more helpful to have case studies based on small volume outputs.

271. Mr Brock: The notion that an NGO can be seen as a form of group enterprise that subsequently becomes private must be treated with some circumspection. As a benevolent enterprise, an NGO may pay higher-than-realistic prices. If these subsequently fall away when, following privatisation, the enterprise must come to terms with market realities, the result can be that private enterprise itself gets a bad name.

272. Dr Schreckenber: It is often tempting for NGOs to become actively involved in the marketing process, but it is not advisable. Avoiding doing so prevents the problem identified by Mr Brock from developing.

273. Mr Bruhns: Firstly, do organisations such as Fair Trade offer guidelines on how best to manage and formalise relationships with producers? Secondly, many de facto organisations in Namibia don't actually want to become formally structured, as this requires them to comply with administrative and tax regulations. They nevertheless might be very valuable partners. How best should one identify and deal with them? And thirdly, the IFTT might do well to look into the Team Namibia initiative, which has similar marketing goals to Proudly South African.

274. Dr Schreckenber: The guidelines referred to in the presentation did in fact come from Fair Trade. It is indeed true that informal enterprises can be valuable partners. Relationships based on trust are possible with such enterprises, even in the absence of formal contracts.

275. Mr du Plessis: In deciding how to go about transferring economic capacity to communities, one is necessarily dealing in a field where concepts such as “previously disadvantaged” (and perhaps “currently disadvantaged”) come into play. How does the Affirmative Action policy impact upon these decisions?

276. Dr Schreckenber: Affirmative Action should in principle be supported, but it is equally important that the business that is constituted actually works. The working groups should give attention to how Affirmative Action is to be put into practice when decisions are made regarding to whom businesses are to be transferred.

277. Mr Shikongo: Many of the products being discussed already exist on the informal market. The issue is getting them to the formal market. Who should bear the costs involved in this process?

278. Dr Schreckenber: PIF Phase I has already done much in this regard. Obtaining further funding should be possible, particularly as non-timber forest products are currently regarded as an attractive and politically correct area of focus.

### **Working groups: ownership models**

279. Workshop participants divided into two groups to discuss the following questions:

- a) When should business opportunities be transferred?
- b) To whom should they be transferred?
- c) What ongoing support should they be given?

## **Feedback from working group 1 (ownership models)**

### **280. When should business opportunities be transferred?**

- a) There should be clear and proven viability of the enterprise after public funds are withdrawn.
- b) There should be a willingness on the part of participants/community members to contribute, in either cash or kind.
- c) Producers/harvesters should be fully involved.
- d) Managerial skills and a sound business plan should be in place.
- e) Technical skills and the capacity to maintain assets should be in place.
- f) There should be secure markets, signed contracts and a marketing plan.
- g) The enterprise should be able to sustainably supply products, have viable stockholding and cashflow levels, and have a contingency plan in place.
- h) The enterprise should be environmentally sustainable, and have a reliable certification system.

281. It was further noted that the assets of the enterprise should not be transferred at the outset, but that this should happen on a phased basis over some years, subject to successful operation of the enterprise. Intellectual property rights should not be transferred, but should be retained and licensed out.

### **282. To whom should enterprises be transferred?**

- a) The recipients should be people or groups who are involved in the development process. Where possible, they should be as close as possible to the primary producers. Traders who are committed to fair trade should also be considered.
- b) Preference should be given to established organisations rather than newly constituted ones.
- c) The question of whether to give preference to local organisations above organisations based elsewhere should be dealt with on a case-by-case basis.
- d) When considering whether to transfer an enterprise to an individual or a group, the probable success of the enterprise should be the guiding principle. It is often the case that grass roots joint ventures require considerable assistance.

283. The working group was divided on the question of whether enterprises should be given exclusive rights, or whether the principle of competition should prevail.

### **284. What ongoing support from public funds should enterprises be given?**

- a) Any support given should comply with MTI/SME criteria.
- b) Production and marketing functions should be separated.
- c) Business incubation support should be given with a view to the ultimate independence of enterprises.
- d) Research and development programmes, marketing and generic promotion, technology intelligence, and infrastructural and policy assistance should continue. These require the long-term commitment of the government, and might best be provided by a “one-stop shop” institution geared specifically towards providing such support to a range of enterprises.

## **Feedback from working group 2 (ownership models)**

### **285. When should business opportunities be transferred?**

- a) The enterprise should be judged to be viable, on the basis of either proven results or sound market analysis.
- b) The transferring body's exit should be phased over time.
- c) Managerial capacity, technical skills and a sound business plan should be in place. Arrangements should be made for external auditing.
- d) There should be a willingness on the part of the recipients to contribute to the enterprise.
- e) Producers and harvesters should be fully involved.
- f) Intellectual property rights should be licensed to the enterprise.
- g) There should be guaranteed supply and adequate stockholding.
- h) The enterprise should be environmentally sustainable.
- i) There should be a secure market, with contracts in place.

