SOCIO-ECONOMIC STUDIES ON THE VALUE OF INDIGENOUS TREE SPECIES IN VARIOUS AGRO-ECOLOGICAL ZONES OF UGANDA

Activity Synopsis

Research intervention:

Diversification and promotion of utilization of indigenous tree species for improved livelihoods and economic development.

Activity:

Conduct socio-economic studies on the value of indigenous tree species in all agro-ecological zones.

Justification for research:

Several traditional agroforestry systems have persisted in Uganda for centuries. In the coffee-banana-shade tree system found in the lakeshore region of central Uganda, trees e.g. *Maesopsis eminii, Albizia spp*, and *Ficus natalensis* are used to shade coffee and bananas; while the parklands and croplands of Northern Uganda are scattered with shea butter trees deliberately retained by farmers. Besides these obvious examples, however, very little research and development work has been done in Uganda on integrating indigenous trees in farming systems. The few studies have identified potential indigenous species for various uses in particular farming systems (Nabanoga & Opiro, 2000; Sekatuba *et al*, 2004; COARD Project, 2004) have not explored in depth, the role of indigenous trees in people's livelihoods and their potential for economic development.

Apparently, indigenous trees have enormous potential for supporting livelihoods and conserve the environment given that they are more adapted to the local climatic and agronomic conditions and are less susceptible to pest and disease attack compared to exotics. In addition, farmers have a wealth of knowledge about indigenous species as they have utilized them for generations to provide a wide range of products and services.

In order for indigenous trees and shrub species to realize this potential, there is need to identification of appropriate species for domestication and diversification. Subsequent investigations into their propagation, phenology, and management practices are greatly dependent on the meticulous identification of candidate species. Subsequent dissemination of indigenous trees and shrubs will enhances tree diversity hence making tree growing less risky for farmers, while at the same time conserving the genetic base for future generations.

Expected outputs:

The value attached to indigenous trees and their potential for livelihood improvement established.

Objectives:

1. To establish the contribution of indigenous tree species to peoples' livelihoods and economic development;

2. To investigate the factors influencing peoples' attitudes towards indigenous tree species.

Indicators:

1. At least 10% increase in the number of households relying predominantly on indigenous tree species for their livelihood in all agro-ecological zones;

2. At least 5 major factors that influence peoples' attitudes towards indigenous tree species identified for each agro-ecological zone.

3. At least 5% of target households attributing change in their livelihoods to indigenous tree interventions, by end of 5 years.

Methodology:

Design

The study will be done in two phases. The first phase will use a quantitative survey to characterize the construction of livelihoods in different agro-ecological zones and establish the contribution of indigenous tree species these livelihoods. Design of this phase based upon the sustainable livelihood conceptual framework.

The second phase will employ qualitative methodologies to gather in-depth information on the importance of selected products and services, indigenous tree species and perceptions towards candidate indigenous tree species, especially with regard to their potential for adoption and economic development. Rapid rural appraisal (RRA) techniques will be employed during this phase.

Study area

The proposed study is intended to cover the broad agro-ecological zones of Uganda, namely the banana-coffee system, the banana-millet-cotton system, the montane system, the Teso system, the northern system, the West Nile system and the pastoral system.

Sampling procedures

Stratified random sampling will be to select study sites. The country has been divided into 12 agro-ecological and the study is intended to cover each of these zones. In each zone, 3 districts will be selected that is representative of the agro-ecological zone. In each district, 3 sub-counties will be sampled using stratified random sampling. One parish and

subsequently one village will be sampled from each sub-county. The sampling procedure is summarized in table 1.

Table 1. Summary of sampling procedure

Levels	Derivation of units	Number of units	Respondents per unit
Agro-ecological zones	12	12	180
Districts	12 x 3	36	60
Sub-counties	12 x 3 x 3	108	20
Parishes	12 x 3 x 3 x 1	108	20
Villages	12 x 3 x 3 x 1	108	20
Households	12 x 3 x 3 x 1 x 20	2,160	1

Methods and tools

The quantitative survey will use a semi-structured questionnaire administered to individual household heads. This questionnaire will capture socio-economic and demographic characteristics, household asset endowments, household livelihood outcomes and strategies; as well as mechanisms used for coping with emerging socio-economic and environmental trends. Establishing the contribution of indigenous trees to all these aspects will be the essential purpose of this tool.

Qualitative surveys will employ a range of RRA tools as will suit the context under study. Through focus group discussions and key informant interviews, the study will use farm walks, matrix scoring, pairwise ranking, trend lines and case analyses to gain deep insights on the value of indigenous trees in different agro-ecological zones.

Data collection

Data collection for the household survey will be done by a team of enumerators, closely supervised by members of the research team. The same team will be used in order to benefit from experience accumulated during the process. Where necessary, field guides/translators will be hired to overcome language barriers.

The qualitative survey will be facilitated by the research team members as guided by a checklist of issues to be investigated. Data capture will be facilitated by use of a debriefing document (recording) and flip charts (visualization). A recap session will be held at the end of each day to evaluate progress.

Data analysis

Data from the household survey will be coded and entered in Ms Excel workbook and exported to SPSS for statistical analysis that will mainly involved descriptive analysis to derive frequencies, cross tabulations and comparing means. Qualitative data from the focus group discussions, transect walks and key informant interviews will be entered in Ms Word for collation and sorted according to study themes. The quantitative analysis

will be summarized in tables, graphs and charts; while qualitative descriptions will be presented in text and diagrams.

Activity schedule:

Activities	2007		2008	
	Q_1	Q_2	Q_3	Q_4
	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun
Review of secondary data				
Sampling and site selection				
Tool development and pre testing				
Team selection and training				
Data collection for household survey				
Data coding, entry & analysis				
Data collection for RRA				
Data collation and analysis				
Report preparation				
Feedback & data validation meetings				
Final report write up				
Dissemination of findings				

Budget estimate: 150,000,000/=

Activities	Cost (Ushs)	Cost (US$)
Review of secondary data	3,000,000	1,667
Sampling and site selection	6,000,000	3,333
Tool development and pre testing	3,000,000	1,667
Team selection and training	2,000,000	1,111
Data collection for household survey	50,000,000	27,778
Data coding, entry & analysis	4,500,000	2,500
Data collection for RRA	45,000,000	25,000
Data collation and analysis	3,000,000	1,667
Report preparation	1,000,000	556
Feedback & data validation meetings	30,000,000	16,667
Final report write up	1,000,000	556
Dissemination of findings	1,500,000	833
Total	**150,000,000**	**83,333**

References

Nabanoga G. and Opiro K. (2000). Survey of Indigenous trees to be planted in Mbarara, Tororo and Nakasongola Districts. Report to Ministry of Lands, Water and Environment. Kampala.

Sekatuba J., Kugonza J., Wafula D., Okorio J. and Wajja-Musikwe N. (2004). Identification of important indigenous fodder trees and shrubs in the lake Victoria shore region of Uganda. Uganda Journal of Agricultural Sciences. Kampala.