

Report on the District Consultative Workshop and Participatory Rural Appraisal on the Lango Farming systems

Jacob G Agea, JBL Okullo and Joseph Obua

1. Introduction

A District Consultative Workshop and Participatory Rural Appraisal were carried out in Lira District and two farming communities of Aduku in Apac and Agwata in Lira. Ten days were spent with the two communities in July 2005, during which Focus Group Discussions on land, land resource uses and conflicts within in the community were explored. An analysis of peoples' livelihoods over time was also explored.

2. Livelihoods

2.1 Livelihood options available to people of the Lango region and their changes over time

The people of Lango region have varying sources of livelihoods. Many survive through subsistence farming that have increased since 1970 to date though crop yield have reduced over the past years due to population growth which, has led to a reduction in the area of arable land. Dependence on forest resources such as firewood and charcoal; trade; hired labour; brewing, hotel and transport businesses have increased since 1970 to date and is expected to continue in the future. Reliance on cash crop production declined between 1981 and 1990 though currently it's picking up. It's however, sad to note that other people receive their livelihood requirements through dubious means like the mushrooming religious prophesying, begging, prostitution, gambling, theft and robbery. Such wrongful survival strategies have also increased over the past years. Other livelihood options are presented in Table 1.

Table 1 Livelihood options available to people of the Lango region and their changes over time

Livelihood options	1970-1980	1981-1990	1991 to present
Subsistence farming	High	High	Very high
Use of forest resources like firewood & charcoal	Low	High	Very high
Dependence on livestock	Very high	Low	Low
Trade (Whole and retail)	Low	High	Very high
Trade in produce	Low	High	Very high
Petty trade	Very low	Low	High
Cash crop production	High	Low	Very low
Innovativeness & use of indigenous knowledge	Moderate	High	Very high
Dependence on government social services	High	Low	Low
Hired labour	Low	High	Very high
Captured fisheries	High	High	Very high
Aquaculture	Was not there	Very low	Low
Dependence on government paid jobs	High	High	Low
Dependence hotel business	Very low	High	Very high
Dependence relief supplies	Very low	Low	High
Tendering	Uncommon	Low	High
Begging	Insignificant	Low	Very high
Brewing	High	High	Very high
Dependence on transport like bodaboda, buses etc.	Very low	Low	Very high
Agro-processing	Very low	Low	High
Rent and sales of land	Very low	Low	Very high
Sales of pottery, mats & crafts	High	High	High
Traditional healing	High	Very high	Very high
Religious prophesy	Very low	Low	High
Theft, Gambling and robbery	Very low	High	Very high
Prostitution	Low	Low	High
Dependence on construction industry	Very low	Low	High

2.2 Causes of changes in livelihood options and the coping mechanisms

There are many causes of changes in livelihood options of the people of Lango region over time (Table 2). These causes are cattle rustling especially in 1980s and early 1990s that left many people with no option except to begin crop production, fishing, bee keeping, piggery and trade; HIV/AIDS where people responded by increased use of condoms and behavioral change; economic growth that drove many people to private business and to seek for credits as well as demanding services. Other causes include poverty where some people responded by brewing local beer and waragi for sale, selling of their land and other properties, and prostitution; insecurity; changes in weather; decentralization, liberation and privatization; Decentralization, liberation and privatization, and high cost of electricity.

Table 2 Causes of changes in livelihood options and the coping mechanisms

Causes of livelihoods changes	Coping mechanisms/strategies
a) Cattle rustling	<ul style="list-style-type: none"> - Crop production - Fishing - Apiary - Piggery - Poultry - Natural resources [sale of land, bricks, sand, quarrying, firewood etc]. - Trade - Education - Eating bush/game meat.
b) HIV/AIDS	<ul style="list-style-type: none"> - Counseling and behavioral change - Awareness/sensitization - Use of condoms, ARVs - Increase in number of NGOs and projects working on HIV/AIDS - Openness to married partners and sex education at home.
c) Economic growth	<ul style="list-style-type: none"> - More people are getting involved in business, private practices - Establishment of various kinds of enterprises - People to credit facilities - Privatization - Demand driven services and deliveries
d) Poverty	<ul style="list-style-type: none"> - All in (a) and all in (c) plus - Brewing - Sales of land and other properties - Prostitution - Policies interventions e.g. CBO, NGOs, PMA, EAP, NUSAF, PAPSCA, Agricultural extensions, UPE etc. - Promotion of non-traditional crops.
e) Insecurity	<ul style="list-style-type: none"> - Migrations to other peaceful places

