



Air layering *Uapaca kirkiana*



Women and children selling *Uapaca* (Masuku)



*Strychnos cocculoides* fruit

## The Way Ahead for the Domestication and Use of Indigenous Fruit Trees from the Miombo in Southern Africa



Involving stakeholder representatives during a workshop in Malawi



**International Centre for Research in Agroforestry (ICRAF)**

Southern Africa Regional Programme  
SADC-ICRAF Zambezi Basin Agroforestry Project

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**The Way Ahead  
for the Domestication and Use of  
Indigenous Fruit Trees from the Miombo  
in Southern Africa**

*Proceedings of a workshop held at Sun & Sand,  
Mangochi (Malawi) from February 27 to 28, 2001.*

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**Report edited and compiled by:**

**Andreas Böhringer and Festus Akinnifesi**

**Workshop Moderator:**

**Sam Matemba**

**May 2001**

Funds for this workshop at Mangochi were kindly provided  
by the Federal Republic of Germany through BMZ- GTZ and ICRAF

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Published 2001

International Centre for Research in Agroforestry  
Makoka Research Station  
P.O. Box 134, Zomba, Malawi.  
Tel: 534 277/250/212  
Fax: 534 283  
Email: [icrafmalawi@sdp.org.mw](mailto:icrafmalawi@sdp.org.mw)

ICRAF is a FUTURE HARVEST Centre supported by  
the Consultative Group on International Agricultural Research

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<u>Workshop Secretariat:</u>	Kettie Mwabumba and Gealward Kaonga
<u>Desktop Publishing:</u>	Gealward Kaonga

Correct citation:

Böhringer A and Akinnifesi F (2001). *The Way Ahead for the Domestication and Use of Indigenous Fruit Trees from the Miombo in Southern Africa..* Makoka, Malawi: International Centre for Research in Agroforestry, 47 pages.

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## II. List of Acronyms

ADD	Agricultural Development Division
AF	Agroforestry
BMZ	Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (German Ministry for Economic Cooperation)
CIDA	Canadian International Development Agency
GTZ	Gesellschaft für Technische Zusammenarbeit (German Development Cooperation)
ICRAF	International Centre for Research in Agroforestry
IF	Indigenous Fruit
IFT	Indigenous Fruit Trees
ITFSP	Intergration of Tree Crops into Farming Systems Project
MW	Malawi
NARS	National Agricultural Research System
OP	Operational Plan(s)
PO	Plan of Operation
PM	Program Manager
PPM	Project Planning Matrix
RBM	Results Based Management
SA	Southern Africa
SADC	Southern African Development Community
SP	Stakeholder Participation
TZ	Tanzania
ZM	Zambia
ZW	Zimbabwe

### III. Executive Summary

The project phase I of the "Domestication of Indigenous Fruit Trees of the Miombo Woodlands of Southern Africa", currently being implemented by ICRAF (International Centre for Research on Agroforestry), started in October 1997 with a no-cost extension till June 2001. As the phase I of the project is drawing to an end, a project review was commissioned by BMZ in February 2001 and a proposal for a second phase is prepared. A two-day workshop organized by ICRAF and supported by BMZ, involving representatives of key stakeholders was convened at Sun 'n' Sands, Mangochi/Malawi between February 26<sup>th</sup> and March 1<sup>st</sup> 2001, to plan the way forward for work on indigenous fruit trees in the region. This report summarizes the proceedings and outputs of this workshop.

Major discussion in this workshop centred on findings and recommendations of the BMZ review team and a concept note that was submitted earlier to BMZ by ICRAF-SA. Discussions on the way ahead focused on whether to scale up the current project by putting more emphasis on indigenous fruit utilization and marketing including widening the mandate of ICRAF's work to exotic fruit tree species and medicinal trees; or to continue within the framework of the current project.

The workshop used the Project Planning Matrix (PPM) as a framework for conceptualizing future work on IFT domestication in the region. The workshop agreed on purpose and objectives as well as major outputs for a 3-year project to be designed after submission of a project proposal to BMZ by the end of May 2001. Discussions and group work during the workshop assisted much in advancing such a project proposal, allowing to take key stakeholder views into consideration at this early planning stage. Seven outputs for a subsequent project were jointly drafted and key activities with indicators for each of the objectives identified. Outputs agreed were as follows:

1. Longterm domestication strategies for priority IFT's implemented.
2. Commercialization strategies for IFT products implemented.
3. Utilization of IF's and products improved.
4. Harvesting, processing and post-harvest handling practices and skills developed.
5. Capacity in indigenous fruit tree domestication improved among farmers and partners.
6. Awareness on domestication, cultivation, utilization and commecilization increased.
7. Selected IF propagules and appropriate tree management practices available

Due to the fact that the workshop was limited to two days only, the participants agreed that adequate time needed be given to discussions at this early stage of planning. Consequently, a complete PPM could not be developed. Feedback from the final wrap up-discussion recommended for instance to consider reducing the proposed number of outputs from seven to five. These and other recommendations were given to a team that was commissioned to prepare a project proposal to be submitted to BMZ by end of May 2001. A detailed plan of operation would then be developed in another workshop in case of acceptance of the project proposal by BMZ. Clarification will be sought from GTZ/BMZ after the reviewers present their findings in Germany on whether the project proposal should aim at requesting funding for a 2<sup>nd</sup> phase of the existing project or be an adaptation of the already accepted concept note: "Commercializing Increasing Household Use of Agroforestry Tree Products for Improved Nutrition, Health and Incomes in Southern and Eastern Africa." Consultations with GTZ in the meantime have shown that the full proposal should be based on the PPM developed in this workshop. Another critical issue was on bridging gaps in funding to allow on-going work to continue until the contract for a 2<sup>nd</sup> phase/new project could be signed with BMZ in February 2002. It was also agreed that the participating countries in the project should be restricted to Southern Africa.

Overall it can be said that the workshop facilitated much needed fruitful and open discussion on the future of IFT work in the region, allowing a fresh look from different angles on some key issues. The creativity, flexibility and high degree of commitment on part of the participants during this workshop, provided crucial inputs in preparing a project proposal aiming to increase impact of IFT's on people's livelihoods in the region.

#### **IV. Introduction**

ICRAF's Southern Africa Program with support from BMZ has been implementing the project "Domestication of Indigenous Fruit Trees of the Miombo Woodlands of Southern Africa" in Tanzania, Zambia, Malawi and Zimbabwe since 1997. The project focus has been on species priority setting, screening of germplasm and developing horticultural techniques that allow easy and fast propagation of germplasm. Considerable attention has also been given to aspects of fruit utilization and marketing. This project terminates with a non-cost extension being granted by BMZ in June 2001. A subsequent phase was envisaged early and ICRAF had submitted a new concept note for funding to BMZ entitled "Commercialising and Increasing Household Use of Agroforestry Products for Improved Nutrition, Health and Incomes in Southern and Eastern Africa". This concept note was accepted by BMZ and ICRAF was invited to prepare a full project proposal to be submitted by May 31, 2001 for further consideration. Concurrently, BMZ also commissioned an evaluation of the on-going domestication project, ending in June 2001. The tasks of the review mission were:

1. To assess results achieved in relation to the project contract signed between ICRAF and GTZ as executing agencies.
2. To analyse existing planning documents, and the general design and institutional set-up of the project.
3. To draw recommendations on how future work should be conceptualised and implemented.

It was also agreed between ICRAF and BMZ that a short workshop should be convened to wrap up the evaluation mission and to reflect on the domestication project as well as plan the way ahead for fruit tree and other high value tree work in the region. The objectives for this workshop were:

- To review the project on domestication of indigenous fruit trees and to analyse its achievements and shortcomings.
- To identify outcome/output gaps and set priorities for ICRAF's future work on high value trees in SA.
- To review the new concept note accepted by BMZ and draft a project proposal for the next three years taking stakeholder views into consideration.

#### **V. Workshop Methodology**

To achieve the workshop objectives, presentations by the review mission of the current project on the new concept note, the RBM and the PPM were made, followed by group work as well as discussions in plenary. ZOP techniques were used to visualize and document all workshop outputs. The following presentations provided the key inputs into discussions:

- The BMZ Project Review findings.
- An overview on current project achievements
- The content of the 'new concept note' and some rationale behind its submission

The sequencing of the workshop proceedings was designed to provide all participants with information needed so that agreements and consensus regarding key elements of the future project could be reached. Synthesis presented in plenary concluded each session. Table 1 outlines the proceedings in chronological order. It was observed that this schedule did not differ significantly from the one proposed at the beginning of the workshop. Two aspects of the PPM namely identification of 'Assumptions and Risks', and outlining the 'Institutional Set-up for Implementation' could not be fully covered due to time constraints.

**Table 1: Schedule of ICRAF – BMZ Workshop Proceedings**

<b>February 27<sup>th</sup> &amp; 28<sup>th</sup> 2001</b>	
<b>Time</b>	<b>Activity</b>
<b>08:00 hrs</b>	<ul style="list-style-type: none"> <li>• Welcome/ Opening (A. Böhringer)</li> <li>• Introductions / Expectations (S. Matemba)</li> <li>• Workshop Objectives (S. Matemba)</li> </ul>
<b>09:00 hrs</b>	<ul style="list-style-type: none"> <li>• Tanzania Project Overview (Remen Swai)</li> <li>• Overview IFT Project – SA (F. Akinnifesi)</li> <li>• Opening Speech on behalf of Ministry of Agriculture by Program Manager – Machinga ADD (A.J. Kaunda)</li> </ul>
<b>10:15 hrs</b>	<ul style="list-style-type: none"> <li>• Refreshments Break</li> </ul>
<b>10:20 hrs</b>	<ul style="list-style-type: none"> <li>• CIDA-RBM Matrix Overview of ICRAF SA Program (F. Kwesiga)</li> <li>• New concept note (A. Böhringer)</li> <li>• Findings of the review of the current project (F. Bremer and G. Baumann)</li> </ul>
<b>13:00 hrs</b>	<ul style="list-style-type: none"> <li>• Lunch Break</li> </ul>
<b>14:00 hrs</b>	<ul style="list-style-type: none"> <li>• Plenary Discussions and Response – Project Review Findings</li> <li>• Project Planning Matrix {In Plenary}                             <ul style="list-style-type: none"> <li>○ Overall Project Goal – Plenary discussion.</li> <li>○ Presentation of Concepts behind PPM (F. Bremer)</li> <li>○ Project Purpose – Plenary discussion .</li> </ul> </li> </ul>
<b>END OF DAY ONE</b>	
<b>DAY TWO – February 28<sup>th</sup> 2001</b>	
<b>Time</b>	<b>Activity</b>
<b>08:00 hrs</b>	<ul style="list-style-type: none"> <li>• Review of Previous Day Proceedings - (Report by workshop process committee (B. King'ori)</li> <li>• Synthesis on Purpose Statement (I. Kadzere)</li> </ul>



**Table 1: Schedule of ICRAF – BMZ Workshop Proceedings**

<b>February 27<sup>th</sup> &amp; 28<sup>th</sup> 2001</b>	
<b>Time</b>	<b>Activity</b>
<b>08:10 hrs</b>	<ul style="list-style-type: none"> <li>• 1<sup>st</sup> working group assignment – Identification of project outputs (PPM Contd.)</li> <li>• Plenary discussions and agreement on Outputs from group-work.</li> <li>• 2<sup>nd</sup> working group assignment: refining outputs based on inputs given in plenary and identification of output indicators; identification of key activities.</li> <li>• Group presentations and agreement in plenary on summarized outputs/ indicators/ activities.</li> <li>• Short presentation on definition and formulation of indicators (F. Bremer).</li> </ul>
<b>13:00hrs</b>	<ul style="list-style-type: none"> <li>• Lunch break</li> </ul>
<b>14:20hrs</b>	<ul style="list-style-type: none"> <li>• Presentation of revised PPM at output level</li> <li>• 3<sup>rd</sup> working group assignment – refining activities and indicators</li> <li>• Tea break</li> <li>• Group presentations and final plenary discussions on activities and indicators</li> <li>• Plenary discussion on some key institutional issues</li> </ul>
<b>18:00hrs</b>	<ul style="list-style-type: none"> <li>• Workshop Evaluation</li> <li>• Social get - together</li> </ul>
<b>END OF DAY TWO AND WORKSHOP</b>	

## **VI. Summary of workshop proceedings**

### **1. Opening Remarks**

The workshop was supposed to start with an opening address by the Program Manager (PM) – Machinga ADD Mr. A.J. Kaunda on behalf of ICRAF's hosting institution in Malawi, the Ministry of Agriculture and Irrigation. However, because of the delayed arrival of some participants from Zimbabwe, the PM's address was shifted to the morning tea break, when the party from Zimbabwe arrived.

