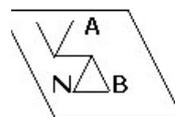




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PARTICIPATORY ASSESSMENT ON HUMAN USES OF NATURAL RESOURCES: TRAINING AND IMPLEMENTATION

OKAVANGO INTEGRATED RIVER BASIN
MANAGEMENT PROJECT (CONSERVATION OF
BIODIVERSITY IN KUANDO KUBANGO PROVINCE)



MARCH-APRIL 2008

This publication was produced for review by the Southern African Development Community (SADC), the Permanent Okavango River Basin Water Commission (OKACOM) and the United States Agency for International Development by ARD, Inc.

Prepared for the United States Agency for International Development under the Integrated Water and Coastal Resources Management Indefinite Quantity Contract (IQC), Contract Number LAG-I-811-99-00018-00, Task Order Number 811.

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DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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SUMMARY

This report summarizes findings of a resource use assessment of three selected communities within the Mucusso Reserve of Kuando Kubango Province, southeastern Angola. A key purpose of the assessment was to generate detailed information about the Ngongo, Ngcusha and Shamamputu communities, including their livelihood patterns, use of and impacts to natural resources. This information was gathered through training of local facilitators in participatory methodologies, as part of the Okavango Integrated River Basin Management (IRBM) project's Kuando Kubango biodiversity program. The results will be analyzed to assist the Angolan government in its ongoing efforts to better understand the dynamics of reserves in Kuando Kubango (in particular, the Mucusso Reserve), so as to make sound decisions regarding the future of these areas. A secondary objective was to provide practical training to a group of local Angolan participants, such that they would be suitably equipped to continue with further village assessments, and thus contribute to an improved understanding of other communities in Southeast Angola.

The initial training was carried out over six days at the Frans Dimbare Youth Centre in Namibia. Thereafter, the team moved into the field in Angola, where three village assessments formed an integral component of the overall training. The 12 local participants for training were selected by IRBM project staff in a process that involved consultation with traditional authorities and communities. Three additional participants from the provincial centre of Menongue (from the Institute of Forestry Development, the Department of Environment and the NGO ACADIR) participated during the initial training and first village assessment at Ngongo.

The process followed for each village assessment included:

1. Securing the necessary permission from the relevant administrative and traditional authorities,
2. Holding an initial community meeting,
3. Selecting a small number (12-16) of village representatives,
4. Working with the village representatives in each community over five or six days doing various Participatory Rural Appraisal (PRA) exercises,
5. Administering a simple questionnaire to all households within the village (Ngongo = 59, Ngcusha = 82 and Shamamputu = 33), and
6. Holding a final report back meeting with each community.

The PRA process was adapted and modified from one village to the next, partly to facilitate the training process, partly to improve the process through adaptation to local conditions. The questionnaire was compiled, tested and standardised prior to the village assessments, such that it was delivered in standard form to all households.

Results from the PRA and questionnaire studies are collated and reported under eight principal themes:

- People and history of Mucusso,
- Population and household data,
- Village maps,
- Natural resources,
- Livelihood activities,

- Income and expenditure,
- Institutions and rules, and
- Development issues.

1.0 INTRODUCTION

1.1 THE MUCUSSO RESERVE

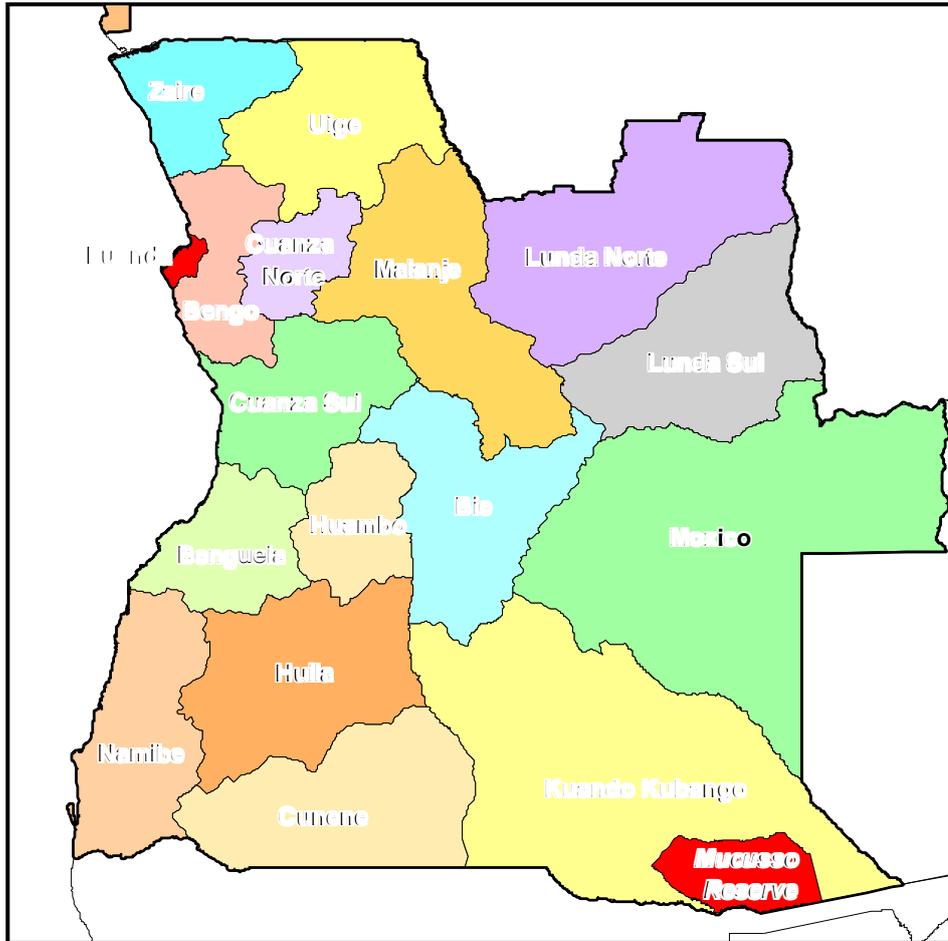
The Mucusso Reserve is located in Kuando Kubango Province in the extreme southeast of Angola, bordering onto part of the Namibian Caprivi strip (Map 1). The Kavango and Cuito rivers form its southern and western boundaries; the Lumuna, Luengue and Luiana Rivers its northern limits; and the Luiana Partial Reserve its eastern boundary. The Mucusso Reserve covers an area of some 21,300 square km, and forms part of a much larger contiguous complex comprising six "reserves" extending over some 100,000 square km within Kuando Kubango (Map 2). This greater complex of protected areas forms the core area in Angola of the planned Kavango-Zambezi Transfrontier Conservation Area linking Angola, Zambia, Namibia, Botswana and Zimbabwe.

Historically, the Mucusso Reserve is known to have supported abundant wildlife populations. These were the basis for its declaration in 1959 as a *Coutada Publica* or 'Public Hunting Reserve', and its subsequent use for safari hunting purposes. However, wildlife populations were strongly impacted during the prolonged period of unrest, including large-scale hunting of animals for meat and higher value commercial items, in particular ivory and rhino horns. Following the end of the civil war, the Angolan government is now interested in rehabilitating the Mucusso Reserve, including supporting the regeneration of wildlife populations and reintroducing sustainable management operations.

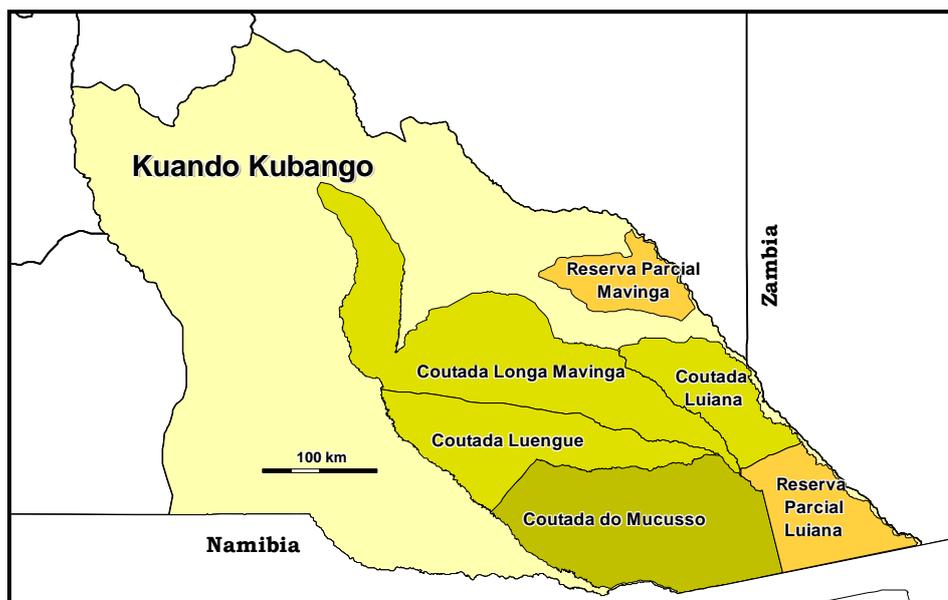
The Reserve also has a resident human population distributed in about 25 settlements, mostly located in the southern section along the Kubango River and border with Namibia. Mbukushu and Dirico speaking people form the majority of the population, but there are also significant numbers of San people. Livelihoods are based on dry land cropping (millet - *mahango*) and livestock production (cattle and goat rearing), coupled with significant use of wild products for food, local use, and for sale to Namibia (reeds, thatching grass etc.). These communities have been strongly impacted by over 30 years of conflict (from the late 1960s to 2002). Many of the current residents lived, at different times, as refugees elsewhere in the country or in Namibia, Botswana, Zambia and South Africa. Since the cessation of hostilities in 2002, the area has again been re-settled, although many former residents appear to still be living outside of the country. The area has very limited public infrastructure and services (schools, clinics), and offers very little in the way of formal employment opportunities, which are primarily limited to a few jobs in administrative services and companies with timber concessions.

The designations, permitted activities and legal status of protected areas in Angola have remained unchanged since colonial times, but are presently under review. Currently the management authority for the *coutadas* lies with the Forestry Development Institute (IDF) of the Ministry of Agriculture and Rural Development. However, these areas may in future fall within the remit of different management institutions, depending on the outcome of on-going government policy decisions. The reality, however, is that the Reserve has had little history of management as a protected area and, although a number of timber and tourism concessions have been authorized, there is currently no management system in place for the area as a unified "reserve".

Map 1. Location of the Mucusso Reserve within Angola



Map 2. Location of the Mucusso Reserve with respect to the other classified areas of Kuando Kubango



I.2 THE OKAVANGO IRBM PROJECT

Angola, Botswana, and Namibia agreed in 1994 to establish the Permanent Okavango River Basin Water Commission (OKACOM) to promote coordinated, regional water resources development objectives for the Okavango river basin, while addressing the legitimate social and economic needs of these three riparian states. A key objective of OKACOM's efforts is a coherent approach to managing the basin's resources, based upon equitable allocation, sound environmental management, and sustainable utilization.

USAID/Southern Africa, recognizing the commitment of OKACOM, agreed to support OKACOM's institutional development through the Okavango Integrated River Basin Management Project (IRBM). Implementation of IRBM is being overseen by OKACOM and its technical advisory body, the Okavango Basin Steering Committee, in collaboration with government ministries, non-governmental organizations in the basin, communities, regional academic and research institutions, businesses and local governments that use and manage the resources in the Okavango River Basin.

Over the past year, the Okavango IRBM project has been supporting biodiversity conservation studies and programs within the Mucusso Reserve. Important achievements to date include baseline vegetation and wildlife studies, training of local environmental technicians, initiation of a program aimed at mitigation of conflicts between wildlife and people, and initiation of a process for assessing the protected area status of the reserve. This process is an important opportunity for feeding into and stimulating the development of policy, legislation and applied experience for protected area planning and management in the wider national context.

A key element of this planning process is to develop policies and management systems for communities living within protected areas, whose livelihoods are often strongly dependent on the use of natural resources within the reserve. In order to ensure that community perspectives and livelihood options are taken into consideration in the ongoing redevelopment, zonation and planning, it was recognized that it would be necessary to develop a more detailed assessment of these communities.

I.3 PURPOSE OF THE PRESENT STUDY

The present study was thus commissioned in order to provide information concerning the livelihoods and the use of natural resources by three communities within the Mucusso Reserve. These comprised Ngongo village in the Mucusso Communa, and Ngcusha and Shamamputu villages in the Dirico Communa. The specific objectives of the study were:

1. To provide training to community mobilizers selected from the local community and relevant local authorities in participatory methods appropriate for assessing local community natural resource use, and for the development of village plans and options for local livelihoods based on the sustainable use of those resources;
2. To support the implementation of village-level community assessments and planning in selected settlements within the Mucusso Reserve, in areas representative of different ethnic groups and geographic locations; and
3. To collate the information from these assessment-planning efforts into report(s) to contribute to considerations in planning.

2.0 STUDY AREA

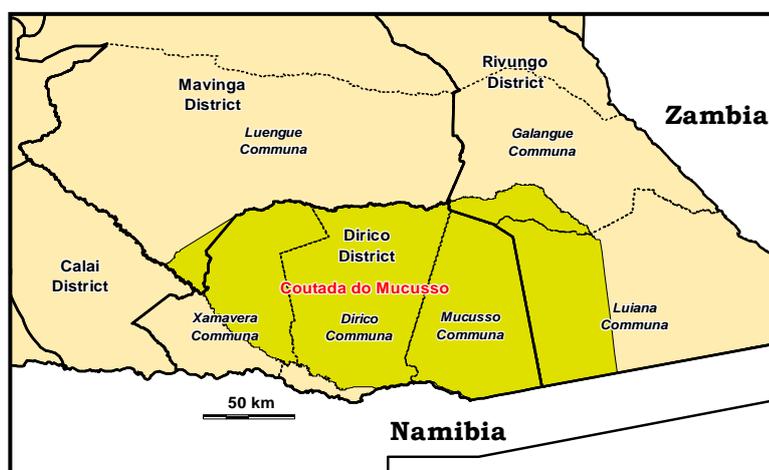
Location. The *Coutada do Mucusso* includes portions of three Municipalities (or Districts) and six comunas. The bulk of the reserve falls within Dirico Municipality (including all of Mucusso Comuna, most of Dirico Comuna, plus a major portion portion of Xamavera Comuna – to the east of the Cuito river), with smaller portions of Ravungo (western parts of Luiana and Galangue Communas) and Mavinga Municipalities (the southwestern tip of Lengue Comuna) (Map 3).

Administration. There is a small administrative centre for each municipality and comuna. For Dirico Municipality, the administrative centre is Dirico town, which is situated between and at the junction of the Cuito and Kavango Rivers. There are currently no bridges in this area across either the Kavango river (linking to Namibia) or the Cuito River, such that road access is confined to the portion between the two rivers.

Settlement. The largest human settlements occur in two areas bordering the reserve: in the south, where a series of small villages line the banks of the Kubango and Cuito Rivers, and in the north, where the Likua settlement aligns the Lumuna River. Most agricultural activity occurs along the Kubango and Cuito Rivers. Other human settlements appear to be small in scale (such as Chatoma and Wandumbi). Outside of the reserve, there are additional settlements in the neighbouring portion to the west of the Cuito River. The southern banks of the Kavango River in Namibia are far more densely inhabited by people and cattle than are the northern banks of the river, in Angola.

People and Traditional Leadership. The eastern portion of the reserve is dominated by Mbukushu people, whilst the western settlements are predominantly Ganguela and Gciriku peoples, with a prominent San minority. For the eastern Mbukushu portion, there is a single *Rei* or King, who resides at Ngongo village some 10 km to the west of Mucusso, as well as *Sobas* or Chiefs for a series of villages who fall under the *Rei*. Similarly, the western portion used to have a single *Rei*, but during the colonial area a second traditional authority position was established. As a result, there are now two *Reis* in the Dirico side of the reserve, one based at Ngcusha and the other at the neighbouring village of Shamamputu. The presence of these primary traditional authorities was a key consideration in the selection of the three villages for the present study.

Map 3. Municipalities and comunas that have land within the Mucusso Reserve



3.0 METHODS

The field work followed for the study was carried out over 32 days during March/April 2008.

Selection of Facilitators. Selection of the facilitators was carried out by the IRBM project team in consultation with traditional authorities and communities, prior to initiation of this exercise. The team of facilitators was lead by Euzebius Isandu, local project coordinator for the IBRM project, living in Mucusso. Two of the other members, Basilius Mandjeke and Alberto Kavindja had previously worked as team members of the IRBM project through the Angolan NGO ACADIR. Also included within the group was the district agricultural officer, Ehrnesto Samalinha, who was based at within the offices of the district administration at Dirico. The other 10 local members were drawn from Mucusso and Dirico plus several of the intervening villages along the Kavango river (Katunda (2), Ditemwangi (2), Kangongo (1), Shamutwe (1) and Ngcusha (2)). These individuals were nominated by their respective communities, with the understanding that they should have good communication and literacy skills. The local group comprised four women and 10 men.

Participants from Menongue. For the initial training and Ngongo village assessment, the local team was complemented by three members from Menongue, who joined in and formed part of the team of facilitators for the Ngongo assessment. These three comprised the Provincial Director of the Department of the Environment, a representative of the Institute of Forestry Department (IDF), and a representative of ACADIR – an environmental non-governmental organization based in Menongue. These individuals were:

- Julio Bravo – Head of the Provincial Department of Environment of Kuando Kubango;
- Firmino Tchipepe – Institute of Forestry Development Officer; and
- Jose Americo Filipe – Community Mobilization Officer, ACADIR.

The two government departments both have a role concerning management of the Mucusso Reserve, while ACADIR is operational in the province. As such, the purpose for including them in this exercise was to give them exposure to and thus enable a better understanding of the actual situation in the field within the Mucusso Reserve, and how the project is operating within the field.