	<ul style="list-style-type: none"> - Sale/buying of land/other properties - Recruitment of local militias (Amuka) - Putting up pressure on international organizations - Amnesty for the rebels
f) Weather changes	<ul style="list-style-type: none"> - Short-term/early maturing crops - Invasion of wetlands - Small-scale irrigation - Growing of root crops - Brick making and sale of forest products and all kind of income generating activities - Migration
g) Decentralization, liberation and privatisation	<ul style="list-style-type: none"> - Self-employment - Participation in politics - Establishment of enterprises and businesses - Training and capacity building - Raising of local revenues - Sensitisation of people
h) Food insecurity	<ul style="list-style-type: none"> - Producing more food crops - Depending on food relief programmes - Storing more food crops in the granaries - People producing more commercial crops to avoid - Sale of food crops
i) High cost of electricity	<ul style="list-style-type: none"> - Use of energy-saving stoves - Cutting more trees to be used as firewood and charcoal - Buying more charcoal and firewood - Planting more domestic woodlots - Awareness and sensitization of people - Developing environmental action plan up to lower levels - Use of solar energy
j) Appropriate technology	<ul style="list-style-type: none"> - Training and capacity building - Demonstrations - Soliciting for funds

2.3 Impacts of livelihoods coping mechanisms on common property natural resource management/utilization

Impacts of livelihoods coping mechanisms on common property natural resource management/utilization in Lango region includes: depletion of forest in all forms; drying up of wetlands; general environmental degradation; decline in soil fertility, pollution of the environmental; fragmentations of landholding; increase in land related conflicts; intensive land use; decline in fisheries resources; loss of communal grazing land and decrease in bush meat. Long-term effect of cultivation, and the minimal replanting of trees for instance puts in question the sustainability of the crop production systems in a decreasing forest and woodland ecosystem. Poverty and changes in weather conditions have are also causing

people to cultivate in wetlands especially in dry seasons. This interferes with wetland management and may cause conflicts among the different people that value the wetland.

3. Community history

The people of Lango have settled in Lira and Apac districts, which were formerly called East and West Lango since time immemorial. However, there have been migrations of some people in the region (immigration) out (emigration). Causes and patterns of these migrations are not clear though the community cited insecurity, cattle rustling, land disputes, search for business opportunities and food insecurity/famine as the possible reasons. Some migrants are believed to have settled permanently in the region while others take refuge for some time (temporary settlement). Lango community believe that such migration may result into disruption of social setting of the people, more pressure on land resources, conflicts and land disputes, pollution and decline in sanitation, temporary disruption of food production, spread of livestock, crops and human related diseases, solidarity as a result of intermarriages, increase in incomes for those who are enterprising and less pressure on land resources from the areas of migrations

4. Socio-economic trends

The community gave information on trends of thirteen (10) socio-economic variables over a thirty four-year period from 1970-2004 (present). The trend line was divided into three (3) periods (Table 3). Livestock numbers and agricultural productivity have been decreasing since 1970 and may further decrease in the future. The sharpest decrease was between 1981 and present when there was and still is a decline in security as a result of cattle rusting and rebel activities in the area. Income increased then decreased between 1991 to present due to poor marketing of agricultural produce. This situation may remain the same in the future. Development agencies have continued to increase from 1970 to date and will increase into the future.