Freddie Kwesiga, ICRAF's Regional Coordinator for Southern Africa made his opening remarks as follows:

"I would like to move a vote of thank the reviewers for a professional job that will show us the achievements and shortfalls of the Phase I and guide us in developing a proposal for BMZ funding of a subsequent project. The reviewers spent 3 weeks together with the team and our partners in Malawi, Zambia and Zimbabwe and came up with very useful recommendations. I urge all the participants to think through these recommendations and distil key issues that we need to address as gaps in phase II. My own observations are:

- It is a good idea to have a phase II of the on going domestication project on indigenous fruits of the miombo. The concept note needs to be reviewed in light of such recommendations and toned down in areas that are over-ambitious.
- During this workshop we should also focus on those recommendations from the review that will allow us to formulate future research directions.
- The reviewers were concerned about the regional dimension of the project. We need to discuss this in working groups and show how a future BMZ project can add value to other ICRAF investors in the region (CIDA, DFID, NORAD, SIDA etc)
- We also should concentrate more on the basic hypotheses and assumptions, e.g. if we say that fruit trees are essential in food security or cash income in the region, we need to articulate this, reviewing literature and quantifying to what degree this has happened.
- Lets spend some time reflecting on core issues of the current phase and what the future ones should look like. We should be realistic by avoid putting too many deliverables in future plans, in relation to resources available, time and commitment of partners.
- We should also discuss our relationship with GTZ and BMZ and how communications with our German partners can be improved, so that better relations, trust as well as synergies can be created during the next project. May be we should discuss with BMZ/ GTZ the merits of having a project monitor assigned, who could visit the region at least once a year during the planning meetings so that feedback mechanisms can be improved?

I wish to thank the team and partners for their time and patience during the review period. Thank you very much".

## **2. Introductions/ Expectations**

For introductions and to capture the workshop expectations, each participant was requested to put down on cards, their hopes and fears for the workshop's proceedings. After introducing themselves each participant's expectations were put on display on the pin-board. Table 2 is a summary of the participants' expectations and fears for the workshop.

**Table 2: Summary of Participants Expectations and Concerns**

Hopes for this workshop			Fears for this workshop		
Address priorities	We think long-term	Focussed second phase	Inconclusive way forward	Time to do all the work is not enough	We may continue going in circles
Implementable program with impact in mind	Hoping the best for indigenous fruits + more	Realistic planning of 2 <sup>nd</sup> phase	Non participatory approaches to kill impose ideas	Short time to reach a consensus on key issues	Domestication deferred/abandoned
To know successes and failures of domestication of indigenous fruit trees	To draft a project proposal for next three years	Acceptable outcome (product) on future of miombo fruit domestication	Presentations will take too long – No PPM	Second phase overridden by ideas of new concept note	Uncompleted work abandoned (Discontinuity)
To know where we failed in phase 1	Develop winning proposal for second phase	Well defined result oriented outputs on indigenous fruits	More IF production without considering demand	Develop a plan that is not achievable/ time frame	There will be a lot of time wasted before we agree on final proposal
Set bold targets	Project extension	Coherent project plan	Some feelings 'left out'	Over ambitious planning	Fail to prioritise
We will agree on one proposal at the end of the workshop/early enough	Discuss weaknesses and strengths of current phase	Know the way ahead of the domestication of indigenous fruits of the miombo			
Learn of our successes in the first phase	Better stronger collaboration	A consensus supporting proposal			
Identify gaps from current phase	List of activities for the next phase	Discuss and agree on way forward			
Achieve something - happy-					

### 3. Workshop Objectives

The workshop proposed objectives were discussed at length. There was a strong concern expressed by some participants about the possibility of the 'New Concept Note' taking central focus of the workshop opposed to having open discussions about the future of IFT work in the region. As a result of clarifications and suggested alterations to the proposed ones, the final workshop objectives were adopted as illustrated below:

## **Workshop objectives**

- i. To review domestication of indigenous trees and analyse its strength and weaknesses.
- ii. To review the new concept note accepted by BMZ as input towards planning for work during the next three years.
- iii. Develop a basic project-planning matrix for a future three year project.

### **4. Tanzania Project Overview**

While waiting for the presentation of some of the scheduled activities for the workshop it was decided to have a presentation of the Tanzania project, as the reviewers had not been able to visit this country during the review. The presentation was summarized as follows:

#### **Project summary**

- Planned collections carried out
- *Uapaca* trial needs replication
- Seed orchard for 10 top medicinal trees established
- IFT slow growth, too small for grafting more time needed to identify appropriate vegetative propagation methods
- Germination techniques developed
- Training farmers on benefits of IFTs and how to process and commercialise (1,235 women trained).

#### **Way forward**

- Select superior traits/mother trees
- Scale up germplasm supply
- Processing/marketing IF products
- Integrating IFT s into farming systems
- Need to conduct training on propagation

### **5. Overview of IFT Project**

The Tree Domestication Team Leader in Southern Africa, Festus Akinnifesi, presented an overview of the current IFT project.

The presentation started by highlighting the ICRAF sites in the region. This was followed by a problem analysis, which justified the project. The overall goal of the current IFT project was given as, 'to improve nutrition and income of rural poor in the region by promoting the domestication and wide cultivation, utilization and marketing of priority indigenous fruit trees of the miombo woodlands'. Key achievements of the project were in the areas of:

- Species prioritization
- Identification of regional priority species
- Farmers identifying tree traits for improvement

The presentation also gave some highlights on results related to the field survival of IFTs – on farm vs on station, seed propagation and vegetative propagation. Conclusion that can be drawn from this project were summarized as:

- Low on-farm performance of most priority species warrants further farmer-led management studies. Most work have revolved around regional priority species and there is need to go down the list (some early fruiting, easy to propagate species may then get domestication preference);
- Developing IFT domestication into a viable commercial tree crop sector should be one future focus of the project; farmers should not only become food secure but get incomes.
- A change in strategy is needed, if domestication products must be delivered in large-scale; a direct clonal approach is proposed

A full version of this presentation in handout format is given in Annex IV.

## 6. RBM Matrix Overview

The Regional Coordinator, Freddie Kwesiga, made a presentation on the Results Based Management framework introduced by CIDA into ICRAF's Southern Africa Program. This was important for all participants to know this approach to planning as ICRAF's project planning in Southern Africa is based on this framework. The RBM just like the PPM is based on a log frame concept.

The usefulness of RBM can be summarised as follows:

- It improves management effectiveness and accountability
- It involves stakeholders in:
  - Defining realistic expected results
  - Assessing risk
  - Monitoring progress towards the achievement of expected results
  - Integrating lessons learned into management decisions
  - Reporting on performance

The presentation also went on to demonstrate the value of some of the components of RBM, such as:

- Stakeholder participation
- Defining expected results
- Identifying assumptions and risk
- Selecting performance indicators
- Collecting performance information
- Performance reporting

Tony Simons, Program 2 Leader at ICRAF Headquarters also complemented the presentation by further illustration of the RBM concept, using a diagrammatic presentation. Both power point presentations are provided in Annex III.

## **7. New Concept Note**

ICRAF's Development Leader in SA, Andreas Böhringer, presented the elements of the accepted new concept note by using a PPM matrix on pinboards, a summary of which is provided in Annex II. The background to the preparation of this concept was given as based on:

- ICRAF's intention to submit three competitive concept notes by October 31 (one from SEA, one from LA and one from SA);
- The intention by the Development Division to combine an earlier submitted project proposal on marketing by Program 4 with the draft concept note having been prepared by SA,
- The integration of some of the work of the GTZ-ITFSP project which terminates this year, and
- The need to re-focus selection of countries based on the need to include a component at ICRAF headquarter in Kenya as well as consider recent realignment of German aid in Africa.

Some of the main points raised during the discussion following this presentation were:

- The shift in focus in the new concept note to 'marketing' and the inclusion of 'other high value trees such as exotic fruit trees and medicinal trees'
- The choice of countries, for instance the inclusion of Kenya and Mozambique, while leaving out Zambia, was also questioned,

As discussions on details of the concept note seemed to be getting locked up on details that the reviewers indicated were also going to make observations on, it was agreed to suspend further discussion and to proceed with the reviewers' presentation.

## 8. Findings of the BMZ project review mission

Both reviewers had prepared an elaborate presentation on pin boards before the workshop started which could be presented in a concise and efficient fashion (see Table 3 below).

<b>Table 3: REVIEWER'S PRESENTATION</b>			
<b>CONTEXT</b>	<b>ICRAF DOMESTICATION PROGRAMME – IFT ON GOING -</b>		<b>BMZ – PROJECT 10/97 TO 06/01 (~50%) 1.6 MILLION DM</b>
<b>PLANNING</b>	<b>ACHIEVEMENTS</b>	<b>POINTS OF REFLECTION</b>	<b>RECOMMENDATIONS</b>
	<ul style="list-style-type: none"> <li>Contract/work plan</li> <li>PO in 06/98 with revisited PPM</li> </ul>	<ul style="list-style-type: none"> <li>OP for whole phase?</li> <li>No sub-activities, milestones, time frame and responsibilities</li> <li>Ambitious planning</li> <li>No clear distinction BMZ-CIDA</li> </ul>	<ul style="list-style-type: none"> <li>Yearly evaluation and planning workshop</li> <li>Realistic indicators + activities</li> <li>Regular planning, coordination + monitoring of 2 donors</li> <li>Clear reporting modalities</li> </ul>
<b>IMPLEMENTATION</b>			
<b>1. Priority setting</b>	<ul style="list-style-type: none"> <li>Survey done, document published</li> <li>Analysis meeting held</li> </ul>	<ul style="list-style-type: none"> <li>No distribution maps and monograph chapters</li> <li>Priority setting incomplete (other players)</li> <li>Further surveys on indigenous knowledge and marketing needed</li> </ul>	<ul style="list-style-type: none"> <li>Finalise priority setting</li> <li>Define country strategies</li> <li>Distribution maps</li> <li>Continue analysis of indigenous knowledge</li> <li>State of the art reports</li> </ul>
<b>2. Germplasm collection</b>	Collection 1998 MW: Strychnos "cocculoides" TZ: Strychnos 6, Parinari 3 ZM: Strychnos 4 ZW: Strychnos 18, Ziziphus	<ul style="list-style-type: none"> <li>Collection of two priority species + two <u>new</u> priority species not completed</li> <li>No exchange of germplasm</li> <li>Identification of superior trees not adequate</li> </ul>	<ul style="list-style-type: none"> <li>New collections should only target superior trees</li> <li>Superior trees should be propagated vegetatively</li> </ul>
	Collection 1999 MW: Uapaca, Strychnos, parinari TZ: ZM: ZW: Uapaca		<ul style="list-style-type: none"> <li>Reproductive biology of IFT should be studied and be included in the IFT monographs.</li> </ul>
	<ul style="list-style-type: none"> <li>Collection meetings</li> <li>Propagation in nurseries</li> <li>1999 ZW Uapaca sex-ratio</li> </ul>		