Training. Following arrival in Divindu, Namibia, the first six days were spent training the team of facilitators. This was carried out at the Frans Dimbare Youth Centre, a superb facility that is situated some five km upstream of Divindu on the banks of the Kavango river. The purpose of the training was to clarify with facilitators the objective of the village assessment exercise; to assess their capabilities; to introduce them to the methodologies that they would be using for the assessments, including a questionnaire study and basic PRA tools; to develop a simple one page household questionnaire, and to instil some basic facilitation skills.

Selecting the Study Villages. Selection of the study villages was carried out by the IRBM project staff in consultation with local authorities. Important considerations included the importance of including areas from both the Mucusso and Dirico portions of the Reserve; the need to work in close proximity to the lead traditional authorities (one for Mucusso and two for Dirico); the location of settlements vis-à-vis wildlife corridors, the wish to cover as much diversity as possible (for example, differing ecological conditions and different ethnic groups), and logistical feasibility.

Preparatory Work. Preparatory work was carried out prior to each assessment. This included informing the district authorities, including meeting with the District Administrator (at Dirico) and Comuna Administrator (in Mucusso), meeting with the traditional leaders for Ngongo, Ngcusha and Shamamputu; and holding initial community meetings at all three villages.

Data Collection. Actual data collection was carried out over 6 days for Ngongo and Ngcusha and five days for Shamamputu (where one day was taken up by meetings with district officials). Information was generated by the Assessment Team in two ways: by means of group work comprising a variety of participatory exercises, and through conducting a small household questionnaire.

Group Work. For the bulk of the participatory exercises, the Assessment Team was subdivided into two or three smaller sub groups, each of which would work on a different aspect. The types of methods used included structured interviews, spidergrams, scoring, tables, calendars, sketch mapping and trend analysis. Proceedings were mainly conducted in local languages: Thimbukushu at Ngongo and Runyemba at Ngcusha and Shamamputu, whilst information on flip charts was recorded in a mixture of languages including local languages, Portuguese and some English.

Questionnaire Study. The questionnaire was limited to a single A4 page, comprising 19 questions on various aspects such as household composition, age, education, tribal affiliation, year of establishment of the household, presence of relatives in other countries, principal activities, crop and livestock production, sources of income, possession of capital items, development problems and types of housing. The form was based on that used during previous similar assessments, adapted and piloted as part of the training of the facilitators, following which it was again modified and finalised.

For each village the questionnaire was administered to all households, although it is possible that a small number of households may have been missed in cases where all family members were absent at the time. The definition of a household was taken as comprising a group of people who cook and eat together from the same pots.

The number of households covered in each village was 59 for Ngongo, 82 for Ngcusha and 33 for Shamamputu, thus giving a combined total to 174. As part of the subsequent review process each day, all questionnaires were reviewed to check for errors, omissions, items that required translating, and to ensure that different enumerators were using a consistent approach to each question. Questionnaire data was subsequently entered in electronic format, following which analyses were performed for certain parameters.

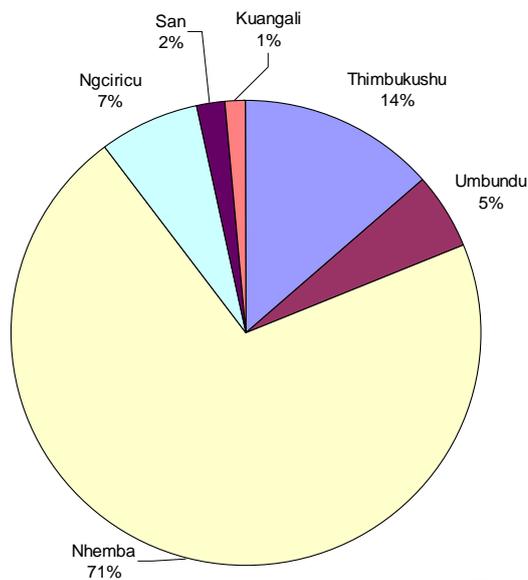
Report Back Meetings. Report back meetings were held with each of the three participating communities at the same venues as the initial community meetings. Prior to this, one day was spent with the facilitators reviewing the data generated and planning and developing on flipcharts (in the local language) a suitable format for the report back presentations. In addition to feeding back results to the communities, these meetings provided good opportunity to explore certain issues in greater detail. They also presented a good opportunity to again explain the purpose of the activity in its broader context of the Mucusso Reserve.

4.0 FINDINGS IN GRAPHICAL FORMAT

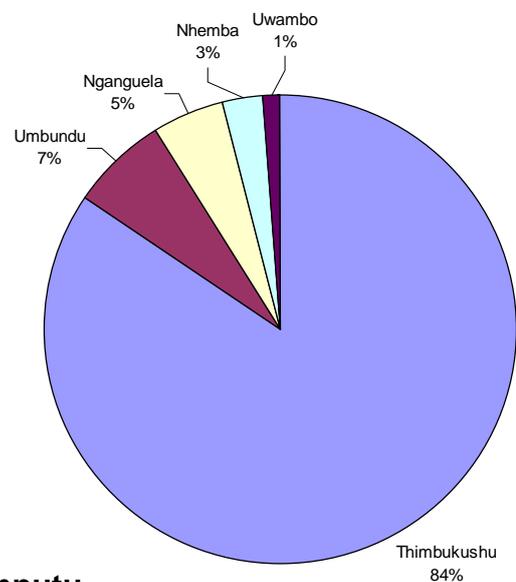
4.1 POPULATION DYNAMICS

Presence of ethnicities expressed as percentage of population for each village

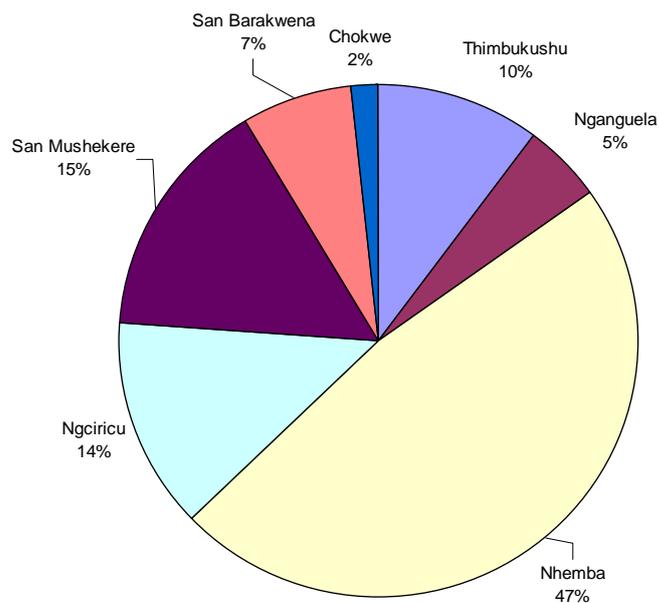
Ethnicities in Ngcusha



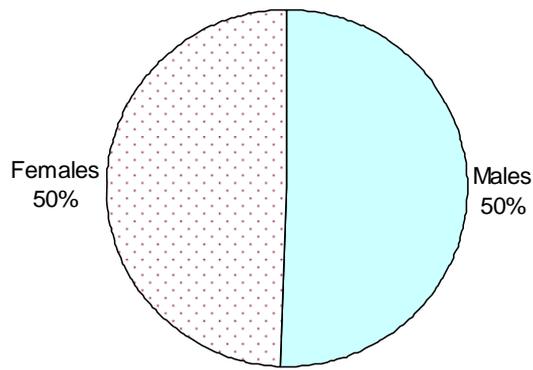
Ethnicities in Ngongo



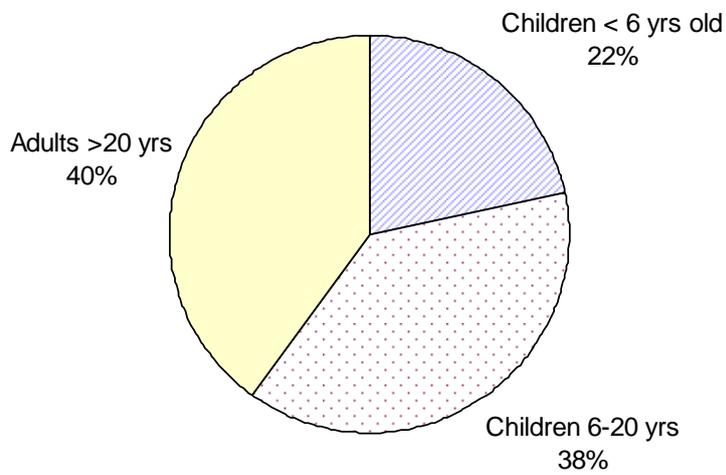
Ethnicities in Shamanputu



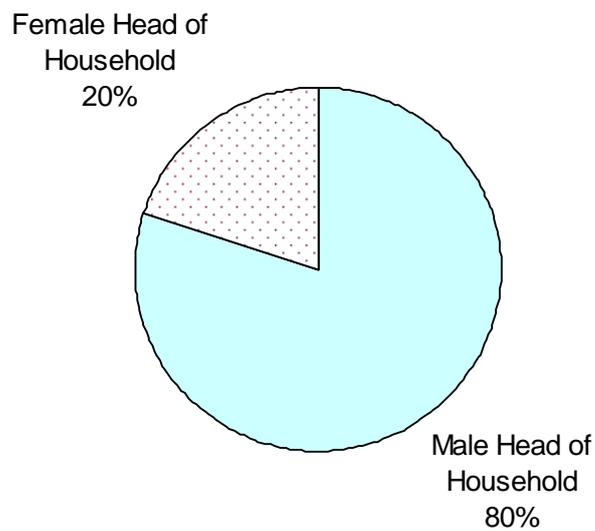
Average ratio of males to females for Ngongo, Ncusha and Shamanputu



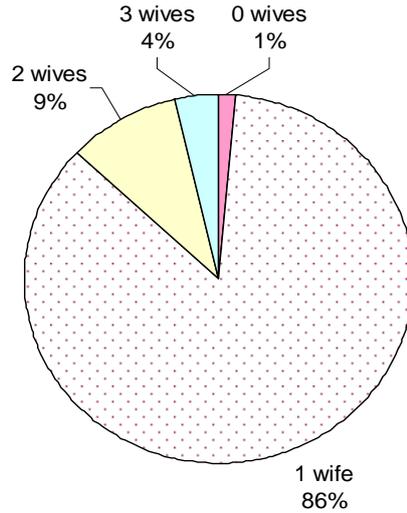
Average division of infants, children and adults for Ngongo, Ncusha and Shamanputu



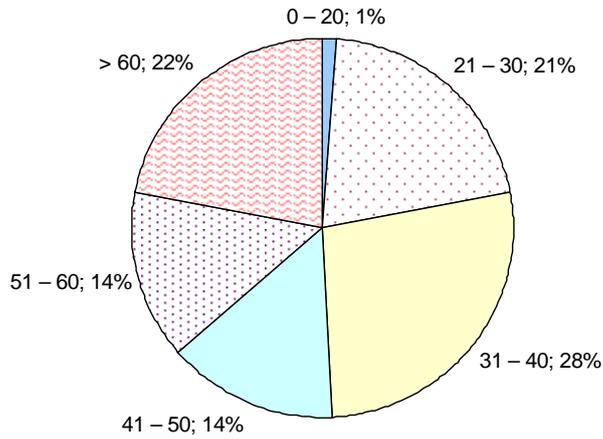
Percentages of households headed by males and females for Ngongo, Ncusha and Shamanputu



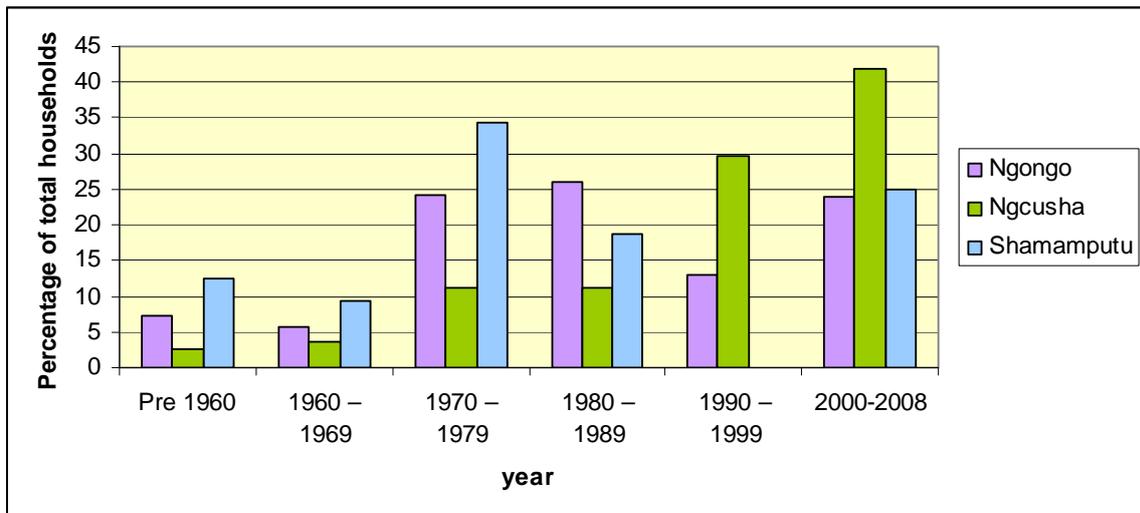
Levels of polygamy within Ngongo, Ncusha and Shamanputu - expressed as percentages of male headed households



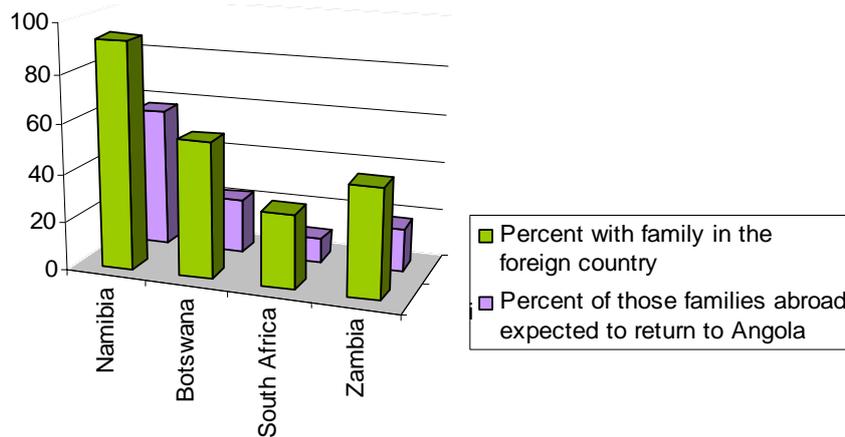
Ages of heads of households for the study areas, expressed as percentages of all heads of households



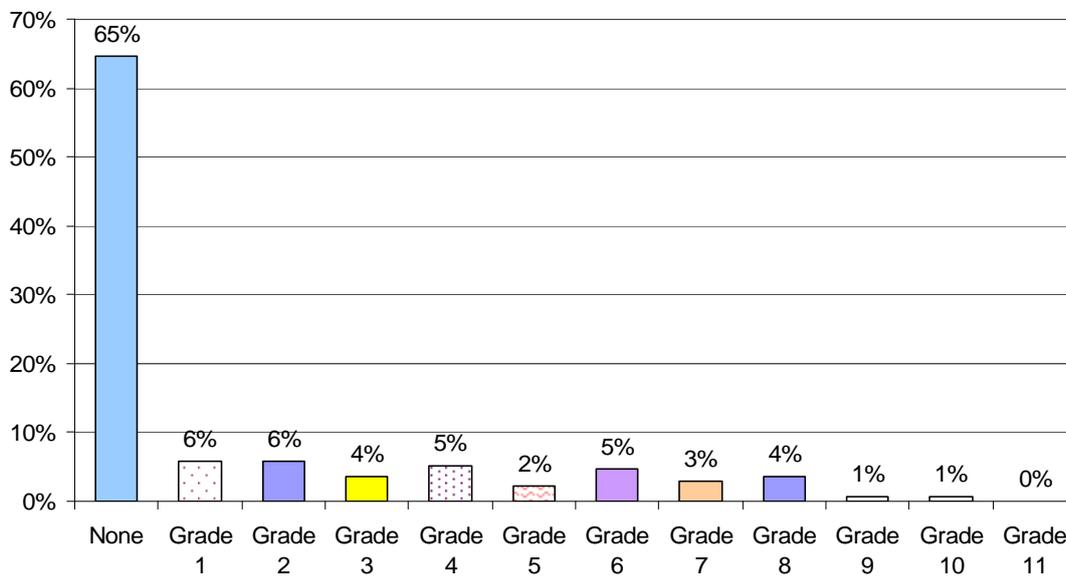
Year of establishment of households, expressed as percentages for each area



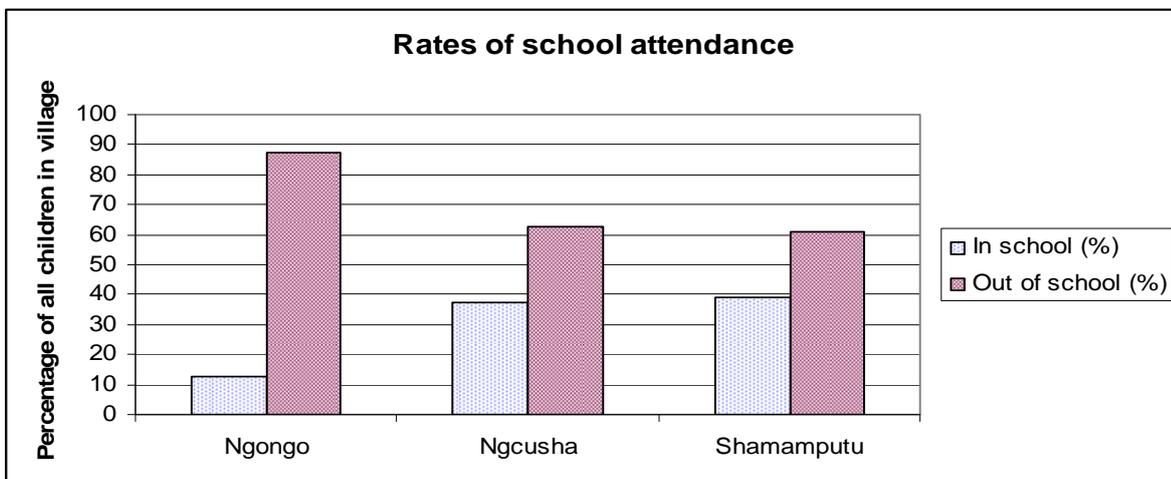
Existence of family members within neighbouring countries and whether or not they are likely to return to Mucusso in future