Table 3 Socio-economic trend matrix*

Variable/Period	1970-1980	1981-1990	1991-to present
Livestock	+++++	+++	++
Income	++	+++	++
Population	++	+++	+++++
Agric productivity	++++	+++	++
Business	+	+++	+++++
Development agencies	+	+++	+++++
Education	++	+++	++++
Health services	+++	++	+++
Credit availability	-	++	++++
Employment (off-farm & on-farm)	+++	+++	++

*The more the number of plus sign (+) the higher the availability or occurrence. Zero (-) implies the absence of the variable.

Business has increased throughout due to increase in population and urbanization. Development agencies, education and health services, as well as population have increased from 1970 to date and will increase in the future. So the people of Lango feels that development of the area has picked up since 1970. On the other hand, employments have decreased and are set to do so in the future.

5. Community resource endowment and management in Lango

In addition to understanding the history and general characteristics of the two farming communities, the PRA team investigated land and resources use. Trendlines were completed to see how availability and use of resources has changed over time. This information can help the community to determine what opportunities may exist for improvement in access and use of resources. Stakeholder analysis assisted the team to better understand the relationships between the community and other stakeholders of the protected areas (Forest reserves). Some investigation of conflicts arising from utilization of the various resources was also discussed with the community.

5.1 Resources availability and accessible

The members of the district consultative workshop and two farming communities listed resources that are available to people, how it is accessed and discussed how they have changed over time since 1970. Completing the trendline is important, but the information generated during the discussions really assisted the PRA team in their understanding how and the reasons why resource availability and use has changed over time. The resources available to the community included water resources such lakes, swamps, rivers, wells and springs that were accessed by one without restriction; forests and woodlands where there is open access for ungazetted reserves and restricted access for gazetted ones. Other resources available to people are land resources (sand, clays, stones); rocks, hills and mountain ranges; wild games and wild plants (Table 4).

Table 4 Resources available to the communities in the district and their accessibility

Natural resources	Accessibility
Water resources (lakes, swamps, rivers, wells and springs)	- Open access
Forests and woodlands	- Open access for ungazetted forest - Restricted for gazetted forest
Rocks and hills and mountain ranges	- Open access
Land resources (soils, sand, clays, stones)	- Open access - Restricted if on some one's land
Wild games and wild plants	- Open access

5.2 Trends in resource availability

Local people depend on natural resources for their livelihoods. It is therefore important that the residents understand changes that have taken place over time. It is evident that, in general, availability of resources has worsened since the 1970 (Table 5), most likely due to increasing population and over exploitation especially wildlife and forests. Soil fertility has been decreasing over the years as a result of soil erosion due to poor farming methods and little to no crop rotation. Wildlife population has generally decreased since 1970 and at present they are not available to people. This was reported to be due to over hunting and an increase in population of the people over the years. As the population has increased, the land under cultivation has also increased, interfering with the natural habitat of these animals, which resulted many of them being hunted down for meat.

Availability of forest and woodland resources has also declined throughout the years. Previously in 1970s, there was a good forest cover, thickets and woodlands, which decreased as people, exerted pressure on them in their quest for firewood, charcoal burning and timber, virgin land for cultivation. Woodlots cover within the community has continued to increase throughout the period. In 1970s, there was more forest and woodland cover because the population was low. As the population increased, more land is put under crop production reducing the amount of forest cover around the farms. Land has continued to decrease from 1980s due to the ever-increasing population. It has continued to decrease after that due to further subdivision as people start new families. The community has seized the opportunity to cultivate lands within the forest to satisfy their subsistence and cash needs in an increasingly difficult economy. Fertility of the soil has continually decreased due to repeated cultivation of the same land without proper soil management.

Table 5 Resource trend matrix*

Resource	1970-1980	1981- 1990	1991 to present
Forests	++++	++	+
Woodlands	++++	+++	+
Wetland resources	++++	+++	++
Wildlife	+++	++	-
Woodlots	+	++	+++
Land	++++	++	+
Soil fertility	++++	++	+

*The more the number of plus sign (+) the higher the availability of the resource. Minus sign (-) implies the resource is no more.