**Table 3: REVIEWER'S PRESENTATION**

CONTEXT	ICRAF DOMESTICATION PROGRAMME – IFT ON GOING -	BMZ – PROJECT 10/97 TO 06/01 (~50%) 1.6 MILLION DM	
PLANNING	ACHIEVEMENTS	POINTS OF REFLECTION	RECOMMENDATIONS
<b>3. Germplasm evaluation</b>	<ul style="list-style-type: none"> <li>- Nutritional value of several IFT fruits assessed</li> <li>- On-farm trials in all 4 countries</li> <li>- On-station trials with Strychnos</li> <li>- Germination trials in nurseries</li> <li>- Strychnos seed storage trial</li> <li>- Uapaca trial Malawi (Air-layer versus seedlings)</li> </ul>	<ul style="list-style-type: none"> <li>- No protocol for on-farm trials available</li> <li>- Only Strychnos cultivated on-station for evaluation</li> <li>- Superior trees may not be identified by evaluation of provenance trials</li> </ul>	<ul style="list-style-type: none"> <li>- Trial protocols for on-farm and on-station should be elaborated in order to distinguish between trial and dissemination</li> <li>- Superior trees still have to be identified</li> <li>- Laboratory analyses to continue according to needs</li> </ul>
<b>4. Propagation techniques</b>	<ul style="list-style-type: none"> <li>- National nurseries improved</li> <li>- Vegetative propagation studied</li> <li>- Extension material published on planting, air-layering, processing</li> <li>- Dissemination of trees by partners</li> </ul>	<ul style="list-style-type: none"> <li>- Success rates of vegetative propagation still low</li> <li>- No work on tree management</li> <li>- Quality of distributed trees questionable</li> </ul>	<ul style="list-style-type: none"> <li>- Refine propagation work and evaluate possible tissue-culture</li> <li>- Do studies on tree management and publish literature, trials</li> <li>- Analyse comparative advantage of IFT and exotics</li> <li>- Work out strategy for in-situ conservation</li> </ul>
<b>5. Processing + marketing</b>	<ul style="list-style-type: none"> <li>- Market surveys (some) carried out</li> <li>- Prototypes of jams, juices and</li> </ul>	<ul style="list-style-type: none"> <li>- Economic viability of fresh fruit sales and processing not yet established</li> <li>- Main market survey data still not available</li> </ul>	<ul style="list-style-type: none"> <li>- Evaluate PhD studies for decision making</li> <li>- Produce synthesis of processing practices for IF</li> </ul>



**Table 3: REVIEWER'S PRESENTATION**

CONTEXT	ICRAF DOMESTICATION PROGRAMME – IFT ON GOING -	BMZ – PROJECT 10/97 TO 06/01 (~50%) 1.6 MILLION DM		
PLANNING	ACHIEVEMENTS	POINTS OF REFLECTION	RECOMMENDATIONS	
	snacks available - Some women trained in production techniques ZM + MW	- Gap between prototype and utilisation/commercialisation	- Produce training modules on processing and enhance capacity building	
<b>6. Policy Making (not BMZ)</b>	Zimbabwe: - Constraints identified (germplasm supply; laws...) - Dialogue meetings held	- Regional synthesis + country specific recommendations not yet completed	- Assess constraints at policy-level in all 4 countries - Propose adaptations of rules	
<b>7. Capacity building</b>	- ICRAF: cooperation network of >160 partners used also for IFT - Training of farmers and partners - Co-operation with NARs	- Experience of NARs not fully considered	- Further use of network for dissemination - Intensify training - Closer cooperation with NARs ⇒ State of the art reports needed	

**Table 3: REVIEWER'S PRESENTATION**

CONTEXT	ICRAF DOMESTICATION PROGRAMME – IFT ON GOING -		BMZ – PROJECT 10/97 TO 06/01 (≈50%) 1.6 MILLION DM
PLANNING	ACHIEVEMENTS	POINTS OF REFLECTION	RECOMMENDATIONS
<b>SUMMARY – PROJECT PURPOSE</b>	<ul style="list-style-type: none"> <li>- Awareness created</li> <li>- Priorities set (?)</li> <li>- Dissemination started</li> <li>- National programmes underway</li> <li>- Network of partners</li> </ul>	<ul style="list-style-type: none"> <li>- Low degree of execution of PO</li> <li>- No regional programme</li> <li>- Controversial points remain: conservation in-situ, marketability</li> <li>- No improvement of trees + fruits; dissemination?</li> <li>- Unfinished research business</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure continuity + improvements in 2<sup>nd</sup> phase</li> </ul>
<b>STEERING IMPLEMENTATION SET UP</b>	Integration into SADC-ICRAF Agroforestry project	<ul style="list-style-type: none"> <li>- CIDA and BMZ project not merged BMZ part neglected</li> <li>- Late posting of horticulturists</li> </ul>	<ul style="list-style-type: none"> <li>• Stronger coordination</li> <li>• Common planning</li> <li>• M+E of donor</li> <li>• Clear reporting modalities</li> </ul>
	High level of competence, commitment + motivation in country teams	<ul style="list-style-type: none"> <li>- Coordination not efficient → no regional project</li> <li>- No GTZ – backstopping</li> <li>- Poor report quality (BMZ – PO)</li> </ul>	<ul style="list-style-type: none"> <li>• Regular consultations of participating countries</li> <li>• Regular backstopping-GTZ</li> </ul>

The reviewers also had some comments on the new concept note as quoted from their report, "As a general remark it must be stated that IFT is no longer in the centre of interest of the concept note. The emphasis appears to be overly biased to marketing when in reality this is a development aspect rather than a framework for the next project. The domestication of IFTs and other trees (e.g. medicinal) is not yet sufficiently advanced to warrant the marketing of as yet undeveloped prototype products. This aspect should therefore remain at output level. As far as IFT are concerned, the proposal of the review mission covers the outputs one and two of the concept note. Exotic fruits should be especially considered in a combined dissemination approach, as there is indeed a strong demand from farmers, but should not dominate the new project design. The integration of two new countries and abandoning Zambia and Zimbabwe would constitute a rupture of continuity. In general, the new project should build upon the outputs and successes of the Miombo fruit tree project whilst integrating the added value of research outlined in the concept note."

## **9. Plenary discussion on review findings**

A thorough discussion followed the reviewers' presentation, according to key issues raised by their findings. The discussion and comments followed the topic format adopted by the reviewers in their presentation (see Table 4 above) as summarized below:

### **9.1 Context**

- Integration of domestication within ICRAF's Programme 2 and roles unclear
- Set-up of project within SA program
- Responsibilities be well – defined
- Project life-cycle 3 years – realistic – priorities required (project 2 phases)
- Long incubation period before commencement of project

### **9.2 Planning**

- 97, 98 & 99 Annual Regional Meetings included domestication project: New approaches for report presentation required.
- Resource allocation for operational activities was unrealistic

### **9.3 Priority setting**

- ICRAF's guidelines 'more' inclusive for selection – be used in phase 2
- Distribution maps more updated - + GIS results – provide information on effect of deforestation
- IK – type and methodologies documentation, utilization and standardization (state of art report critical)

### **9.4 Germplasm collection**

- Maintenance of pre-1997 trials valuable
- Collection – targeted/random?
- Range wide collection for ex-situ conservation
- Seed collection – cuttings not different parts of trees – possibility
- Collection not necessarily expensive if well targeted + planned

### **9.5 Germplasm collection**

- Clarification on reproductive biology

### **9.6 Germplasm evaluation (GE)**

- Differentiation between evaluation and dissemination

### **9.7 Propagation techniques**

- Comparison advantageous for the farming community – more options/choices

### **9.8 Processing and marketing**

- Capacity building to include business skills
- Each enterprise to have an socio-economic analysis (recommendation)
- Evaluation of demand – economic/utilization/preference

### **9.9 Policy making**

- Policies identified in Zimbabwe trends/differences in Tanzania, Zimbabwe and Malawi required.

**9.10 Capacity building**

- Type of training – partners, farmers
- Postgraduate training – coverage to be more inclusive (countries + fields)
- Selection of candidates clear and transparent

**9.11 Summary**

- Critical/important conclusion

**9.12 Steering implementation set-up**

- GTZ backstopping was lacking
- GTZ resource person to participate in Annual Regional Meetings

**9.13 Steering/Implementation Set-up**

- Consultation undertaken – regional scientist – focal point
- Concern 'towards' exchange/testing of germplasm
- Liaison person required from GTZ
- Format for reporting to GTZ requested
- Buffering for fluctuation in currency – Annual planning necessary for prioritisation/adjustments

**9.13 Reviewers' Comments on New Concept Note**

It was felt that the reviewer's comments on the new concept note should not be discussed at this point in time. However, the comments would be taken into consideration together with the other recommendations of the review mission when generating goals, project purpose and outputs during the development of a PPM for the way ahead.

**10. Developing a Project Planning Matrix for the way ahead**

When all presentations and their discussions were complete, the energy of the workshop shifted towards generating ideas and making decisions on the future of the project. Most of the conflicts generated by the 'New Concept Note' re-surfaced at this point. It was agreed that a more constructive approach would be to define the goal of a new project first before going into detailed discussions on outputs and activities.

**10.1 Overall Project Goal**

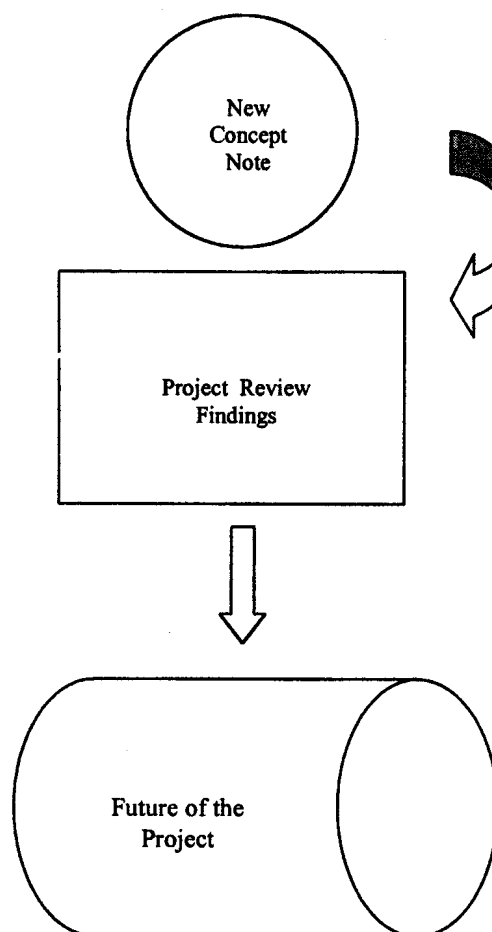
The plenary did not spend much time discussing the overall goal for the future of the project as it was quickly agreed that the current project goal would suffice for any project proposal whether inclining towards the project review recommendations or including some suggestions tabled in the 'New Concept Note'.

**10.2 Project Purpose Summary**

Discussions on the purpose statement for moving the project proposal planning forward were done in plenary. A lot of the debate centred on whether either the new concept note or the project review recommendations should have more bearing in shaping the way forward. This prompted, Tony Simons to raise a point that people may be talking about the same object, but only looking at it from different angles, like looking at a cylinder from the front (=circle) or side (=rectangular), both are valid perspectives on the same object! The illustration below was used to visually demonstrate his point.