Levels of education achieved by heads of households in the study areas, expressed as percentage of all heads of households

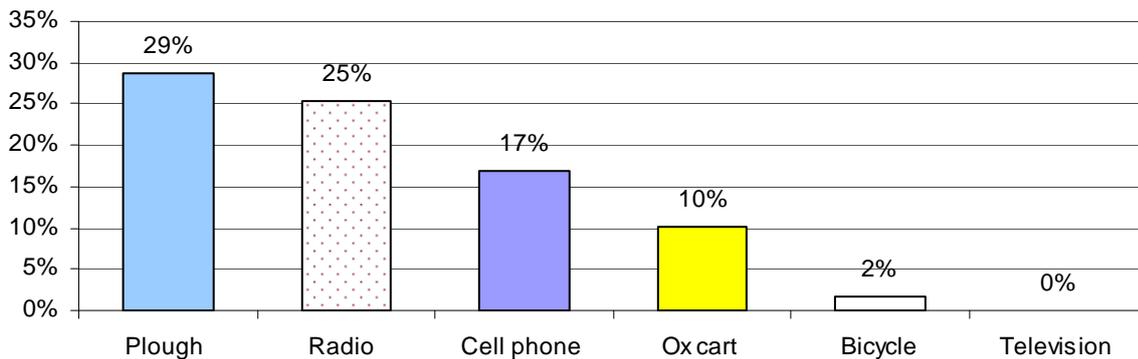


Levels of attendance by school aged children (ages 6 to 20 years) in the study areas, expressed as percentages of total children aged 6 to 20 years

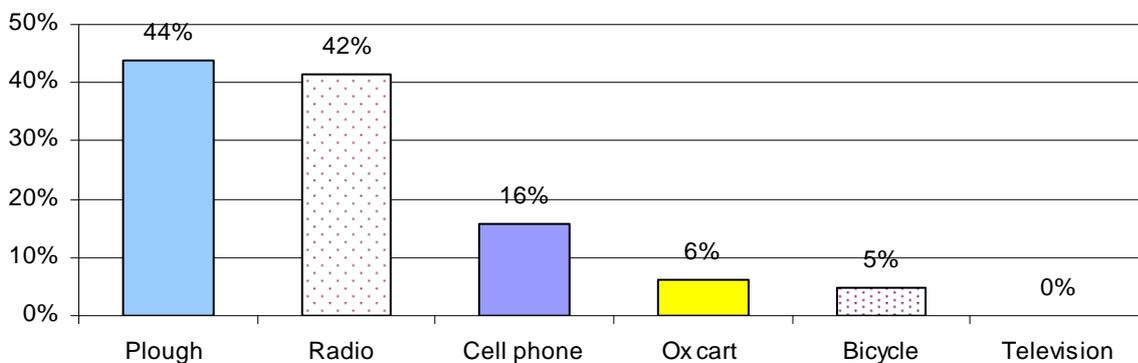


Percentage of households with various items in the study areas

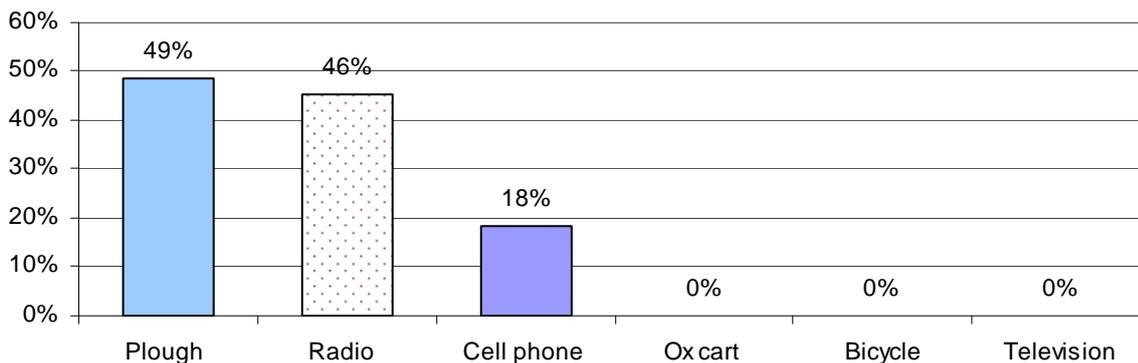
Ngongo - Percentage of households with various items



Ncusha - Percentage of households with various items

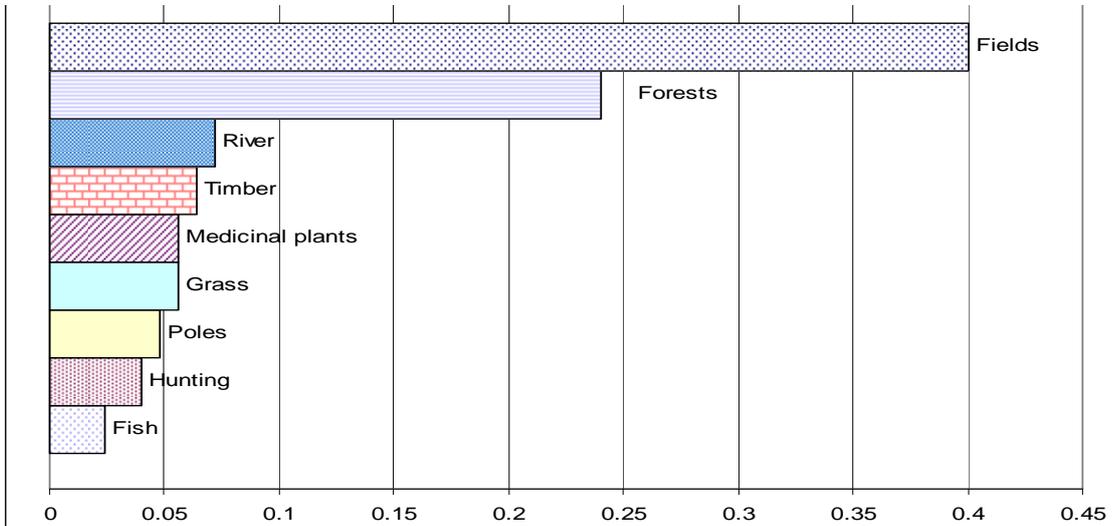


Shamanputu - Percentage of households with various items

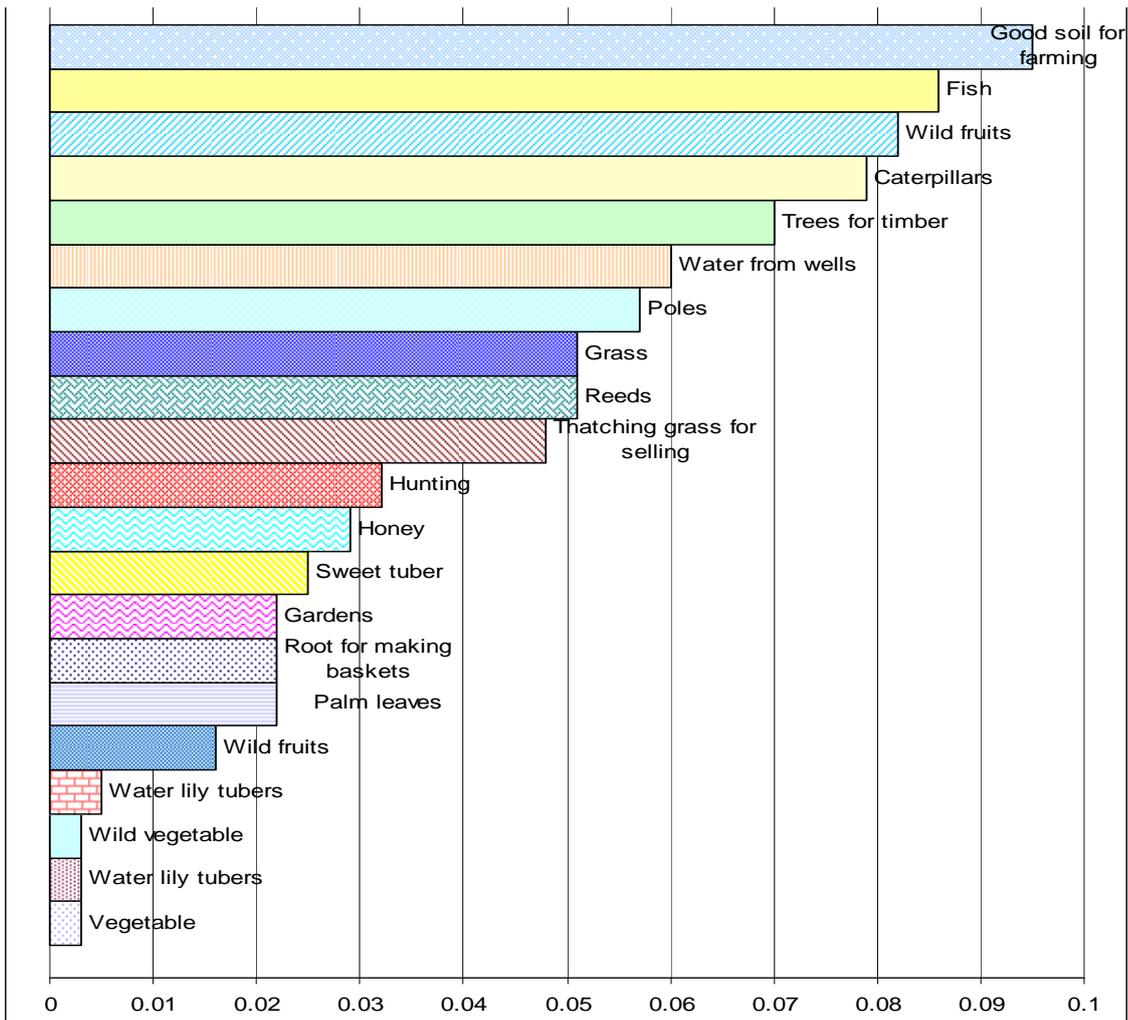


4.2 NATURAL RESOURCES

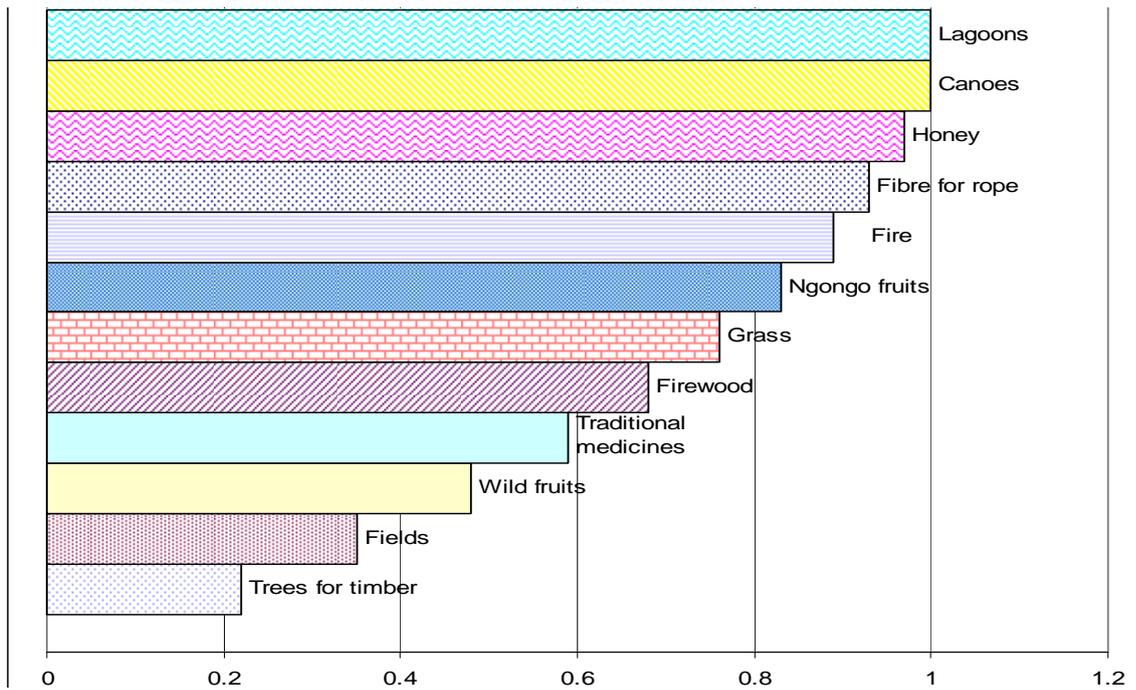
Natural resources most valued by Ngongo residents, and their relative importance to average families within Ngongo (The greater the value, the greater the importance given by community members)



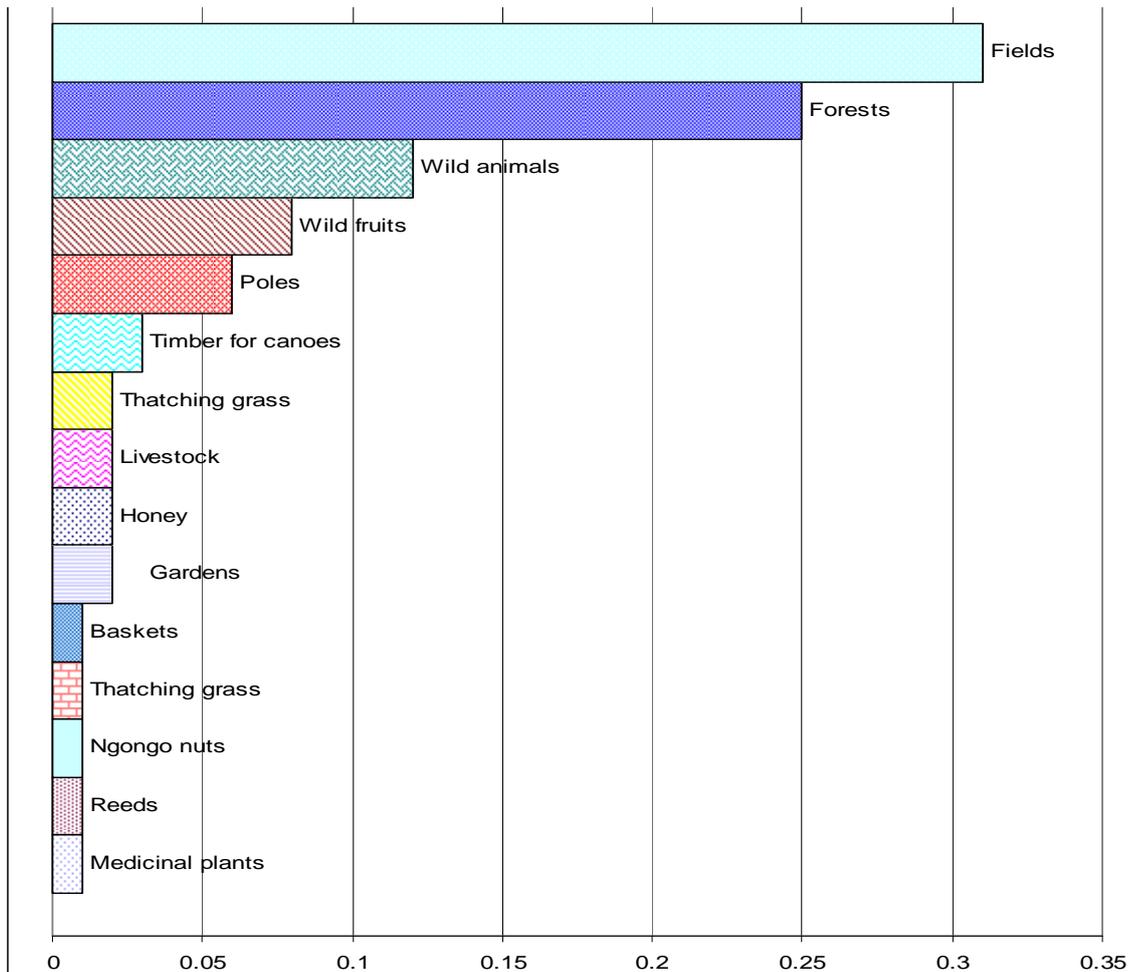
Natural resources most valued by Ngcusha residents, and their relative importance to average families within Ngcusha



Forest resources most valued by Ngcusha residents, and their relative importance to average families within Ngcusha

