POLICIES AND INCENTIVES FOR MIOMBO MANAGEMENT

Progress report

March 2007

A range of activities have been underway with TFESSD support. TFESSD support has also leveraged additional support from the Program on Forests (PROFOR), to assist in publication and dissemination of the research findings. There are 8 activities which are either underway or which have been completed. The first 6 are being carried out by the Center for International Forestry Research. The last two are being carried out by a team of researchers associated with Rhodes University (South Africa) and working on a parallel miombo research project with DFID support.

1. Planning workshop held in Maputo, Mozambique

A planning workshop was held in Mozambique in February 2006 to plan for the activities of the project for the first project year. Participants were drawn from natural resource institutions in Mozambique, University of Eduardo Mondlane, University of the Western Cape in South Africa, the World Bank, CIFOR, University of British Columbia in Canada and the Royal Veterinerary and Agricultural University of Denmark (Center for Forest, Landscape, and Management Planning).

2. Miombo website

A website for the project was designed and launched in August 2006. The website address is www.cifor.cgiar.org/miombo. The website features a description of the project, main activities, publication and contact information. The website has generated some interest from researchers from other parts of the world, as diverse as Senegal and Spain. The website and other outreach activities have resulted in the development of links with other projects focusing on the miombo woodlands such as the WWF-SARPO Miombo Ecoregion Conservation Programme. The project is also closely connected to the CIFOR Dry Forest Project funded by Swedish Sida.

3. Poverty-Environment Network (PEN) studies

The project is supporting two PEN studies (www.cifor.cgiar.org/pen) and has leveraged support for a third (through CIFOR) as part of the field work aimed at generating data to examine the woodlands' contribution to livelihoods and national economies. These three studies are derived from intensive household data sources, and have been staff intensive and time-consuming. The following is a summary of progress to-date.

3.1. Tapping urban markets: Elevating the role of miombo woodlands in rural poverty reduction in Zambia by Manyewu Mutamba, Junior Professional Officer, CIFOR, Zambia

Using household and market level data collected from two contrasting sites in Zambia, this study is looking at the relationship between income and distance to markets to provide insights into the conditions under which poor forest dependent households can significantly benefit from tapping urban markets.

The main objective of the study in Zambia is to understand how differences in market access due to remoteness and infrastructural differences influences the contribution of forest products to livelihoods of rural households. To enable this comparison, 2 study sites in Mufulira and Kabompo districts in Zambia's Copperbelt and Northwestern provinces respectively, were chosen as they provide contrasting attributes with respect to market access. In each study site 2 villages were selected and 50 households from each village were randomly selected from the full village lists for the household survey. Therefore each of the two study sites contributed 100 households, giving a total sample of 200 households.

Selected villages in Mufulira district (Sosala and Village No. 14) are situated within easy access (10-70 km) of a network of mining towns of Kitwe, Mufulira and Chingola, and Zambia's the second largest city of Ndola. Both villages are located not more than 2km from a tarred road connecting them with all major urban centers. The border post into the Democratic Republic of Congo (DRC) is less than 5km from Sosala village, allowing vibrant cross-border trading in various commodities. In sharp contrast to Mufulira, Kabompo district is located towards the Angolan border and remains largely remote from urban centres, only connected by a gravel road to the provincial centre Solwezi, some 370km away. The selected villages in Kabompo, Nkhulwashi and Maveve, are located 23km and 69km from the district centre along the gravel road to Zambezi district centre to the South-west.

The four rounds of household level data collection have been completed in both sites. A few data collection activities such geo-referencing households is pending. From a total of 200 households selected for the survey, only 8 households pulled out of the surveys midway due to various reasons that include migration, fatigue, and lack of time. The remaining work and data entry is nearly completed, and the data is being analysed. The researcher reports that a draft summary report of the analysis is to be completed by end-April.

3.2. Payments for Environmental Services and Rural Household Behavior: The Case of Carbon in Mozambique's Agro-forests, Ravi Hedge, PhD student, University of British Columbia, Canada

The PEN study by Ravi Hedge aims to quantify the contribution of miombo woodlands to households, and evaluate the concept of Payments of Environmental Services (PES) as a strategy for miombo woodlands conservation and economic development. The study is being undertaken in the buffer zone of the Gorongosa National Park (GNP) in Sofala Province, Mozambique, where a small-scale carbon sequestration (CS) project is being implemented. Smallholders have voluntarily signed a contract with the Project

Implementing Agency (PIA) to commit themselves to plant and manage trees on their farm to supply Carbon sequestration services and not to clear any more miombo woodlands, in exchange for annual cash payments for seven years.