**'THE WAY AHEAD'**

**Visualizing Perceived Differences between New Concept Note and Review Findings**



To develop an appropriate purpose statement and to move the project forward, it was suggested to have the 3 different purpose statements (for current project, the new concept note and the one from the reviewers recommendations), on display to facilitate plenary reflection. This resulted in the generation of two new statements. This generated further discussion without reaching agreement. To move forward, a team was then set-up to finalize the statement overnight, incorporating concerns voiced during discussions, for plenary adoption the following day. Table 4, is a summary of the visualization of discussions and conclusion of the purpose statement.

<b>Table 4: Summary of Proposed Project – Purpose Statement</b>		
<b>Source</b>	<b>Statement</b>	<b>Plenary Comments/ Concerns</b>
<b>. Current project</b>	Promote domestication of priority species of IF for wider growing, utilization and marketing by farmers in S.A	<i>Promote (too nebulous)</i>
<b>. Reviewers</b>	Farmers apply a long term strategy for domestication and in-situ conservation of IFT in four countries of the Miombo	<i>In-situ conservation</i>
		<i>Miombo Vs S.A Vs 5 countries</i>
		<i>No utilization + marketing</i>
<b>. Concept note</b>	Promote the utilization + marketing of tree products that are key to the rural poor in S.A. in respect to nutrition, health and income	<i>No domestication</i>
		<i>Any tree (too broad)</i>
		<i>Health (new)</i>
<b>. Plenary</b>	<ol style="list-style-type: none"> <li>Enhanced cultivation, marketing and utilization by farmers of miombo fruit trees and associated tree species</li> <li>Enhance domestication of priority species of IFT for wider cultivation, utilization by farmers in SA</li> </ol>	
<b>. *Task team</b>	ENHANCE FARMER-LED DOMESTICATION OF PRIORITY IFTS OF THE MIOMBO FOR WIDER CULTIVATION, UTILIZATION AND COMMERCIALIZATION IN FOUR COUNTRIES OF SA.	<i>Farmer(s)-domesticate (cultivate, utilize and commercialise) priority IFTs of the Miombo in four countries of SA</i>
<b>. Plenary (Final)</b>	<b>FARMERS DOMESTICATE, CULTIVATE, UTILIZE AND COMMERCIALISE PRIORITY IFTS OF THE MIOMBO IN SOUTHERN AFRICA</b>	

Task Team: Festus Akinnifesi, Tony Simons, John Saka, Irene Kadzere, Alfred Mkonda

## 11. Review of the workshop process after day one

A Process Committee set-up to review workshop proceedings gave a report on their discussions as summarized in Table 5 below. Beatrice King'ori, a member of the Process Committee, presented the report the following morning.

Table 5: PROCESS COMMITTEE REPORT*	
REVIEW OF DAY I	WAY FORWARD FOR DAY II
Presentations were clear	A harmonised and agreeable project purpose
Long and detailed discussions on some issues	<ul style="list-style-type: none"> <li>• Focus on priority needs to be achieved</li> <li>• Brainstorm on outputs in groups</li> </ul>
Time management not strict	Better time management

Process Committee Members: Sam Matemba, Frank Bremer, Remen Swai, Charles Mwamba, Beatrice King'ori, Steve Franzel and Dzingai Rukuni (*did not attend the Review Meeting*).

## 12. Advancing PPM further - Project Outputs

After reaching a consensus on the purpose statement, the participants broke up into 3 different groups, each with the same assignment – 'to develop a set of outputs' for the project that would contribute effectively in achieving the agreed purpose. This group-work was then presented in plenary. After discussions, comparisons and similar output clusters were formed, resulting in preliminary identification of 8 outputs. Participants then split into 4 groups each, taking two closely related outputs. The task was to refine outputs and to develop indicators and key activities under each output.

Results from the four groups were brought back for plenary discussion. One immediate result of this process was the number of outputs being reduced to seven. It was also found that participant's perceptions on formulation of outputs, indicators and activities varied greatly and that some concepts of PPM should be revisited in plenary first, before group work could resume. Frank Bremer provided a useful and brief overview on PPM and gave a number of examples on formulating outputs and activities. He then took the plenary through one whole output, which helped to illustrate the concept. Following this demonstration, participants went back to their respective groups to refine indicators and activities.

After groups reconvened in plenary it became clear that there was not enough time available for completing all indicators and activities for each output. It was, therefore, agreed that a plenary discussion should run through all outputs produced by working groups and open issues were noted down. It was then agreed that a team outside the workshop would be asked to complete the task of preparing a draft PPM and a project proposal to be submitted to BMZ. Table 6 summarizes the final outputs produced in working groups followed-up by discussions in plenary.

**Table 6: Summary of Group work on Outputs, Activities and Indicators (with Plenary Comments)**

	<b>Indicators</b>
<b>Project Purpose</b>	<b>Farmers domesticate, cultivate, utilize and commercialise priority IFTs of the Miombo in Southern Africa</b>
<b>Output 1:</b>  <b>Long term domestication strategies for priority IFT's implemented</b>	At least 2 major partners in every country have adopted strategies by year 3 of project
<b>Activities</b> 1.1 Produce monographs of priority IFT spp. 1.2 Formulate specific domestication strategies. 1.3 Update priority setting through supplementary surveys 1.4 Assess effects of policies on IFT production, utilization + marketing 1.5 Developing policy options and facilitate policy change.	<i>State-of-the art on IFT's</i> <i>1.4 + 1.5 could also be moved to marketing</i>
<b>Output 2:</b>  <b>Commercialization strategies for IFT products implemented</b>  <i>(Merge commercialization with post-harvest since marketing starts with post-harvest handling)</i>	3 Product prototypes taken up by at least 2 cottage industries per country  1 IFT product per country commercialized by at least one private enterprise
<b>Activities</b> 2.1 Characterize existing and potential markets of IFT products 2.2 Conduct marketing studies to identify constraints and opportunities. 2.3 Facilitate market information system 2.4 Develop commercialization strategies for selected IFT products	



**Table 6: Summary of Group work on Outputs, Activities and Indicators (with Plenary Comments)**

		Indicators
<b>Output 3:</b>  <b>Improved utilization of IF's and products</b> <ul style="list-style-type: none"> <li><i>This output to be merged with "marketing"</i></li> <li><i>50% rise will be based on baseline information obtained from the studies on household utilization of priority IF's and their products</i></li> </ul>	2 new products/ country of priority IFT species available in markets by year 3  A 50% rise in the consumption of processed fruits & fruit products	<ul style="list-style-type: none"> <li><i>What new products do we have in mind apart from the existing ones?</i></li> <li><i>50% increase in consumption on higher side</i></li> <li><i>50% of which baseline</i></li> </ul>
<b>Activities</b> 3.1 Develop and test post-harvest handling and storage techniques 3.2 Develop and promote new and existing products of priority IFT's. 3.3 Determine nutritional quality of IF's and products. 3.4 Determine household utilization of priority IF's and products 3.5 Disseminate post-harvest handling and processing techniques		
<b>Output 4:</b>  <b>Harvesting, processing and post-harvest handling practices and skills developed</b> <ul style="list-style-type: none"> <li><i>Omit Harvesting – It is covered under management</i></li> <li><i>Possible to merge this output with marketing "marketing and utilization"</i></li> </ul>	One appropriate harvesting technique developed for at least 2 species by the end of year-one or two	
<b>Activities</b> 4.1 Develop and test post-harvest handling and storage techniques 4.2 Develop and promote new and existing products of priority IFT's. 4.3 Determine nutritional quality of IF's and products.	<ul style="list-style-type: none"> <li><i>Home consumption</i></li> <li><i>Testing Harvesting</i></li> <li><i>Storage and shelf-life of IF's</i></li> <li><i>Marriage of post-harvesting and processing</i></li> <li><i>Pest and diseases</i></li> <li><i>Nutritional assessment of products</i></li> </ul>	

**'THE WAY AHEAD'****Table 6: Summary of Group work on Outputs, Activities and Indicators (with Plenary Comments)**

	Indicators
<b>Output 5:</b>  <b>Capacity in indigenous fruit tree domestication improved among farmers and partners</b>	At least 50,000 farmers evaluate IFT's on farm <ul style="list-style-type: none"> <li><i>The two outputs (5&amp;6 should be rephrased and merged</i></li> <li><i>The number of farmers seems unrealistic – 50,000? Suggest 10,000 farmers.</i></li> </ul>
<b>Activities</b> 5.1 Train farmers and partners in IFT domestication 5.2 Involve more National Partner Social Scientists/ Economists 5.3 Support post-graduate training on tree improvement/ domestication.	<i>Scaling down on PhD/ MSc funding to (at least 3) – food processing/marketing/ horticulture</i>
<b>Output 6:</b> <b>Awareness on domestication, cultivation, utilization and commercialization increased</b>	Percentage increase in nos. adopted, processing and marketing IFT's  Increased # of IFT's planted by farmers in landscapes
<b>Activities</b> 6.1 Develop dissemination strategies 6.2 Baseline surveys in target areas (species & management practice)	<i>Activity on baseline surveys misplaced → Long-term domestication strategies</i>
<b>Output 7:</b> <b>Selected propagules and their husbandry requirements available</b>  <i>† Restricted to clonal materials (Definition) include seed propagated</i>	Propagules of 10 clones of 2 species per country produced for pilot dissemination and decentralized mother blocks by 2005 <ul style="list-style-type: none"> <li><i>Inclusion of # farmers + other partners</i></li> </ul>

<b>Table 6: Summary of Group work on Outputs, Activities and Indicators (with Plenary Comments)</b>	
	<b>Indicators</b>
<b>Activities</b> 7.1 Undertake participatory identification and collection of superior phenotype of priority IFT's 7.2 Test and multiply superior clones/germplasm on-farm and on-station 7.3 Develop sexual and vegetative propagation techniques. 7.4 Evaluate management practices for IFT's on-farm and on-station 7.5 Identify and monitor incidence of pests and diseases of IFT's on-farm and on-station	

### 13. What Next and Closing Remarks

After the third group-work on outputs, indicators and activities; and plenary discussion, it was not feasible for the workshop to take the process any further as time for the workshop had run out. Outstanding work needed to complete the workshop agenda was, the identification of 'Assumptions and Risks' and the determination of the 'Institutional Set-up for Implementation'. It was felt, however that workshop outputs produced and the discussion that took place, would enable a team drawn from workshop participants to prepare a project proposal following the new BMZ guidelines.

It was therefore agreed that the next steps should be,

- i. Circulation of this workshop report to all participants and key stakeholders,
- ii. Preparation of a draft project proposal by a task-team, which would be circulated as widely as possible depending on time available before the dateline of submission on May 31st,

The workshop organizers would receive further guidance from the reviewers after debriefing in Bonn has taken place, as on what would be the best way to proceed. Festus Akinnifesi, the team leader for domestication in SA was charged to communicate to participants latest developments and to call a task team for drafting of a project proposal. BMZ-GTZ will communicate to ICRAF's DG on the outcome of the debriefing and provide formal advise on the next steps necessary.

When the next steps had been resolved and after a brief discussion on administrative issues, Tony Simons closed the workshop with an inspirational summary of the workshop. The summary noted that too much had been scheduled for accomplishment in this two day workshop, given the fact that some of the participants arrived late. Furthermore, the wide array of agendas together with the fact of using a novice to ICRAF's work as moderator added challenges to accomplishing a very ambitious agenda of the workshop. Despite all this, the workshop was generally considered a successful milestone in shaping the future of IFT domestication and utilization work in the region.

## VII. Summary of Workshop Evaluation

At the end of the workshop, each participant was to write his or her feelings on the way the workshop was handled. Specifically participants were requested to write their thoughts in relation to the following statements:

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- In my opinion the single most important achievement for this workshop was ....
- What did not make me happy in this workshop was ....
- The single most important change in the future for a workshop like this is ....
- What made me happy in this workshop was ...