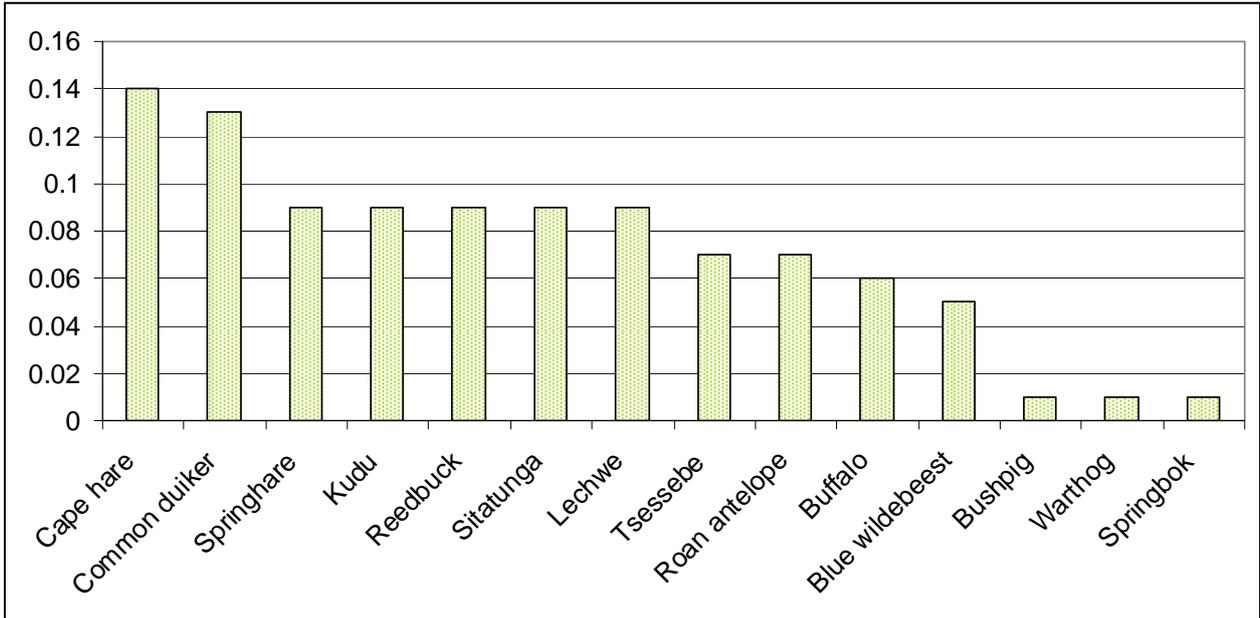


Natural resources most valued by Shamamputu residents, and their relative importance to average families within found within Shamamputu

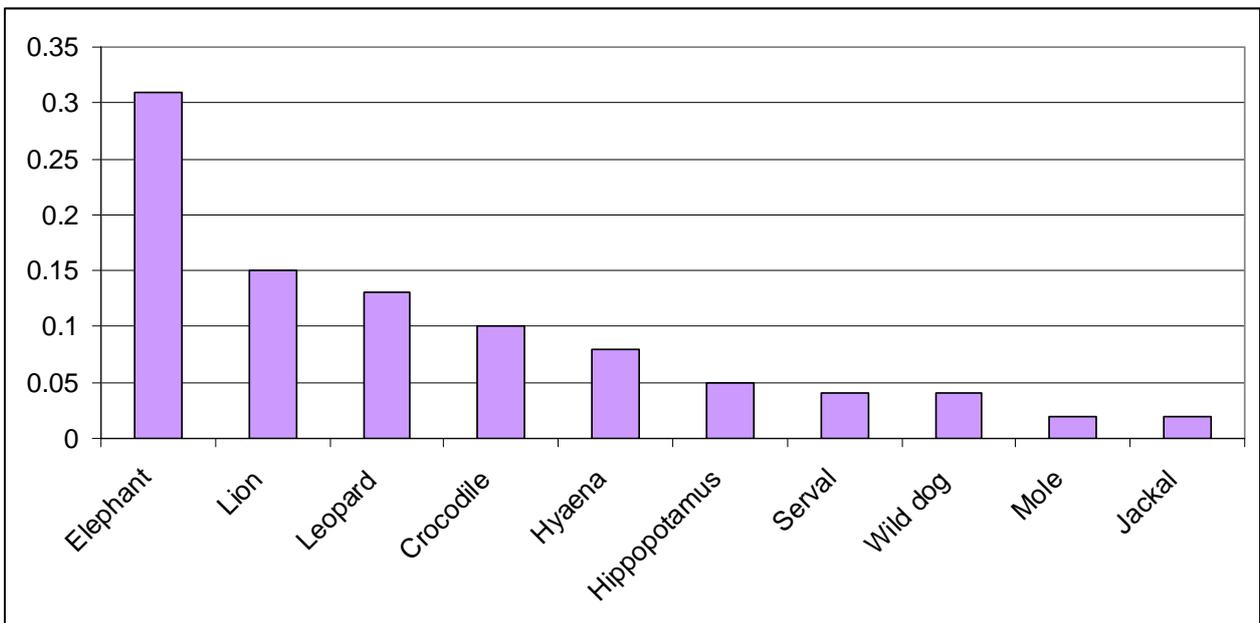


4.3 OCCURRENCE OF WILDLIFE

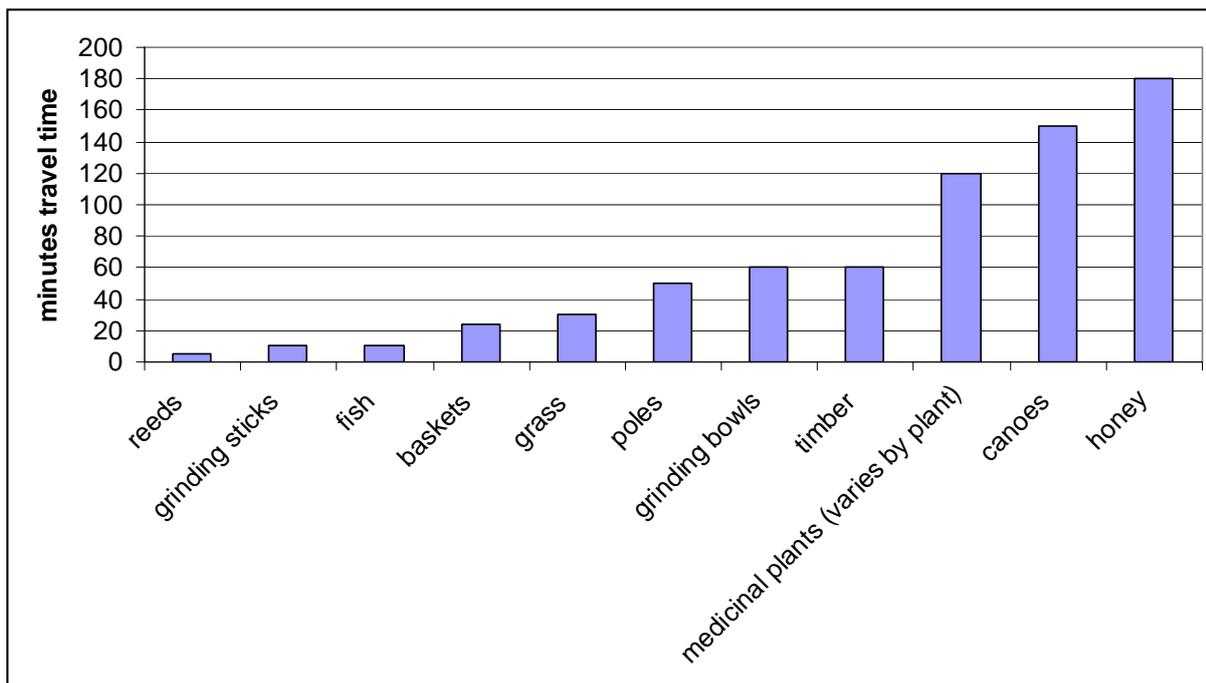
Wild animals scored in terms of relative importance as food sources within Shamamputu



Wild animals perceived to cause problems by residents of Ngcusha, scored in terms of relative importance

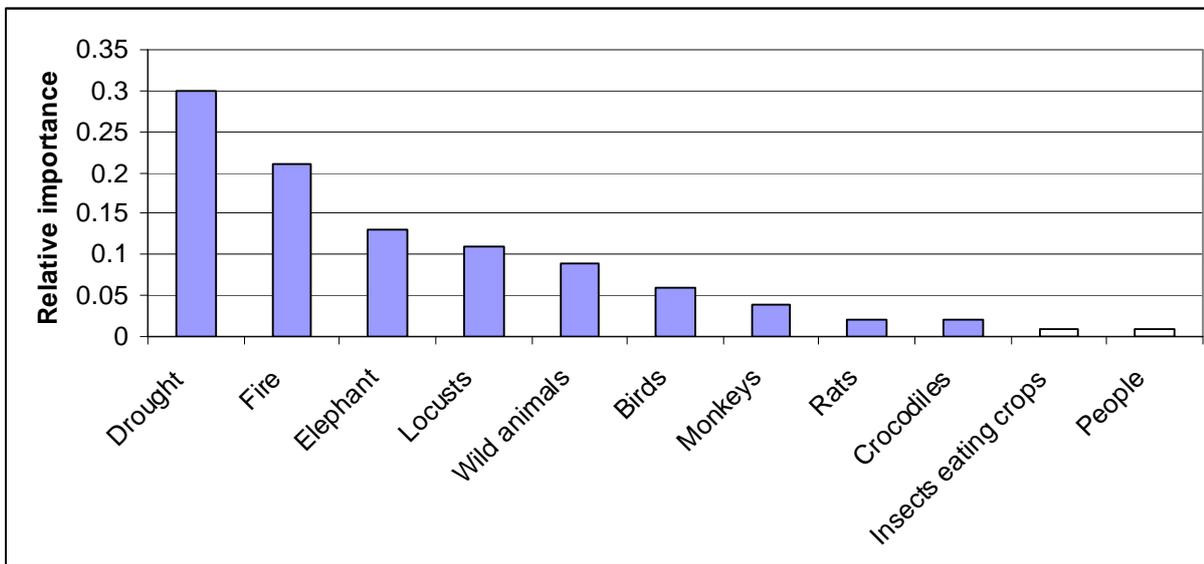


Approximate travel time required to acquire natural resources from Ngongo, expressed in minutes



4.4 MANAGEMENT OF NATURAL RESOURCES

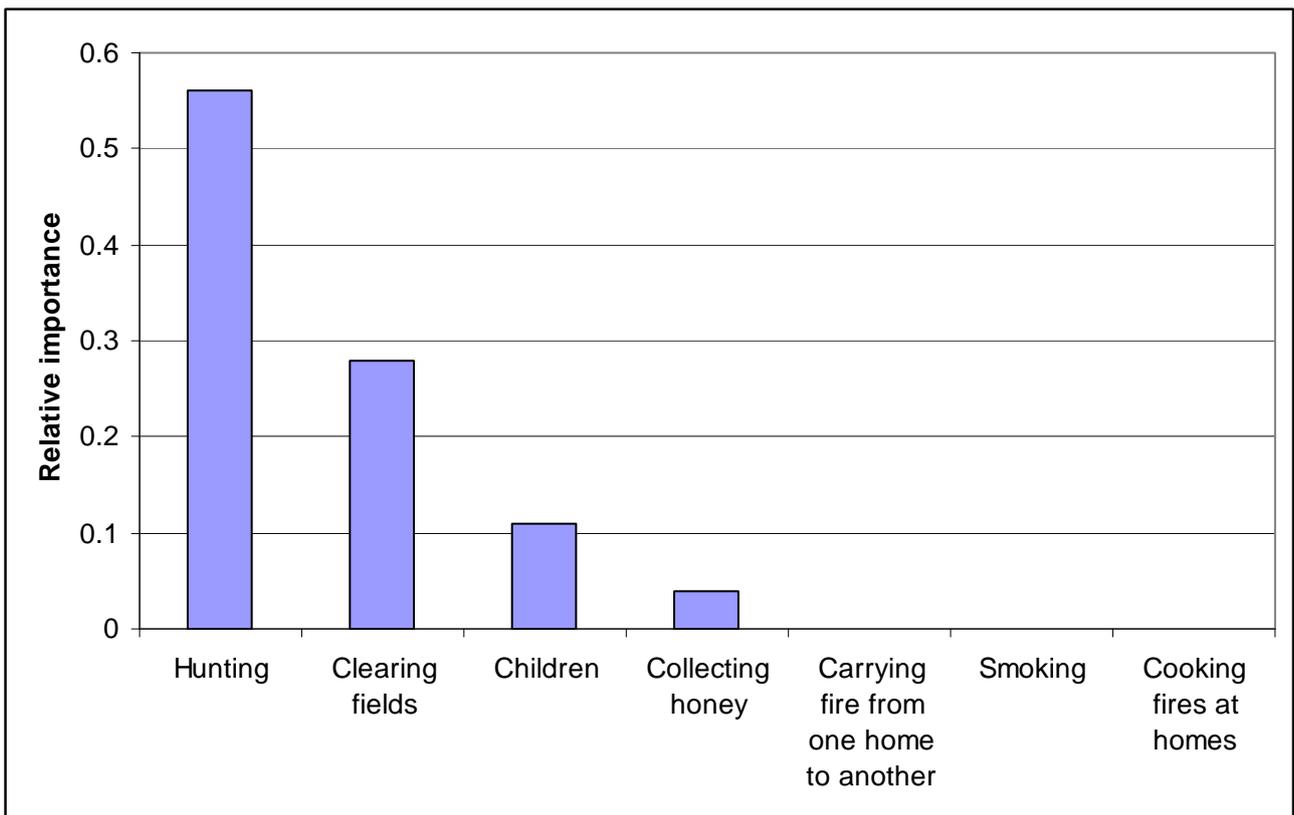
Factors perceived to cause detrimental impacts to natural resources within Ngongo, scored in terms of relative importance



Impact of wild fires on natural resources, as perceived by residents of Ngongo, Ngusha and Shamanputu (not listed in any order of prioritization)

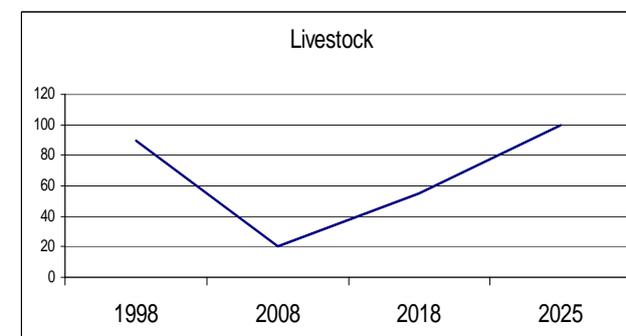
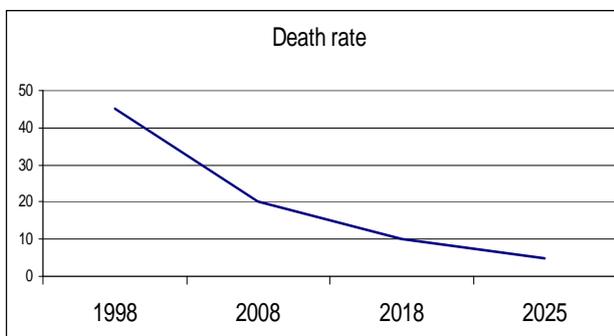
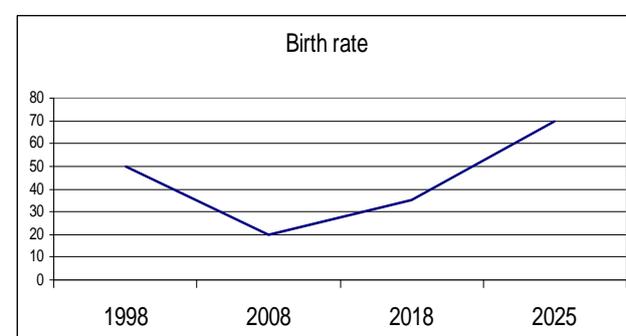
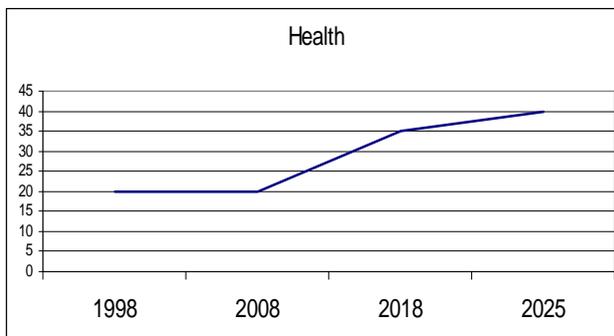
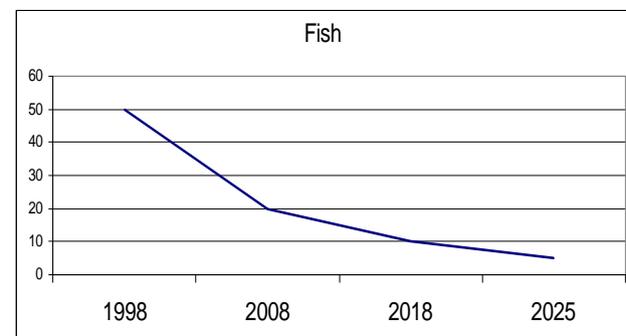
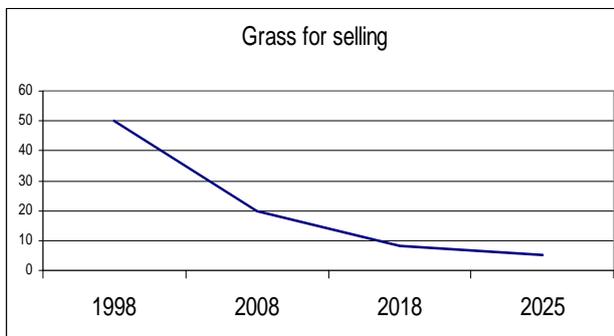
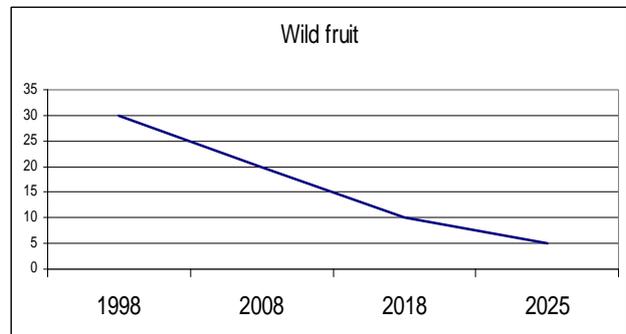
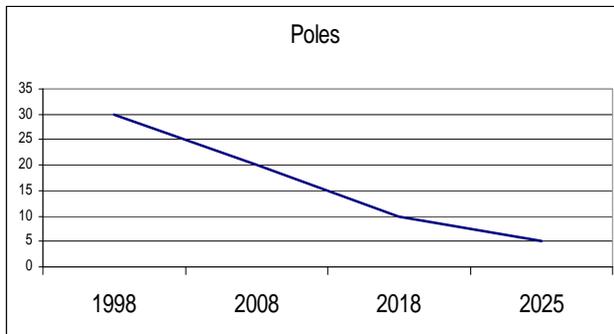
Loss of honey
Destruction of fields and their crops
Death and destruction of trees
Dislocation of wild animals
Destruction of young birds
Loss of reeds
Loss of wild fruits
Loss of grass for thatching
Less rain
Loss of medicinal plants
Loss of caterpillars
Loss of people and houses
Loss of pasture for cattle
Destruction of kraals for cattle
Dust and smoke from the fires