### **286. To whom should enterprises be transferred?**

- a) The recipients should be as close as possible to the primary producers.
- b) Existing institutions with proven track records, and those who are willing to invest should be given preference.
- c) It does not necessarily follow that individuals/groups in an area should be given preference. This should be dealt with on a case-by-case basis.
- d) Recipients should be willing to trade fairly.
- e) No preference should be given to groups/joint ventures above individuals.

### **287. What ongoing support from public funds should enterprises be given?**

- a) Support should meet MTI/SME criteria.
- b) Support in the form of research and development, generic promotion, and market and technology intelligence should be given.
- c) A mentorship relationship should exist where necessary, but only for a limited period.
- d) A "one-stop shop" should coordinate assistance, including the expediting of permit applications.
- e) Enterprises should invest some of their profits in a fund that supports assistance.

## Discussion

288. Mr Bennett: Case studies have shown that where enterprises are moving relatively small volumes, they are not likely to be successful in their marketing initiatives. It might therefore be preferable to establish a single marketing outfit, leaving small enterprises to focus on their production. Some public funding could be made available for this purpose, but enterprises should at least contribute.

289. Mr du Plessis: Past experience has been that enterprises run by individuals who take personal responsibility are generally more successful than those run by groups, where personal responsibility tends to be dissipated.

290. Dr Schreckenber: The investment required for group-run enterprises is also greater than that required for single-owner enterprises.

291. Mr Horn: One of the main problems facing enterprises is the ability to maintain sufficient supply to meet demand. The answer to this lies in building up sufficient stockholding, but this may require some public funding.

292. Mr du Plessis: It is imperative that the workshop address the issue of when and under what conditions information may be made available, and give clear guidelines in this regard.

293. Mr Brock: Part of the answer may lie in the licensing of intellectual property rights.

294. Mr Burger: One must ask what the people who hold information are doing with it. If it is not being used, it should be made freely available.

295. Mr Ipinge: The IFTT is funded by public money. Information that results from the project should therefore be in the public domain.

296. Dr Maggs-Kölling: If CRIAA SA-DC's work is funded by the MAWRD, the ministry's own policy on information should apply. This means that it should be freely available within the ministry, and to other line ministries, but it should only be made available to outsiders with ministerial approval.

297. Mr du Plessis (to Mr Burger): Some information – for example regarding funding, the resource and processing – can be in the public domain, but international commercial concerns such as the Body Shop require confidentiality, and may not even want their names mentioned in the context of specific resources and products, for fear of attracting the attention of competitors and freeloaders. For this reason the supply of marula oil to the Body Shop was until recently kept under wraps. Where commercially sensitive information is involved, there is a clear requirement that confidentiality be maintained, as its disclosure would compromise economic relations. But what of other potentially valuable information generated through project activities? Should this also be made widely available?

298. Mr Burger: Making information available would stimulate competition.

299. Mr du Plessis: Where new products are involved, the first incomers have to invest a great deal of time and money to prove safety and efficacy, for which they expect a period of exclusivity. From the Namibian point of view, it would not be practical to go through these processes without an established international partner – entering into agreements with concerns such as The Body Shop makes good economic sense, but our ability to do so would be compromised by making information available to all and sundry.
300. Mr Burger: What is the situation with *Hoodia*?
301. Mr du Plessis: The CSIR registered a patent for the use of *Hoodia* to suppress appetite, and licensed it to Phytopharm, who in turn licensed it to Pfizer.
302. Mr Matanyaire: The issue should be dealt with at a higher level. Some classes of information should not be made public.
303. Mr Bennett: Perhaps Mr du Plessis should make a proposal and forward it to the relevant committee in the MAWRD, from where it can be sent to other ministries.
304. Mr du Plessis: Is the IFTT mandated to make commercial decisions relating to public funds?
305. Mr Matanyaire: The IFTT doesn't have the necessary authority to reveal information that might damage national interests.
306. Mr du Plessis: It should be noted that the basic research results are in the process of being published.



## The way forward

307. The workshop participants resolved as follows:

- a) The workshop proceedings will be distributed to all workshop participants by 5 June 2003. NASSP, assisted by Mr Hofmeyr, is the responsible body.
- b) The next meeting of the IFTT/IPTT will be held on 5 June 2003. The meeting will be called by Mr Ipinge, and will address the following agenda points:
  - Confirm the change of the IFTT to the IPTT, and establish terms of reference for the IPTT.
  - Clarify the situation regarding intellectual property rights.
  - Clarify the situation regarding the conditions under which information of potential commercial value should be made available.
  - Confirm the recommendations of NASSP/PIF II. (Responsibility: Mr du Plessis/Mr Bennett, by 5 June 2003)
  - Confirm the recommendations of the IFTT workshop. (Responsibility: Mr Bennett/CRIAA SA-DC, by 5 June 2003)
  - Discuss the draft report of Dr Kate Schreckenber. (Responsibility: Dr Schreckenber, by 5 June 2002; final report to be available by 15 June 2003)
- c) Identify new potential members, and invite them to attend the IFTT/IPTT meeting on 5 June 2003 (initially as guests.) (Responsibility: Mr Ipinge, by 5 June 2003)
- d) IPTT stakeholders' meetings will be held biennially.

## Annex

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