A summary of the participants responses to these statements is provided in Annex I. The participants felt that the general atmosphere of the workshop was positive and that a sizeable amount of progress was made.

**VIII. List of references made available to participants:**

1. ICRAF New Concept Note presented to BMZ
2. Results Based Management Workshop Summary (Zambezi Basin AF Project Indicators)
3. BMZ Guidelines for Targeted funding for International Agricultural Research Centres.
4. Draft Report on Proceedings of an International Workshop held at ICRAF Nairobi – 'Cornerstones for Marketing Research and Development'.
5. Plan of Operation – Project on Domestication of Indigenous Fruit Trees of the Miombo Woodlands of Southern Africa (October 1997 – September 2000)

**'THE WAY AHEAD'****IX. List of workshop Participants**

<b>Country</b>	<b>Participant Name and Contact Details</b>		
<b>Kenya</b>	<p>Steve Franzel Agricultural Economist ICRAF P O Box 30677 Nairobi, Kenya Tel: 254 2 524 000 Fax: 254 2 524 001 E-mail: <a href="mailto:S.Franzel@cgiar.org">S.Franzel@cgiar.org</a></p>	<p>Tony Simons Domestication Program Leader ICRAF P O Box 30677 Nairobi, Kenya Tel: 254 2 524 000 Fax: 254 2 524 001 E-mail: <a href="mailto:T.Simons@cgiar.org">T.Simons@cgiar.org</a></p>	<p>Beatrice Kingori GTZ-ITFSP – Kenya Programme coordinator GTZ – ITFSP ICRAF House P O Box 47051, Nairobi, Kenya Tel: 254 2 524 656/524 000 Fax: 254 2 524 651/524001 E-mail: <a href="mailto:B.Kingori@cgiar.org">B.Kingori@cgiar.org</a></p>
<b>Malawi</b>	<p>Clement Z Chilima Senior Entomologist/Coordinator, Trees On-farm FRIM P O Box 270, Zomba Tel: 265 524 866 Fax: 524 548/524 782 E-mail: <a href="mailto:frim@malawi.net">frim@malawi.net</a></p>	<p>Jarret Mhango Horticulturist SADC-ICRAF AF Project P O Box 134, Zomba Tel: (265) 534 277/212 Fax: (265) 534 283 E-mail: <a href="mailto:jmhango@sdpn.org.mw">jmhango@sdpn.org.mw</a></p>	<p>Thomson Chilanga Horticulturist SADC-ICRAF AF Project P O Box 134, Zomba Tel: (265) 534 277/905 Fax: (265) 534 283 E-mail: <a href="mailto:icrafmalawi@sdpn.org.mw">icrafmalawi@sdpn.org.mw</a></p>
	<p>Festus Akinnifesi Tree Scientist/Project Leader SADC-ICRAF AF Project P O Box 134, Zomba, Malawi Tel: (265) 534203/277/250 Fax: (265) 534283 E-mail: <a href="mailto:fakinnifesi@sdpn.org.mw">fakinnifesi@sdpn.org.mw</a></p>	<p>Andreas Böhringer Senior Scientist Development Leader in Southern Africa SADC-ICRAF Agroforestry Project, Makoka P O Box 134, Zomba, Malawi Tel: (265) 534289/277/250 Fax: (265) 534283/298 E-mail: <a href="mailto:aboehringer@malawi.net">aboehringer@malawi.net</a></p>	<p>John Kalenga Saka Associate Professor of Chemistry Chancellor College P O Box 280, Zomba, Malawi Tel: (265) 524222 Fax: (265) 524046 E-mail: <a href="mailto:Jsaka@chirunga.sdpn.org.mw">Jsaka@chirunga.sdpn.org.mw</a></p>
	<p>Chimwemwe Grace Kussein Nutritionist (Tutor) Private Bag 3 Namadzi Tel: (265) 534222</p>		
<b>Tanzania</b>	<p>Remen E A Swai Coordinator, IFT Research &amp; Development/ SADC- ICRAF Agroforestry Project ARI Tumbi P O Box 306, Tabora, Tanzania Tel: 255 026 260 4541 Fax: 255 026 2604121 E-mail: <a href="mailto:lcrafbt@africaonline.co.tz">lcrafbt@africaonline.co.tz</a></p>		

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Country	Participant Name and Contact Details		
<b>Zambia</b>	<p>Alfred Mkonda Horticulturist SADC- ICRAF Agroforestry Project P O Box 510089 Chipata, Zambia Tel: 062 21404 Fax: 062 21404 E-mail: <a href="mailto:Amkonda@zamnet.zm">Amkonda@zamnet.zm</a></p>	<p>Paramu Mafongoya Soil Scientist/Project Leader SADC-ICRAF AF P O Box 510046, Chipata, Zambia Tel: 260 62 21404/21725 Fax: 260 62 21404/21725 E-mail <a href="mailto:Mafongoya@zamnet.za">Mafongoya@zamnet.za</a></p>	<p>Charles K Mwamba Director National Institute for Scientific &amp; Industrial Research P O Box 310158 Lusaka, Zambia Tel: 260 281013/750581</p>
<b>Zimbabwe</b>	<p>Elias Ayuk Project Leader SADC-ICRAF Zimbabwe C/O DR&amp;SS P O Box Box CY594 Causeway, Zimbabwe Tel: 263 4 704531 Fax: 263 4 728340 E-mail: <a href="mailto:Eayuk@mweb.co.zw">Eayuk@mweb.co.zw</a></p>	<p>Dzingai Rukuni Seed Physiologist Forest Research Centre P O Box HG 595 Highlands, Harare, Zimbabwe Tel: 263 4 496878 Fax: 263 4 497070 E-mail: <a href="mailto:Drukuni@frchigh.co.zw">Drukuni@frchigh.co.zw</a></p>	<p>Irene Kadzere Senior Research Officer/Horticulturist DR&amp;SS/SADC-ICRAF P O CY 594 Causeway, Harare, Zimbabwe Tel: 263 4 704531 Fax: 263 4 728340 E-mail: <a href="mailto:lkadzere@mweb.co.zw">lkadzere@mweb.co.zw</a></p>
	<p>Freddie Kwesiga Regional Coordinator for Southern Africa SADC- ICRAF P O Box 128, Mount Pleasant, Harare, Zimbabwe Tel: 263 4 334202 Fax: 263 4 301945 E-mail: <a href="mailto:Fkwesiga@africaonline.co.zw">Fkwesiga@africaonline.co.zw</a></p>		
<b>BMZ-GTZ Project Reviewers</b>	<p>Frank Bremer GTZ Consultant 08 BP 1132, Cotonou, Benin Tel: 00 229 307181 Fax: 00 229 307064 E-mail: <a href="mailto:pendjangtz@firstnet.bj">pendjangtz@firstnet.bj</a></p>	<p>Günter Baumann Advisor to MoAI P O Box 31131, Lilongwe 3 Tel: (265) 770 413 Fax: (265) 770 413 E-mail: <a href="mailto:guenta@malawi.net">guenta@malawi.net</a></p>	
<b>Moderator/ Facilitator</b>	<p>Sam Matemba P.O. Box 925, Lilongwe, Malawi. Tel: (265) 794 824 Cell: (265) 838 168 Email: <a href="mailto:smatemba@sdpn.org.mw">smatemba@sdpn.org.mw</a></p>		

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<b>Annex I: Summary Of Participants' Evaluation of Workshop</b>			
<b>In my opinion the single most important achievement for this workshop was ...</b>	<b>What did not make me happy in this workshop was. ...</b>	<b>The single most important change in future for a workshop like this is ...</b>	<b>What made me happy in this workshop was ...</b>
The spirit of wanting to achieve	Short time hence unfinished tasks	Allocate enough time for discussions	Exposure to the PPM formulation process
Some focussed outputs	Insufficient time to complete business	Allocate more time	Open discussion
High output in a short time	Uncompleted work	More group work, entail extra day	Team spirit
ACHIEVEMENT – 2 <sup>nd</sup> phase proposal agreed on	1 day too short Unfinished business	Allocate more time (1 week) Involve farmers	Sense of humour by participants  Small but effective group
Focussed outputs	Not enough time	Need more time to complete the workshop objectives	Nice group, good mooded compromising Excellent facilitation 'team spirit Team spirit and the facilitation
Articulate and critical workshop with great output	Nothing		
Consensus on development of the way forward	Absence of local music at the hotel	More time required More time would have been useful	
Finally a program of activities was done	Unfinished Business	<u>Important Δ</u> Longer time needed  Single most important change- provide tables in conference room next time	Participatory evolution/development of workshop
Consensus achieved on major components of proposal	Good, but too long or discussions not allocated enough time		Relaxation exercises by Tony Simons Endurance
Draft PPM showing outputs, indicators and activities		Involve more National Partner Social Scientist/Economists	Good facilitation The high degree of free interaction
Log framework for IFT			Great facilitation



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**Annex II: The new concept note to BMZ**

**"Commercialising And Increasing Household Use Of Af Products For Improved Nutrition, Health And Incomes In SA +EA"**

Objectives	Outputs		
1. To assess problems + opportunities for the utilization + marketing	Potential growing areas + markets of key tree spp. mapped	Marketing constraints + opportunities analysed and marketing strategies developed	Guidelines for the establishment of local knowledge + marketing systems
	Marketing network facilitated	Marketing capacities of partners strengthened	Partners for product development + marketing identified
	Regional consortium on tree germplasm production + marketing established	On-farm tree diversity increased + household demand for tree products met	Tree domestication strategies + operational plans established
2. To develop + implement tree – planting strategies + identify priority spp.	Superior clonal varieties disseminated	Planting of priority spp. on pilot scale supported	Live pharmacies established
3. To establish scaling-up platforms with strategic partners in pilot projects	Pilot development projects + strategic partners identified	Planning workshops for scaling – out pilot development projects carried out	Appropriate production utilization + marketing systems developed + implemented
	Impact assessed + case studies published	Farmer groups selected, trained and farmer marketing supported	

**Annex III: Summary of RBM Presentation (F Kwesiga)**

Slide 1

**RESULTS BASED  
MANAGEMENT (RBM)**

A Management tool

Slide 2

**What is RBM ?**

- A means to improve management effectiveness, accountability
- Involves stakeholders in :
  - defining realistic expected results
  - assessing risk
  - monitoring progress towards the achievement of expected results
  - Integrating lessons learned into management decisions
  - Reporting on performance

Slide 3

**Resources, Reach and Results  
(3R)**

- These are management concepts whose usefulness for performance planning, measurement and management has only recently been fully exploited.
- Resources are: human, organizational, intellectual and physical material inputs that are directly or indirectly invested by an organization
- Reach: is the breadth and depth of influence over which the organization wishes to spread its resources.

### **Annex III: Summary of RBM Presentation (F Kwesiga)**

Slide 4

#### **Results?**

- Measurable change in state derives from cause and effect relationship
- 2 key elements in the definition:
  1. Importance of measuring change
  2. Importance of causality as the logical basis for measuring change
- Consequently, results are those changes that are attributable to the "reach".

Slide 5

#### **Why is RBM useful?**

- Managers must have performance information about the 3RS (resources, reach and results) in order to plan, manage and evaluate their programs and projects

Slide 6

#### **Components of RBM**

1. Stakeholder participation
  2. Defining expected results
  3. Identifying assumptions and risk
  4. Selecting performance indicators
  5. Collecting performance information
  6. Performance reporting
- To manage for results means to fully integrate these components into the project life-cycle from planning to evaluation.

### **Annex III: Summary of RBM Presentation (F Kwesiga)**

Slide 7

#### **Stakeholder participation (SP)**

In a participatory approach ( SP) is essential

- In defining project goal and purpose
- Designing work plans and making adjustments
- Continuous performance monitoring
- Annual performance appraisal

SP has many more benefits to RBM in identifying, defining and measuring results/risks that hinge on comprehensive information gathering.