Perceived causes of bush fires, scored in terms of their relative frequency

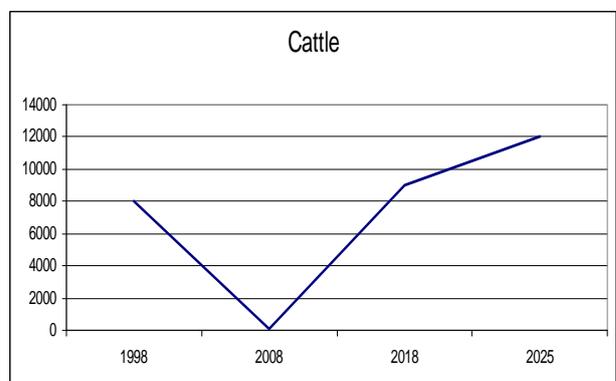
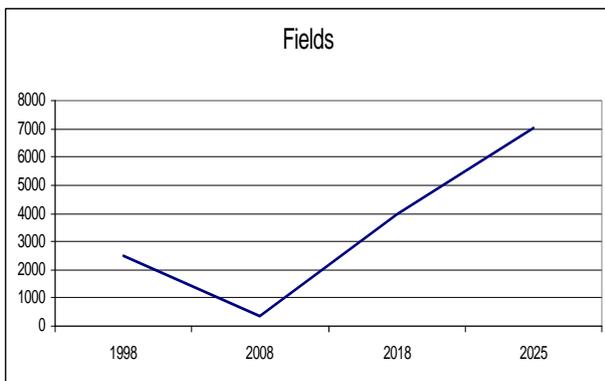
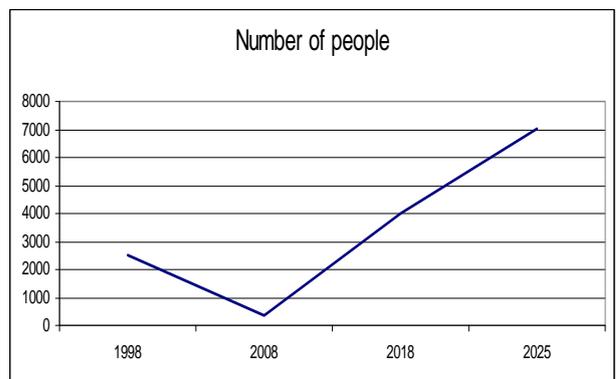
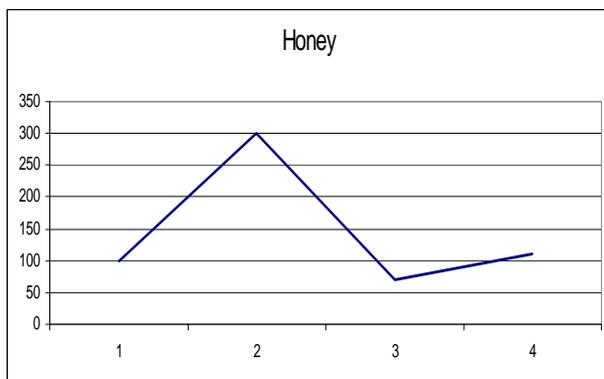
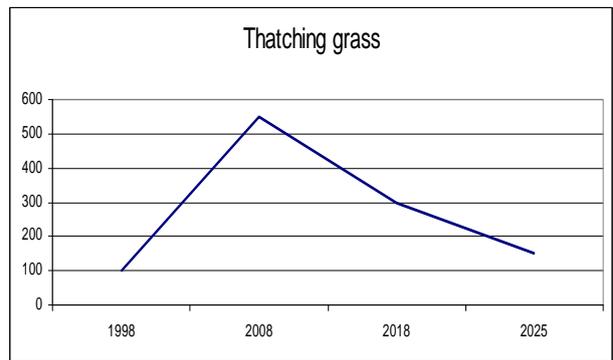
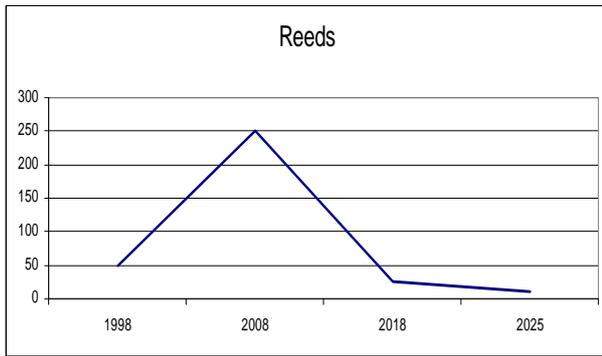


4.5 TRENDS IN AVAILABILITY OF NATURAL RESOURCES AND DEVELOPMENT

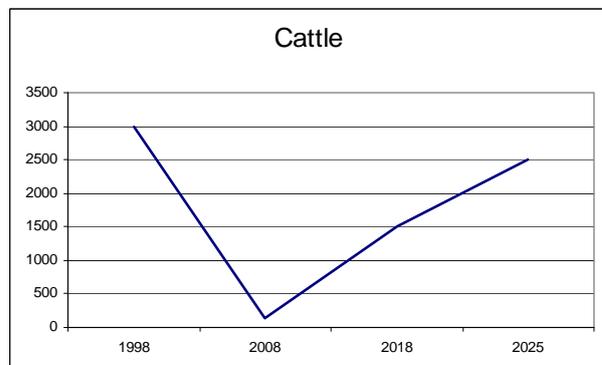
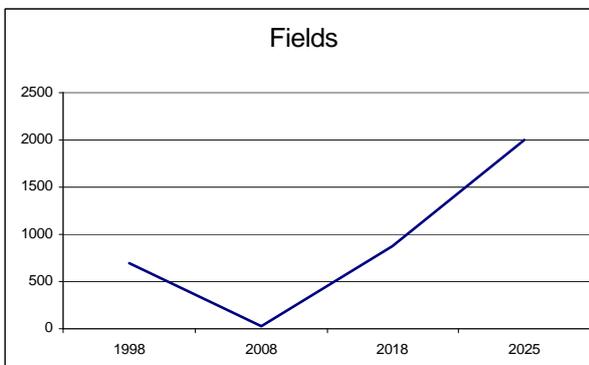
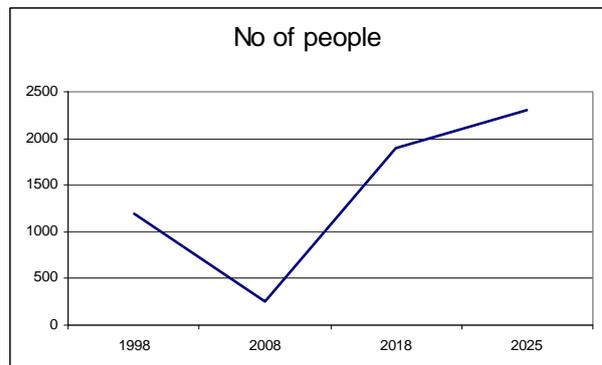
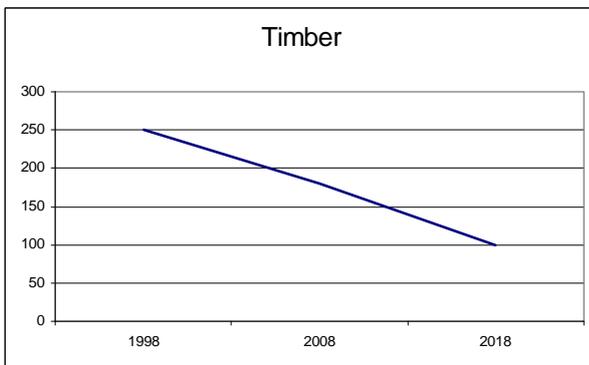
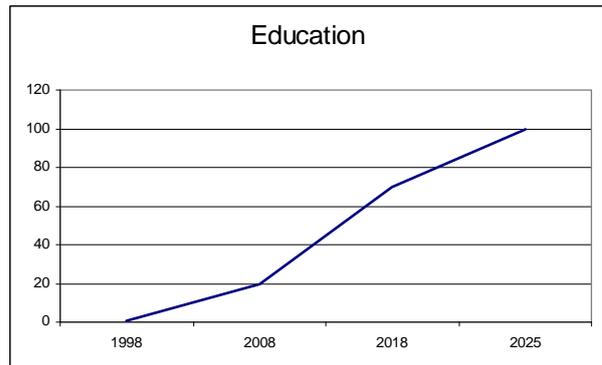
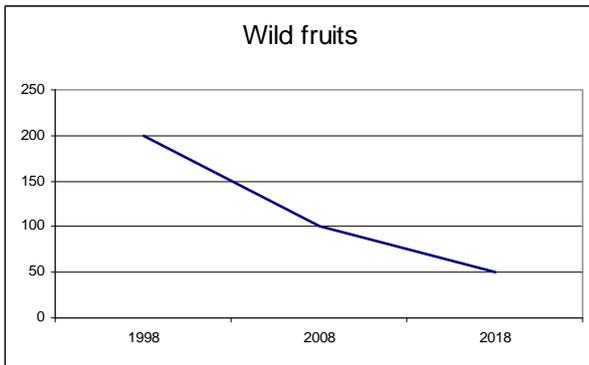
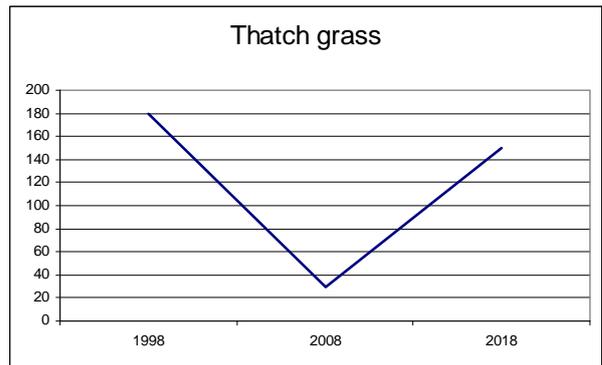
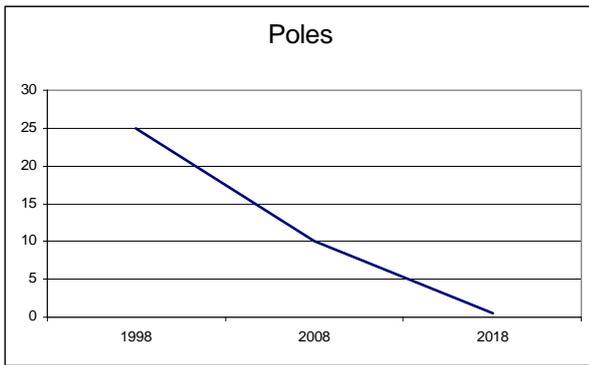
Changes in natural resources availability and in select development indicators, from the past (1998) to the present and as predicted to occur in the future (to 2018 and 2025), as assessed by residents of Ngongo



Changes in natural resources availability and in select development indicators, from the past (1998) to the present and as predicted to occur in the future (to 2018 and 2025), as assessed by residents of Ncusha



Changes in natural resources availability and in select development indicators, from the past (1998) to the present and as predicted to occur in the future (to 2018 and 2025), as assessed by residents of Shamanputu

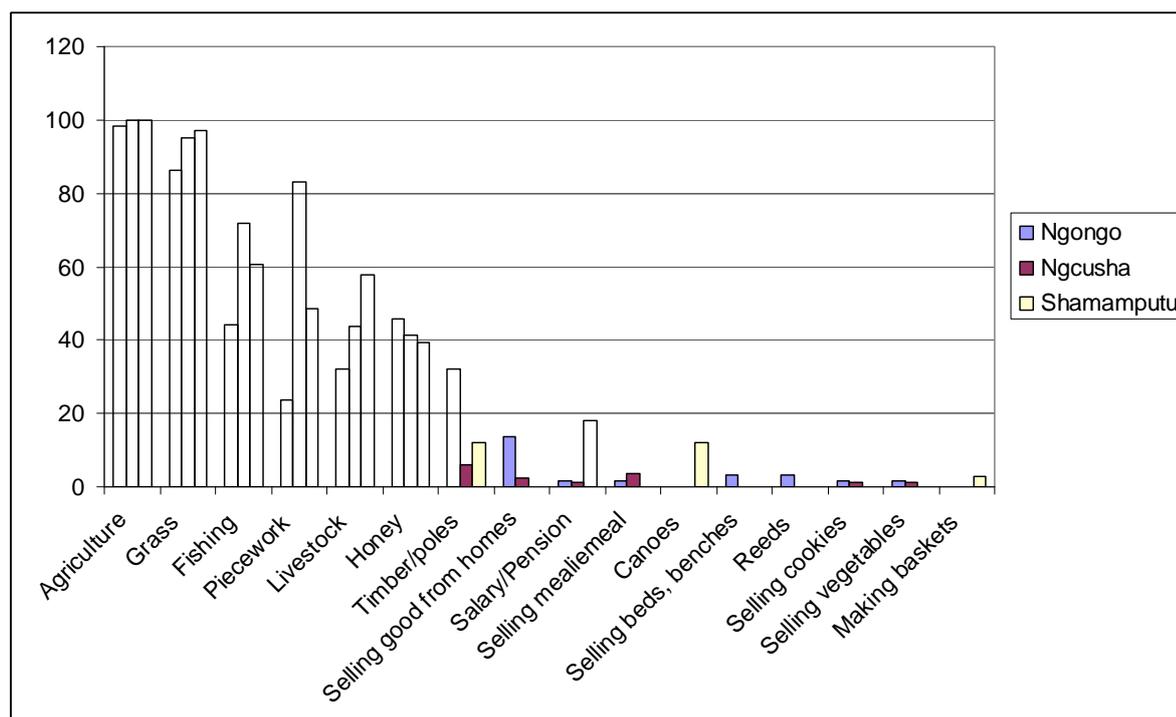


4.6 LIVELIHOOD ACTIVITIES

Months during which different livelihood activities are carried out

Activity	J	F	M	A	M	J	J	A	S	O	N	D
Farming	X											
Cutting trees/clearing								X	X	X		
Burning waste										X		
Ploughing	X	X									X	X
Planting	X	X									X	X
Cultivation/weeding	X	X	X									
Guarding the crops		X	X	X								
Harvesting				X	X	X	X					
Moving crops to homes					X	X	X					
Threshing and cleaning							X	X				
Filling grain stores							X	X	X			
Grinding to make meal	X	X	X	X	X	X	X	X	X	X	X	X
Other activities												
Collecting medicines	X	X	X	X	X	X	X	X	X	X	X	X
Cutting poles	X	X	X	X	X	X	X	X	X	X	X	X
Timber					X	X	X	X	X	X		
Making canoes						X	X	X	X	X		
Cutting grass					X	X	X	X	X			
Cutting reeds							X	X	X			
Berchemia fruits			X	X								
Collecting fruits				X	X	X	X	X	X	X	X	X
Collecting ngongo					X	X	X	X	X	X	X	
Hunting							X	X	X	X	X	
Fishing	X							X	X	X		
Honey	X										X	X
Business	X	X	X	X	X	X	X	X	X	X	X	X
Building houses	X	X	X	X	X	X	X	X	X	X	X	X
Brewing beer	X	X	X	X	X	X	X	X	X	X	X	X
Milk	X	X	X	X	X	X	X	X	X	X	X	X
Baking	X	X	X	X	X	X	X	X	X	X	X	X
Metal working	X	X	X	X	X	X	X	X	X	X	X	X
Piecework	X	X	X	X	X	X	X			X	X	X
Selling crops				X	X	X	X	X	X			
Gardens								X	X	X		

Proportions of households carrying out different activities, expressed as percentages of the village population