The study site is Chicale Regulado which covers a total of 40 km2 area with nearly 1,100 households spread over five villages. A sample of 320 households from these five villages was chosen for the study. The initial part of the study involved the researcher familiarising himself with the local conditions, identifying main collaborators, research assistants and recruiting an 8-member survey/enumerator team. Each enumerator received a bicycle, and started working either in his native village or in the neighboring village, which helped both with the logistics of interviews and trust building. Each member was given the responsibility of 40 households. The first two weeks were spent in training, which included a front to back review of the questionnaire, series of mock interviews amongst enumerators themselves and trial interviews. Once the errors were reduced to a minimum, actual surveys started in a gradual manner. Data collected in the initial phase of the survey included all the crops grown and forest products collected in each village, including fish and non-environmental environmental products. To date, four rounds of surveys have been completed. The final was completed in December 2006. The researcher reports that a draft summary of the results from the survey work should be ready by end-April.

3.3. The potential for community-based forest management in poverty alleviation in Mozambique by Øystein Juul Nielsen, Forest and Landscape Denmark, The Royal Veterinary and Agricultural University

The study looks at two aspects; i) how income and consumption levels change for households with different access to forest resources, and ii) to assess whether rural people are able to smooth intra-annual consumption across seasonal income fluctuations. The study area is located in two slightly different natural forest areas: semi-deciduous miombo-like forest in Sussundenga and a typical miombo woodland in Pindanganga. Both are located in the Manica Province of Mozambique. About 250 households were randomly selected in each location along a gradient from high to low forest abundance (using satellite images and household lists). 17 enumerators were selected and trained for the study and some time was spent in gaining insights to local conditions.

The survey work included a consumption-expenditure component to the questionnaire including some 70 basic items. This was done so as to assess the means by which communities depended on miombo woodland resources, smooth consumption through agriculture, savings, paid work, forest exploitation, social networks, remittances, etc. The preliminary results are indicating that the majority of the community members are able to smooth consumption and save. Further data analyses is needed to understand how communities smooth consumption - but it is quite obvious that agriculture and paid work play a key role, in addition to gold panning, charcoal production and other forms of forest.

Another part of the study is looking at welfare consequences when forest resources disappear. So far, there is some indication in the data that points towards lower agricultural production when forests disappear although this is mainly based on preliminary verification of the questionnaires. The researcher reports that a preliminary draft analysis will be available for review by end-April

With separate funding, CIFOR has organized a consultation amongst the PEN researchers which is to be held at the end of April, so that these studies can be properly peer reviewed, and finalized.

4. Towards people centred woodland management in Mozambique: Can this make a difference? : by Alda Salomão, (Centro Terra Viva-Estudos e Advocacia Ambiental) and Frank Matose (University of Western Cape)

Considerable progress has been made on the case study report for Mozambique that is reviewing community-based woodland management opportunities in Mozambique. A draft report has been prepared.

The reports main findings are that:

- it is difficult to assess the extent to which community based natural resource management (CBNRM) experiences in Mozambique have effectively responded to the dual objective and expectations associated with community participation in natural resources management. i.e., the promotion of natural resources conservation and socio-economic development through sustainable use of the local resources by communities. This is partly because these programs seldom include reference to comprehensive performance indicators.

- The Mozambican legal framework needs to be reformed in a manner for CBNRM to be visible, implemented and formalized as an institutional mechanism for promotion of rural development. In some respect, the legal framework undermines opportunities to undertake meaningful CBNRM activities.

- Capacity to deliver an "enabling environment" is weak, especially with regards to regulations about community participation in natural resources conservation, as many projects are being implemented on an ad-hoc basis.

- CBNRM experiences have not been well documented and so lessons learned are not being systematically captured and used to improve the processes. It has also been pointed out that government agents maintain a heavy hand over CBNRM projects. The Tchuma Tchato and Chipange Tchetu projects reviewed in this study provide examples of what needs to be attended to in this regard.

The study is currently being peer reviewed, and should be finalized by end-March 2007.

5. A national report on local livelihoods and life support contributions of miombo woodlands to economic development in Zambia: by Sam Bwalya, Natural Resource Economist, Zambia

This report focuses on providing data and analyses to illustrate dependence on and contribution of miombo woodlands to household and national economies, and recommends how forests and trees can be a vehicle for economic development and poverty alleviation in the country. Econometric analyses will be done to demonstrate dependence on forests by household and show how much the forests are contributing to the economy.

Data has been collected on household forest utilisation, trade and marketing from 6 provinces, covering 8 districts with a total sample of 700 households. Data on urban and rural household energy consumption (1500 households) has been assembled. A comprehensive national data set from Central Statistics Office (CSO), and government report has been assembled. The data sets include:

- National annual returns from sale and trade of forest products and services from 1991 to 2003 for all the 9 provinces of Zambia
- Gross consumption values per household for forest products which include timber, construction poles, charcoal, thatch grass, mushrooms, firewood, wild fruits, wood-carvings, reeds and honey.
- Proportion of household producing/consuming/selling forest products
- Average quantities of forest products produced/consumed/sold per household
- Average prices of forest products
- Estimated times and distances to collect certain selected forest products
- Export volumes and revenues from selected forest products.