Slide 8

#### **Stakeholder participation (SP)**

- Requires that clear roles and responsibilities are articulated from the beginning. This will lead to commitment to achieving the stated results for which they helped to define
- Participation ensures a sense of ownership
- Clearly defined roles and responsibilities ( for data collection, analysis and reporting) lead to efficiency, by reducing duplication
- Greater accountability on delivering results when they feel empowered ( resources, consulted, respected)

Slide 9

#### **Building a Performance Framework**

- Asking and answering some fundamental Questions
    1. Why this project?
    2. What results do we expect to achieve for the resources being invested?
    3. Who will benefit or loose from this project?
    4. How can the project best be implemented?
- RBM tool depend on the extent to which stakeholder views are incorporated, their participation and consensus on these questions.

**Annex III: Summary of RBM Presentation (F Kwesiga)**

Slide 10

### Internal Logic of RBM

- Is based on cause and effect relationship between inputs, activities and results
- 1. Inputs are investments( money, people, labs etc)
- 2. These inputs are brought together in time and space & transformed by some management or or implementation activity
- 3. These activities in turn , generate developmental results e.g an RBM workshop result is awareness, knowledge and skills of participants raised.
- 4. We need to clarify on what is an activity and a result

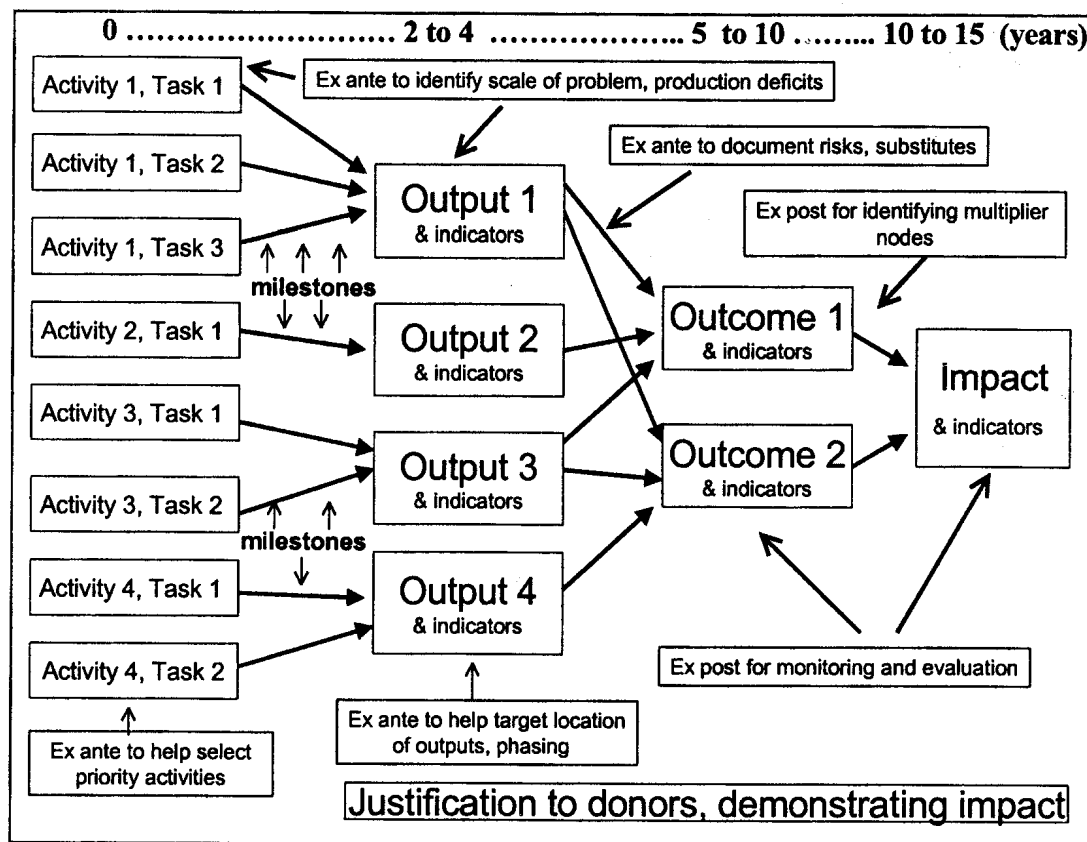
Slide 11

### Results, Outcomes and Impact

- The developmental results chain is composed of outputs, outcomes and impact level results that are linked
- 1. Impact level results are linked with the big picture, what you want to achieve in the end and they correspond with the GOAL level objective
- 2. Outcomes correspond with with purpose level statements
- 3. Outputs are immediate results.

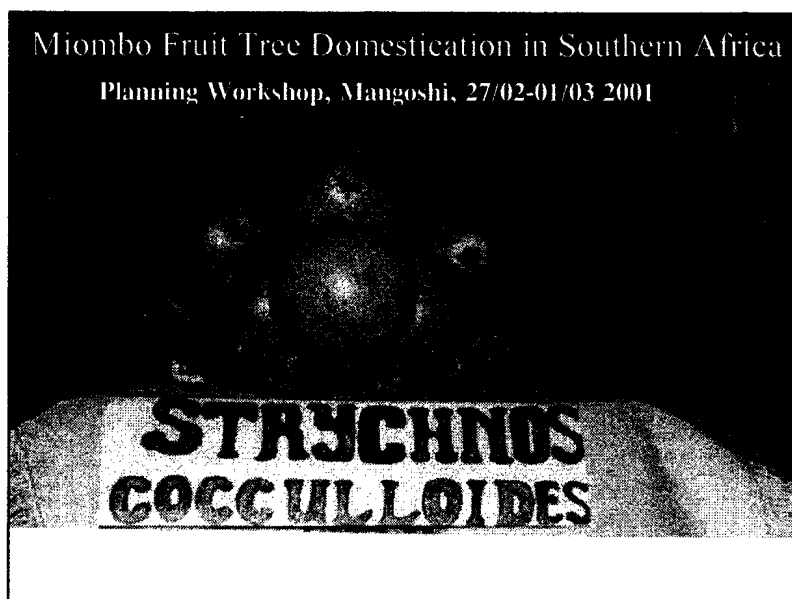
**Annex III: Summary of RBM Presentation (F Kwesiga)**

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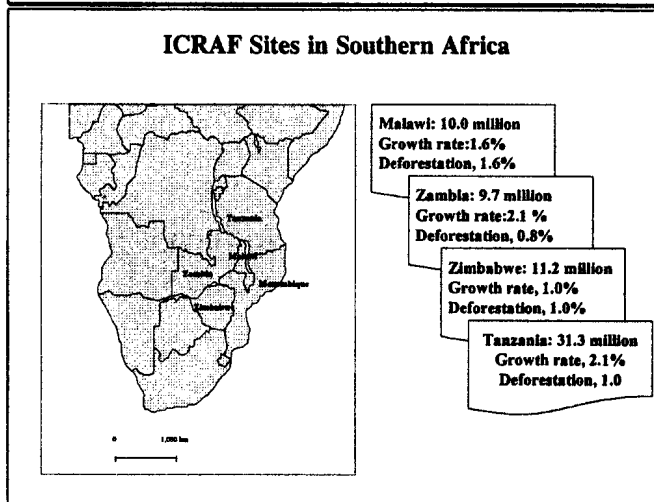


**Annex IV: Overview IFT Project - SA (F. Akinnifesi)**

Slide 1



Slide 2



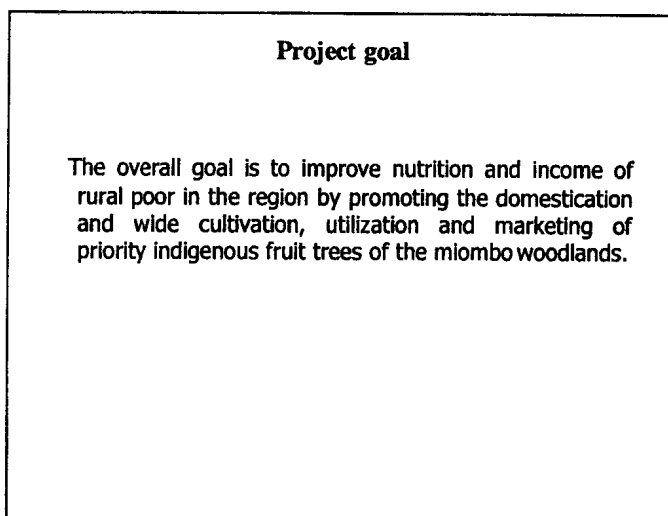
Slide 3

***Problem Analyses***

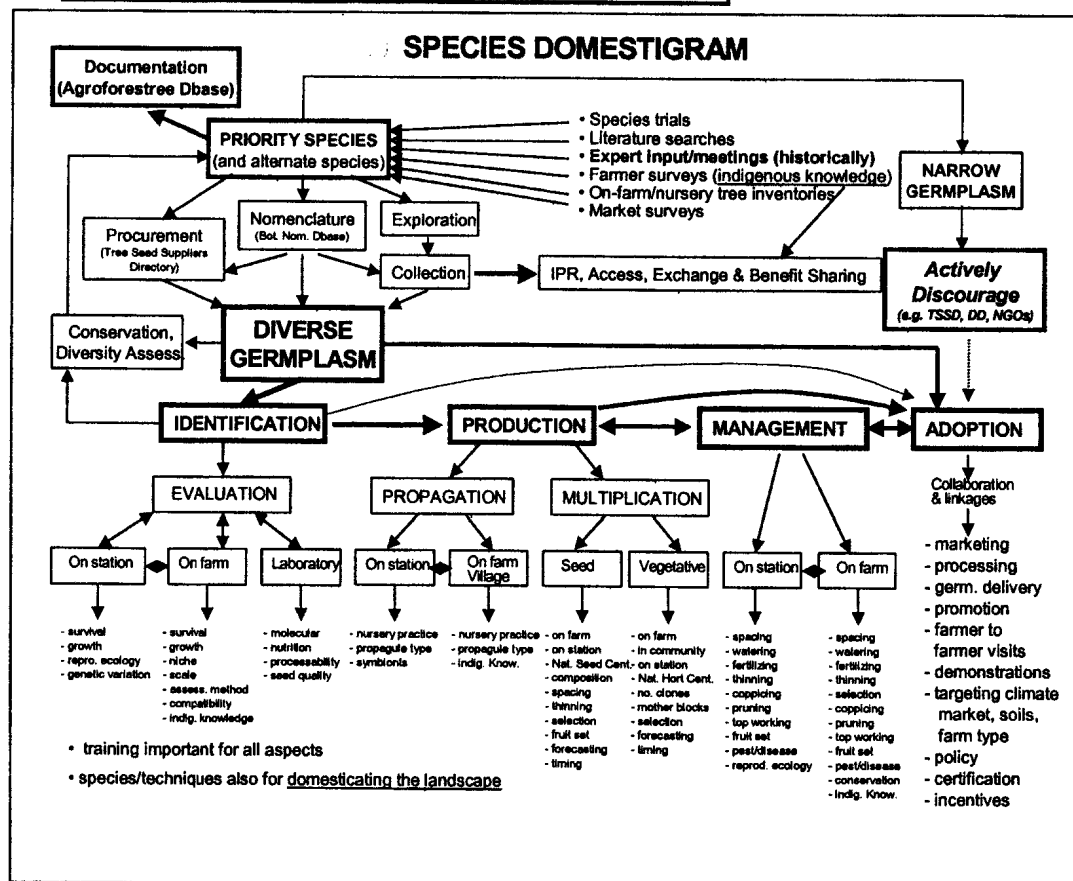
- Ethnobotanical surveys 1986-88: over 50 wild fruit tree species are eaten and marketed;
- These are central to rural livelihood systems;
- Many IFTs are at the verge of extinction, due to increased deforestation, thus exposing women and children to malnutrition and reduced income;
- Enhanced management is hampered by substitution natural stands by exotics and food crops;
- Farmers' zeal to cultivate IFTs is limited by lack of knowledge in tree propagation, husbandry and market opportunities.
- A regional conference held in 1994: the need for regional collaborative work on domestication emerged as key output

Annex IV: Overview IFT Project - SA (F. Akinnifesi)

Slide 4



Slide 5





**Annex IV: Overview IFT Project - SA (F. Akinnifesi)**

**Annex IV: Overview IFT Project - SA by F. Akinnifesi**

Slide 6

**Key activities**

- Priority setting to identify priority species;
- Germplasm collection, exchange and testing;
- Development of appropriate propagation techniques;
- Provenance/progeny and multi-species trials (for clonal selection);
- On-farm planting to gauge farmers reactions and dissemination pathways;
- Promoting processing, utilization and understanding marketing potentials.