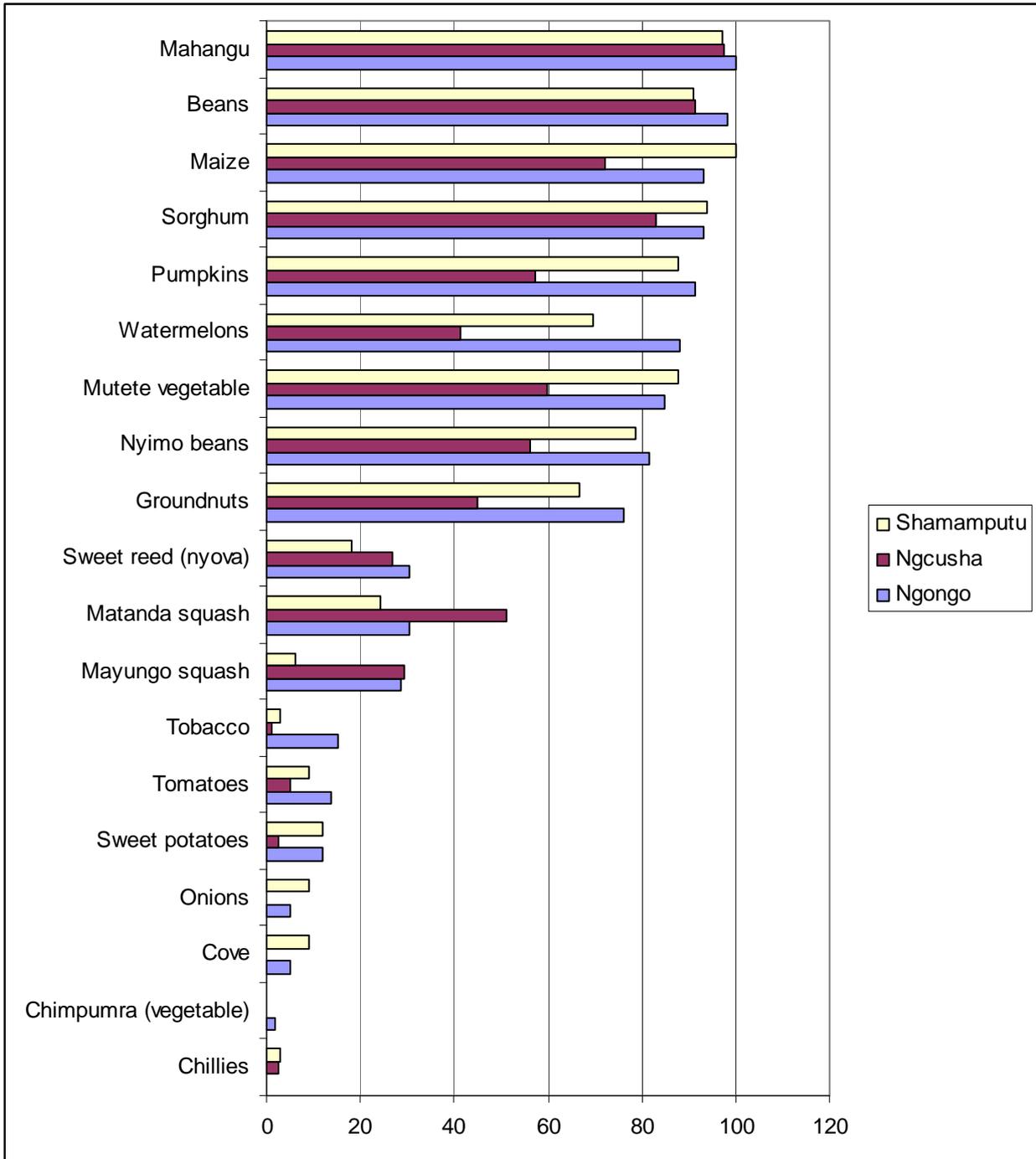


Participation by men, women and children in different livelihood activities

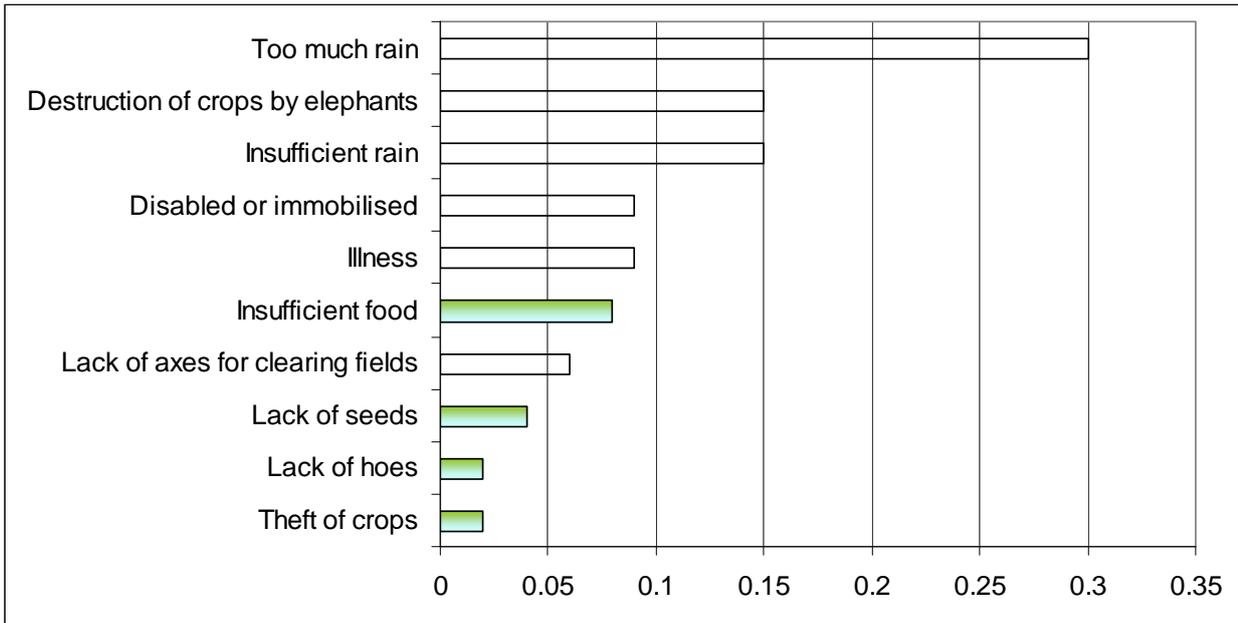
Activity	Men	Women	Children
Farming	X	X	X
Cutting poles	X		
Cutting grass	X	X	X
Cutting reeds	X	X	X
Collecting firewood	X	X	X
Collecting fruits	X	X	X
Collecting worms	X	X	X
Collecting medicines			
Hunting	X		
Fishing	X	X	X
Pounding meal		X	X
Honey	X		
Piecework	X	X	X
Small businesses		X	
Building houses	X		
Cutting timber	X		
Brewing beer		X	
Making canoes	X		
Selling crops		X	X
Collecting ngongo	X	X	X
Gardens	X	X	X
Milking	X	X	X
Baking		X	
Metal working	X		

4.7 CROPS AND FIELDS

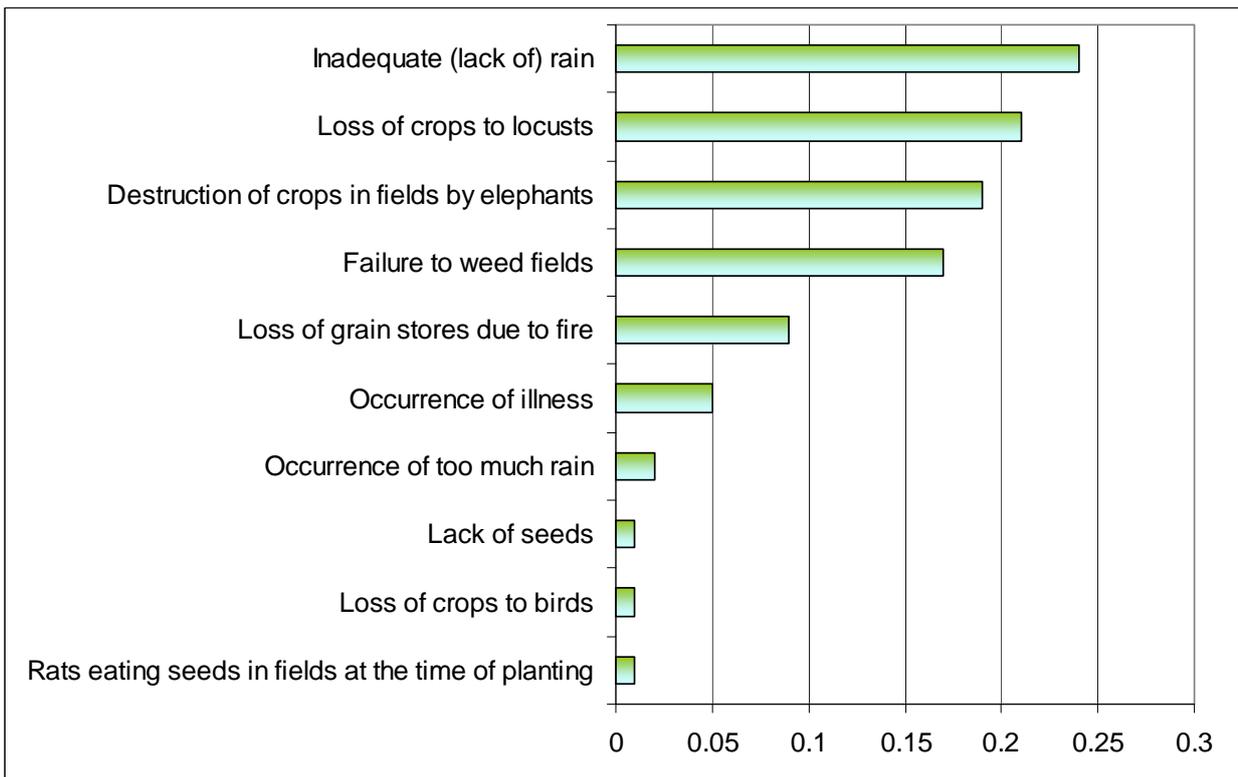
Proportions of households growing different crops, expressed as percentages for each village



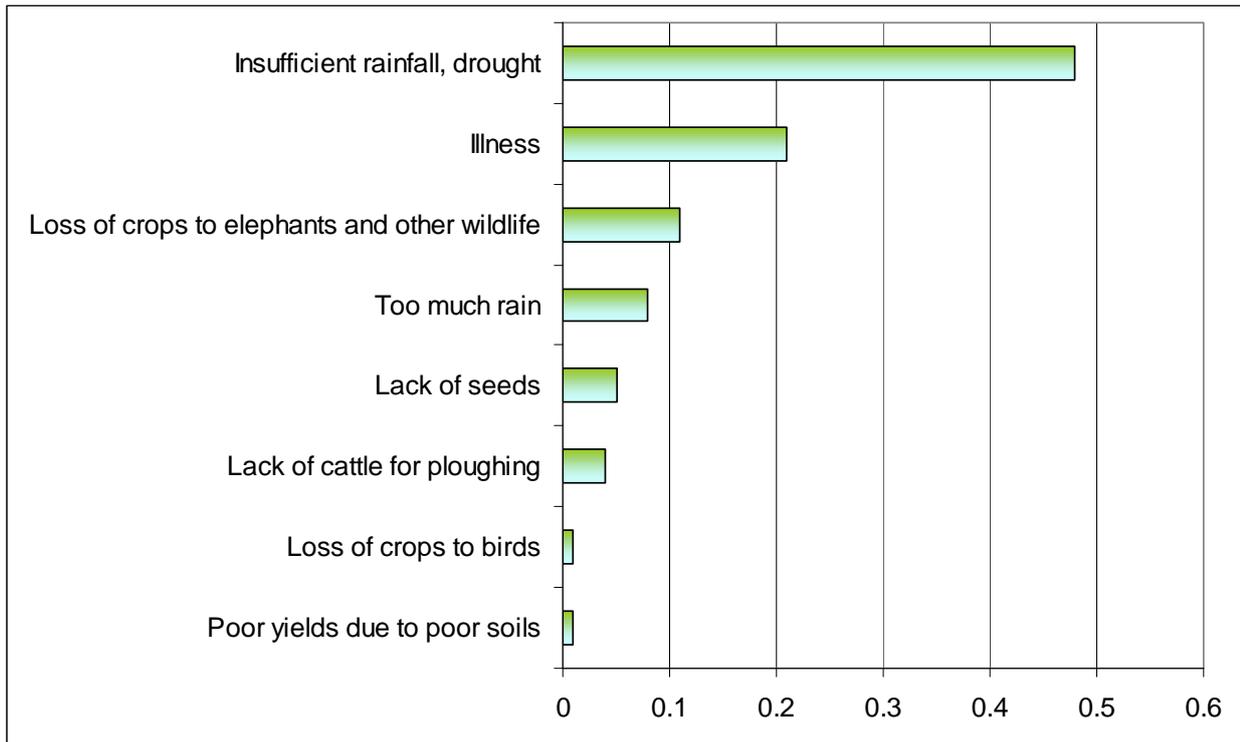
Perceived constraints to crop production faced within Ngongo scored in terms of their overall relative importance



Perceived causes of hunger within Ngcusha, scored in terms of their relative importance

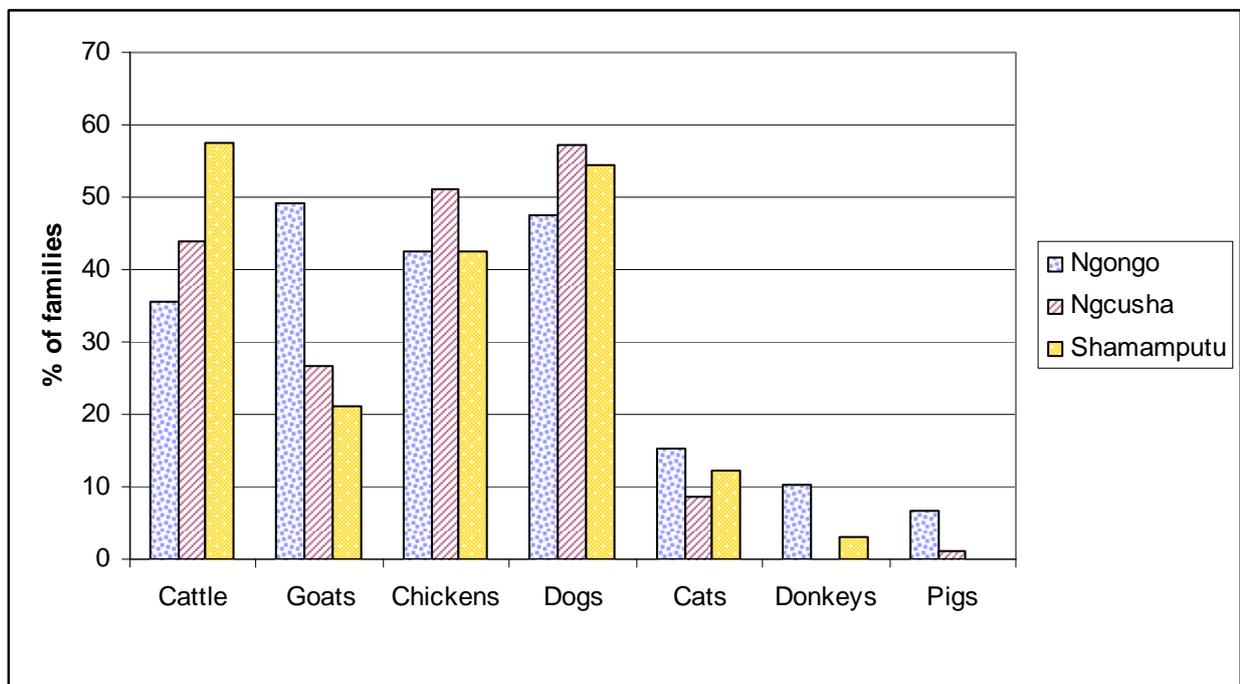


Perceived causes of hunger within Shamamputu, scored in terms of their relative importance



4.8 LIVESTOCK PRODUCTION

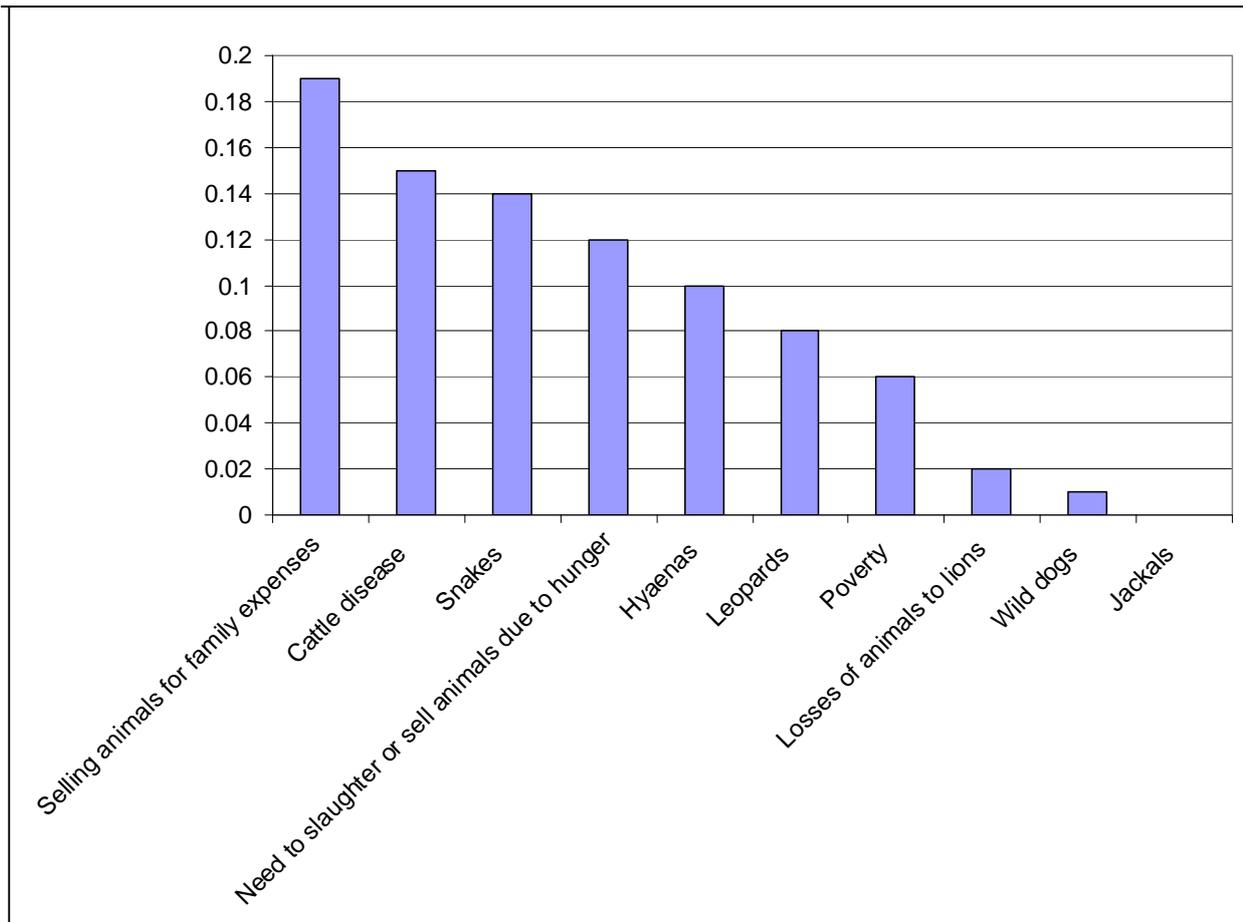
Proportions of households owning different types of livestock expressed as percentages for each area