5.3 Constraints and conflicts over natural resource management and use in Lango and the mechanism to resolve them

There were many constraints and conflicts that exist over natural resource use and management in Lango (Table 6). Many of these constraints and conflicts were related to restrictive policies on the use of some these resources, illegal activities, inadequate staffing and facilitation, ignorance of the law, lack of cooperation on resources use and increasing land degradation. Others included soil infertility, high population pressure on land resources and insecurity of land tenure. Mechanisms to solve the conflicts seem to be resource dependent. However, sensitization of the people and creating awareness about the resource and the possible conflicts that can emerge from its use and management is basic to all resource categories.

Table 6 Constraints and conflicts over natural resource management and the mechanism to resolve them

Natural resources	Constraints and conflicts	Mechanism to resolve the conflict
Water resources (lakes, swamps, rivers, wells and springs)	<ul style="list-style-type: none"> - Restrictive policies on the use of some these resources - Illegal fishing activities - Inadequate staffing and facilitation - Ignorance of the law - Lack of cooperation on resources use - Poor sanitation at the landing sites - Silting of the water bodies 	<ul style="list-style-type: none"> - Planting grass strips to stop silting of water bodies - Enforcing laws and by-laws - Sensitisation of the people - Formations of BMUs
Forests and woodlands	<ul style="list-style-type: none"> - Illegal activities (encroachment and harvesting) - Unclear boundary/demarcation of gazetted areas - Inadequate staffing and facilitation - Lack of cooperation by the local communities 	<ul style="list-style-type: none"> - NFA has come in to stop illegal activities - District policies have already been develop regarding local management of these resources - NGOs and CBOs are working around the clock sensitizing people and encouraging them to plant trees
Land resources (sand, clays, stones)	<ul style="list-style-type: none"> - Ignorance about land adjudication - Very few lands have been surveyed and demarcated - Increasing land degradation - Soil infertility - High population pressure on land resources - Ignorance of the Land Act - Insecurity of land tenure 	<ul style="list-style-type: none"> - District land board tribunal is helping in settlement of some disputes - Land Acts stipulates how land is acquired and used - Sensitisation of farmers about land and soil fertility decline by CBOs, NGOs and local governments - Family planning to check on the population pressure on the land

5.4 Land tenure

A matrix was completed, with the type of tenure on one side and type of conflict on the other side (Table 7). The community then rated the intensity of each type of conflict on the different types of tenure. The land classification were first defined and discussed with the group as follows: Freehold - land owned by individuals who have or don't have title deeds; Government- protected forest and woodlands; Communal- grazing lands, wetlands; Leasehold - Land rented from landowners by the landless for temporary stay and cultivation

Table 7 Land tenure matrix*

Land tenure	Type of conflict		
	Among family members	Between families	Between villages
Freehold	+++	++	+
Communal	+	+	+++
Government	-	-	++
Leasehold	++	++	++

*One (1) plus sign shows least conflict and three (3) plus sign shows highest conflict. Minus (-) sign represents no conflict.

On freehold land, there exists a conflict among family members, which includes leasing without consent of parents or wife, boundary disputes and inaccessibility to land by sons and daughters. Between families, access through farms, pasture, alteration of boundaries, access to water and fire outbreaks are sources of conflict whereas between villages, conflicts arise from firewood and general land disputes. On communal land, conflicts within the family arise when a husband and wife want to use the same piece of land. Between families, access to water, firewood collection, and farming in the wetlands are causes of conflict. Between villages, conflicts arise when people graze on road reserves and wetlands.

Conflicts on government land were not reported within the families. However, between families, there are boundary alterations. Issues also arise between villages when there are fire outbreaks and boundary disputes. Leasehold land also has conflicts within families that arise from high population and water access. Between families, conflicts occur on environmental health rules, whereas between villages, there is disagreement between the rich and the poor, as the rich want to lease more land at the expense of the poor.

5.5 Institutions and their roles in natural resource management in Lango

Institutional ranking helped the PRA team to gain an understanding of the roles of local organizations and perceptions of local people about them. It also assists participants to become more aware of the roles that local institutions play in natural resources management. The information collected at this stage is important, especially at later stages of the PRA process, as it helps: to identify possible community entry points in resource management which can be strengthened; the community to perceive agencies, people, and organizations,

reflect their role in resource management within the community and how best they can begin to form closer linkages for further development.