Slide 7

**Key achievements**

**I. Species prioritization**

- ✓ Protocol developed for priority setting and published
- ✓ Identification of priority species
- ✓ Assemblage of indigenous technical knowledge

**II. Regional priority species**

- *Uapaca kirkiana* (masuku)
- *Parinari curatellifolia* (maula)
- *Strychnos cocculoides* (mateme)
- *Sclerocarya birrea* (marula)

Slide 8

**Farmer identified tree traits for improvement**

Tree Trait	% count	Fruit trait	% count
Precocity	77	Fruit size	66
Tree size	20	Taste	39
Yield	2	Pest	6

\*All regional priority species have juvenile phase of >5 years  
 \*\* Means of all 4 priority species

**Annex IV: Overview IFT Project - SA (F. Akinnifesi)**

Slide 9

**Germplasm exploration, collection and exchange**

- ✓ 24 provenances of *Uapaca* collected and exchanged among 5 countries (including Mozambique);
- ✓ 42 provenances of *Sclerocarya* collected from 8 countries (30 provenances exchanged among 4 countries);
- ✓ *Strychnos* and *Parinari* provenances/progenies collected in at least 2 countries (*Parinari* halted in Malawi because of low germination);
- ✓ Molecular genetic diversity was determined for *Sclerocarya* and planned for *Uapaca* ( Ian Dawson)

Slide 10

**Uapaca provenances in Malawi, Zambia and Zimbabwe  
(30 - 42 months)**

Rank	Malawi (n=16)	Zimbabwe (n=12)	Zambia (n=12)
1.	Phalombe -Malawi	Mrewa -Zimbabwe	Chipata -Zambia
2.	Choma - Zambia	Mapanzure-Zimbabwe	Choma -Zambia
3.	Mapanzure-Zimbabwe	Choma -Zambia	Mpwapwa- TZ
Mean height at 30 months:			
	72.4 cm	51.5 cm	28.0 cm

\*10% of all trees in Malawi ≥ 2 m at 42 months

Slide 11

**Field survival of IFTs on-farm Vs on-station**

Species	Country	Survival %	
		On-station	On-farm
<i>Uapaca</i>	Malawi	79 - 85 (18)	22 (10)
<i>Strychnos</i>	Zambia	91 - 97 (16)	10 (18)
<i>Ziziphus</i>	Malawi	100 (48)	63 (10)
<i>Sclerocarya</i>	Malawi	86 - 100 (6)	42 - 64 (18)
<i>Sclerocarya</i>	Zambia	72 - 100 (18)	-

\*Figures in parenthesis are months after establishment

**Annex IV: Overview IFT Project - SA (F. Akinnifesi)**

Slide 12

*Seed Propagation- findings*

- Uapaca (80-100%)
  - Needs soaking overnight; recalcitrant ; dry or cold storage limited by pseudo seedling character;
- Strychnos ( 40-85%)
  - fruit mesocarp inhibits germination and seeds need cleaning and soaking;
- Sclerocarya ( 75-80%)
  - After-ripening suspected; germinate best in sand;
- Parinari ( 2 - 12%)
  - Major headache so far

Slide 13

**Vegetative propagation- findings**

**Marcotting:**

- ⇒ Air layering most successful for Uapaca;
- ⇒ Timing was the single most important factor  
(0 - 6% in April, 25 - 31%, Aug; 31 - 63% Dec);
- ⇒ Hormone and micorrhiza are not preconditions for setting Uapaca airdlayering;

**Grafting:**

- ⇒ Top wedge grafting is promising for 28% for Strychnos, Uapaca (30%) and 85% for Adansonia

**Cutting:**

- ⇒ Low rooting of matured stem or root cuttings (<2%)
- ⇒ Juvenile cuttings of Parinari rooted (21 - 62%)  
(relevance to fruit production is limited)

Slide 14

*Market research*

- Market structure, conduct and performance;
- Demand and supply of IFTs;
- Present and future constraints;
- Product development: fruit processing, quality assessment
- Economics of the current level of collection, production and utilization;
- Profitability of investment on cultivating IFTs ( ex ante assessment);
- Economic incentives to investment;
- Gender-related issues

**Annex IV: Overview IFT Project - SA (F. Akinnifesi)**

Slide 15

**Achievement indicators**

- Over 5000 farmers, and 20 partners are testing approx. 20,000 IFTs germplasms on-farm in the region;
- Partnership and, networking are the key elements in disseminating the technology:
  - ⇒ At least 10 technical meetings, regional workshops and reviews on IFTs undertaken during the last 5 years;
  - ⇒ Over five scientific articles and documents published (including 3 proceedings of workshops)
  - ⇒ One Regional Newsletter devoted to IFTs published;
  - ⇒ Several fliers printed and distributed to farmers (many in preparation).

Slide 16

**Capacity building**

- ✓ Five horticulturists (MSc holders) - Domestication;
- ✓ Two MSc studies completed - propagation;
- ✓ Two PhD studies - biology/ecology and market research;
- ✓ Two PhD research on going - marketing and production economics;
- ✓ Local grassroot capacity building enhanced.

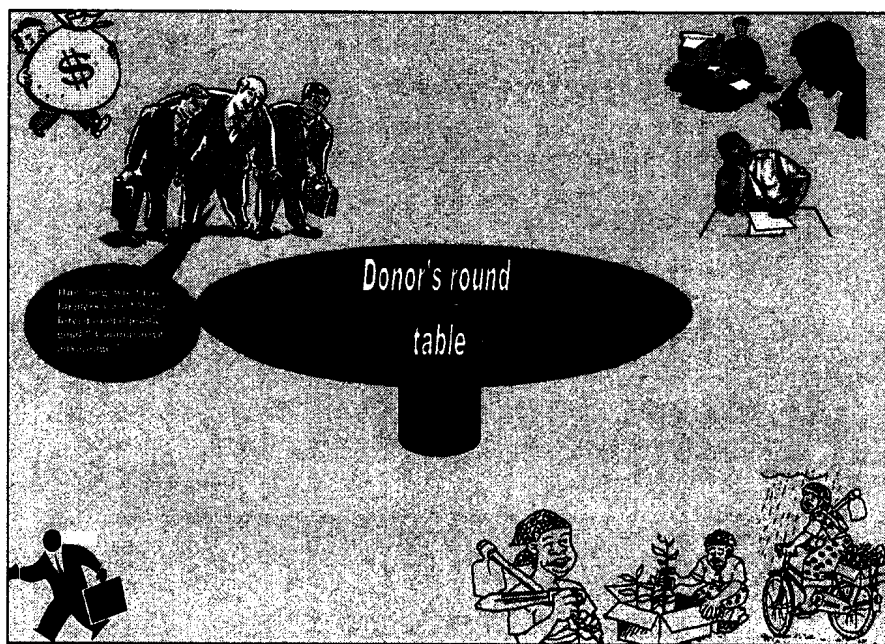
Slide 17

**Conclusions**

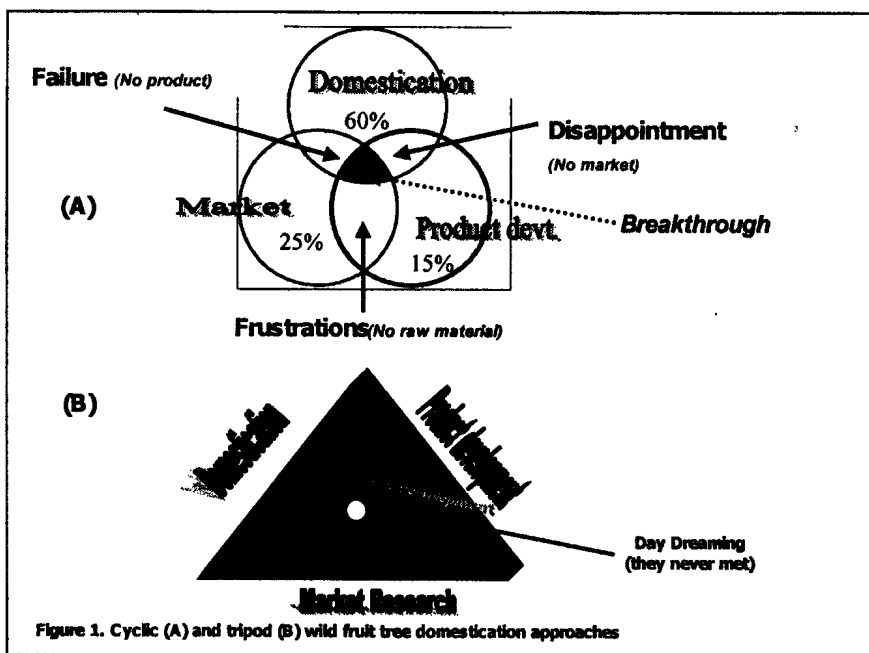
- Low on-farm performance of most priority species warrants further farmer-led management studies;
- Most work have revolved around regional priority species, there is need to go down the list (some early fruiting, easy to propagate species may be worthwhile);
- Developing IFT domestication into a viable commercial tree crop sector should be the future focus of project. Farmer should not only survive but prosper.
- *A change in strategy is needed*, if domestication products must be delivered in a dramatic way; direct clonal approach is proposed;

Annex IV: Overview IFT Project - SA (F. Akinnifesi)