Range and average number of animals per owning household for each area

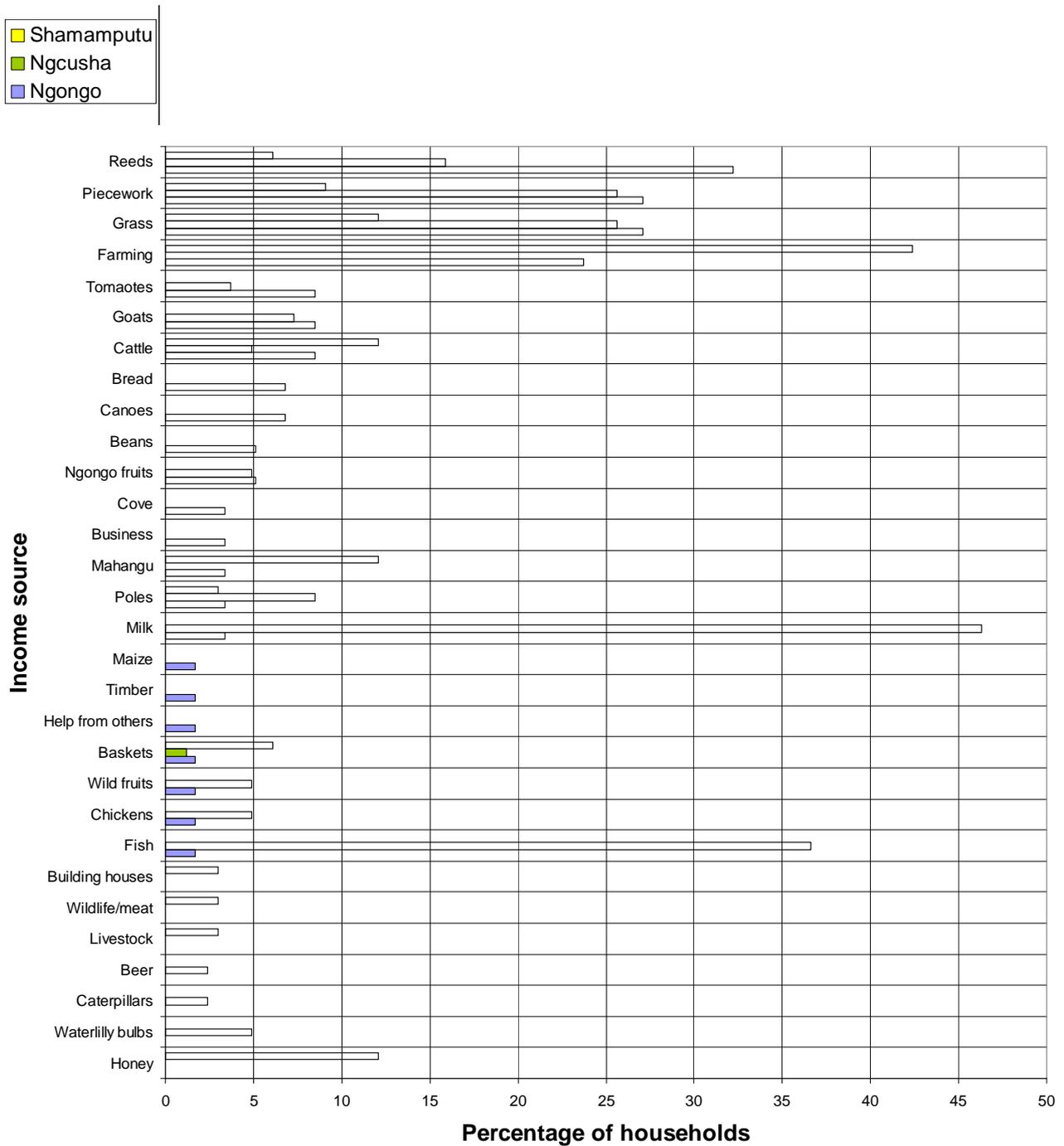
	Ngongo		Ngcusha		Shamamputu	
	Range	Average	Range	Average	Range	Average
Cattle	1-22	5.0	1-100	17.1	1-20	5.5
Goats	1-39	5.5	1-25	8.0	1-10	3.9
Chickens	1-16	4.2	1-30	4.9	1-7	3.5
Dogs	1-5	1.5	1-6	2.3	1-5	1.9

Difficulties encountered in terms of rearing domestic animals within Shamamputu, scored in terms of relative importance



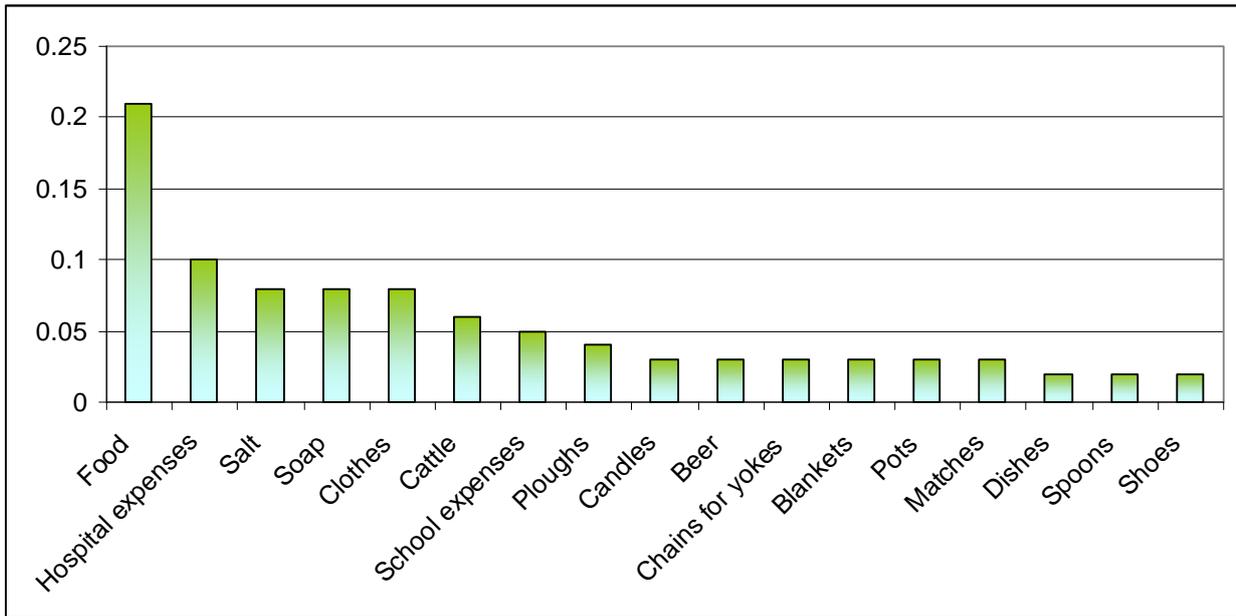
4.9 INCOME AND EXPENDITURE

Sources of income expressed as percentages of households for each questionnaire area

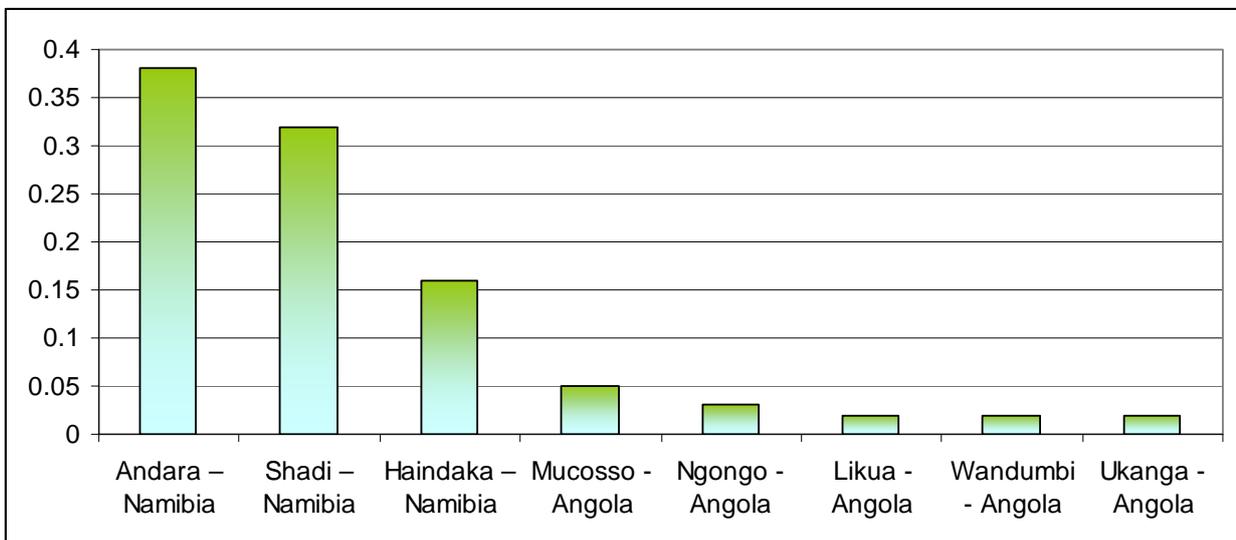


4.10 FORMS OF EXPENDITURE

Principal items of expenditure by residents of Ngcusha village, scored in terms of relative amounts of money spent (high scores = high expenditure)



Locations where residents of Ngongo spend money, scored in terms of their perceived portion of overall expenditure

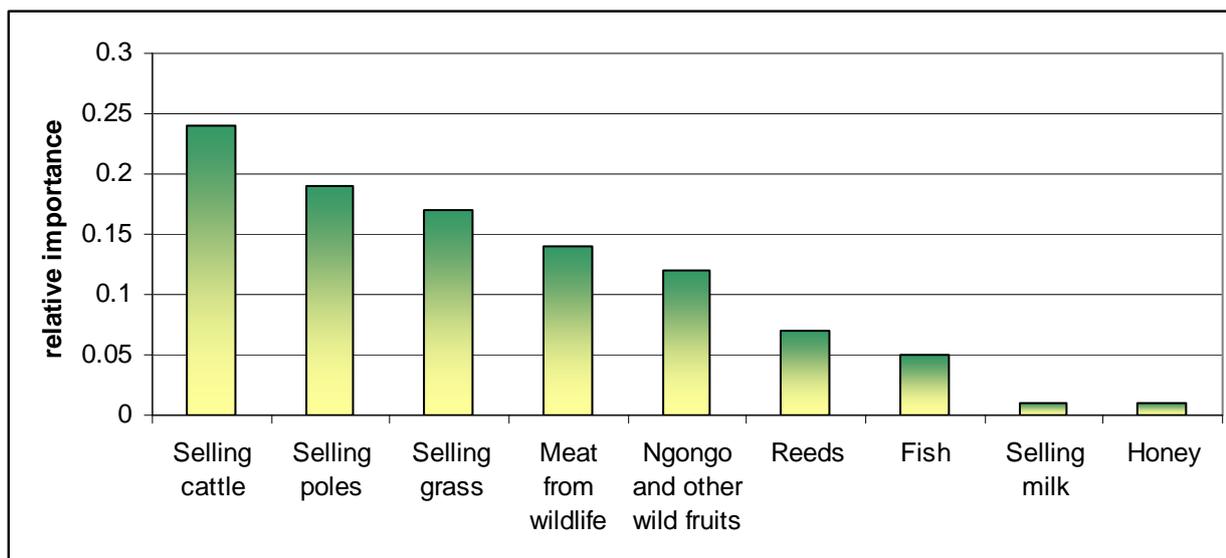


4.11 DEVELOPMENT ISSUES

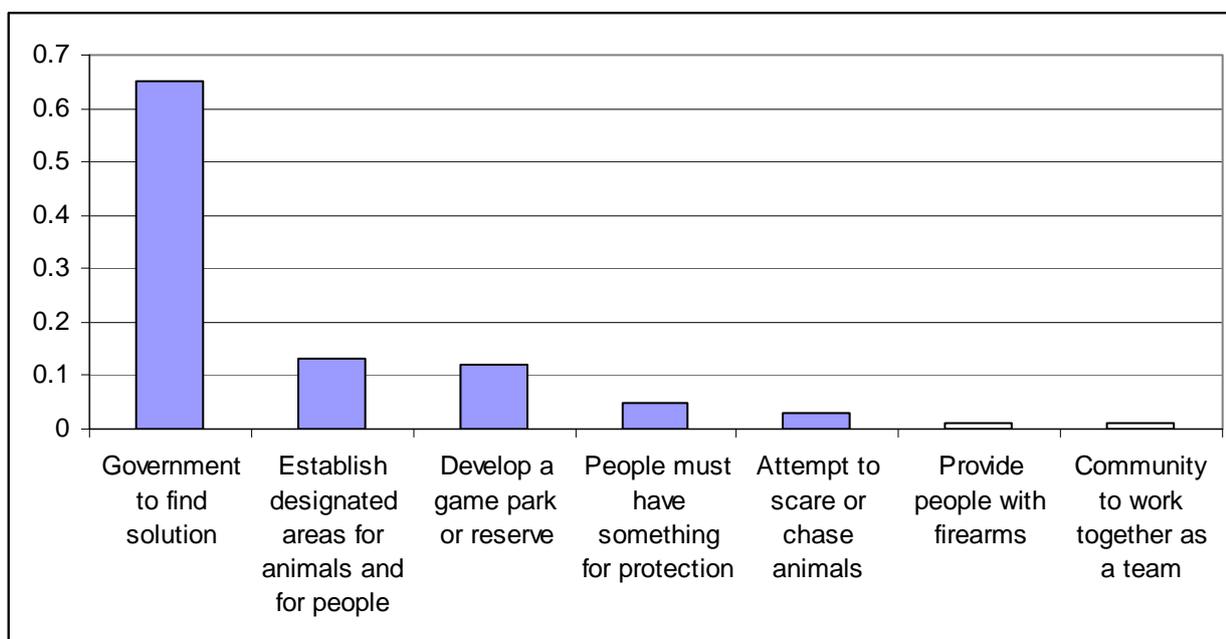
Periods of hunger through the year

Period	J	F	M	A	M	J	J	A	S	O	N	D	Observations
Time of hunger	X	X							X	X	X	X	
Time with food			X	X	X	X	X	X					

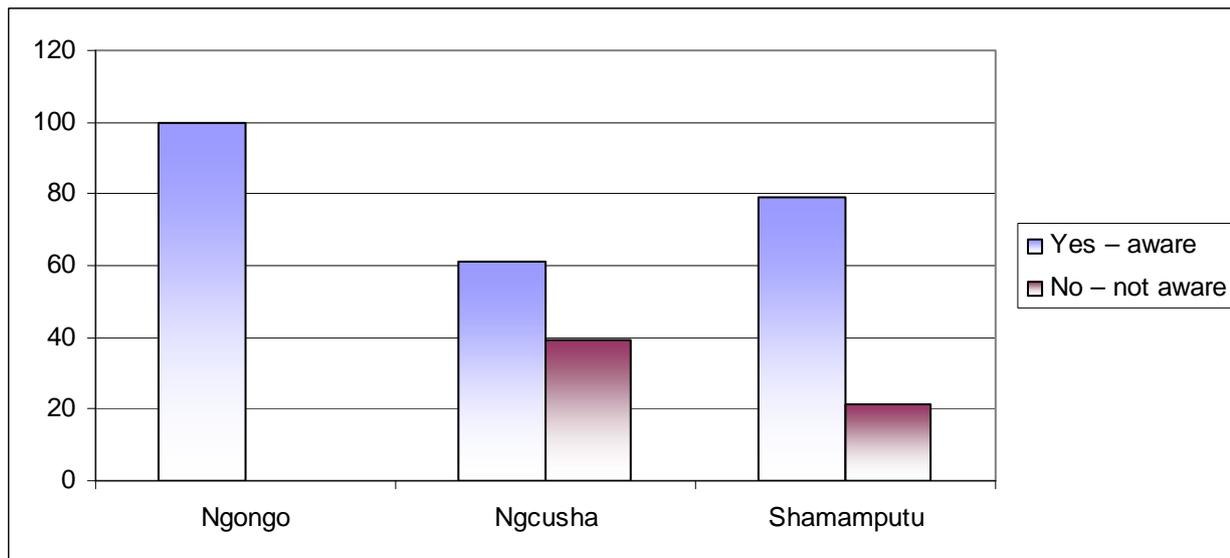
Coping mechanisms to combat hunger within Shamamputu, scored in terms of their relative importance



Possible solutions to wildlife problems experienced within Shamamputu, scored in terms of their perceived relative importance



Awareness of the existence of the Mucusso Reserve, expressed as percentages of households for each village



4.12 CONCLUSION AND NEXT STEPS

The information represented in the above graphs provide insight into human experience and perspective related to natural resource use in villages near and within the Mucusso Reserve.

The source data for this report was generated by local Angolans resident in the Mucusso Reserve area, who were trained in participatory methodologies through the IRBM project. Through July 2008, they are continuing to expand their base of information about communities of the Mucusso Reserve area. The trained team is conducting further surveys in villages that represent the range of social, cultural and environmental attributes found within the Reserve.