Some data on environmental services such as contribution of miombo woodlands to the wild-life and eco-tourism sectors in Zambia, hydro-electricity, subsidy on the energy budget, has also been collected, but it has been difficult to find consistent data.

A draft report has been prepared and is being peer reviewed. A final report should be available by end-April 2007.

6. A policy paper on barriers to adoption of sustainable woodland management

A team of authors has been assembled (Arild Angelsen, Bruce Campbell, Tony Cunningham, Madeleen Husselman, Sheona Shackleton, Sven Wunder) and the paper has been 80% completed and is available on the web. In this paper, our *first section* examines the opportunities for sustainable forest management. We consider the opportunities to be: (a) Forests are still a valuable resource base and will remain so for a long time; (b) The locus of responsibility for forest resources is shifting; (c) New approaches to integrating conservation and development are emerging; and (d) New markets are emerging and expanding.

We then examine the barriers to sustainable forest management. In the *second section* we examine the barriers to increasing the value of miombo woodland resources to livelihoods. We identify four key Value Barriers: (a) Miombo woodlands have low inherent productivity – so returns to management will be low; (b) Elite and external actors capture values; (c) Restrictive regulations for forest product production and trade reduce access to resources and increase transaction costs of producers and traders; and (d) Limited support is given to local forest enterprise development.

If resources have limited value, then there will be few economic incentives to manage them sustainably. But high value is a necessary but not sufficient condition for sustainable forest management. High value can lead to overuse, degradation and deforestation – in the *third section* we examine the barriers to balancing use and sustainability. We identify seven key Sustainable Management Barriers: (a) Leading from the first set of barriers, resource rents are too low to direct into management; (b) Transaction costs of control and management interventions are too high; (c) Local institutions continue to lack recognition and are often weak; (d) Forestry is still side-lined in national debates; (e) As soon as resources achieve higher value they are domesticated and natural forests become less important; (f) Cash is constrained and time preferences are high; and (g) Technical information regarding management of miombo is limited.

7. A paper which reviews the silvicultural options for improving the management of miombo woodlands. (Charlie Shackleton, Rhodes University; Jeanette Clarke, University of the Western Cape and Genesis Analytics; Alan Ogle, Ogle Consulting; Robert Scholes, Center for Scientific and Industrial Research, and Paddy Abbott, LTS International)

The objective of this paper is to explicitly describe management measures which increase the production of miombo woodland products with local value, such as wild foods, leaf litter, firewood, and small dimension building material.

The review considers how an intensively managed miombo woodland, from which local products are being derived, and which, for example, is integrated into local mixed farming/livestock management systems, would differ in terms of age structure, species distribution, etc. from woodlands which are being managed for timber production. It notes that most of the studies which have been carried out on miombo productivity (largely derived from trials carried out by forest research institutes in Zambia, Malawi, and Zimbabwe) focus, for example, on the impact of early burning on regeneration, and provide guidance for improving yields for commercial timber production. These approaches often have little relevance for poor local communities which depend on a much wider range of woodland products, than commercial timber alone.

This work has been contracted, and a draft report is expected by August 2007.

8. A paper which reviews policy measures for improving the access, use and management of miombo woodland products by poor people. (Charlie Shackleton, Rhodes University; Jeanette Clarke, University of the Western Cape and Genesis

Analytics; Alan Ogle, Ogle Consulting; Robert Scholes, Center for Scientific and Industrial Research, and Paddy Abbott, LTS International)

This paper is focusing on developing some of the themes which are emerging in the literature about the relationship between woodland management and the poor [for example, the work of Sunderlin (2006), and Chomitz (2006)] and how these themes may be attenuated in dry woodland miombo areas. Much of the discussion has focused on the need to define property rights more clearly, and the paper will examine this issue from a range of perspectives - accounting for the tendency toward common property management regimes in dryland areas such as those where miombo is found. The paper is giving particular attention to the scope for working with a range of policy tools which are used in poor countries such as Poverty Reduction Strategy Papers (PRSPs), and lending instruments such as Development Policy Loans (DPLs) and Sector Wide Approaches (SWAPs) for supporting miombo management. It will depend heavily on some of the other outputs from other parts of the project. This work has been contracted, and a draft report is expected by August 2007.

9. A final project workshop, to review recommendations and findings from all the background studies has been scheduled for October 2007, and will be held in Zambia.

10. The World Bank publisher has agreed to support the publication of a volume of papers resulting from this work.