The Table (Table 8) shows the institutions that exist and their roles in natural resource management. Non Organization Organizations (NGOs), Community Based Organizations (CBOs) and Faith Based Organizations (FBOs) like Churches are seen as an influential in sensitizing people and creating awareness on natural resource management and well as bringing appropriate technologies in resource use and management near to people. Other institutions like the local government are important especially in formulating and implementing policies on resources use and management and mobilizing local communities on issues relating environmental safety.

Table 8 Institutions and their roles in natural resource management in Lango

Institutions	Roles
NGOs, CBOs, Faith based organizations (FBOs) and Private sector	<ul style="list-style-type: none"> - Create awareness on natural resource management - Sensitise people on natural resources issues - Bringing appropriate technologies (like modern farming) in resource use and management near to people - Initiating and involving people in activities live tree planting
Local governments	<ul style="list-style-type: none"> - Formulates and implement policies on resources use and management - Mobilise local communities on issues relating environmental resources
Cultural institutions	<ul style="list-style-type: none"> - Keeps land on behave of the people - Settle some conflicts between community members

5.6 Policies on resource use and management

The policies on natural resource use and management have not yet been effective in Lango region. Lira district for example have just this year, 2004 developed policies on natural resource use and management ant they have not yet been implemented. Many members of the community are still ignorant of key policies like wetland policy and forest policy, which they ought to know. This is partly why people are encroachment into forest and wetland areas.

6. Agricultural Constraints

Farmers in Lango region face a number of constraints, which affect the profitability of agricultural production. It is not possible to alleviate poverty and raise living standards unless these constraints are addressed. Strategies on how best to deal with the constraints can be formulated. Different constraints affect agricultural enterprises to varying degrees. The farming community of Aduku for example analyzed a number of agricultural constraints and ranked them. These problems were however, not particular only to this community but generally cut across the different Lango farming communities.

The matrix (Table 9) shows that the most important constraint to agriculture is insecurity whereas the least important constraint to agriculture is lack of credit. It is interesting that marketing ranked very low as a constraint, yet it has been discussed in several forums to date as a serious problem to increasing agricultural profitability. Farmers are instead more worried about weather (drought), lack of technical knowledge to improve their farming. Many people are also worried about alcoholism, which was ranked the forth-important problem. They claim many productive people wasting their time in drinking waragi and giving very little or none of their time to farming.

Table 9 Agricultural Constraints*

Constraints	W	PD	LS	LaSC	IN	C	TF	LIN	CR	M	A/C	ST	TK	Total	Rank
Weather (W)	-	W	W	W	IN	W	W	W	W	W	W	W	W	11	2
Pests & diseases (PD)		-	PD	PD	IN	C	PD	PD	PD	PD	A/C	PD	TK	07	5
Loss of Soil fertility (LS)			-	LS	IN	C	LS	LS	LS	LS	A/C	LS	TK	06	7
Land scarcity (LaSc)				-	IN	LaSc	LaSc	LaSc	LaSc	LaSc	A/C	LaSc	TK	06	7
Insecurity (IN)					-	IN	IN	IN	IN	IN	IN	IN	IN	12	1
Capital C						-	C	C	C	C	A/C	C	TK	07	5
Traditional farming (TF)							-	LIN	TF	M	A/C	TF	TK	02	10
Low Inputs (LIN)								-	LIN	LIN	A/C	LIN	TK	04	9
Lack of Credits (CR)									-	M	A/C	ST	TK	00	13
Markets (M)										-	A/C	ST	TK	02	10
Alcoholism (A/C)											-	A/C	TK	09	4
Storage (ST)												-	TK	02	10
Technical Knowledge (TK)													-	10	3

*Pairwise ranking in Aduku.

How to cite this document.

Agea JG, Okullo JBL and Obua J (2005). Report on the District Consultative Workshop and Participatory Rural Appraisal on the Lango Farming systems. Makerere, Kampala Uganda.