All findings are being reviewed, analyzed and incorporated into an analysis of the socio-ecological reality of the Mucusso Reserve. This socio-ecological analysis is an integral part of a larger exercise to assess the protected area status and boundaries of the Reserve, which is being conducted through 2008 as part of the *Conservation of Biodiversity in Kuando Kubango Province* program, a partnership between the Ministry of Urban Affairs and Environment, the Provincial Government of Kuando Kubango, and the USAID-funded Okavango Integrated River Basin Management Project (IRBM).

As they engage in dialogue about conservation, local leaders and innovators in Mucusso become increasingly aware of the possible benefits that conservation can bring to both people and the natural resource base in the long term. Beyond protected area status considerations, consultation with them can also help to inform important considerations regarding the responsibilities, rights and future of communities who live within the conservation areas of Kuando Kubango, Angola.

ANNEX I: HISTORY, AS PROVIDED BY VILLAGERS DURING PARTICIPATORY DISCUSSIONS

HISTORY OF NGONGO VILLAGE

Mbukushu people, who form the majority grouping within Ngongo, currently live mainly in Angola but with others in Namibia, Botswana, South Africa and Zambia. The Timbukushu are believed to have come from far away, from somewhere called Rui near the Zambezi River. From the Zambezi they came to the Mashi (a tributary of the Kwando River), then to Luiana, then to Mbunda, and from Mbunda to the Kavango River. Mbunda is some five days travel on foot to the north of Ngongo. Chief Mbungu was the first leader to come to the Kavango River.

The first person to come to the Kavango River is said to have been a hunter who was followed an elephant all the way from Mbunda to here. After he saw the Kavango River, he carried fish, reeds, grass and tubers from water lillies back to his village and urged the leader and his people to move to there, which they subsequently did. This was estimated to be about 1845.

The Timbukushu were previously staying together with the San people, but then the San complained that the Timbukushu were disturbing their animals, such that they moved to the east and the Mbukushu were to the west.

When the Timbukushu moved from Mbunda to the Kavango River, noone gave them permission to do so, they simply moved. According to some informants the area was empty at that time, such that Chief Mbungu simply came and settled here. Other people suggested that the San may have already been in the area at that time, and/or living to the south within Namibia. Some of the Timbukushu settled along this portion of the river, whilst others settled further south in what is now Namibia.

The first person to settle at Shmunwe (where the community centre is now located) was Chief Dimbu, who came from the adjacent village of Kakene. Shmunwe means the home of the chief. Many birds come together in these big trees (some large *Diospyros mespilliformis* trees) to discuss in the same way that we do at the Chief's residence, which is why it is called Shmunwe.

Ngongo takes its name from a particular ngongo tree that someone planted in the village and grew into a big tree. When the Portuguese came here, they used to refer to '*the Soba where the ngongo tree is growing*', and in time the village came to be known as Ngongo.

At the time of the liberation war, the Portuguese soldiers first came here in about 1969. They treated the local people very harshly. For example:

- Local people were forced to carry people on our shoulders over long distances.
- Local people were forced to transport people in canoes for long distances upstream.
- The Portuguese could demand whatever they wanted, and there was no way to refuse them.

This suffering continued through the years of 1970-1973 until the end of the liberation war in 1974. At this time the San were working together with the Portuguese and would travel together in

helicopters to show them where the Mbukushu people were staying. Due to this harsh treatment it was necessary to run away to Namibia, Botswana, even South Africa.

After the war ended in 1974, some people returned in 1975/76, but others did not. Although people were now free, they were still suffering from hunger and a lack of clothes and other things. However, at that time it was possible to go and work on the mines, for example at Swakopmund, after which one could come home with money and clothes.

The civil war started here in 1999 through to 2002. Following the ceasefire, the first people returned in 2002 but were too late to plant crops in fields and so were only able to plant mahangu in gardens. The first real crop was only achieved in 2003. Additional people returned to Ngongo in the following years up to 2005, but no one else has come back during 2006 and 2007. Even now there are still many people outside of the country, but they are waiting for next elections and to see whether everything is settled, following which some more may return.

Unlike 1975/76, when people returned after the liberation war, the mines at Swakopmund are now closed, such that it is much more difficult than before to earn money. Now locals are reliant on farming, but there are too many problems with elephants, such that it is very difficult to generate money to buy food or clothes.

HISTORY OF NGCUSHA AND SHAMAMPUTU VILLAGES

Ngcusha and Shamamputu are both named after wetland areas draining locally through the respective villages, and in which people claim to have previously caught a lot of fish.

Village informants claimed that the first person to come and settle at Ngcusha was Shakatengo, who moved from Mashi to here in 1962. At that time, Dirico was just a small Portuguese settlement, together with a few people who were working for the Portuguese. At that time there were one or two families living at the neighboring village of Shamutwe (and which was previously called Shakalumba).

The initial people who were staying in this area fled to Namibia to escape the bad treatment by the Portuguese during the time of the liberation war (Table below). Starting from 1968, within this region, the Portuguese began to move people from the interior and to settle them in large centralised villages along the Kavango River, based around schools. As part of this effort, in 1973 people were moved from Tundere, Tondo, Lumuna, Kandombo and other villages in the interior, and were settled around Chaisa school on the boundary between Ngcusha and Shamamputu. Settlement in Shamamputu started in 1975, after the war, as people spread out from Chaisa into neighbouring areas. Since this time many of these people have moved to Namibia, some have moved back to the interior, and some are still living there.

History of civil conflict as related by participants from Shamamputu village

Date	Event
1976	Problems start fighting amongst three groups
1992	Elections, following which the war started again
1996	Police and Administration came to Dirico
1999 – 2000	(November) The war starts again, many people are killed
200	Early in the year, everyone runs away to Namibia
2002	War finishes. People start to return from Namibia, but they are too late to plant crops that year

During the Portuguese time the population of Dirico Municipice was 37,000, whereas the current population is estimated at 16,000 (these figures were given verbally, but there was no way to check their source or veracity). There are still a lot of people outside the country. Most of the people were

forced to leave because of the war and are still outside of the area in Namibia, Dirico and other Angolan villages to the west of the Cuito River. The government policy is to encourage people to return. Some are waiting for the next election, and if everything is peaceful then perhaps they will return. But now many have children born in Namibia, so perhaps they will stay there. If Angola develops then perhaps people will return, otherwise probably they will not.

APPENDIX 2: SUMMARY OF SELECT PARTICIPATORY VILLAGE ASSESSMENT EXERCISES

SECTION	KEY QUESTIONS	METHOD	SCORING
1. HISTORY			
1.1 Origins	What is the meaning of the village name? Which tribes occur within the village? Where have different tribes come from? When did the first people come to settle here? Who was the leader at that time? What was the reason for moving and coming to settle here? Who gave authority to settle here? Was anyone else living here when you came to settle here? When did the current population come to settle here? What were the routes used to come to this village?	Group discussion recorded as key statements	N/A
1.2 Historical events	What have been the main events in the history of the village, when did these occur, what was the impact on people, and how did they cope? Checklist of possible events: Wars, movements, governance, droughts, floods, famines, diseases, forced activities, plagues, livestock diseases, introduction of new crops or animals	Table – 3 columns Era and year/ event/ notes	N/A
1.3 Languages and tribes	Which languages are spoken in the village? Which tribes are present in the village?	Spidergram Spidergram	No. of people No. of people
1.4 Life long ago compared to now	For this village, how do living conditions as they were “long ago” differ from how they are now?	Table – 3 columns Factor/long ago/present	N/A
1.5 Impacts of war	What have been the principal impacts of war as experienced by people from this village?	Spidergram	Importance
2. MAPPING AND INFRASTRUCTURE			
2.1 Village features	What are the main features of the village and where do these occur? Checklist of possible features: households, fields, mountains, forests, rivers, water sources, wet areas, churches, cemeteries, sacred places, roads, bridges, paths, school, clinic, grinding mill, airstrip, football ground, leaders house, mine fields, etc.	Sketch map showing positions of features	Census/counts of each type of structure
2.2 Boundaries and neighbours	Where are the boundaries of the village? Who are your neighbours? Are the village boundaries clear, and are there any disputes about boundaries with neighbors?	Sketch maps showing village boundaries and neighbors and	N/A

SECTION	KEY QUESTIONS	METHOD	SCORING
	Which Municipality, Communa, Barro and Rei does the village fall under?	extents of communa, barro, and Rei's area	
2.3 Locations of fields	Where do people from this village have their fields?	Sketch map showing locations of fields	No. of plots or relative sizes
2.4 Locations of water sources and wildlife	Where are water sources that are used by wildlife within the village and neighboring areas?	Sketch map showing locations of water sources	N/A
3. NATURAL RESOURCES	What types of forest resources occur within the village?	Spidergram	Importance
	What types of resources are associated with rivers and wetlands within the village?	Spidergram	Importance
3.1 Types of resources			
3.2 Abundance of resources	How abundant are different resources or groups of resources?	Spidergram	Scarcity/abundance
3.3 Distance to resources	How far does one need to travel to access different types of resources?	Table – 3 columns Resource/distance/notes	Relative distances
3.4 Changes in resources over time	How has the relative abundance of different resources changed from the past (since 1998) to the present (2008) and how do you expect these to change in the future (by 2018)? Checklist: Food items, construction materials, medicines, water, village population, fields, livestock, infrastructure/services such as education, health, roads, communications, shops etc.	Trend analysis – table (5 columns): Resource/1998/2008/2018/explanation	For each resource 2008 score is always 20, scores for 1998 and 2018 are relative to this
3.5 Details of key resources (e.g., fruits, wildlife, medicines, grasses, timber etc).	Which are the main species, where do these occur and what are they used for?	Table 4 columns Resource/species/distribution/uses	N/A
	How important are the different species?	Spidergram	Importance
3.6 Occurrence of fire	What are the main causes of wildfires in the village?	Spidergram	Frequency
	What impacts do wildfires have on different types of resources in the village?	Spidergram	Relative impact
	What are the positive aspects of fire?	Spidergram	Benefits of fire
4. LIVELIHOOD ACTIVITIES			
4.1 Principal activities	What are the principal livelihood activities of members of this village (activities that produce food or money)?	Spidergram	No. of participants. Importance
4.2 Items people make	What items do people from this village make?	Spidergram	No. of people
4.3 Timing of cropping and other activities	When are different crop activities carried out, and why?	Calendar	Notes – why not done at other times
	When are other activities carried out and why?	Calendar	Notes – why not done at other times
4.4 Participation by gender and age	Who within the family is responsible for different activities (men, women, children, hired labour)?	Table 4 columns Men/women/children	N/A or ranking as 1, 2, 3
4.5 Relative activity	How busy are men, women and children in each month of the year?	Calendar	Relative activity

SECTION	KEY QUESTIONS	METHOD	SCORING
4.6 Crop production	What types of crops are produced in fields?	Spidergram	Volume of production. Food sources. Sales (\$).
	What types of crops are produced in gardens?	Spidergram	Volume of production
	What varieties of each crop are grown in the village?	Table - 3 columns Crop/variety/notes	N/A
4.7 Soil types	What types of soils occur in the village?	Table 3 columns Name/description/ abundance	Relative abundance
	Which soils are most important for crop production?	Spidergram	Suitability for crops
	Which crops are produced on which soils?	Table – 2 columns Soil/crops	N/A
4.8 Rotation of fields	What is the typical life cycle of a field from the time of opening until it is finally abandoned? Which crops are grown and for how long? Are these followed by other crops? Are any forms of fertility management carried out, and if not why not? How long can land be used before it is abandoned? How long does it take for a field to regenerate such that it can be used again? Do these answers differ for different types of soils in your village?	Discussion and notes	N/A
4.9 Crop yields	What yields of crops have been obtained over the last 5 to 10 years, and what have been the causes for poor yields?	Table – 3 columns Year/relative yield/ notes	Poor, moderate, good, or 1 (poor) – 10 – 20 (good)
4.10 Problems with crop production	What are the main problems faced in terms of crop production in the village?	Spidergram	Importance
4.11 Livestock production	What types of domestic animals do people keep here?	Spidergram	No. of owners No. of animals
4.12 Problems with livestock production	What are the main problems faced in terms of livestock production in the village?	Spidergram	Importance
4.13 Other activities – General questions that can be applied for any activity	What is the method or process of production or harvesting, and who is responsible for doing this (men, women, children, hired labor)?	Notes	N/A
	Do people make different types of this product or use different species to make this product?	Notes	N/A
	Where is the production/harvesting carried out?	Notes	N/A
	What tools are required for this process?	Notes	N/A
	How many families carry out this activity, and why do others not do it?	Notes	No of families
	Which types of households do or do not carry out this activity?	Notes	N/A
	How much of each product is obtained or produced during one year?	Notes	No./volume
	What are the main problems faced in carrying out this type of activity?	Notes	Importance
5. INSTITUTIONS	What institutions are present within the village (local institutions)?	Spidergram	N/A
5.1 Presence and roles of institutions	What other institutions (external) have an impact on or affect the village?	Spidergram	N/A
	What are the main roles or functions of each institution or organization?	Spidergram or table for each	Importance

SECTION	KEY QUESTIONS	METHOD	SCORING
Checklist: Traditional Government Non-government Faith based Community based Private sector	What is the overall relative importance of different institutions to the village? (Can either treat local and external institutions separately or can score together).	Spidergram(s) – see first charts	Overall importance or relevance
	What rules do we follow in this village?	Spidergram	Importance
	Who are the trusted leaders in the village?	Spidergram	Importance
5.2 Use of land and natural resources	How do people acquire land for cultivation?	Notes	N/A
	Who gives permission to use and/or controls the use of land and other resources within the village?	Notes	N/A
	What are the procedures that village residents must follow in order to use resources within the village or in other areas?	Notes	N/A
	Do any people from outside of the village come to use resources within the village? Where do they come from? Do they require permission to do so? How do they obtain the necessary permission?	Notes	N/A
5.3 Sacred areas	Are there any sacred areas within the village? Do these areas have names? Where do they occur? How big are they?	Table - 3 columns Name/location/size	N/A
	Are there any rules relating to the use or maintenance of these areas?	Notes	N/A
	Who is responsible for looking after these areas?	Notes	N/A
5.4 Procedures for movements of households	Who makes the decision for a household or family to move?	Notes	N/A
	What are the most common reasons for moving?	Spidergram	Frequency
	Who gives authority and what is the procedure to be followed in moving to a new area?	Notes	N/A
	What are the main criteria or considerations in selecting a place to move to?	Spidergram	Importance
5.5 Conflicts	What types of conflicts occur within the village or with other people or organizations outside of the village, especially regarding the use of land and natural resources?	Spidergram	Frequency
	How are these conflicts resolved?	Table – 2 columns Type of conflict/ process	N/A
6. LOCAL ECONOMY 6.1 Income	What are the principal sources of income within the village?	Spidergram	\$ - amount generated
	In which locations do people from this village earn money?	Spidergram	\$ - amount generated
	What prices are obtained for resources or products during normal times and times of stress?	Table – 4 columns Product/measure/ normal price/stress price	N/A
6.2 Expenditure	How (on what) do families in this village spend their money?	Spidergram	\$ - amount spent
	Where do people in this village spend their money and for what purposes?	Spidergram and notes	\$ - amount spent
6.3 Movements to and from the village	Which are the main places or destinations where people from this village travel to?	Spidergram	No. of trips or frequency of trips
	What are the main reasons for traveling to the different destinations?	Table – 2 columns Destination/ reasons	N/A

SECTION	KEY QUESTIONS	METHOD	SCORING
	Which types of people travel, or do not travel, to the different destinations?	Table – 3 columns Destination/do/ do not	N/A
	When do people travel to the different destinations?	Calendar – months by destinations	N/A
	What routes do people follow do different destinations? How long does a journey take? Where do people stop on route? Are there any sources of water on route?	Table – 5 columns Destination/ routes/ time/ stops/ water	N/A
6.4 Wealth ranking	Are all households in the village the same or are some better off than others?	Discussion - yes or no	N/A
	Can you identify different types of classes of households and, if so, how many?	No of classes and names of classes	N/A
	How do classes of households differ in terms of family composition, education, health, activities, crop production, income, capital items, appearance of home etc?	Table – 5 columns Factors/ class1/ class2/ etc	Scores or descriptions of factors by classes
	What is the relative frequency of different types of households within the village?	Spidergram	Closed score (percent)
7. DEVELOPMENT ISSUES	What are the main problems faced by people living in this village?	Spidergram	Importance
7.1 Principal problems	What are the causes of these problems and what are the possible solutions that can be implemented by village members or with external assistance?	Table or combination of table and spidergrams 4 columns problem/causes/ local solutions/ external solutions	N/A
7.2 Occurrence of hunger	Do people in this village ever experience hunger and, if so, during which period of the year and during which years in the past?	Calendar Table – 3 columns Year, relative yield, notes to explain yield (why)	N/A Amount of crops or no. of families with enough food
	What are the main causes of this hunger?	Spidergram	Importance
	How do people survive/cope with times of hunger?	Spidergram	Importance
7.3 Problems with wildlife	What problems do wild animals cause in this village?	Spidergram	Importance
	Which animals are responsible for the different problems (loss of crops, livestock, danger to people, destruction of resources)	Spidergram for each	Importance
	How can these problems be avoided or solved?	Spidergram	Importance
7.4 Infrastructure and Services	What problems do people from this village face in terms of access to infrastructure and services?	Spidergram	Importance
	How can these problems be solved through either local effort or with external support?	Table – 3 columns Factor, external support, local help	N/A
7.5 Resettlement to and from the village	What are the good aspects about staying here in this village?	Spidergram	Importance
	Do you expect any new families to come and settle in this area, and why?	Notes	Number
	What are the main reasons that bring new families to settle in this village?	Spidergram	Importance
	What are the main reasons that cause families to leave this village and settle elsewhere?	Spidergram	Importance

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