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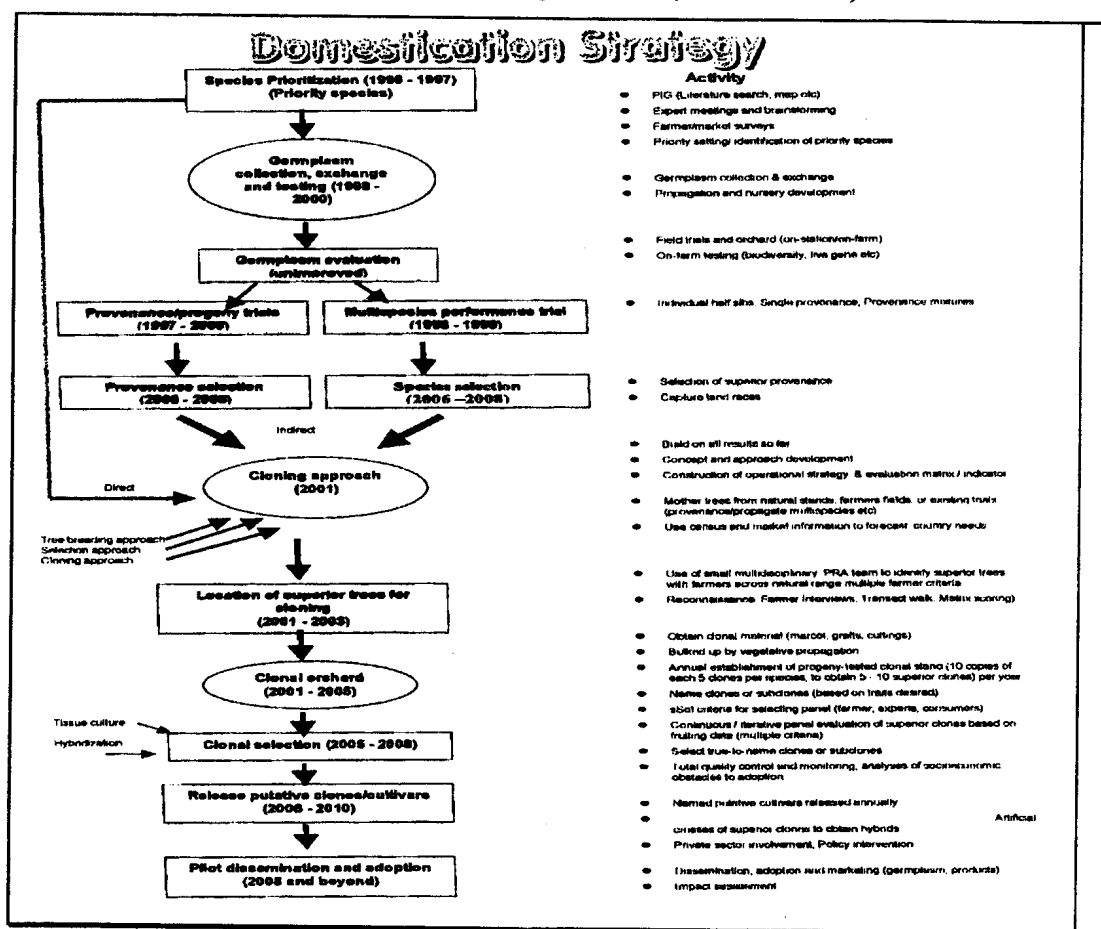


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Annex IV: Overview IFT Project - SA (F. Akinnifesi)

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Slide 21

*Uapaca kirkiana*

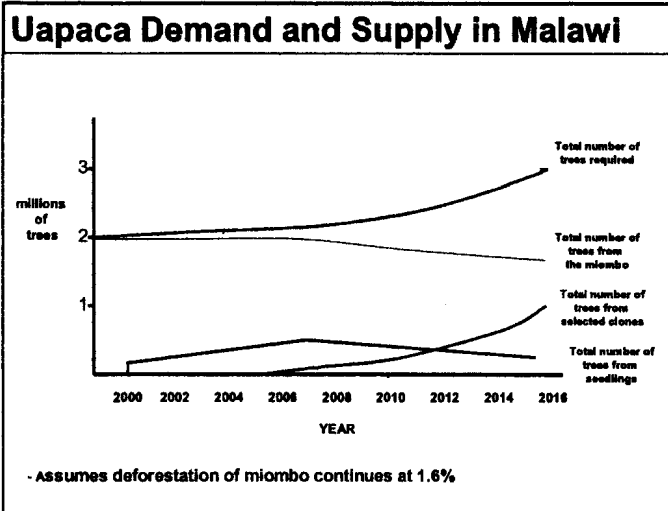
**Uapaca kirkiana**

- Priority No. 1 IFTs in the southern Africa (Malawi);
- Important traits for farmers (precocity, fruit size, tree size);
- Planted seedling requires about 10 yrs. before 1st fruiting, grafted plant, 3-4 yrs;
- Dioecious (separate male and female trees).

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Annex IV: Overview IFT Project - SA (F. Akinnifesi)

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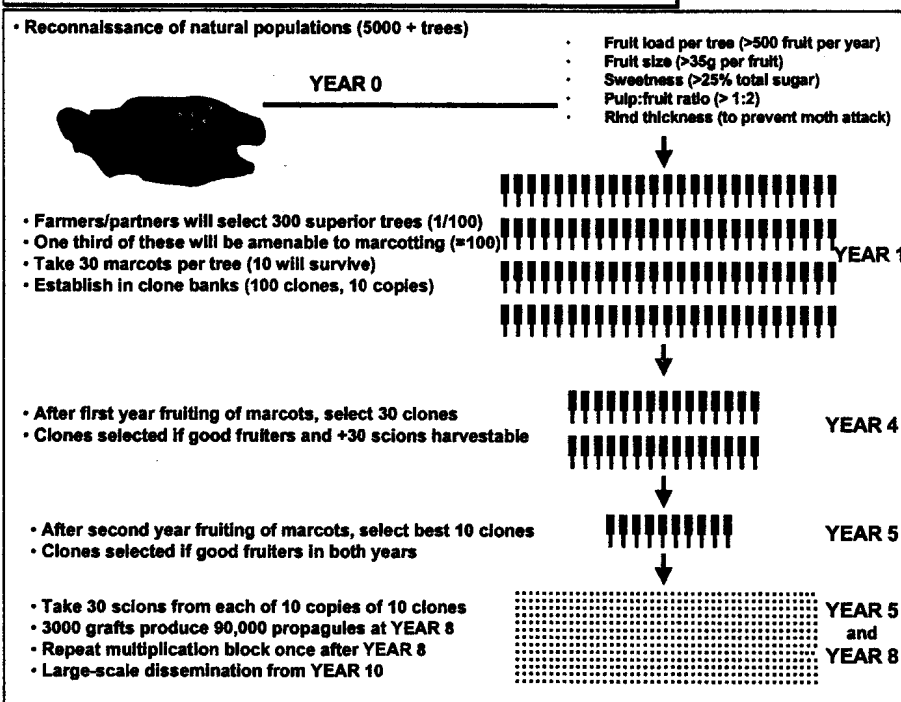
Slide 23

### A farmer-driven and market-led process

By 2010, 2 million trees are needed to meet the annual demand of *Uapaca kirkiana* (masuku) in Malawi. Will this come from:

5 farmers	each planting	400,000 trees
50 farmers	each planting	40,000 trees
500 farmers	each planting	4,000 trees
5,000 farmers	each planting	400 trees
50,000 farmers	each planting	40 trees
500,000 farmers	each planting	4 trees

Slide 24



**Title of the project:** Domestication of Indigenous Fruit Trees in Southern Africa  
**Country:** Malawi, Tanzania, Zambia, Zimbabwe  
**No. of project:** 1996.7860.8

**Lifetime:** (3 years)  
**Date of establishment:** 28/02/2001

Project Description	Indicators	Sources of verification	Assumptions
<b>Overall Goal:</b> Food security, income, nutritional status of the rural population in the Miombo ecosystem improved			
<b>Project Purpose:</b> Farmers domesticate, cultivate, utilize and commercialise priority IFTs of the Miombo in Southern Africa.			
<b>Outputs:</b> 1. Long term domestication strategies for priority IFTs implemented 2. Commercialisation strategies for IFT products implemented (merge commercialization with post-harvest since marketing starts with post-harvest handling) 3. Improved utilization of IFTs and products (This output to be merged with 'marketing')	<ul style="list-style-type: none"> <li>At least 2 major partners in every country adopted strategies by year 3 of project</li> <li>3 product prototypes taken up by at least 2 cottage industries per country.</li> <li>1 IFT product per country per country commercialised by at least one private enterprise.</li> <li>2 new products/country of priority IFT species available in the market by year 3 (what new products do we have in mind here apart from the existing ones?)</li> <li>A 50% rise in the consumption of processed fruits and fruit products (50% increase in consumption on higher side/ 50% of which basic figure?/ the 50% rise will be based on the baseline information obtained from the studies on household utilization of the priority IFTs and their products)</li> </ul>		
4. Harvesting, processing and post-harvesting handling practices and skills developed (Omit harvesting it is covered under management/ Possible to merge this output with marketing 'marketing and utilization')	<ul style="list-style-type: none"> <li>One appropriate harvesting technique developed for at least 2 species by the end of the year-one.</li> <li>One appropriate post-harvesting technique developed for at least 2 species by end of year-two</li> </ul>		



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Project Description	Indicators	Sources of verification	Assumptions
5. Capacity in indigenous fruit tree domestication improved among farmers and partners. <i>(The two outputs 5 + 6 should be rephrased and merged)</i>	<ul style="list-style-type: none"> <li>At least 50,000 farmers evaluate 3 IFTs on farm <i>(The number of farmers seems unrealistic – 50,000? Suggest 10,000 farmers)</i></li> </ul>		
6. Awareness on domestication, cultivation, utilization and commercialisation increased.	<ul style="list-style-type: none"> <li>Percentage increase in nos. adopted, processing and marketing IFTs</li> <li>Increased number of IFT's planted by farmers in landscapes.</li> </ul>		
7. Selected propagules and their husbandry requirements available <i>(Restricted to clonal materials (Definition) include seed propagated)</i> .	<ul style="list-style-type: none"> <li>Propagules of 10 clones of 2 species per country produced for pilot dissemination and decentralised mother blocks by 2005 <i>(Inclusion of number of farmers and other partners)</i>.</li> </ul>		
<b>Activities</b>			
1.1 Produce monographs of priority IFT spp. <i>(state-of-the-art on IFTs)</i>	2.1 Characterise existing and potential markets of IFTs products	3.1 Develop and test post-harvest handling and storage techniques.	
1.2 Formulate species specific domestication strategies.	2.2 Conduct marketing studies to identify constraints and opportunities.	3.2 Develop and promote new and existing products of priority IFT's.	
1.3 Update priority setting through supplementary surveys	2.3 Facilitate market information system.	3.3 Determine nutritional quality of IF's and products.	
1.4 Assess effects of policies on IFT production, utilization and marketing.	2.4 Develop commercialisation strategies for selected IFT products.	3.4 Determine household utilization of priority IF's and products.	
1.5 Developing policy options and facilitate policy change <i>(1.4 + 1.5 could also be moved to marketing)</i>		3.5 Disseminate post-harvest handling and processing techniques.	
4.1 Develop and test post harvest handling and storage techniques. <i>(Home consumption/ Testing harvesting)</i>	5.1 Train farmers and partners in IFT domestication	6.1 Develop dissemination strategies	
4.2 Develop and promote new and existing products of priority IFT's. <i>(Storage and shelf-life of IF's/ Marriage of post-harvesting and processing)</i>	5.2 Involve more National Partner Social Scientists/ Economists	6.2 Baseline surveys in target areas (species and management practice) <i>[Activity on baseline survey misplaced – Long-term domestication strategies]</i>	
4.3 Determine nutritional quality of IF's and products. <i>(Pest and diseases/ Nutritional assessment of products)</i>	5.3 Support post-graduate training in tree improvement/ domestication <i>(Scaling down on Ph.D/MSc to (at least 3) – Food processing, Marketing, veget.)</i>		

# ICRAF

## Annex V: Project Planning Matrix (PPM)-Current IFT Project

Deutsche Gesellschaft für  
Technische  
Zusammenarbeit (GTZ)

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**Title of the project:** Domestication of Indigenous Fruit Trees in Southern Africa  
**Country:** Malawi, Tanzania, Zambia, Zimbabwe  
**No. of project:** 1996.7860.8  
**Lifetime:** (3 years)  
**Date of establishment:** 28/02/2001

Project Description		Indicators	Sources of verification	Assumptions
<b>Activities (Continued)</b>				
7.1 Undertake participatory identification and collection of superior phenotype of priority IFT's.				
7.2 Test and multiply superior clones/ germplasm on-farm and on-station.				
7.3 Develop sexual and vegetative propagation techniques.				
7.4 Evaluate management practices for IFT's on-farm and on-station.				
7.5 Identify and monitor incidence of pests and diseases of IFT's on-farm and on-station.				
<b>Abbreviations</b>				
IFT's		Indigenous Fruit Trees		